With this we, Msc3 group Public Realm Rotterdam Lijnbaan, want to thank for our tutor Nicola Marzor and guest student Francesco Cinquini for their effort in tutoring us in the process of our design project. Within our process of research we learned a lot from the Friday mornings in which we had design classes. Another important moment of learning in the field of architecture and as social group bonding was the excursion to Venice where we visited the Venice Biennale; people meet in architecture. Here we enjoyed the teachings of Nicola Marzot at the Biennale and the guidance of Francesco through out the streets of Venice. In the future process we hope that we can continue this positive flow in our projects with the extra guidance of the tutors Susanne Komossa and Jelke Fokkinga.
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Colophon
GRADUATION ASSIGNMENT

The research in this booklet is part of the MSc Studio Public Realm: composition and tectonics. The scope of research lies in the field of public domain and the relation with the build environment. The studio is part of a longer research by the Public realm studio in which they explore the meaning of public realm in the light of current urban redevelopments occurring in the city centre of Rotterdam.

The designated area lies in-between the Lijnbaan and the Coolsingel, facing Aert van Nesstraat southward and Stadhuisplein northward. It consists of an existing urban block being part of the inner city post-war re-structuring in the light of Van den Broek & Bakema Lijnban proposal. The building curtain of the block has to be preserved, while the inner core will be demolished, with the unique exception of a small part, listed in the municipality monument to be restructured, lining Sint Lucienstraat. The city municipality has already expressed the intention to densify the Lijnbankwartier, to attract the so called ‘creative class’, defining an overall framework, which is part of the Studio delivered materials, according to which individual proposals have to fit. Students also have to investigate the most important of them, as inspiring suggestions to criticize and/or develop further: Claus en Kaan Lijnban Masterplan, Kees Christiaanse Rotterdam Centre South Overview, OMA Coolsingel ABN AMRO design etc. A functional program is also provided, but students will be invited to develop different programs based on thorough research and own insights, not withstanding size and envelop limitations shall be respected. In potential the site can house offices, dwellings and shops but also social-cultural facilities. Mixed programmes and new strategies have to be developed to meet the social, cultural, political and economic problems and needs of the Rotterdam city centre in the 21st century. Such strategies can involve themes such as a public realm for a diversity of city inhabitants, users and visitors, densification, stacking of programs offering facilities for specific groups, integrating production and consumption, working and dwelling, and so forth. Innovative concepts and typologies, like the urban hybrid building that address the search for a new public realm and accommodate these new programmes are thus important. Through the analysis of precedents of the European ground scraper (see the above listed bibliography) and on-site fieldwork we will develop tools in order to understand and address the issue of public realm in relation to actual urban spaces.

The architectural design assignments resulting from these programmes and strategies can involve the public realm on several levels. On the one hand, they may accommodate social, cultural and educational institutions that can function on the level of the city region as a whole. On the other hand, solutions can be generated for local problems, such as the lack of space for the small-scale urban economy in the city centre of Rotterdam. Thus the studio public realm can result in projects and visions on a larger urban scale, as well as in site-specific interventions that take into account the character of the modern Dutch city.

Theory and practice together form the ground on which the discourse of studio Public Realm is founded. The newly released book Architectural Positions: Architecture, Modernity and the Public Sphere (SUN, Amsterdam 2009) will be used to discuss the position architects have taken towards their responsibility towards the public sphere. Next to this, theories from a more sociological and cultural-political background, as for example works of Richard Sennett/ Saskia Sassen, Henri Lefebvre, Jane Jacobs, Edward Glaeser, René Boomkens and Arnold Reijndorp will offer a more in-depth understanding of the public realm.
From 12 till 16th of November 2010, we attended ‘La Biennale di Venezia’. The 12th International Architecture Exhibition, with the title of People meet in architecture, was open to the public in the ‘Palazzo delle Esposizioni della Biennale’ (Giardini), the ‘Arsenale’ and in various locations throughout Venice.

The exhibition, formed a single itinerary, with participants from different fields: firms, architects, engineers and artists from around the world. The selection criterion has led to architects, artists and engineers who, in return to this call, propose a way to investigate relationships among people. Each dynamic relationship has its roots in actual, physical space.

They have invited many architects to study their own work in films that will be shown in an attempt to examine how people make space what it is by living in it. In this exhibition architecture can be shown as a generator of new forms of understanding. The idea is to help people relate to architecture, to help architecture relate to people, and to help people relate to themselves. We had different reactions towards each installation. The Central Pavilion and the Arsenale are treated similarly, but the work is deeply varied, making it possible for us to make our unique route through displays freely. By experiencing architecture from different angles, we were able to start creating our own personal ‘set of encounters’.

The Lijnbaan is a shopping street in the centre of Rotterdam and has been named after the rope factory that was located at this region between 1667 and 1845. The modern shopping street is well-known over the whole world. It is a long and open passage that is only accessible for pedestrians with on both sides of the street shops. The Lijnbaan is famous because it was the first shopping promenade of the Netherlands.

The Lijnbaan has been designed by the architects Van den Broek and Bakema and the start of its construction began back in 1949. Because it was a special non-traffic pedestrian zone in the middle of a big city it gained international attention at the time it opened in 1953.

Nowadays a lot of big well-known stores and brands are situated in the Lijnbaan but there is also room for some smaller entrepreneurs with their own specifity. Because the area is easy accessible by tram, metro and car the place is not only crowded with people from Rotterdam but also from beyond.

The Lijnbaan goes from the office area near the Weena in the North to the Binnenwegplein in the South. It connects with the popular public places like the Beurstraverse or Koopgoot, the Stadhuisplein and the Korte Lijnbaan with the Schouwburgplein.

The Lijnbaan represents one of the icons of architecture of the reconstruction of Rotterdam after the bombing in the second world war. That’s the reason why we find it on the list of monuments of the municipality of Rotterdam.

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The whole research started with the public domain, the public space and the public place. Extending our knowledge on these topics made us understand that our references of a public domain or public space is not anymore what we can find in daily life due to the change of the public space rules composed by the community. For example, one of the first rules of the public domain that is often mentioned is to meet ‘others’, to perceive the unknown and to feel it is free to use for everyone. But our way of life has changed and does not fit these rules anymore. We live as individuals, functions within the city are clustered to be more pragmatic and parts of the public space have been privatized, like the Koopgoot. All these factors have slowly modified our behaviour in public space and along with it, the rules of the public space. Now, the rules are different, but it happened so soundless that no one seems to know what they now really are let alone how to describe them.

Rotterdam as Location

Besides the world of the ‘public’ also the city Rotterdam needs to be reinterpreted. The city center of the year 2010 only exists 65 years, in contrary with the existence of the city that goes back to the 13th century. This unique situation has dealt with new approaches to urbanism, architecture and to the public space, but also gave the city a complex organization because of its turbulent history. Because of the bombing in the Second World War planners were unexpectedly provided a new challenge to find a solution for the common problems that many fast-growing cities were dealing with at that time. Many different projects were proposed and realized. One of the first plans introduced in the new heart of Rotterdam was a transportation program for the future. Goal was to have good and fast accessibility within the city centre which resulted in a large and wide grid of traffic lanes. Because of the big proportions of the new streets and their oversized buildings the city center is divided in areas, separated by these borders. The theory of Modernism overruled every other thought. A new kind of architecture arose from the soil. Now, the opportunity arises to intervene within an intervention.

The Lijnbaan, designed in 1953 as the luxurious boulevard in the city, has undergone a metamorphosis. The Lijnbaan, where once greenery was colouring the streets, vandalism proof garbish bins have taken over. Big brands have concurred the commercial space in the Lijnbaan, moving the alternative small shops throughout the city. Where once people visited the Lijnbaan to be seen and to wonder around, the visitors rush through the busy street. The buildings of Van den Broek & Bakema seem to surrender to the thought they once flourished and that those days have now passed. In contrary to the function, the commerce, that still grows bigger and bigger and attracts a mass of people during the day. All kind of people. And it is a street, a public place. Or not? Does this mass actually use the space as a public space? Can this intensity in this particular pedestrian street directly lead to
the conclusion that it is part of the public domain?

IntenSity in use

Our project location is connected to the intense used traffic street the Coolsgiel and to the intense used pedestrian traffic street the Lijnbaan. The north-south connection seems so strong that crossings do not have the ability to trigger the passerby to choose. The choice seems to be already made and seems difficult to change. By visiting the location we were triggered by this phenomenon in intensity. The route seemed to be invisibly marked for the pedestrians who were passing our block. They just go with the flow. Within the system of the Lijnbaan this intensity has the power to guide the mass, to emphasize the main space and to fade away certain paths. Does this mean that the function by itself is so strong that it can close of certain paths or is the emphasize that lays on the space of the Lijnbaan so strong that it disconnected with the spaces just beside it? More general, it is possible, by understanding the intensity in use, to provoke intensity and use it as a tool in the public space?

To understand the intensity of the Lijnbaan a clear structure of research was necessary. By visiting the location at different times on different days of the week we concluded that the area is working within a system of constant change. Mostly during daytime the area is one of the most vibrant parts of the city but after 6 pm the area transforms completely to an almost deserted place. It was clear for us that we needed to understand the rules of the system of the Lijnbaan as a base for our research and to develop a consistent masterplan for the design location.

We defined three important aspects in our area that are constantly coherent with each other: function, time and space. The area transforms continuously according to these three aspects. The shift of the difference of use of the functions and spaces within the area is directly connected to time. This is the reason why we chose the coherence between time, space and function as our main focus to approach our research topic.

Research framework

Till now a main topic, the intensity in use, and the approach, the coherence between space, time and function, have been introduced. To start our research we needed a framework. By setting up a framework it is possible to filter the more valuable information and to keep the research focussed. We started by creating a space framework. On the biggest scale we focus on the Lijnbaankwartier and within this frame we highlighted another 23 locations, which are the points we researched. On top of the space framework, these chosen places are investigated in a time framework. We chose a standard weekday, the Wednesday, and a weekend day, the Saturday, to see the differences that occur during the week. The choice for these days is made because of the differences in intensity that occurred in the Lijnbaan. During the weekend the area is used mostly for leisure by tourists or people who come for a day off. To be able to compare these two days, we pinned down 6 hours for specific reasons.

8.30-9.30. Daily life starting/just started, like work and school, while the main function shopping is still closed.
10.30-11.30. Shops open their doors.
15.00-16.00. In the middle of the day. Students free from school. Bars opening.
17.00-18.00. Work is done, shops are closing.
22.00-23.00. Shops closed, bars and discotheque open.

Now that we anchored our frameworks we could start our intensity research. After capturing the questions already mentioned we divided the research in 6 main topics. The research approach asks for a specific method of researching, mainly because we need to capture the changes in time for the different topics. By combining different methods, data analysis, perceiving and interviewing, we were able to map the intensity in the Lijnbaan on different levels.

As made clear in the time framework, the function, being almost completely constant, plays an important role. Before uses and users can be defined, functions need to be known. For that reason we started of with analysing the functions.
8.30-9.30 10.30-11.30 12.30-13.30 15.00-16.00 17.00-18.00 22.00-23.00

8.30-9.30 10.30-11.30 12.30-13.30 15.00-16.00 17.00-18.00 22.00-23.00

Functioning functions

Mapping functions can be done in many ways, depending on the output you aim for. In our case mapping the functions in floorplan was not as interesting as showing the functions in section, because the focus lies on the space connected to it. With other words, it is not so much about the functions in the buildings as it is about the reflection of the functions on the space.

The function that reflects the most powerfull on the space determines the way the function of the space is perceived. The change of power between the functions can variate during time. By making sections all the functions connected to spaces in the Lijnbaan are shown.

These functions are able to reflect upon the street, but it does not show which functions actually are the most powerfull.

To support the sections, we therefor made two maps, wednesday (l) and saturday (r), that show the reflection of the function on the streets Lijnbaan, Korte Lijnbaan and Stadhuisplein.

Especially the L-form (Korte Lijnbaan – Lijnbaan) the commerce is the most powerfull. But after closing hours no other function are able to reflect upon the spaces.
WHAT A BEAUTIFUL PLACE, KEEP YOUR HANDS OFF!

IT IS NOT WHAT IT ONCE WAS...

ENJOYING THE SUN

IT IS NOT WHAT IT ONCE WAS...

BUILD COMPLETELY NEW BUILDINGS.
Who are you?

Seeing the Lijnbaan area as the core of the city center it became of interest who kept it alive. Was this piece of public space molded by the many individuals who passed randomly, day in and day out, or was it the automatic outcome of the well-oiled commerce machine? Data from external sources, like the municipality, didn’t seem to cover the question. The aim of our research was not only to discover who was expected to be there but to define the actual city user of the area. In total we interviewed 226 people at the crossing of Lijnbaan and Korte Lijnbaan, which helped us to understand the motivation of the users (few results shown on previous page). With this information a more specific definition could be made of the city user. We arranged them in three groups; the crossing, the visiting or the routine user. The visiting users form the majority and are especially linked to the main function, the commerce. By analysing the answers a map of flows of the users could be composed.
Perceiving as tool

With the interviews the goal was to find out who used the space as a way to understand the reason of the flow. Only the interview as a tool was not enough to cover the complete research topic.

First of all we could only ask a very small percentage of the people who actually passed the research area. This meant that the outcome of the amount of visiting, routine and crossing of the total interviews could not be transformed into a conclusion for the whole Lijnbaan area. Although we tried to support the interview and get a better understanding of the flow by counting all the people on a weekday, that crossed our research location, it just resulted in an overall outcome of which route was used mostly and not of a specific flow.

On the second place, with the interviews we only analyzed one crossing of the Lijnbaan area. The information we gathered of the entrances to the Lijnbaan were only based on the answers we collected in the center. Also, we were able to perceive the surrounding during the interviews. We were confronted, not only with the flow we saw but weren’t able to analyze yet but also with a new phenomenon of the flow; a pulse. Because the flow and the pulse of the flow was not caused by just one individual, using the interview as a tool to research was not sufficient enough to help us further in the quest to understand the flow.

Therefore the research tool was shifted from interviewing to perceiving, using the information we gathered with the interviews mainly to define the city users.

Research guidance

To be able to gain data from three individual perspectives that would still be comparable, it was necessary to have a set of rules within the framework of space and time. We chose six locations within and at the edges of the Lijnbaan. To get a grip on the flow during time we also chose six time spans on the given days, Wednesday and Saturday.

Within this framework a few questions arose which guided our perceptions. First of all we wanted to know how intense the spaces were used. We measured in two ways:

- Perceiving (no one - few people - busy - crowded)
- Counting, using the method of Allan Jacobs. He counted all the people that crossed him at one point during one minute to get an idea of the intensity in a specific street or area.

Second, we focused on the city users. By understanding the goal of the city users, which were defined by analyzing the interviews, it was possible to categorize the
people who were passing into the different groups, notating them in percentages. Third, the route was important, because the flow could change direction during the day. An additional question was the appearance of the pulse. If it was possible to perceive a pulse the counting procedure was done twice. Because every location was only visited for ten minutes, within each hour, we generalized the data we had gain for the whole time span.

After collecting the data, a way had to be found to translate the information in useable output that could tell more about the intensity. We began with two charts, the intensity chart and the flow chart.

**Intensity chart**

In the intensity charts (shown above) the horizontal lines represent 10 people per minute (p/m). By adding the measured values - the amount of people per minute and connecting them, an intensity line became clear. This made it possible to compare the different times, locations and days.

It became clear that not only the Lijnbaan had a clear peak during the day but also locations like Stadhuisplein and Weena. Comparing the measured values of these peaks of the wednesday and the saturday showed differences. For instance, the comparison of the two charts of the Weena shows a shift of the peak. On the wednesday the most people were counted during 12.30-13.30, while on saturday this peak moved to the next measure time, 15.00-16.00. Although this chart gives a good first impression of the intensity of the six different locations on six different times, it lacks information about the direction of the intensities. You cannot see, for example at Weena, if the people use it as entrance or as exit. To understand the route of the passers we used our second hand of data, the direction, by using the flow chart.

**Flow chart**

In this chart we mapped the different paths with their obvious direction and the importance of those paths that occurred on the specific places and times. The more people used the same path in the same direction the more clearly we could perceive a flow. Comparing to the Intensity chart, we could see some resemblance; when the intensity of that place increased, the flow became more visible. Nevertheless, the flow chart does not tell a complete story. For example, looking at the Koopgoot the intensity chart shows the highest amount op people per minute.
Weena Lijnbaan Schouwburg Stadhuis Aert van Nes Koopgoot

at almost every time, but the flow chart does not show obvious paths that were chosen. Because of the tremendous space and a great variety of paths, the flow could not appear.

When mapping the paths of the users we perceived that they used specific parts of the streets. Even if the Lijnbaan has a width from 12 up to 18 meter, only the space under the canopy was intensively used.

We needed another chart to show the use. **Use chart (I)**

**Already knowing the paths and the intensity of the use of these paths, the base for the use of space was already there. We chose to make a negative, where white stood for used space.** The flow charts formed the base; they already showed which path was used and how intense they were used. By turning the whole space black and only carving out the used paths which left a white scar behind the used space within the whole space was shown. Using only black and white, and referring white to the used space, black becomes coherent to the non-used space, which does not give the correct image. On top of that, the shown path was not based on measured data but on perceived data.

**Use chart (II)**

The use chart needed additional information to give a more correct image of the used space.

By adding an extra layer it was possible to give the shown path a buffer around it to gain a better view. The theory behind the extra layer was based on our perceiving of the space we used, which did not only depend on the exact path we walked but also on the total space and the space which was used by the other passers in the street. For example, the most people walked under the canopy which is just a small part of the whole street. The used space is in this case not only the exact path nor the entire street but the space under the canopy. With the data from this chart we could not only compare different times and places but we could also overlap to draw conclusions about the different spaces, used and non-used and the greyzone in between.

**Total maps**

By combining the information of all places and of all six times a complete map could be made, where different paths with their buffer overlapped each other. The whiter the place, the more intense used it is.
INTENSITY AND CITY USERS

Although the charts and the total maps, shown in the previous chapter, visualize the information that was gathered to connect the paths of the users to the used space within the time frame it does not yet show the intensity as specific as the intensity chart does and above that it does not make any difference between our three categories of city users. What actually had to be mapped was a combination of the paths and the intensity chart, based on the different users.

Axo Intensity Diagrams

In the previous chapter the intensity chart shows the change in intensity during six time frames on one of the six chosen locations. By disconnecting these charts into the time pieces it was possible to make a new intensity chart showing the change in intensity on the different locations in one of the time frames. By connecting these pieces the gathered information became a continuous line, unlike the real situation where the research locations were disconnected. To make the information corresponding to the output the gathered information in the research area was generalized to be identical for a bigger output area. Now it was possible to form an intensity chart at a specific time, connecting the intensities of the different locations. We use this chart as the average intensity of all the city users.

Decomposing one of these intensity lines, combined with the results of the gathered information of the perceived research (where we estimated the amount of passing city users with different percentages, see FLOWS) it is possible to grasp the different intensities of the different users. Because we chose six locations which are not all aligned with each other it was not an option to make one intensity line where all six locations were represented. We could make just two lines separate from each other: Line A (Schouwburg-Lijnbaan-Stadhuis) and Line B (Weena-Lijnbaan-Aert van Nes-Koopgoot) but the fact was that the locations were deeply connected with each other and that the intensities were depending on and influenced by each other.

So three main themes had to be represented: The intensity, the different city users and the connection of the six locations. The end results are the Axo Intensity Diagrams, shown on the facing page. Now it became clear which user or users caused the peak of the average intensity line. We were able to compare the differences between the users and within the same user group. Besides that we could see what the main path was in intensity and who was the main user of this path.

Decomposing the intensity chart in three lines, representing the three city users.
Using space?

Knowing now when the intensities are increasing and decreasing and by whom, we take a step back to the question where. Where exactly does the intensity take place.

The total map was based on our own perceiving in a particular area. To get more grip on the whole city center we used the program Space Syntax. The program calculates the intensities based on the width dimensions of the spaces, real physical borders. The result is shown in the image above, where again more weight means more used. Comparing the Space Syntax map with the Total map it is interesting to see that the Aert van Nes in East-West direction is more highlighted then the Lijnbaan area itself in North-South direction.

Looking more closely at the two maps we see that there are different greytomes in the same space, which means that another division is taking place within the space. The space is not divided by physical borders like a wall but is still divided in such away that the intensity in use on one spot varies from another spot of the street. Where the physical bordered space is fixed, the used space can vary through day time. The more intense the space is used, the more clearly non-used and used space becomes visible and the bigger the chance is that a flow occurs. The flow does not always mean that the amount of people has to increase, because if a smaller space is used by the same amount of people a flow can also exist. This means that the intensity chart that is based on people per minute, does not show if or if not there is a flow when a peak is visible. Creating a flow does not only depend on the amount of people but also on the space it uses. It is about the balance between space and users.

When we talk about the used space, we are not talking about one situation that can occur; a variation can be found. It can work as a space to be, like a public space. Or the contrary, more as a street, which is used to move from A to B, a place not to stay, the transitional space. Besides the use of the a space it is also designed as public or transitional. The design is fixed but the use depends on the different users and has the flexibility to change over time. Exactly this balance, between design and use, tells us about the quality of the space. The use can be conflicting with the design due to the rules of the users, which move their way through according to their own insight and goals. On the next page you will find eleven analyzed locations.
Space quality. The eleven chosen locations analyzed on space dimension, typology, street furniture, user and function to measure the design of the space.

<table>
<thead>
<tr>
<th>Space</th>
<th>Location</th>
<th>Typology</th>
<th>Picture</th>
<th>User</th>
<th>Function week</th>
<th>Function weekend</th>
<th>Design</th>
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<tbody>
<tr>
<td>1. Weena-zuid</td>
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<td>11. Oldenbarneveltspl.</td>
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Space quality. The eleven chosen locations analyzed on space dimension, typology, street furniture, user and function to measure the design of the space.
**CITY GATES**

**Entering and experiencing**

From the moment that the city users entered our research and became the base to understand the flow, another question arose: *Where do they come from? From Rotterdam or a neighbor city? And how do they move through the city itself? What are the points of entering and exiting the city? These city gates became an intriguing aspect of the research because it were mostly the starting points of the flows. Besides being the beginning or the end, they are also part of the experience of the city, which depends on the gate that is used.*

We qualified the gates in three categories depending on the different scales of the city. First we have the city gate, which represent the main entrances to the whole city. Think of the harbor, the airport, highway exits and the train station. Second, we have the district gates, the entrances that lead us to the city center district, like the train, tram and metro stops, car and bicycle parkings and of course the pedestrian routes. On the smallest and last scale we have the local gates, that bring the pedestrians directly into the commercial area of the Lijnbaan.

Although the biggest amount of users in the Lijnbaan is one and the same, the pedestrian, it has to be taken in account that before they all entered the local gate, they have different experiences of the city, because of their choice of the district gates.

To show this variety of experiences a frequency of photos is taken in the different situations to focus on the main aspect of the different scales of the city gates.
of that specific experience. Combining this information with related themes and images, resulted in five different experiences in collage layout.

On the map, shown above, the different district gates are made visible by the different designed black circles. From these points the city users enter as pedestrian in our research area through the red marked local gates. These local gates are mostly just used by pedestrians but they clearly have different dimensions, functions and qualities, which makes some gates more representative than others. With other words, the local gate can also be divided; in the small gate, that functions as a side entrance, and in the large gate, that functions as the main entrance.

As we could see with the analysis of the spaces there was a difference between the use and the design, both showing a way to represent the space as a transitional or public space. With the side and main gate we have a similar case and therefor use a similar approach.

We can make the distinguish between these two gates by looking at the representation of the gate or with what intensity that gate is used. Again two ways that do not have to end up at the same gate, side or main, and says something about the quality of the gate.

To measure the representative quality of the gate we used six categories. First of all it is about the proportion of the gate and the typology of the surrounding buildings. There should be a balance between the two sides, aswell in size as in style, to form a unity as gate. In second place, the function of the gate plays a part, where we look at the users and the placed functions. The Lijnbaan is designed as a pedestrian area but is still crossed by a few streets. On these spots the traffic not only enters but also overrules the pedestrian area. For example, looking at Aert van Nes (gate G) the typology, proportion and the balance are coherent with a main entrance, but the traffic overrules the gate area being the main user. Although the traffic can only cross the Lijnbaan, the pedestrians choose different paths to enter the area, because of the intensive use. The balance in use is off. Already introducing in this example the analysis also focusses on the intensity of the gate. Again, we used the total intensity maps where we added the times the activity at the gate was the highest.

Overall, the Korte Lijnbaan and the H. van Oldebarneveltplaats are the two main entrances to the Lijnbaan area.
Gate quality. The eleven chosen locations analyzed on typology, proportion, street image, user and function to measure the design of the gate.
CONCLUSION

Introduction
Finishing with the City Spaces we completed the research and entered the search for answers: the influence and the reason of the existence of the intensity. By combining the information of the different topics we are able to draw conclusions that answer our main question:

Can the existence of an intensity in a space directly lead to the conclusion that the space is then a public space? Knowing how flexible the intensity is, the question can be refraised. Is it possible that the public space is not anymore something fixed but something as flexible as the lifestyle of the community.

To answer this question we divided the results in the different scales, starting at the city center Rotterdam and then moving step by step towards the local scale of the Lijnbaan.

These conclusions will be the leading aspects towards the first steps of the masterplan, with which we will continue after this final chapter.

Archipelago City
Rotterdam is characterized by the tragedy of the Second World War and the opportunities that ensued it. This resulted in a city structure that is based on wide lanes and enormous blocks where the created ‘oversize’ is unique for Rotterdam. The urban blocks become worlds on their own and the wide main lanes the borders between the blocks. In this way functions are clustered and the connection with the other functions that are linked with the city center are reached with public transport or car. This results in different islands, that form an archipelago by the will to belong to the same Rotterdam.

Amsterdam, which also gained its city rights in the 14th century and has flourished from the trade as Rotterdam, shows a complete different urban structure. Museums, dwellings, commerce and public buildings are mixed which influences the perception of the city center. All the functions together form a whole, a heterogeneous structure. In Rotterdam the clustering of functions make it possible to just experience one part, one island, which disturbs the understanding of the city center as a whole.
Lijnbaan as a system

The Lijnbaan functions as the commerce island in the archipelago Rotterdam and works like the other islands as a separate system. As told in the previous part, the archipelago structure makes it possible to choose the goal beforehand and reject the chance of wondering through the other parts. Because of the location of the Lijnbaan, in the center of the archipelago, it has both users, which opens up an opportunity, because it means that not only the users with a commerce goal will pass through the area we have to develop. Second, this urban structure does not only define the routes and the spaces of the Lijnbaan but also determines the rules of expanding. Where a city like Amsterdam expands centric, the urban islands of Rotterdam increase through density.

Unbalanced system. The fast development of the Lijnbaan and Korte Lijnbaan causes other parts to shut of.

The Lijnbaan was designed and still functions as a commerce area, but time changed the balance in the area. Some parts developed faster and left the parts that could not keep up behind which caused an unbalanced system.

Now, in the commerce area the Korte Lijnbaan and the Lijnbaan overrule, shutting of other parts that just remain attached by thin strings. On top of that, the parts that have the opportunity to develop, develop so fast that the making of new spaces to house the function cannot keep up or does not even have a place to be built. As result, the public space is taken over, becoming degraded to the doorstep of the function instead of being a the public space. The Stadhuisplein is an example where the commerce function expanded and helped transform the public space into a transition space.
Flexible gates
Gates and city users are closely connected, if we consider that the size of the gate depends on the intensity caused by the users. The intensity worked as a guidance to show the influence on the city users and local gates. However, the diagram of the gates that conclude if they are functioning as a side or main entrance regarding the intensity only shows one outcome. Comparing this to the axo diagrams of the city users we miss the time framework. To understand the influence of the time, the axo diagrams of the users were combined with the interpretation of the gate. Depending on the time and the day the intensity changes which made it possible for the gates to change from main to side gate on one location within a day. We call this phenomenon, the flexible gate.

The flexible gate is of course only an understanding of the intensity in use and is not linked to the representation of the gate. Because of the flexibility, the main gates represent the possible connections to the other islands of the archipelago.

A possibility is created to connect the commerce island to other islands on specific times.
The definition of Intensity

As we started our research: The whole research started with the public domain, the public space and the public place, we ended with understanding the intensity in the Lijnbaan and extending the definition of intensity. But remarkable was, that contradictions occurred within the boundaries of this definition. Intensity occurred as well in transition space, as in public space. The spaces were probably used as intense in both cases, although they were based on different rules. For a more correct image, the definition was broken-up in two subjects:

1. Event Intensity. The intensity in a place
2. Transition Intensity. The intensity between places

The intensity occurring in a place is based on city events, like parks, plazas and boulevards, which capture a public quality. These events can be active or non-active, programmed or non-programmed. Because the place offers an event, it becomes a place to be.

On the other hand we have the intensity between places, which could be perceived in the Lijnbaan in the form of a flow. The transition intensity occurs in between city events and represents a place to move through, a place not to be.

Because these two intensities are strongly connected, the possibility arises to intervene in the event intensity and directly influence the transition intensity.

LIJNBAAN. SPACE DESIGNED AS PUBLIC WORKS AS TRANSITION. NO PLACE TO BE.
Intensity in use.
flow.space.time
RASA ANAITTE | THOMAS FROGER | FROUKJE ZEKVELD

Masterplan.
Introduction

The results shown in the conclusion from our research construct the base of our ideas of the master plan. The archipelago city structure in Rotterdam has been explained and shows that the city centre is consisting out of different islands. Also an important result from our research was the change of intensity during the day which causes a constant diversity in how people move through the area. This causes flexible gates which we see as an opportunity for the project at our location. While looking at the grid structure of Rotterdam, the important North-South connections draw the attention. The functions in the centre are more divers in the horizontal direction. In our master plan we have chosen to create this connection in the horizontal direction. By connecting the Aert van Nesstraat and the Meent we create a link between two area’s which are different in scale and function and so we are improving the quality of the city centre of Rotterdam as a whole. Stitching the different events occurring in our area is the key aspect for making this connection. Like we concluded in the research, the area is at the moment functioning as a transition space. It is not only our goal to create an opportunity for people to stay but also to enhance the quality of passing through. In order to reach this goal we need to reconstruct the chain of events.
By making the connection of The Aert van Neststraat and de Meent we create a new dimension. Now the Westersingel, which is in the future plans of the municipality seen as ‘the red carpet’ from the central station, connected with the Binnenrotte, which represents the old city centre as being the heart of Rotterdam with the old church and is the place for the big market. Within this range there are plural of important public buildings. This new line shows the visitor the city centre from a different perspective. Public spaces connected or not to the public buildings are crossing or linking with the Aert van Nesstraat and the Meent. We have analysed the visibility on these important buildings in our area together with the functioning of the façade. For some of the buildings it is already possible to see them from a big distance while others are more hidden. By mapping these aspects a clear vision on coherency of the active public spaces with their significant public buildings was created.
Analysis of the pocket

We first analyzed for each pocket how it works according to its vision. If the pocket is enclosed by buildings the public space is more tuned to itself while when the space has a clear opening there is also an introduction of the perspective. In case of the Schouwburgplein, the square at the new city hall and the old church have a clear opening. Even though the space has physical boundaries. On the other hand do the pockets at the Joost Banckertsplein and our location have a clear public space that is surrounded by buildings. We defined the pockets according to the term innercourt and plaza. The plaza refers to the pocket with a public space that is clearly opened up towards its surroundings. The innercourt represents the concept of the pocket being enclosed.
Functions and events
We introduce the term ‘pockets’ to explain the potential of this street and our urban block. A pocket is an open public space that is involved in our street and in addition improves the quality by its character and function. After the decision of which pocket will be active, we propose different kind of characters of each pocket. This character is given by its main function that will be carried out at that time. The idea of always having some of the different functions active in the area will change the image and feeling of the area as being a dead place at night. For example the pocket of the Schouwburgplein, which is of course nowadays an icon within the city, is well known in the area. Though it is most of the times found empty and people are rather walking around the square than over it. We want to propose the idea to bring back the theatre on the square. The feeling that people could perform and express themselves and others be entertained should come back into the character of the square. In case of the Joost Banckertsplaats it is a totally different intervention. Nowadays this green space is not used at all because of its oversized and meaningless design. Reducing its scale by combining the green with a sporting facility this pocket gives people from surrounding residential areas and offices an interesting location to go to. We propose the pocket of the Grotekerkplein at the old church as area which is active through its galleries (some of them are already present right now). The surrounding dwellings could be linked to this creative environment by open it up for the creative class to move.

Time and events
One of the problems of the Lijnbaan area is its transformation during the change of time. During the day the place is crowded with people who are coming to the big amount of commerce in the area, but after the shops and offices are closed the place becomes completely deserted. This is a known issue for the area and that’s why we think that with our plan of different events functioning at different times of the day the area is constantly active. This doesn’t mean that we want every function in area to be active 24 hours per day, on the opposite, the different events alternate in activeness during time. In this way we create a dynamic area during time by adding pockets which are coherently active.
Creative class

By analysing the street according to the method described before we could define all our potential pockets in our area. In order to construct a clear vision about each pocket and its functioning within the new system of the Aert van Nestraat and the Meent the current situation and use is of great importance. By doing so the main character of the street became visible. The presence of on one hand a big cultural square with theatres and cinemas at the Schouwburgplein and on the other hand the art galleries in combination with the commercial sector shows there is a missing link between the two areas which is located at our project area. The creative class is already active in our street. On one hand it is very professional (Schouwburgplein) and on the other hand is the medium creative class (galleries). We think the presence of the prime creative class is lacking in our area. Our pocket will have the function of a creative centre that is focusing on this level within the creative class.

Rotterdam has the ambition to strengthen her image as a dynamic and inspiring city. The reinforcement of the creative cluster is next to the harbour and the medical cluster, appointed to be the target of the economical policy. In the past years the Economical Development Board Rotterdam (EDBR) together with the Rotterdam Council of Art and Culture (Rotterdamse Raad voor Kunst en Culture) advised to join forces in order to give the development of Rotterdam as a creative city a big impulse. Their advice as stated in their report concludes three main objectives which are stated in the report “Rotterdam maakt werk van creativiteit”.

1. Increasing the cultural climate.
2. Increasing the economical rate of creative sector.
3. Visualize spatial policy and communications.

We believe that our design fits in the ideas and advices proposed by the EDBR and the RRKC. Besides this report also the Economical Vision Rotterdam 2020 mentions the importance of the big amount of creative education in Rotterdam. A lot of talent is coming from Rotterdam and this shows in the creative clusters. Therefore it is important to support the development of the creative city of Rotterdam.
Functions and scale
The creative class in Rotterdam has been active in Rotterdam for a long time in the region of the Witte de Withstraat. This street has been transformed in the beginning of the 90’s because of its bad character. The transformation was carried out according to a plan to introduce a cultural axis in Rotterdam that connects the Museumpark to the Maritime Museum. Nowadays it is a popular street for both residents and tourists. In order to understand the system and potential of the cultural street we made a comparison with the Aert van Nesstraat. The similarities and differences help us understanding the quality of public spaces in our area. When we look at the functions schemes we can see a clear distinction in scale. The Witte de Withstraat consists out of many different and small plots while the Aert van Nesstraat shows the opposite.

Borders
The Coolingsel is a wide and crowded street crossing the Aert van Nesstraat and the Meent. In the situation of the Witte de Withstraat we can perceive the same phenomenon. In this case it is clear that it is possible to have borders within the system of the street as long the street is working as one strong coherent system. The character of the street in case of the Witte de Withstraat is strong enough to deal with a border in the middle. Besides the presence of the border there is also another thing that is similar in both street. The streets are similar in their function as being a connection in the city. Both streets connect two major parts in the center with each other. The Aert van Nesstraat connects the Westersingel which is the main street from the central station, with the Binnenrotte which represents a part of the old city centre of Rotterdam with big markets etc. The Witte de Withstraat connects the Museumpark with the Maritime Museum.
Prime creative class

Previously we introduced the creative centre for the prime level of the creative class in Rotterdam. The prime level consists out of people who just started in the creative sector like students. Besides the educational target group it is important to focus on the people who are maybe not directly involved into creative activities but rather would like to be enjoy or be part of it. In order to understand the impact of a creative centre for this prime level in the city centre of Rotterdam it is important to look at the existing presence of creative education. Rotterdam has already been for years one of the major cities for the development of people in the creative sector in the Netherlands. Rotterdam is investing in the design clusters concerning architecture, technical and graphical design, audio-visual design and other new media concerning internet and smartphones. Because there are so many opportunities for a student to exploit themselves not only on the different levels of education (MBO-HBO-WO) but also the diversity of courses and studies that could be followed, Rotterdam is the location for connecting the creative sector within the system of the city centre.

Creative centre

Like mentioned above the focus of the creative centre not only lies on the educational part but also people who are not active in the creative sector. By making creativity easily accessible for everybody it stimulates the interaction and integration of creativity within the society. In this way the functions within the building are designed for both ways. The difference will be made in the sense of making certain functions profitable for non-students and non-profitable for students in order to make an easy accessible educational building.

Design

We want our design location to have its own identity of creativity. The space should function as a pocket within the system of the Aert van Nesstraat and the Meent. Concerning the existing pockets there are some things which are important in our case. At the Schouwburgplein the area is defined by the surrounding buildings and their reflection on the public space. The ground floor is working together with the buildings. In our case the buildings are reflecting on the public space. We defined three different aspects that will work together in order to create a public space that is working according to the system of the urban block in our street. Attraction, pocket and building are the tools to create one urban block system.

Creative education in the city of Rotterdam.
Urban scale

The Lijnbaan is a very large space. In order to understand the framework that we are working in we needed to analyse the area in a different way. By comparing the size of the Lijnbaan with other parts of cities it is easy to understand the bigness of the area and with what kind of scale we are dealing with. It is interesting to see that the Damrak in Amsterdam and the Spuistraat in Den Haag completely fit into the area of the Lijnbaan. Other famous parts of cities like the Financial Centre in Frankfurt, the Regentstreet in London or Broadway, Manhattan are fitting in the location.

Building scale

The block with our project location is as mentioned before very large. In order to start with a rough design we needed to realize the size we are dealing with. The removal of the current Rotterdam building is opening up a space that is surrounded by large and high buildings. Despite this the space is still almost big enough to cover the ground floor of the city hall in it. This gives us a grasp of the enormous dimensions of the place. Also the cinema or city theatre could easily fit in the design area as well.
Rules for design

Because we will design one urban block system that will function as a pocket of the Aert van Nesstraat, it was important for us to set up a framework of rules for design according to the idea of the creative class.

We set up nine rules which are making clear our ideas about dealing with surrounding buildings, pocket, creativity and current problems that are in the space right now.

1. Connection with existing buildings.
   The existing surrounding buildings in the area are an opportunity for one coherent block system. The connection of old and new creates not only a coherent system of the block but also gives the opportunity to (partly) involve them with the new function. The existing activities in the surrounding buildings could cooperate with the new function.

2. Transparency with Lijnbaan.
   The urban block is situated next to one of the busiest shopping streets in Rotterdam and shouldn’t ignore what is happening. In order to improve the interaction between both systems and improve their quality it is good to introduce a certain level of transparency through the current building separating the Lijnbaan and our pocket.

3. Covering expedition entrances.
   The ground floor of the existing buildings consists out a layer of expedition entrances. These entrances are the important supply on the backside of many stores or cafés, so they couldn’t be removed. Like mentioned before, the creation of a landscape improves the function of the pocket as a whole. By covering the first layer of the expedition entrances both issues are solved.

4. Connecting through the emptiness.
   This is one of the crucial and most important challenges of the design. In order to let the space be influenced by creativity it is important not to design everything. There will be a certain limit of designing the space in order to let it be controlled by the creative class.

5. Building according to the height of existing buildings.
   The existing block has a strong exterior character with very high buildings. We didn’t want the block to be overruled by its inner core. The space gets its attention from the existence and function of the pocket. This is why the new building should have the heights according to the surrounding existing buildings.

6. Public pushes its way through space and building.
   Both space and building are formed according to the use by the public. The space should function as a pocket and should be easily recognizable as such. Also the accessibility and view while being on the Aert van Nesstraat is crucial for the experience of the pocket.

7. Public space not only on ground floor.
   Public spaces are separated over the building envelope according to not only the horizontal but also the vertical direction.

8. Created for and by the creative class.
   The space should have an amount of deformable and unpredictable space in order to let it be influenced by the creative sector.

9. Created for and by the creative class.
Building volumes

The building will consist out of three different parts joining together. Each one of us will design its own part of the building. Together we will design the public spaces that are connecting the parts with each other. In order to equally divide the functions we separated the creative centre into three main parts: the creative incubator, the express lab and explore lab. All three volumes will be physically connected through the old monumental building. The volume concerning the creative incubator is focusing on the theme of commerce within art with galleries, studio’s and flexible working spaces. The express lab will be situated between the old monumental building and the existing buildings and focuses on the form of art that is concerned with physical performance like dancing, theatre and music. The explore lab will be the place where people can meet a broad range of different kinds of art in order to explore their creativity through workshops. All three buildings will have to work together through the design of the landscape and the main public square in order to achieve one urban block system. The creative incubator will be designed by Rasa, the express lab by Froukje and the part concerning the explore lab by...
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RASA ANAITTE | THOMAS FROGER | FROUKJE ZEKVELD

Essay.
Introduction

Cities are constantly changing. Throughout history we can see the development of the cities by the changing needs and behaviour of people. The very old cities, which were originally designed for travelling by foot or horse had to evolve through time to adapt to the desire of people to use other transportation systems like the bicycle and the car. Cities and towns designed after the industrial revolution had completely different approaches for design than the medieval towns.

The triumph of the middle class industrialists and businessmen over the landed class of nobility and gentry is a big change in the social culture that was witnessed during this period of the Industrial Revolution. More and more ordinary people found increased opportunities of employment in the new factories situated within the cities. These increased opportunities resulted in an explosive growth of the cities during the beginning of the 20th century which can be considered as the starting point of the ideas of the first metropol cities. The simultaneous change of these cities together with people behaviour became an interesting phenomenon to study. As Simmel indicates in his book ‘Die Grossstadte und das Geistesleben’: “The metropolitan type of man – which of course exists in a thousand individual variants – develops an organ protecting him against the threatening currents and discrepancies of his external environment which would uproot him. He reacts with his head instead of his heart”. This alteration in behaviour of people caused by changes in economic and environmental fields modified the functioning of the Avant-garde. Tafuri mentions in his Architecture and utopia that there were different tasks for all the Avant-garde of the twentieth century in order to be able to react on this development.

A lot of metropol cities faced many problems during this period of change and industrialization. Most of the inhabitants were forced to live in poor conditions such as air pollution caused by factories being situated in or close to residential areas. In addition dangerous situations occurred on the streets by growth in number of private cars. These type of problems caused by the industrialized city needed a reconsideration and solution. The meaning of the use of the public and private spaces changed dramatically because of the new rules of design. The concept of functionalism started in the mind of the contemporary philosophy. The main idea is that mental states of the human being are created by their functional role. Functionalism in general could be seen as the theoretical level between the physical implementation and behavioural output. (2) Within architecture this means that the construction and exterior of a building are determined by the function of the building.

Functionalistic thinking caused changes in ideas about mobility and public space. Rotterdam is one of the many cities in which the idea of functionalism is still visual. Rotterdam is the design location for the graduation studio of MSc-3 Public Realm and so it is an interesting case study for this subject.

This report will explain the changes made by the functionalistic approach. In order to understand these changes it is important to first make clear what functionalism actually is and pursues. In chapter one there will be an introduction of functionalism followed by the second chapter concerning the development of Rotterdam. These two chapters together create a solid base to understand the reason why Rotterdam is like we experience it nowadays. The third chapter combines the two topics of the two chapters by focusing on the specific elements of functionalism in Rotterdam. The report tries to find a solution to the problems of functionalism nowadays in Rotterdam which will be described in the conclusion.

Functionalism

Throughout history of the human settlements, streets and squares were basically functioning as the backbone of the buildings. The functionalistic planning starting in the late 1930's until the '70's broke through this tradition.

The new ways for designing the city were bounded between the aesthetic of the architects and the functionalistic ideas about good and healthy urban planning. The alternative of the existing and overpopulated workers areas in the old centres of the city were the new, light and free standing buildings. During this period of functionalism the people criticized the old city centres as the “romantic failures”. The only thing designers didn’t discuss about was the effect of the form of the building and block on the social environment.
between people within the city or the urban block. None of them was of course trying to reduce the social activities in the area, on the opposite. Designers had the utopian idea of creating green public spaces between the housing in order to open up the possibilities of new social life and interaction. But no further studies on the actual correctness of the meaning of these green social zones were done. By analysing the most characterizing properties of the functionalistic approach we can conclude what consequences this way of building had on the quality of the social life between buildings.

A short summary of the most critical points of functionalistic planning in relation with the quality of the public space between buildings as they are analysed by Jan Gehl:

- Areas which can mostly recognized by their big measures, straight lines, endless perspectives and overwhelming uses of spaces, are normally not really nice for walking through or staying for a longer time. Besides these overdesigned dimensions, this architecture doesn’t correspond with a big part of the world’s climate and therefore reduce the possibility to go or stay outside even more. This urban approach is more pleasant to look at than actually walk through it.
- By making the distance longer between buildings, architects created the possibility for more light in the area. Also the implementation of green areas was possible. On the other hand this also means that people and their events will be more spread from each other.
- By orientating the buildings on the sun instead of on the streets, a maximum of pedestrian paths is designed. Therefore a minimum of human activity per path is the result.
- The decision of dividing the most important functions like housing, working, school and shopping reduces on one hand some obstacles in the society but on the other hand it eliminates the possible advantages of mutual contact between citizens.

Development of Rotterdam

Of the biggest cities of the Netherlands, Rotterdam is often considered by many to be the most suited city to meet the demands of modern mobility. The reason can be traced back through its turbulent history. The city became important and well known by its flourishing trade in the beginning of the twentieth century when its port started to focus more on the function of loading goods directly from one ship onto the other instead of storing it in warehouses like other big ports did. Because of the bombing in the second world war the city centre could be reconstructed according to the desire of the new demands of modern motorized traffic like creating new broad avenues. Of the biggest cities of the Netherlands, Rotterdam is often considered by many to be the most suited city to meet the demands of modern mobility. The reason can be traced back through its turbulent history. The city centre could be reconstructed according to the desire of the new demands of modern motorized traffic like creating new broad avenues.

1. 1854: Water project

The water project was designed by architect Willem Nicolaas Rose in order to find a solution for the growing amount of problems in Rotterdam’s public works like diseases and overcrowded places near the harbour. The plan gave organization and clarity to the direction for growth of the city by creating a clear cohesion between the systems of streets and promenades.

2. 1879: Port construction

In the following years Rotterdam was facing an explosive growth which changed the main character of the port. Instead of storing the goods they were shipped onto other kinds of transportation in order to directly continue the trade. This shift of function of the harbour asked for a complete different approach for the harbour. De Jongh provided the city with new docks outside the city centre for better connection with the railroad tracks.

3. 1913: Coolinge

Burgdorffer, head of Public Works in 1910 had a vision for shifting the existing centre at the Sint Laurenskirk with a bigger centre on the western edge of the city which would more relate with Rotterdam’s new scale and allure of the new Docks. He decided to fill the Coolvest and create a boulevard with new important functions like stock exchange, city hall and shopping.

4. 1928: City expansion plan

In 1924 W.G. Wittenveen became head of the department of expansion and buildings in Rotterdam. He worked on an of a good physical infrastructure and planning tradition which had been created around its movement and urban dynamic. It is possible to feel the ideas of the functionalistic movement during the beginning of the 20th century in Rotterdam.

Historical urban development

To understand the reason of the significant changes in Rotterdam’s city traffic it’s useful to look at the ideas of development about the urban history. There are ten main visionary plans of Rotterdam since 1844 which I will shortly summarise.

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Development of the old closed, to the new open building system

Las Vegas before 1940
8. 1974: Urban renewal
Because of plans like the Rotterdam Diamond and other big scale projects, many inhabitants were angry about the lack of attention to the small scale solutions for citizens. J.G. van der Ploeg lead the urban renewal program for the city in 1974 as a result that the attention for regional motorways was shifting to pedestrian and bicycle friendly roads, restriction of the use of the car in many streets. Also the Coolingsel was renovated by the creation of more terraces, pavilions and public gardens in order to decrease the amount of traffic.

9. 1991: Kop van Zuid
The addition of a new city icon by creating the Erasmus bridge in 1995 was a direct result of the vision that started in 1990 for the development of the Kop van Zuid (The South Bank of the Maas). The Structural Plan’s ‘windows on the river’ in 1946 was extended to the ‘leap across the river’. Many administrative, business and recreational functions that were originally situated in the old cities triangle were now tempted to cross the river.

10. 2001: City on the river
In last decade Rotterdam had been searching for its new identity. This search started with Joost Schrijnen who was the first person to say that Rotterdam needed to focus on the Maas as the most important public space of the city. He states that this should be an attractive location for housing and recreation and no longer a transport axis. He made a plan for reallocation ofockland functions and revitalization of existing residential areas.

Infrastructure landmarks
Mobility, in all different kinds of transportation, is one of the most defining aspects for creating the image of Rotterdam. Parts of the infrastructure nowadays are the most remarkable landmarks in Rotterdam. These landmarks have a great impact on the experience of the public life. People can easily recognize these icons and they help them finding their way through the city. Also they form a great value in understanding the system of infrastructure and mobility.

The river plays an important key role in the development of the city and the infrastructure connecting the northern part of Rotterdam with the southern part are important for people to position themselves through the city. The Maas Tunnel is a symbol of speed and modernity that went beyond the imagination of people when it first opened in 1942. It was one of the first structures that helped relieving the small ferries over the Maas from the city and regional traffic. Still it is one of the most important routes for transportation through the city. Another important structure that transports a big amount of regional and national traffic is the Van Brienenoord bridge. Because of the crossing of the highway over it, it became one of the crucial spots for the Netherlands for the connection with the South. Probably one of the most iconic bridges in Rotterdam and even in the Netherlands is the Erasmusbridge. Since the opening in 1996 it has been the symbolic heart of contemporary Rotterdam and an eye-catching trademark. It’s shape symbolizes the distorted relationship in the development of the city between the north and the south.

Other important landmarks which helps people orientate in the infrastructure of the city are the Central Station because it functions as a essential node where different types of transportation connect with each other. Also the Hofplein with its monumental fountain and the Sint-Laurenskerk, which is one of the few buildings that refer to the old centre of Rotterdam before the second world war, are important and helpful for the navigation through the city.

Functionalism in Rotterdam
The first chapter showed the most common aspects of functionalism and in this chapter these aspects will be compared with the developments of Rotterdam showed in the previous chapter.

Transportation
Noticeable from the development of Rotterdam are the structural plan of Van Traa, the Rotterdam Diamond Plan and the construction of the metro system after the second world war. These plans are based on the functional ideas which were necessary for Rotterdam at the time. It was not only important for Rotterdam to recover as fast as possible but it was also an unexpected opportunity to create a city plan that could solve many problems that were occurring in the bigger cities of that time.

Because of traffic problems before the bombing the decision of creating a new city plan based on the optimization of transportation was essential. Because the plan consisted out of streets connecting the east and the west and the north and the south, the city was divided in different “islands”. Because of the idea of fast and easy accessibility the idea was created to divide the main functions over these islands. The city was segmented with clusters of functions like shopping, residence, office, culture and leisure. To improve the quality of the mobility through the city, streets were made bigger and more wide. Because of this, streets could now support more uses at the same time like trams, metro’s, cars and pedestrians.

Today still the plans are visible in the city. Wide streets like the Coolingsel and the Blaak are dominant in the city because of its various traffic. People often refer to Rotterdam as a city of
big distances and cold environment. This is one of the results of the dispersion of the functions. People in general have to walk relatively far distances to get to their function of needs. The distances are not much longer than in any other city like Amsterdam or Utrecht, but because of the overwhelming scale of streets and buildings it seems longer. Besides this the scale causes also a lack of shelter for people. Wide streets are pleasant when the sun is shining, but the climate in the Netherlands is normally not that comfortable with easy winds and rain.

Rotterdam counts an average amount of deaths caused by traffic of 3.5 per 1000 inhabitants. This is much higher than the average of the 35 biggest cities in the Netherlands of 2.83 or the average of the Netherlands in general (2.27 per 1000) (4). This means that the combination of the different users of traffic, results in more dangerous situations than in other cities of the Netherlands.

**Lijnbaan**

It is interesting to zoom in onto the design location of the Public Realm studio and recognize the results of functionalism in the area around the Lijnbaan.

As stated before the Lijnbaan is a result of the Structural Plan of 1946. Therefore it was created out of a functionalistic approach to have an ultimate pedestrian area which is safe from cars, all the important commercial activities are close to each other, easy accessible and the introduction of green public spaces. It was because of these reasons that the Lijnbaan used to be a very successful and high-end area with the best shops. Over the years the area had changed gradually and some of these characteristics have changed. For example, the Stadhuisplein is a beautiful public square that provides a beautiful view of the old city hall but it is completely occupied with empty terraces and commercial signs. It doesn’t even feel like a square any more, but rather a small street because people are forced to move on one side of the space.

The green public spaces in the area are not used and the Aert van Nesstraat is a dangerous crossing because it became an important route for vehicles. The Lijnbaan has a lack of identity and a lack of recognition. Because of its location it can also be considered as a transition space for people moving from A to B within the centre of Rotterdam.

**Conclusion**

Most of the people in Rotterdam live in houses build after 1946. Therefore it was created out of a functionalistic approach to have an ultimate pedestrian area which is safe from cars, all the important commercial activities are close to each other, easy accessible and the introduction of green public spaces. It was because of these reasons that the Lijnbaan used to be a very successful and high-end area with the best shops. Over the years the area had changed gradually and some of these characteristics have changed. For example, the Stadhuisplein is a beautiful public square that provides a beautiful view of the old city hall but it is completely occupied with empty terraces and commercial signs. It doesn’t even feel like a square any more, but rather a small street because people are forced to move on one side of the space.

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Appendices

Footnotes

1) Tafuri, M., Architecture and Utopia, page 84
2) Block, N., What is functionalism? a revised version of the entry on functionalism in The Encyclopedia of Philosophy Supplement, page 1
3) Gehl, J., Leven tussen huizen, page 35
4) Meurs, P., In Transit: Mobility, city culture and urban development in Rotterdam, page 185

Literature


Meurs, P. (2003) In Transit: Mobility, city culture and urban development in Rotterdam, NAI Uitgevers, Rotterdam (Netherlands)


Ruiters, W., Sanders, F.M. (2008) Urban dynamics for the city of Rotterdam, Papers report “Call for Participation”


Zündert, A. van (1990) Mobiliteitsontwikkeling van Rotterdam, Gemeentelijk bureau voor Onderzoek en Statistiek, Rotterdam (Netherlands)
Introduction of the inner city of Rotterdam

Rotterdam had several stages of development and in each of these stages city could be seen striving to create an identity through which it could be recognized. In third development stage Rotterdam had purpose to become modern city. The shaping of a city in this stage began with in a lineage of Coolangiel were a new city hall and post office were situated. It referred to the French boulevard and was indentified as prestigious spot in the city. In this stage the ambition for the modern city was also realized through Maas Tunnel connecting north and south bank by using revolutionary building technique.

Interruption of the bombardment by the Germans in 1940 destroyed inner city of Rotterdam and city was forced to surrender to Germans. Dramatically Rotterdam had lost its city heart and only in 1945 when city got its liberation the rebuilding started. The clear-out accumulated the idea of modernization that already had slight beginning before war. The context of the postwar period was related with modernistic approach towards urban planning. The idea that was emphasized by CIAM was to create rational urban structures which would bring order and stability to the cities. Cities were constructed in relation of increasing use of the car, the possible increase of population and clear arrangement of functions.

However another ideology was appealing for the reconstruction of Rotterdam. The vision that was borrowed related to ideology of the decentralized city with its American-style separation of functions. It followed further on in relation to American grid or matrix-model such thoroughfares were constructed as the Weena, the Bliak and the Maas Boulevard.

In general, Rotterdam as the city port turned to demands of world economy and from national became world port. Another bend in creating own identity started in 1985 with urban redevelopment under the motto "The New Rotterdam". In this period the constructions started on metropolitan projects and the scale of the city became important again (Oosterman, 2001).

The attempt is to understand the genesis of how centre of Rotterdam was reconstructed after the war in order to identify and even mediate the future possibilities in shaping the city.

Post-war reconstruction of the inner city of Rotterdam

Soon after the bombing of the Rotterdam, plans of reconstruction started to emerge. However, in a way reconstruction had already started before the war. The old city with narrow streets and poor houses was considered irrelevant for the modern city Rotterdam was aiming to be. The city before war was already changing by filling in the structure with modern buildings as well as developing infrastructure projects. The modern tunnel crossing the river Maas to the south which was started in 1937 was a great symbol of the modern transformation as also was the magazine Mästunnel which constantly informed on the progress of the tunnel construction as well as other new developments.

So ironically after the attack of the Nazi air force "the city appeared as the photographic negative of the pre-war clearance maps on which the blocks to be demolished were marked blank; after the removal of the rubble in 1940 only the buildings on the white
areas remained standing” (Crimson, 2002).

The initial reconstruction plan was started by Witteveen who was an official in charge of city development. In 1941 he presented the Basic Plan for reconstruction which because due to the war was only approved in the 1946. The plan by Witteveen was not a radical denial of the past but rather a search for a genius loci. “He posed the rhetorical question: can we ignore the past completely and if not, which principles should be the leitmotif when designing a new city? ‘There was seemingly great freedom of movement but in reality there was a surprising restraint’ claimed Witteveen (Crimson, 2002). Although the plan was based on the recollections of the old structure and the street pattern was still visible after the debris was removed, the new requirements for infrastructure were adopted as primal condition so that “the new routes were broadened derivatives” of the old streets. (Crimson, 2002). The Coolingsel and the Hofplein were the parts of the new modern traffic system.

The Basic Plan was also influenced by Van Eesteren who made the parcelation in the area west of Coolingsel even more rational turning it into a system of rectangular blocks. The major influence on the further development of the plan was made by van Traa who was a successor of Witteveen. However his perspective on the reconstruction was quite different from his predecessor. Van Traa did approve for the reconstruction of any reminiscent of the old city. Already involved in the initial planning van Traa expressed his position giving preference to the flexibility of growth rather that beautification and form. Until the 1955 the Basic Plan undergone many alterations leaving only the main framework of the traffic network less changed. The building structure between the main roads were radically modified. The rectangular building blocks with service courts to the west of Coolingsel, for example, have been blended into the elementarist composition of the Lijnbaan.

The Lijnbaan indeed became the major structuring element of the whole development west from the coolingsel. The Lijnbaan was designed in 1948 by Van den Broek and Bakema who proposed to free the shops from their superstructure, adding a row of high rise flats which were placed at right angles to the shops. The shops formed a pedestrian street. Although architectural criticism usually considered the Lijnbaan to be a suburban shopping mall placed in the inner city, van den Broek intended this concept to enable the construction of a massive urban centre with high densities (Wagenaar, 1993).

As the city block in Witteveen’s plan was a normative prototype, in van Traa’s an invitation to total deconstruction of the type. “Where a generic city block had originally been set down in the 1946 plan an official or high-rise block of flats was now projected, standing there in splendid isolation. So the plan of 1955 is much bolder than 1946. It dared to leave large segments open, without having to set down a building, park or complex for diplomatic reasons (Crimson, 2002). This became the major structure of the area west of the Coolingsel.

This could be also seen as a consequence of the overall shift in Dutch planning policy, which lost its character as a discipline that focused on the physical three-dimensional design leaving the third dimension to (modern) architecture. “Unlike the carefully shaped plan made by Witteveen, the final version of Basic Plan limits itself to the physical distribution of human (economic) activities, defined in only four main categories over the two-dimensional surface of the town. The three dimensional finish of the plan was left to architecture.” Architecture was liberated from town planning as a discipline that provided a carefully designed, three dimensional framework. This liberation was further enhanced by softening building regulations and building codes, thereby providing maximum opportunity for architecture to shape the townscape (Wagenaar, 1993).

The development of the area followed the patterns set by van Traa and the even the Rotterdam Inner City Plan of 1985, which was supposedly the final phase of the post-war reconstruction. In many ways still resembled the Basic Plan. It also featured a return to specialized zones where the major elements were Park Triangle, Water City and the Center Diamond. The later was mainly the area west of the Coolingsel which was to be developed to shape the high rise character of the center. In the late 1980’s and 1990’s this area started to grow in metropolitan like residential and office towers gaining the shape of global CBD district.
Ideologies towards grid urban planning

The grid planning could be traced in large number of cities since the ancient times. The motivation for the grid in means of ideal planning could be recognized through Old Kingdom worker villages at places like Giza (2570-2500 BC). The primitive grid structure was the best and quickest way to organize city but also the homogeneous population with a single social purpose. The motivation for the grid greatly varied for different purposes. It served for the military arrangements in Roman castra, religious covenants, mercantile capitalism (railroad towns), and planning for the industrial city. In respect to urban growth grid was employed as convenient way of expanding the borders of city. Grid planning was understood as clear order which could be easily perceived as well as organic form allowing for a city to spread. In more practical understanding of this arrangement it was easy to make and easy to sell.

A model of grid also appeared in the Netherlands in the 16th century. One of the examples of this type of planning was the ideal port city plan by Simon Stevin in 1590. The combination of gridiron plan by incorporating canals into the city fabric had economic and defensive purpose. Stevin’s grid was not just a rational way of parceling out the available land, it also illustrated his ideas about symmetry as an organizing principle of functions in a variable hierarchical order. One of the purposes of the grid massively employed in the 16th century was establishment of order and structure in the tabula rasa of the South American Spanish colonies. This was largely the establishment of leading power. In historical perspective cities of South America such as Quito, Buenos Aires, Bogota, Santiago de Chile and Valparaiso which all of them were founded in the decade between 1534 and 1544 were all developed by the same Spanish planning system, the Spanish grid. This “legalistic, programmatic approach to the city planning avoided particular distinctions among cities and identified the functional aspects of planning with its administrative control, and so, with uniformity” (Kostof, 1991, p. 114).

The irregular pattern of the medieval city core – the dark area at lower left – is shown sliced by a supergrid of (unbuild) boulevard. The 18th-century grid of Barceloneta was abandoned and the new open block was introduced which was the superblock. Modernist argued that grid was composed for traffic and automobile changed the character for the worse, turning city blocks into besieged islands. The rectilinear planning was exercised even in the modernist planning paradigms, but that of a completely different scale and purpose, which was the superblock. Modernism came with a manifestation that old cities were low quality, unhealthy and dirty. This was also seen as a problematic of the grid which motivated modernist to rationalize city in abandoning the grid as such. The outcome of this was an idea of an internally oriented superblock which boundaries would be traffic arteries.

The revival of the inner city of Rotterdam became revival of metropolism as Rene Boomkens is describing in “The New Metropolism”. The goal of Rotterdam is to create its identity through the super block freestanding terraces (Zeilinbau) in parallel rows. One façade which is long pared down is facing onto strip of greensward and the short end-face usually blank is turned to the circuit of major streets.

With a T-square and a triangle… the municipal engineer could figure out the number of square feet involved in a street opening or in the sale of land. Mumford put it: An office boy could figure out the number of square feet involved in a street opening or in the sale of land which was understood as clear order which could be easily perceived as well as organic form allowing for a city to spread. In more practical understanding of this arrangement it was easy to make and easy to sell.

The palace compound along with important public buildings, and their plazas occupy a central band of blocks; while neighborhood churches and markets are uniformly disposed through the city.
skyscrapers as a metropolitan city in this way making vertical city and forgetting its horizontality. In means of identity it would be hard to define its essence as high-rise building does not carry any identity, it could be replaced in any context as it is faceless. In all considerations all the cities that were constructed as the new structures in "tabula rasa" are "Generic Cities" otherwise it would be historical cities. "The Generic City is the post-city being prepared on the site of the ex-city." (Koolhaas, 1995). Herewith the question remains, in which way the inner city of Rotterdam should be shaped in the future, while in the first place we need to know how it could be indentified at present.

The center of Rotterdam could be seen as made of different patches of which the parallel to the superblock can be set. These patches are segregated from each other by differentiations of functions. Each of these islands is programmed to represent itself as a part of Rotterdam centre. Moreover each of those patches has differentiations in the inner structural and functional array.

The remains which survived the bombing, the elements of American style urban blocks with high-rise buildings and the modernistic elements such as Lijnbaan and highrise apartment blocks are mingled in one of the most central patches of the city. It becomes hard to define which rules should or could be followed to identify and develop the structure. Further more the question consists of rethinking the image or even an identity of the area. It could be proposed that this complexity of existing and developing form followed by many contradictions in each of them perhaps needs certain conceptualization. This conceptualization could bring at least some clarity in understanding and possibly operating on the structure. Perhaps here we could employ the dichotomy of block and superblock then asking a question whether at least any of them could be chosen as a common logic (if there could be a common logic) towards identification and further development of the Rotterdam centre.

One of the examples that demonstrate treatment of the block in inner city of Rotterdam is proposal of Dutch architectural office OMA. Mixed use high-rise cube designed in the block between Coolinglei and Lijnbaan, where it interferes between two buildings that were build after war. This new volume fills the volume of the block emphasizing its third dimension with a pure form. In relation to the cityscape that is formed by high-rise buildings it seems to continue that tradition in its scale. The ground floor perimeter of the building creates continuity of outside space in to inside space. The façades opens up towards intersection of important streets such as: Coolinglei, Lijnbaan, Binnenweg and Beursdreef.

The openness in its unique from do not destroy the unity of the block volume at the same time creating the smooth transition from outside space in to inside. Although the division between two spaces could be hardly defined, inner space of the building in its openness creates strong relation to outside and possibility for public to observe city from high point makes building even more integrated in to the city. “Public program like restaurants, exhibition and media spaces are situated in the middle of the block and on the top floors. From these floors the public will be able to overlook the entire Rotterdam area. The biggest challenge will be to attract the people to go up. Slanted public elevators that stop at few floors only will make an event of the travel” (Official internet site of OMA architectural office).

On the other hand it is evident that the major tool for the recovery of Rotterdam center has been the impressive architecture which supposedly would accumulate the use of the spaces. If we follow the idea of buildings as unique stars in islands for intensifying use of the city, the concept of a superblock could be seen as a leading logic. The island apparently does not try to construct homogenous urban plan instead it continues the idea of having city heart as a pile of remarkable building.

However, one of the important points is that the real play of the public life starts on the ground. City-forms create tissue of lines on the ground. The shared ideology of the grid could be defined as a tool of perfect order which was perceived from birds-eye view of contemporary urban environment by their creators. In this way inhabitants are defined by different types of differentiated areas without putting an emphasis on human scale. “We had lost the understanding of what the real functions of buildings and spaces should be. The society, and the architects who served it, had created corporate signature buildings, ornamental malls, and escapist Disneyesque fantasy architecture. They remained cloistered behind walls of indifference to those around them. Despite the sterility and coldness of modernism, the best modernist architects had a utopian dream of providing light and air for all who inhabited their spaces. In contrast, postmodernism seems self-conscious and self-absorbed” (Wolf, 1994, p. 203).
Appendices

Footnotes
1. Centre Square, watery, and tunnelled Triangle Park, the four core areas in the Inner City Plan 1985. Two boulevards, which run from north to south, linking the Centre Square successively with the Triangle Park and the Water: Westersingel and Coolsingel / Schiedamse Dijk. Westblaak Weena and bolts to form the east-west between the four areas. Source Bulthuis 1987

Bibliography

Boomkens, R., OASE #75 25 Years of Critical Reflection on Architecture, NAI Publishers, Rotterdam


Oosterman, J. (2001) cities in transition, edited Graafland A., 010 Publisher


Source of the title image http://maps.google.com/
ARCHIPELAGO CITY: AN OPPORTUNITY TO EVOLVE THE PUBLIC DOMAIN

‘Architecture is an eternal discipline. Its language, evolved through the ages, is rich and versatile enough to express everything essential and to serve most human needs.’

Architecture and urbanism are moving closer towards each other, blurring into a single discipline. This means that projects do not only focus on the building block but on the surroundings, the city structure and the urban meaning of the block. Architecture can be seen as an eternal discipline which we cannot dismiss out of our world. We need it to define the places where we live, on the scale of the building as well of the urban tissue. Within the contemporary city and thoughts the public space is one of the discussion items. It seemed appropriate to mingle myself in this discussion and try to find where the opportunities lie in the contemporary city for the public. Architecture designs to serve the human needs, it serves us in the way we live. To live can be explained by use; we need a place to sleep, to work, to buy, to create. But an important side of living is to wonder. ‘To wonder is to be curious, to engage the mind, but to wonder is also to be astonished or in awe, to arrive at a state where the mind has nowhere to go’. We try to make sense of the world, and while we do we assume along the way. Architecture needs the discipline to flourish the wondering in the citizens, to let them experience the architecture and to let the architecture dwell the experiences in society, in the public space.

The Change of Society. The individual organization

The evolved language of architecture has changed due to the changes of community. The life standards of the community have shifted during time and as reaction, also our desires and wishes and the way we interact have changed. From a member of a community, where we needed interaction as a way to live, we now have all the freedom of choice to organize our lives as individuals. The rise of technology developments has played an important role is this changing lifestyle. The car was an important development which didn’t only have its effect on the lifestyle but also directly on the urban structure. This piece of machinery made it possible to reach greater distances and on top of that you did not have to leave the safe environment of the private surrounding. Destinations could be more widespread without becoming unreachable. Peter and Alison Smithson took this still rather unknown phenomenon as starting point for their proposal of a new community. They saw the car, and the new infrastructure that came with it, as an opportunity to let a new and more useful community system emerge, the Cluster City. ‘It is useless to pretend that our lives are so simple that we can all live where we work’. We have to accept that families have more than one ‘worker’ in them and that the choice of where one lives is a complex matter. Our job is to give choice; to make places that are meaningfully differentiated; to offer true alternative lifestyles.

Areas of high intensity of use – related to industry, to commerce, to shopping, to entertainment – would be spread throughout the community, which were connected to each other by urban motorways. The motorized traffic grew exponential and thus became the network of motorways more and more importance within the urban structure. The infrastructure functioned, instead of the connection between the different functional areas, as sharp scissors, cutting them apart.

Another development interfering with the change of lifestyle was the media, which had a more social impact. The television changed from information medium, to commercial merchandize machine. The created images – only able to be made with a subjective eye – show all the different aspects of the world, from news, to information of other countries or cultures, to entertainment. To understand the surrounding these images are functioning as the base of information. It is not necessary anymore to wonder when a wide range of images to choose from is already served on a plate. Also the wireless network reflects on the social behavior of the community.

The last technology development had especially a great impact on the unpredicted meeting. No interaction seems to occur if it is not staged. The unpredicted meeting got sent away from the world of interaction. The mobile network, and later also the internet, made a lot of in-person appointments superfluous. It became possible to exchange information without actual interacting. This also brought along a more urban related, side effect: ‘(...) at the same time [as telecommunications revolution has decreased
the number of functionally necessary meetings) new and usually higher demands are made of the places where the meetings are held: Where the mind became more and more individual because of the freedom of choice, the demands became higher for the places where interaction was going to take place.

Besides the rare and functional meetings, which turn their back towards the opportunity for interaction, the rising and easily accessible world of the internet had a great impact on the social structure. The combination of the city infrastructure that seemed to have reached its limit and the never ending space that the internet offered, had an effect on the work environment; the home workers appeared. Although the function of the infrastructure was designed to be the connection between the different clusters, where work and dwelling could finally be separated, now the virtual has shown the world its possibilities and taken over. We are now routinely transporting our simulated bodies to alternative online worlds, where, besides social activities, we are doing most of our mind work in an inter-connector space shared by 1.5 billion internet users. Without assuming that the real world will completely be taken over we should be aware of this new forcefield in between the ‘physical realm and the emerging digital infrastructure’.

The Archipelago City. A Structure

In short, people have changed. People have ‘individualized’. With this means that the idea of being part of a whole, of a community, has shifted towards an individual approach where the focus was more on organization of life. They choose and organize their goals - different places to work, live, leisure and interact - as an individual.

An interesting aspect of this ‘new’ individual organization is that the urban structure has been transformed. The idea of offering true alternative lifestyles that was introduced by the Smithson’s into the concept of the cluster city evolved into a flexible model. Closely related functions are now clustered together, to support the pragmatic character of the contemporary city, creating intensified spots within the urban field. The more dense, compact and concentrated these function clusters are, the more they become closed off to their immediate context. Functional and pragmatic islands arise within the sea of urban tissue, constituting a system we could refer to as an ‘archipelago’. In this new structure, based on the individual organization, people can choose in the most convenient way. ‘People put together a lifestyle, as it were, from the components on offer’.

Rotterdam, the harbor city, got the opportunity, due to an enormous tragedy, to construct a new city with the modern ideologies that were vivid around the 1960s. The modernistic approach was marked by its functionalism, giving the individuals the possibility to choose. The bombing of Rotterdam gave them the extraordinary chance to operate right in the middle of the city, right in the heart. Two main aspects that can be found are the importance of the infrastructure and the clustering of blocks supporting a main function. In the city plans made for Rotterdam the OpIlo, the architect group in control of the new city plans, designed for a future city. The future was important. In the first place, a part of this group was member of Team10, like Bakema, who had a major part in the reconstruction of Rotterdam. The modernistic approach could finally be used and shown. In the second place, the bombing gave the opportunity to give a new center to a 14th century city. All the worries of the old city center were washed away in a single moment and the opportunity arose to think ahead to which standards the city should live up to in the future. The first plan of Van Witsvood, which he presented only ten days after the bombing, was just a base for the new infrastructure network. A few months later he completed the city plan which was able to house 2.5 million people. Although this was not the final plan, which was developed by Van Traa in 1946, it already shows the importance of the motorway. The first plan only showed an infrastructure network, instead of the blocks, and thus shows the thoughts about the car as the new way of moving within the city and between the cities. With a good infrastructure as base the blocks would be placed automatically. These blocks had own rules and were characterized by their size. An insurmountable consequence was the space between the blocks that went along with the new scale. Another result of the focus on the infrastructure was the oversized space between the blocks. Dwelling was seen as a function that did not fit within the image of a modern city center and was pushed to the sides. Commerce and cultural functions on the other hand were seen as instruments to stimulate the new heart. The result was a variety of function clusters, where the infrastructure network formed the base, dividing and at the same time connecting the different parts, as they existed on the edges of the blocks.

The increasing dimension of the infrastructure tempers the clusters. The clusters had to grow with their own limiting borders. They increased in density over the years and became compact islands representing just one part. In an extreme way, of the whole. Increasing the density, meant focusing on the inner part of the island, which resulted in edges that became more contrasting with the surroundings and thus becoming more and more the image of an island. But it would be a mistake to see the archipelago as an island, as a geographical form. The ‘function clusters’ as mentioned before only form the clarification for a variety of islands, but not for the term archipelago. To become an archipelago must a group of islands is necessary: they need a thought of cohesiveness. ‘The image of the archipelago presupposes that the parts, even in their absolute distinction, are transcended by the sense of an absent fatherland-centre, towards which each island, in communion with the others, is oriented without claiming possession’. To get to this feeling of communion, a group of islands is not enough. An extra ingredient is essential: a connection, a magnetic force, the glue. It must be a top layer that all clusters share, despite of the variety in rules existing at the different parts. This connection must lead to the understanding of the group as a unity, as one single element. Different approaches to the understanding of this connection have been formed.

Hajer and Reindorp see the archipelago as ‘the cultural-geographic interpretation of the spatial term ‘urban field’ , consisting out of a multitude of different microeconomic worlds that can be reached via a convenient station or motorway slip road’. The cultural interpretation is based on the grouping in zones that can be reached via a convenient station or motorway slip road. The cultural interpretation is based on the grouping in zones that can be reached via a convenient station or motorway slip road. The cultural interpretation is based on the grouping in zones that can be reached via a convenient station or motorway slip road. The cultural interpretation is based on the grouping in zones that can be reached via a convenient station or motorway slip road. The cultural interpretation is based on the grouping in zones that can be reached via a convenient station or motorway slip road. The cultural interpretation is based on the grouping in zones that can be reached via a convenient station or motorway slip road. The cultural interpretation is based on the grouping in zones that can be reached via a convenient station or motorway slip road. The cultural interpretation is based on the grouping in zones that can be reached via a convenient station or motorway slip road. The cultural interpretation is based on the grouping in zones that can be reached via a convenient station or motorway slip road. The cultural interpretation is based on the grouping in zones that can be reached via a convenient station or motorway slip road. The cultural interpretation is based on the grouping in zones that can be reached via a convenient station or motorway slip road.
The strength of society, that Castells as well as Hager and Reijndorp see, seems in contrast with the theory of the individual organization. To reconnect the two terms – society and individual organization – it is necessary to understand the result of giving on all the individuals an endless list of choices that form the base for their lifestyle. Although the choices of the citizens are personal, overlap will occur because of shared interests. Hager and Reijndorp already mention the grouping of individuals because of the fact that people choose who they want to meet. For example, in Rotterdam we could work in the same district, use the same commercial machine or visit the same museum quarter. The architect Manuel de Solà-Morales used in his essay Public Spaces, Collective Spaces’ the fitting term ‘urban tribes’. As an individual you belong to different ‘tribes’ based on shared interests, where you decide to the rules of each one. The members of an urban tribe share a lifestyle, which guides their wishes and desires about certain aspects of the places they live and move through. These urban tribes’ contribute more to the image of the contemporary society than the individuals themselves.

The Archipelago City. An urban strategy

The idea of the archipelago can easily be visualized as different urban islands. In this case, put together their city areas. The citizens of Rotterdam can put together their own city, which is close to their own needs and wishes. This is not a matter of a changed urban form but of a changed urban strategy. The citizens as well as the visitors of the city do not visit one center for all their needs but can choose from a variety of centers occurring to their specific needs at a specific time. The urban strategy has changed the urban form in to a polycentric urban area. The polycentric urban area makes it possible to support the very dynamic and flexible lifestyle patterns of the citizens. Time is divided throughout the day as efficiently as possible, maneuvering between the different urban spaces. It is not more about visiting spaces and moving between them it is about maneuvering within their own individual time-space pattern.

In the book ‘The liquid city’ (original title: De vloeibare stad, 2007) the author Willem Hartman emphasizes on the liquid behavior of the city. The maneuvering of the citizens and the constant flow of realizing new projects and spaces connect the word ‘liquid’ to the contemporary city. He sees that the city has a consistency, but not on a solid base. The city is very flexible in form and content and is characterized by ‘agility’. It is created, it amazes, it is experienced, it is working, it is transformed and it is replaced. Spaces change due to the wishes of society and the possibilities to keep creating the ‘new’.

Reconsidering the Public Space

In this changed urban structure of the archipelago city the public space needs to be reconsidered. Reconsidered and not withdrawn. The definition seems to be so fixed. Public is not private and does not deal with the individual but with the society as a whole. Public is the place which should be shareable with all and where interaction between them could and actually will happen. On the other hand, looking at the structure we have – where people meet people they want to meet and avoid those they want to avoid, where lifestyles are depending on strategic and efficient planned patterns – public space seems to be turned into an un-establishable design task. The feeling of being out of control regarding the public space seems to have entered the theory of many architects and architectural theorists under the theme ‘the decline of public space’.

I do not believe in this decline. As stated in the first sentence architecture is eternal and for that it has a language that evolves through time. My belief is that the same principal is true for the public space. Our goal is to search for the definition of public space within its language. People organize differently and have evolved different lifestyles throughout time, so why hold on to a traditional structure of public space.

Vito Accorsi, an allround artist who is intrigued by the public space, gives a network, a seemingly structureless conglomeration of functions. The individuals – creating the society – form a network, that keeps the structureless and scattered pattern together. This network is comparable with the contemporary city. He sees that the city has a consistency, but not a solid base. The city is very flexible in form and content and is characterized by ‘agility’. It is created, it amazes, it is experienced, it is working, it is transformed and it is replaced. Spaces change due to the wishes of society and the possibilities to keep creating the ‘new’.

Prohibitions before entering the Vondelpark in Amsterdam.
This idea of different groups in a public space can also be transformed into an opportunity. On one hand, with using the term ‘parochialization’ in a positive way by Hajer and Reijndorp. On the other hand, with introducing the term ‘collective space’ by Solá Morales. Both do not deny the fact that the public life and with that the public space has changed into a more privatized world, but they do believe that a more privatized world needs a reconsideration of the public space. They both take this as their starting point to identify the route towards a new form of public space. Parochialization is based on the system that a certain group dominates a certain place and creates the behavioural rules for that place. Where Acconci sees this as a loss of public space – people who do not dominate feel as unwanted visitors – they see it as the base for the existence of the public space. Parochialization makes sure that a public space, designed or evolved for everyone, never turns into a no-man’s-land, where no one sees that place as part of their territory, where no one is a visitor and where everyone, including the space itself, is a stranger. Of course there is a downside to this theory, which is in line with the theory of Acconci: making sure that public space stays public and that the dominating group does not exclude others. As soon as this happens, the public space will transform into the collective space, something in between public and private. This flexible character keeps the experience of the public space alive. A shift makes new space possible with brings along new insights. It is not about the meeting but about ‘the opportunities that are offered for a shift in perspective: through the experience of otherness one’s own casual view of reality gets some competition from other views and lifestyles.’ The public spaces keep the encounters in society alive – although we live in our own individual organization – to make our ‘world’ does not become monotonous, like the islands of the archipelago we live in. It is not about creating one space for one society, but creating different spheres within one place for the very diverse society that is present now. We could say that a public space never has the same face. Now the question arises where the public domain has the possibility to flourish within the archipelago city. With other words, where does the opportunity arise for a shift of perspective? This change of perspective can be established when different ‘urban tribes’ cross each other in daily life. Thinking of the archipelago, different islands do not only offer a more fluid function but also a monotonous lifestyle. The chance that within these islands a public space can evolve is therefore minimal. To discover a place which is used by different individuals with different purposes we have to move our vision from the single islands to the space in between, the space of connection.

The ‘in between space’ is a flexible space depending on the individual. Looking at the archipelago as city structure we can define function islands. The base and the infrastructure network create the base for the in between space. To understand the role of the individual in relation to the in between space I will relate to the research of ‘time, space and function’ where we examined flows of different city users. The people were divided in the three groups ‘routine,’ ‘crossing’ and ‘visiting.’ This already implicates that not all people present, chose the Lijnbaan area as destination. Business people for instance see this commerce island as route to their destination. A destination for one ‘urban tribe’ can be a in between space for another. We can say that depending on the lifestyle others are added to the base. Another form of in between space is the space where two islands overlap and where people from both islands, are the new destination destination. If we add up these three forms of the ‘in between space,’ we end up with the ‘in between space’ as a fluid form. It can constantly change, using the base as the fixed line from where it can extend or decrease.

As earlier stated, the archipelago needs an overall layer to make the archipelago city a true city. It needs one strong item that will be able to relate all islands. I see this item as society itself. Society

Urban modern structure. First of all the developments within the archipelago structure are focussed on the inner parts of the islands and secondly, the modern grid had a lot of space to offer. As result the public space has been developed and transformed to privatized public space, private with a public touch. An example in the Lijnbaan area is the Koopgoot, which looks public but is owned by private stakeholders. So when entering, the signs pop up, excluding certain public life.

Finding the in between spaces within the clusters of the city that can develop to public spaces where interaction can take place. Image by Roel Winter, Studio Hoengebiel, 2010

"In a church you pray, in a house you live, but in public space you cannot fix what is going to happen. When designing public space you should refrain from all kinds of things instead of adding them.”

New Boomkens (Original text in Dutch in Laboratorium Rotterdam, Decode Space, 2007, p167)
Appendices

Literature


Ravesteijn, L.J.C.J. van (1924) Rotterdam in de 19e eeuw. De ontwikkeling der stad Rotterdam. Zwagers, p17


Infrastructure and Architecture. The relation and space between

MARIJE VAN DER LAAG | MARNIX DE JONG | VIJITRA POJARIYA

Research.
### Position at start of research

Before starting the research on the Lijnbaan area, the thought of the first experience, entering Rotterdam, came to mind. What were the expectations of the city, how did we enter the area and what did we experience? From our own perspectives, these answers were both different and similar.

The gateway to Rotterdam center

Entering Rotterdam as pedestrians, or by train using Central Station as a gateway, where two of the experiences. We as user of the city, getting the different experiences from the two gateways, were surprised by the (dis)order of the different infrastructures in combination with the functions inside buildings. For instance, it was very difficult to find the shopping area of Rotterdam, the Lijnbaan, this first time.

No street was directly leading towards the Lijnbaan, no landmark was directly visible from the gateway to point out the area. The main roads were leading around the area instead of into the Lijnbaan. Secondly the buildings were fencing off the Lijnbaan. While drifting, asking locals directions or using a map, finally a small street rectangular onto the Weena lead us to the searched area which was the Lijnbaan.

### Another experience of entering Rotterdam

The use of the car. We entered the city, coming from the north using the Motorway A13, onto the Stadhoudersweg and then the Schiekade crossing the Weena at the Hofplein and finally arriving at the Coolingsel. The Coolingsel, which is the ‘Aorta’ of the infrastructure grid of the city center, was easy to find. While driving on the Coolingsel, the Lijnbaan and its buildings were not visible. Even so the street functioned better as a passing through road, going from North to the South area to the Schiedamsedijk and the Erasmusbridge over the river Maas, than being a gateway to the area. After using a parking garage west of the Coolingsel it was possible to enter the area of the Lijnbaan as pedestrians.

### Conclusions of experiences

The conclusions of these experiences was quite similar. The main road structure for motorized traffic was quite clear for use on big scale, entering the different districts. For pedestrians the infrastructural grid was too disordered to give a clear use. This was mainly because of the hierarchy within the scale of the streets, the entrances and directions. Along the roads on the border of the district, the buildings were mostly containing an office function. The typology of these buildings existed about eight or more layers highrise. Within the district the smaller street had either low-rise buildings with a leisure function or high rise with a dwelling function. Some streets were for pedestrians only and some were for all kinds of traffic and public transport. The experiences brought us to these following questions; How does infrastructure effect the typology of the building block along the Lijnbaan area? What is the influence of infrastructure to Rotterdam city? To answer these questions we will take a look at Rotterdam in different scales and in different periods in history.
HISTORY - LAND MORPHOLOGY

The existence of Rotterdam is based on development of dike structures along the river Maas. Because Rotterdam is situated close to the estuary of the Maas into the sea it was strongly influenced by the tides of the water.

To make the land usable for permanent dwelling, people start building dikes to protect themselves against the water. Secondly by digging small canal perpendicular to the dikes, water was able to flow out of the wet ground and could be used for agricultural usage.

Still today the structure of the former dikes do influence the structure of Rotterdam. Dikes became roads and a lot of those roads do still exist. The relation between the nowadays infrastructure and the former dikes is also visible in the names of different streets.

Even the oldest dikes, there where Rotterdam emerged, do still exist and holds the same name as seven centuries ago, Hoogstraat (highstreet). Along the Hoogstraat a dam was build in between the Maas and the river Rotte resulting in trade along the dam. Ships had to trans-ship there goods on other boats to continue there journey. This resulted already from the birth of the city in intense relation between city, trade and water. In the next pages this will be illustrated with schemes and images showing the intense relation between city, trade and water.
**HISTORY - FIRST WATER STRUCTURES IN ROTTERDAM**

Water canals as main infrastructure for transportation around the city.

D挖ing more canals to regulate the water and making city extension possible.

The water canals along the river do not only have the function for transportation, but also for defensive purpose.

Water canal as main infrastructure for transportation around the city.

**HISTORY - INFLUENCE OF THE PORT ONTO INFRASTRUCTURE AND PUBLIC REALM**

The harbour big enough to keep inside the city walls.

First extension of the harbour into the Maas.

Second extension of the harbour, resulting in building a new dike deeper into the maas to keep the tides of the sea out of the harbour.

The ferry market. Trade along the Hoogstraat because of the influence of the harbour.

View on the Boompjes (location of the former Oosterpoort). Ships entering the city.
HISTORY - PORT AND RAILWAY

With the coming of the steam engine Rotterdam changed radical. Not only the steam ships influenced the infrastructure of Rotterdam because of the exponential growth of the harbour, but also a new infrastructure emerged; the locomotive and railway.

The history of the train in Holland started in the mid of the nineteen century where Amsterdam created a railway in between Haarlem and Amsterdam. After the success of this railway, Amsterdam decided to make a line to Keulen, Germany, for economical purpose. The line should go over Rotterdam connecting Amsterdam with with Keulen. Because of potential loss of trading over the river Maas, Rotterdam didn’t agree in building a line going from Amsterdam to Germany. This resulted only in a connection Amsterdam with Rotterdam, finished in 1846. Station DP Delfse Poort was the first station in Rotterdam.

Amsterdam in the meantime decided to built a line to Germany over Utrecht and Arnhem. Years after the finishing of station DP in Rotterdam, the city council saw the new potentials of trade and public transportation by using the train network. Rotterdam built a station along the river Maas, Maasstation (1876), which connected trade over water with the railway infrastructure. Not only goods were transferred but also international passengers entering Rotterdam by the cruise ships.

On the next pages the growth of harbour and railway are illustrated.
1870 AD - Rotterdam. Trade and Fishery

1900 AD - Rotterdam. Industrial period

1930 AD - Rotterdam. Petroleum harbor (oil)

1970 AD - Rotterdam. Europort

1980 AD - Rotterdam. Maasvlakte

2000 AD - Rotterdam. Europort. Exponential growth

2015 AD - Rotterdam. Build of the second Maasvlakte

Rotterdam Maasstation. Cruise terminal connected with national/public transportation.

Station DP rebuilt. Serves not as an end-station anymore. Connects Amsterdam with the south of the Netherlands.

Maasvlakte. Trade over water and trade over land are connected along the Maas.

Building of Rotterdam Central Station. Maasstation destroyed.

New Central station of Rotterdam.

Second Maasvlakte. Extension of Rotterdam as port city.
PORT - INFLUENCE ON ALL LEVELS

Global scale; worldwide

On a global scale the city’s accessibility is dominated by water. Most transport to Rotterdam is taking place by water having the port as a gateway. Although it is mostly containers and goods instead of human transport passing the port, the water counts a one of the most dominant structures of the existence of the city grid.

Trading

During the past centuries, the Netherlands was very active in trading in with cities in all continents. Ships going to the end of the world, bring back foreign spices and goods. Still today the most important port of the Netherlands for all this trading is the port of Rotterdam. Within the world, the Port is listed in the top ten of most important trading harbors.

Global scale; Europe

On the image on the right, information is given about different aspects of trade by the port Rotterdam in comparison with other European port cities. The pie diagrams showing that Rotterdam (blue) is the biggest port in Europe and handles almost the most goods in comparison to the other European cities.

National scale; Rotterdam goods

On the next page illustrations of land use of the Rotterdam Port is shown by plans and pie diagrams. It shows the amount and division of the different goods entering Rotterdam and where the goods are distributed or stored.
Vegetables, Fruit and Juices. Daily transport of 200 trucks leave the port with vegetables and fruit to everywhere in Europe. 1 on 2 Europeans drinks the fruit juices that have passed the port of Rotterdam.
Within the main research question, ‘How does infrastructure effect the typology of the building block along the Lijnbaan area?,’ it is important to ask how the port and the river (infrastructure; water) effect the typology of the buildings in Rotterdam along the river Maas.

Rotterdam city scale; Landmarks

The last decades a series of iconic (highrise) buildings arose along the waterfront. The waterfront is an excellent spot for these landmarks. Former docks are providing a lot of space to build on. There is a kilometers long range of view. Mostly their connection with the port is on a typological level, since the function of these buildings is not always directly connected with the function of the port. For example, dwelling and leisure.

Functions

Some buildings were located within the river area, because they have a strong connection with the port. For example (world) trading companies, harbor patrol stations, distribution logistic offices, tax and custom offices, sailor schools, hotels etc. These functions are sometimes located in the highrise along the waterfront or in older buildings near the smaller harbours along the river. But also within the city center there are some functions located which are strongly connected to the port, like the world trade center and the fruit market at the Blaak.
Looking at Rotterdam on the scale of the Netherlands, both water and road structure are very important for the infrastructure. For example the motorway A4, connecting Amsterdam and Rotterdam, is one of the most important roads to the city. The river Maas entering the Netherlands near Maastricht, and exiting the Netherlands at the coast near Rotterdam is another important entry to the city of Rotterdam. The railway is the third entity which influencing Rotterdam on the national level. The central station of Rotterdam is one of the most important gateway for the pedestrians to enter the city of Rotterdam.

The four most important cities of the Netherlands are located in the Randstad area. These cities are: Amsterdam, Rotterdam, The Hague and Utrecht. These cities are connected with each other by, waterway, railway and motorway.

The relation of the different infrastructure together do make a good working infrastructure for Rotterdam. That's why the hubs where different infrastructures come together are the most important places inside this structure of mobility. The next pages illustrates how the infrastructures do work together and where hubs between the different structures are.
Train network

Water structure and train network

Public Transportation

Car network
### Historic development of the Lijnbaan

1625 AD. Lijnbaan as agricultural area
Before the Lijnbaan area was used as building space, it was used for agricultural purpose. The structure of land and canals in this landscape will later be the structure of streets and building blocks.

1700 AD. Lijnbaan as garden landscape
When the city of Rotterdam became too dense, people with enough money could buy a small garden house around the edges of the city. This resulted in a green area of garden and free standing houses for high society.

1840 AD. Lijnbaan as industrial area
With the upcoming of the industrial period new businesses came in. This meant that the free space of the gardens could be used for industrial purposes. The gardens around the Coolvest were transformed into bleaching field where blankets were washed.

1865 AD. Lijnbaan as city extension
With the extension of industrial areas along the old city borders a new development of city extension started. A combination of dwelling, industry and gardens were the starting point of the lijnbaan developments.

1890 AD. Lijnbaan as theater area
With the development along the old borders free space came available to build building for new function. This resulted in an area of dwelling and entertainment.

1930 AD. Lijnbaan as metropolitan area
With the Coolsingel as boulevard, the quality of the lijnbaan became stronger. It also stronger the identity of metropolis.

### Functions of the Lijnbaan

1. Agriculture
2. Gardens/dwelling (high-class society)
3. Rope yard (lijnbaan)
4. Bleaching fields
5. Theater
6. Station DP
7. Diergaarde Blijdorp
8. Hospital
9. Primary school
10. Church
11. Founded / institute
12. Swimming-pool
13. City hall
14. Post office
15. Stock exchange
MOBILITY & FUNCTIONS
City centre scale

On the scale of the center two researches are done which do related to each other. The first research was about the relation between the mobility infrastructure and that of the infrastructure of functions. The map on the next pages shows how the relation between the mobility infrastructure is working in relation to the different functions around the city centre of Rotterdam. It is clear that the network of the mobility in the centre, car, tram, metro and train is focused onto the centre itself and less around the centre. Example is the network of the tram system which all come together around central station from which it spread out into the city. The density of this network is by this reason higher in the centre than elsewhere in Rotterdam. Because all mobility networks come together in the centre of Rotterdam the public functions are the highest in the centre.

The other research is that of identity of the streets itself. By using the pie diagram we researched the division of the sizes of roads, bicycle path, tram and pedestrian area. This created an overview and better understanding of the streets around the design location. It also shows the accessibility between the streets itself.
Function - Welfare
- housing/dwelling
- office
- hospital
- hotel
- industrial-factory

Function - Leisure
- commerce / shop
- commerce / dwelling
- cinema / theatre / music hall
- outdoor market
- outdoor recreation

Function - Education
- museum / monument
- university / institute
- school / kindergarten
- library
- sport facility

Stadcentrum
Age
- 0-19 yrs old
- 20-34 yrs old
- 35-64 yrs old
- >65 yrs old

Income
- low 24300
- middle 24300-45000
- high >45000
Graduation studio public realm | Infrastructure and Architecture

Education

TRAM Rotterdam / Netherlands / Europe

METRO Rotterdam

TRAIN Rotterdam

Research | Masterplan | Essay 137
Accessibility and Identity

After researching the infrastructure on the level of Rotterdam city centre, we scope down to the level of the street itself. This means that we researched the street to get an understanding of the different characters of the streets. How is the division of street use? Which functions can be found in the building along the different streets and how do people use these streets?

Along our location we made two sections in the north-south and east-west direction crossing the different streets. The combination of pie-diagrams, sections and pictures we showed the characters of the streets which can be seen on the next page.

The diagram on this page shows how the streets relate to each other in their transportations. It shows which streets can be used for car transportation or are only accessible for the pedestrians.
10 Van Gehntstraat  
11 Lijnbaan  
12 Hennekijstraat  

13 Coolsingel
Infrastructure and Architecture.

the relation and space between

MARIE VAN DE LAAG | MARNIX DE JONG | VJJITRA POJARIYA

Masterplan.
CASE STUDY

The case study is part of the research in which we try to conclude with the question we asked ourselves in the beginning of the research. With the question ‘How does infrastructure affect the typology of the building block along the Lijnbaan area?’ we searched for the relationship between infrastructures and architecture.

The images on this page show that the border between the street and the building can hold a certain blur in which both can interact with each other. This illustrates that architecture needs the public domain to interact with the users and street needs the architecture and its functions inside to attract people to use the streets.

The image on the next page illustrates the relationship between infrastructure and the building block with the different street types.

Another important aspect is the experience by the city user. The experience of a car user is different than that of a pedestrian. This means that the relation between infrastructure and the architecture is different. On the next page the different user is illustrated to show the different relation between user and its architecture.
Experience of driver and people in the car will be controlled by only the atmosphere in the car. They won’t feel, smell or interact with the air or things outside the car. Only the eyes can see but other senses are limited.

Experience of pedestrians on street. They can use all senses to feel everything around them. They can feel wind in the air, smell and hear every sound around them. People can interact with each other when they walk on streets.
How does infrastructure effect the typology of the building block along the Lijnbaan?

High rise building along the Coolsingel. The influence of the Coolsingel as main axe for fast traffic and as boulevard for pedestrians is clearly visible in its architecture. The map shows where high-rise can be build according the municipality. With this it shows the importance of the Coolsingel as important road, as value for city branding.

Elements to interact with pedestrians
Infrastructure influence typology of architecture in the way that architecture give benefit to pedestrians that walk on street. (Cover ways, entrance, etc.)

Shop facade interacting with user
Facades of buildings try to attract the pedestrian that walk on street. In Lijnbaan, facades will be more fancy and divided into many elements. Facade of the Bijenkorf will be one big facade.
The cosmetic shop try to invite people to go into their shop by using the plant to create the entrance.

In Stadhuisplein, many pubs and bars need more space and want to attract pedestrians who walk pass by so they took their advertisement board to reserve more area in the square.

Restaurant want to have bigger area for tables so they took the area of side street to put more tables and chairs.

CONCLUSION RESEARCH

Finally we can state that on the scale of the city user, there where the relation between user, building and public realm is most visible, a tension is visible between the typology and infrastructure.

In the previous chapters we showed the relation between building and infrastructure. There where the infrastructure is created as an important axes for connecting different suburbs, or as connection to the rest of the Netherlands, the scale of buildings become larger and the building block will be used for one single building. When the infrastructure is only for a small group of users, or used by only pedestrians, the scale of buildings is adopting itself onto the scale of the street. With this the infrastructure is also influencing the functions inside the buildings. Along the main roads big offices or shopping malls are situated and the smaller streets provide small cafes and shops and dwelling above it which makes the relation between the different users more intense.

There where the function is not fitting into the building typology a loop can occur. This loop is creating because function start to interfere the public domain, and with this the infrastructure. An example in Rotterdam is the Stadhuisplein where we see that bars around the square are taken over the public space resulting that the square is now only used as a trespassing area and not as public meeting space anymore. For the stadhuisplein this loop creates a negative result in the public domain.
MASTERPLAN: IN BETWEEN COHERENCE

Introduction

After researching the Infrastructure around the building site it became clear that the site is in between two entities. This is the entity of the Lijnbaan and that of the Coolsingel. Both working different and do have their own rules.

In between those two coherences our location is located. The question which will be raised in the process of development is how will this overlap of two coherences need to be designed and reacted on.

In our masterplan we researched how the coherence of Lijnbaan and Coolsingel is working and in which ways the existing in between space reacts on this. How is the quality of these spaces and in which way can we react on it. Will this incoherence become an identity on its own or will be the overlap of two coherences and use the quality of both.

In the upcoming pages we illustrate the research for understanding both coherence of the Lijnbaan and that of the Coolsingel.
LIJNBAAN COURTYARDS
DWELLING & OPEN PUBLIC SPACE

LIJNBAAN - STREET

DESIGN LOCATION
Closed building block

Coherence

Incoherence

proportions
facades directions
facade materials
To understand the coherence of Lijnbaan and Coolingsel we should understand the building block. The scheme above illustrates the different organization of the building blocks of Coolingsel and Lijnbaan. For example, there where Coolingsel has its building blocks exists out of separate buildings with their own public function and covered public core, the Lijnbaan is different. Here the scale of the building block is existing of open public spaces accessible for the city user. The building block along the Lijnbaan is divided into smaller plots with small scale shops and apartments above. In this it is clear that the building block in the coherence of the Lijnbaan is working different in comparison with the coherence of the Coolingsel.
Identity and Architecture of Coolsingel Monument

Almost same height

Transformation

Standard building block typology
- one function
- closed facade
- creates its own world inside,
  core is a core

New block typology
- hybrid buildings; more than one function
- public domain invite people inside
  fizzling of inside & outside
- communicate with people

Public domain typology
- less border between
  (combine functions)

- one function
- one function
- creates its own world inside,
  core is a core

Standard building block typology
- one function
- closed facade
- creates its own world inside,
  core is a core
Urban scenario

To make the city become Metropolitan city, Rotterdam built Coolsingel street which aim to be the street that situate important institute buildings of the city and designed the Coolsingel as the boulevard which provide a big pavement for pedestrian. Lijnbaan is the important shopping street opened in 1953 and is the most crowded area in the city. We see the possibility for the future to connect the shopping street and crowded street from koopgoot, Lijnbaan, new shopping center which is the old post-office that will be develop by UN studio, new city hall, old city hall, Schouwburgplein square and theatres. We found out that the Stadhuisplein square is in the good location that give the good approach to city hall. It just need to be develop to be a lively square and can be connect with the Luxor theatre. Stadhuisplein square can become the leisure square full of cafes and cultural entries. We create the new entrance to Luxor theatre through Stadhuisplein square and also connect to the new public space within our site.
Develop Stadhuisplein

Principles

1. Keep the preserve facades/building

2. Entrance

3. Public core inside

4. Horizontal - influence of Lijnbaan scale Vertical - influence of city scale of Coolsingel
Public Domain is inside both horizontal and vertical
Infrastructure and Architecture
the relation and space between

MARIJE VAN DE LAAG | MARNIX DE JONG | VUIITRA POJARIYA

Essay.
In the history of Rotterdam a lot occurred. From the start of a small fishing town to the city of today, Rotterdam has undergone a lot of identities to becoming a metropolis. To become a metropolis Rotterdam its status rose over time by the growth of the port and the trade produced by it. Nowadays Rotterdam is a important city inside the Randstad area and is one of the most important trade cities. How does Rotterdam show its influence and status to the world, and what kind of building types are used to show its status?

The history of Rotterdam started as a small town along the river Maas. The city dwellers lived from small scale fishing and a little trade along the water. The existence of the city was based on a structure of dikes which helped to protect the dwellers from the flood water of the North Sea. Rotterdam was situated in the estuary of the Rotte which flows in the Maas. Both rivers streaming deep into the Netherlands, provided an important role to towns along the river in means of trade, food distribution and the mobility of the citizen. By building a dam into the river Rotte, which was located in the Hoogstraat, a barrier was made in between the Maas and the Rotte, where through ships could not sail deeper into the lands. The dam, also regulating the water level inside the city, made that ships had to disembark and trans-ship their goods into other ships to continue their travel on water. The goods were weighed and taxed at the dam, bringing a lot of wealth for the city board. The harbor also influenced daily live of citizens. Citizen went to the market near the dam at the Hoogstraat and the port along the Blaak. The public domain around the dam served as a social meeting place for the daily live inside the city: visible in the two illustrations. The influence of trade was visible in economics, daily live but also in its architecture. It created typologies which were not seen in cities not connected to sea other water ways. Examples are the covered market hall, stock exchange and warehouses. The market hall was simply build, existing only out of columns with a covering roof. The open structure of columns made it possible to transfer goods easily in and out by shippers, traders and buyers. Goods were protected against different weather conditions by the cover of the roof. As a whole, the covered market worked as a landmark and was symbol for the trade and daily live inside the city. Another landmark was the beurs (stock exchange) where

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**Metropolitan Rotterdam: Influence of an Idea onto City Development**

MARNIS DE JONG

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**Research | Masterplan | Essay 167**
merchants could trade with other merchants. Landmarks linked to the trade of the port and are examples of buildings reflecting the identity of the Rotterdam of the 17th century.

With the birth of the city, the water was the most important infrastructure for Rotterdam. On the lowest scale, inside the city itself, the citizens were using the canals as infrastructure and on the biggest scale Rotterdam was connected to the whole world because of its connection to the sea. Because Rotterdam was closely situated to the estuary of the Maas flowing into the North-Sea, connecting Rotterdam with the rest of overseas countries, it made it possible to trade local and non-local goods. In the mid-eighteenth century, by the upcoming of the steam-engine, Rotterdam started to grow rapidly after a period where the city was almost stagnating. This new period of technical inventions created opportunities for the city along the Maas. The break with the old and the enhancement of the new period in Rotterdam is visible in the image of the harbor of 1904. The image illustrates the old sailing ships making way for the new steamships, which were on all levels better than the old sailing ships. The new technology made it possible to have a faster and bigger production of goods what resulted in more wealth and stronger growth of Rotterdam its port. Another important factor of the steam engine, was the possibility to expend the port along the Maas with a speed which was never been seen before. The new harbours were build with the new requirements of that time and this, of course, made expansion in goods production and labour along the port possible. Rotterdam grew out from a small fishing town to a big port city with international connections all around the world. For a good historical overview of Rotterdam as a port city I would like to refer to books Rotterdam fifty years of reconstruction (Baaij, 1990) andHAVENS, kranen, dokken en venen (Bolisma. 2007). Other important books to understand the historic, social, economical, infrastructural and cultural structure of Rotterdam are Rotterdam verstedelijkt landschap (Balboom. 1990) and Imagine a Metropolis (Ulzen. 2007). The book of Patricia Ulzen is an important book in which she gives a fine overview of the different problems Rotterdam had been facing since the rise of modern society.

The history of cities show us that the architecture could serve as a manifestation for the power of a city. Architecture is able to show the wealth and identity by the configuration of important buildings inside the city. The decision making inside the city council which took lot of efforts in a good working port and less in the development of the city and its buildings. Rotterdam didn’t have a lot of big monuments as Amsterdam and by that Rotterdam was seen as a working city. Still the city held some monuments showing the importance of the port were the Schielandhuis, build as palace to accommodate influential administrators, and the stock exchange where good examples. Rotterdam build four different stock exchanges where each building could handle the new needs and growing trade of cities harbor. An image of the third stock exchange, located at the Blaak and Beursplein, is added and is in comparison with the first stock exchange much bigger. It shows how the growth and wealth of the city extended in time. A big change occurred in the identity of Rotterdam around the beginning of the 20th century with the mayor A.R. Zimmerman. With the steam-engine as symbol of a new period, Rotterdam grew explosively by the new invention and its international importance grew again. Zimmerman saw the status of the city rising and wanted to create a centre with monumental allure to show its importance and power to the world. The city had a period of rapid growth; new suburbs were build, city walls where broken down and canals in the city were ditched. Mayor Zimmerman visioned Rotterdam as a metropolitan city 3.

A big change occurred in the identity of Rotterdam around the beginning of the 20th century with the mayor A.R. Zimmerman. With the steam-engine as symbol of a new period, Rotterdam grew explosively by the new invention and its international importance grew again. Zimmerman saw the status of the city rising and wanted to create a centre with monumental allure to show its importance and power to the world. The city had a period of rapid growth; new suburbs were build, city walls where broken down and canals in the city were ditched. Mayor Zimmerman visioned Rotterdam as a metropolitan city 3.

The city enhanced new typologies and new function to become this metropolitan city. Some functions of entertainment is given above, but a metropolis of that time should also have a new kind of entertainment; the grand cafes. This new function added a new kind of meeting place. Not only market, stock exchange, church or the street, but also the grand cafes or coffee houses became meeting places inside the public domain. These cafes were blurring the boundaries between the different social classes in the city. Workers could drink at the same table of a high society businessman, something impossible in public domain of Rotterdam before. It was even possible for women to show themselves in public and were able to meet strangers without
Restoration done by Mei architects.

when seen through metropolitan glasses”

Rotterdam with a interesting quote:

Choosing high-rise as typology for its city branding, Rotterdam clearly visible in its high-rise.

Image a Metropolis.

The invention of the historical Monument architecture, but it is also a city of monuments”

Another interesting book is

for being a metropolitan city continued. In the years passing

Rotterdam, was in search to become a metropolitan city by

In this I do not agree! When the city brands itself as a city of modern architecture, as a city of progress, the city is not able to state to be a city of monuments, which means to be something fixed and frozen in time. See The invention of the Historical Monument (Francoise, C. 2001). It is true that Rotterdam holds heritage out of its different periods: the Laurenschurch and Schielandhuis representing the 17th century, city hall and former post office representing the begin of last century, and the stock exchange with its extension /f/it the demand of the temporarily society.

It started with the in/f/luence of the modernistic ideas where in the 20th century, the municipality of Rotterdam had the opportunity to build the city according the rules of the modern movement. The municipality had a change to solve problems which where present in the pre-war city. The new planning strategy gave the city a new face. The old was gone and the new planning came in. The centre was rebuilt on the layer of the pre-war city and took an identity, which over time changes to fit the demand of the temporarily society.

Since the beginning of the 20th century, the municipality of Rotterdam, was in search to become a metropolitan city by using creating boulevards and a monumental centre along the Coolsingel. Even through the city was destroyed, the search for being a metropolitan city continued. In the years passing Rotterdam build a big variety of modern architecture. Still, Rotterdam sees itself as a monumental city.

“Rotterdam is famous as the modern city of architecture, but it is also a city of monuments”

In the years of reconstruction.

... the entertaining city - of J.H. Furnee in the book Het Witte stenen that our collective memory is concentrated”

Kollhoff states with this quote that the architecture of the city holds the memory of the collective. Houses, public buildings, streets and squares mostly exist longer that one generation of people, and with this, buildings are able to reflect events from the past generations. With the bombing of Rotterdam the collective memory of the centre was brutally broken, resulting in a new collective memory which had to build up in time again by the new generations. The break of collective memory leads to the old and the new Rotterdam. Rotterdam lost its old identity and had the opportunity to build the city according the rules of the modern movement. The municipality had a change to solve problems which where present in the pre-war city. The new

planning strategy gave the city a new face. The old was gone and the new planning came in. The centre was rebuilt on the layer of the pre-war city and took an identity, which over time changes to fit the demand of the temporarily society.

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Endnotes
1. Gaal, K. de. The new Rotterdam; Rotterdam fifty years of reconstruct- tion. p135-149
2. NAI website
4. Idem.
5. Kolhoff, H. Architecture today; Architectural Positions. p200
6. Website of municipality Rotterdam
7. An exhibition inside the World Trade Center showing the development and history of the building.
8. Ulzen, P van. The new Rotterdam; Imagine a Metropolis. p213
9. Rotterdam: The Markethall in the inner city along the Biesweter. Design by MVRDV

Articles

Books
Baji, H. & Bestebrureijt, G. (1990). Rotterdam fifty years of reconstruction. Veen publishers; Antwerpen


Ulzen, P van (2007). Imagine a Metropolis. Uitgeverij 010, Rotterdam

website

NAI website about the history of Rotterdam


Movies

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Let’s hope that the high-rise in the city is at its end with building de Rotterdam of OMA office. Interestingly that the name of this skyscraper holds the name of the city. As if only one building can reflect the status and qualities of the whole city of Rotterdam. It proves to me that Rotterdam put effort in branding its icons and neglecting its public domain. Luckily this trend is shifting and Rotterdam put more effort to restore its public domain. It uses its old monuments and using new typologies to improve the public domain.

There where Rotterdam started to build monuments in the begin of the 20th century to improve the public domain, it now redeveloping those same monuments to, again, improve its public space. The former post office along the Coolsgel is now redeveloped by UN studio. The monument will house a big shopping mall inside which will enrich the public domain around the Coolsgel and the Meent. The extension proposed for UN studio will create an entrance blurring the public domain with the interior of the building. See a movie of UN studio about the post office at www.postrotterdam.com. This is also a good development in the harbour area for the enrichment of the public spaces. The municipality gives a new meaning to the old harbour by filling old buildings with new functions and densify the area with new dwelling. For me the St. Job at the Loydplein is a beautiful example of developing the old port identity into daily live of Rotterdam. Other example of a good working public domain is at Kop van Zuid, where the former cruise terminal, beautiful monument, now houses a restaurant to enrich the public domain. The restaurant is surrounded by high-rise visible from far away and dense the Kop van Zuid. The combination of monument and iconic high-rise do enrich each other. The public domain of the Kop van Zuid can be seen from far away by its icons, but when entering the site the restaurant will take over and interact with the users because of its public function.

Also inside the city this tendance is occurring. Rotterdam again put more effort in the public domain of the pedestrians by creating new public buildings, which almost get a monumental status by the proportions and the relation with the public domain. Not only the redevelopment of the post office is a good example, but also the new designs of OMA and the market hall of MVRDV. These new typologies working as public landmarks enriching the public domain and taking this domain into the buildings. Inside, the users of public space will encounter more private functions and by this encounter there is more interaction enriching the public domain. Let’s hope Rotterdam will continue with the development of creating typologies who do interact with the public sphere. Rotterdam can become a metropolitan city full of individual icons and monuments all connected by a good working tissue which reflect Rotterdam as a modern metropolitan.
ATTRACT CREATIVE PEOPLE IN ROTTERDAM CITY

Introduction

With the growth population that higher every year plus with huge numbers of immigration moving into the city caused many cities in Europe face the same social problems.

City need to deal with many problems like the shortage of housing, inefficient public transport, lack of public facilities to serve people in the city and many immigrants moving in the city for job. State tries to solve these problems, for example, housing problem can solve by build more new housings that offers a chance to design high quality housing which strengthens the urban fabric and provide a nice living environment. Reducing the number of cars in the city center and expanding public transport within the city center and the neighbourhood.

City tries to solve problems with many physical solutions however the social problem like the gap between the rich people and the poor people is still continue and sometimes difficult to blur the border between them. The different ranges of income in each area sometimes can cause the crime and unsafe area in the city.

The city will not be a city if without people to live inside it and it is people that make the city lively with the everyday life activities. City need to provide what people need so people will stay in that city.

Rotterdam has long historical background known as the world important port and also famous as new modern Dutch city. The number of population in Rotterdam city rank No.2 after Amsterdam which means Rotterdam also play the important role to the economic and social role in Netherlands.

Rotterdam has a plan to become attractive city for cultural, art and leisure. Rotterdam try to develop the area of the neighbourhood to be livelier and provide public facilities for people in the city by hoping that with all this benefits will attract the creative people to stay in Rotterdam city.

Creative people are the class that educated well and have strong power to transform the economic and environment of the city to be prosperous.

Age and income diagram.
Creative class

From the Webster’s dictionary, Creativity means the ability to create meaningful new forms. Carley Faaina, CEO of Hewlett-Packard once said to national governor that “Keep your tax incentives and highway interchanges, we will go where the highly skilled people are” (Florida, 2002:6). From this quote, the highly skilled people refer to the creative class people. A class is a group of people who have common interest and tend to think, act and feel similarly and can be determined by economic function like the kind of work that they do for living.

Creative class prefer to orient in big cities and regions that offer a variety of economic opportunities, a stimulating surrounding and amenities for all possible lifestyle. Creative people choose to live in the area that they like and don’t need to be close to where they work. The place will be open to diversity and allow creative class to express themselves and corroborate their identities. Creativity always arises in specific location of the city and it’s the people that creative and has power to develop specific area to become center of creativity.

“I define the core of creative class to include people in science and engineering, architecture and design, education, arts, music and entertainment, whose economic function is to create new ideas, new technology and/or new creative content. Around the core, the Creative Zone includes a broader group of creative professionals in business and finance, law, health care related fields. These people engage in complex problem solving that involves a great deal of independent judgement and requires high levels of education or human capital” (Florida, 2002a).

We can see that creative class important to the development of the city and can increase the economic growth of the country because creative class tend to have a good idea in sloving the problem and always want to make a better area for living. Creative people turn in the inferior points into the benefit points by make the best out of what they have or find out the possibility to slove the problem.

Creative class people think that diversity is important for the community because they enjoy a mix of influence. They want to socialize and meet with different people whom they can get the new points of view and wider range of opinions. The attractive places for creative class need to be cosmopolitan-place which make people feel comfortable to interact with other groups and a place where outsiders can easily become insiders.

Gentrification

“Gentrification occurs in periodic waves: from the federally sponsored urban renewal efforts in the ’50s and ’60s, to the so-called “back-to-the-city” movement of the late ’70s and early 1980s.” (Kennedy and Leonard, 2001:1)

Urban gentrification is the social cultural changes from the economic process which higher income people move to live in the lower income area of city and this make the original long term tenants of the area have to move out of the city because they can not afford the higher rental price of the households.

Urban gentrification starts from the idea that the developer/landlord/state want to improve and earn money from the abandoned area of the city and allow the creative class which has low income but high creativity idea rent the building in a low price. The groups of creative minded people move to live in the abandoned area and transform the area into the creativity lively neighbourhood.

The developer and landlord find out that the area turn to be nice neighbourhood and then they start to raise the property value via the higher rental price and increasing tax revenues. Urban gentrification can change the identity of the neighbourhood from cultural heterogeneous into economical homogeneous community. When the rental price is higher, the creative class or original tenants can not afford to live in this area anymore and finally have to move out of the city center. The high income people replace into the original neighborhood.

Somehow gentrification help to turn area into safety neighbourhood and reduces the numbers of crime in the area but this process make the bigger gap between high income people and low income (creative) people.

We can look at Gentrification in a good side and a bad side depends on from which case and which definition. Gentrification can use as urban revitalization to describe any commercial or residential improvement for neighborhood, as physical improvement of low income neighborhood or sometimes gentrification can occur in the middle of revitalization process. Revitalization happens a lot in the city center, the waterfront area and the area which has transport hub nearby.

For example, Rotterdam city after the bomb in May 1940, turn the city center area to become the empty lands and this was the big chance for Rotterdam to gentrify and redevelop the empty areas of the city. Rotterdam use this lost as a challenge and opportunity to develop to be creative city.

“Revitalization: the process of enhancing the physical, commercial and social components of neighborhoods and the future prospects of its residents through private sector and/or public sector efforts. Physical components include upgrading of housing stock and streetscapes. Commercial components include the creation of viable business and services in the community.” (Kennedy and Leonard, 2001:6)

I want to focus on the revitalization of the urban area which means the area that aimed to develop to be the public space/facilities that give the benefit to the people in the area. Revitalization of the area is very important for the development of the city.

The public function like schools, universities, concert halls, theatres, museums, conference centres, exhibition spaces, libraries, sport facilities, public parks and squares make the city become habitable environments. All these public functions can improve the quality of people life in the city.

All the public functions which essential for people need to find a place in the urban fabric. The developing of the building block is one kind of revitalization the urban area.

“Public amenities should not be designed as isolated objects that fulfill a well-defined programme. With carefully thought-through positioning and high-quality architecture, they can play a role as the vehicle for change in a district. They are a driving force for social cohesion in urban development. The total package of metropolitan and more small-scale facilities make it possible to strengthen the successful practice of neighborhood.” (De Bruyn and Declerck, 2010:24)

If the city develops to be a lively place which provides the quality of living for its inhabitants, people will live in that city and the numbers new comers moving into the city will be also higher. In the same time that city revitalizes its land, the important infrastructure such as highways, roads and streets also develop along together which aim to support the connection within the city and between the cities.

Mobility hubs such as the train station and tram stops are the most visited location of the city. The Mobility infrastructure is an important part of everyday life. Mobility and accessibility is an important backbone that links and unites the different parts of the city. Mobility brings coherence to a city and unifies city into a single piece. Habitants get the comfortable life and feel that they are part of a shared urban society.

In 1865, Museum park forms as an essential part of the park Triangle, functioning as a green connection between the city center and the park on the hill, and as open space in the midst of various cultural institutions.
The development of Rotterdam city after the bomb

After Rotterdam was bomb in May 1940, the most important architectural project since the river Rotte was dammed up in the twelfth century was the removal of debris, pipes, cellars and foundations.

At the end of 1960, sixty, enthusiastically allowed the Dutch railways to build a railway across the old city center, requiring the filling up of the Rotte and this showed that the authorities were willing to go in wiping out Rotterdam's history. At the beginning of the twenties before the bombing, the architecture critic Mieras described that Rotterdam was a metropolis because the plan of combine the destructive power of the elevated railway with the rural tranquil of the Land of Hoboken in the middle of the city.

Rotterdam in 1960-1975, regional planning was no longer sufficient to structure the development of the city. The motorway becomes important tool which connect Rotterdam to the international and national networks. The gigantic building block spread around the city. The harbor was in the process of gaining a permanent place in the global network of goods trafficking and becoming the greatest port in the world. In the seventies, the biggest project was the city renewal of the old nineteenth century workers' neighbourhoods.

“The city bought up whole districts, cancelled huge modernization plans for new hospitals, roads, universities or housing projects and set about restoring the neighbourhoods to their state, that of sociological containers for an idealized community life. It was called ‘bouwen voor de buurt’: ‘building for the neighbourhood’, as opposed to building for the city. The urban planners left their desks and formed project groups in the neighbourhoods, together with sociologists, social workers, and the tenants.” (Mieras, 2001:33)

The main paradigm-shift of the seventies was that the form of the city was not anymore described in term of production but in term of experience. Later in the mid of eighties, the idea from seventies were announced over. Its intentions were good but the architecture at that time was ugly. In this era the important feature was the appearance of architecture. The overhaul of the political and economic structure of city could stay the same. The city renewal generation now supported the culture of architecture and tried to make as many as well designed building as possible.

During the eighties and nineties the city renewal veterans brought back the unsatisfy elements that they had ousted in the seventies: first the market was reintegrated in big public private partnership projects with good urban design for the people in the post industrial voids and then the coming of foreign architects to create museum and town halls and the thirty item Koolhaas was being invited to every competition.

The government gives people good architecture as it give people good neighbourhoods. Architecture becomes an art, simultaneously arousing the intellectual manderings and forming a backdrop for hedonistic lifestyle. The urban life like the street, square and the corner become important for people.

"The zeal and enthusiasm is so great and the urge to forget the past so powerful that they all too eagerly welcome the latest architectural inventions in order to give shape to contemporary feelings of pride without historical deadweight". (Aarts and Maandag, 2006)

We can see from 1940 till present, Rotterdam has been developed and changed the appearance of the public spaces from the outdoor public space into the space of public realm within the well designed architecture. Rotterdam tries to revitalize areas in the city over and over again to make it useful for the habitants. Rotterdam nowadays still use the master plan which designed by Van Traa.

The function in the city is more likely to be the monofunction than the multifunction. With this reason sometimes can cause the problem of unconnection of the activities in the city and divided city into specific function for just one area. In the reality, people need mix function area because it offer the amnesties for all possible lifestyle.

Conclusion:

Rotterdam provided many outdoor public spaces in the city but most of them are under used, have unclear function and low quality of design. For example, the Schouwburgplein seems to be the icon for the city branding value more than to be the lively public space which aim to serve activity of people.

City should improve the quality of public space that already exist in the city and try to make the clear connection from one public space to other public spaces which this will help to stimulate the activities of people in the neighbourhood and the city. The public space as collective space should connect well with the streets and this will help people to be easily continue their everyday life activities.

If the city provide quality public spaces, good public facilities, efficient public transport and create the lively environment in the city then people will choose to live in the city and do not want to move away.

With this reason we can attract the creative people to stay within the city. Rotterdam is the city that already full of creative people most of them are under used, have unclear function and low quality of design. For example, the Schouwburgplein seems to be the icon for the city branding value more than to be the lively public space which aim to serve activity of people.

Development of Rotterdam City
Revitalization the abandoned building block or space and transform it into new useful and creative public building that can fulfill the need of people will be useful for the future development of the city.

The Lijnbaan area is the most crowded and lively area of Rotterdam and full of people do many activities all day. Our site is in between the Lijnbaan area and the Coolsingel street. Coolsingel is the most important street for mobility of the city. Coolsingel street also has the big pavement for pedestrian.

In the future for the development of the building block and its area, I would like to make the linkage of public space and public domain in the area around the Lijnbaan, the Coolsingel street and within the building block itself. Area within the building block will be introduce as the new lively public space and new creative public domain for pedestrians between the Lijnbaan area and the Coolsingel street. I want to make the good environment both inside and outside the building block.

Appendices

Literature


De Bruyn Joeri, Declerck Joachim, Building for Brussels Architecture and Urban Transformation in Europe (Exhibition booklet), 2010, Centre for Fine Arts, Brussels

J.P.Mieras, ‘Post Rotterdam’ Architecture and City after the tebula rasa (2001) 010 Publishers, Rotterdam


Hajer Maarten, Reijndorp Arnold, In search of new public domain (2001) NAI Publishers, Rotterdam

Baaij Hans, Rotterdam 650 Years (1990) Veen Publishers, Utrecht/ Antwerpen

Intensity in Density.
Intense City a Dense City

GWENDOLYN HUISMAN | SIETSE BELT | ROBBERT VAN DE STRAAT
INTRODUCTION

problem of Rotterdam: low urban density

the heart of a city, the centre, asks for a certain congestion (=density and intensity) of elements.

Usually the centre is a location, which developed over a long range of time filtering centre relevant structures and functions shaping the urban fabric almost like a natural process.

In Rotterdam the center is mainly a product of planning and design of the last 70 years. The location is characterized by a modern image and shows just little reminisces of a classical European city.

In Rotterdam, many rules and post-war transformations have reduced the complexity and connectivity of the center. Rotterdam’s low density reinforces the lack of urban vitality in the public space.

These aspects resulted into a constant transformation of the urban structure rather than a coherent city form. The image of the city centre is rather one of suburban shopping than one of an attractive city centre.

research phase

during the research phase we analyzed how different densities are arranged in contemporary Rotterdam and which of these densities can generate intensity in public life.

we focused our research on demography, socioeconomics and characteristics of the real city of Rotterdam.

it became a mix of sociology and architecture to understand the relation of the real use of the city and it’s architecture.

result analyses

the result of the analysis is to understand which intensities in densities create a more vibrant city life and to conclude which parameters we need for the aimed result of interaction of the city user.

result masterplan

the outcome of the research is to evaluate how a hybrid urban block can function as a catalyst for density in the surroundings and finally to create a masterplan where a hybrid urban block integrates a mix of cultural groups and spreads the cultural diversity in the city from a smaller scale.

METHODOLOGY

use of statistics, theories and excursions to test the different parameters in the real city. We used three methods of mapping the city:

1. mapping several parameters related to the topic of density in different scales of the city. Inspired by ‘The London Urban Task Force’ and ‘London School of Economics’ in the names of Richard Rogers, Anne Power and Richard Burdett.

   > the result of layering this data will give an artificial impression of the real city life.

2. the first method used the administrative borders. In this method we test these borders and analyze if they, within the city, are experienced as ‘real district borders’ or are just written ones. Inspired by Peter Eisenman’s ‘in between space’.

   > results in actual borders/islands within the city.

3. in the last method we mapped parameters for a social life in three areas in the city centre. Inspired by Jane Jacobs and Andrew Wright.

   > results in verifying parameters for public life and defining the relation between space, time, complexity and scale within the three areas and our design location.

   we analyzed these methods on three different scale-levels:

large scale

for all the districts of Rotterdam we’ve mapped the following statistics:

• age
• ethnicity
• income
• amount of households
• safety category
• political elections town council

medium scale

for all the areas within the city centre we’ve mapped the following subject:

• the statistics (same as the large scale)
• future plans cs-kwartier
• highrise zones

small scale

for the area of Cool we’ve analysed the following subjects:

• future plans for Cool
• spacemate index
• congestion parameters (building bulk, function range, space and time)

administrative borders vs real borders for the Oude Westen, Cool and Nieuwe Werk we’ve mapped the following subject:

• positive vs negative parameters
• the Jane Jacobs parameters
• space and time
00 basic information
research methodology

master 3 public realm graduation studio:
sietse belt, gwen huisman, robbert van de straat

01 theme definition
interpreting the contemporary quality by analyzing the problems of Rotterdam
methodology:
top down research by literature; bottom up research by excursions
mapping methods:
texts, icons and photography

02 large framework - rotterdam
analyzing the socio-economical and demographical characteristics of rotterdam, and relating it to the city centre
methodology:
top down research by statistics and literature
mapping methods:
gradient maps, matrices, circle diagrams, texts

03 medium framework - city centre
analyzing the socio-economical, demographical, typomorphological and daily life pulse characteristics of rotterdam's city centre, it's future plans and relating them to theories
methodology:
top down research by statistics, literature, architectural and sociological theories; bottom up research by excursions
mapping methods:
gradient maps, quadrichrome light models, dotted maps, layered 3d maps, matrices, circle diagrams, 3d stacking models, sections, photography, texts

04 small framework - cool area
analyzing the socio-economical, demographical, typomorphological and daily life pulse characteristics of the cool area, it's future plans and comparing it's extremes and livability
methodology:
top down research by statistics, literature, architectural and sociological theories; bottom up research by excursions and calculations in spacemate
mapping methods:
gradient maps, dotted maps, matrices, circle diagrams, sections, photography, texts

05 overlap group theme's and conclusions
analyzing the overlap of the three researched group themes (density, typomorphological and historical, space and time), and forming conclusions and recommendations for the cool area
methodology:
top down research by statistics, literature and architectural and sociological theories; bottom up research by excursions and calculations in spacemate
mapping methods:
gradient maps, quadrichrome light models, dotted maps, layered 3d maps, matrices, circle diagrams, 3d stacking models, sections, photography, texts

06 transformation to masterplan and design
analyzing specific typomorphological qualities and developments of the lijnbaan area, comparing them to the conclusions of the research and start visualising the masterplan and design
methodology:
top down research by literature, architectural and sociological theories, presentation booklets and individual essays; bottom up research by excursions
mapping methods:
sections, floorplans, 3d urban scapes and street views, location models, icons, texts, 3d photographic concept model, stop motion concept movie

SCALE LARGE - ROTTERDAM
the data about the density shows a indication about what the city of rotterdam is about. rotterdam is part of a larger urban zone of 1.3 million inhabitants, which is situated at the centre of the southern part of a major urban conurbation: the Randstad. With its 600.000 inhabitants rotterdam is the second largest municipality in the netherlands after the capital amsterdam. rotterdam is a city where a lot of different ethnicities live close to each other.

data density

rotterdam is... 592.939 inhabitants
46.868 turks 282.776 immigrants
52.632 surinames 38.982 moroccans
300.141 employed
15.797 unemployed
231.982 people between
35-64 years old 9.367 shops
24.285 businesses
289.779 dwellings
26.600 euro annual household income
220.642 euros for a house
safety score 7.3

MAPPING DATA

for all the districts of rotterdam we’ve mapped the following statistics:
• age
• ethnicity
• income
• amount of households
• safety category
• political elections town council

to map these data we made in total 19 maps. For example for the ages we’ve analyzed four different age-groups: 0-19 yrs, 20-24 yrs, 35-64 yrs and 65+ yrs. For the other themes we analyzed other important characteristics.

To get an overall impression of all the researched themes, for the city of rotterdam, we’ve created a scheme which shows which city district has the highest percentage per theme. This way we have a clear (quick) view of who lives where, which political party is present where etc, and if there is a connection between the several themes.
scheme mapping data

This scheme shows which district has the highest density per parameter.

Most of the parameters are spread over the different districts, but Delfshaven clusters most of the ethnicities.
we used the 18 maps to create a quadichrome light model. We printed the maps on transparent sheets and layered them on top of each other.

By doing this we could get an artificial impression of ‘real’ city life. The quadichrome light model shows the intensity of the density of several relevant parameters (the darker=more intense). It shows that the districts cluster into wider areas with the same characteristics.

district intensity matrix

For all 14 districts of the city of Rotterdam we created an intensity matrix.

Here we are showing the intensity matrix of the city centre. It shows the ranking (deviation in average percentage) for the different parameters we have been mapping.

This matrix gives us a rough impression of the demographical, socio-economical and political characteristics of each district.
The data about the density shows an indication about what the city centre is about. We used these statistics from buurtmonitor for a rough overview before we did a more deep investigation in the form of a bottom up method. It shows that the city center has quite a high average income, but on the other hand, people see their living environment not as safe as it is only graded with a 4.9. There is quite a lot of work and it’s clear that this is the economical heart of Rotterdam.
MAPPING DATA

For the middle scale we reckoned the city center which consists out of seven neighborhoods. The seven neighborhoods as shown over here are the neighborhoods as they are subscribed by the municipality of Rotterdam.

For all the areas within the city centre we’ve mapped the following subjects:

- the statistics (same as the large scale)
- future plans cs kwartier
- highrise zones
- administrative borders vs real borders
- the statistics (same as the large scale)
- future plans cs kwartier
- highrise zones
- administrative borders vs real borders

Thereby we also mapped several parameters for our case study (oude westen, cool, and nieuwe werk). Oude westen because it was for a long time known as a problem neighborhood and nieuwe werk because it belongs to the top 20 most wealthiest neighborhoods of the Netherlands. In this case we have two extremes which we can relate to our design location in cool, these mapped subjects are:

- positive vs negative parameters
- the Jane Jacobs parameters
- space and time

scheme and statistics model

This scheme shows similar statistics we analyzed for the large scale. They are projected on the plot of each neighborhood.

The statistic model shows us that the Stadsdriehoek, Oude Westen and Cool have the highest total density.

Cool has a pretty high density in all the ethnicical parameters, the largest age groups (20-34,35-64) are equally represented, and there’s a decreasing gradation in the income groups.

Remarkable is that the Oude Westen contains all parameters reasonably equally, except for the low income.
The neighborhood intensity matrix shows the intensity matrix of each area in the city. This allows us to get a rough impression of the demographic, socio-economic and political characteristics of each area.

This matrix shows that Cool is the most around average, but peaks in: natives, low income and reported nuisances.

Central District Rotterdam

Central District Rotterdam (CDR) is the new name of the new station area. The area is facilitated with a convenient network of public transport. The Central Station is currently in transformation to become a stop for the high-speed train between Amsterdam and Paris. In the coming years the number of daily passengers is predicted to triple...

The future plans for the central station district CDR are developed to increase the possibilities of mobility, space, central location and the mix of local and multinational businesses. This should give a impulse to new residents and offices and it gives the pedestrian a green carpet towards the city centre.

In the Netherlands, 7 other stations are also converted to a dense hybrid area with an attractive city life.
The high-rise zone kinda speaks for itself, it is interesting that you can see a clear strip which connects the central station area with Kop van Zuid, this is the only element which visually connects Kop van Zuid with the other side of the Maas.

The right half of this page shows the schemes of borders as we experienced them when cycling and meandering through the city. While cycling and meandering we looked at the coherence of functions, morphology, use and infrastructure on these administrative borders.

The real borders (hatches) differ from the administrative borders (orange) at some points.

this is the result of coherence in:
- functions
- use
- morphology
- presence of the infrastructure.
oude westen

cool

nieuwe werk
Jane Jacob parameters

The dotted mapping shows the intensity of negative densities for the Oude Westen, Nieuwe Werk and Cool.

The negative parameters are:
- vacancy of buildings
- low house price (<100.000)
- low income
- unemployment rate
- unsafe index
- traffic nuisance
- burglary

The dotted mapping shows the intensity of positive densities for the Oude Westen, Nieuwe Werk and Cool.

The positive parameters are:
- appropriate dwellings (size, in good condition, price)
- high house price (>150.000)
- high income
- employment rate
- safety index
- residential satisfaction (enquetes of the dotted mapping shows the intensity of neutral densities for the Oude Westen, Nieuwe Werk and Cool.

The neutral parameters are about building ownership:
- private owned
- private rental
- community/corporation rental (social housing)

The dotted mapping shows the intensity of positive densities for the Oude Westen, Nieuwe Werk and Cool, which could help emerge public life.

The Jane Jacobs parameters are:
- streets design for public life (wide avenues, squares, playing grounds, pedestrian areas, parks)
- eyes on the street (orientation of buildings towards the street)
- concentration of dwellings
- business activity

The dotted mapping shows the intensity of negative densities for the Oude Westen, Nieuwe Werk and Cool.
the dotted mapping shows the relation of:

- the Jane Jacobs parameters
- presence of cameras
- transport stops (train, bus, metro)

the infrastructure connects the main arteries of the areas and the presence of the cameras shows us the fear of the city.

conclusion:
the spaces with a high intensity of the Jane Jacobs parameters (+ transport & cameras) don't always create healthy city life, the type and mix of functions are decisive.

space and time analysis
the pulse of the the main arteries of the Oude Westen and the Nieuwe Werk shows a pretty healthy rhythm of the city life, while Cool is dead after 6 p.m.
the data about the density shows a indication about what the cool district is about. It shows that cool has a small amount of inhabitants, compared with the people who are working there and that the amount of businesses is almost 1/3 of the amount of dwellings. We can say that for this area the focus lies on the one of working instead of living.
MAPPING DATA

for the area of Cool we’ve analysed the following subjects:

- future plans for Cool
- spacemate index
- congestion parameters (building bulk, function range, space and time)

to map these data we made in total 19 maps. For example for the ages we’ve analyzed four different age-groups: 0-19 yrs, 20-24 yrs, 35-64 yrs and 65+ yrs. For the other themes we analyzed other important characteristics.

To get an impression of this method, you can see on the next page one of those maps of each researched theme.
new building developments

Besides the development of the Central District Rotterdam, Rotterdam has within its city center a few new building developments. These developments will create a higher congested city centre and will make a start with transforming the lijnbaan area, from shopping mall to more ‘inner city’-like.

The lijnbaan area is based on dividing functions and the shopping area is detached from its surroundings.

We mention four of those new building developments, because they are close to our design location and are, as well as our design is going to be, a so called ‘hybrid building’.

urban morphology

The center stretches over an area of 4km². The river Nieuwe Maas divides the city into a northern and a southern part.

The central area of the city is mainly established at the north river bank. The location is characterized by a modern image and shows only little reminiscence of a classical European city. The morphology suggests a strong north-south orientation.

With a population of 30.000 inhabitants, the residential density of the center is low (75 inhabitants/ha, 200 worker/ha).

public domain

The port city is facilitated with a convenient car traffic infrastructure. As a result many roads of 4-6 lanes cut through the inner city.

The pollution is by far the highest in the whole Netherlands. The Weena is, with its value of 72 μg/m³ per day, announced to be the ‘…dirtiest street of the Netherlands’ (de Volkskrant, Weena vijeste straat van Nederland, February 9th 2007).

The pedestrian zone of the Lijnbaan is only allied to commercial program available between opening hours (9:00-18:00). This creates a large physical barrier within the area. Accessibility to public spaces like squares and markets or landscape elements like water or green is weakly integrated in the overall framework.
Spacemate method

The spatial logistics of urban density density

Recent changes in urban design and planning practice (e.g., large scale projects, very long time spans, privatization, an unpredictable future, and increasingly complex programs) require strategies that enable planners, politicians and the public to regain influence on relevant aspects of the quality of the urban environment. At the same time, such a strategy must leave designers and developers enough flexibility and freedom to realize a plan.

past

The most widely used method of determining density remains the number of homes/hectare. However density not only concerns the number of homes in a particular area, but also the size of the homes and the number of amenities, companies and offices.

method

The Spacemate method uses four variables to describe a developed area, namely the Floor Space Index (FSI), Ground Space Index (GSI), Open Space Ratio (OSR) and Layers (L). These four variables express the intensity, the compactness, the pressure on non-built space and the building height of an area respectively.

plan area and entities of measurement

The Spacemate diagram allows the four variables to be assessed simultaneously. The FSI on the y-axis gives an indication of the built intensity of an area and the GSI on the x-axis reflects its compactness. The OSR and L are gradients that fan out across the diagram. Combining these four variables gives every project a unique ‘spatial fingerprint’.

The Spacemate diagram

FSI, GSI, OSR and L

Floor Space Index (FSI) The FSI expresses the built intensity of an area, indicates the gross floor area with regard to land area. FSI = gross floor area : plan area

Ground Space Index (GSI) The GSI expresses the compactness of an area, the relationship between built and non-built space. GSI = built area : plan area

Open Space Ratio (OSR) The OSR expresses the openness of an area and the pressure on the nonbuilt space; amount of non-built space at ground level per m² of floor area. OSR = (plan area - built area) : gross floor area

Layers (L) L expresses the average number of floors in an area; average building height in an area. L = gross floor area : built area

Spacemate project analysis

Within the cool district we analyzed eight building blocks. On your right you can see, from two of them, the actual situation (above), the new build situation (under). In the graphics you can see that both examples increase in density.
DENSITY VS IDEA OF CONGESTION

The location covers diverse public functions of Rotterdam. This makes the area a destination for all citizens and visitors. But the area suffers a segregation of function mainly due to the Lijnbaan use. The two-story buildings of the Lijnbaan are exclusively allied to commercial program and only accessible for pedestrians.

This mono-functionality causes deserted streets after opening hours. The ensemble creates a physical and functional barrier between the east and the west part of the center.

We analyzed the three areas of our case study (oude westen, cool and nieuwe werk) on the range of function, building bulk and dynamic of life.

This scheme show the range of function within the ‘cool’ district. Out of the schemes, we can conclude that the design location is monofunctional and contains mainly high rise dense building blocks congestion (in space and time)

A new spatial strategy will set out new aspirations for increasing density and accessibility.

According to this strategy, an increase in density results in positive economic growth, and environmental and social advantages.

The graphs show the dynamic of life around the design location. It shows variables within space and time. We can conclude that the design location shows an unhealthy pulse, because the area is dead after 6 pm.

aim of promoting higher densities

The main aim in promoting higher densities is to achieve a compact(er) city to accommodate a growing population. Apart from setting a maximum density for development, one of the tasks for governments to achieve its high-density housing strategy is to promote the positive value of high-density living.

The link is often made between density and the level of interaction among people: the denser the development, the more interactions there are and the more potential there is for community construction. We can conclude from this that higher densities and social mix have become two major tools to achieve wider policy objectives like sustainability or cohesiveness.
CONCLUSIONS

outcome of our research resulted in parameters who strengthen and parameters who can weaken the intensity in density of a city. A key element is that a intensity in density is not working if it doesn’t have enough open space in its surrounding.
concluding
We can conclude our work in answering the next two questions:

• how are different densities arranged in contemporary Rotterdam?
• which of these densities can generate intensity in public life?

aimed result
The aimed result of our analysis is to understand which intensities in densities create a more vibrant city life and to conclude which parameters we need for the aimed result of interaction of the city user.

starting points for the masterplan
Rotterdam is part of a larger urban zone of 1.3 million inhabitants, which is situated at the centre of the southern part of a major urban conurbation the Randstad. With its 600.000 inhabitants Rotterdam is the second largest municipality in the Netherlands after the capital Amsterdam. Its port is the largest in Europe and for more than forty years it was the world’s busiest harbor.

We can say that the city of Rotterdam is highly mixed (demographical and socio-economical), but it really lacks urban vitality in the public space due to incoherence in different densities.

Public life is therefore scattered and it moves in the city during the day. Besides this, users might have difficulties to find their way and navigate in the centre of the city.

The motivation for our masterplan is the wish to transform central Rotterdam into a place for a more vibrant city life.

Outcome of our research is that the project location needs at least an injection of:

• high-quality open space;
• more dwellings and community functions;
• and a diverse mix of functions for a healthy city rhythm.
case study

we took the marked area as our case study. From this case study we made a in-depth investigation in order to find underlying principles to use as starting point for our final design of the masterplan.

The marked area features the lijnbaanhoven in the west (the van ghentstraat), the shopping-area in the middle (the lijnbaan) and our design location in the east (sint-luciastraat).

CONCEPTS FOR THE MASTERPLAN

features of the case study

sint-luciastraat
the sint-luciastraat is mostly used for expedition and parking. It features a building that’s monumental listed, the architect was Leo de Jonge and it was built in 1958. Nowadays it’s used for education with underneath a parking garage. It is the only building at the design location that remains.

lijnbaan
the Lijnbaan is the main shopping street of Rotterdam. It was opened in 1953, as the main pedestrian street in the new shopping district, after the old shopping district was completely destroyed during WOII. It was designed by the firm Van den Broek & Bakema lead by architects Jo van den Broek and Jacob B. Bakema.

van ghentstraat
the van ghentstraat is as well mostly used for expedition and parking. It’s a street that runs dead in the end. The backside of the shops are a chaotic mess, all the facades look different and show arrears of maintenance.
concept for the masterplan

01 coherence
- design a strong multi-functional element for the streets, that brings 
  coherence
- bring back the east-west connection

02 healthy pulse
- create a second public streets level on top of the lijnbaan buildings,
- place bridges between these streets to connect them
- place public functions at the corners of the intersections for 24/7 activity

03 re-design the waste lands
- give the lijnbaanhaven a strong and clear function and place public 
  functions around the edges
- place living + pockets (dwellings with ateliers) on top of the low lijnbaan 
  buildings and design the former expedition streets as livable residential 
  streets

04 traffic
- lower the streets for cars and tram, so they don't interfere with the 
  pedestrian flow of the lijnbaan area.

we used these (starting)points for creating the first ideas for the masterplan, and this 
resulted in the end in our final proposal for the design location.

design elements for renovation
changing the concept: refurbishing is not only the conservation of elements of 
great cultural interest (which continues to be essential for the preservation of our 
historical heritage).
The rehabilitation’s ideas have to expand and explore all the areas, from private to 
commercial, from industrial to the public,
from large to small, finding constant meeting points between the special and 
mutable needs of the society.
+ low costs
+ facade with direct link to its history
- backside
- focus
Cities in the Randstad are dealing with a serious lack of dwellings. Because building plots are rare, municipalities are looking for alternatives for demolishing and new building developments. In Rotterdam they decided, in 2000, to take on this problem thru stimulating topping the outdated stock of gallery entrance flats.

**Design elements for 2-level dwelling**

- Low costs
- Facade with direct link with history
- Little nuisance for residents
- Quick building method
- Conservation of appartement buildings
- Density

**Design elements for architype**

Adding flexible, temporary or fixed structures, designed by artists or architects, that feed off existing infrastructure. This as a way to introduce new and unforeseen functions, turning a district almost exclusively concerned with shopping or dwelling into a more urban entity.

- Routing
- Combination of functions in different architypes
- Addition to existing structures
- Form mono- to multifunctional
- Density and intensity

- Accessibility
- Relations

- Weight of added construction
- Disclosure - Balance
design elements for city on the roof

the roofs in inner cities could offer a lot for intensifying and possibilities of other use. Thru small allies and courtyards, on multiple spots, you’ll have access to the ‘streets in the sky’. These ‘streets in the sky’ makes it possible to outcrop new building volumes, who where before unacessible. The design location could become the initial project for the roofing-route. These first initiatives, will hopefully seduce others in creating a new three dimensional network to add to the city.

+ mix
+ more lively use of public space
+ layering
+ 2nd surface level with its own identity
+ density and intensity
- ‘big’ construction
- disclosure

study models

these study models are featuring different perspectives of the concepts we’ve mentioned before. Finally we picked the one, who we thought that fits the best to our needs.
INTRODUCTION INTENSITY IN DENSITY. INTENSE CITY A DENSE CITY

FINAL DESIGN FOR MASTERPLAN

final proposal

this is our final proposal for the design location. You can see three different volumes, who will represent three different functions, who will be complementary to each other.
function injection through urban acupuncture

to cure the lijnbaan area we’ll inject a micro-system of characteristic energy levels that have a catalytic effect on the urban fabric.

the masterplan consists of:
• revitalization of mal functioning structures
• creation of new permanent structures
• creation of temporary space

the injected functions are part of the private, parochial and public realms:
• this brings balance in the realms within the location
• it gives the city dweller, the city user and city visitor it’s own (overlapped) space
• it will make the area heterogeneous and well functioning

basic guidelines for the building blocks

01 exterior vs interior world

there is a big contrast in space: the lijnbaanhoven are experienced as an exterior world, where the south east hybrid building block is more dense and experienced as an interior world.

our building block will have a balance between the exterior and interior world.

02 adding densities

to balance the east side blocks and west side blocks we implement new flexible volumes with public, collective and private functions into the lijnbaan area. on the westside the smaller volumes create hidden publiccollective pockets, and in our building block the larger volumes create a collective-public world in between.

03 interfaces between the three realms

since the current situation is mainly a harsh division between the public and the private realm, we introduce the collective realm as a mediator. there evolves a gradient from the public realm to the private realm. the in-between worlds are the public-collective, the collective-public and the collective-private. our building block will mainly have a public-collective realm outside, and a gradation to the collective-public and private world inside.
basic guidelines for the designs

01 level 0, ground floor
• parking and expedition
• place public functions next to the street to close the streets facade

02 level 1, public square
• public square on top of the parking area; connect it to the ground floor streets with stairs
• connect the public square with the public street on top of the lijnbaan buildings (level 2)
• the SKVR-buildings remains in the block; connect it to the public square
• connect the lijnbaan buildings to the public square
• the 3 building blocks share a public square; design it as a sequence of landscapes for the public buildings

03 the individual buildings
• use the envelop as guideline for the buildings; this does not have to be the definite building volume
• connect the buildings to the public square, parking garage, and the street on level 0 if possible
• connect the buildings to each other by functions; determine 3 main public functions that create collective-public spaces for the different social groups and enhance the pulse of the area

adding densities
topping the existing with small scale volumes, with functions related to living and adding bigger more public functions on cornerpoints. Creating a ‘hybridised’ area, with a mix of functions and with that creating a healthy pulse.

2nd level
adding a 2nd level as a place for intensifying and possibilities for other use. The start of creating a three dimensional network to add to the city.

public squares

giving the squares a more specific meaning will result in a more intensly and specific used area. One of the lijnbaanhoven will function as a place to capture water combined with places to sport and play (concept watersquares), the other one will keep it’s green appearance. The square at the design location will be designed as a sequence of landscapes for the buildings.
We introduce the collective realm as a mediator. There evolves a gradient from the public realm to the private realm. Our building block will mainly have a public-collective realm outside, and a gradation to the collective-public and private world inside.

The area marked in dark grey shows the area we assigned as ‘pedestrian’ area. This area is only crossed by bikers and trams, car traffic is here not allowed. The area will be designed and furnished for the usage by pedestrians and bikers.

Map of all the different interventions we introduce with our masterplan creating a place that represents a congested city life, with a healthy pulse and with enough open space to give room for different and spontaneous activities.

Here above you can see a cross section that features on the left the lijnbaanhoven, in the middle the lijnbaan shopping area and on the right our design location.

We used this cross section to define the building heights of the volumes we are going to design.
most of the parking will take place on the groundfloor. We are going to use the existing entrance on the Aert van Nesstraat. It consist out of an entrance and an exit, which can be used for parking as well as for expedition.

In the parking garage there’s an entrance for each individual building as well as entrances for the stock of the Lijnbaanshops. In the northwest and the southeast there will be elevators and stairs to enter the public square on the first floor.
the starting point for the design
The research 'intensity in density', the essay 'interfaces for public life' and knowledge of current developments in Rotterdam resulted in a clear approach for my individual design.

Design a public building where the different social groups of Rotterdam can find their own symbolic worlds, where they can get familiar with each other and re-connect to each other on the interfaces of these different landscapes. This building must have a strong identity, but also has the ability to be flexible in time and space so that users can claim a certain area for a period in time.

the function determination
Urban farming is an upcoming social activity in the city of Rotterdam, waste lands are (temporarily) used for collective agriculture within residential areas, and green (roofs) help to diminish the water storage problem in Rotterdam.

EETBAAR Rotterdam is an existing collective that connects the smaller urban farming initiatives and tries to influence the politics on several topics: sustainability, economy, nutrition and welfare, spatial planning, social, education and the reconnecting of city and rural areas.

the program of EETBAAR
EETBAAR Rotterdam contains a mix of public and collective functions where the city user can work, learn, eat and enjoy. It’s not only about the farmlands, but also integration, experiencing different social worlds and reconnecting to each other.

In the public building you can find a bio daily market, a bio restaurant and cooking classes, event space for harvest and music festivals, educational areas, offices for EETBAAR, and of course the farmlands and gardens.

The building is designed as a cube (30x30x30 m), where each floor is designed according to the same basic principle. The void is twisted on each floor, where a smaller collective space emerges between the different landscapes. The design brings back the human scale back in modern architecture. It’s a strong icon for the city centre of Rotterdam.

BY GWENDOLYN HUISMAN

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Educational center of performing arts Rotterdam

to reach all the demographical layers of Rotterdam and gain a healthy city pulse. Rotterdam needs a public building which activates city life during the whole day. As Rotterdam wants to be the most important harbour city according to knowledge and innovation, investment in education plays a crucial role. In extension of the urban acupuncture of our masterplan ECOPA, Rotterdam adds a function which connects the different layers of society. As the city also wants to invest in the so called creative class, the ECOPA is a big step in the direction of the policy-goals of Rotterdam for the next 20 years. The building works together with its surrounding and acts like a polycentric system by sharing several functions like the gym, the auditorium, lecture rooms etc. Exposition space for student gives one the opportunity to show their skills and share their knowledge. Together with the urban farming and the dwellings ECOPA Rotterdam should give the area the impulse it needs.

program

The building will consist out of an broad scala of functions based on performances and art, the more private areas are in the higher part of the building, the more public in the lower part, the largest function, the auditorium, is the mediator between the two parts. In between the program the circulation space acts also as spaces of informal encounter where sudden performances can take place or temporary exposition can be held.

main user

the main user of the building will be the SKVR who’s using the largest part of the building. As they planned to move into Rotterdam Building, which in our case will be demolished, SKVR is the ideal user of the program concerning education and performing arts. The surroundings like the dwellings, the existing buildings and other parts of the masterplan are the second user, ending with other users from Rotterdam and the rest of the Netherlands.

BY SIETSE BELT
(SH)ALOM. CULTURAL INTEGRATION IN AN ‘HYBRID’ URBAN

(SH)ALOM
’shalom’ means peace, completeness, and welfare in Hebrew and can be used idiomatically to mean both hello and goodbye. The word ‘alom’ is a Dutch synonym for the word ‘multifunctional’.

(SH)ALOM combines a cultural mix of living with a communal function in the form of a wellness center.

multicultural = multifunctional

the appartements will get horizontal and vertical flexibility to match the different needs for example a couple, a big family or for people with an office at home. With the possibility of breaking thru floors and partition walls, the different compositions will increase; small to very big appartements are possible and dividing or combining them are later on still simple to complete.

housing = office

housing and office typology become more or less the same. The effect is that houses can be offices; which has a lot to do with realities of work in the future and has a positive effect on the urban environment (Atelier Kempe-Thill). The appartements will be designed on the principles of the ‘loft’. In the loft you can create your own paradise and cut all relations with the public sphere to a minimum, with the new media people are well connected and can find and receive almost anything they wish. The loft is a mix of public and private; it can be home, office or both. In former times people went on the street now they prefer to stay at home.

adding programme

adding a public function as a wellness center (to the one of living) will attract a wider range of different cultures. The wellness center will give place to a grand cafe/lounge, fitness facilities, hamman, sauna and baths and a barbershop.

It’s going to be a place where people can just relax after a long day of work, meanwhile talking with its neighbor who’s there for a ritual cleaning.

symbiosis of cultural, everyday and commercial activities

The public function is going to be designed on the principles of the city as a loft (KCAP).

The monumental listed building of Leo de Jonge will be preserved, but will get a different function. It’ll allow different users to develop both informally and officially in a symbiosis of cultural, everyday and commercial activities. This initial mixture of different activities will led (SH)ALOM to become not a parasite on the urbanity of the inner city but an urban centre itself.

Intensity in Density.
Intense City a Dense City

SWENOLYN HUISMAN | SIEJSE BELT | ROBBERT VAN DE STRAAT

Essay.
INTERFACES FOR PUBLIC LIFE. INTENSITY IN EXCHANGE BETWEEN THE DIFFERENT SOCIAL REALMS

INTRODUCTION

‘This is the story of the city. The city is no longer. We can leave the theatre now.’ (Rem Koolhaas quoted in Lieven de Cauter, 2009:29)

erosion of public life

The dominating vision about the present public life is above all a negative one. Sociologists, philosophers, urban planners and architects are talking about the lack of a healthy public life in the cities. Individualism and fear are mentioned as characteristic behavioural trends.

Since the 1960’s extensive studies have been made on the topic of eroding public life. Kisho Kurokawa, one of the founding fathers of Metabolism in architecture, diagnosed modernity as the disintegration of society and explosion of migration. He formed an utopia of a new way of life, the arrival of the capsular space as new way of living. In his utopia every individual should have an autonomous accommodation where he can develop his own individualism. The only temporary configuration of sociability, is when these individual capsules form ever changing conglomerates. Public space is residual space due to hyperindividualism. The only social realm will be that of stationed capsules and their communal space. (de Cauter, 2009:70-71)

While Koolhaas, Kurokawa and many others create visions of our future public life, Richard Sennett writes about behavioural codes of public man in the 18th and 19th century to understand the current situation. The public man in that time was living a cosmopolitan life in the safe haven of the public domain. Everyone obeyed the rules of public appearance; it was very clear how one should behave in each of the realms. The realms were clearly separated in that time. (Avermaete et al., 2009:31)

What seems to be a important cause in this eroding public life, is the shifting and blurring of the realms. It’s not clear anymore where the private realm ends and the public realm begins. Elements from our private life are present everywhere in the public realm, and through technological equipments public life invades our private realm. Especially the development of internet and the mobile phone create a new form of social contact that stimulate the blurring of the realms. And where physical contact between individuals used to be normal, virtual social networks are normal in present day life.

exploration of the social realms

The modern city is expanding rapidly and has a high density. Not only in amount of inhabitants, city users and visitors, but also in diversity such as social and cultural background. This has severe consequences for social contact between individuals and the social realms which they experience. Since the task of an architect is more and more a social task, I’d like to investigate the actual state of the social realms where public life is formed.

Which social realms are present in the public realm, and in what way do these realms and the physical space contribute to a healthy public domain and life?

To answer this question, I will divide this essay in two parts: ‘the social’ and ‘the physical’. A definition of the different realms and the necessity of human contact will be discussed in the first part. The physical space and contribution of architecture will be discussed in the second part.
value of social contact

Since the 21st century city is growing at incredible speed, a great number of individuals is confronted with each other in the social realms. The city is the scene where social and collective rituals are put on the stage; the city dweller is simultaneously actor and spectator (De Cauter, 2009:35). According to Hannah Arendt, this on-going growth of the city and the number of people inhabiting it should be seen as the threat of erosion of public life. The problem is that the world between those people can no longer connect and divide them. Without this type of commonality, each individual remains suspended in his own individuality and in his own personal experience (Avermaete et al., 2009:30).

This tells us that contact between individuals is important for public life for multiple reasons: it can create a social network that gives rise to a community and it is essential for temporary mutual understanding between individuals. (Volker et al., 2006:102-13, Müller, 2002:80). Only social potential, inhabitants and their activities can bring planned urban environment to real life. They give it the character and possibility to develop a specific and cultural milieu. Social domains and human activities should overlap in order to achieve this aimed result. (Bobic, 2004:8-10).

Whereas the former public man in the 18th and 19th century could rely on steady traditional behavioural codes, the modern public man cannot. This shared set of rules, which we call the behavioural codes of public man, was a steady base for contact in the public realm. Since these codes are not clear anymore, the foundation of public life is changing. Because of mobility, urbanization and communication, we need to research for ourselves how to behave to another through reflection. Human contact in the public realm will break through anonymity which is typical for the city.

three social realms

This modern city, the theater mundi, connects three types of social realms: the private realm, the parochial realm and the public realm. The private realm is where the household, the family and the network of close friends are. The parochial realm is where the neighbourhood, the work space and network of acquaintances are. The public realm is where the strangers are.

The geographical location of these realms is flexible and shifts due to the present social relationships and their density at a specific moment. The composition of relationships causes the realm to change its character. Therefore, the realms are not physical but real social networks. In the public realm there can be a presence of ‘private bubbles’ at a certain moment in time, such as a meeting of close friends, which causes the realm to be divided in a public zone and a more secluded introvert private zone. Strangers will not easily merge into these private bubbles.

The private realm exists when the dominant relations between individuals at a certain physical location are intimate ones. The parochial realm exists when the dominant relations have a common character. And the public realm exists when the dominant relation between individuals is one of strangers or the individuals recognise each other only on categorical level. (Lofland, 1998:10-14)

interfaces of contact in social realms

‘The private sphere is not only a place of seclusion, but also the Pandora’s box that modern society desperately tries to keep closed, so that the public sphere remains intact.’ (Michelle Perrot quoted in Avermaete et al., 2009:43)

Small communities or villages contain a combination of the private and parochial realm, everybody knows each other. Because people share the same symbolic world, they know what the behavioural codes are. This form of relationship is what we call primary. In the public realm people do not know each other or only in a categorical way (where people know each other by non-personal features, so they can place an individual in a certain category). Individuals are biographical strangers when they have never seen each other before. Individuals can also be strangers on cultural level, where they come from different symbolic worlds. Consequently, the public realm is the place where a person is confronted with another whom he has never seen before and does not share the same symbolic world. The city is much more complex and diverse than the small community or village; it contains a combination of all three of the social realms. When the city dweller leaves the private realm of his home, he enters the public domain where he is being confronted with biographical strangers as well as cultural strangers. This is an important difference with the former small communities or villages. (Lofland, 1996:9-13).

Lofland, a student of Jane Jacobs, claims that the public realm is potentially an important field for social interaction and exchange, because this is the realm where people meet. Contacts are expected to be less intimate and brief compared to contacts in the private and parochial realm (Lofland, 1998:9). Another typical metropolitan form of contact is the contact by accident, which we experience with other people in a bus or store for example. On that account individuals create a common experience with each other which causes the distance between them to diminish and creates a situation of recognition. (Muller, 2002:73). This contact by accident between strangers becomes of great importance when it happens on a regular base. Repetition causes individuals to recognize each other and it forms a public familiarity, the local network of friends and family is not important for them anymore. The city dweller leaves the private realm of his home, he enters the public realm of the pub where one goes every evening. Positive exchange between individuals emerges above all on the basis of accidental encounters or only in a categorical way (where people know each other by non-personal features, so they can place an individual in a certain category). Individuals are biographical strangers when they have never seen each other before. Individuals can also be strangers on cultural level, where they come from different symbolic worlds. Consequently, the public realm is the place where a person is confronted with another whom he has never seen before and does not share the same symbolic world. The city is much more complex and diverse than the small community or village; it contains a combination of all three of the social realms. When the city dweller leaves the private realm of his home, he enters the public domain where he is being confronted with biographical strangers as well as cultural strangers. This is an important difference with the former small communities or villages. (Lofland, 1996:9-13).
need to search for a starting point when contact is desired. Since this makes spontaneous contact more difficult, individuals can choose to avoid contact and protect themselves from a situation than can be embarrassing when they misjudge someone. Nevertheless, some people will start to reach out to another in public. This happens most frequently when someone has to kill time, is interested in another, or just wished to relieve his feelings which can be easier in an anonymous contact. (Müller, 2009:80-96).

One might say as general rule, that acquainted persons in a social situation require a reason not to enter into a face engagement with each other. There is no need to find a reason to do so.” (Jan Gehl quoted in Goffman, 1963).

final consideration
Exchange in contact in the modern public realm is diverse and complex. The private, parochial and public realms are blurred and inverted in the city, and migration and xenophobia cause a dislocated cultural and social background between the city dweller, we simply do not always know how to act in public life because we are strangers to each other on multiple levels, so we become more introvert in our own safe private or parochial bubble. In contrast, there is also a shift to extrovert public behaviour as a reaction of fear of the impersonal city life. The balance between the private and the public realm is missing. Sennett states that this intimacy causes the erosion of public life (Sennett, 2002:338-340).

This does not mean that public life is dead; we just need to find a new way to connect to each other and find a new balance between the different realms. Most importantly, we need to know in which realm we are in order to know how we should behave.

THE PHYSICAL

The city must offer a theatricized space for the abundance, the intensity in density and the distant sociability that we call urbanity. (De Cauter, 2009:37).

After discussing the social realms and types of contact in public life, we can have a look at the physical space where public life is present and what the contribution of architecture is for exchange between individuals in the public life.

contribution of the physical
Physical characteristics of modern public man’s stage contribute to the feeling of safety and the interpretation of a certain context. Residues of pre-sence of other individuals, which form pollution and decay of a space, are also involved in this interpretation. These physical characteristics will give an individual the feeling of not being at ease, which causes him to interact less with other around him (Blokland, 2009:186). Since contact by accident is of great value for social exchange, we need to stimulate it by creating suitable spaces in the public realm. Jan Gehl emphasises that the chance at a conversation between strangers will increase when the space gives them the feeling of being at ease and comfortable. It also helps when the individuals have the same activity, such as watching a street performance (Gehl, 2001:70). Other elements can be the presence and formation of object such as benches, the type of facilities in the neighbourhood, and the amount of time that people spend in the public life (Volker et al., 2007:100-102).

The more time they spend in this realm, the more likely they are to exchange with each other. This will contribute to the collective feeling in the neighbourhood.

The modern lifestyle is at high speed; there seems to be a lack of slow time. When a certain place arouses a person to slow down and stay here for a longer period of time, this feeling of dislocation will decrease and the person then is a participant instead of an outsider again. (Avenera et al., 2009:125-131). Since the 1950s/1960s the design attitude by architects and urban planners changes; formed trends seems to be unfitted for modern public life, they need a new mentality. Architects such as the Smithsons, Hertzberger and Van Eyck are in search of new architecture, and find it in New Brutalism (England) and Structuralism (the Netherlands). This new design method started as a reaction to the CIAM functionalism (rationalism), which had no sense of place according to this group of younger architects. There was no human form of urban planning. In Structuralism the human being becomes more important again, and the relation between the social and the physical is being researched.

There are two basic appearances of Structuralism: the aesthetics of number, like Van Eyck’s orphanage in Amsterdam; and /find it in New Brutalism (England) and Structuralism (the Netherlands). This new design method started as a reaction to the CIAM functionalism (rationalism), which had no sense of place according to this group of younger architects. There was no human form of urban planning. In Structuralism the human being becomes more important again, and the relation between the social and the physical is being researched.

designed public space
Design strategies for the public realm in history are different than what we see in the current design mentality; the geographical location of the realms used to be very clear then, so designers had a different task than they have now. At the current moment, the realms are blurred and reversed, and the geographical location is determined by the dominant group that conquers the space at a certain moment in time. This means the public realm is a shifting realm, which makes a good design harder than in the oldsteady days.

When Sennett describes the physical characteristics of public buildings and the public realm in the 18th and 19th century, he talks mostly about coffee houses where an individual exchanges thoughts with different types of strangers. This is where one could form an opinion on matters of the society; it is an institute of society. This exchange between different social classes is new; typical for the metropolitan life and social change. The more time they spend in this realm, the more likely they are to exchange with each other. This will contribute to the collective feeling in the neighbourhood.

The modern lifestyle is at high speed; there seems to be a lack of slow time. When a certain place arouses a person to slow down and stay here for a longer period of time, this feeling of dislocation will decrease and the person then is a participant instead of an outsider again. (Avenera et al., 2009:125-131). Since 1950s/1960s the design attitude by architects and urban planners changes; formed trends seems to be unfitted for modern public life, they need a new mentality. Architects such as the Smithsons, Hertzberger and Van Eyck are in search of new architecture, and find it in New Brutalism (England) and Structuralism (the Netherlands). This new design method started as a reaction to the CIAM functionalism (rationalism), which had no sense of place according to this group of younger architects. There was no human form of urban planning. In Structuralism the human being becomes more important again, and the relation between the social and the physical is being researched.

Van Eyck’s pupil, Herman Hertzberger, was of great importance for Dutch Structuralism. His architecture is about interaction...
between individuals and the multiple use of architecture. His famous Centraal Beheer building has an open structure that is still suitable for the ever changing way of working in offices. He creates spaces for smaller and working spaces that are horizontally and vertically connected. The smaller entities that create the building represent the human within the organization. In most of Hertzberger designs, the building is organized as a tiny city, with streets and alleyways, meeting places for individuals and visual links. (Avermaete et al., 2009:93-100).

In England’s New Brutalism, the Smithsons are interested in the topic of transit; the upcoming use of the automobile that takes people in their private bubble through the world around them, distantly. The city is a series of events, instead of a continuous experience. So they design concepts for liveable estates: large areas for the city, which contained clear dwelling zones, work places, and spaces for leisure and relaxation. An easy anonymous transit connects these zones (De Cauter, 2009:67).

Recent modern interpretations of Structuralism can be found in architecture by OMA (municipality in Rotterdam, 2009) and MVRDV (sky village in Denmark, 2008). These designs are mainly about flexibility and creating a variety of interiors and exteriors. Offices can be transformed into housing and vice versa; smaller units can be transformed into bigger ones and vice versa.

From the 1970’s new design strategies are mainly on the topic of the public realm; the space where stranger meet should have a strong public meaning, people should be able to identify themselves to these spaces. Pedestrians are the main focus in the works of Gehl and Jacobs. The automobile is banded from some city centres and wide pedestrian areas. This should help improve healthy public life and social exchange; places of flow should become places to stay. Diversity is the keyword for Jacobs; diversity in people, streets, buildings and functions. This should attract a diversity of local facilities, areas of distribution and contributes to a feeling of coherence and safety between the inhabitants (Franke and Hospers, 2009:70-71). They also emphasise that there should be a clear division between the private and public realm. People are confused in the modern landscapes of high rise in undefined green zones; they need a transition zone between their house and the world (Franke en Hospers, 2009:108-109).

Nowadays design strategies for the public space are orientated on the topic of manageability: managing the fear of violence, the value of the small scale in the big city, privatization and control of public spaces. Designs of modern transition spaces in the public realm, the non-places of Marc Augé, are a good example. Train stations, shopping malls and airports are all anonymous spaces, where the local individuality but some homogeneity of people. Individuals automatically respond to this design; they become introverted and quietly merge into the mass. This might improve the efficiency of the flow in these spaces, which is their main function, but it does not improve the quality of public life and exchange between the individuals. Where the non-places possess a neutral identity, public space with a strong identity should improve public life. People can identify themselves there; it is what makes the city the city (Hajer and Reijndorp, 2001:8-10).

Besides this topic of manageability, time and space claiming in the public realm is widely discussed. Juhani Pallasmaa sees the public realm as a museum and a library of patterns of life and culture, a manual for appropriate behaviour. The modern city nowadays projects a sense of isolation, which doesn’t establish a form of collectivity that is necessary for public life. According to Pallasmaa, the external space and each individual’s internal mental space are an uninterrupted continuum. We react to the world around us through our senses and memories. Both time and space are integrated in our mental and psychological lives. Through our changed lifestyle at high speed, time is spatialized and space is temporalized. Today’s electronic and digitalized hype create a world that is simultaneous. This weakens the experiences of both place and time and creates distance between the individual and public space. According to David Harvey we’ve experienced a intense phase of time-space compression in the last two decades. This has a disorientating and disruptive impact upon cultural and social life. We become outsiders to our own lives. Cities are more about movement from one place to another, space isn’t claimed and occupied anymore. This leads to a loss of memory, and memory is the ground of identity and leads, to a sense of social integrity, social exchange and thus public life. (Avermaete et al., 2009:125-133)

Some say that the public realm is diminished to an open-air shopping mall. In my opinion this is considered to be correct for areas as the Lijnbaan and the Koopgoot in Rotterdam’s city centre: it is crowded between 10 a.m. and 6 p.m. with people who come there to shop, but after 6 p.m. the pulse of public life is flat. This is unhealthy for a city centre, it should be heterogeneous, safe and healthy.

‘To improve public life and its domain, a specific cultural program is needed as well as urban concepts which can cope with spontaneous events. The public realm asks for a sign instead of de-sign (removing meanings from a specific place): new meanings should be given to specific places’ (Hajer and Reijndorp, 2001:106).
DISCUSSION AND RECOMMENDATION

Individuals find themselves living in very dense cities of the 21st century. The more dense a city becomes, the greater the chance that individuals do not know each other on multiple levels. This can lead to introverted seclusive behaviour; one doesn’t understand its surroundings which can lead to conflict, so it chooses to shut itself off from the outside world.

Fortunately, this is not the way every individual behaves in the modern public realm. Contact is the essential foundation for the social environment in the city. To establish successful contact, the physical space should be well designed to let people feel at ease. Also the ability to form private or parochial bubbles in the public realm will break free from the anonymous character of the public space; when people can claim the public realm with their bubbles, it helps to establish social exchange. Although the social realms are blurred and inversed, when public space allows us to claim it for a certain period, we do feel connected to city life.

The essence of modern public realm cannot be found in the formal characteristics, but in the overlap and exchange between the different social worlds. When we are able to understand the strangers around us and we feel safe, then we will participate. This can be done by placing meaningful elements from different social groups close to each other. Rotterdam’s public library is a good example of a healthy public realm: a large diversity of people uses it and they come in contact with their strangers. Autochthonous men read foreign newspapers in one area, teenagers surf the web in another, students study for exams and a homeless person plays with the chess game near the entrance. (Hajer and Reijndorp, 2001:113-125)

When we look at Rotterdam’s modern city centre, in the area of Cool, we can find a scattered public life. Since the main arteries of the area only have the function of shopping, the pulse is dead after 6 p.m. and social exchange is made difficult in this monotonous open-air mall. In the evening the Stadhuisplein might seem like a well-functioning organ, but contains only private and parochial bubbles from a particular group of city user. In contrast, the Schouwburgplein does establish some form of healthy public life. While the flexible stage might be empty at certain moments, it is a very suitable location for spontaneous events and groups can claim the space for a little while. This encourages social exchange and memories which establish public life. It’s not designed for a particular social group; individuals from different symbolic worlds use it. This is the place where we can simply sit down on a sunny day, get familiar with the strangers around us and enjoy life in the city while we un hurry for a moment.

‘The task for a new cultural political intervention does not concern the vivacity, but the creation of interfaces between different landscapes. At these interfaces the new public domain can emerge.’ (Hajer and Reijndorp, 2001:81)

APPENDICES

Literature
M. Bobic, Between the edges, Toth Publishers, Bussum, 2004
T. Blokland, Het belang van publieke familialiteit in de openbare ruimte, Ben m Tijdschrift voor Beleid, Politiek en Maatschappij, 3, 193-191, 2009
L. de Cauter, De capsulaire beschaving. Over de stad in het tijdperk van de angst, NAI uitgevers, Rotterdam, 2009
S. Franke en G.J. Hospers, De levende stad. Over de hedendaagse betekenis van Jane Jacobs, SUN Publishers, Amsterdam, 2009
M. Hajer, A. Reijndorp, Op zoek naar nieuw publiek domein, NAI uitgevers, Rotterdam, 2001
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S. Franke en G.J. Hospers, De levende stad. Over de hedendaagse betekenis van Jane Jacobs, SUN Publishers, Amsterdam, 2009
M. Hajer, A. Reijndorp, Op zoek naar nieuw publiek domein, NAI uitgevers, Rotterdam, 2001
L. Lofland, A world of strangers. Order and action in urban public space, Prospect Heights, Illinois, 1985
T. Müller, De warme stad: betrokkenheid bij het publieke domein, Utrecht, 2002
THE MIXING MACHINE. EVEN IF ONE PIECE IS MISSING IT MATTERS A LOT

INTRODUCTION

Cities are constantly changing. Throughout history we can see the development of the cities by the changing needs and behaviour of people. The very old cities, which were originally designed for travelling by foot or horse had to evolve through time to adapt to the desire of people to use other transportation systems like the bicycle and the car. Cities and towns designed after the industrial revolution had completely different approaches for design than the medieval towns.

Cultural diversity in European cities is an interesting, but also very challenging outcome of the ongoing globalization process. When you visit different larger cities in the European union, you’ll get a feeling of being in several cities all over the world – at the same time and in the same place. The diversity with respect of languages, urban architecture, cultural and social activities, etc., makes our cities interesting. Furthermore, cultural diversity is also a necessity in order to make our cities and societies more attractive and competitive in a global economy.

However, many immigrants are unemployed, live in deprived segregated urban areas, are being socially excluded and face discrimination in everyday life. This is a serious problem for the individual. It is a barrier to positive societal integration as well as sustainable urban development. And it is a barrier with respect to making positive use of the opportunities afforded by cultural diversity in European cities.

The Dutch population has changed as well fundamentally due to this ongoing worldwide migration. The city of Rotterdam is characterized by a great variety of (sub)cultures, habits, ways of life, daily life practices etc.

bottom-up strategies

Within this research essay I am going to analyze the architectural and sociological mechanism who are needed to promote a mix of (sub)cultures within a urban block, to avoid segregation on a small scale and creating a good foundation for society on a bigger scale. This research searches for generating bottom-up strategies who supplement and improve the common top-down approach.

‘The mixing machine, cultural integration in ‘hybrid urban blocks’.

The main question of this research essay will be: are existing building blocks instruments for social integration, or are they ‘ghetto’s’ for specific communities with the same origin and habits?

Is it possible to create a ‘hybrid urban block’ where a mix of cultural groups are living and could this work as a new way to spread the cultural diversity in the city from a smaller scale? Can architectonical instruments, as the mixing of dwelling typologies, who are designed for different lifestyles, and a new approach for designing collective spaces, enhance the social integration from residents in an urban block?

This research is based on studying architectonical and sociological characteristics of existing urban blocks, who are improving, on one way or another, the mix of different cultures.

The goal is to find interesting tools on the field of architecture, urban development and social science, who are known from the past as valid methods of improving society and to propose new strategies, based on modern knowledge of evolving society and architecture, to create a new model, ‘the cultural mixing machine’, where different lifestyles are combined to improve the social interaction between different cultures.
Today's Dutch urban policy rests on three pillars: An employment and economic pillar, a physical pillar and a social pillar. As to the employment and economic pillar extra attention is being invested in encouraging entrepreneurs from ethnic minorities. Likewise the focus of the initiatives and measures within the social pillar is primarily on reinforcing ethnic minorities and/or vulnerable groups, on strengthening their social involvement and participation in local communities, etc.

In Rotterdam, likewise other big cities, there are several urban areas who have a high rate of unemployment and welfare-services. Furthermore these areas have a lot to do with crime and arrears on schools. These areas indicated as 'trouble areas', are for every city a big problem, cause every city has to do with economical competition and want to preserve a positive image. Rotterdam aims with its policies for a reduction of influx of underprivileged groups.

This idea of 'selective settlement' is in the Netherlands rather new. Because less underprivileged people enter Rotterdam, the idea is that the 'poor areas' will improve with help of a different city policy.

the idea of selective settlement

Because of collisions between different groups, it is more difficult to live next to each other with those differences. The opposite of integration, a multicultural society: as Frissen proposed, starts looking like a fairytale in the Netherlands.

Differences between groups are already spatial showed. The rich people live in 'rich' neighborhoods, the poor in 'poor' neighborhoods. These poor neighborhoods exists most of the time for a big part of immigrants. Though, for the time being, there aren't any ghettos in the Netherlands, it is possible to point out several urban areas within a cities border where are more problems and a relative high arrears in comparison with the rest of the Netherlands.

Since 1998 the City of Rotterdam has been implementing an overall strategy on cultural diversity in order to promote ethnic integration in the city: using opportunities of cultural diversity. This new strategy or perspective, which was confirmed by the policy paper 'Effective Policy on Minorities', aims at both making better use of the talents and possibilities of ethnic minorities and at the same time promoting social inclusion of ethnic minorities.

More specifically, in order to provide better job opportunities for immigrants and to achieve a better match between the services and the changed composition of Rotterdam's population special attention is given to the composition of the management and staff of the city administration and the public administration. Moreover, the city also encourages involvement of the immigrant organizations in the policy-making process, just as an advisory body with representatives from the immigrant communities has been set up.

Which lessons can we learn, from experiences of the past, to apply in the future? Can we find new matters to really improve the policy of the government still a effective way to avoid problems of segregation? Could a part of the future solution exists out of parameters as applied in the future? Can we find new matters to really improve the policy of the government still a effective way to avoid problems of segregation?

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PHYSICAL ASPECTS OF REVITALIZING CITIES

To shape the physical aspect of revitalizing cities, a new urban renewal policy (WSi) was launched in January 2000. This policy addresses the urgency for reshaping inner cities, brown fields (former industrial sites/harbors) and post-war neighborhoods. Under this policy, cities are availed financial support for Urban Renewal (ISV: Investment budget for Urban Renewal). By formulating Long Term Development Programme, the so-called G4 (4 biggest cities: Amsterdam, Rotterdam, The Hague and Utrecht) and G26 (26 medium cities) have started the process of revitalizing their urban centers and implementing the ISV policy.1

MIGRANTS AND THEIR LIVING CONDITIONS

In the Netherlands arrived the first groups of Indonesian and Moluccans in the 50s and 60s. This as a result of political developments in former Dutch-Indie. Indonesian people where house vested in pensions and Moluccans in so called ‘camps’. When the temporarily stay of Moluccans changed in a more structural kind, they were house vested in so called ‘living quarters’. Since then there are 66 homogeneous Moluccas living quarters. Together with the Indonesian and Moluccas, the first Surinamese and Antillean’s came. They arrived mainly in the bigger cities in the ‘Randstad’. For the first group of Turkish and Moroccan, who came in the 70’s as a migrant worker to the Netherlands, living conditions were insignificant. Their plan was, after all, to return to their home country on short notice. But often their return was postponed and in the end resulted in staying in the Netherlands. The second generation migrants is already stronger developed to play a role. A Dutch household exists, on average, out of 2.3 Turkish and Moroccan more or less on 3.8. This has an eff ect on the arrangement of households, level of income, and specific living conditions in relation with interior layout and public space. With Turkish and Moroccan population groups cultural backgrounds play a role. A Dutch household exists, on average, out of 2.3 Turkish and Moroccan more or less on 3.8. This has an eff ect on the arrangement of households, level of income, and specific living conditions in relation with interior layout and public space. With Turkish and Moroccan population groups cultural backgrounds play a role.

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In Amsterdam and Utrecht, it turns out that the growth of the minority most of the time is more or less concentrated in areas. In Rotterdam and The Hague there are still a lot a elder concentrated areas who are increasing. But at the same time, there is a big increase of minorities in different postwar neighborhoods. Because minorities weren’t strongly concentrated in these areas, a decreasing segregation is following. The living conditions of migrants changed significant thru the years. A positive development is the gradually increase of private ownership of the time. For the Turkish is this 14%, Moluccas 12%, Surinamese 24% and for Antillean and Aruban 16%. For the Dutch population this is 43%. Nonetheless is the position of migrant households significant worse than native households. Immigrants live more in residents of lower quality and live more often in so called ‘problem areas’. They live in smaller dwellings, while there household is in average one or two persons bigger than a native household. There dwellings are besides not cheap. And concentration patterns, are related for a big part with the building-typology of those districts. Segregation in the lowest spatial scale level is barely higher than within the district. So we can conclude that voluntary segregations barely plays a role.

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A growing segregation-index, in middle-size cities, can be partly explained by the addition of new urban areas in these cities. When one or two new building developments are added to a middle- size city, where barely live foreign people, a growing segregation-index is unavoidable. Adding such new building areas has in a middle-size city a lot more influence than in a big city. It is difficult to compare the size of segregation in different cities. This is a consequence of the fact that the height of the most easy interpretable and most commonly measured is the housing intensity in density measurement. Measuring segregation is partly influenced by the size of the inhabitants of the spatial elements who are used. A growing segregation-index, in middle-size cities, can be partly explained by the addition of new urban areas in these cities. When one or two new building developments are added to a middle- size city, where barely live foreign people, a growing segregation-index is unavoidable. Adding such new building areas has in a middle-size city a lot more influence than in a big city.

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MULTICULTURAL BUILDING DEVELOPMENTS, LIVING AND DESIGN PROPOSALS

What does multicultural building development mean? Which examples are there in the Netherlands? And what are the experiences?

background

The Netherlands counts at this moment 1.6 million non-western immigrants. In 2020 this amount will rise to 2.4 million (14% of its population). All most half of them will be born in The Netherlands (second generation). The Turkish (350.000) and Moroccan (315.000) population group will represent the biggest non-western immigrants, followed by Surinamese (330.000) and Antilleans (130.000). The biggest concentration will be in the ‘Randstad’ (15%) and the four biggest cities (30%). This concentration of non-western population will only rise in the bigger cities.

Since the critique of Paul Scheffer (2001) on the multicultural society as a multicultural drama, the incidents after the murder of politician Pim Fortuyn and cineaste Theo van Gogh, the rise of radicalizing Muslim groups as the ‘Hofstadgroep’, the multicultural society became in discredit and disorder. These incidents actualized all the discussions about the environment as a safe place to meet all inhabitants.

In 2002 the VROM-counsel puts, with the advice: ‘Different tastes: referring to culture, history and belief. etc.) and expressing the dwellings in a different architectural way. With symbols, styling or religious expressions there were referred to culture, history and belief.

example projects and initiatives

- Rotterdam, Le Medi
- Rotterdam, Delfshaven, Biz Botulyuz (translation: Bospolder Tussendijken)
- ‘t Hertogenbosch, Boschveld Wijk van Werelden
- Amsterdam, M Akoma di Color
- Den Haag, Transvaal, De Orient

multicultural or consumer-focused developments

The outcome of a research led by FORUM is that not everybody finds ‘multicultural building developments’ a good approach. This term could lead to resistance by immigrants. And it is not all ways clear in what manner the way of living relates to cultural habits. For example: some Surinamese wish, from their cultural background, a big living kitchen, while there are a lot of natives who share this wish without a cultural background playing a role in this. In some cases they therefore use the term ‘consumer-focused developments’.

influence on the image of a district

Outcome of the research ‘Diversity in living, a comparison of different new building developments’ is that inhabitants of these projects find that the life ability, image and social control of residential dwellings (informal spaces, location of the kitchen etc.) and expressing the dwellings in a different architectural way. With symbols, styling or religious expressions there were referred to culture, history and belief.

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The duration for projects dealing with multicultural building developments is often very long (Biz Botulyuz: 7 yrs., Le Medi: 9 yrs. and Mi Akoma di Color: 5 yrs.). Potential buyers should be prepared for this. With Le Medi the long buying period led to people dropping out and a lot of irritations.

The registration of future residents should be professionally guided. In this way future residents better know what they are starting with and in the end there will be less irritations and people dropping out. With the project Mi Akoma di Color they concluded that it would be better not to involve the future residents with the whole building process. They find the interior-layout and the furnishing of the outside space of more importance.

Another outcome of the research ‘Diversity in living, a comparison of different new building developments’ is that multicultural building developments shouldn’t be more expensive than non-multicultural building developments, when these are built in CPO. The future residents could consult, during the building process, with the architect about their individual wishes. When a developer is involved, this is different: the developer will always use certain standardization; variation on this will always lead to higher building costs.

We can conclude that there is thought various about the term ‘multicultural building developing and living’. Research proves that in common living wishes from second and third generation migrants aren’t that different from natives. This could be explained with the fact that immigrant and native have to do with similar conditions as climate influence, analyses with regard to spatial and urban arrangements (live- and durability), existing housing market, rules, etc. On a more common level we can make a difference in a ‘native’ and ‘migrant’ living culture. Sometimes the design for dwellings and meeting places, of immigrants, are influenced by elements from their native country. The subtropical (Mediterranean) climate can be an element that plays a role for re-developing public spaces (meeting places); sometimes there is a clear relation between collective living desires and certain (sub) cultures (Islamic interior lay-out for first generation Turkish and Moroccans).

The demand for multicultural building developments is fed by the need of migrants and natives to make a distinction in the field of living. An often heard argument is that it isn’t desirable to build residents who are just suited for one specific target group. Every form of building that isn’t standard will bring higher building costs. Designing and building spacious, extendable floor plans will result in dwellings that can be used by a wider range of groups, migrant and native, on their own way. Multicultural dwellings aren’t only attractive for migrants who want to take their parents in to their home, but as well for double-income couples who want an office at home. Multicultural building developments becomes than multifunctional building developments. Specific building for certain groups could become universal building when a dwelling is reused by a different group.

CONCLUSIONS

determination of a concept

With multicultural building development it thus certainly not mean a building with a migrant interior lay-out! The solution lies within its flexibility or adaptability, renewal and abundance.

R.R. (Robbert) van de Straat
Footnotes

1) Social classes are economic or cultural arrangements of groups in society. Class is an essential object of analysis for sociologists, political scientists, economists, anthropologists and social historians. In the social sciences, social class is often discussed in terms of ‘social stratification’. In the modern Western context, stratification typically comprises three layers: upper class, middle class, and lower class. Each class may be further subdivided into smaller classes (e.g. occupational).


3) Frissen, P.H.A. Fragmentatie en Multiculturaliteit (Amsterdam, 2002) pp. 152-169

4) Charlotte Hamburger, idem, p. 28


6) Research done by SmartAgent®Company: Preference in living conditions for Turkish, Moroccan and Surinamese people


8) Rein Sohilait and Peter Schmitz, Multicultureel bouwen en wonen, het actief betrekken van allochtone bewoners bij ontwerpopgaven. FORUM, instituut voor multiculturele ontwikkeling (Utrecht, 2006)

9) Labyrinth Onderzoek & Advies, Diversiteit in wonen, een vergelijking van verschillende nieuwbouwprojecten. (Utrecht, 2010)

10) Labyrinth Onderzoek & Advies, idem

11) CPO-projects are projects dealing with private commissioning’s

12) Labyrinth Onderzoek & Advies, idem

Literature


Veldboer, Lex, Ouyverdak, Jan-Willem and Bouw, Carolien. De mixfactor. Integratie en segregatie in Nederland. Amsterdam (Boom), 2007


de Cauter, Lieven. The Capsular Civilization: On the City in the Age of Fear. Rotterdam (NAi publishers), 2004


Frissen, P.H.A. Fragmentatie en Multiculturaliteit (Amsterdam, 2002) pp. 152-169

Labyrinth Onderzoek & Advies, Diversiteit in wonen, een vergelijking van verschillende nieuwbouwprojecten. (Utrecht, 2010)

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Research by SmartAgent®Company: Preference in living conditions for Turkish, Moroccan and Surinamese people (Amersfoort, 2001)

Bolt, Gilden and van Kempen, Ronald. Concentratie en segregatie in Nederlandse steden
INTRODUCTION

“The street is dead….The skyscraper looks as if it will be final, definitive typology. It has swallowed everything else….Density in isolation is the ideal.” (Koolhaas 1995:1253)

This quote of Rem Koolhaas about new urbanity can be applied in contemporary Rotterdam. In cities like Rotterdam density is a very urgent theme. Because the goal of the Dutch government is to concentrate urbanization in the existing urban fabric large cities have to be creative. With their high-rise strategy they hope to generate lots of activity on the street (Gemeenteraad Rotterdam 2007:5). Together with the fact that Rotterdam wants to keep their competitive position and bring more inhabitant to the city center with more variety in income and level of training their goals are ambitious (idem 2007:2).

Density is a modern term which deals strongly with the public space, private space, sociology, sustainability and program. Referring to Sennet as a city ‘where people meet’ (Sennet 1992:39) densification makes physical contact possible in a world where – overloaded with modern communication – this kind of contact seems less and less necessary. Public space is very important for people to meet and just transforming buildings into high-rise (many people as possible on an as small as possible building plot) does not acquire the needs for a public space to function well. So how do density and public space relate to each other and how can they work well without excluding one another?

Dutch highways are silting, land use is getting more intense but the roofs can act as a new landscape. Costs, building regulation, building site and constructive possibilities are some element which make it hard to built on top of other (existing) buildings to obtain density. However, several architects like for example MVRDV, OMA, Neutelings&Riedijk, Coop Himmelbau and others experimented with building on an existing layer. It is not only a current theme, already in 1913 Harvey Wiley Corbett made plans of what he called ‘La Ville Future’ where several layers of public buildings, dwellings infrastructure, and public space are put on top of each other (Melet, Vreedenburgh 2005:42/43).

Because much and much more contemporary problems deal with how to densify a (part of the) city without losing the quality of public space my interest is heading towards this theme. Can public space also be successful above ground level and how can you design it as such, so different people (ethnicity, class, age etc.) still meet each other physically?

The Netherlands on the one hand have the least amount of open space per person after Bangladesh. On the other hand The Netherlands, with almost 500 inhabitants per km2, has one of the highest overall population densities in the world, while Sweden has slightly more than 20 inhabitants per km2 and represents a country with one of the lowest overall densities (UN 2009).
DENSITY POST-WAR

“Density in all its various forms is a complex but substantial issue, which has many connections with the value of settlement. Plagued by numerous myths, it nevertheless has very real impacts on the performance dimensions, which must be traced out in any given situation.” (Lynch 1981:265)

The issue regarding density and concentration is not a contemporary issue but plays a role over a long urban design period. It will start to line out a couple of important developments of very different doctrines, relying on different uses of density to make their argument. I distinguish density used as part of an ideological agenda for urban professionals (Unwin, Garden City Movement) at the beginning of the century, where they strived for a more healthy and social city, as preference for high-rise developments in a green and functional organized city (CIAM, Le Corbusier, Gropius), to advocacy of density for a compact city of medium height, to the last one, the more contemporary examples (MVRDV, Rudy Uytenhaak).

The trigger for the critical density analyses of planners and architects of the Garden City Movement (1898) and the early modernists a century ago was rapid industrialization. This new, decentralized city offered an alternative to the overcrowded and unhealthy cities with their lack of natural environments. Garden cities should have a maximum of 30,000 inhabitants and should be built on an area of 1,000 acres (approximately 400 ha). This translates to a population density of 75 inhabitants per hectare. The most important amenities are in clusters at the centre of each town. Housing is located in spacious settings surrounding the centre and industry on the outer ring.

At the beginning of the 20th century, Raymond Unwin claimed that nothing was to be gained from overcrowding in cities; he proposed a standard density of 12 houses per net acre maximum, or 30 houses per hectare (Unwin 1994: 320). According to Unwin there was no optimal density. It depends on the site. But he does offer some principles for determining what a density for a particular urban area should conceivably be. This is a point where Unwin can be easily misinterpreted. He often speaks of lowering the density of existing cities, particularly of London, but these comments need to be read in their historic context. Early industrial European cities were intensely overcrowded. Hereby modern amenities such as sanitation, public infrastructure, and building techniques were not yet fully utilized. Even the laws enacted to prevent overcrowding still allowed in excess of 40 to 50 Dwelling units per acre (DUA), and the average London unit in 1903 fit 7.6 people. It was universally agreed that this level of density, under these conditions, was unhealthy and positively inhumane.

The CIAM (founded 1928), perceived the urban landscape as the sum of collective functions of a city which went hand in hand with a decreasing density and dilution, especially in residential areas (Komossa 2008:128). With Le Corbusier and his utopian ideas he contributed to the design of the vertical garden city, a concept which reached its peak in The Netherlands with the realization of The Bijlmermeer in 1973. Le Corbusier’s Ville Radieuse – with 1000 inhabitants per hectare – was one of those utopian ideas but had been characterized as overcrowded. As dense model it could have worked well, but it tells nothing about the green open spaces surrounding the towers.

Between 1928 and 1931 Walter Gropius developed ideas about the advantages of high-rise buildings, his buildings consisted out of 8 to 12 storey’s high which had many advantages, based on some simple schemes. He argued that by planning for higher buildings, one could provide more open space without losing out on the number of dwellings (and population density). His schemes were based on the relation between street width, or court size, the building height was also a factor in his studies. So he was also taking into account, the amount of open space, left for public activities.

DENSITY AFTER-WAR

In the 1960’s, Jane Jacobs warned that American slums were not only an issue faced in the inner cities, but also in the low-density, dull areas on the outskirts. According to Jacobs modern planning had ignored the complexity of the city and had forgotten that for achieving a city that functions well, you need essential ingredients like economic and social vitality. She suggested that a minimum of 100 dwellings per net acre (250 dwellings per hectare) was a necessary condition for participatory city life (Jacobs 1961: 211) while previous governments have subsidized people to move out of cities, and politicians have generally been frightened of urban centers as places that encourage rioting and dissent. For vital cities you need 175 dwellings per hectare (Jacobs: idem). Today high densities and the compact city are often seen as necessary for sustainable urbanization and economic growth. Jacobs advocates for a compact city of medium height.

In Meta Berghauser Pont and Per Haupt’s Space, Density and Urban Form, Lozana, Hoenig and the ones mentioned above have used as part of an ideological agenda for urban professionals (Unwin, Garden City Movement) at the beginning of the century, where they strived for a more healthy and social city, density as preference for high-rise developments in a green and functional organized city (CIAM, Le Corbusier, Gropius), to advocacy of density for a compact city of medium height, to the last one, the more contemporary examples (MVRDV, Rudy Uytenhaak).

The most important amenities are in clusters at the centre of each town. Housing is located in spacious settings surrounding the centre and industry on the outer ring. The CIAM (founded 1928), perceived the urban landscape as the sum of collective functions of a city which went hand in hand with a decreasing density and dilution, especially in residential areas (Komossa 2008:128). With Le Corbusier and his utopian ideas he contributed to the design of the vertical garden city, a concept which reached its peak in The Netherlands with the realization of The Bijlmermeer in 1973. Le Corbusier’s Ville Radieuse – with 1000 inhabitants per hectare – was one of those utopian ideas but had been characterized as overcrowded. As dense model it could have worked well, but it tells nothing about the green open spaces surrounding the towers.

Between 1928 and 1931 Walter Gropius developed ideas about the advantages of high-rise buildings, his buildings consisted out of 8 to 12 storey’s high which had many advantages, based on some simple schemes. He argued that by planning for higher buildings, one could provide more open space without losing out on the number of dwellings (and population density). His schemes were based on the relation between street width, or court size, the building height was also a factor in his studies. So he was also taking into account, the amount of open space, left for public activities.

schemes by Gropius, source: Berghauser, P., Haupt, A. Spacemate (Amsterdam 2002), PERMETA architecten;
Graduation studio public realm | masterplan

The program around an infrastructural spine. It's an
cover, split, merge, branch, superimpose, sandwich, wrap or hide
Disneyland, have been planted with grass, shrubs, and trees. Land
at least 20% of the rooftop planted with greenery. In three
has become an important issue regarding the global warming.
roof use is supported by municipalities. In Tokyo rooftop greening
the example of Tokyo, one can see what the benefits are, when
different groups of activities and people. If we for example take
create 50,000m² (3,600 dwellings) of dwelling area in The Hague by
also on higher levels and even on top of the buildings. According
to that, Ed Melet and Eric Vreedenburgh calculated that one can
create 50,000m² (3,600 dwellings) of dwelling area in The Hague by
build a central city of 50,000 people, linked train networks. This system
exists only where there is sufficient density to support
climate change will continue to threaten our very existence. And
environment, and in particular, failure to deal with the issue of
so cities that are allowed to sprawl and place a heavy reliance
about a society, its culture and identity. Mobility, city culture and
sustainability point of view and it gives the opportunity to recover historical structures and
attract touristic potential.

Density is needed because space is scarce and further suburbanization will lead to soil waste. If we look for example at the development of Lelystad after the world war we can see a good example of soil waste (Maas, 1999:35; Koek 1999: 122). In the 1950s it was planned to attract people from the Randstad to escape from the overcrowded city. According to the planners it would grow into a town of 100,000 inhabitants by the year 2000, at this moment (October 2010), the city counts only 74,337 inhabitants (http://www.lelystad.nl). The main cause is strongly related with booming city Almere, the proposed second town, which is situated closer to the donor cities of the Randstad and being designed later so the city was more aware of the demands of potentials occupants.

In Los Angeles on the other hand, like in many other American cities, urban sprawl went hand in hand with car-dependent communities. Moving out of the city had several advantages, such as more family residences on a larger plot, the prices of the land were lower etc. Private cars are the prevalent transport mode in Los Angeles. Public transport only serves 10% of all daily journeys undertaken in the city (Burgett 2006:147). If you compare this with the situation of Asia as we can see in the image below, that Los Angeles, as well as many other American cities, has a lot to do according mobility.

So cities that are allowed to sprawl and place a heavy reliance on the use of the car can cause considerable damage to the environment, and in particular, failure to deal with the issue of climate change will continue to threaten our very existence. And here is an opportunity to benefit from density. Public transport systems exist only where there is sufficient density to support them, so anyone moving out is likely to be reliant on the use of a car for the larger part of their travel needs. In contrast, London has the combination of excellent public transport facilities and limited parking means that a significant proportion of journeys are made by bus or tube. Regarding the issue of density and mobility it is to be noted that Bjarne Angell's Loop City presented at the Danish Pavilion at the Venice Bienale 2010 by BIG Architects. This project focuses on the connection of the suburbs with the center. BIG proposes to continue to connect the area around the Øresund strait in a sustainable spine of public transport, energy and water management, protecting the Öresund strait with a cross straights fence, and in the same time link the existing urban areas with the Øresund strait with a cross straights fence, and in the same time link the existing urban areas with the Øresund straights. The Øresund straights is the only way the larger part of the land use is supported by municipalities. In Tokyo rooftop greening has become an important issue regarding the global warming. The Tokyo Metropolitan Government amended its land use regulations in April 2001, making it obligatory for newly-constructed buildings with plots of 1,000 square meters or over (250 square meters or over for public buildings) to have at least 20% of the rooftop planted with greenery. In three years, about 40 hectares of rooftops, equivalent to 8% of Tokyo Disneyland, have been planted with grass, shrubs, and trees. Land
for greening in central Tokyo is very limited, since the price of land is still very high and buildings are extremely crowded, and this is why rooftops are called the last unused space for greening.

The environmental effect is not the only merit of rooftop gardens. People now see them as a space for comforting or healing busy urban workers and dwellers, for displaying unique designs and ideas, or even for community-building among the people living in flats. Making rooftop gardens is a trend now observed on not only public and commercial buildings but also private housing, promoting technological development and the creation of new businesses (www. http://rfcjj.jp).

Current Rotterdam can follow this principle when revitalizing the city in the future, it will be a good way of achieving the goals set by council of state advisors, do something about the sustainability goals and at the same time creating a new public space, and extra (green) layer on the city.

**DENSITY AND CONSIDERATIONS**

The past decade a large part of the urban renewal in Rotterdam, the municipality vision was based on social, cultural and hygienically aspects of living. The main economical activity was focused on the large scale of harbor and industrial activity and was separated from living environments. This large-scale thinking in the thirties was even more encouraged by the CIAM influences which delivered spatial urban models based on separation of functions. So like other large cities, Rotterdam also was spread out in several functional enclaves which meant a enormous dilution and decrease of density in the living areas of Rotterdam (Komossa 2008:120). This functional dispersion is still visible in the center of Rotterdam but the distances between the clusters become thinner and thinner. This is a good development but it still lacks a good density of functions and a congested public realm. With density of function I mean a good mix of functions for all demographical backgrounds for inhabitants for the future of Rotterdam, a higher mix of old, new, poor and rich. Demographic developments and social change produce concepts for new ways of living. Older people are moving back into the cities, and thirty- and forty-year-olds no longer migrate to the outskirts as a matter of course. The classical family is being replaced by lifestyle concepts for single people because of the more divorces, lone parents, communes or multiple generations living together. Cities are faced with the task of integrating immigrants and activating the potential and Rotterdam has the ingredients to house these groups, at least if they achieve a good mix of densities.

I strongly believe that healthy public spaces need a certain density to work well. A huge amount of people on a small dwelling plot is not directly affecting the public domain around the building. There can be civility in the building, but there might not be any outside the building. If we look at the open air square around Gordon Bunshaft’s Lever House on park Avenue one can see that the street level itself is dead space. No diversity of activity takes place on the ground floor; it’s only a means of passage to the interior (Sennett 1977:12). It’s not easy to make interior public spaces which are congested through the whole day. A compact hybrid program should accommodate a healthy city life, something which lacks in the city center of contemporary Rotterdam where you can find plenty examples such as Lever House in New York. I believe, to create a congested and dense area, you need dwellings and a diverse program with a range of opening hours and a good mix of high density and low density. Thus Rotterdam should focus on the growth in compact walkable urban centers to avoid sprawl and advocates compact, mobility-oriented, walkable, bicycle-friendly land use, including educational facilities, uniform streets, and mixed-use development with a range of housing choice.

**APPENDICES**

**Literature**

Berghauser, P., Haupt, A. Spacemate, PERMETA architecten, Amsterdam, 2002


Gemeente Rotterdam, Stadsvisie Rotterdam , Rotterdam. 2007

Gemeente Rotterdam, Verbonden stad visie openbare ruimte Rotterdam, Rotterdam, 2007


Meule, E., Vreedeniueh Be, Luchtgebonden Bouwen NAI Publishers, Rotterdam, 2005

Meurs, P. In Transit: mobility, city culture urban development in Rotterdam, NAI Publishers, Rotterdam, 2003

Sennet, R. The fall of public man, Norton Publishers, New York, 1992


Uytenthaak, R. Cities ful of space, O10 Publishers, Rotterdam, 2008

**PERMETA architecten, MIT press, Cambridge, 1981**

**Mobiliteit en Beleid, Van Gorcum, Assen, 2001**

**Cities, architecture and society, Rizzoli International Publications, New York, 2006**

**Gemeente Rotterdam, Stadsvisie Rotterdam , Rotterdam. 2007**

**Gemeente Rotterdam, Verbonden stad visie openbare ruimte Rotterdam, Rotterdam, 2007**


**Koolhaas, R. S, M, L, XL, O10 Publishers, Rotterdam, 1995**


**Maas, W., Koek, R., Rijs, van J. Farmax MVRDV: Excursions on density, O10 Publishers, Rotterdam, 1998**

**Meule, E., Vreedeniueh Be, Luchtgebonden Bouwen NAI Publishers, Rotterdam, 2005**

**Meurs, P. In Transit: mobility, city culture urban development in Rotterdam, NAI Publishers, Rotterdam, 2003**

**Sennet, R. The fall of public man, Norton Publishers, New York, 1992**


**Uytenthaak, R. Cities ful of space, O10 Publishers, Rotterdam, 2008**
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