Transforming Housing Heritage
Projects for Regeneration of Rotterdam Feijenoord & Lombardijen

RMIT graduation studio 2011-2012
W.J. Quist & L.G.K. Spoormans (eds.)
Transforming Housing Heritage
Projects for Regeneration of Rotterdam Feijenoord & Lombardijen

W.J. Quist & L.G.K. Spoormans (eds.)
Transforming Housing Heritage - Projects for Regeneration of Rotterdam Feijenoord & Lombardijen.
Results of the RMIT graduation studio 2011-2012
Edited by W.J. Quist & L.G.K. Spoormans

Keywords
Housing, heritage, transformation, renovation, intervention, neighbourhood

Publisher
Delftdigitalpress.com
info@delftdigitalpress.com
© 2012 this edition: Delftdigitalpress
© 2012 text and illustrations: authors

Design and lay-out
Studio Lampro, Karen Knols
karen@lampro.nl

www.rmit.tudelft.nl

Invited experts:
Edwin Dortland - Woonstad
Niels van Ham - Woonstad
Ilse Dumoulin - Havensteder
Bert van Duuren - Wijkregisseur deelgemeente Feijenoord
Marcel Dekker - Gebiedsmanager Lombardijen
Astrid Karbaat - Advisor cultural heritage in urban planning Stadsontwikkeling Rotterdam
Henk van Schagen - Architect and Veldacademie
Catherine Visser - Architect DAF and program manager R70 research
Wijnand Galema - Architectural Historian
Katerina Loukopoulou - Student TU Delft
Thaleia Konstantinou - PhD researcher TU Delft
Otto Trienekens - Veldacademie
Jurrian Arnold - Veldacademie
Sander Smoes - Veldacademie
Paul Meurs - RMIT, TU Delft
Job Roos - RMIT, TU Delft
Hielkje Zijlstra - RMIT, TU Delft

The contribution of all invited experts and other people involved is gratefully acknowledged.

About the editors
Both Lidwine Spoormans and Wido Quist are trained as Architect and Building Engineer and graduated at the Faculty of Architecture of TU Delft. Lidwine Spoormans is architect and owner of Studio LS and teaches in the RMIT graduation studios. Wido Quist holds a PhD in Building Conservation and is researcher/teacher at the RMIT-department.
INHOUD

Introduction
Wido Quist, Lidwine Spoormans, Hielkje Zijlstra

Introduction to Veldacademie and the Rotterdam Context
Otto Trienekens & Pieter Graaff

Housing as Heritage?
Paul Meurs

ShopHouse Transformation in Feijenoord
Aman Poon

Simonsterrein - A Social Project
Theodora Chatzi Rodopoulou

Diversity: Ideas and Embodiment
Alexandra Vlasova

Liveability in Residential Urban Neighbourhoods
Eirini Gallou

De Wijkgedachte 2012
Mark Radstake

Green Spaces in Post-war Areas
Donghwa Kang

Self-identification Issues in Post-war Neighbourhoods
Irakli Melkadze

Perspectives
Lidwine Spoormans & Wido Quist

Epilogue
Wido Quist & Lidwine Spoormans
In 2011 the RMIT-department of the Faculty of Architecture of Delft University of Technology formulated the ambition to be structurally involved in the transformation of urban neighbourhoods in both research and education. This was decided upon because of the complex social, spatial and physical issues that many districts in large cities are facing and the urge to react on these issues with research based design within the awareness of the cultural significance of those threatened areas. RMIT wants to stress the importance of discovering degraded housing areas as potential heritage. This helps to change the reputation of the areas and requires a new our attitude towards regeneration.

The mentioned complexity fits perfectly in the mission of RMIT, i.e. aiming at multidisciplinary research, product development and knowledge transfer in the fields of modification, intervention and transformation of the built environment. By linking academia with professionals in the field RMIT aims at innovation in both education and research. Therefore RMIT and Veldacademie joined forces and started a graduation studio on “Transforming the Housing Heritage of Feijenoord and Lombardijen”. This book presents the results of this studio. Because of the different backgrounds of the students, being Chinese, Dutch, Georgian, Greek, Korean and Russian the research and the design proposals show some out-of-the-box-thinking that is very inspiring.

The ambition of the studio was to gain an insight in origin, history, past interventions, the actual situation and the future possibilities of a variety of typologies in the existing housing stock as a base for intervention strategies. To connect with the real world, stakeholders such as housing corporations and local authorities were involved in the organisation of the studio. The collaboration with Veldacademie and the input of experts resulted in a multidisciplinary approach. From an academic point of view the graduation studio already got a follow-up by comparable studios on Den Haag Zuidwest and several urban areas in the western part of Amsterdam.

This introduction sets the academic context in which the graduation studio on Rotterdam Zuid took place and introduces the most important aspects of the conducted research and the created designs.

**RMIT education**

Architecture students are introduced to RMIT in the first year of the bachelor programme and can develop their skills by means of a minor in their third year. In the graduation year they consider their further study options. These include the RMIT Master: ‘Design with History’. The RMIT master variant (part of the Architecture master track) covers the basic aspects during the first term, which the students can develop further in the second term. Next, they combine practical and
theoretical aspects with ‘design through research’ and ‘research through design’ at the RMIT graduation laboratory.

Education & Research, theory and practice, preservation and intervention are all subjects relevant to all three forms of education (lectures, assignments and projects). RMIT covers three levels of scale of architectural assignments: Modification: from brick to building, Intervention: from building to town and Transformation: from town to landscape. These strands meet in the graduation studio: research, design, through context, with history, via objects, down to details. The final graduation project is a complex transformation brief, which combines all aspects of the RMIT levels of scale and areas of expertise.

Throughout their education, students build up the knowledge and expertise to look beyond their boundaries. The RMIT education programme aims to present a broad perspective on current professional practice in design and research. In their graduation projects, students have to be able to develop the synthesis necessary to respond effectively to the brief which they defined themselves. They learn that by asking the right questions at the right time. RMIT provides the tools to study by using this perspective.

Graduation studio

From the beginning the Veldacademie, based in Rotterdam was a partner in this project and therefore the graduation studio focused on Rotterdam. In consultation with Veldacademie, housing corporations and the municipality, Feijenoord and Lombardijen as important areas of Rotterdam-Zuid were set as study areas, see figure 1. Actual problems, a sense of urgency, diversity of topics and the need for new strategies were leading in the choice of projects to be studied. The involvement of Veldacademie in this graduation studio will be highlighted in the first chapter of this book.

Feijenoord was the first Rotterdam expansion area on the Southbank and housing arose in the nineteenth century. In the seventies and eighties of the twentieth century during the “Stadsvernieuwing” (Urban Renewal), demolition, renovation and rebuilding resulted in today’s social housing stock. Feijenoord is seen as a deprived urban area and social and safety issues are the main themes. Research started by studying all layers of physical and cultural history in the development of Feijenoord. Lombardijen is a post-war expansion area, mainly existing of large-scale repetitive housing blocks, built by industrial building systems. In this neighbourhood different dwelling typologies have been studied such as rijtjeshuizen, portiekflats and galerijflats. Relevant themes in Lombardijen are large
amounts of identical typologies, energy saving, adaptability to ageing inhabitants, connection with service and facilities, social-economic issues. Research started by studying the history of physical and cultural development of the post-war “zuidelijke tuinsteden” (southern garden cities).

Outline
In this graduation studio the students spent one academic year on both research and design for the transformation of threatened neighbourhoods. They have chosen to specialise in this important field and prepare for their future work as an architect. The scope of the analyses was Rotterdam-Zuid and focused on the position of Feijenoord and Lombardijen in this urban area. Within every study area some intervention areas were predefined and students were asked to adopt one of those locations. The intervention area in all cases is an urban block or ensemble.

In the first quarter different areas and buildings have been researched fundamentally on different levels; the urban scale of city and landscape, the architectural scale of buildings and context and the technical aspects of structure, material and detail. Students studied the building history, earlier interventions, the actual situation and the future possibilities. This research lead to an analysis of the different aspects, which formed together with external influences the basis for a SWOT-analysis or value assessment regarding the building (or ensemble) and its surroundings. The outcome of the analysis dictated the programme of requirements and outlined the following design process.

In the second quarter the students focussed on research by design and defining the design boundaries. In this timeframe research by design mainly meant the development of concepts. The definition of the design project is set in dialogue with the outcomes of the analysis on urban, architectural and material level. In the second semester of the graduation, one or more concepts were chosen and elaborated to a full design proposal. All student projects focus on transformation of the housing stock. Design proposals deal with architectural, cultural, historical, programmatic, economic and spatial issues.

Research approach
The research was conducted on three levels of scale. It is obvious that it is difficult or sometimes impossible to distinguish between the urban scale and the building scale. Also there is not always a strict line between the building scale and the material scale. Therefore we speak of one research with three focus points that resulted in one report. The main goal of the research was to ‘get to know the building and its problems and possibilities in every sense’. It is about recognizing and understanding the significance of the building or ensemble. To give structure to the research the matrix, presented in figure 2, is of great help.

First of all the research is about finding, collecting and sorting all kinds of data that describes the building on the mentioned levels of scale on the one hand and in time on the other hand. It is not only about collect-

![Figure 2 Matrix to structure research.](image-url)
ing data on the current situation and the ‘original’ situation, but also (little) things that happened in between.

The second part is the actual analysis. Therefore all students are encouraged to focus on a specific theme. Understanding the significance of a building or ensemble is mainly about recognizing, describing and analysing the different relations and their meaning and possible consequences for the future. Those relations can be found (and have to be described) according to the timeline, between the different levels of scale and with external items all in a social context.

In the end, the third aspect of the research has to do with interpretation and assessing values. How do the findings influence the (im)possibilities of transforming the building or ensemble into a building or ensemble that is ready for the next decades? What are the strong points and the weak points (SWOT-analysis) and how can those be used to formulate starting points for design that eventually results in design concepts (figure 3).

Structure of the book
After this introduction, the introduction to the involvement of Veldacademie in the project and the context of housing as heritage in the Netherlands, the core of this book will be formed by seven short papers. Those papers are based on the research by the students in the first semester of the graduation studio. Every paper focusses on a specific question, related to a specific area within Feijenoord or Lombardijen. All those papers are open-ended by suggesting a design direction to solve the issues the discovered during the research. In the second part of the book all students are given the opportunity to visually show their design proposals, based on the conclusions of their research.

Because the two study areas, Feijenoord and Lombardijen, have a different origin, history and current condition, research results and future possibilities show significant differences. The projects of the students clearly indicate this. Below these projects are characterized starting with the projects on Feijenoord and ending with the projects on Lombardijen.

- ShopHouse Transformation in Feijenoord, by Aman Poon
  This project reintroduces the combination of shop and house in a nineteenth century housing block along the Oranjeboomstraat. The result is a strengthened connection between working and living, between old and new structures and between two strongly separated parts of Feijenoord.

- Simonsterrein - A social project, by Theodora Chatzi Rodopoulou
  In this project, the Simonsterrein is valued as a monument of activism. A contemporary version of participation, process design and physical intervention is developed in order to improve the living conditions.

- Diversity: ideas and embodiment, Zinkerblock, by Alexandra Vlasova
  The unequal value of the two parts that form Zinkerblock is unified in this project. The nineteenth century character of diversity is strengthened and
used to upgrade the nineteen eighties-part of the block and its surroundings to a higher level.

- Liveability in residential urban neighbourhoods, Oranjeboomstraat, by Eirini Gallou
  The creation of an urban enclave in this project improves safety, social coherence and liveability of a combined housing block (nineteenth century and nineteen eighties) along the Oranjeboomstraat. In contrast to the project of Aman Poon that opens up the urban structure, this design uses the strategy of enclosure.

- De wijkgedachte 2012: Collectivity and individuality in Molièrebuurt West, by Mark Radstake
  The exceptional situation of private ownership in this part of Lombardijen inspired the redesign of a neighbourhood in this project. Either improving or reducing collective space is tested in a design laboratory.

- Green spaces in post-war areas, Lombardijen-Oost, by Donghwa Kang
  Close observations of today’s use of green spaces form the base for redesign of this more or less generic post-war area. Turning the existing rationality to complexity is this project’s strategy for facilitating and stimulating collective contemporary use.

- Self-identification issues in post-war neighbourhoods, Loss of Identity in Lombardijen district, by Irakli Melkadze
  The mismatch of a frozen post-war identity and a new multi ethnic population is the reason for the addition of new identity and programme. The repetitive building system of the existing structure is a starting point in the development of a system to create multiple identities.

The design proposals will be critically reflected upon by the tutors of the studio, using the ‘pijlers’, proposed in the report of ‘Kwaliteitssprong Zuid: ontwikkeling vanuit kracht’ by Deetman and Mans, issued in February 2011. This report states that the scope and the intensity of social-economic problems in the weakest segment of the housing market is exceptional in The Netherlands. The advice is the creation of a national program, with strong involvement of governmental bodies.

The report by Deetman and Mans is the topical and guiding document for the transformation of Rotterdam Zuid in the nearby future and therefore the relevant framework to evaluate the results of the studio.
Introduction to Veldacademie and the Rotterdam Context

Otto Trienekens & Pieter Graaff

While the field of our profession is changing rapidly, academic projects can be of high value to the complexity of urban developments. As a knowledge centre for neighbourhood renewal, Veldacademie is located in the heart of Oud-Charlois, a social and economical deteriorated neighbourhood in the south of Rotterdam. Hereby Veldacademie has settled itself among its subject: the functioning and perception of Rotterdam (South) neighbourhoods. It acts both as an operating base for students and as an information or exchange centre for inhabitants and professionals who are involved in the area. Among the complexity of social, economical and physical challenges, Veldacademie is exploring multiple lines and directions in which projects can be embedded.

Bringing the academy to the field

Student work that is executed at Veldacademie is fed and tested by data and policy from the field. Once the projects are embedded in ongoing research lines, they will be influenced by the challenging complexity of the Rotterdam context. This confrontation is often a boost for the research project and gives the students more insight to the situation and the practise of their profession. At the same time, students are encouraged to share their findings with a broader public and thereby contribute to discussions and improvements of the (sub)urban reality. These confrontations are given shape as interviews with local inhabitants, analyses of policy, digital knowledge and fact databases and preferably the combination and confrontation of different sources and participants.

In this way, a benefit in two directions is achieved. Students are brought into contact with realistic cases while practise is fed with ideas of students. Time after time we notice that the student ideas are broadening the scope of professionals as they come up with ideas...
that professionals themselves wouldn’t produce any
more. Besides their unprecedented open view of the
subjects, students also show to be more able in access-
ing multiple sources of information and contacting per-
sons from different fields and levels.

Since their future practise will become increasingly
focused on the transformation of the existing city and
the complexity of dealing with many different stake-
holders and interests, students will be better prepared
for their future jobs being confronted with these issues
beforehand.

**A methodical approach for analysis**

Besides giving shape to the integration of student work
and practise, Veldacademie has developed methods in
which an integral and multidisciplinary analysis of a
neighbourhood can be made and communicated. Here-
by the functioning and characteristics of different

neighbourhoods are consistently analysed and visual-
ised, offering the students a hands on kick-start for
their research and ensuring the long-term usability of
the newly found data at the same time. In this analysis,
both quantitative as qualitative data are combined to
an integral basic analysis of an area, which can be used
and worked out for several more specific research sub-
jects. Altogether, a coherent vision on both physic and
social-economic aspects can be achieved on different
scales.

**Collaboration**

Thanks to these methods of analysis and the ongoing
research work that is done by groups of students, Vel-
dacademie has become a meaningful party in linking
different themes and disciplines. Veldacademie now
gets commissioned for taking part in research projects
amongst both public and private organisations. On dif-
ferent subjects, Veldacademie works together with
TNO, Arcadis, housing corporations, developers or local
authorities. Hereby, student groups of different univer-
sities can work at the same subject so that they influ-
ence and confront each other. It has become clear that
such interdisciplinary collaboration is only possible out-
side the faculty buildings and Veldacademie is eager on
facilitating and stimulating this. For example, students
of Erasmus University in the field of public administra-
tion are studying the possibilities and consequences of
assisted living areas - suitable homes and facilities for
elderly and disabled in their familiar neighbourhoods.
At the same time, TU Delft students are mapping exist-
ing facilities and visualizing the consequences of trans-
forming the existing areas into accessible homes and neighbourhoods.

**The Studio**

Students are motivated to come and work at the Veldacademie studio. This is the best way to get into contact with the actual cases and with other students, working on related subjects. While they are free to write their own research proposal, Veldacademie stimulates them to choose the perspective of the neighbourhood. What does the transformation of a housing block mean for the area? Who are the inhabitants? What can be achieved and what are the consequences? In this way, the subject becomes broader than just an exploration of the physical possibilities.

The confrontation with the area and the fact that the students are working in the area they are studying noticeably influences the process. In an early state of their project, the students of the MIT studio have been brought into contact with professionals and stakeholders working in Feijenoord and Lombardijen who know exactly what’s happening there. During this meeting, the confrontation between the experienced professionals and the open and curious international students has already led to a few eye-openers at both sides.

**Merging exercise**

An excellent example of the way in which Veldacademie confronts students and the practise is the Merging exercise that is done by the graduation students. In this workshop, research is done on the possibilities of merging a first-floor and an upstairs apartment in Oud-Charlois. The surplus value in this research is that it takes place in an interactive process in which different stakeholders (e.g. home-owners, real estate agents, local authorities) are giving input and feedback.

The research on the possibilities of merging and extending doesn’t just focus on the architectural and physical aspects of the assignment. A focus on determining the right target groups and a study on the effects of merging to the direct environment is at least as important for the usability and evaluation of the different options.

The south of Rotterdam is dealing with a strongly fluctuating population and a high flow of inhabitants, where few are actually involved with the neighbourhood or district. This mainly concerns inhabitants (mid and high incomes) who leave, due to a one-sided housing stock of small dwellings and lack of binding to the district. Making a housing career within their own neighbourhood is therefore often not possible. Households that want a larger apartment and have sufficient income should be encouraged to stay within the district and thereby contribute to the social and economic support the area needs.

The purpose of the merging stimulation programme that is set up by Stadsontwikkeling Rotterdam is to achieve a set of tools to stimulate the merging of apartments and thereby promote the realisation of a more diverse housing stock and a greater choice in housing types for the middle class.

The workshop concerned apartments of private homeowners to be merged or extended. This research on the possibilities of merging and/or extending first-
floor and upstairs apartments is part of a long-term research programme on differentiation of the housing stock by merging. In other workshops, the merging of apartments in other typologies as well as for different target groups or housing corporations is studied. Hereby the workshop contributes to a relevant research process at hand that clarifies multiple possibilities of differentiating the housing stock and the benefits and threats of each of those options. For these assignments Henk van Schagen, who can be seen as a national expert in merging existing apartments (Van Schagen Architekten), is attracted to teach and advise the students in their exercise as well as to protect the long-term coherence over the different workshops.

Repeatedly merging and transforming apartments will lead to an overall development of the neighbourhood. This not only influences the amount of inhabitants, but thereby also the amount of cars, the basis for facilities, the use of the front garden and the streetscape. Besides designing different prototypes for merging and extending, a strategy for the front and back yard is provided to enhance the identity and value of the neighbourhood. Different configurations and parking solutions are proposed which influence the character of the street.

Now that even an estimation of the costs for the different prototypes is included, the workshop products offer a very complete and usable overview for local homeowners who are considering merging their apartment. The Merging exercise therefore both contributes to the knowledge and skills of the students as to the local programmes for neighbourhood development.

Towards the future

As the economic and executive context becomes more complicated every day, the value of these kinds of projects will increase continually. More and more, students will need to see their physical orientated work in a broader context and have insight in the current challenges of the field they will be working in. Hereby the newborn young professionals get prepared to deal with complex assignments and will be able to define their work among current themes and developments in their professional field. In this complex reality, the thorough research of the students and the integration of different scales and disciplines prove to be of urgent value.

The student work in this publication shows how projects can be started with non-traditional stakeholders, how the wishes of current inhabitants can be integrated in a design process and how transformation of the current housing stock can lead to new liveable environments and contribute to social and economic challenges on a higher scale. We are convinced that the experiences and confrontations with the practise at Veldacademie will help the students to find their way in their professional career. At the same time their projects are exemplary and inspiring for contemporary assignments in the field, such as the redevelopment task for about 33.000 houses on the south bank in the coming years.
Mass produced housing in the Netherlands roughly dates from the 1880s, when speculators started building low quality dwellings for workmen on a large scale. With the “Woningwet” (Housing Act) of 1901 the government took up its role in social housing, stressing liveability, affordability and healthy living conditions. Over just more than a century millions of houses were realised, creating large urban extension zones spread over the country. At the time of completion most complexes and neighbourhoods were praised as very up to date, or even as a preview of a better future that was about to arrive. The new inhabitants felt proud and privileged with their new homes. As the quality of newly constructed homes gradually increased over the years, the existing stock soon lost its glance. For most projects it was a matter of years before they started to become problematic. The paradox of vanguard housing solutions is that the more utopic or futuristic certain complexes were, the faster they were outdated. Most of the dwellings that were constructed in the period 1880-1980 do not meet today’s requirement for accurate housing. Society has developed in a completely
different direction than was anticipated upon in the past, especially in the social housing experiments from 1920-1970. By then society was supposed to become homogeneous and egalitarian; instead it became heterogeneous with many different cultures and lifestyles. Good intentions in the past, for instance on the collective use of the public domain, were not understood by residents. Mass produced or cheap solutions proved not to be durable. Uniformity was perceived as boring and monotonous, rather than as egalitarian and social. Older houses turned out to be too small. Although the average number of residents went down, people keep more and more stuff in their houses and have a much larger housing footprint than in the past. The green design of the public space was jeopardized and sometimes lost, because of the need for paved surface for parking and traffic. All these arguments make older neighbourhoods in general less attractive and this provokes a gradual social degradation, from bad to worse.

What should be done with neighbourhoods that date back to the period 1880-1980? Many interventions in this building stock that were carried out from the seventies onwards (Stadsvernieuwing) brought radical solutions on the scale of the buildings: new access structures (elevators and staircases), up-scaled and modernized apartments and sometimes the construction of new apartments on the top floor of a block. Measures to reduce the energy consumption and/or improvement of the size and living quality of houses, impoverished the architectural quality though. In the years before and after 2000, the interventions went further in the direction of massive demolition of buildings that sometimes were in a bad state of repair (foundations, humidity, material decay), but in many cases only had problems in the building typology and the functional layout on the scale of the neighbourhood (too much the same, too much public space). The new constructions that replaced the existing houses, sometimes used the old footprint - and respected the urban structure. It was however more common to design fragments of new urban configurations and insert them into the urban fabric - for instance residential towers instead of slabs, or one-family row houses instead of apartment blocks.

The last five years the expensive substitution of houses came almost to a standstill, because of the financial crises and all its consequences for the building production and the system of housing corporations. Suddenly the reconsideration of old and outdated houses has become urgent. How can we improve existing
houses? How can we reposition degraded areas in the housing market, without rebuilding them? How can the mass produced residential neighbourhoods compete with other parts of the cities - both old and new - and what can become their unique selling points? The potential of the housing stock that dates back to 1880-1980 relies on different factors. A key factor is price: old and outdated houses are cheap and therefore can attract specific functions. The low prices make it possible to work on tailor made solutions for specific lifestyles. The degraded areas can be more dynamic and deal better with lifestyles and economic diversity than gentrificated downtowns or recent suburbs.

Another key factor for the regeneration of dilapidated housing is identity. Although many neighbourhoods, in particular the large-scale and industrially built post-war areas, have a negative reputation - they have a distinct own identity and character. Identity has become one of the key assets of successful living environments. People want to live in an area that is recognizable, has unique spatial qualities and can be associated with good stories to tell. The challenge therefore is to convert the bad reputation of degraded neighbourhoods into a positive one, exactly like it used to be in the time of completion - when the areas were considered to be state of the art and gave a preview of a better future yet to come. This conversion implies that the causes of the negative trends have to be taken away and the original intentions have to be updated, transformed and made relevant today. This is a long process, that implies smart architectural intervention, programming and branding. In certain ways the revival of historic inner cities from the 1980s onwards and the transformation of nineteenth century neighbourhoods into varied urban quarters serve as inspiring examples. They prove that it is possible to change reputations of urban areas radically, also in the positive direction - as long as the areas can built upon specific and unique spatial and cultural qualities.

Can mass produced neighbourhoods be unique? Over the past decades heritage inventories were made in residential neighbourhoods that now roughly cover the period 1880-1980. Subsequently, many housing ensembles, complexes and even entire neighbourhoods were listed as monuments or conservation areas - both on national level and on municipal level. The big discovery is how little we know about the housing stock that was produced between 1880-1980. There are many prejudices, that help to worsen the general opinion about the quality of the neighbourhoods. But reality is by far more varied - as can be revealed on explorations all over the country, in interviews with key actors, witnesses and residents or by making surveys in archives, where the history of ideals and ideas is kept. First, there were many developments and innovations during this century, both in urban design, architecture, typology and building techniques. This goes from garden cities, Amsterdam School, neighbourhood units, to prefab systems, experiments with building materials (such as concrete) and experimental housing typologies (such as the untranslatable range of zitkuil, paalwoning & woonerf). Second, even within certain periods and concepts - a very wide range of variations can be discovered - due to the influence of residents, the local conditions and big differences in the architectural and urban design. The housing production of the welfare
state can on the long run become one of the richest and most valuable contribution to the national (and local) heritage. It will however take time to extend our understanding of the period, make clear choices on what the outstanding qualities are and find strategies to adjust this heritage to current demands for housing and living environments.

The discovery of degraded housing areas as potential heritage, helps to change the reputation of the areas and requires a new attitude towards regeneration. It is slowly becoming unthinkable to solve the problems by creating a new tabula rasa on which the current ideas on housing and neighbourhoods can be developed from scratch. Instead, the approach will have to be to start thinking and designing from what there is - both in terms of urban design, architecture and people. How can the existing reality be shifted into a new reality that still is recognizable and has a memory that is present and visible? Changes are needed, but part of the changes could be to uncover qualities and concepts that have become out of sight. The challenge is to transform one-dimensional extensions, that were real-ized in a short building process, into layered urban areas, in which different time eras co-exist and create a new urban quality and vitality - similar to what happened in the older parts of the cities over a very long time.

The experience with housing as heritage also will change our attitude towards monument preservation and heritage. It is unthinkable to regard urban extensions as conservation zones, the way we do in inner cities - focussing on the preservation of building substance, cherishing each and every buildings that is part of the urban composition and adjusting the daily use to what the site can handle - banning cars. The conservation zones outside the city centres will be the stage for big interventions, changing their urban structure, demolishing certain areas and intervening drastically in the housing stock. The heritage dimension is perhaps not related to the question if interventions should be done, but rather on the question how to do it. The focus will be different in certain areas - for instance on the public and green space, instead of on the constructed property, on the conceptual value rather than on the material value, or on gradual instead of radical change. The Dutch government is in a process of modernizing the monument conservation, emphasizing the integration of spatial planning and heritage conservation. For this ambition, the housing heritage is the perfect experiment - as the regeneration badly needs the conversion of bad reputations and the exploration of the identity of sites. At the same time the creation of new heritage cannot go without new and innovative strategies for conservation, that take transformation and the creation of fruitful and vital urban neighbourhoods as starting point.
Introduction

The shop house is a vernacular building type. Shop houses are mostly two to three stories high, each with a shop operating on the ground floor for commercial activity and a dwelling above the shop. They are mixed-use buildings that serve social and economic functions. They could be found not only in the Netherlands, but are also very common in other countries. Usually, the dwelling part of the building is housing family of the owner of the ground floor shop. The relationship between shop and dwelling is close and direct. However, this building type became displaced in the twentieth century. “Shops” were claimed as sources of nuisance, and excluded from dwelling area. Housing developments, especially those being built after the Second World War (WWII), are mostly pure dwellings.

An example of the displacement of the shop house could be found in Feijenoord, Rotterdam. Feijenoord was developed into an industrial port area in the late nineteenth century, shop houses were built for the port workers and their families at that time. However, these shop houses substantially changed over the past hundred years. Functionally, the relationship between shop and dwelling is disconnected recently. The shop operators may not live in the dwelling units above. Physically, some of the shop house were renovated, of which some shops were removed from the building in the 1970’s. And last year, a row of shop houses in Oranjeboomstraat were demolished and the site left vacant (figure 1). Once being so dominant in urban culture and street fabric, what is the future of this building typology? Is being demolished the only way out for it?

In this writing, the fall of ShopHouse is briefly narrated, followed with the highlights of significant district phenomena and the recent situation of ShopHouse.
The fall of ShopHouse after WWII

Traditional ShopHouse were seldom to be found built after the WWII. The most obvious reason for this is the raise of “functionalism” which stressed highly on the perception that society is a collage of individual utilities, organized in a logical manner that serves collectivity as a whole, for the wellbeing of the society. As functionalism was the most important and influential doctrine endorsed by the modernists, the segregation of urban functions was widely pursued by architects and urban planners in their design during the twentieth century.

During that period, the cities split up into mono-functional areas. Residential areas, formed by pure habitation dwellings and shared communal spaces, are separated from other urban functions. The development of Bijlmermeer District in Amsterdam is a typical example of the Modern city in the Netherlands. This type of urban planning was widely applied in the post-war period in order to fulfill the increasing demand for housings. The boom of the Modern cities successfully resolved the imminent social problem of the Netherlands at that period. However, as an expense, ShopHouse, which was cultivated by the small-scale economy resulted from slow organic growth of residential neighbourhood, was rapidly excluded from the residential area.

Nowadays, as cities evolve, the negative effects of this division-of-functions planning becomes obvious, i.e. it minimized the social coherence and neighbourhood connections in the residential areas. Residents set off for work in the mornings, and their children play on their way to school only. They have only a few activities in their housing districts. Though the communal spaces are mono-functions parks with large empty green spaces, provided to promote a sense of community feeling, most of them failed. This failure results in not only the under-use of space which is a waste of social resources, but, more important, a deteriorating neighbourhood relationship.

There have been huge debates on this kind of city planning for many years. For example, Jane Jacobs questioned about the division-of-functions-planning and suggested to make linkage among district economy, district physical structures and the public space. Making cohesion among various urban functions became important.

Recently, there are national plans about the urban renewal projects in the Netherlands, for example, South of Rotterdam. This region is originally associated with social housing built in the pre-war and early post-war periods. The linkage between different functions and areas by new public space is stressed in this project. However, at the moment, only literal connection among these areas by physical structures is provided. The need for actual connection among the residents that promotes human interactions has not been addressed. The linkage zone should be a mix-function entity that consists of various uses, for instance, housing, working and public spaces; that allow gradually transformation among different existing functional zones.

How to link up those existing buildings, for example the traditional mixed-use buildings - ShopHouse with the existing urban fabric, and transform them into a new model for the districts is one of the cases.

The changes and problems in Feijenoord district

Feijenoord is located in the South of Rotterdam and was developed when the port industries peaked in the nineteenth century. It was a large scale urban development. Many factories and houses were built in the area
together with the streets and the related infrastructures, such as bridges and railways. The street profiles were wide in that period. ShopHouse was then the most typical building, with shops operating on the ground floor to support the daily life of the residents in the area. Since most of the residents, the workers and their families, came from different towns or villages, those pavements were important places for them to meet, to play and to rest. Street pavements were designed to benefit the connection between people from different social backgrounds.

The influence of the Modern Movement is also obvious in Feijenoord. After WWII, the port industrials were getting down; factories were moved away from Feijenoord and replaced by residential blocks. Shops were also taken out of the area. Although the area successfully changed from a port industrial area into residential area, there are also negative effects generated by these changes.

**Disconnected and small communities circles**

Since Feijenoord area survived the bombings of Rotterdam in WWII, many of the pre-war buildings still exist after the War. The redevelopments of Feijenoord were carried out in bits and pieces. As a result, these redevelopments reflected and reinforced the separation of the population structures in Feijenoord. The housing projects built or renovated in the fifties and the seventies were designed to suit specific groups of people with own characters. Old districts are transformed into relative poverty for low socio-economical groups, while new districts are built for higher income people and higher social classes. Feijenoord was cut down into many small communities-circles of people from different social groups. Although the planners tried to increase the connections among different areas by constructing some cross streets; the interaction among different social groups is rare. This is because of the absence of pavements nor facilities that promote the mixing of functions in the districts, there are no places for people to communicate; there is no connection and exchange among districts.

**Vanishing of street activities**

During the “Stadsvernieuwing” (Urban Renewal period) in the 1970’s and 1980’s, since the urban planner aimed to make Rotterdam centre more cheerful and welcoming, they tried to reduce the housing density in the centre and spread housing districts to the city edge. Since Feijenoord is not in the centre of Rotterdam, it was transformed into a “pure-dwelling” district. The urban renewal planning in Feijenoord followed the concept of “mono-function”, housing and other related facilities of daily life were separated. The small-scale urban economies were viewed as ‘impurity’ and were removed from the housing area. It was a quite common arrangement in that period due to the assumption that businesses and shops were seen as sources of nuisance. Communal spaces became an important element in housing projects instead. As a result, street activities
were reduced and daily life activities were separated from the housing district. Local residents are seldom to be seen outdoor (figure 2). The area became quieter with various nuisances. If there is anyone hanging around, residents may feel danger to stay outside in the districts.

**Green structure without coherence**

There are many green structures in Feijenoord. Over thirty per cent of the area is green space, of which about sixty percent is common or collective garden for adjacent inhabitants and private gardens on ground floor. The rest is a kind of public green area, that can be accessed by anyone, including the parks and green plants in the streets. The two big public green parks are located near Nassauhaven and the other is located near Rosestraat.

Although these two parks are important public spaces for residents, they do not form coherent components to the existing street network. For example, the Rosepark, located on the island between Oranjeboomstraat and Rosestraat, is more than 400 meters long and about 75 meters wide. It is located close to the “Peperklip” residential buildings in Rosestraat and the row of traditional ShopHouse in Oranjeboomstraat, but is separated from those building blocks by a busy carriageway and a long big wall respectively (figure 3). Also because there are no specific functions in the green park, it is always empty. Green structures divide the areas instead of link the areas.

Obviously, division-of-functions planning divided Feijenoord into small subdivided communities, but no proper linkage space is provided. Making linkage among local economy, transforming existing buildings and public green structures to form cohesion among the districts in Feijenoord is required. It is not a transformation to combine all the subdivisions. The focus of the transformation is to strengthen the connections and increase the sense of belonging of the area among residents. For example, opening up a subdivision area, and transform it into a public and representative zone, that will be an attractive spot for social activities among districts.
Transformation in Oranjeboomstraat & Rosepark

Oranjeboomstraat is the ideal location for this transformation. There are four main reasons. Firstly, Oranjeboomstraat is a symbol of the district as “everyone knows the Oranjeboomstraat”. It is the traditional shopping and community centre of Feijenoord, where ShopHouse is the main typology of shops (figure 4). They support the social-economy to the nearby community area. The importance of Oranjeboomstraat was only dimmed recently after rows of ShopHouse are demolished. Secondly, Oranjeboomstraat is located in the middle of Feijenoord. The ground floor shops in the street are occupied by more than 30% of retail shops and supported to the eastern part of Feijenoord (figure 5). Thirdly, there is an empty green structure, Rosepark, behind the row of the ShopHouse. This green structure is located at the edge of Feijenoord. Although there is no proper public access and development feasibilities requires further study, its emptiness possess huge potential and possibilities for transformation. Last but not least, there will be a new tramline constructed in the coming years. A new tram station is proposed next to the Rosepark. With the new public transportation facility, the benefit of the transformation might magnify due to the increase of pedestrian flow. Moreover, as the new station will bring more ‘outsiders’ to Oranjeboomstraat, if the transformation is successful, there is a chance that the enhancement in neighbourhood interaction may even radiate out to the other areas as well through the tram network.

Transformation feasibility of existing ShopHouse in Oranjeboomstraat

There are rows of existing ShopHouse located along Oranjeboomstraat that survived demolition in 2010. If transformation is taking place in Oranjeboomstraat, these buildings should be utilized as one of the key elements. The potential value from the unique style and qualities of the existing buildings provides possibilities on the physical transformation.

Building style

These buildings were used as “Social housing” for workers. The design of the building facade was simple and identical; and the layout was basic and logical: narrow and elongated with repeating depth and length in the plot. During the renovation in the 1980’s, they were still renovated as social housing. The building facade and layout were renovated in the concept of “merging horizontally”. As a result, the building plot, in terms of front facade, layout and sectional arrange-
ment, was changed from “Identical Individual” to “One” (figure 6). The back facade of the building is a kind of “private facade” but it is facing to the Rosepark and one main carriageway of the area. Renovation on this facade is necessary.

**Building quality**

The structural system and materials used in renovation are typical for that era in the Netherlands. Renovation was done by adding external insulation. The building structure and foundation limited the extendable height of the building; however, the wall and floor systems allowed additional changes. During renovation the living units were rearranged horizontally by making holes in the partitioning walls; openings were made to the timber floors for the construction of new internal staircases. Basically, the buildings are mainly structured by the loadbearing walls; the facades and floors are relatively flexible for transformation.

How to transform these ShopHouse is important. Not only the technical issues need to be considered, but also the social-cultural content of the ShopHouse should be touched upon. The existing ShopHouse mixes the functions of “shop” and “living”, which operates with shops on ground floor and dwellings above. What are suitable combinations of functions for nowadays
and future? What is the new definition and relation of “work” and “live”?

Re-thinking “living” plus “working” spaces and its social implications

Recently, there is a growing attention to the combination of housing and working. This does not mean literally placing the housing and working spaces next to each other. It is the experiment of a single space that serves both production and consumption functions.

‘Home-office’ or ‘SOHO’ is an example of “small-scale economy”. The term ‘Home-office’ or ‘SOHO’ refers to a category of business that involves less than 10 workers each work in their own home, integrating his or her working life with his or her family life. It is particularly popular in relatively small-scale business. Small-scale economy can provide opportunities for people with different backgrounds to become integrated and emancipated. People can create their own businesses and economic independency, which can help them to have better equality in the society.

This vision of economy is definitely suitable for Rotterdam, also Feijenoord. This is because it matches one of the main goals in Rotterdam Urban Renewal plan - “strengthen the economy structure” that promotes knowledge and innovation businesses and service economy. The idea of small-scale economy, due to the low starting costs, is suitable for different groups of people, including singles, couples, students, even families to own their business. This is very beneficial to Feijenoord, especially for the improvements on youth employment. Secondly, it is suitable to the economic background of the district. Since residents of Feijenoord are mostly immigrants from lower social strata, the economic footprint is relatively low. It is also suggested that “high-class” commercial activities do not fit there. On the contrary, the small-scaled business is well fitted in the social environment. It can provide living space and working space. It allows people to start their business in budget, while people can save money and time in transport. It is one of the local economy sources. The individual and distinguishable characters of small shops can help to strengthen he community circle in the area and even attract adjacent communities to visit.

Although the existing functional arrangement of ShopHouse is typical, the composition, circulation and orientation of shops and dwellings limit the variation of shop types. Transformation of the ShopHouse to suit the contemporary business model is required. Traditional ShopHouse can be transformed into new composition of living and working places. This is a good chance to re-think and re-define the meaning and the future of ShopHouse in Feijenoord.

Possible direction

The notions of Functionalism were DIFFERENTIATION AND SPECIALISATION which promotes the ‘Economy of Scale’; the internal social cohesion was sacrificed for maximizing the cost effectiveness and productivity. We actually benefit from such mode of development. Large cities and big corporate is vital to our daily lives. However, it does deepen the gaps between different social groups as the less competitive ones will always be marginalized and displaced. The emphasis on INTEGRATION AND COALESCENCE might counter-balance the side effects of Modern city planning and way of living. The emphasis of human interaction interface on the ‘intersection’ of functional zones and the idea of a spatial setting that can accommodate both working and living activities will cohere the various social fragments without a wholesale change in social structure that will in turn result in another set of social problems. These are opportunities to make transformation in Feijenoord improve its living environment. It requires the involvement of both urban and building levels.
On urban level, the green empty structure, Rosepark, needs to be redesigned with new facilities to bring a new balance and harmony to the area. The public from different communities can go to enjoy the new green park and experience the new and specific composition of ShopHouse and park. This linkage zone can be part of their working and leisure place.

On building level, the existing ShopHouse can be modified and transformed. Small-shops, studios or work-shops plus living spaces can be provided. They are suitable for different sizes of people groups from single to families. The residents who live in these buildings can be offered a semi-community-and-public space. The building front facade can be transformed to embrace the district image, which can maintain and emphasize district identities. Meanwhile, the existing back facade of the buildings can be re-invented to bring a new image of each individual or small group of houses.

On the long run, projecting the potential of this architectural and urban design concept into the social and cultural level, the transformed ShopHouse may result in a new housing typology that not only provides living space for people, but also facilitates people starting up small businesses, at the same time forming a new characteristic community and society structure. The local economy will also benefit. Facing the fall of economical footprint in the area and competitiveness from big corporations, these small businesses with distinguishing qualities may be a way out.

To conclude, now the housing problem for the mass has been resolved. We are now faced with new social problems of deteriorating sense of community and a disjointed society that is generated by the Modern city paradigms. To tackle these new problems does not mean the complete restoration of the old system. It should mean a new typology that reflects the traditional system in an innovative way. By mixing the old buildings with the new ones through the injection of new communication platforms that encourage communication among people from different cultures and backgrounds, a more well-balanced society will be the new model for the future.

Bibliography

Bureau Monumenten Rotterdam d5+V, May 2003, Lombardijen, Cultuurbouw en beschrijving (1949-1965)
De Nieuwe Unie, Wijkvisie Feijenoord 2006-2016
Gemeente Rotterdam Stadsontwikkeling, 2011, Masterplan Kop van Feijenoord Fase II Kop van Zuid, Rotterdam
Gemeente Rotterdam, 2007, Stadsvisie Rotterdam: Ruimteontwikkelings-Strategie 2030 (Concept)
Komossa Susanne, 2010, The Dutch urban block and the public realm, Models rules ideas, Rotterdam and Vantilt Publishers, Nijmegen
Meijel L. van, Hinterthür H, Bet E., 2010, Cultuurhistorische verkenning Feijenoord
Rotterdam Vakmanstad M/V, Veldacademie,2010, De Nieuwe Belangstelling, Verbinden en overbruggen in de wijk Feijenoord

Websites

www.portfeijenoord.nl/visie.pdf
en.wikipedia.org/wiki/Small_office/home_office
Introduction

At the very eastern part of Feijenoord lies Simonsterrein, see figure 1, a project forerunner of the participation design, built in the mid-seventies. In what follows the social and architectural parameters of the complex will be discussed. The project will be analysed and evaluated within the social and physical framework of Feijenoord. The analysis of the history of Feijenoord and Simonsterrein is mainly based on secondary literature i.e. Van Meijdel et al. (2010) and Gemeente Rotterdam (2011). The description of the participatory and design process of Simonsterrein is based on lectures given by Henk van Schagen to the MSc3 students of RMIT, during the first academic quarter 2011-2012 and Galema (2010).

In the crossroads of Feijenoord’s historic paths

Feijenoord was the first expansion area of Rotterdam on the South bank of the Maas river. Building started in
the late nineteenth century, during the industrial development, as an industrial and harbour district. The low cost housing blocks were limited, addressing mainly the industrial workers.

In the nineteen seventies and eighties of the twentieth century, during the urban renewal Feijenoord acquired a new identity. A series of demolitions and renovations combined with the erection of new dwelling blocks resulted in today’s housing stock. The redevelopment of this era was a result of the passionate social struggle of Feijenoord’s residents. The analysis of the Simonsterrein case will highlight the achievements of the urban renewal bottom-up design.

As times and circumstances kept changing the development focus shifted into other districts of Rotterdam. From the nineties on, Feijenoord felt into decline. Today the district - refuge of immigrants and lower social strata - is a deprived urban area with major social, financial and safety issues. These problems are subsidised by the state and the form of the urban environment. The gravity of the before mentioned problems seems to mislead the public that tends to forget the qualities of the area.

In the author’s opinion, the district needs attention and special treatment not only because it is a problematic area but also because it is a place with a rich history, interesting present and many spatial characteristics that could lead to a very promising future.

Les Miserables\(^1\)

Feijenoord residents always belonged to the lower social strata. The high levels of industrial and port nuisance turned the district into a residential destination that was far from popular. In the nineteenth century the Feijenoord residents were mainly illiterate industrial and port workers who came from the province in search of labour. The social segregation was imprinted to the urban tissue since then. Its traces can be found in the comparison between Feijenoord - home of the “miserable” and Noordereiland (North Island) - home of the wealthier middle social strata.

During the course of the twentieth century Rotterdam’s demography started to change. The city centre gradually became abandoned as its inhabitants were moving to the new garden cities. Following this trend, the residents of Feijenoord who had a better financial status left the district, in search of better living conditions.

During the seventies the Feijenoord people along with the Oude West residents proved that their districts are worth living and fighting for. They were the first who organized manifestations demanding better living conditions and an equal participation process in the design of their residential environment. During the “Stadsvernieuwing” (urban renewal) their demands were met, with Simonsterrein to be the materialization of their collective vision. This social struggle and its reflection on the urban space is definitely one of the most important values of the district.

During the last three decades of the twentieth century newcomers whelmed the district searching for cheap housing. In their vast majority they were poor and illiterate. With the municipality’s attention given mainly to the regeneration of Kop van Zuid, the district was discredited. Slowly but steadily the houses deteri-

---

\(^1\) The term “Miserables” is not used literally in this case but it leads back to the atmosphere of V. Hugo book. (Hugo V, 1862)
orated, the public spaces were left abandoned and the quality of life of the residents became a bad example for the entire city of Rotterdam.

A social project
As posed before Simonsterrein was the pinnacle of the interconnected social and architectural discourse. Through its example the author attempts to describe the bottom up process of the nineteen seventies and examines its outcome in respect to the current residential needs. The conclusions of this analysis will lead to design solutions with a socially sustainable orientation.

History
Simonsterrein took its name from the ship dismantler Simons who used to run the northern part of the “Feijenoord shipyard”. In April 1974, the former industrial venue was bought from the municipality for the development of a traditional top-down dwelling program. The residents’ committee that had been formed a few years earlier, claimed its right to participate in the decision-making process. Four months later, the process began with the participation of the municipality services, the residents committee and the housing association. Right from the start and until the erection of the complex there were various disagreements not only between the before mentioned parties but also within the municipality organizations. In order to overcome these disagreements external experts were commissioned. The architect Henk van Schagen was proposed as an external design expert while an independent calculator was recruited for the cost subgroup.

The cooperation of the various stakeholders although challenging, was proven fruitful and met the project’s deadline of the October 1976. At this point it is important to stress that during the process the most significant decisions were based on the cost implications placing the architectural design in a second footing. The complex erection began in March 1976 and was completed a year later (Galema 2010).

Main features
Simonsterrein is a typical three floor portiekflat complex (figure 3). It consists of 490 apartments of different sizes. On each floor there are 140 apartments while on the ground floor there are only 70 flats. The rest of the space has been given to storage room. The most characteristic feature of the portiekflats is that the indoor communal space is minimum, limited only to the entrance hall and the staircase.

The facades have a certain variety. There are four facades typologies, see figure 4. Unfortunately the design of the facades does not exploit the context of the building. The same facade typology has been used in all the outer perimeters of the blocks ignoring the opportunities that derive from the waterfront and the adjacent park.
Floorplans
The decision on the floor plans was not an easy task. Alike the selection of the allotment, in the case of the floor plans the decision was made after a long period of discussions and disagreement between the participating parties. There were two proposals for the main floor plan typology designed by the two design departments of the municipality of Rotterdam: Stadsontwikkeling (SO) and Volkshuisvesting (VH). The floor plan of VH was based on a 6 meter grid, with the kitchen attached to the external wall while SO made a plan based on a 5.1 meter grid with the kitchen centrally positioned in the length of the house. The alternatives offered by the two public services showed very small differences. In reality the residents did not have two profoundly different solutions to choose from, but variations of the same solution.

Finally the price defined the residents’ decision. The SO floor plan, being smaller was more economical. The selected typology, although it was not the optimum one in terms of design, had several architectural values as it was based on the modernist idea of a superstructure (figure 5). According to Van Schagen its set up analogies offered a qualitative living area while modern ideas were implemented in the design by the creation of an open plan kitchen.

Given that there was an obligation of providing housing for a variety of households the selected typology was not enough. The architecture was in the service of making cheap large houses. Therefore, it was more efficient to create a subdivision plan and test many variations of the original typology. (Simonsterrein-ontwerpbijeenkomst 8 juni, 2010)

Figure 4 Facade typologies.

Figure 5 Floor plan of a two typical apartments furnished by H. van Schagen (from: Galema 2010).
A substantial issue that arose after selecting the floor plan was the formation of the blocks’ corners. Once again different ideas were presented but finally the cheapest and more conventional one was chosen. The floor plan typologies that form the blocks’ corners were variants of the prototype. No effort was made to create a design that would exploit these prominent positions. Finally Simonsterrein has five floor plan typologies with the prototype to be the most diffused one (45%). The size of these typologies varies between 67 and 130 m². It is also important to mention that the floor plan is indeed flexible as there are no load bearing walls in its interior. This fact gives endless possibilities for the redesign of the complex.

**Courtyards**

The design of the inner courtyards, which are in their larger part public, was based in the society model and the architectural ideas of the nineteen seventies (figure 6). Also, it was specifically addressed to the needs of the first residents of the blocks.

As times, residents and society changed the demand for more private space grew. The communal gardens lost their original character and were gradually left abandoned. Nowadays, despite their regular maintenance by the “Deelgemeente” they face many problems and in some cases they even considered a springboard of turbulence.

The quality and safety of the inner courtyards varies. The courtyard next to Dillenburg blocks has been redesigned and is in an excellent condition. Moving towards Hunter Douglas though this quality fades, reaching in the eastern courtyard very low levels. The quality transition does not only differ in the northern-southern axis but also in the western-eastern. The southern parts of the courtyards that are next the road are far safer and in a better condition than the northern isolated parts.

As far as the private yards are concerned, their state differs very much as it is completely based on the tenants’ taste. In this point we need to stress that the private yard is one of the spaces where the residents are free to give their own character and identity. This fact is necessary, as it gives the resident the feeling of being “at home” while adding a certain identity and diversity to the complex. On the other hand it is also the cause of several problems if not controlled by some guidelines.

**Special features**

Simonsterrein architecture is generally neutral and simple. Apart from the involvement of the Municipality services and the cost limitations that had a big impact on every aspect of the design, there were other also...
other reasons that led to the formation of Simonsterrein particular architecture.

During the participation process Van Schagen avoided imposing his personal concept of architecture on the residents.

“Design for me is purely secondary in relation to the social function of the project. I prefer the architectural design to be the residents’ association exercise.”
(translated from Galema (2010))

Every aspect of the complex expresses this social idea. There is no architectural stamp in the project reflecting a personal style. Simonsterrein emphasizes the idea of equality, reflected in all scales: from the design of the context to the formation of the smallest detail.

The neutral design of Simonsterrein is not a typical example of the architecture of urban renewal. The politics of urban renewal was promoted by a progressive architectural face, says Van Schagen.

“Therefore, some architects selected a style that is recognizable as progressive, experimental, small scaled...”
(translated from Galema (2010))

In the authors opinion Simonsterrein is a precursor of “Stadsvernieuwing” (Urban renewal architecture), standing in the crossroads of modernism and Urban Renewal with influences from the nineteenth century traditional Dutch architecture. It is also worth mentioning that it is not a one of a kind project as there have been others, like the Oranjeplein project in Den Haag and the Kinkerbuurt project in Amsterdam, built in the same period that have a lot in common. (Van Drooge & Verhulst 1976).

Ornamentation
Simonsterrein architecture may be neutral but it is not impersonal. Van Schagen wanted to offer the residents some elements to be proud of. These elements, although functional, is the only ornamentation of the building.

Chamfered balconies
The balconies design had also been a subject of discussion. Initially they had a different design than the one implemented. Only two weeks before the deadline of the process it was decided to allow Van Schagen to alter that design.

Van Schagen proposed that the balconies of the living rooms had to be designed as bay windows. He noted that many of the balconies located towards the windy sides, east or north of the Maas, would be difficult for the tenants to use. The bay window would also serve as a prolongation of the larger living room as well as offering better river views.

Finally the bay windows were not carried out, but their form is reflected in the chamfered corners of the balconies. The shape of the balconies is projected on the ground floor as well, as a brick wall of 1.2 m that delimitates a small private yard (figure 7).

Balcony poles
The balcony poles, made of square steel pipes, were introduced to the structure by Van Schagen as a reference element to the Rotterdam harbour. Originally, these tubes were painted with orange-red colours chosen by the architect to match the colour of the harbour cranes. Apart from ornamentation elements, half of them serve also as drainpipes.

Pyramid skylights
According to Van Schagen, the pyramid skylights were introduced not only for functional reasons but also as a way of make the complex visible and recognizable during night time by the ships passing by in the Maas.
Colours
The original colours as were not picked randomly. They were a way of connecting Simonsterrein to its wider context. The use of the red brick was very common in the area and was also a good way to make the new block congruent with its adjacent dwelling blocks. The original brick masonry has not been replaced or covered with render.

The window frames were originally painted green, yellow and brown. It is not been defined what were the reasons, if any, for the selection of the particular colours by VH. Currently the majority of the window frames is painted white (figure 7).

As stated before, the original colour of the metal poles was orange-red. Today the poles are grey. The exact period of the change of the poles and frames’ colour is not documented. What is known is that Woonstad, the housing corporation that owns the complex maintains and repaints the window frames on a regular basis.

This change of colours though, had a profound impact on the building. Especially in the case of the metal poles, the discolouring broke their link to the harbour context. Today the greyish metal poles seem like an abandoned scaffold that downgrades a great deal the image of the complex.

Reflections of identity
Observing closely Simonsterrein nowadays it is noticeable that there are some spaces that reflect the residents’ identity. The balconies and the private yards are such spaces. Additions of materials between the railings, window boxes, colourful fences are only some of the residents’ interventions. These interventions reflect tendencies and pinpoint weak points of the design. They also reveal a tendency for a shift from the collective identity of the nineteen seventies to a more individual one, feature that is valuable to the redesign process.
The second round

From the preceding analysis it is evident that the most important value of the complex is its social character and the participatory process of its creation. In the author’s opinions this value should be reintroduced in the re-design process. However, the way of participation should be adjusted to the current situation.

As posted above, Simonsterrein is located in an area with severe social problems. Restoring the social coherence requires social measures and strategies. Giving people the right to participate promotes social interaction and gives them a rare chance to cooperate for a common goal. Moreover, giving people the right to have a choice and a voice over the generation of their living environment makes them more responsible, careful and respectful towards the space (Qu & Hasselaar 2011).

Aiming at a socially sustainable design, it was considered crucial to conduct an extended field research with a focus on the current residents view over their living environment. Twenty five people, living in Simonsterrein and in the neighbouring Dillenburg complex were interviewed. These people were given the chance to evaluate the complex and stressed its weak points. The cross-examination of the views of Simonsterrein residents with that of their wealthier neighbours, provided the author insight about the needs and wishes of two target groups and an image of their current interaction.

The outcome of this research reflects the appreciation and the high levels of satisfaction of the residents concerning Simonsterrein complex. The main issues that appeared to bother them were mainly the quality and design of the outdoor spaces, the car circulation and parking and the indifference of some residents towards the public space. As far as the interior setup is concerned, people requested primarily the enhancement of the communal spaces and secondarily minor changes in their apartments that concerned principally the kitchen and bathroom core.

The results of this “hands on” research, along with the research of the theoretical framework helped the author to form design starting points; a design establishing a living quality that will keep satisfied the demands adapted by the local residents, strengthening socio-economic structure while making the living environment more suitable for the interaction of disadvantaged groups and middle income social strata.

Conclusion

Simonsterrein is considered an important site not only because it represents the architectural trends of its times but mostly because it is a monument of activism and a national model for participation design. (Galema 2010) Almost forty years after its erection Simonsterrein, situated in the heart of the rapidly evolving city of Rotterdam, needs to return in the forefront of the
architectural discourse. Its prominent location in combination with its social multiplicity makes it a fertile ground for experimentation. Using the same practice, which seems to be more appropriate nowadays than ever before, Simonsterrein can become a symbol of the twenty-first century socially sustainable design.

Bibliography

Drooge L. van, Verhulst J., 1976, Bouwen voor de buurt: moeilijkheden bij nieuwbouw in oude wijken, Amsterdam

Galema W., 2010, SIMONSTERREIN Monument van activistiese stedenbouw, AIR Rotterdam

Gemeente Rotterdam Stadsontwikkeling, 2011, Masterplan Kop van Feijenoord Fase II Kop van Zuid, Rotterdam

Hugo V, 1862, Les miserable (In Greek translation), A. Lacroix, Verboeckhoven & Cie, France

Meijel L. van, Hinterthür H, Bet E., 2010, Cultuurhistorische verkenning Feijenoord, Rotterdam

Qu L., Hasselaar E., 2011, Choice, voice and liveability in residential places, techné press, Amsterdam

Lectures

Dekker M. (Gebiedsmanager Lombardijen), 2011, Lecture on the social state of Feijenoord and Lombardijen during the 1940’s-1980’s, Veldacademie, Rotterdam

Schagen H. van (Architect Simonsterrein), October 2011, Lecture about Stadsvernieuwing, Veldacademie, Rotterdam

Schagen H. van (Architect Simonsterrein), October 2011, Lecture about Simonsterrein, BK-City, Delft

Websites

Introduction

Zinkerblock is an urban building block, located in the Feijenoord neighbourhood, which can serve as an illustration to all stages of neighbourhood’s transformation in terms of architecture and urban planning (Van Meijel 2010).

The extensive development of the area around Zinkerblock began around the year 1900, when the Nassauhaven was dug. Simultaneously, first port industry was established on its banks. Residential city blocks were built on both sides of the harbour several years before that. The growth and development of the port area continued during all pre-war period and several years after World War II up to the moment, when it became insufficient for contemporary shipping (1950’s-1960’s). The decaying industry was preserved in the area up to 1980, when the “Stadsvernieuwing” (Urban Renewal) distinctly changed the appearance and the function of the plot. During the 1980’s the majority of the industrial buildings was demolished and new residential areas took their place. Old housing stock was completely renovated and partly replaced with new structures. During the last decade extensive public parks were established in the surroundings of Zinkerblock. Nowadays the building faces two large green areas: Nassauhavenpark and “Creatief Beheer”.

As a result, during the twentieth century the location of Zinkerblock underwent the transformation from a heart of a busy industrial area to a peaceful, quiet and green residential neighbourhood.

The building block is located to the east of Nassauhaven at the corner plot between Nijverheidstraat, Zinkerweg and Feijenoorddijk. The original city block was built in the early stage of extensive industrial development of the area around the year 1898. In the
In the twentieth century it underwent serious reconstruction during the Urban Renewal in 1980’s. At that moment a large part of the block was demolished and replaced with a new structure that followed the outlines of the original building (architect Henk van Schagen, 1982).

The preserved part of the nineteenth century building (along Nijverheidstraat and partly Zinkerweg) underwent large-scale renovation. The design was made by architecture studio “Delfshaven Groep” in 1983 (Gemeentearchief Rotterdam, 2011). Nowadays the remains of the original structure in the renovated part (walls, brickwork) are listed as a heritage object - “walls of historical importance” (van Meijel 2010).

From my point of view, the current architecture of the building is a good example of the architectural heritage of the “Stadsvernieuwing”, especially of the embodiment of an idea of diversification as an instrument of achieving balance in the area (figure 1).

**Balancing the neighbourhood compound**

General economic decay in 1980’s (Groenendijk 2009) in combination with a turn from industrial to post-industrial production, which asked for less human resources, significantly increased the level of unemployment in almost all European countries (Stouten 2010). This led to the extensive segregation of society that demanded a differentiation in the housing sector as well (Stouten 2010). At that point, the low-income group of population should be taken into account as one of the main tenants on the housing market. That led to a great demand for social housing, especially in the big cities. Pre-war neighbourhoods provided the involved parties with a good possibility of social housing construction. During that period the planners were focusing on the positive elements of the old (pre-war) houses and neighbourhoods, such as low rents, vibrant and mixed neighbourhoods, their proximity from the downtown and so on (Schuiling 2007).

The social goal of the period was extremely important. While families with children left the cities and moved to the countryside in search for better living conditions, students and foreigners came to their place. In that situation the Urban Renewal was seen as a remedy, which aim was to achieve a balanced population structure inside the neighbourhood: not too many old people, not too many foreigners, not too many students.

The traditional family was intended to be a core of the district, where the general balance in the composition of the population by age, financial status and nationality was assumed as an important goal (De Kleijn 1988). Therefore, the neighbourhood approach, with liveability as a keyword, was meant to attract families back to the city (Schuiling 2007).

**Diversification of the inner planning of Zinkerblock**

In theory, the demand-directed approach during the Urban renewal period formed a guideline, where the size of houses corresponded with the size of the households. From this point of view, the Urban renewal was seen as a possibility to diminish social inequalities, where the housing stock would provide appropriate accommodation for diverse households, different in composition and income (van Meijel 2010). Originally, the structure of the building was very traditional for a Dutch city block. It was composed of narrow blocked houses (approx. 6 x 12 m) separated by longitudinal load-bearing walls. Every house had its own entrance and inner stairs to the upper floors.

After renovation, the inner structure of the block was completely changed. Due to the openings in the inner load-bearing walls the houses were united into several blocks with one common staircase in every block (porch structure). This allowed to minimize staircase
volume and to increase useful space inside the building. Private entrances were carried out through semi-public entrance areas in every porch. Straight narrow stairs were replaced with modern U-type staircase, located in the middle part of the building, unlike the old ones, adjacent to the longitudinal walls. The porches along Nijverheidstraat consist of 3 original cells, united to one staircase. 9 cells in the corner of Nijverheidstraat and Zinkerweg were composed into a large block with one common staircase (figure 2).

First of all, these improvements concern a serious change in the composition of the households. The number of big families, where several generations lived together, decreased in time. The average couple rarely had more than 2 children. So the demand for large family housing was no longer relevant. At the same time, the idea of a balanced neighbourhood demanded diversity, suitable for all households, different in composition. In this sense, horizontal (storey) planning provides much more opportunities for a diverse design than a vertical one (blocked houses). Besides that, the shortage of modern dwelling during the 1980’s demanded an increasing number of households to be accommodated in the area (Schuiling 2007). All above mentioned factors in practice caused an implementation of a porch system, increase in the number of apartments and decrease in their averaged floor space, as well as an attempt to provide diverse inner planning inside the apartments.

The number of apartments (households) was increased from 5 per 3 cells to 7. This led to a reduction of the apartment’s area. Before renovation three apartments had a floor area of approx. 150 m² and were located on three floors, while after renovation only one flat in the block had an area of 110 m²; all others became much smaller (figure 3). But in reality, the opportunities to create differentiation in housing typologies were not carefully realized in this particular building.

While the major ideas of Urban Renewal announced not only re-atraction of families to the city, but also accommodation of diverse target groups, such as singles, students or seniors, this intention was not properly addressed in the diversification of the dwelling stock. In the renovated part, the range of the bedrooms per apartment varies from 2 to 5. In the 1980’s building the typical floor plan introduces only 2 and 3-bedroom flats, except several larger flats in the corners of the block (between Nijveheidstraat and Feijenoorddijk). This layout is not intended to fit the demands of small households, such as starters or singles, either young or senior. Therefore, it seems that these target groups dropped out of the sight of the planners.

In contrast to the planning before renovation, the design of the 1980’s provides a spectator with quite strange proportions of the rooms inside the apartment. While a long narrow kitchen area is typical for a traditional Dutch planning, the bedroom with a dimensional proportion 3:1 (1.8 meters along the short side) might be explained only with a necessity to provide diverse composition of the apartments to the prejudice of its convenient use. This proportion of the rooms, which in-
tended to be bedrooms, can be seen in many apartments in the restored part of the building along Nijverheidstraat. In this part longitudinal load-bearing walls with floors spanning approx. 4 meter determine the actual size of the room: one room 4 m wide or 2 separated rooms with a width of 2 m. In many cases the decision was made towards the “artificial” increasing of the number of rooms (figure 4).

Diversity versus standardization: facades

In contrast to the inner planning, during the renovation the facades of the building were treated towards simplification and standardization instead of initial diversity of the nineteenth century neighbourhood, where every building had architectural details and surfaces slightly different from one another. In general, the standardization and prefabrication of building details and elements provided the best possibility for reduction of building costs in both material and labour terms. This led to unification not only in inner load-bearing structures of the building, but also in the facade appearance and decoration. Therefore, according to Stouten (2010), in the situation of “regularly changing budgets for modernization and/or improvement of the old housing stock” the urban renewal activities were sometimes characterized by “a lot of quick-fix approaches such as temporary measurements to stimulate the insulation of walls and windows”.

Structural changes affected mainly the upper storey of the renovated part of Zinkerblock, where the traditional sloping roofs were demolished and replaced with a new flat roof structure. The facade wall of the storey was moved away from the front facade surface, which provided inhabitants with personal access to roof terraces. In addition, several balconies were added to the original structure: 13 along Nijverheidstraat, 2 at the corner facade, 2 at the facade along Zinkerweg.

Many changes were made in the composition of the
openings of the building. They affected mainly the
ground floor, where the inner structure was almost
completely changed and the number of entrances was
reduced. As a result, many door openings were con-
verted into windows (bottom part of the opening was
bricked up). Double doors were also partly bricked up
from one side. These interventions caused a drastic
change in the appearance and perception of the whole
city block. First of all, while previously the silhouette
of the building was determined by the sloping roofs,
after renovation even the preserved part of the build-
ing was visually united below the new flat storey. The
reduction of the number of entrances in the old part
casted visual unification of the sections of the facade,
which attended to one entrance. Unification of the ap-
pearance of the building as a whole might be seen
even in the addition of the balconies to the old struc-
ture. Originally the block looked like a row of separate
houses due to the differences in brick colour, decora-
tive elements, shape and proportions of windows.
While the facades were left almost untouched during
the renovation, those differences are still visible, but
new balconies break this subdivision, because one bal-
cony often belongs to different building cells.
The newly built part of the block was composed as a solid flat-roofed block from the beginning. The porch layout determined the extensive facade parts served by one entrance. This part has a compound surface in both horizontal and vertical sections, formed by standardized prominent bay windows and windows along the staircases. Prefabrication of the elements, such as windows and bay-windows, which alternate according to a certain rhythm, determine a monotonous character of the whole structure, especially by contrast with the facades of the nineteenth century (figure 5). On the background of the nineteenth century building with its wall surface, diverse in brick colour and decorative brickwork (horizontal rows of headers, brick lintels) and rich detailing, such as cornices and window decoration, the new additions and the whole new part of the building, simplified and uniformed in materials and details, is perceived like foreign elements and structures.

It is especially noticeable in a close look at certain elements of both parts of the building. First of all, this inequality concerns wall surface. Incomplete, relatively to modern one, technology of machine brick production in the end of nineteenth century provided the effect of inequality and diversity of masonry surface, especially in the facades, which initially belonged to different houses (owners). Differences in clay compound (proportion of iron oxide and lime, De Vries 2010) produced slight colour variations, which enrich the facade surface. Rough, sandy surfaces of the machine-moulded brick contrasts with the smooth surface of the new part, where the surface even in colour and shape of the bricks is introduced. Secondly, diversity of preserved decoration in the old structure, such as cornices and window decoration (lintels, key-stones, window sills) looks contradictory to the simplified and unified detailing of the new edifice, where both cornices and windows are represented only as functional ele-
ments (figure 6). Moreover, even the appearance of the preserved part of Zinkerblock suffered from standardization not only on the building scale, but also on the scale of detailing.

During Urban Renewal of the 1980’s an emphasis was made on collective interests of tenants in the decision making process and this left less space for individual solutions. The dominant notion of communal aspects at the beginning of the social urban renewal approach resulted in less attention to details and the use of cheap materials and structures. A lot of interesting details in the old facades, roof frames and typical combinations of room for small shops and enterprises had been ‘modernized away’ (Priemus 1991).

Current facade’s aesthetics are at a high degree determined by renovation activities. For instance, wooden window frames were replaced with aluminium ones, which obviously have several weak points in comparison with wooden ones. First of all, it is a simplified flat profile in contrast with a complicated curved one in wood. Secondly, their shape does not follow a curved brick lintel, what negatively affects both, the aesthetic of the joint and the visual cohesion between the frame and the opening. Finally, the grey colour of the plain aluminium does not fit into the historical facade’s colour scheme.

In addition, original limestone window sills were partly replaced during renovation with ceramic ones (same tiles are used in the new part of the building). This change affected only ground floor openings, which were remade during renovation. As a result, a profiled window sill from natural stone was changed to a simple row of tiles with a terrible joint between the latter and the window frame. Original window sills were quite massive and were extended to the sides of the opening, what provided a visual foundation of the window. Now this effect is missing. Moreover, the dark purple colour of the tiles does not match any other colour composition in the building.

As a result of all above mentioned factors, cheap materials, such as HPL and plywood panels and unified detailing nowadays determine the appearance of the new additions to nineteenth century city blocks and Zinkerblock is not an exception.

Starting points for design
In general, both compounds of the architectural environment, namely indoor planning and facade expression, were treated towards opposite directions. While the inner structure of the city block was in principle modified into an apartment layout, which allows more flexible and diverse planning, in the facade renovation the idea of diversity, inhered to the nineteenth century
architecture was completely left aside.

But in practice, the intention to diversify the housing stock turned into a new kind of standardization, where the needs of a limited group of population, namely, medium size families were taken into account.

While the major idea of a balanced neighbourhood in terms of income and household composition is still relevant (Hills 2007), the major social and spatial goal for the design proposal is based on it.

Consequently, the attraction of middle-class and well off people as well as the accommodation of new target groups, such as starters and small households are the guidelines for the redesigned planning.

For the outdoor environment, the nineteenth century architectural heritage creates a unique identity of the area, which should be underlined and emphasized. The diversity of the old building, as a main feature of the nineteenth century architecture, would become a leitmotiv for the whole city block.

**Bibliography**


P. Stouten, Changing contexts in Urban Regeneration: 30 Years of modernisation in Rotterdam. Amsterdam, 2010.


**Websites**

http://www.vanschagenarchitekten.com/

Gemeentearchief Rotterdam <http://gemeentearchiefrotterdam.deventit.nl/nl-homepage>

Gemeentearchief Rotterdam, pandkaarten <http://rotterdam.rvc.nl/pandkaarten/search.asp>
Liveability in Residential Urban Neighbourhoods
Oranjeboomstraat

Eirini Gallou

Introduction

The focus of this article is liveability in residential urban neighbourhoods in decline like Oranjeboomstraat, Feijenoord. Oranjeboomstraat is situated in the heart of the historic industrial urban area of Feijenoord and is an axial street connecting the south with the north of Rotterdam (figure 1). Since the de-industrialisation of the area, the neighbourhood has been a residential one that during history has transformed from a busy boulevard to a local commercial street in decline today. The social and physical parameters of this decline and their impact on the liveability of the area will be discussed. The project will be analysed and evaluated within the framework of creating liveable residential environments.

Liveability

Starting, examining articulations of liveability gives the opportunity to examine the redevelopment of an area like Feijenoord, the knowledge brought by urban planning and design and their consequences. Providing a definition for ‘liveability’ proves difficult, as it is a highly mutable term. Definitions of liveability have evolved from a focus on the visual aesthetics, to revitalization through amenity creation (http://livable.org/). Criteria that define a place as liveable focus on urban design, environmental quality, and human and economic development. According to another current definition, making a liveable neighbourhood means strengthening the neighbourhood and community by creating viable public spaces and promote the restoration of a compact, walk-able, safe, mixed-use urban environment (Hellemans & Wassenberg 2004). These goals point out the relation between liveability and sustainability. Liveability refers to the degree to which a place, i.e. a neighbourhood, town or city, supports quality of life, health and wellbeing for the people who live, work or visit.

Figure 1 Oranjeboomstraat, the connecting road of Feijenoord (http://maps.google.com).
Liveability can be assessed in two ways. On the one hand the objective liveability of an area can be expressed in terms of spatial quality and on the other hand the perceived liveability in terms of feelings and perception of individuals in their living environment. Based on the vision on Feijenoord expressed by the “Deelgemeente” (local government), five indicators for evaluating the current objective liveability in the area are formulated: safety, criminality and nuisance, outdoor environment quality (Deelgemeente Feijenoord, 2010). Affordability is an important factor as well affecting liveability that could be strongly related to indoor design. Affordability refers to the combination of housing costs and other living expenses for households, like the costs of transportation, energy and water utilities. Almost all of these critical indicators for liveability are highly affected by the social state of a neighbourhood. Besides the physical features, a huge range of social factors contributes to liveability, such as social cohesion, lower risks to personal safety, conviviality and social inclusiveness, aesthetics, diversity among the population, and heritage.

**The current liveability of Feijenoord and Oranjeboomstraat**

Feijenoord is an example of a post-industrial urban area that faces complex problems today due to the processes of gentrification and urban transformation of a historical port area to a residential area. The industrial use that created urban growth in the late nineteenth and early twentieth century in areas like Feijenoord destroyed partially the liveability of the city, and led to suburbanization. Now coping with the loss of population and industry, neighbourhoods need to find a new plan for liveable residential environments that are attractive for residents returning closer to the centre.

**Feijenoord**

Feijenoord was the first expansion area of Rotterdam in the South bank of the Maas river. It was formed in the late nineteenth century, during the industrial development, as an industrial and harbour district. In the nineteen seventies and eighties of the twentieth century, during the “Stadsvernieuwing” (Urban Renewal period), Feijenoord acquired the second part of its current identity. The urban renewal in the 1970’s and 1980’s brought a series of demolitions and renovations, in an attempt to upgrade the living standards. These were combined with the erection of new housing blocks that offered cheap housing for newcomers in the area. The current housing stock reflects the main chronological phases of the development of the area. Nineteenth century housing for the industrial workers, reflecting the poor living conditions for port workers, has acquired today historic value and gives identity to the area. This coexists in a hybrid urban fabric with

![Figure 2: Historical timeline of the development of Feijenoord.](image-url)
dwelling blocks of the Urban Renewal period, that brings the values of participatory design processes and upgraded living conditions for residents.

From the 1990’s on, Feijenoord started declining. Today the district is a deprived urban area with major social, financial and safety issues. Those issues are sometimes related to the design of the environment. The potentials of the area for creating a liveable living environment are however high and its prominent position in relation with the city centre gives another reason for focusing on its problems today.

**Oranjeboomstraat**

Oranjeboomstraat was established in 1890 as a wide boulevard flanked by residential buildings and in the middle a freight railroad that later gave way to several tram lines. A church, Wilhelminakerk, and the Oranjeboom-Brewery where two landmarks of the street that constituted an important place of meeting and social interaction for people living in the neighbourhood. Infrastructure determined the walkability and accessibility of the area till today. The strict linearity and the formal face of the street due to the position of the train lines divides and fragments the public space while the different heights isolate the public space in Rosestraatpark. The railway tunnel site, in Rosestraat, a street parallel to Oranjeboomstraat, was constructed in 1968, defining Feijenoord’s principal border.

The urbanization process created also large urban voids, adjacent to the transportation lines and to the street that later transformed into green and public spaces (like Rosestraatpark). This process was not a result of careful design and today problems occur due to the inaccessibility of these spaces. Oranjeboomstraat today is a humble residential area with local shops on the ground floor of apartment buildings.

Figure 3  Historic and current section of Oranjeboomstraat.
Problems and issues in the area today

Social aspects
The largest part of the residential stock (almost 90%) is owned by a housing corporation, traditionally resulting in cheap housing, mainly inhabited by ex-port workers and immigrants. A relatively large proportion of residents in the Feijenoord district lives on welfare (16%). Just over three quarters of the residents are satisfied with their own neighbourhood, which is comparable to the overall percentage of Rotterdam (Deelgemeente Feijenoord, 2009). Feijenoord as a whole, deals with a broad network of various intertwined problems, many of them have a social aspect (http://www.cbs.nl/en-GB/menu/themas/). The district has a high level of immigrants with various cultural backgrounds among its population. However this multicultural heterogeneity doesn’t lead to mixing of cultures, and so Feijenoord is reported to face a lack of social cohesion.¹ Feijenoord is a melting pot of ethnicities. The immigrant : native ratio has been stable for several years: 80 : 20. Residents with a Turkish origin, that are concentrated mostly in Oranjeboomstraat, constitute about 30%, being the largest group within the district, followed by native Dutch, the Surinamese and Moroccan population. The households consist mainly (ca. 42%) of families with children. This ensures that Feijenoord compared with the city’s average is a ‘young’ area: 31% of the population is younger than 20 years. A relatively high number of single-parent families live in Feijenoord (Deelgemeente Feijenoord & Nieuwe Unie 2006).

The ‘fading’ of the neighbourhood in recent decades has not led to alienation of the population. However, the current residents prefer mixing.² This applies to both original dwellers and immigrants. Not only schools should be mixed, but new residents also want more facilities like sports, bars, playgrounds etc. Also more expensive houses could both lead to more mixing and more opportunities for mutual contact (Deelgemeente Feijenoord & Nieuwe Unie 2006).

¹ All figures in this section are from the Centre for Research and Statistics (COS), reference date: January 1, 2005
² Large-scale survey of over 12,000 residents, conducted by the Smart Agent Company
Safety Experience

Table 1 shows the district’s scores in the urban safety index. The district of Feijenoord is an exception, according to the most recent measurement, which sets it in the category of threatened.

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feijenoord</td>
<td>7.0</td>
<td>6.3</td>
<td>5.7</td>
<td>5.4</td>
</tr>
<tr>
<td>Kop van Zuid-Entrepot</td>
<td>8.0</td>
<td>7.9</td>
<td>7.7</td>
<td>7.9</td>
</tr>
<tr>
<td>Noordereiland</td>
<td>8.6</td>
<td>8.9</td>
<td>8.3</td>
<td>8.5</td>
</tr>
<tr>
<td>Katendrecht</td>
<td>5.7</td>
<td>7.1</td>
<td>7.1</td>
<td>7.6</td>
</tr>
<tr>
<td>Deelgemeente</td>
<td>6.3</td>
<td>6.2</td>
<td>6.2</td>
<td>5.9</td>
</tr>
<tr>
<td>Rotterdam</td>
<td>7.2</td>
<td>7.3</td>
<td>7.2</td>
<td>7.3</td>
</tr>
</tbody>
</table>

Safety as measured within the Rotterdam safety index consists of two elements. On the one hand there is the objective safety in which i.e. the number of robberies is included, on the other hand there is the subjective safety or safety experience.

In the young safety index, for example, the indices as a whole showed a negative trend. Young people in the district do not always behave worse, crime did not significantly increase, but it is increasingly perceived as a problem by residents (Deelgemeente Feijenoord 2010). With regard to the safety index a similar trend is observed. It is also clearly demonstrated that especially the experience regarding cleanliness and quietness (e.g. litter, graffiti, garbage etc.) becomes of high interest. Residents perceive their neighbourhood becoming less clean.

Crime and nuisance

Regarding the violent crime within the neighbourhood, Feijenoord falls in the ‘safe’ category. Regarding to burglaries, the district of Feijenoord is in the ‘threatened’ category. Over the period 2005-2008, the amount of burglaries is higher than average and experienced as a neighbourhood problem.

The nuisance factor is average over the last years for the district of Feijenoord and it falls respectively in the categories of ‘threat’ and ‘attention’. Nuisance is divided into the urban youth issues, drugs and anti-social behaviour. Youth nuisance is an important part of the nuisance problem in the neighbourhood. The hanging out in the street creates nuisance for older inhabitants (Deelgemeente Feijenoord 2010).

Social bonding

The scoring of the neighbourhood is ‘moderate’ or ‘insufficient’. In the district of Feijenoord many inhabitants feel a social isolation and therefore have little connection with the neighbourhood. Feijenoord is one of the six more problematic districts of Rotterdam concerning social issues. The residents participate insufficiently in work and school, have few social and cultural activities and experience little social bonding (Deelgemeente Feijenoord 2010).

It has traditionally been an area of low educational level and lately it has a high unemployment rate. This contributes to the area having a very poor image, which makes it difficult to attract private investments. It has remained a residential area with local commercial stores, mostly located in Oranjeboomstraat, despite its potentials for development due to the proximity to the centre; it asks for a boost of both living conditions and prestige.3


Liveability in Residential Urban Neighbourhoods
Physical aspects

Public and communal spaces
Feijenoord has sufficient public spaces: parks, green on the courtyards of perimeter blocks like the courtyard in Oranjeboomstraat; green spots between the flats on the Nassauhaven and children’s playgrounds are located throughout the district. However the problem of the exterior is not the quantity or the lack of green, but it’s the quality. It is mainly green just to look at (with signs: do not play football). The Rosestraatpark next to the studied location is separated from the district. There is no continuous footpath to the quays and so the docks are not actively used.

Spatially, the area faces a fragmentation and lack of active public and semi-public spaces that could act as a platform for social interaction. Connectivity and accessibility of private open spaces and public spaces is problematic; however the demolition of some outdated residences, redefines a new frame for public amenities and offers new opportunities for achieving liveable environment in the residential area. By enhancing the quality of apartments offered, the value of the whole area will be boosted and become attractive for new tenants in the area. Due to the large diversity of populations (ethnic groups, young and old, natives and newcomers) in the future, meeting is important for gaining social cohesion.

Courtyards
The nineteenth century Oranjeboomstraat features two different types of semi-public space: one is the common courtyard, created by combining all separate courtyards of the various apartments and is owned by the housing corporation. This type appears where the ground floor is used as shopping and storage area. The yard is meant to be used by the residents of the upper floors. The second one is a more private type of courtyard, separated from the neighbour’s one, fenced and developed like a small garden in the back side of the ground floor housing in Oranjeboomstraat. This type appears in a few places. The effect of the housing typology seems important for the usage and safety of the courtyard; factors like the level of privacy and property affect the condition and maintenance of the semi-public space as people have a sense of being part of the enclave. Another important factor affecting the usage and safety of semi-public space is the border of the railway tunnel site that isolates the courtyard. Access is only possible from the building side, due to the height difference with the adjacent park that is not bridged.

The communal courtyards initially were not green and were used as open storage space for the shops and the residences. The situation changed with the refurbishment in the eighties, when the closed storage spaces on the ground floor were enlarged. However, this design decision isolates the courtyards, since the access for the tenants living on the upper floors became more complex and blocked by the new storage spaces. The planted green space in the courtyard was created then. As times, residents and society changed the communal courtyard was gradually left abandoned. Nowadays, despite the maintenance by the housing corporation they face many problems and in some cases they even considered a platform of turbulence. The courtyards are documented as being in a poor condition and due to the low identity nobody feels connected to it.

Indoor environment quality
Oranjeboomstraat combines typical four floor portiekflat complexes from the Urban Renewal period with three floor renovated portiekflats dating from the nineteenth century. Along Oranjeboomstraat around 400 apartments
of different sizes are situated. On each portiek there are six apartments while there are only a few ground bound apartments and a several local shops. The remaining ground floor space has been devoted to storage.

The most characteristic feature of the portiekflats is that the indoor communal space is minimized, limited only to the entrance hall and the staircase itself. The housing quality and equipment levels are basic, but generally appreciated by the inhabitants. The factors they are less satisfied about, are looks and the entrances. The latter one is important as it greatly affects the possibility and quality of social interaction between neighbours. The ugliness as defined by the residents, relates mostly to the complex renovated part in the eighties during the urban renewal (Deelgemeente Feijenoord & Nieuwe Unie 2006, p. 22).

The facades of the nineteenth century dwellings lost their individuality and became homogenous affecting the readability for its users. There are two facades typologies, the urban renewal and the one of the old dwellings. Unfortunately the design of the old facades does not enhance the quality of meeting spaces inside the building, thus emphasizing anonymity and separation of private life between the residents, even of users of the same portiek. The entrances to the residences are adjacent to the shop entrances and this creates certain complexity, safety and nuisance issues for the residences on the ground floor.

According to Van Schagen, architect of the Urban Renewal complex, the entrance zones are highlighted by materials change; pyramid skylights were introduced not only for functional reasons but also as a way of making the complex visible and recognizable.

**Floorplans**

The main floor plan typology designed during the renovation of the old building, lead to a great change from attached single family houses to l-shaped apartments accessed from a portiek. The access to the ground floor and to the courtyard is achieved only through the portiek.

The newer dwellings floor plan is based on a 5.3 m grid with the bathrooms positioned centrally in the house. The entrance portieken are structurally strictly divided from the living parts and this part is expressed in the street facade with a differently materialized zone along the staircase. The size of the portiek is restricted in both types of the floor plan. The ground floor was originally designed to become shop and café area but was later rented as housing, so the vitality of
the ground floor differs in old and newer apartments. A lot of balconies are added to the backyard side for the people to view the green area, which enables the surveillance of the courtyard.

**Theory on Liveability**

In a residential neighbourhood like Oranjeboomstraat, the semi-public space, i.e. the courtyards can define an alternative platform for social interaction, thus playing a crucial role in increasing the outdoor environment quality. Theories by Jacobs and by Van Dorst will be evaluated to find tools for this improvement.

According to Jacobs, liveability drew attention to the positive aspects of street life as contributing to safety in and enjoyment of urban spaces. The concept of legibility seems attached to liveability for her; it drew attention to the spaces and routes between buildings, questioning the autonomy of architectural forms and focusing on the importance of urban design. Liveability as another humane approach, includes the means to well-being in any urban space. Jacobs is one of the first to emphasize that the key to a safe environment is the natural surveillance resulting from visibility towards the public space and activity in the public space. For her the main requirement for a successful public space was that people feel secure on the street among strangers (Jacobs 1961).

According to Carmona, a way to achieve it is by focusing on the building facade, that has the active frontage on the street is “adding interest and vitality to the public realm” (Carmona 2003, p.107, 173). They are sustaining that “a high concentration of street level doors, are more conductive to social interaction then…structures with black walls”. Moreover, a high concentration of doors and windows contribute to the natural surveillance of the public space, which represents a key factor for its safety (Jacobs 1961).

As for Van Dorst’s theory, an important aspect of liveability and for the goal of social growth, is the control over social interaction an individual has in a neighbourhood. The motivation and attitude towards social interaction is formed by physical preconditions (Van Dorst 2005). For Van Dorst, designing a liveable neighbourhood, lies in redefining the zoning between private and public space in order to offer room for social interaction.

As a conclusion for these theories, a sense of security is a very important feature for the public realm. In a multicultural environment it is often the case that tensions arise in between the different cultures, due to
intolerance, territoriality and differences in conduct values (Van Dorst 2005). If people don’t feel safe in the public space, and they don’t use it because it is empty or populated by people that seem intimidating, the public realm is substantially impoverished. The principles for public space expressed in Jacobs theory are extended in the private, dwelling area in Van Dorst’s theory making it more interesting for application on the residential complex.

**Direction to possible solutions**

Oranjeboomstraat is considered an important site not only because it represents the architectural trends of all historic layers of the area but also due to its prominent position and opportunities for adding value to the neighbourhood in the future. Situated in the heart of Feijenoord, in a prominent position in relation with the heart of Rotterdam, the neighbourhood needs to focus on the existing social problems and use its physical strengths in order to create a vibrant and liveable residential area. This way it could become an example for restructuring similar hybrid urban neighbourhoods in the future.

Applying Jacobs theory to Oranjeboomstraat implies a focus on the active street frontage in order to increase safety and surveillance for the public space. The approach should focus on the street: by providing shops and business premises: with new appearance a vibrant street front can be formulated. For the dwellings (about 400) providing immediate visual connection to the street by removing the canopies added during the renovation is another action. Another way of achieving this control and surveillance of the entrance area can be by creating windows in the apartments that overlook the portiek area.

Applying Van Dorst’s theory, provides even more principles in the case of Oranjeboomstraat since it expands from the public space to the interior of the living environment itself. The approach towards a liveable and socially integral neighbourhood could lie in redefining the zoning between private and public space in order to offer room for social interaction. With improving the mental geography of the neighbourhood (by creating a legible privacy zoning) the interaction between social environment and physical environment is recognized.

The counterbalance between giving life to a local economy and ensuring people a liveable home environment can be conflicting; simple actions like enlarging the space of the pavement in front of the entrance halls could boost local economy and offer space for interaction for shoppers. However design priorities should be kept intact - and these focus on the living conditions of the residents. Aiming at a liveable neighbourhood through a socially sustainable design, it is considered crucial to reflect residents opinions over the living environment and combine this with the guidelines from the scientific approaches by Jacobs and Van Dorst, and the vision for the area’s future that includes new target groups to be incorporated. The focus in all these is on the evaluation of the issues that matter (safety, nuisance, outdoor and indoor space quality). The outcome of this for the existing reflects quite a high level of satisfaction of the residents concerning the conditions of the dwellings. The main issues that appear as problem are the quality and design of the outdoor spaces, accessibility to amenities and quality of public spaces in terms of activities. About the interior, the focus is primarily on the quality of the portieken, as communal spaces.

Formulating the design starting points; a design establishing a higher living quality that will both satisfy the demands of the local residents, while creating opportunities for a living environment suitable also for middle income social group. The need for the existing people to acquire a platform for social interaction and cultural exchange is valued as primary. The design solutions will attempt to enable social cohesion. This can
be achieved by totally social measures, like social mixing, since it is faced as a major tool capable to offer the desired cohesion (Priemus & Van Kempen 1999). Tools to achieve it in building scale include increasing the variety and diversification of building stock, emphasizing the existing multinational environment and at the same time aiming at incorporate target groups that could upgrade the area both socially and economically (Stadsdeel Zuidoost & SEV, 2002).

On a second hand, spatially, the solutions will try to provide the spatial conditions that will enable the combating existing safety and nuisance issues, through increased surveillance opportunities and restructuring of the trespass between the zones.

As for the housing interiors, the urban renewal design once gave better interior living conditions to the residents. Comparing this housing with the nineteenth century typology the needs seem to be less. However economical restrictions have not resulted in a full realization of the goals of the modernization. In this part the current redesign can fulfil these previous goals that remained unfulfilled.

Bibliography

Deelgemeente Feijenoord (2009), Integraal Wijkactieprogramma Gebied Noord 2010, WIJK FEIJENOORD
Deelgemeente Feijenoord (2010), Gebiedsvisie Noord - Wijk Feijenoord, Kop van Zuid-Entrepot, Katendrecht, Noorderdiep, Kop van Zuid
Deelgemeente Feijenoord and Nieuwe Unie, Wijkvisie Feijenoord 2006-2016
M.J. van Dorst (2005a), Een duurzaam leefbare woonomgeving - fysieke voorwaarden voor Privacyregulering, Delft
M.J. van Dorst (2005b), Privacyzoning - the different layers of public space in (P. Turner) Dorst, M.J. van, (2005 b Physical conditions for interaction in the home environment

Gemeente Rotterdam Stadsontwikkeling (2011), Masterplan Kop van Feijenoord Fase II Kop van Zuid, Rotterdam
G. Hellemans & F. Wassenberg, “The renewal of what was tomorrow’s idealistic city. Amsterdam’s Bijlmermeer high-rise.’ In: Cities (2004), 21-1, pp. 3-17
L. van Meijel, H. Hinterthur & E. Bet (2010), Cultuurhistorische verkenning Feijenoord, Rotterdam
M. van Veghel, & FF Wassenberg (1999) Leefbaarheid en beheer in de Bijlmermeer, een evaluatie van vier jaar vernieuwing [Liveability and maintenance in the Bijlmermeer, an evaluation of four years of renewal], Delft.

Veldacademie: “Verbinden en overbruggen in de wijk Feijenoord,De Nieuwe Belangstelling”, Rotterdam, Veldacademie Bureau Frontlijn (Ruth Hoppner, Jurrian Arnold, studenten TU Delft), Rotterdam Volkmanstad M/ V (Henk Oosterling, Ans Stolk), Veldacademie | Bureau Frontlijn (Ruth Höppner, Jurrian Arnold, Allan Pinheiro)

Lectures

Dekker M - Gebiedsmanager Lombardijen, 2011, Lecture on the social state of Feijenoord and Lombardijen during the 40s-80s, Veltacademie, Rotterdam
Schagen H. van (Architect Simonsterrein), October 2011, Lecture about Stadvernieuwing, Veltacademie, Rotterdam

Websites

http://www.veldacademie.nl/pages/veldacademie/1/
http://www.rotterdam.nl/aandachtsgroepenvolkshuisvestingsbeleid,
http://livable.org/
Introduction

Molièrebuurt West is one of the seven neighbourhoods of Lombardijen that are linked around the central Spinozapark. Situated west of Homerusbuurt and Molièrebuurt Oost, Molièrebuurt West is the third neighbourhood south of the Spinozaweg which divides Lombardijen in a northern and southern part. Among these three neighbourhoods, Molièrebuurt West stands out. Most of Lombardijen, and more obviously the southern part, has for financial reasons not been executed according to the urban design of Van Drimmelen and has turned into monotonous architecture with high densities:

“Van Drimmelen merkte in 1963 op dat: “financiële motieven te veel tot zuinige en monotone architectuur hebben geleid en plaatselijk tot te hoge dichtheden”. (…) Zuinige en monotone architectuur en plaatselijk hoge dichtheden zijn vooral in het zuidelijk deel van Lombardijen te vinden.”
(Van Bommel et al. 2003, p. 38)

Repetitions of similar housing blocks seem endless (figure 1). The division in architecture between different neighbourhoods is not as clear as Van Drimmelen had suggested, giving most of the south of Lombardijen the same appearance. Molièrebuurt West is an exception. Instead of the monotonous and endless repetitive housing blocks, a rich diversity of different facades

Figure 1  Repetitive housing blocks that make up large parts of Lombardijen.

Figure 2  Diversity in privately owned single family houses in Molièrebuurt West.
surrounds the streets. Suddenly all front doors are different and a wide spectrum of colours and patterns can be seen (figure 2).

To understand why this neighbourhood stands out we have to look at the ownership of the houses. In Lombardijen as a whole, 70% of the houses are rental houses, which leaves only 30% of privately owned houses. In Molièrebuurt West 100% of the houses are pri-
vately owned (figure 3). This is an essential difference compared to the other neighbourhoods. But how did this difference in ownership cause such a difference in aesthetics and scale? How did private ownership influence this neighbourhood? And what does this mean for future interventions?

**Individuality**

The housing in Molièrebuurt West consists of low-rise family houses with two floors and 5 floor porch apartment buildings. Molièrebuurt West was designed by six architects. Most blocks were designed by Jos de Jonge and his son Leo de Jonge.1 From the moment the neighbourhood was built, the differences in architecture must have made this neighbourhood stand out. A lot has changed since then.

To understand the influence of the individual owners on the changes of the neighbourhood, the original drawings made by the architects have been compared to the current situation. Since the interior of the houses does not have a direct influence on the neighbourhood as a whole, the comparison focuses on the changes that are visible on the outside of the buildings. The changes in the facades and gardens have been researched, as well as the addition of extensions.

When the original drawings are compared to the current situation one can see big differences. Especially the ground based family houses have been totally transformed in such a way that the original architecture from the late nineteen-fifties is rudimentarily recognisable: 50 to 100% of the front facades has been changed, 10 to 30% of the original facade surface of the houses has been added in extensions on the side, behind and/or on top of the buildings and only 5 to 25% of the houses still has the original facade.

Because of the structure of the buildings, the family houses have a large adaptable surface. The fact that there are hardly any loadbearing parts in the facades and that the floors, facades and roof are made of a timber construction, means that a lot of adaptations can be made without compromising the structure of the house. People have used this opportunity to adapt the houses to their personal demands, by extending and altering over the years. By doing this, owners have added their personal value in these houses and their gardens, altering the appearance of the street drastically. Instead of anonymous repetitive architecture and the unity of the block, each individual house has become a separate entity. The collectivity of the post-war period seems to have diminished and turned into a world of individuality.

The question rises if an intervention in these blocks is necessary. Because of the huge alterations to the buildings, we cannot talk about the blocks in terms of sixties architecture anymore. The cultural value as such is not in the preservation of sixties architecture. The value lies much more (if not only) in the added individual identity of each individual owner. The feature of ever changing different facades has become the most important characteristic of these housing blocks. We may think of these blocks as ugly or incoherent, but there is no real problem here. If we would intervene, what will be the added value, if the value mainly or only lies in the added individual value? The houses offer enough adaptation opportunities to suit the owner’s needs. Besides, the inhabitants probably appreciate this diverse image above the boring repetition as can be seen in the eastern part of Molièrebuurt. In any case, only few of these houses are for sale and people seem to stay. These blocks therefore seem ready for the future and are not in need of an urgent intervention.

---

1 Jos de Jonge (1887-1965) and Leo de Jonge (1919-2009). These Rotterdam based architects were very active during the post-war period and designed multiple housing blocks in Zuidwijk, Lombardijen and Hoogvliet.
Collectivity

The porch apartment buildings have almost an opposite situation. The influence of private ownership on the outside of the apartment buildings is minimal, compared to the family houses. No extensions have been made and no or minimal individual value has been added. Only two blocks have a new insulating facade, altering the facade completely but not adding any individuality.

The reason for this minimal influence here can also be found in the used materials and the building structure. Because of the large amount of brickwork in the facade and the stone and concrete construction, only 50% of the facade is easily changeable. Extensions and alterations to the construction are difficult, as is insulating the structure. People did change or replace window frames and by doing that changed 30% of the facade but because of the strong layer of brickwork that determines the appearance of the building, the architectural impact is low. Unlike the family houses, individuality has not prevailed. The blocks remain highly collective (figure 4).

The high collectivity of the buildings seems to have led to problems. The buildings are in a rather poor state. Different owners are joined in collectives of owners, which makes decision making difficult. The responsibility of different owners for the same building has led to a neglecting of maintenance. The bad maintenance has even resulted in the demolishing of four of the apartment blocks in 2003. Until today these buildings haven’t been replaced.

An intervention seems to be necessary. The apartments are mostly small, the buildings are poorly taken care of, they suffer from a lack of identity and offer much less opportunities to adapt to the individual owner’s needs. Not surprisingly, many of these apartments are for sale. Because of the collective of different owners, demolition is neither desirable nor possible but that doesn’t mean that the value to the individual owner is the only remaining value of these dwellings. The untouched fifties architecture is not exemplary and so the value is probably not be found in the architecture itself. The value of the apartment blocks and their gardens must be seen on the urban scale. In the whole of Molièrebuurt West and in the patchwork of different family houses the apartment buildings have a function of stability. In scale they give counterweight to the small scale of family houses and offer a framework in which the family houses can exist without falling apart into a chaotic individuality. Therefore an intervention is not only necessary for the condition of the buildings, moreover an intervention is essential for the neighbourhood.

Molièrebuurt West and ‘De Wijkgedachte’

Characteristic for Molièrebuurt West is that it is the only neighbourhood in Lombardijen in which the mixture of low-rise (family houses) and middle-rise (porch apartment buildings) as designed by Van Drimmelen...
and suggested by ‘De Wijkgedachte’ has been executed. This unlike the other neighbourhoods in which the low-rise and middle-rise are more concentrated and isolated from each other. This mix of middle and low-rise, one could say, has worked for Molièrebuurt West and is now the most important characteristic of the neighbourhood. Unfortunately, the ideas of ‘De Wijkgedachte’ theory have also caused problems in today’s situation. The theory was designed as a hierarchical structure of social units in which daily life could take place and different scales of communities were pursued. Every social unit had its own specific functions and number of inhabitants. This system of social units was then quite literally translated into an urban layout in which these activities should take place. With the hope and belief that the communities as designed would arise in this geographical framework.

In the fifty years that past, life has changed a lot and demands have changed drastically. Certain social functions of the neighbourhood have disappeared and people live their lives in different and far more diverse ways. As a result, the social framework that was designed fifty years ago does not answer to today’s demands and therefore does not fully exist anymore. What remains is a geographical framework or skeleton of the “Wijkgedachte” (figure 5). It is even questionable whether or to what extent the theory has ever worked in practice. Already in the fifties, before Lombardijen was constructed, the Rotterdam based professor J.A.A. van Doorn had large doubts about the connection between the theory and reality:

“He states that this theory based on social communities could not answer to the speed of life in the city and therefore did not reflect reality. He also names heterogeneity of the new inhabitants of the neighbourhoods as a factor against ‘De Wijkgedachte’. In 1965, Van Doorn’s theorems are further confirmed by research about church communities in the urban community, executed in Hoogvliet en Spijkenisse:

“De stad kenmerkt zich ten opzichte van het platteland, aldus Van Doorn, door een grote mobiliteit, migratie en een snelle wisseling van levensstijl en beroep. Deze factoren zouden het tot stand komen van de wijkgedachte, waarin het ‘gemeenschaplike’ voorop staat, onmogelijk maken. De wijkgedachte sloot daarom in het geheel niet aan bij de maatschappelijke werkelijkheid.”
(Doevendans & Stolzenburg 1988, p. 37)

He states that this theory based on social communities could not answer to the speed of life in the city and therefore did not reflect reality. He also names heterogeneity of the new inhabitants of the neighbourhoods as a factor against ‘De Wijkgedachte’. In 1965, Van Doorns theorems are further confirmed by research about church communities in the urban community, executed in Hoogvliet en Spijkenisse:

“Onder territoriale kaders verstaan we straten, flatblokken, gehele wijken; in al deze gevallen blijken bindingen en identificaties in het algemeen niet voor te komen. (…) Van samenhang of buurtbesef is weinig te bespeuren. Voor de kleinere territoriale kaders: de straat, de flat, de ‘trap’ geldt hetzelfde. Men is geenszins geneigd om op grond van het geografische bij elkaar horen allerlei sociale bindingen te aanvaarden; de contacten worden voornamelijk in het functionele vlak van de publieke sector gehouden; een grotere betekenis, in de zin van afbakening van een privé-sector, heeft de territoriale samenleving niet.”
(Swanborn et al. 1965, p. 58)
This research concludes that social binding does not appear to be related to geographical territories like streets, buildings and neighbourhoods. Contacts are mainly made in the functional part of the public sphere and crossover different territories. Whether or not the theory has ever worked, the changes in the current social sphere cause problems, mainly in the collective spaces. The communal gardens have lost their function and are merely grass fields that are not being used or maintained, which gives these public spaces a bad atmosphere. The connections between the different units or scales are badly designed and hard: Entrances to the buildings are dark and low, entrances to houses are directly connected to the staircase without any buffer and there is no direct connection between the buildings and their gardens, which only enhances the problems of the gardens. As a result of ‘De Wijkgedachte’ theory these transitions and units have become too forced.

Inhabitants recognise these problems and are by far not satisfied with the collective spaces. They are most unhappy with the state of the staircases and gardens. They do seem to be happy with their own apartments, but in general do not live there with large families anymore. This has resulted in a lower number of children that use the communal garden for whom it was originally designed. A desire for individual expression and adaption like in the case with the family houses is not obvious, but people are prepared to invest in both their apartment and building and stay for a longer period of time (10-20 years). This means that there is a will to prepare these buildings for the future.

Wijkgedachte 2012; three experiments

As a conclusion of the previous we can note a contradiction. Collectivity i.e. the collective buildings are on an urban scale essential for the neighbourhood as they form a stable counterweight to the high individuality of the low-rise family houses. At the same time the collectivity i.e. the collective spaces are the problem on the building scale. This contradiction sets the most important guideline for an intervention; the collective problems must be solved but the collective cannot be completely removed. This means that there are two options; the collective has to be improved or the collective has to be reduced by improving the individual.

To test both approaches and their impact on both the individual, the collective and ‘De Wijkgedachte’ framework, three design experiments can be executed (figure 6):

- Improve the collective
  The simplest and most realistic way to answer to the demands of the neighbourhood, buildings and owners is to improve the collective space. In this experiment the individual apartments stay unchanged. The impact of the improved collective on the individual owner is the main goal.
- Improve the individual
  A more experimental and less realistic approach is improving the individual apartments and by doing that reducing the collective. Taking away the problem rather than fixing it. The goal here is to reduce the problems to a minimum.

- Building in the framework today: Wijkgedachte 2012
  This experiment answers to the demand of designing on the empty plot in the neighbourhood. How to build in the ‘Wijkgedachte’ framework today? Using the solutions from the first two experiments, the goal is to redefine what the ‘Wijkgedachte’ can mean for the neighbourhood today.

**Conclusion**

Private ownership has had a huge impact on Molièrebuurt West. It has transformed the collectivity of the family houses into a world of individuality, changing the appearance of the street completely. A lot of personal value has been added. For the apartment buildings the opposite is true. Collectives of owners have caused these buildings to be badly looked after and poorly maintained. The buildings did not allow the individual owners to add personal value. The result is that the high level of collectivity is maintained but in a bad condition, giving a negative influence on the individual.

Private ownership is not the only reason why the neighbourhood is in its current state. The ideas of ‘De Wijkgedachte’ theory do not answer or probably have never answered to the current demands, causing certain social units to be without function and leave it to be a mere geographical framework. The transitions between the different scales of the framework prove to have been poorly designed, causing problems in the collective.

The ‘Wijkgedachte’ idea of mixing different kinds of housing i.e. low-rise and middle-rise did have a positive influence on the neighbourhood. It gave an answer to the changes that private ownership had caused and kept the scale of the neighbourhood stable.

Designing three experiments with a different approach to solving the problems stated can give insight into the different solutions of revitalizing the ‘Wijkgedachte’ framework and even redefine what the theory can mean for the neighbourhood today. In this way the mere skeleton of the framework of ‘De Wijkgedachte’ that it is today, can be transformed into ‘De Wijkgedachte 2012’.

**Bibliography**


Introduction

Residential neighbourhoods with a lot of green spaces form, besides some of the pre-war districts, a major part of the urban plan of the post-war expansion of Rotterdam south. Green space is one of the essential features of the post-war housing area. Back then, these gardens were well planned and organized. However, nowadays it seems that green space, doesn’t function like it was planned during the 1950’s. According to the plan, communal gardens are supposed to be the place where people gather or play. But, after several visits, these communal stayed empty. Also some of the private gardens are unmanaged or deserted.

Green space in post-war regions, physically, is one of the well organized infrastructures in both quality and quantity. So, figuring how to deal with vast existing spaces can be the first step to regenerate those areas. An assessment of the structure of green spaces in a post-war region, especially focussing on Molièrebuurt Oost in Lombardijen, was performed. First, the research was focused on defining the structure of green space. Then the assessment on current usages of green spaces was carried out to compare the current situation with the plan from 1950’s. This can show which aspects should be adjusted for regenerating this neighbourhood.

Wijkgedachte

For figuring out the structure of green spaces, diagrams of the “Wijkgedachte” (Neighbourhood concept) were applied. Diagrams of the “Wijkgedachte” have the essential idea of a garden neighbourhood area in the 1950’s. The “Wijkgedachte” is a concept of dividing areas based on the level of hierarchy and it organizes spatial and social aspects of the city. There are four levels, which are “gezin” (family level), buurt (neighbourhood level), “wijk” (district level) and “stad” (city level). This provided a guideline for urban planning. However, there isn’t any fixed size of each area (family, neighbourhood, district and city). There are lots of realized variations of urban plans.

There are also variations of the “Wijkgedachte” in dividing areas. Figure 1a shows a division in areas on 4 levels in terms of distance, which are 400 m, 1 km and 4 km. Figure 1b divides areas in terms of walk-time, which are 5 minutes, 15 minutes and 30 minutes. Figure 1c is based on the concept of a Catholic parish that shows a development plan for neighbourhood-units for a Catholic community. In some regions in the Netherlands, such as Nijmegen, Catholic parishes traditionally played an important role in community life. The Catholic parish neighbourhood-unit consists of four distinct neighbourhoods centred on a parish complex (i.e. church, school, club houses).
Figure 2 shows that the “Wijkgedachte”, based on distance suits Molièrebuurt Oost better than the “Wijkgedachte” based on time. Molièrebuurt Oost (400 m radius) can be defined as “buurt”, Lombardijen (1 km radius) as “wijk” and Rotterdam south area (4 km radius) as “stad”. However, with the development of new transportation systems, these divisions cannot be applied in the current situation. People can reach their destination in less time than they spent before and people can reach further than they could before in the same amount of time.

According to Gruen (1964), the walkable range is up to 20 minutes in the perfect situation (in a highly attractive, completely weather protected and artificially

---

Table 1

<table>
<thead>
<tr>
<th>Mode</th>
<th>5 min.</th>
<th>15 min.</th>
<th>30 min.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walk (5km/hour)</td>
<td>420m</td>
<td>1.3 km</td>
<td>2.5 km</td>
</tr>
<tr>
<td>Bike (14km/hour)</td>
<td></td>
<td>3.6 km</td>
<td>7.2 km</td>
</tr>
<tr>
<td>Car (60km/hour)</td>
<td></td>
<td>15 km</td>
<td>30 km</td>
</tr>
</tbody>
</table>

The walk-time division was converted in the scale of distance. The speed of 5km / hour was applied. With the converted distance, about all Lombardijen area is in buurt level, a part of Rotterdam south region in stad level.

The bike-time division was also tried for the comparison. The speed of 14km / hour was applied. With bike, the whole Lombardijen area is under 5 minute zone. And, the all Rotterdam south region is under 30 minute zone.
acclimatized environment). It means that the “Wijkgedachte” can be applied to a pedestrian-accessible region, in which the area approachable a 20 minutes’ walk can be interpreted as “buurt”.

**Stad (city) level**
In terms of “Wijkgedachte”, the Zuiderpark is functioning as green space on city level for Molièrebuurt Oost. The Zuiderpark has lots of attractions and facilities. It is the biggest urban park in the Rotterdam south region. In the Zuiderpark, there are canals, trees and sports facilities so that it can accommodate various activities, such as walking, cycling, picnic, barbeque, meeting and sports. Due to its location and size, it could attract more people from districts all over the Rotterdam south region. It can encourage the interaction between people in different districts. In this sense, the area that is influenced by the Zuiderpark can be the whole Rotterdam south region.

However, due to development of transportation system (public transportation/increasing numbers of car owners), the distance does not matter anymore, but time (TU Delft 2010). Any location in Rotterdam south area can be reached by car or public transportation in 20 minutes from Molièrebuurt Oost. It makes the quality of space more important than time consumption, when it comes to choose a space for spending time. It becomes clear that a green space should have a unique character over other spaces, to be used.

**Wijk (district) level**
There are three types of green spaces in the Lombardijen area, which are an urban park (Spinozapark), a boundary garden and a partition garden (figure 3). A boundary garden is a green strip that defines the boundary of Lombardijen. A partition garden is dividing neighbourhoods, such as Molièrebuurt West and Molièrebuurt Oost, in the Lombardijen area. The Spinozapark is divided into smaller areas with elements, such as canals, fences and paths. This small division is proper for accommodating small scale activities, such as picnic, barbeque, playing and walking. In case of Spinozapark, the size of groups of users is small, usually families (3-4 persons) and a 2-3 person group. User groups with small number of people fit well in small divided spaces. The Spinozapark is properly used in a nice weather, especially, during weekends. Children are playing in the playground with their parents. People are walking their dogs and roller-skating. Senior citizens are sitting and talking to each other.

According to Peters et al. (2009), there are various tendencies for using urban parks depending on ethnicity. It shows that people from Turkish and Moroccan origin use urban parks for picnic, barbeque and meeting,
more than native Dutch people. However, there isn’t a significant difference among ethnicities for using parks for walking and cycling. Due to small scale division of Spinozapark, it looks proper for accommodating various activities so that it can satisfy various needs from various ethnicities.

**Partition gardens in Molièrebuurt oost**

There are two partition gardens in Molièrebuurt Oost. Both gardens have a linear shape so that these are suitable as a promenade. One is dividing Molièrebuurt into a West and Oost. There are also canals between Molièrebuurt Oost and West so that level of dividing is increased. The other one is dividing Molièrebuurt Oost into two areas. On the west side of this garden, there are porch type apartments. On the east side, there are gallery type apartments. This partition garden is a combination of a linear and square shape. The linear shape is for promenade. And there are a football field, a playground and a Ping-Pong table on the square shape partition garden. However, these sports facilities and playground usually remain empty.

**Buurt (neighbourhood) level**

Communal gardens can be conceived as a green space of “buurt” level. Communal gardens were designed as a place for interacting with their neighbours. They are usually located between apartment buildings (figure 4). Communal gardens are the most mal-functioning green spaces among all scales of green spaces. There are only grass and trees in communal gardens and the small facilities, such as playgrounds and benches, are outdated. Communal gardens have no competitive strength over the Spinozapark that can be reached in 5 from Molièrebuurt Oost. There isn’t any reason for inhabitants to use the communal gardens. It is natural that most of people prefer to use Spinozapark over the communal gardens. For a better use of the communal gardens, new functions or new competitive strength is needed.

However, due to the interlocking disposition of buildings, parking lots in the middle of porch type housing blocks have lots of potentials over the communal gardens, which have a narrow dimension. During
site survey, it was found that little girls were playing at the parking lots rather than in the communal gardens. It became clear that the location and surroundings of communal gardens are not suitable for accommodating activities.

There is another reason for malfunctioning communal gardens. Most of the tenants in apartment buildings are from non-European countries. For them, the living room, which is facing to communal gardens, is the one of most intimate spaces. Windows of living rooms are almost every time covered with curtains in order to protect their privacy. So, there isn’t any interaction between dwellings and communal gardens.

**Gezin (family) level**

Private gardens can be conceived as a green space of “gezin” level, the closest green space type among all the scales of “Wijkgedachte”. Balconies of apartments were taken into account in terms of green spaces. The balcony is not exactly a garden or green space, but it is the nearest thing apartments can have. Quantitative surveys were performed to find out aspects affecting its current use and the users notion on their private garden or balconies. With the outcome, the tendency of current use of gardens and balconies could be figured out. The explanation about the current situation could be estimated through combing the outcome with physical conditions, such as surroundings and orientation, and social conditions, such as rent and ownership.

**Private gardens**

Private gardens in Molièrebuurt Oost area are mostly attached to single family houses and ground bound dwellings of elderly housing. There are two types of single family houses (SFH’s), which are type B and type S. All SFH’s have front and backside private gardens. To figure out what is the aspect affecting the level of maintenance of private gardens, the information of SFH type, the width of the road it faces and ownership was cross referenced with the level of maintenance. Generally, it is found that private gardens facing a 2 m wide road are in a better condition. The level of privacy is higher where the width of the road is narrower. Tenants can feel safer with a 2 m wide pedestrian road than a 10 m wide road. This can be a suitable situation for tenants to build their affection on their gardens.

It is presumed that there is a relation between ethnicity and the level of maintenance. During a survey, native Dutch people were seen in one of SFH buildings with the most well maintained gardens, even though these gardens are facing the 10 m road, which provides the low level of privacy. The level of maintenance of these gardens is comparable to the ones facing the 2 m-wide road.

The front garden of type B is connected to the living room on the ground floor. People can make a visual connection with their garden on their comfortable chairs. On the other hand, in case of type S, there is a kitchen and entrance space on the front side of the ground floor. There is a better chance for tenants of type B to look into their garden more often than tenants of type S. This can encourage the use of gardens and their maintenance.

Some of the private gardens are well maintained. Some of them are not. Aspects that encourage maintaining private gardens seem to be the use of the adjacent room, the width of the facing road and ethnicity. Of course, also differences occur depending on users personality and life style.

**Balconies**

All apartments in the apartments buildings have at least one balcony. The dwellings of porch type apartment blocks have two balconies. There is a small balcony of 2.2 m² area (1 m x 2.2 m), connected to kitchen and there is a bigger balcony of 5.3 m² area (4.3 m x 1.25 m), connected to bedrooms. The dwellings of gallery type apartment blocks have one balcony on the
backside, connected to the living room. The size is 3.5 m² (1.4 m x 2.55 m).

In terms of balconies, quantitative survey was done for figuring out the users notion on balconies. With the outcome of numbers, the tendency of current use of gardens and balconies could be figured out. Quantitative surveys on the number of chairs and plants per balcony, usage of balustrade covers and the number of balconies used as storage spaces were performed.

Based on the survey, it can be stated that most of the balconies are not used. The number of chairs and plants per a balcony is not even over one (figures 5 & 6). The number of plants per balcony is 0.58. The number of chairs per balcony is 0.55. And there is not a prevailing use of balconies. It can explain a strong contrast in life styles in collective dwellings. When it comes to the use of balconies, how to cope with various uses of a regular shaped space can be the issue. It was hard to make general perceptions on the usage of balconies. However, there are some interesting findings.

With the number of plants, the tenants’ cognition of their balconies can be inferred. It can be found that the number of plants is higher on balconies, facing parking lots and outskirts of Lombardijen, than balconies, facing communal gardens. With the outcome numbers, it could be assumed that tenants keep plants on their balconies as a compensation for concrete surroundings, rather than as an extension of outdoor green spaces.

There are some balustrades covered with vinyl sheets. It was guessed that the purpose of these vinyl sheets was the protection from wind. However, the result shows that the number of balustrades covered with vinyl sheets is higher in balconies facing the south-east direction than the south-west direction. It should be
higher in balconies, facing the south-west direction, to block wind. The number is higher on balconies, facing busy streets. It could be that the purpose of vinyl sheets is for securing privacy from eyes of pedestrians.

**Conclusion**

It appears to be that green spaces around Molièrebuurt Oost are well realized in terms of the “Wijkgedachte”. The Zuiderpark on city level, The Spinozapark, boundary gardens and partition gardens on district level, communal gardens on neighbourhood level, private gardens and balconies on family level (figure 7). There is a gradual increase of scale from family level to city level.

However, it has been over 50 years since Lombardijen area was built. There had been many changes on lifestyle, method of transportation and ethnicity. The plan from the 1950’s does not fit the current situation. Especially, in terms of green space, which is a well-organized infrastructure in both quality and quantity, there are certain green spaces, which don’t function as they are planned. Especially, green spaces at “buurt” level are not in use.

To regenerate these neighbourhoods, dealing with both quality and quantity of green space is the first thing to do. Adjustments on architecture and urban structure should be done for better use of green space. Design of public space for better use of communal gar-
dens, such as turning parking space into public space, and renovation of apartment buildings for triggering interaction between dwellings and communal gardens, such as adding semi-public space to dwellings and modification of balconies for more universal use, can be considered.

**Bibliography**

A. Blom, B. Janden, M. van der Heide, De typologie van de vroeg-naoorlogse woonwijken, 2004

TU Delft, Metropolitan greens, public open space provision in dispersed urban regions, 2010

V. Gruen, The Heart of Our Cities. The Urban Crisis: Diagnosis and Cure, 1964


K. Peters, B. Elands, A. Buijs, Social interactions in urban parks: Stimulating social cohesion?, 2009

M. Junger, Delinquency and ethnicity: an investigation on social factors relating to delinquency among Moroccan, Turkish, Surinamese and Dutch boys, 1990
Self-identification Issues in Post-war Neighbourhoods

Loss of Identity in Lombardijen District

Irakli Melkadze

Introduction

The process of prefabrication and standardization, which was one of the biggest steps in the development of construction industry during the twentieth century, had its negative side effects. Hundreds of similar blocks proliferated like mushrooms, which led to place-identity problems (similar built structures made different places look alike). “The standardization of the built environment undermining place attachment by eroding place differences and destroying the particularity of place relations.” (Cuba & Hummon 1993, p. 550). It became difficult to pave the way to distinguished built structures, even more it became hard to recognize individual apartments through masses of same edifices. Sense of individuality and identity paled into insignificance. Although, there can be doubts on the architectural values of mass housing, it is clear that they were and probably still are vitally important, providing living shelters for millions of inhabitants all over the world.

Not only in the Netherlands, but all over the world post-war architectural heritage is widespread. As the edifices are mostly physically and morally outdated, nowadays experts of different fields are trying to find out the best strategies to deal with them. Lombardijen which is one of the so called “tuinsteden” (garden cities) of Rotterdam’s south, once designed for attracting people and offering them better living conditions became a dull and abandoned place and this has many reasons. This paper focusses on one of the problems with a more global character: the loss of identity. At first glance, loosing identity doesn’t sound so dramatic, compared with economic or social problems, but it can have serious psychological influence on the ordinary man. “Place identity can be defined as an interpretation of self that uses environmental meaning to symbolize or situate identity. Like other forms of identity, place identity answers the question, “Who am I?” doing so by countering, “Where am I?” or more fundamentally, “Where do I belong?” (Cuba & Hummon 1993, p. 548). If someone meets obstacles to find out answers on those questions, I think it can generally lead to problems of self-identification. This paper examines the loss of identity in Lombardijen in general terms and focusses on prefabricated dwelling blocks located in the North-Eastern part of Lombardijen, Homerusbuurt, in particular. The influence of prefabrication systems on the identity questions will be shown.

History of prefabrication in the Netherlands

Mass production of prefabricated housing was boosted all around the world after the World War 2 (WW2) and the Netherlands was not an exception. Reasons why mass housing became so actual can be traced back in history. Rotterdam with the growth of the port needed
new residential areas. Population growth played its role as well. Compared with other European countries Holland’s inhabitants doubled between 1900 and 1950 (Willems 1963, p.10-12). Whilst in the beginning of the twentieth century there was no housing shortage, after WW2, in 1945 house shortage reached to 168000, also due to Luftwaffe bombings (Willems 1963, p.10-12). To accommodate population it was an important and an inevitable concern of that time. One of the means to overcome the post-war house shortage was seen in the system-building. One of the first who saw the need and importance of standardized housing in the Netherlands was Government Commissioner for Post-war Reconstruction, Dr. J.A. Ringers, who made efforts to rebuild the country after the war. He had created a governmental apparatus that was working on the issue to facilitate the job of building about 500 000 dwellings with the lack of skilled labour (Bosma et al. 2000, p. 33). Importing of advanced building technologies from different countries was highly encouraged by the Rotterdam authorities.

During the immediate post-war years most multi-family housing were built using traditional methods, however later, new construction techniques were introduced as a way of alleviating of the housing shortage (Thijssen 1996, p. 259).

**Lombardijen - the borough with identity**

Historically Lombardijen area was mostly used for agricultural purposes, although it was prone to devastating floods. Despite mentioned problems it was slowly but consistently developed. After the start of the Meuse bridge construction in 1875 the development of the south bank followed. The original plan of Lombardijen was made by Peter van Drimmelen who started to work on it in 1946. In his new design concept, the borough of Lombardijen wasn’t seen as an extension of Vreewijk (Lombardijens neighbouring borough), but was designed as an independent district with an urban character (Gemeente Rotterdam, p. 14). Contrary to previous developments, Van Drimmelen gave identity to the district. Lombardijen was considered as one body, as an autonomous self-contained unit, where living, recreational areas and streets served as one interwoven structure. The means he used to achieve this goal lie in the social lay-out of the borough according to the “Wijkgedachte” (Neighbourhood concept). The basic idea of this concept was in the decentralization of the city and bringing different scales in it that prioritized people’s lives around different social groups at different scales (http://nl.wikipedia.org/wiki/Wijkgedachte).

The book “De stad der toekomst. De toekomst der stad” (The City of the future, the future of the city) became an influential source for city planners during the post-war period. The “Wijkgedachte’ envisioned the city as a social system of various levels providing particular functions. Neighbourhoods would have about 2000 to 4000 inhabitants, living in 500 to 1000 dwellings, which in turn would be part of a “wijk” (district), with about 20,000 inhabitants, and subsequently of a “stadsdeel” (quarter) of about 100,000 people. These figures were thought to be ideal numbers to enable basic social-cultural and healthcare facilities. Moreover, districts would have their own council, which was later institutionalized indeed as the “deelgemeenteraad” (Paalman 2011, p. 201). Such measures for different social groups were based on research. There was much discussion among professionals about the ideal size of the neighbourhood. American and British sociologists and designers calculated that the number of 20,000 inhabitants distributed on the approximately 400,000 m² area, so that the in-between distance of home, school and store couldn’t extend a 10 minutes’ walk. It was discussed that neighbourhoods in Rotterdam shouldn’t bigger, because the fragmentation of the social structure in the Netherlands was much higher than abroad.
Eventually the decision was made that for Zuidwijk, Pendrecht and Lombardijen apt size was 460,000 m² with a population of around 20,000 (Zweerink 2004, p. 8). The mix of the “Wijkgedachte” with another major “garden city” concept created communities of people (neighbours) which supposed to recognize each other by face. Such solutions served the strengthening of neighbourhood feeling and self-identification of the inhabitants.

**Homerusbuurt dwelling blocks composition and immediate surroundings**

Homerusbuurt neighbourhood is situated in the close vicinity of Rotterdam Lombardijen train station (figure 1). The railroad defines the eastern border of Homerusbuurt. A busy street, Spinozaweg, forms the northern border, with two directional traffic, tram, bicycle and pedestrian roads. From the South is Sophoclesstraat with private ground bound family houses and from the West some shopping facilities are situated. The Neighbourhood is split into two parts by the street Homerusstraat, which is one of the main arteries connecting the borough with Spinozaweg. The study area consists of 14 dwelling blocks disposed around inner courtyards with open angles. All blocks are five-storey high. Each block can be divided into similar ‘sections’. One section consists of an entrance, two garages and storage spaces on the ground floor and typical four floors with staircase and two apartments on each floor. All 14 dwelling blocks have the same layout with only one difference: ten of them consist of four ‘sections’ and four of them consist of six ‘sections’. All of the dwellings were made according to Coignet prefabrication building system which was imported from France.

Dura’s Society contacted the Coignet firm in Paris which already had successful experience in industrial housing as early as 1948 (Elman Zarecor, p. 240). For example in Evreux - a town with 25,000 inhabitants, 110 km west of Paris, about 500 homes according to the System Coignet had been realized. After careful studies Dura’s firm decided to bring the Coignet construction industry to the Netherlands and implemented it. The Dutch architect Ernest Groosman elaborated new design plans in close collaboration with the technical staff of the Coignet Company. He reinterpreted and adjusted the original Coignet building system to the Dutch standards. For instance, the original French system had a load bearing wall in the longitudinal direction in the middle of the block, while in the Netherlands, traditionally only the side walls were load bearing. Another interesting change refers to a ceiling height. Prefabricated elements were transported in vertical position as they eventually would be fixed, to avoid further incomprehensibility on the site. Groosman had figured out that the vertical elements transport having 2.80 meters height, were unsuitable. In this case, passing through some tunnels and underpasses on the route (from the factory to the potential building sites) was impossible. Consequently he suggested the floor height of 2.60 meters (Hellinga 2001, p.36-37).
Floor panels are only of two different (types) sizes. One is so called ‘three-bedroom’ and other ‘two-bedroom’ apartments. They are completely similar, except of one extra bedroom, which bigger apartment gain in front of the staircase. Facade elements have only a few different dimensions, whereas all other wall elements are designed in such a way, that the same machine could manufacture them (figure 2).
A three-bedroom apartment is composed only of twenty elements, which, depending on the required production schedule, were manufactured using six large and four small machines. The main structure is composed of facade elements, interior elements and floor elements. All building components were interconnected by stiff horizontal connections in both directions and a stiff vertical connection from bottom to top. Such connections were guarantee for a perfect stability and made different elements to serve as a monolithic structure. The horizontal connection is made with reinforced concrete. The vertical connections are also implemented in reinforced concrete, poured into the hollow tubes formed by the conjunction of several facade elements. Slabs were simply placed on walls.

Due to the careful studies of building structure and materialization done by experts working on the Duracoignet system buildings erected according to this system have a stable loadbearing structure and a durable materialization. Because the building blocks were composed by the repetitive use of the same building components, houses - in particular their facade expressions - bring monotony in the outdoor environment, as a whole, making it homogenous. Literally equal blocks miss almost any feature of identity; the same is true if describing court yards spaces created by dwelling blocks (figure 3). After refurbishment in the 1990’s a few actions were taken in order to give individual buildings some distinctive features. One of such additions are wall paintings on the side facades of blocks (figure 4).

**Problems of identity in the Homerusbuurt neighbourhood**

At the end of the 1990’s a question raised on the renovation policy in the Netherlands, for the neighbourhoods with serious physical problems. “Southern gardens”, including Lombardijen were the places where “new” strategy was used towards its refurbishment. More drastic strategies which mainly were used towards post-war housing, at the end of 1990’s were changed by a more moderate one with less radical improvements and better housing management (Gruis et al. 2006, p. 48). During the nineties refurbishment of the Homerusbuut dwelling blocks was done. Renovation included changes in the heating system, the addition of facade insulation and a new roof coverage. Unfortunately the renovation was done without considering architectural values of the original design. The added insulation made building’s appearance rougher, thick lines of new windows and door frames changed the looks of the buildings.

Nineties strategy aiming on urban renovation and differentiation couldn’t help. Borough declined gradually and now experts are looking for the solution which...
can upgrade a borough without harming its valuable sides.

“Urban renewal via the large-scale restructuring of post-war neighbourhoods will form a major challenge throughout Europe in the decades ahead. The neighbourhoods in question were constructed in the aftermath of WW2 amid major housing shortages, decimated infrastructures and a scarcity of good-quality building materials” (Gruis et al. 2006, p. 1)

Although the renovation strategy - the ways architects used to breathe new life into neighbourhood was interesting, it can be said that it wasn’t enough.

It is interesting to examine Lombardijen in terms of gaining or loosing identity, to see if there are any differences - how do natives (or inhabitants who lived in Lombardijen for a long time) and newcomers (immigrants and persons who arrived from different places) perceive the place and identify themselves to certain places. A survey that gives a general idea about the relations of native and non-native inhabitants to the environment they live is included in the research writing “Place and identity processes” (Twigger-Ross & Uzzell 1996, p. 205-220). Natives’ self-identification with the place they live in differs from non-native inhabitants of the same place. In the case of Lombardijen, many people who identified themselves with the borough, have left or passed away and newcomers, from different places have replaced them (WOORDING®TAALBOUW Rotterdam 2004). Consequently the number of inhabitants who still identify themselves with Lombardijen is diminishing. On the other hand, the number of newcomers, who aren’t able to have the same feelings and connections with the neighbourhood of ‘old times’, simply because they have arrived there later is increasing. These people need more noticeable, ‘visually seen’ signs of difference, to identify themselves with the built or non-built environment.

It can be said that original design of Lombardijen was made for a completely different society than it is there now. Political, economic and social issues of that time radically differ from modern days. Lombardijen was designed for a society that had overcome the hard wartimes, had survived and started to build up their country with an inspiration and belief in a much better future. Lombardijen consisted mostly of native Dutch families, but at the end of the 1990’s when all official obstructions to migrant households were removed by making migration policy more suitable for newcomers, reality has changed. Migrants from different countries have flooded the borough. This were mainly poor, less educated representatives of different ethnicities, with different cultural and religious backgrounds. Probably during this social transformation the notion of ‘identity’ became more topical. People who had lived in the borough for a long time were more attached to the place and they could easily identify themselves with the environment they have spent most of their lives. But newcomers, people from different places and countries probably have more problems to get used to the new environment - to identify themselves with the new context. I think it isn’t just coincidence that wall drawings appeared in the borough after migration influx. Wall paintings on the side facades of the buildings were an attempt to return to the roots of original Lombardijen design, where the identity of the borough and certain neighbourhoods were important. That is the reason to paint different pictures on buildings. Drawings, building colorization, entrance door colorization and so on served to give the place certain identity-characteristics which could make identical blocks different. Although mentioned actions were done, in my opinion it hasn’t radically changed situation. Intervention strategy touched only the buildings, but not the environment they function in. For instance in the original design courtyards were seen as the place people could communicate with each other in more secluded
open area and strengthen the neighbourhood social structure. Although all courts have some good qualities to serve the original purpose (the abundance of greenery) they are almost always abandoned and not used. Almost identical courtyards lack any originality which will make these places attractive.

Making Homerusbuurt a neighbourhood with ‘character’

Although, the way designers used to make similar buildings distinguishable is interesting, it harmed very much the facade qualities. Simply saying, buildings colorization is ugly and out of context. The neighbourhood still lacks character, something that will make it different and interesting for inhabitants and for visitors. This experience should be taken into account whilst working on the future intervention strategies. One means to upgrading living qualities in Lombardijen and making the declining neighbourhood attractive for living, can be giving identity to it. There are many ways to refer to this problem. A more general strategy can include diversification on all scales. Bringing diversity on the urban scale (designing courtyards in different ways), redesigning building facades (using different materialization, colorization, adding extensions), changing the floor plan inside (merging apartments in both, horizontal and vertical directions, introducing new dwelling typologies, etc.) can help different inhabitants of the neighbourhood to find ‘connection’ with the place they live in, reinforce self-identification with certain built structures. If the problem of self-identification is solved it can strengthen social cohesion in the neighbourhood, add a feeling of safety and introduce good ground for future developments.

Bibliography


Dr. Eldert Willems, Holland Growing Greater, Published by DE BEZIGE BIJ-Amsterdam 1963


Koos Bosma, Dorine van Hoogstraten, Martijn Voos, HOUSING FOR THE MILLIONS, NAI Publishers

Christ Thijsse, The technical quality of post-war malty-family housing in the social rented sector in the Netherlands, Journal of Housing and the Built Environment Volume 6, Number 3

Gemeente Rotterdam, Cultuurhistorische analyse en beschrijving (1949-1965)

Zweerink Zweerink, K, “Van Pendrecht tot Ommoord Geschiedenis en toekomst van de naoorlogse wijken in Rotterdam, thot”, Bussum 2005


Cjarel Twigger-Ross and David L. Uzzell, Place and identity processes, Journal of Environmental Psychology (1996) 16

WOORDING®TAALBOUW Rotterdam, “Wijkvisie Lombardijen: krachtige wijk in een prachtige stad,” Vastgesteld in de vergadering van de deelraad IJsselmonde d.d. 9 december 2004

Websites

http://www.thenbs.com/topics/designspecification/videos/petereisenman.asp
A framework for Rotterdam Zuid

In this article the tutors of the RMIT graduation studio on housing transformation reflect on the designs that have been made by the students. To reflect and evaluate the final report of “Kwaliteitssprong Zuid: ontwikkeling vanuit kracht” by Deetman and Mans, issued in February 2011 will be used as a framework.

History, present, future

The “Kwaliteitssprong” states that the scope and the intensity of social-economic problems in the weakest segment of the housing market is exceptional in The Netherlands. The report advises the creation of a national program, with strong involvement of governmental bodies. It is a reaction to the urgent present situation and is an incitement to serious improvement for the future. In the same time it states that history is crucial for the DNA of the area and that this DNA should be used as a base for interventions.

The RMIT approach is based on the belief that knowledge of the past provides answers for the future. History is considered as an on-going development, from origin through today to the future, and therefore always consists of multiple layers. The term DNA used by Deetman & Mans (2011), relating to living organisms, is very appropriate and useful in this respect. The concept of DNA of an area implies that there is a fixed combination of components. If the city or a neighbourhood is interpreted as a living organism too, one can imagine the existence of “genes”, the fixed characteristics. However the functioning and the development of this DNA will adjust to changing circumstances.

Discussing the results of the RMIT approach in this studio contributes to the definition of the DNA of Rotterdam Zuid. According to both the “Kwaliteitssprong” and RMIT this DNA is the starting point for future improvement.

Social, economic, physical

During this graduation studio the report was discussed in the national and professional debate. Although the students were aware of the importance of the report and its influence, it did not play a major role in their research and design projects. The reason can be found in the reports’ content. The “Kwaliteitssprong” focuses on social progress as a result from the development of personal talents and economic improvement. Physical improvement is regarded as facilitating. The students agree on this hierarchy and realise that their architectural design is serving rather than directive. Because of the social-economic character, the report does not provide comprehensive starting points for the physical improvement of the built environment, being the profession of the architect.

However, the report by Deetman & Mans (2011) is the topical and guiding document for transformation of
Rotterdam Zuid in the nearby future and therefore the relevant framework for this studio. By relating the student projects to the “Kwaliteitssprong”, we discuss on the one hand to what extent the student analysis corresponds to the report. On the other hand we discuss whether their design proposals meet the reports demands and in what way the design opens up to new perspectives, differing from or additional to the advice in the report.

The “Kwaliteitssprong” proposes “eight perspectives for substantial breakthroughs’ (Deetman & Mans 2011), differentiated in three “pijlers’ (categories):
A: Development of talents (“Talentontwikkeling”)
B: Economic intensification (“Economische versterking”)
C: Physical improvement (“Fysieke kwaliteitsverbetering”)

Perspectives

The students in this studio developed their own “perspectives for breakthrough”, that are not necessarily the same as listed above. The report emphasises that the three “pijlers’ need to be well balanced to create a base for the development of Rotterdam Zuid. Although “well balanced” is as positive as it is imprecise, it’s clear that Deetman & Mans (2011) insist on more attention for social and economic aspects.

The students in this studio however, are being trained to become an architect and therefore their work is unbalanced; working on physical improvement is the architects’ main goal. Nevertheless the students’ projects deal with several economic and social aspects and their physical interpretations will be highlighted here.

Demographic composition

Deetman & Mans (2011) stress the importance of “social climbing” from a social and economic point of view; a city is successful if it has the ability to facilitate social climbers and keep them within the city borders. This mechanism of inhabitants climbing the social ladder and leaving for a better place (selective migration) is recognised as a problem by all students. In all projects the demographic make-up is analysed and change is seen as necessary, but balance and measures differ.

In her project on Simonsterrein Theodora Rodopoulos focuses on improving the conditions for the present population (p.94–97). The situation, in her opinion, needs upgrading in order to prevent migration of social climbers. In her attempt to combine different classes, the social aspect is leading. The seventies concept “Bouwen voor de buurt” (Building for the neighbourhood) is revitalised. Alexandra Vlasova chooses the opposite approach (p.98–101). In her project the attraction of new target groups with a higher income is the main solution for the Feijenoord area. Social climbing is reviewed on the scale of the city; Feijenoord could serve as the comfortable habitat to keep the well-off in Rotterdam, near to the city centre. She proposes a considerable change of population in which the economic capacity of the new population is the key aspect.

What seems to be opposite strategies, investing in present residents or replacing them, turns out to be a matter of scale: facilitate social climbers either on the level of the building complex or on the level of the city. The choice for a homogeneous or heterogeneous group and especially the scale of defining is a difficult one, illustrated i.e. by the debate on the Rotterdamwet.¹

¹ The Rotterdamwet regulates the settlement and investment in certain disadvantaged neighbourhoods by setting strict rules, with the aim to improve liveability and to address and solve housing problems.
Empowerment
The report refers to the advice of VROM-raad (2006) that recommends starting from the ambition of inhabitants. According to this advice the common practice is based on physical upgrading of real estate and top-down projects on social cohesion and liveability. The people and their wishes and ways to progress are simply forgotten. The writers of “Kwaliteitssprong” adopt this VROM advice and translate it to strategies focusing on the inhabitants of Rotterdam Zuid. In several design proposals in this studio empowerment of the residents is set as a goal, which relates to the development of talents.

Donghwa Kang started his analysis with close observations of contemporary behaviour in Lombardijen-Oost, related to the “Wijkgedachte” (p.110-113). One of his conclusions is that today’s residents don’t live up to the strict separation of functions of the original urban design. In his design he attempts to facilitate the current use and by doing so peoples wishes determine the design brief. Theodora Rodopoulou proposes another example of “bottom-up programming” (p.94-97). In her redesign for Simonsterrein a contemporary version of participation is developed. As homage to the history of social activism of the seventies, residents are involved in the process of decision-making. Where Donghwa Kang used observation as a method, Theodora Rodopoulou interviewed inhabitants in different stages of her project. Creating a base for empowerment and development of talents is a strategy that is used by both Irakli Melkadze and Eirini Gallou (p.114-117 & p.102-105). Both students design collective spaces, indoor and outdoor, where residents can and should meet and are challenged physically (sports, gardening) and socially (cooperate). Since there is no direct link to people’s demands, this could be said to be a traditional “top-down” initiative, based on the estimation of a professional.

In the report the category of “talents’ is subdivided in language, education and “soft skills”. The students’ interpretation of working with the ambition of inhabitants mainly has to do with the soft skills, needed for living together in society. The way people are involved is different in their projects and the consequences are hard to predict. The seventies experiment at Simonsterrein shows that both the initiative and the success of a certain approach highly depends on time frame, politics and population.

Programming
Stimulation of local economy is seen as an important condition to improve work opportunities for young people. What is interesting in the report of Deetman & Mans (2011) is that the economic value of local entrepreneurs is valued as minimal. The social and spatial impact however, is important and decisive in putting effort in intensification of local economy. An active neighbourhood makes an attractive environment. Therefore actions are: providing appropriate real estate, supporting present initiatives, stimulating starting entrepreneurs and investing in combinations of working and living.

The project of Aman Poon shows all these aspects. Her proposal for a building block along Oranjeboomstraat stretches the existing mix of commercial and residential use to its limits (p.90-93). She uses the original typology of “shophouse” to strengthen the close connection between economy and residential functions. Her design inverts the entrances of the shops and turns the former backside into a vibrant front. This urban strategy to link the two (unequal) parts of Feijenoord by a commercial zone might exceed the social and spatial impact mentioned in the “Kwaliteitssprong” and might have an actual economic value for the neighbourhood. The program containing residential, commercial and educational functions works for the development of talents and for economic intensification.
The program in Alexandra Vlasova’s Zinkerblok also contains commercial functions in the plinth to attract people and create a vivid atmosphere (p.98–101). Because of the position and the scale of this project the main effect will be social and spatial, more than economic. In her proposal the Nassauhavenpark is included. Programming this large urban park by sports and leisure facilities could have impact on the scale of deelgemeente Feijenoord, albeit social and spatial.

Although the economic impact of local entrepreneurs might not be the priority, the enterprise has to sustain to be of value for the neighbourhood. A problem that is discussed a lot is whether the desired density of facilities is realistic or naïve.

**Safety**

“Schoon, heel en veilig” (“clean, intact, safe”) is a slogan of the municipality of Rotterdam and is to be found on every trashcan or garbage truck in the city. This concept is set as the essential condition for further physical development and is directly related to people’s behaviour. In interviews and conversation of students with residents this was reflected. Especially the (feeling of) safety seemed to be a priority. Although students did not all recognize and feel the issue of the lack of safety when walking around in Feijenoord or Lombardijen, they understood from the residents, stakeholders and experts that this feeling of safety is crucial. The issue is a combination of actual figures on e.g. crime, signs of littering and more intuitive and emotional aspects. This makes it hard to find the real solution. In the student projects we see opposite strategies. This is explicable by the natural tendency to choose the “other option” if the present situation is described as not safe.

The projects along Oranjeboomstraat in Feijenoord by Eirini Gallou and Aman Poon, are located on approximately the same spot and deal with the same complex situation of a public accessible strip of common gardens bordered by a long wall screening a no-man’s-land on top of a train tunnel (p.90–93 & p.102–105). Their solutions are both valid but opposite. Eirini Gallou creates a safe enclave bordered by water and differences in height, providing social coherence and livability for the families of the residential block. Aman Poon on the other hand opens up the site completely and her design invites people to enter from all sides by the creation of gates, paths and destinations.

Another example of contradicting solutions is shown by the projects of Irakli Melkadze and Alexandra Vlasova (p.114–117 & p.98–101). The first one starts with a post-war open urban structure and defines the unclear borders of public, collective and private as problematic. The logical solution is to close the courtyard and create clear boundaries. The second starts with a nineteenth century triangular block and determines the inaccessible courtyard as undesirable. The solution in this project is to erase the strict boundaries and make the courtyard open to the public.

The origin of danger (danger comes from outside or inside the community?) is not always clear and makes it hard to tell what is the cure. The “Kwaliteitssprong” regards “clean, intact & safe” as physical but safety is a social issue as well.

**Diversity**

Housing in Rotterdam Zuid is qualified as imperfect; the stock exists largely of the same, cheap, outworn and vulnerable dwellings. In the document “Zuid Werkt!, Nationaal programma Kwaliteitssprong Zuid” (2011) all cooperating parties signed their agreement and commitment. Municipal, social and commercial stakeholders state that one third of the existing stock needs to be improved or replaced to attract newcomers and to prevent social climbers from moving. According to the document this new neighbourhood should provide more differentiation, more medium expensive and expensive housing, good quality, attractive
outside space and attractive facilities. Decrease of housing density is advised by replacing small dwellings by larger dwellings. With regard to density, almost all students agree on the same approach; enlarge dwelling size to contemporary standards (either by merging or re-arranging) in many cases compensated by the addition of extra dwellings. On diversity they are anonymous as well. Although the urge for diversity was not apparent from the start, the programmatic differentiation was recognised as necessary. Diversification of typology is used as a means to increase financial-economic capacity. The student projects differ in the way diversity is expressed aesthetically. The extremes are Mark Radstake’s experiment of improvement of the collective that keeps the total equality of facades and Alexandra Vlasova’s attempt to maximise the distinction between the houses (p.106–109 & p.98–101).

Diversification of the stock is considered as a physical improvement but is directly linked to the before mentioned perspective of demographic composition. The physical focus can be a risk because if it results in just expressing diversity. The content it covers might be non-divers. Moreover, financial-economic reasons make repetition attractive for development, illustrated by the post-war housing heritage.

**Property/ownership**
The physical chapter of “Kwaliteitssprong” is mainly based on the pre-war neighbourhoods Oud-Charlois, Tarwewijk en Carnisse. In these areas private property is both omnipresent and problematic. Hence the organisation and incentives for a better level of maintenance is the main question. Although Feijenoord is also a pre-war neighbourhood private property is an exception. Woonstad is the main housing corporation in this area and owns the larger part of the stock. They have an important role in the development of the area. In Lombardijen, a post-war area, the housing corporations are dominant in the structure of property. Deetman & Mans (2011) advice to make an inventory of the problems in all neighbourhoods of Rotterdam Zuid, not only the problematic top three. Different ownership conditions will raise other questions en problems. In “Zuid Werkt!” an extra “perspective” is added: Improvement, replacement, addition and maintenance of social property (=corporation property). The student projects mainly deal with building blocks owned by housing corporations and all four aspects of the added “perspective” on social property are taken into account. Their projects could be part of the “inventory” to be made for the “other” neighbourhoods.

Ownership, both juridical and emotional, is an aspect that has been studied by many students in this studio. For most students the feeling of belonging is important but is not necessarily related to ownership. Alexandra Vlasova is explicit about the positive effect homeowners will have on the quality and durability of the block, whereas Theodora Rodopoulou regards selling new dwellings as financially necessary for the development of the project as a whole (p.98–101 & p.94-97). Although in the report by Deetman & Mans (2011) private owners are seen as problematic, for Mark Radstake private ownership formed the inspirational starting point for redesign (p.106–109). By analysing private housing in the neighbourhood of Lombardijen-West he observed many alterations by owners of low-rise terraced houses (rijtjeshuizen). The high-rise flats however, showed hardly any sign of the individual. Another interesting conclusion after interviewing the residents was the high satisfaction with regard to the individual apartment and the low appreciation of collective spaces. This led to a very interesting study on the “portiekflat”; to what extent this typology is future-proof? The dimension, quality and expression of individuality and communality are the main topics of his project. His positive notion of private ownership and on the other hand the restrictions and
disadvantages of social ownership are refreshing and might be helpful in a strategy to encourage private owners in physical improvement of their property.

**Beyond the “Kwaliteitssprong”**

The importance of knowledge of history of the area and its social context and the strong belief that this DNA is to be used in finding solutions, is a resemblance of the report and the RMIT approach. What is not explicit in the report by Deetman & Mans (2011) is whether the use of existing DNA is just a realistic and rational approach because of the impossibility to change or if the heritage of Rotterdam-Zuid is judged as a valuable opportunity. The RMIT approach dictates the value assessment of both physical and cultural historical aspects because of the opinion that housing is heritage and contains ingredients for future improvement. In the essays written by students a part of these analyses is reflected.

**Architectural value**

In general terms, the students are unambiguous in their value assessment on the physical values of the existing stock. Lombardijen is almost completely built in the fifties and sixties and the architecture is generally seen as monotonous, repetitive, logical and consistent. Students working on Lombardijen seem to accept the ordinariness and in their intervention the aesthetic is more or less continued as “analogue” architecture. Although the transformation of facades in the project by Irakli Melkadze is contrasting at a first impression, the design is strongly based on the logic of the original system (p.114–117). Typologies and urban layout of the post-war expansion area are valued as problematic mainly because of social and cultural reasons, but the Modern aesthetic seems to be assessed as valuable.

Feijenoord is composed of late nineteenth century low-cost social housing and “Stadsvernieuwing” (Urban Renewal) property from the seventies and eighties. The students dealing with this area seem to ignore the architecture of the ”Stadsvernieuwing”. New constructions from this period as in Alexandra Vlasova’s Zinker-blok are reduced to their load bearing concrete structure and transformed totally (p.98–101). In all Feijenoord redesigns, earlier renovations are “erased” by adding a new aesthetic to rear facades and rooftops.

The valuation of the nineteenth century constructions is very high, although compared to other pieces of architecture of this era the technical and ornamental quality is mediocre. It seems as if the cultural historical aspects are important, appealing and recognisable even for foreign students. Restoration or reconstruction is the chosen approach. This type of architecture might be idealised and sentimentalised by the students. This matches with contemporary liking and marketing of “historicizing” architecture.

**Cultural value**

According to Meurs (2008) “the valuable characteristics of a place are designated as its historic-cultural quality”. In “Discovering the assignment” Roos (2007) lists several existing and intended values that have to be taken into account by the architect and differentiates two forms; physical (the building itself) and intangible (the history of the building). In addition to what is built, the significant valuable characteristics also include more abstract and immaterial qualities. UNESCO set up the “Intangible Cultural Heritage” category because “cultural heritage does not end at monuments and collections of objects”[2]. The intangible heritage includes traditions and living expressions.

In this studio many students discovered this kind of immaterial historical qualities that, according to them, are valuable and usable characteristics in their redesign. The nature of the intangible aspects is mainly so-

cial, finding its logic in the function of the place being social housing.

- Theodora Rodopoulou finds activism in the DNA of Simonsterrein and she proposes to intervene and re-use a participatory attitude (p.94-97)
- Aman Poon reinvents a disappeared way of living; the close combination of working and living (p.90–93)
- Mark Radstake determines ownership as the important characteristic and researches how to benefit more from private property (p.106–109)
- Donghwa Kang manipulates the “Wijkgedachte” genes to create an improved social cohesion (p.110–113)

**Identity**

Not appearing in the report “Kwaliteitssprong”, but widely discussed in the studio is “identity”. The complex and intangible concept of identity can be explained as “sameness”: whatever makes an entity definable and recognizable. Among other things this can include the aforementioned architectural and cultural historical aspects, as long as they are shared and recognised. All students researched and analysed this topical and stated that the lack or misfit of identity is one of the main problems in regenerating cities and is of crucial importance in new planning. Naturally the solution could be found in a new appropriate identity:

- Irakli Melkadze concludes that the former identity of unity in Lombardijen is not recognized by today’s inhabitants and proposes a new identity based on programmatic content. (p.114-117)
- Mark Radstake states that there is no shared identity on the scale of the collective of residents of one block and proposes to erase this scale. (p.106-109)
- Eirini Gallou focuses on a homogeneous target group in order to benefit from a shared and coherent identity. (p.102-105)
- Alexandra Vlasova determines ‘non-places’ in all public green areas and uses programming of several parks as the main solution for the lack of identity. (p.98-101)

Theodora Rodopoulou observes a segregated identity; high culture (neighbouring area Dillenburg) opposed to low culture (Simonsterrein) and tries to connect the two worlds to one shared identity. (p.94-97)

Many of these observations find their base in cultural historical aspects and the misfit with today’s society. Programming seems to serve as one answer to a new identity. Emotional ownership, a sense of belonging, is another way to arouse identification and shared identity. But what is that identity, how many people share one identity and what part of identity can be created by architectural design? The students of this studio are aware of the fact that identity is a very complex concept and there is no quick fix. However, their notions on identity and design directions can be inspirational and serve as a recommendation for all stakeholders working on the national program “Kwaliteitssprong Zuid”.

**DNA**

In area development “using the DNA” has a merely positive connotation. An even more popular expression is the classical “genius loci”, used by architects to relate to the spirit of the place. These terms seem to imply that this spirit is always good. Using the medical metaphor however, the DNA can also be sick, containing genetic disorder. If curable at all, serious intervention or replacement is needed.

The analysed Rotterdam neighbourhoods show the positive application as well as the negative. The DNA of a place is not necessarily usable; sometimes certain ‘genes’ need to be eliminated. Therefor a profound assessment of physical values, cultural historical values and identity is needed. In practice it is a fact that the DNA is there, but how to deal with it? Where Deetman & Mans (2011) state the importance of DNA without a
clear explanation of what and how, the RMIT approach gives a possible interpretation of this strategy. Although time did not allow studying all subsequent layers of time on the main tree levels of architecture, being urban, building and materials, in a social context, the students’ research reports show great potential to develop this approach into a research method.

Conclusion

Whether one agrees on the completeness, the implementation and the use of the “Kwaliteitssprong” report, its content is valid and it points briefly at important aspects concerning the lack of “quality” in many neighbourhoods in Rotterdam Zuid. Although the report does not guide to practical solutions, it proved to be possible to reflect upon proposals for intervention with the “perspectives for breakthrough” as a reference.

The students’ work shows a wide range of interventions meant to solve the problems observed. Those interventions are discussed by the use of different perspectives. The discussion shows that the students took into account physical, economic and social aspects that they came across in the Rotterdam Zuid neighbourhoods. Many of the discussed perspectives correspond to strategies already used in present-day housing transformation. On the one hand that is a positive thing showing realism, but on the other hand that could mean that there are not many innovative interventions proposed what could be described as disappointing.

What is innovative, in our opinion, is the way DNA is revealed, analysed, adjusted and re-designed. Even if the design result is not spectacular and ‘out-of-the-box’, the approach of using history (especially the intangible kind) is radical. The promising projects by Theodora Rodopoulou and Mark Radstake demonstrate a sharp analysis of the DNA. Both their research and their designs show that cultural historical values can be found in housing areas and that those values can clearly differ from the traditional values used to describe and preserve cultural heritage.

Among all the discussed perspectives for transformation and intervention there are some striking ‘absentees’. The most notable one is sustainability. In the student projects sustainability is interpreted mostly as a social opportunity. Both climate and energy consumption are discussed generally, but do not provoke ambitious design solutions. This is a missed opportunity because from the current professional debate on housing transformation this is known as one of the most urgent problems that needs a creative approach. In ‘Kwaliteitssprong’ the issue of sustainability is linked to the Rotterdam Climate Initiative. This is a program initiated by the municipality, the port authority, environmental service and the united logistical and industrial companies. The ambition is to reduce CO₂-emission with 50% in 2025 (compared to 1990) and in the same time prepare for climate change and improve the Rotterdam economy. The latter aspect, the economy, is the only one mentioned in the ‘Kwaliteitssprong’.

This is remarkable because, apart from the environmental aspect, sustainability will have an increasing social impact. The ability to pay energy bills every month is the most direct example and is a social problem. Furthermore the sustainability issue could be linked to education and to the physical improvement, attractive environment with fresh air, capacity for water storage, diversity of flora, fauna etc. In future graduation studios the triple bottom line being people, planet & profit needs to be given more attention to end up with more balanced designs in terms of sustainability.

Another undervalued aspect is aesthetics or architectural style. Working in the complexity of degenerating neighbourhoods, all kinds of serious problems are discovered. Facing poverty, criminality, language deficiency etc. can have a relativistic effect on the profes-
Aesthetics seem to be too unimportant or even to luxurious to talk about. Students realize that physical improvement alone will not solve all severe problems. The question that rises is what high quality design can do. Knowing that ‘design’ in the urban context is often referred to as expensive and vulnerable for damage it is of interest to study though, the impact of ‘design’ on the positive perception of people living in reconstruction areas.

Although the above mentioned points of interest we conclude that the design through research or research based design that is propagated by RMIT seems to fit the subject of identifying and transforming housing heritage. The detection and alteration of their genes, both positive and negative, by using a research-matrix that names both layers in time, scales and social context is very promising.

**Bibliography**

Deetman & Mans, Lysias Advies BV, Kwaliteitssprong Zuid: ontwikkeling vanuit kracht, Werkendam2011

Gemeente Rotterdam, Ministerie Binnenlandse Zaken et al., Zuid Werkt!, Nationaal programma Kwaliteitssprong Zuid, Rotterdam 2011

P. Meurs, Building in the stubborn city, Delft 2008

J. Roos, Discovering the assignment, Delft 2007

VROMraad, Stad en Stijging, sociale stijging als leidraad voor stedelijke vernieuwing, 2006

Designs
By mixing the old buildings with the new ones through the injection of new communication platforms that encourage communication among people from different cultures and backgrounds, a more well-balanced society will be the new model for the future. In the thesis, the transformation is designed on both urban and building levels in Feijenoord to improve its living environment.
Project Theme

ShopHouse is one of Dutch vernacular Building which represents old social culture.

Quick urbanization was facilitated by function differentiation. This brings benefit as well as harm.

The duality of elements act as a catalyst for the interaction between functions, social sectors and provides flexibility in programming of public space.

In the thesis, these concept into the real life urban context is testified by Aman Poon.

Design Direction

In proposed location, the division of function discourage the social connection of people among districts.

To expand and renew shophouses, a ambiguous urban element, to blur out the existing zoning boundary.

The coexistence of different but compatible activities, encourage the interaction among social groups, enriching urban life-scape.

New Master Plan of RosePark

Existing Master Plan of RosePark

Existing Situation

Proposed Situation
There is a new entrance designed for this new park gallery at Oranjeboomstraat with a new pathway connected to the new tram station at Rosestraat. In order to create a welcoming and attractive entrance, partial of the existing buildings are proposed to be removed. A new stair and lift is provided along the passage to overcome the level difference of the site.
PROJECT DESCRIPTION

The aim of this project is to explore the socioeconomic impact of a physical intervention designed with the participation of its users and the consultation of its stakeholders. The intervention deals with the case study of the Simonsterrein residential complex, located in the degraded district of Feijenoord in Rotterdam.

The most important contribution of this experimental project is the formation of a process that combines social and design solutions. This process is based on the existing practice of participatory design adapted for the current twenty-first century society and its unique socio-political, economical, urban and architectural conditions.

The design establishes a living quality that satisfies the demands of the local residents, strengthening socio-economic structure while making the living environment more suitable for the interaction of disadvantaged groups and middle income social strata.

CONTEXT TRANSFORMATION

A. New functions

- Education
- Recreation
- Commerce
- Transport
- Service & Office
- Social facilities
- Parking
B. Network

C. Visual connection to the river

D. Traffic and parking rearrangement

E. Redefinition of public & private space

GOALS
Maximise usability
Create sense of belonging and responsibility
Minimise delinquency
COLLECTIVE SPACE REFLECTING INDIVIDUAL NEEDS

GOALS

Enhancement of indoor circulation
Emphasis and physical expression of the indoor collective space

Offer each apartment something extra
Optimise functionality and comfort
Currently Zinkerblock acts as a border between two existing green zones: Nassau park and “Creatief Beheer”. The main spatial idea of the design on the urban scale is to connect these zones through the building in order to create a continuous public domain of the area, which will contain several new functions, such as sport areas, recreational zones, spaces for public activities and facilities for children. This spatial connection would also link Zinkerblock and area, located behind it, to the waterfront of Nassauhaven, where pedestrian recreational route is created.
CHANGE OF COURTYARD FUNCTION

FUNCTIONAL ZONING OF GROUND FLOOR
PUBLIC LAYER

FUNCTIONAL ZONING OF FIRST FLOOR
COLLECTIVE LAYER

VERTICAL LAYERING
In my design proposal the primary goal was to diversify the dwelling stock and to adapt it to needs of different households.

Two parts of the building, namely, 19th century part and 1980s part were planned for families and small households respectively.

1st and 2nd floors of the 19th cen. part were re-planned into single-level apartments with floor area varying from 80 to 140 m² and the number of bedrooms from 2 to 3.

The upper floor, added to the building during renovation of 1980s (“dakterras”), is replaced with two-storey apartments with a private roof garden, with floor area of 120-200 m² (3-4 bedrooms).

In 1980s part the majority of existing apartments are subdivided into smaller ones with preservation of existing shafts and load-bearing structures. In the part of the building, facing crossing of Feijenoorddijk and Nijverheidstraat, several 2-bedroom apartments of around 75 m² are left within old boundaries, but re-planned. All the rest flats were designed as single bedroom or studio types with a floor area, which varies from 25 to 55 m².
For the outdoor environment, the 19th century architectural heritage creates a unique identity of the area, which should be underlined and emphasized. The diversity of the old building, as a main feature of the 19th century architecture, becomes a leitmotiv for the whole city block.

In my design façade refurbishment is done towards opposite directions for two parts of the building. While the old façade is restored close to its original state, the architectural language of the newer part would undergo serious transformation, where the complication of architectural language is the main aesthetic goal.

Courtyard facades of both parts are treated towards similar principle. While courtyard space is assessed as more “domestic” and cozy in character, white brick color, few decorative elements and introvert character of the extruded balconies would distinguish the space from the street one.
This RMIT graduation project concerns the translation of aspects of social sustainability to the context of a social housing renovation project, in the neighborhood of Oranjeboom Street, in Rotterdam city. The result of this project comes in the form of design with solutions for issues of social safety, cohesion, diversity and life resistance of a neighborhood. The researched context is that of a mixed neighborhood with late post-war portiek dwellings and 19th century housing. Since the project is concerned with the relation between social functions and physical, spatial properties, and aims to achieve the presuppositions for social sustainability, emphasis is placed on incorporating the perspectives of local residents; both existing and future expected ones. An integrated intervention pattern is developed, at different levels of scale—from urban to architectural and material scale, concerning interventions in public - communal space relation and conditions of indoor living environment.
Social cohesion
- common activities
- AND common facilities e.g. jointly invest in a trampoline for the neighborhood children. The apartment building has shared facilities, e.g. covered bicycle parking and separate containers.

Social Security
- Enhance visibility
- Treat borders and define territory to provoke involvement and care

Diversity of district
- work at home, by installing a good workplace,
- daily shopping within the neighborhood
- functions are mixed over the neighborhood
- live, work and play

Life resistance
- Provide accessible Public Places and amenities
- Provide flexible Renovation plan

STREET PROFILE BEFORE & AFTER INTERVENTION: A MORE TRANSPARENT GROUND FLOOR AND A REVITALISED SHOPPING STREET THAT ENABLES STOPS OF PASSERS-BY
Before (lower) & after (upper): transformation of 19th century apartments with a new functional portico - communal space. It works as an interaction space for the residents (functions: daycare, possibly rent as workspace).

New housing types are created by merging two apartments into one and by adding workspace as part of the apartment as seen above. The upper floors include also many mezzanettes to host existing big families.
Design deals mostly with two social sustainability aspects that were deemed most relevant within the specific context. These are firstly social safety, since aspects related to this appear to be the greatest threat to the future value of these neighborhoods. Secondly, possibilities for social interaction, since this is the most important (potential) quality of the neighbourhood.

The first issue is translated in solutions for accessibility and usability of public and communal spaces; a new entrance from courtyard side, through a clear privacy zoning between public and private space is created. Solutions for visibility were also important to offer easier social control and transparency from the entrance side.

The second issue is translated in solutions for communal activities and communal space design; external and internal: the courtyard and the portieks were the main focus points were new activities are introduced (common gardening, daycare room for the resident sin the portieks).

Diversity was a third important goal: New types of apartments (in size and typology) are created with a particular focus on hosting families with children and working-at-home persons.
> Experiment 1
Improving the collective space.
Perhaps the most realistic way to answer to
the demands of the neighbourhood, buildings
and owners is to improve the collective space.
In this experiment the individual apartments
stay unchanged. The impact of the improved
collective on the individual owner is the main
goal.

The generic solutions that were tested within
this experiment are:

1.1 make readable territories
1.2 involve family houses in the
territory
1.3 move parking spaces into the
territory
1.4 make a community deck above
parking
1.5 move entrances to the inside
1.6 create new staircases
1.7 create a buffer zone between
porch and apartment
1.8 create a community building

Each solution was evaluated by looking at the
influence on the different stated problems on
a social, functional and architectural level. This
was done both for the individual space and
collective space in order to see the influence
on one another.

The influence on both the individual and
collective space is positive, especially on a
social and functional level.
Experiment 2
Improving the individual space.
A more experimental and less realistic approach is improving the individual apartments and by doing that reducing the collective. Taking away the problem rather than fixing it. The goal here is to reduce the problems to a minimum without solving them directly, as is the case in experiment 1.

The generic solutions that were tested within this experiment are:

2.1 merge apartments
2.2 add private outside spaces
2.3 fill the collective garden with housing
2.4.1 owners choose their own window frames
2.4.2 open parts facades are filled by owners
2.4.3 owners choose their fences
2.4.4 apply changeable facade materials
2.4.5 design “shopping windows”

Each solution was evaluated by looking at the influence on the different stated problems on a social, functional and architectural level. This was done both for the individual space and collective space in order to see the influence on one another.

The influence on the individual space is positive. The influence on the collective space is less positive and even negative on the architectural level.
Based on the research on green spaces during my P1, problems around Molierebuurt Oost area were identified. Even though living with green spaces was the main idea of the south Rotterdam expansion, the green spaces in Molierebuurt Oost are not in use these days. There are only grass and trees on communal gardens in Molierebuurt Oost area.

By mixing and exchanging functions, the outdoor spaces in Molierebuurt Oost can have their own characters within their existing contexts. Some parts of the parking lots will be turned into meeting places and some parts of the green strip will be turned into parking lots.

Portiek buildings are not interacting with outdoor spaces. To provide more interaction with outdoor spaces, galleries will be added and balconies will be expanded.
During a site survey, it was found that little girls often play in the middle of parking lots. To accommodate the current activities and add more values, there will be a social networking place in the middle of parking lots, where they meet their neighbors and play with them.

By adding landscape elements to the existing communal gardens, communal gardens can be redefined as spaces which can accommodate individual activities, such as sitting on a bench and walking a dog.
Architectural interventions were focused on redesigns for interactions between dwellings and outdoor spaces. Galleries with extruded areas were designed for users to interact within the social networking place in the middle of parking lots.

With a balcony extension, there will be enough space for family activities. Balustrades on balcony will be built in masonry so that they can reflect on an existing architectural feature.
A key point in creating a high functioning outdoor space is designing an outdoor space with various characters. A social networking place is for a collective activity, while a communal garden is for an individual activity. And outdoor spaces adjacent to balcony side are for a calm and quiet activity.
Urban intervention strategy

Big scale intervention is aiming to bring diversity and therefore give identity to the courtyards surrounded by dwelling blocks. All four courtyards have different spatial and functional programs, which correspond and upgrade existing urban tissue and support newly added different dwelling typologies.

Intervention strategy on the building scale

Intervention proposal implies its preparedness for the step by step development. The neighborhood facelift can be brought into life in three steps: (conditionally called S-small size intervention, M-medium one and L-maximum intervention). Each size intervention add certain values to the neighborhood: starting from the most vital one - S and ending with the maximal scenario - L.
New design of courtyards

Courtyard with children playground
Ground floor plan

First floor plan

Park courtyard
Ground floor plan

First floor plan
Existing floor plan layout

Elderly typology

Big family typology
First floor plan

Ground floor plan

Roof typology

Typical floor plan 2nd-5th fl.

Dwelling + office typology

Existing facade

Courtyard facade

Street facade

Intervention. Facade renovation.

Intervention. Facade treatment

Intervention. Facade treatment
Street facade fragment

Courtyard facade fragment

by Irakli Melkadze
Learning from the past as Van Hees (2004) states to be important in the field of building conservation, should also be applied in graduation studios\(^1\). Therefore we will use this epilogue to critically look at the educational process within the studio in order to make some improvements. Because of the commitment of RMIT to the topic of transforming housing heritage, two new graduation studios have already been started so the suggested improvements can be applied immediately.

After this graduation studio on Rotterdam Zuid it is too early to draw general conclusions already on the topic concerned. We hope to do so after the completion of the studios on Rotterdam, Den Haag and Amsterdam.

One of the successes of this graduation studio, that we will continue, is the involvement of several stakeholders and experts, in the case of Rotterdam brought together by Veldacademie. RMIT wants to tighten this connection and be academically involved in the transformation of the housing heritage in Rotterdam Zuid and therefore asks for input from all different kinds of stakeholders.

It is for the first time since the publication of the results of a RMIT graduation studio on the German city of Dresden (Pham & Heinen (eds.) 2009) that students’ research and designs are being published in a book devoted to the results of such a studio\(^2\). Although being inspirational for both students and tutors it turned out to be difficult to either focus on the progress of the educational process and the production of material for a book. This is mainly reflected in the research papers that make up the first part of this book. Those papers are based on the students research reports and are probably difficult to read for people who do not have the insight into the full reports. In future studios the individual readability of the papers should be emphasised more to the students.

Regarding the RMIT approach reflected in figure 2 of the introduction it is concluded that this matrix is a perfect reference to guide the students research on the DNA of a neighbourhood. Looking back to the results it became clear that students tend to forget about two corners of the research matrix. The research and subsequently the results are focussed on the building, the older urban layers and the younger technical layers. The older layers of techniques and materials and the younger layers of the urban scale are left out. Whether this leads to unbalanced interventions is not clear yet but it certainly needs more attention in future studios.

We can conclude upon an inspirational graduation studio in which seven students were able to finish their graduation within time. We want to thank them for their efforts to deliver materials for this publication and hope that they will be working in the field of housing transformation all over the world for several decades still remembering the RMIT approach and the hospitality of Veldacademie.

---

\(^1\) R. van Hees, Beyond Restoration, Delft 2004
\(^2\) N. Pham & M. Heinen (eds.), The European city in transformation. DRESDEN, Delft 2009
In 2011 the RMIT-department of the Faculty of Architecture of TU Delft formulated the ambition to be structurally involved in the transformation of urban neighbourhoods in both research and education. This was decided upon because of the complex social, spatial and physical issues that many districts in large cities are facing and the urge to react on these issues with research based design within the awareness of the cultural significance of those threatened areas.

The mentioned complexity fits perfectly in the mission of RMIT, i.e. aiming at multidisciplinary research, product development and knowledge transfer in the fields of modification, intervention and transformation of the built environment. By linking academia with professionals in the field RMIT aims at innovation in both education and research. Therefore RMIT and Veldacademie joined forces and started a graduation studio on “Transforming Housing Heritage of Feijenoord and Lombardijen”.

The ambition of the studio was to gain an insight in origin, history, past of interventions, the actual situation and the future possibilities of a variety of typologies in the existing housing stock as a base for intervention strategies. To connect with the real world, stakeholders such as housing corporations and local authorities were involved in the organisation of the studio. The collaboration with Veldacademie and the input of experts resulted in a multidisciplinary approach.

In this book, the following projects are discussed:
- ShopHouse Transformation in Feijenoord, by Aman Poon
- Simonsterrein - A social project, by Theodora Chatzi Rodopoulou
- Diversity: ideas and embodiment, Zinkerblock, by Alexandra Vlasova
- Liveability in residential urban neighbourhoods, Oranjeboomstraat, by Eirini Gallou
- De wijkgedachte 2012: Collectivity and individuality in Molièrebuurt West, by Mark Radstake
- Green spaces in post-war areas, Lombardijen-Oost, by Donghwa Kang
- Self-identification Issues in Post-war Neighbourhoods, Loss of Identity in Lombardijen district, by Irakli Melkadze