The Contemporary Monastery

Delft University of Technology | Faculty of Architecture
Heritage & Architecture
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Introduction
Research
Design
Conclusions
Introduction
Research
Design
Conclusions
Heritage & Architecture
Vision and Goals

Adaptive Re-Use (of existing stock of buildings and monuments)

Understanding and Reconsidering Values (Intrinsic/Extrinsic, Tangible/Intangible)

Create synergies between People and our Heritage

Give new solutions to let our Heritage sustainable, worth keeping and worth living
Heritage & Architecture
the Binnengasthuisterrein (English: inner city hospital area)

Amsterdam inner city and the Binnengasthuisterrein. [maps.google.com]
Amsterdam Inner city
UNESCO Core Zone vs. Buffer Zone

Amsterdam today: The relationship between the Canal Ring and the Bufferzone. (centrum.amsterdam.nl)

Amsterdam. Canal Houses on the Keizersgracht. (amsterdamsegrachtenhuizen.info)
Binnengasthuisterrein

From 14th century monasteries...
Binnengasthuisterrein

...to late 19th century hospitals

(Pandarchief Amsterdam)

The Location today (Morosetti L., Nijhof L., Van den Meijdenberg N.)
Heritage & Housing Studio

Elements of Housing

Goals

Housing the historic inner city

Innovative living opportunities

Re-establish citizen/inner city relationships

Elements

Street

Façade

Entrance

Floor Plan

Flexibility

Structure

Energy

Housing and Shop

Housing and Work

Astley Castle (landmark)
Heritage & Housing Studio

Elements of Housing

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Housing and Work
Research by Design
Research Question

Can the aspects of the collective environment of a monastery be used as a reference for contemporary collective housing?
Research by Design
Vision, Goals, Method

RESEARCH:

• Focus on Monastery and contemporary Collective Housing typologies.
• Study different topics (Monastic typology, collectivity, the city within the building, living and working). Theory and reference projects.
• Find similarities and differences between the two typologies. Use principles of the life in a monastery to criticize problems of collective housing.

DESIGN:

• Use the research as starting point.
• Create a new typology through an innovative way of living.
• Provocative but feasible outcome.
• Critical a posteriori analysis.
Introduction
Research
Design
Conclusions
The Typology of the Monastery

Ora et Labora

Rule of St. Benedict
Monasteries

Spontaneously developed according to specific needs

S. Maria de Valbuena

Clermont charterhouse

Staint Gall Monastery

Montecassino
The strict daily life of the monk is laid out in the monastic architecture as well. (source: Braunfels, W. 1993. Monasteries of Western Europe: The Architecture of the Orders, Thames and Hudson. adapted by author)

The division between vie individuelle, vie collective and vie spirituelle in the monastery of La Tourette by Le Corbusier. (source: Ferro, S., Kebbal, C. & Patié, P. 1987. Le Corbusier; le couvent de la Tourette, Marseille, Parenthèses. adapted by author)
Collectivity

The monastery of Ema, made me conscious of the harmony which results of the interplay of individual and collective life [...] . Individuality and collectivity comprehended as fundamental dualism.

Le Corbusier
Learning from monasteries
Cells and Charterhouse as prototypes for Modernism
Hierarchical division of spaces, accesses and circulation, daily functions and life rhythm of the Immeubles Villas by Le Corbusier. (source: cargocollective.com adapted by author)
The city within the building

A house must be like a small city if it’s to be a real house, a city like a large house if it’s to be a real city.

Aldo van Eyck
In contrast to Modernism
A new way to structure our cities and our architecture - The Amsterdam orphanage
Living and Working

Casual interactions occur between tenants that over time lead to growing acquaintance and a sense of belonging to something larger than simply a collection of units.

Thomas Dolan
Design interactions

Strategies to plan interactions between workers and dwellers
Set of tools for the design
Inventory of principles and strategies to be taken into account

**Collectivity**
- **Green areas**
  Introduction of common green areas could be a beneficial factor in creating locations where people can meet casually or purposefully.
- **Common facilities**
  Laundries, kitchens, living rooms can promote social interaction among the dwellers which unintentionally meet here on a more or less regular basis without.
- **Different target groups**
  A mix of users in social groups and in time of permanency (temporary/permanent) can lead to a vibrant environment.
- **Community gardens**
  The introduction of areas where people can grow their own goods might benefit the sense of collectivity and promote a common purposeful interaction.
- **Daily functions and facilities**
  The presence of bakeries, cafés, university facilities and other functions together with dwellings allows a vibrant liveability of the area 24 hours a daily.
- **Balance Individual/Collective**
  The ratio of individual and collective spaces should be balanced in a way that none of the two overwhelms the other.

**City within the building**
- **Polarized system**
  Both on the building scale and small-city scale we must avoid the compartmentalization of functions and try to create a variation in the overall scheme.
- **Micro-cosm**
  The building should be structured in a way that different functions can be performed, creating this way a building life-cycle of its own, similar to the one of the city.
- **Complementary system**
  The functions that are introduced must be different but not independent, they must complement each other as a whole.
- **Opening to the public realm**
  A clear distinction between public and private must be avoided, the building can be opened up to the public by introducing semi-public and semi-private areas.
- **Courtyard**
  The courtyard as a typological element is not essential but it definitely desirable since it can be several things, such as green area, access, meeting location.

**Living and working**
- **Balance of functions**
  A balance of residential and non-residential functions does not necessarily mean 50/50, but it must respond equally to the specific needs.
- **Ground floor working activities**
  Working activities can be introduced on the ground floor and facing the street, this way enabling interaction with the public.
- **Multifunctional neighbourhood**
  The introduction of a mixed program must act acupuncturally on the small scale of the neighbourhood.
- **Informal interactions**
  The introduction of residential and non-residential activities can be planned in such a way to create casual interaction with people.
- **Walk-able scale**
  A multifunctional neighbourhood is effective in creating a vibrant environment if it is planned on walking distances for the dwellers.
Site Analysis

Former Binnengasthuis complex is common good, because of its cultural and medical-historical value as an expression of the development of increase of scale and modernization of the original old hospitals at the end of the nineteenth century

Dutch Cultural Heritage Agency
Amsterdam inner city
The functional structure of the city

LEGEND
- Dwellings
- Retail
- HoReCa
- Social
- Offices
- Parking and open space
- Leisure
- Companies
- Storage and unknown
- Dwelling areas
- Shopping streets network
- Office density gradient
LEGEND

- Supermarkets (Albert Heijn, C1000, Spar)
- Drugstore (Kruidvat, Etos)
- House store (Hema, Kijkshop, Xenos)

LEGEND

- Primary Schools (27 in 2km radius)
- High Schools (9 in 2km radius)
The Binnengasthuis area
Unilateral relationship with the inner city of Amsterdam
Value Assessment

Architectonic, Cultural, Historical and Scientific
Conclusions and Starting Points

Take advantage of the location

Use a hierarchical structure from the private to the public realm

Create interaction within the area and its functions in a coherent living environment
The monastery as an urban prototype

St. Gallen as main reference

The St. Gallen Monastery can be seen as an Urban Prototype, for hierarchical structure. (source: Braunfels, W. 1993. Monasteries of Western Europe: The Architecture of the Orders, Thames and Hudson.)
The monastery as an urban prototype

Elements from public to private

1) Boundary walls
   Acts as a filter for the public and preserve the site’s atmosphere.

2) Main street/access
   Gives access to the site and acts as a main axis of the ensemble.

3) Main square
   Central gathering place for the users of the complex and a small target of public.

4) Intimate spaces
   Smaller public spots that are detached and more intimate the main public square.

5) Courtyards
   Inner courts are meant to be used by the users of the single-buildings as semi-private spaces.

6) Buildings
   Buildings address specific functions and users.
Strategies
Application for the development of the Binnengasthuis area

1) Boundary walls
2) Main street/access
3) Main square
4) Intimate spaces
5) Courtyards
6) Buildings

Create a central gathering place
Plan independent peripheral micro-cosms
Monitored public flux of people
Functional program

Scale down one big community divided into several smaller producing-communities

Clustered Communities
Each community is independent, and lives and work separately from the other ones. Nevertheless they share spaces and get together for overall organization and management. Every cluster is eventually responsible for its own product or activity.

Common life and shared spaces
People belonging to the same cluster work and live together in the same building, sharing common areas and facilities.

Production
Each community independently takes care of its own production of goods, foodstuffs, product of craftsmanship.

Display and Promotion
The production is open to the public for didactic purposes. Each community can therefore benefit from it as a promotion of their products.

Km0 Sale of the Product
The product can be sold directly on place, in established spots or when markets are organized.
Functional program
Production and public

Permanent stay
Monks would spend their whole life living in a long-lasting but static community.

Temporary (Long/Short)Stay
Give the opportunity to several groups of people and allow a turnover of activities, healthy for the neighbourhood and the inner city.

One big community
The only purpose of a cloister was the commitment to religion, while other activities were merely meant to sustain themselves.

Several smaller communities
Smaller communities with different purposes are easier to manage and more feasible for today’s society.

Consumption of own products
The production was only meant for consumption and therefore addressed to the basic daily and life needs.

Sale of own products
The production of goods can also be intangible and, therefore, cannot suffice to sustain the whole community. It is therefore aimed at the sale to the public.
Functional program
Organization, target and common life

Community Land Trust
Manages land and buildings Real Estate, ensuring low-priced rents and sale for communities.

Gemeente Amsterdam
Has interest in the inner city’s requalification, organization of cultural events and new activities for its citizenship.

the Contemporary Monastery
An actively producing group of small communities, that live together, share spaces, self-manage their own productive activity, sale their own products, and organize public courses, events and initiatives.

What do we share?

Individual place: Rentable studios of flats ensure an intimate place to live. The limited dimensions limit also the costs and promote the urge to share.

Bike storage: a shared bike storage is necessary on the ground floor and can promote casual interactions among the residents.

Laundry room: tenants do not necessarily need private washing machines and can share it with other tenants by saving thus money and space.

Common areas: common areas such as places to chat with each other, a common kitchen, or a common dining room promote a sense of community between the students that have a place to share that is not necessarily their individual one.

Multi-purpose/Projection room: Can be used for public events and audiences, host small conferences or courses but, when available, it can be used to watch movies together.

Common Gym: Is a place for the everyday life of a person that can bring people together and push them to interact with each other and create bonds outside their work activities.

Roof Terrace: Can be used in Summer and Spring to enjoy the good weather and organize BBQs, but also to find a quiet shelter for ourselves.

Small groups of entrepreneurs
People interested in investing a limited budget to start or promote a new production.

MSc and PhD students and starters
Young people with spirit of initiative could benefit by a subsidized lower rent and get the chance to start their first own activity.

Start-overs
Grown people that are interested in participating in some activity, starting a new business, because they want to redeem themselves and need a chance to start over.

CLT

Gemeente Amsterdam

Students
Starters
Small groups of entrepreneurs
Start-overs

PRODUCTION, SELF-MANAGEMENT and ORGANIZATION

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Functional program
Possible activities and fields of interest

Artistic and design
a) Photographers
b) Graphich design and Advertisments
c) Stylists and Taylors
d) Customized Printing Shops
e) Architecture studios
f) Packaging

Food and Drinks
a) Cupcakes, Cheescakes and Pastry
b) Home-Brewing
c) Home cooks, Deliveries and Catering
d) Other Specific products

New Technologies and Multimedia
a) 3D Printing
b) Start-ups
Working activities
Workshops and ateliers open to the public
Interiors

Colours for a creative environment and individuality of each activity
Ground Floor
Ateliers and Workshops
First Floor
Offices and Startups
Living together
Common areas - Tweede Chirurgische Kliniek - Public
Living together
Common areas - Tweede Chirurgische Kliniek - Private
Living together
Living Schemes - Tweede Chirurgische Kliniek (West wing)

Private
Own room and bathroom

Shared
Relax room to share with another person

Collective
Kitchen and Living room to share with three other people
Living together

Living Schemes - Tweede Chirurgische Kliniek (East wing)

- **Private**
  - Own room and bathroom

- **Shared**
  - Kitchen and Living Room to share with other two people

- **Collective**
  - Common Balcony for three groups of three
Living together
Second Floor
Living together

Living Schemes - Zusterhuis (East wing)

Private
Own studio (25-35 sqm)

Shared/Collective
Shared facilities (laundry), recreational and leisure area common dining with kitchen and common living room.
Living together
Common areas - Zusterhuis
New Volume
Connecting public and private
New Volume
Connecting public and private
The Courtyard
The Courtyard
Intervention
Dwellings and activities - Tweede Chirurgische Kliniek
Intervention

New entrance volume
Intervention
Climate scheme

Design | 83
Program Analysis
Square metres by floor

LEGEND
Public
- Public + (Main Entrance and Lobby)
- Public (Pic-Nic area, Exhibition space, Snijzaal)
- Common (Common areas, Landscape Office)
- Individual (Ateliers, Workshops, Offices)
- Public Routing

Dwellings
- Common + (Gym, Roof terrace)
- Common (Recreational, Lounge, Laundry)
- Shared + (Kitchen, Living room)
- Shared (Relax room)
- Private (Single room, Studio)
- Private Routing

Services
- Bycicle Storage
- Services (Storage units, Technical Rooms)
- WC
Program Analysis

Square metres by floor

<table>
<thead>
<tr>
<th>Floor</th>
<th>Ateliers</th>
<th>Offices</th>
<th>Startups</th>
<th>0 - Dwellings</th>
<th>+1 - Dwellings</th>
<th>+2 - Dwellings</th>
<th>+3 - Dwellings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000 mq</td>
<td>242</td>
<td>136</td>
<td>354</td>
<td>273</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1500 mq</td>
<td>119</td>
<td>416</td>
<td>317</td>
<td>266</td>
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<td></td>
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<tr>
<td>1000 mq</td>
<td>459</td>
<td>576</td>
<td>135</td>
<td>135</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>500 mq</td>
<td>768</td>
<td>512</td>
<td>588</td>
<td>648</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 mq</td>
<td>162</td>
<td>56</td>
<td>65</td>
<td>81</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Ateliers
- Offices and Startups
- Dwellings
### Program Analysis

#### Total ratio of functions

<table>
<thead>
<tr>
<th>Function Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Pic-Nic area and a multipurpose projection room (former Snijzaal)</td>
<td>3.16%</td>
</tr>
<tr>
<td>16 Ateliers/Workshops (10 TCK, 6 ZH), 14 Offices, 2 Meeting Rooms for Clients</td>
<td>3.32%</td>
</tr>
<tr>
<td>One Common Gym and one Multi-Purpose Roof Terrace</td>
<td>5.42%</td>
</tr>
<tr>
<td>8 Shared Living rooms with Kitchens</td>
<td>13.49%</td>
</tr>
<tr>
<td>26 Double-height Rooms with bathroom (17 m²) in the TCK, 28 Private Studios (20-33 m²) in the ZH</td>
<td>16.69%</td>
</tr>
<tr>
<td>Private internal Routing with Open Galleries in the TCK, with 4 separate accessess on the ground floor</td>
<td>16.11%</td>
</tr>
<tr>
<td>4 Private Bicycle Storage units</td>
<td>14.54%</td>
</tr>
<tr>
<td>Public Circulation Room in connection with the surrounding public space, and provided with selling stands and Exhibition Places</td>
<td>8.17%</td>
</tr>
<tr>
<td>4 Main Common areas providing Recreational rooms, Lounge space for parties, common kitchens and common Laundry room.</td>
<td>7.60%</td>
</tr>
<tr>
<td>4 Shared Relax Rooms</td>
<td>3.52%</td>
</tr>
</tbody>
</table>

Design | 86
Program Analysis
Traditional, Collective and Own Proposal

Traditional Dwelling/Working
LOMMA APARTMENTS (FOJAB arkitekter) - Sweden

Co-Housing/Co-Working
WINDSONG COHUSING (DYS Architects) - Canada

Traditional
Collective
Own Proposal

LIVING
WORKING
Program Analysis
No vacancy scenarios

Scenario 1
100% Singles

Scenario 2
100% Couples

Scenario 3
50/50% Singles/Couples

Total amount of people

Scenario 1: 54

Scenario 2: 108

Scenario 3: 82

Square metres per person (including routing)

Scenario 1: 51 (71)

Scenario 2: 25 (36)

Scenario 3: 33 (47)
Program Analysis
To share or not to share - Sharing principles

Case Example (see 100% singles scenario)

Individual Rooms

Common Space

SCENARIO A - Nothing is Shared

Claimed as individual

14 m² room

24 m² claimed as individual

14 m² room

1075 m²

SCENARIO B - 50% Shared

Common or shared for everyone

14 m² room

662 m²

12 m² claimed as individual

14 m² room

1325 m²

SCENARIO C - Everything is Shared

14 m² room

2149 m²

20 m² claimed as individual

14 m² room
Reflection
Research, Design, Process

RESEARCH:

• Provocative choice of topics.
• Reflection on the issues of the typology of Collective Housing.
• The monastery offers cues for the reflection on matters that we did not consider relevant.

DESIGN:

• Architecturally feasible.
• Typologically innovative.
• Sociologically utopian.

PROCESS:

• Non-architectonic fields: historical, social, sociological, of today.
• Analysis of the stall in co-housing’s development in the past 50-60 years.
• Provocative attitude in order to raise issues, discussion and reflection.
• Possible solutions for architectural and sociological issues.