FEELING THE SENSE OF NEIGHBORHOOD

by Taja Benčina (4184254)
Research theme: **Connecting inhabitants** in the neighborhood

Design assignment: Collective housing in Ljubljana
Program: Residential and public, the emphasis on residential program
THEORETICAL RESEARCH
In this era, “... the individual is becoming the basic unit of social reproduction for the first time in history.” To put it in a nutshell - individualization is becoming the social structure of second modern society itself” as Ulrich Beck points out (Beck, 2001, p. XXii).
Amongst others, Ivan Svetlik (Svetlik, 2012) points out that the value, which makes Slovenians different from other nations, is **individualism**.

According to Ivanšek (Ivanšek, 1988), the most typical and highly popular type of housing in Slovenia is **single-family house**, which is high individualistic.

Individuals wish to possess detached house, standing on its own plot, with the option of path going around the house. On the other hand, each individual house should differ from others in at least some details, as for example, color.
How should a **neighborhood in Ljubljana** be designed or organized according to its functional and physical characteristics that it would **encourage connections** (encouraging interactions and strengthening neighborhood identity) between its **inhabitants, individuals**?
General research scheme and methodology

A problem

Theoretical part of the research

- Literature
- Observations
- Interviews

Practical part of the research
Research scheme: Theory

Individualism: a problem

In relation to built environment

Defining connecting

Connecting individuals through

The sense of neighborhood

Interactions and common space

Identity of build environment

Encouraging interactions

Strengthening identity

Functional characteristics

Physical characteristics

Diversity and types
Mixing functions and sequence
Flexibility and idetermination
Articulation of space
Disconnection by floors
Congestion and siting
Uniqueness and distinctiveness
Flexibility and idetermination
Uniqueness and distinctiveness
Unity
Flexibility and idetermination
Urban scheme

Encouraging interactions

- Diversity and types
  - Functional characteristics
- Mixing functions and sequence
  - Functional characteristics
- Flexibility and indetermination
  - Functional characteristics
- Articulation of space
  - Physical characteristics
- Disconnection by floors
  - Physical characteristics
- Density and siting
  - Physical characteristics

Strengthening identity

- Uniqueness and distinctiveness
  - Physical characteristics
- Unity
  - Physical characteristics
- Flexibility and indetermination
  - Physical characteristics

Theoretical principles

Guiding point 1
**Individual units- system**

- Unity
- Flexibility and idetermination

**Strengthening identity**

**Physical characteristics**

**Theoretical principles**

**Guiding point 1**
DESIGN RESEARCH urban analysis
Location on the map of Ljubljana

Center

10 min by car
Choice of the plot: Residential use
Location: marsh, ‘Barje’

Location is on the area of medium flood risk. Floods occur once per 20-50 years.

Rural character
Public infrastructure
Choice of the plot: almost no public functions

Border between urban and rural
Relation between public and traffic infrastructure
Public infrastructure in relation to road hierarchy

Guiding point 3

Transit road

Grocery stores: next to transit road

Restaurants: next to transit road

Schools: next to transit roads, at least 30 m away

Sport facilities: close to transit road, distance

Cultural facilities: next to less transit roads

Kindergartens: next to dead-end road

Playgrounds: next to dead-end road

Less transit road
Structure of accesses and transit road

Guiding point 4
Weak pedestrian infrastructure

Pedestrian and bike paths
Guiding point 4

Pedestrian path as national monument
LAYOUT of the NEIGHBORHOOD
Improved connectivity, pedestrian paths
Detajlno

1:1000

vse

manjsa

shema

Osnovna

grupa

Parking,

javni

prostor

Gostota

Detailed part of the urban scheme, 1:1000

Pedestrian areas
Diversity, types and flexibility

Cooperation of the inhabitants

Diversity, types and flexibility

Cooperation of the inhabitants

Encouraging interactions

Functional characteristics

31
Encouraging interactions

Functional characteristics

Mixing functions and sequence
Encouraging interactions

Physical characteristics

Articulation of space
Encouraging interactions

Physical characteristics

Connection by floors

Inhibiting contact  Promoting contact
Encouraging interactions

Physical characteristics
Strengthening identity

Functional and physical char.

- Distinctive layout
- Unified and distinctive individual units

Unity and distinctiveness
Strengthening identity

Flexibility of individual units
INDIVIDUAL UNITS

a system

with rules

FLEXIBILITY AND NOT COMPLETE DETERMINATION

UNITY (OF INDIVIDUALS)

coopera9on of inhabitants in the process
WHAT IS IT?
Fixed vrs. flexible

Basic group

Flexible individual units

vrs.

Fixed platform with piles on modular system
Platform also prevents houses from flood.
Lake dwellers 2000 BC
Individual units as modular volumes

Individual units are different volumes that fit to a modular system.
Modularity in urban section

Modularity also contribute to unity

Southwest-Northeast

3.85 m
Individual units can grow after time and adopt to future changes, so inhabitants do not have to move.

Culturally important
Sistem lesena prefabricirana panelna konstrukcija 

Zaradi modularnosti, flexibilnosti in nadgrajevanja, lahko material in lokalno gradivo, ki se lahko uporabljajo za prefabricirano, lazje in cenjše izdelavo, kot tudi za lenje in hitro.

Standard module on 60 cm

- wooden posts on 60cm 148/48 mm
- gypsum board panel 18mm
- vapor barrier
- particle board 15 mm
- wooden wool 148 mm
- Particle board 15 mm
- Wooden fibre plate 150mm
- Particle board 15 mm
- hydro insulation
- facade
Prefabricated wooden panel construction

- Modularity
- Flexibility and growth
- Native, local material
- Lightness: subsidence problem
- Easy and cheap to use
Basic individual unit

ratio 3:7

3.85 m

load-bearing module

1.2 m

structural module
Growth of the unit

Basic unit

Addition

First phase

Second phase
Position of the stairs in individual units facing north-east

- Spring: 43°57’
- Winter: 20°3’
South-west facade

1.2 m

Garden atriums
‘free’ facade

North-east facade

Facade follows modularity
Because of the modularity, rooms within the plan can be changed.

Room module: 3.60 m

“Flexibility is when different people will have different associations with the same space.”
(Herman Hertzberger, profiles, www.dutchdfa.com)
HOW DOES IT WORK?

cooperation of inhabitants

mass customization
catalog

individuality within collective
Random scheme according to demography

Basic group of houses
<table>
<thead>
<tr>
<th>type of household</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>single</td>
<td>33%</td>
</tr>
<tr>
<td>non-family (usually 2)</td>
<td>2.5%</td>
</tr>
<tr>
<td>family +</td>
<td>4.6%</td>
</tr>
<tr>
<td>more families</td>
<td>4.4%</td>
</tr>
<tr>
<td>more families +</td>
<td>0.3%</td>
</tr>
<tr>
<td>couple</td>
<td>12%</td>
</tr>
<tr>
<td>couple with a child</td>
<td>10%</td>
</tr>
<tr>
<td>couple with two children</td>
<td>10%</td>
</tr>
<tr>
<td>couple with three + children</td>
<td>3%</td>
</tr>
<tr>
<td>father with a child</td>
<td>2.5%</td>
</tr>
<tr>
<td>mother with a child</td>
<td>11.5%</td>
</tr>
<tr>
<td>non-married couple</td>
<td>1%</td>
</tr>
<tr>
<td>n-m couple with a child</td>
<td>5%</td>
</tr>
</tbody>
</table>

households and families, Slovenia, 1.1.2011
Level 1: Choosing the plot

Larger houses with garages

Smaller houses without garage

Owned by individuals

Collective parking

Collectively owned
Level 2: Choosing the volume

2_a

- a: 43+12 m²
- i: 115+30 +24 m²
- c: 94+12 m²
- d: 105 m²
- e: 70+20 m²

- f: 94+12 m²
- g: 105+30+30 m²
- h: 120+30+12 m²
- b: 75+15 m²
- j: 115+30 +24 m²

- k: 115+30 +24 m²
- m: 120+30+12 m²
- l: 115+30 +24 m²
- n: 115+60 +30+20 m²
Level 3: Choosing the plan

3_a

h

b

i

k

f

d

j


e

l
Level 4: Choosing a façade texture

Wooden facades with different textures

4_a

a. Vertical lamellae

b. Horizontal lamellae

c. Crossed lamellae
Level 5, 6, 7: Choosing a facade color

Color of facade panels and panels

Color of wood lamella
Level 8: Choosing a façade

System for openings
Openings always aligned to the yellow line

Max. 2.4m
Max. 2.4m

Some of the possibilities

8_aacacc
8_2_bcx
Level 9,10: Choosing windows

Window frames

a. Wooden window frame
b. Dark colored Aluminum window frame

Window jamb

a. Wooden window jamb
b. Dark colored sheet metal window jamb
Shutters

Dark colored steel frame with wooden infill

Fence

Dark colored steel frame with wooden infill

Dark colored steel frame with steel infill

Dark colored steel frame with steel infill

Level 11,12: Choosing shutters and fences
Level 13, optional: Balconies

Wooden structure with wooden or aluminum window frames, according to other window on a house.

Aluminum window frames

Wooden window frames
EXAMPLES
Example A

3_a
Ground floor

More ‘public’ spaces

First floor

More ‘private’ spaces

- separate bedroom
- larger bed
- extra storage space

Urša

43+12 m²

1_h, 2_a, 3_a, 4_a, 5_d, 6_c, 7_b, 8_aacacc, 8_2_bcx, 9_a, 10_a, 11_a, 12_a, 13_x
Example A

a_a section

b_b section

6.1 m

3.8 m

7.9 m

3.6 m

0.6 m

0 m

3.8 m

6.1 m

7.9 m

3.6 m

0.6 m

0 m
Example A

1_h, 2_a, 3_a, 4_a, 5_d, 6_c, 7_b, 8_aacacc, 8_2_bcx, 9_a, 10_a, 11_a, 12_a, 13_x
**Vertical section**

- **S_W facade**
- **N_E facade**

**Horizontal section: windows**

- Wooden shutters
- Sheet metal protection

**Example A**

- Vertical section details:
  - Ver. Wood batten 30/50 mm
  - Hor. Wood batten 20/50 mm
  - Ver. Wood batten 40/50 mm
  - Fibre cement panel 12 mm
  - Hydro insulation
  - Particle board 15 mm
  - Wooden fibre plate 150 mm
  - Wooden posts 148/48 mm
  - Wooden window jamb
  - Triple glazed window with wooden frame
3_c

Ground floor

First floor

1_f, 2_c, 3_c, 4_c, 5_a, 6_b, 7_c, 8_bbacccc, 8_2_caxxxbxx, 9_b, 10_b, 11_a, 12_b, 13_x

- 'free' plan in g. floor
- place for reading
- large room for a child
Example G

- garage
- large living room
- double-height space
- bedroom with a terrace

Ground floor

First floor
Example G

8_xabbxaxbbccxxca
8_2_aabbaxxxaxbc

S_E facade

N_E facade

1_b, 2_h, 3_g, 4_b, 5_c, 6_d, 7_b, 8_xabbxaxbbccxxca, 8_2_aabbaxxxaxbc, 9_b, 10_b, 11_b, 12_b, 13_x
Example A
1. well pump
2. fruit trees
3. benches
4. private gardens
5. after running stretching element
6. enclosed parking
7. common garbage
8. bicycles
9. common space
10. common storage and engine room

Collective parking as public space

A group of houses
Scheme 1: heating, winter

Scheme 2: cooling, summer

Scheme 3: central geothermal closed-loop system
Section group of houses
Facades group of houses
Combination of different façade elements creates individuality within collective.
Porch: a cultural characteristic
The neighborhood ‘Barje’
Filipović Hrast, Maša, Dolničar, Vesna (2011) Sense of community and the importance of values: comparison of two neighborhoods in Slovenia. Ljubljana: University in Ljubljana, Faculty for social studies.

Legend: Main literature, Additional quotations