HUMAN SUSTAINABILITY

Author: Dr. DI Harald Deinsberger-Deinsweger www.wohnspektrum.at Housing Research & Analysis

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Human Scientific Factors to Enhance Life Cycle Sustainability of Housings

Example 1: Pruitt-Igoe

"The most unsustainable housing complex in history caused by psychological deficits"

Housing object:

"Pruitt-Igoe"
St.Louis, USA
ca. 2800 housing units
completion 1956
occupation peak 1957: 91%
1965 occupation rate ca. 33%
1971 only 600 Inhabitants left
demolished 1972 - 1976

Main reasons for the failure were psychological planning mistakes. First of all: wrong zoning within the building.

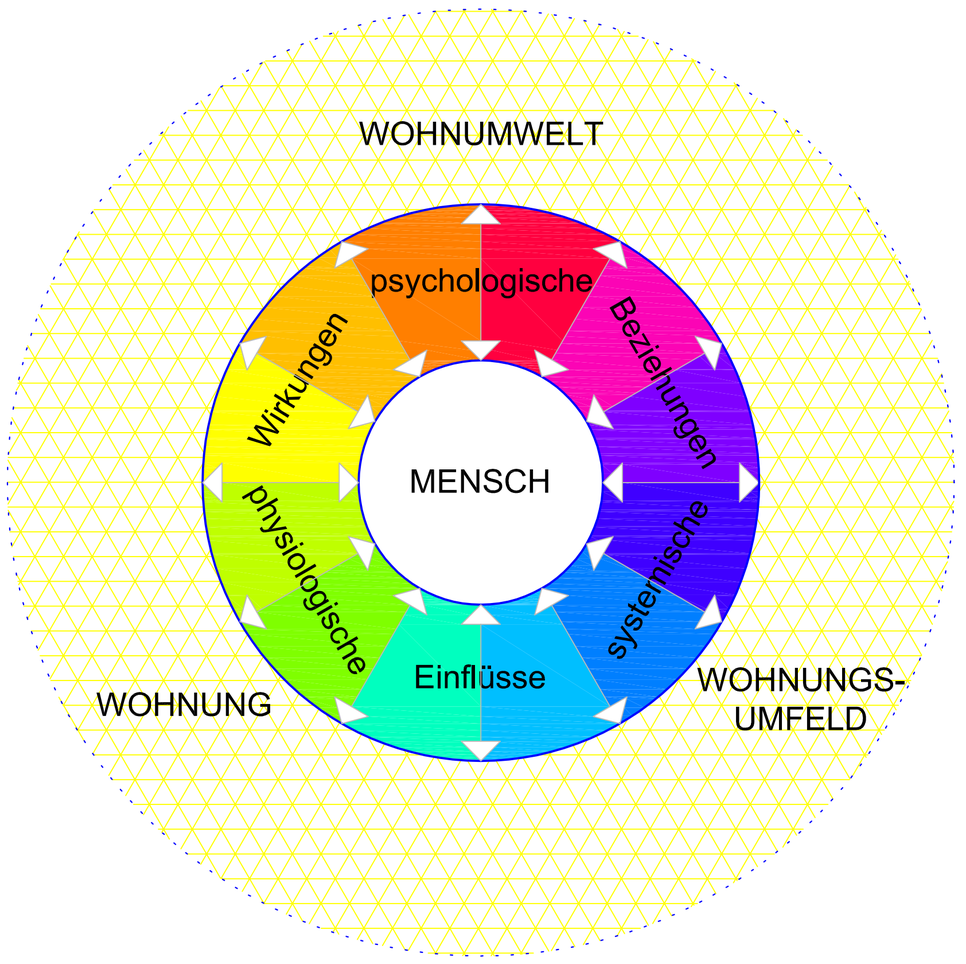
(A) Semi-public areas within the building without possibilities for visual control lead to:
- "silent" vandalism (deteriorations)
- aggressive vandalism (damages)
- places of fear ("Angsträume")
- stronger tendencies for crimes
- ... and even crimes occurred within the buildings communal areas

(B) Semi-public areas directly abut on private ones, this leads to:
- "crowding" situations
- antagonistic behaviour
- diminished feeling of being secure
- reduced willingness to get into contact with others
- reduced responsibility for the living surrounding
- lack of social control
  ... which amplifies the consequences of (A)

This vicious circle started turning from the beginning - very slowly but consequently and unstoppably.
All this ended up in the complete demolition of the whole housing complex, which therefore became the most unsustainable housing project so far
- despite the fact that from a constructional point of view the buildings were better than most of the others in the surrounding at that time.
- despite the fact that the comfort of the apartments were clearly above the average standard of this period.

References (pictures): www.pruitt-igoe.com

Research Report Part II: Examples and Analyses



HQA Housing-Quality-Analysis

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HQA is able to catch all essential criteria of human quality - also in advance, before the building is erected and inhabited!

Example 2: "Terrace-house-settlement"

"Human sustainability lacking energy-efficiency"

Housing object:

"Terrace-house-settlement"
Graz, Austria
552 housing units
planning 1965
built 1972

Housing Concept:

- separate individual apartment units
- each unit has got a private terrace or balcony or a small garden
- In the outside: attractive semi-public areas with various possibilities for appropriation
- no motorised traffic within the settlement
- including places for social interactions, places for playing, places to stay for people of any age.
- high personalization potential (most apartments)
- private spaces without heteronomous control
- high sensory variety (visual first of all)
- etc.

The housing complex had been built 40 years ago and is still fully occupied - despite several constructional deficiencies concerning thermal insulation, moisture penetration etc.
- and despite several psychological deficits: some small parts of corridors and staircases are lacking social control; the higher floors are more isolated from the area-of-appropriation etc.
But this deficits are obviously outweighed by the positive aspects.

Conclusion: If a building complex has got a high human quality it remains occupied even if the physical factors are not very sustainable.

Example 3: "Cohousing - Lebensraum"

"Human and ecological sustainability"

Housing object:

Cohousing project
"Lebensraum" ("Habitat")
Gänserndorf, Austria
32 housing units
built 2005

Ecological Building Concept:

- natural and recyclable building materials
- very low energy building
- high thermic insulation
- use of solar energy (passive and active)
- ecological water management
- ecological waste management
- etc.

Housing Concept:

- separate individual apartment units
- each unit has got a terrace or balcony and a small garden, where the inhabitants can stay private
- high personalization potential
- attractive and spacious communal rooms and areas, located at the right positions
- offering opportunities for various forms of social interaction
- offering appropriate facilities for people of any age
- integration of natural elements
- special offer for children: "adventure" area - not predetermined by adults
- semi-private corridors (partly problematic)
- no public areas, little contact to people outside the settlement
- high systemic isolation (infrastructure etc.)

The housing concept tries to comprise ecological, biological and social issues in order to reach a sort of overall sustainability.
It aims for combining humanity with ecological building standards.

References (basic data and pictures): homepage www.derlebensraum.com