Intergenerational



Living

A RESIDENTIAL BUILDING FOR STUDENTS & SENIORS



Intergenerational Living - A Residential Building for Students and Seniors Olle Johnsson

Master thesis at Chalmers School of Architecture Master program in Architecture and Urban Design Chalmers University of Technology

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Abstract

Age segregation is a growing issue in today's society. Both young and old adults almost entirely socialize with people of the same age. In fact, young adults are the most isolated age group, with least contact to other generations. At the same time, a huge amount of the elderly suffers from mental illness and loneliness. Recent statistics show that more than 50 percent of the senior population feel alone.

One of several contributing factors to the age segregation is the division of housing. For instance, students and seniors usually live separately from each other. This leads to a missed opportunity of meaningful exchange. Studies show that intergenerational relationships have benefits in both directions. Among the reported benefits are reduced prejudices, ageism and age related anxiety, as well as an increased sense of community and self-esteem. In other words, there are a lot of arguments for changing the current situation.

In addition, the amount of elderly people in Sweden is increasing. The reasons behind this are both widespread longevity and a result of a large amount of births in the 1940's. In ten years, the amount of people 80 years or older is expected to increase by 50 percent in comparison to today. A variety of housing solutions will be needed to match their demands.The tendency also indicates that the task of bringing young and old together will be even more important in the near future.

Against this background, the master thesis aims to enable social interaction between students and seniors in a residential setting. The outcome of the thesis is a design proposal containing a hybrid of student and senior homes, mixed with public functions. The project site is located in Tullkammarkajen, a harbor area in Halmstad. The intention from the municipality is to transform the area into a residential district. Preliminary planning envisions a variation of housing typologies for people in different stages of life. This makes the site ideal to bring young and old together under the same roof. Here they can socialize, share facilities and benefit from each other.

Keywords: housing, students, seniors, social interaction, intergenerational relationship

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Introduction

HOW CAN RESIDENTIAL ARCHITECTURE PROMOTE SOCIAL INTERACTION BETWEEN STUDENTS AND SENIORS?

?

Purpose

The purpose of the thesis is to investigate an intergenerational housing typology as a comment to age segregation in the society.

Aim

The aim of the thesis is to enable social interaction between students and seniors in a residential setting.

Method

The thesis is mainly built-up as Design by research. Literature studies is collected and presented in the background and theory chapters. The crucial parts from the theory is summarized in diagrams, which then works as a backbone for the design.

From studying reference projects two relevant cases have been chosen. The evaluation of these leads to a positioning on the scale from spatial separation to spatial mix. In addition, site analysis and documents from the municipality have influenced the design.



Design components

The design is based on three components: theory, reference projects and context. Below is a list of what is brought from each chapter.



DESIGN PROPOSAL

Background

Terminology

The thesis uses the following definitions:

Student housing	Housing for people enrolled in post- secondary education
Senior housing	Housing for people 70+ (with possibility to home care)
Nursing home	Institutional housing for old people in need of support and care
Social interaction	Direct and indirect contact between people, primarily to promote the documented benefits of intergenerational relationships.



Age segregation

"Over the last 50 years we have ended up with an apartheid between young and old". The message is clear from Guy Robertson, a former Department of Health policy advisor on ageing in Great Britain, in an interview with The Telegraph (Wood, 2015).

Age segregation is not only an issue on the British islands, it is a growing problem in a lot of nations. In Sweden people interact over generations to a lesser extent than before. The functions and activities in the society is more divided today. People at different ages live apart, have different recreational activities and consume different medias (Nilsson, 2002).

"We work and socialize in age-segregated worlds. It's not a healthy society. Meeting older people is important for young people's long-term health too", Robertson continues (Wood, 2015).



An age segregated society People interact over generations to a lesser extent.

Isolated young adults

The most isolated age group in the society is young adults (18-34 years old), according to an American report (Gentile, 2017). The report shows that this group has the least contact with other generations. A large portion of these are students, who spend most of their time in a locked environment. In fact, students almost entirely socialize with other young adults (Bressler, 2002).

A recent study also shows that every other student in Sweden experiences mental illness (Folkhälsomyndigheten, 2018). Having that in mind, an older neighbor could be the anchor point in daily life.



Students socialize with peers Young adults are the most isolated age group (Gentile, 2017).

Lonely seniors

Mental illness and loneliness are common among the elderly today. As much as a third of the seniors, 65 years or older, has been treated for mental illness (Socialstyrelsen, 2018). More than every other senior with home care in Sweden suffers from loneliness (Socialstyrelsen, 2016).

There is a strong connection between social isolation and depression, which affects the life quality in a negative manner (Djukanovic, 2017). Solitary living is correlated to loneliness, especially among the oldest in the society (Nyqvist, 2017).



Loneliness among the elderly More than every other senior with home care feel alone (Socialstyrelsen, 2016).

Increased amount of seniors

The amount of elderly people in Sweden is increasing. The reasons behind are both longevity and a result of a large amount of births in the 1940's. In ten years, the amount of people 80 years or older is expected to be increased by 50 percent in comparison to today (SCB, 2018).

This tendency leads to an increased need of housing for seniors. Almost every municipality in Sweden reports a shortage of this typology. (Boverket, 2019). The large quantity of people also demands a variety of housing solutions.



Large group of elderly The large quantity will lead to challenges when it comes to senior housing. Already today there is a shortage of this typology (Boverket, 2019).

Personal perspective

The inspiration to the subject comes from Randerslund in Halland, a nursing home where my grandparents Inga and Gustav spent their last years. We visited them regularly, often on Sundays with dinner in the common canteen which was open to the public.

After the dinner we walked around the complex, and every time I noticed that many seniors were searching contact. I stayed and talked to some of them, and I especially remember one old man who was eager to tell me stories from the past. From the meeting I got the impression that he seldom has relatives on visits. He seemed to be one of many lonely seniors.



Me and my grandmother Inga at her 100th birthday. Author's copyright.

Theory

Intergenerational programs

Intergenerational programs are common methods around the world to bring people from different age groups together and to reduce age segregation.

Research shows that a neutral environment and equal group sizes are preferable. Moreover, it is also key to promote activities where the different age groups can cooperate. Shared goals within the activity bring them closer together. Equal status between the age groups is also important (Drury, 2017).

Research indicates that contact between age groups reduce prejudice, which then leads to preventing ageism. The best type of connection is friendship over generations. To foster this, the age groups need to spend regular time together (Drury, 2017). A combined student and senior housing could be a platform for growing friendship.



Intergenerational keys



50/50

The two age groups should have equal size (Drury, 2017).

Equal status Both groups should be on the same level when it comes to status (Drury, 2017).

Both groups should feel comfortable in the environment (Drury, 2017).

Spend time together As in all type of relationships the two age groups need to invest time together (Drury, 2017).

Promote cooperation

The relation grows better if the two groups work together towards a common goal (Drury, 2017).

Intergenerational benefits

Students

Young adults who have frequent contact with elderly tend to donate and help the older ones in a higher degree. It also reduces age related anxiety among young adults, and in turn reduces ageism, which the entire society benefits from (Drury, 2017).

Both the young and old get increased trust across ages, increased sense of community, increased selfesteem and feelings of worth (Henkin, 2017).

Seniors

A direct contact to a younger generation can improve cognitive-emotional regulation (Drury, 2017).

Intergenerational relationship also decreases social isolation and increases the wellbeing for older adults (Henkin, 2017).

1. Less age related anxiety1. Improves cognition & emotions2. Less ageism2. Decreases social isolation3. More helpful to elderly3. Increases the wellbeing4. Trust increases4. Trust increases5. More sense of community5. More sense of community6. Boosts the self-esteem6. Boosts the self-esteem

Students in nursing homes

One of the most cited intergenerational project is the Residential and Care Center in Deventer, the Netherlands. The 150 residents are in the age of 55 years or older and have varying needs of support. In 2013 six university students moved into the nursing home as a way to increase the wellbeing among seniors and to unburden the staff.

The idea is built upon an exchange where the students are contributing with 30 hours of work per month and in return reside for free. Example of activities are watching sports, meal preparation, celebrating birthdays, offering company when seniors are ill, emailing and teaching how to use social media. The dutch nursing home has been an inspiration to other projects around the world. (Holligan, 2015).

In the field of intergenerational living this is a relevant example, even though the design proposal of this thesis has taken another direction, without working students and care.

Architecture & social interaction

A high concentration of people is key for social interaction to occur. Social interaction happens spontaneously, when people are gathered in the same place. Gehl (2011) desrcribes that "the more residents are outdoors, the more often they meet – and the more greetings are exchanged and conversations develop." (p. 53).

Gehl (2011) gives an example of a successful residential community: Tinggården in Copenhagen. There, a lot of effort has been put into both the social and physical organization. A hierarchy of residential spaces was created. From the individual dwelling, via a group of dwellings to the entire residential complex. The division was a way to strengthen the community.

One way to create liveliness in a residential area is to offer a semi private zone outdoors close to the private entrance door. Gehl talks about it as a "transition" zone between the dwelling and access street. Gehl exemplifies: "The bench next to the entrance door, protected from rain and wind, with a good view of the street, is a modest but very obvious way to support life between buildings." (p. 187). He also emphasizes the connection between daily activities and frequent meetings. This is one way to increase the chance of establishing contact with neighbors.

According to Gehl, acceptable walking distances in ordinary daily situations ends up around 500 meters. The layout of the distance has an impact. If the path is divided into smaller parts, the experience of the distance is perceived shorter than the physical length. When it comes to height differences and life between buildings, Gehl describes that people in general prefer to use ramps instead of stairs. Furthermore, the ramp should be as flat as possible.





Gehls five principles

Below is Gehls (2011) five principles summarized in figures. All of them represent how the physical environment can promote visual and auditory contact between people.



Reference projects

Eken & Solhyllan

In 2018 Utopia Arkitekter created a vision for a plot in Almby, Örebro. The proposal included senior housing, student housing, collective housing and a kindergarten.

The functions are divided in two buildings, one containing 52 senior apartments and the other 36 student apartments, 4 collective apartments and a kindergarten. The majority of the senior apartments have the size of 50 m² and the students 35 m². The collective apartments are 93 m².



Storeys:	5
Total size:	6650 m ²
Residential:	5200 m ²
Kindergarten:	650 m ²
Common / public:	800 m ² (12%)
Apartments: Students: Seniors: Division:	92 40 52 57% seniors 43% students
Apartm. size:	\approx 50 m ² (senior) & 35 m ² (student)
Configuration:	Students & seniors in separated volumes
Interaction:	Outdoor and ground floor to some extent

Not built yet

Status:



Figure 1. Eken & Solhyllan (Utopia, 2018).

Sällbo

A two year long experiment in Fredriksdal, Helsingborg is due to start in december 2019. Three groups of people will live together in a concept called Sällbo, with 51 rental apartments in total.

31 dwellings are dedicated for residents 70 years or older. Ten apartments are earmarked for 18-25 years old residents. Unaccompanied young adults with residence permits will use the remaining ten dwellings. The size of the apartments varies from 36 to 49 m². Outside the private apartment there are common rooms to socialize with the neighbors.



Storeys:	4
Total size:	4300 m ²
Residential:	3720 m ²
Common:	580 m ² (13%)
Apartments: Students: Young adults: Seniors: Division:	51 10 10 31 60% seniors 40% students & young adults
Apartm. size:	≈ 40 m²
Configuration:	Totally mixed on the same flc

A Co Interaction: Status:

or Indoor on each storey Concept applies to an existing building with start in december 2019



Figure 2. Sällbo (Helsingborgshem, 2018).

REFERENCE PROJECTS



REFERENCE PROJECTS



Size & positioning



The previous page shows how the design proposal relates to the size of the reference projects. On the scale between separation and mix, the design proposal is positioned in the middle, with benefits from both extremes. This means young and old in one single building to promote interaction, but at the same time divided in groups to avoid disturbance.

Size

4-5 storeys ≈ 5500 m2 ≈ 70 apartments **Positioning** One building, divided in groups

Context

Halmstad





Halmstad



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Halmstad



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Tullkammarkajen

New housing typology

Extract from the municipality document:

The municipality of Halmstad proposes a variation of housing

types in the new area. Therefore a new residential hybrid could fit in.

For people in different stages of life

The municipality also states that Tullkammarkajen should be a place for people with different background and ages.

Need of kindergarten

There is also a need of new kindergartens which should be integrated with other functions in the area. This could add another age group to the intergenerational building.

Mix of functions

Dwellings should be mixed with public functions, especially on ground floor.

Meeting places

Tullkammarkajen should have meeting place all year around.

(Halmstad kommun, 2016).

1:10 000

100

200

Site

The project site is located in Tullkammarkajen, a harbor area in Halmstad. The plan from the municipality is to transform the area into a residential district with 600 new dwellings.

The municipality document proposes a variation of housing typologies for people in different stages of life. This makes the site ideal for the subject of the thesis. The chosen plot is 52×52 meter and located close to the Nissan river.

Design proposal

Strategy

Equal numbers

The distribution of apartments is 50/50* between students and seniors.

Strategy

Alternate

In total there are 66 apartments* which are divided into 12 groups. One red square represents a group of 5-6 apartments. The groups are then *mixed** to promote social interaction in between.

Strategy

Form units

One group of students and one group of seniors form a unit. Here they can *spend time** and get to know the closest neighbors. There are six units in total.

Strategy

Add activities

In between the units activities of various character are added. As a contrast to the units, these are open to all residents. Here the young and old can *cooperate** and work towards a *common goal**.

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Strategy

Add public functions

The municipality states in the document that dwellings should be mixed with *public functions**. Therefore, a public restaurant and kindergarten is added.

Private Unit Residential Public Kindergarten

Strategy

Concentrate flows

All functions are tied together by one continous path. This is a way to *concentrate people**.

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Strategy

Adapt program to size

Strategy

Roll it!

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Strategy

Place on site

The tallest side is facing north according to sun conditions and height of *surrounding buildings**.

Break the volume

By cutting the volume twice, two L-shapes are created. This is a way to open up the building to the public*, and at the same time making room for the outdoor circulation.

Add ramp

The ramp works as a *low speed** residential street, going both on the courtyard side and city side, ending with a river view.

The ramp is very flat (1:20) and in addition there are a lot of horizontal platforms. This gives the impression of all storeys floating together into one level*.

By placing the circulation and flow of people outdoors, *no walls** will block the possibility to interact with a neighbor.

Private Unit Residential Public Kindergarten

Social qualities

Restaurant facing river walk

A *public restaurant* including outdoor seating is facing west, along the river walk. The kitchen is placed in the south and can be shared with the kindergarten.

Playground = social catalyst

The courtyard is used as a playground for the kindergarten in the day time, and opens up to the public in the evenings and weekends. The idea is that playing children will work as a social catalysator to attract the residents and bring them out to the ramp. An indirect type of social interaction.

Apartments facing south / west

All apartments are organized with the private side towards the south or west, which means ramp access from the north or east.

Social qualities

Unit corners

One group of students and one group of seniors share a unit corner on each floor – a *semiprivate** space where the residents can socialize with the closest neighbors. Here is a common living room, kitchen and laundry located.

Activity corners

The other two corners hold facilities open for all residents. Six activities are divided into two themes: health & wellbeing and creativity. The idea of the activites is to *promote cooperation** between residents.

Roof terrace

The roof in south west is working as a terrace with greenery, seatings and an outdoor gym.

Residential floor 1:500

1 storage 2 living room 3 laundry 4 gym 5 atelier

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Apartment 1:100

Private Semi private Residential

Alternative apartment 1:100

 $\begin{vmatrix} & | & | \\ 0 & 1 & 2 \end{vmatrix}$ Olle Johnsson | 51

Activity corners 1:500

Roof terrace 1:500

Section 1:500

Facade 1:500

west

north

east

south

Street view

River view

Ramp view

In numbers

TOTAL AREA:	5100 m²
RESIDENTIAL:	4000 m²
KINDERGARTEN:	500 m²
RESTAURANT:	600 m²
COURTYARD:	900 m²
ROOF TERRACE:	600 m²
APARTMENTS:	66

Discussion

The idea of mixing just students and seniors can be questioned. Why the thesis became about this has to do with that both age groups have a lot of spare time and similar housing typologies. Myself being a student and my experience from meeting elderly is also a part of the direction choice. It would be interesting and fully possible to mix other age groups as well. Focusing on just these two age groups was a way to limit the thesis.

From the beginning the idea was to include nursing homes as well, but after some research I realized it would be a too extensive project. According to the city of Gothenburg's recommendations, 100 apartments is needed in order to get the administration and economy working. In retrospect I am glad I chose to focus only on independent seniors and students. I believe that they have more in common which hopefully will lead to a better exchange of skills and knowledge.

Looking at the result, I do believe it is easier for the residents to establish social contact in this proposal compared to an ordinary housing block. This being said, this is not the only right way to design for interaction. Other choices along the way would have led to another result. The ramp is one example of a design decision which have a big impact on the final proposal. The consequence of going deep into one subject, in this case social interaction and intergenerational relationships, is that other parts have to be put aside. The overall presentation is on a conceptual level and if the proposal was to be built, more effort on structure, materiality and detailing would have been needed.

One could question the repetition of single room apartments. A wider span of apartment sizes would attract other groups of people. The reason for just using one type of apartment comes from the theory of intergenerational relationships. Equal status between the young and old has been one of the foundations, which is a contrary to variety. However, a few alternative apartments can easily be integrated from start.

I think the main idea of the proposal could work in different settings. Some parts are anchored in the context, for instance orientation and the public functions, but the idea itself could be applied in different locations. The proposal should be seen as a comment to the housing debate. I believe that we need new typologies, and that we should not be afraid of mixing age groups.

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