



Delft University of Technology

Document Version

Final published version

Citation (APA)

Jürgenhake, B. (2023). *Towards an inclusive living environment in which people can grow old*. Paper presented at International Conference "Urban Regeneration – Shines and Shadows", Łódź, Poland.

Important note

To cite this publication, please use the final published version (if applicable).
Please check the document version above.

Copyright

In case the licence states "Dutch Copyright Act (Article 25fa)", this publication was made available Green Open Access via the TU Delft Institutional Repository pursuant to Dutch Copyright Act (Article 25fa, the Taverne amendment). This provision does not affect copyright ownership.
Unless copyright is transferred by contract or statute, it remains with the copyright holder.

Sharing and reuse

Other than for strictly personal use, it is not permitted to download, forward or distribute the text or part of it, without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license such as Creative Commons.

Takedown policy

Please contact us and provide details if you believe this document breaches copyrights.
We will remove access to the work immediately and investigate your claim.

This work is downloaded from Delft University of Technology.

Towards an Inclusive Living Environment in which people can grow old

Dr. Birgit Jürgehake

Delft Technical University, Faculty of Architecture, 2600 GA Delft, The Netherlands

e-mail: b.m.jurgehake@tudelft.nl

Abstract

The ageing society asks for architectural designs in which people can grow old. However, our living environments are not well-equipped for this. Isolation, loneliness or neglect of the elderly are often seen results. What if we could create living environments for mixed communities, co-housing or other forms of living in which the elderly live among others and can be informally supported and empowered to keep a purpose in life? In 2022, 12 students studied a neighbourhood in The Hague in the Netherlands to find answers to these questions. The integration of ethnographic research methods provided an unique opportunity for the student to meet their target population. Models and design solutions for new concepts of co-habitation were developed, answers on the level of transformation of existing houses, new houses and ideas for a co-neighbourhood with new amenities. The paper will explain the method, the process and show some interesting results.

Keywords: ageing society, ethnographic research methods , co-housing, co-neighbourhood

Introduction

In the coming years, the Netherlands will face the challenge of an increasing elderly population. In 2022, approximately 20% of the Dutch inhabitants were 65 years or older. According to the CBS (Statistics Netherlands) report from December 18, 2018, this number is projected to rise to a quarter of the Dutch population by 2030. Moreover, the United Nations predicts that by 2050, one in four individuals living in Europe and Northern America could be aged 65 or over (source: UN.org).

An aging society has severe implications for the organization of our cities, neighbourhoods and living clusters. Existing housing designs as well as public spaces generally are not well-equipped for accommodating growing numbers of elderly. The policy of the government is ‘staying at home as long as possible’ – but often the wish is there, but the realization is difficult because of a lack of organization within the neighbourhood.

This paper presents a study conducted in 2022 by twelve master's students from the Faculty of Architecture at TU Delft. The course was dedicated to exploring the concept of an inclusive living environment that facilitates aging. After consulting with the municipality of The Hague, it became evident that certain neighborhoods were facing challenges related to aging population, mobility, and loneliness. Consequently, in collaboration with the municipality, a specific neighborhood in The Hague called Moerwijk South was selected for closer examination. This neighborhood has a higher concentration of elderly residents, many of whom moved there in the 1960s and now require additional support in their daily lives. The twelve students engaged with the residents, observed their behaviors within their living environments, and subsequently developed suggestions for improvements. The

studio was supported by two teachers, including the author of this paper, as well as a team of external partners, namely the municipality of The Hague, the housing association HaagWonen, the Centre for Groups Living in The Hague, and an architect.

The paper begins by introducing the concept of "aging in place" and explores the benefits of co-housing for senior living. The background of the chosen neighbourhood will be introduced, the main problems and objectives and the aim of this study. The students had several questions which will be shown, the method they used to gain information and some of the results. Aim of this paper is to support a discussion not only about housing for the elderly who eventually need care, but as well about the neighbourhoods which are not yet equipped for the demographic changes.

Ageing in place

"Aging in place is a term used to describe a person living in the residence of their choice, for as long as they are able, as they age. This includes being able to have any services (or other support) they might need over time as their needs change."(<https://ageinplace.com>) For most people, ageing in place means remaining in their familiar neighborhood and residing in a house they have known for years.

The concept of ageing in place is not exclusive to the Dutch government (<https://www.government.nl>); it is a policy adopted by numerous countries and is considered the norm in many places. Furthermore, it is the desire of most elderly individuals. With the increasing life expectancy, we will inevitably encounter a growing number of elderly individuals who require care. Presently, neighborhoods are not prepared to support elderly individuals who wish to remain in their homes, even when faced with conditions like dementia or other serious illnesses. Houses and dwellings often fail to meet the specific needs of the elderly, lacking features such as spacious corridors, accessible bathrooms, or elevators. Neighborhoods themselves present obstacles that hinder mobility and access to essential services like grocery stores, medical care facilities, or pharmacies, not to mention opportunities for social interaction. As a result, cities are initiating programs like "age-friendly city" or "slow city" (a program implemented in Rotterdam) and conducting evaluations of their cities and neighborhoods. Simultaneously, efforts are underway to explore new living concepts for the elderly. The aim is to provide housing options that cater to this demographic, allowing elderly individuals to downsize from their often overly spacious houses that no longer meet their needs. One of these innovative living concepts for the elderly involves communal living and shared spaces and facilities, including the provision of care services when necessary.

Co-housing and its benefits for senior living

Co-housing is a living arrangement where individuals maintain their own private dwellings while sharing common spaces and participating in activities together (Bramfort 2011). The specific shared spaces in co-housing projects may vary, but commonly include gardens, kitchens, living rooms, guest rooms, wellness areas, or hobby rooms. In co-housing, older individuals manage the activities within their community themselves.

However, it's important to note that co-housing is not a universal solution. As highlighted by Rusinovic et al., loneliness and isolation remain significant challenges, even within the co-housing concept, which often focuses on its advantages rather than the potential problems (Rusinovic et al. 2019). Rusinovic conducted fieldwork in eight senior co-housing projects (two of these co-housing projects provided healthcare), interviewing 32 seniors with an average age of 76 (ranging from 60 to 93). The research revealed that social contact was a major reason for choosing co-housing. Neighbors in co-housing communities are more than just "regular" neighbors; it's easier to ask for help or engage in a friendly conversation. This sense of safety and security is heightened in co-housing.

However, when it comes to support, the border lies where the health support starts. That is a task for the professional caregiver, not for the neighbour. The support in a co-housing, as Rusinovic states, lies more in the instrumental support (doing a shopping) and in the emotional support (having a talk).

Co-housing can help reduce social loneliness, but it may not completely alleviate emotional loneliness, especially when individuals experience the end of a partner relationship. A co-housing cannot eliminate this feelings. Drawbacks maybe social exclusion for newcomers (Rusinovic e.a. 2019) and limited freedom because of too strict rules in the community.

Nevertheless, co-housing significantly contributes to reducing social loneliness and strengthening the sense of safety by living among people you know and can rely on for assistance.

The Hague established an organization called "Centrum Groepswonen" (Center of Group Living) six years ago, dedicated to supporting housing associations and residents in organizing co-housing initiatives within the city. Co-housing for the elderly is particularly promoted and facilitated through this organization. Over the past six years, several co-housing projects have been developed. One of the organization's main activities is to provide information about co-housing since there are various terms and approaches to living together, such as "living together," "co-living," "group living," "home-house," and country-specific terms like the "Knarrenhof" in the Netherlands, inspired by traditional almshouses. The common thread among these approaches is knowing each other, liking each other, helping each other, and enjoying each other's company. "Most people think that group living is only suitable for older individuals. While it is true that there are many groups for people over 50, and as care homes are no longer being built, group living is seen as a viable alternative. However, there is also growing interest in group living among young people, and we are witnessing the creation of groups where both young and elderly individuals live together" (Centrum Groepswonen).

With this basis information about co-housing, 12 students started a small research in one of The Hague neighbourhoods where co-housing will be implemented in the future by the municipality. The municipality as well as the director of Centrum Groepswonen provided support the students by coming to the start-, mid- and final presentation of this ten week lasting course.

The case of Moerwijk South

Moerwijk is a district in The Hague that was developed in the period shortly before and after World War II. It is divided into Moerwijk, Moerwijk East, West, and South (Figure 1). The urban design of the district was provided by Willem Dudok. Today, Moerwijk consists of a mix of small apartment buildings and typical "The Hague portico houses" dating from the years 1945-1960, with occasional new constructions. The district features numerous water features, wide canals, green spaces, and apartment buildings. Moerwijk is home to several housing associations, and it has a relatively high proportion of elderly residents. Loneliness is a significant problem in the neighborhood. When elderly care homes closed their doors in 2015 due to policy and subsidy changes, housing associations were required to offer those elderly individuals their vacant apartments. However, this was not always the best solution for the elderly.

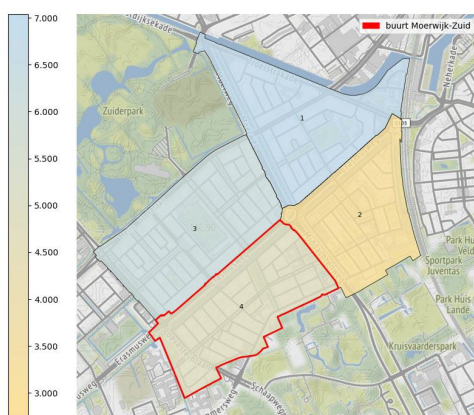


Figure 1: The four neighborhoods of Moerwijk. (AlleCijfers.nl)

In 2022, Moerwijk had a population of 20,755 inhabitants. Among them, 5,050 individuals were aged 45-65 (25%), and 2,330 individuals were 65 years or older. Over the next 10-20 years, a quarter of the entire neighborhood's population will reach the age of 65 or older, in addition to those who will reach the age of 85 or older. It is crucial for the municipality to consider solutions for aging in place so that residents can continue living in their neighborhood. For the purposes of our study, we focused specifically on Moerwijk South (see Figure 02).

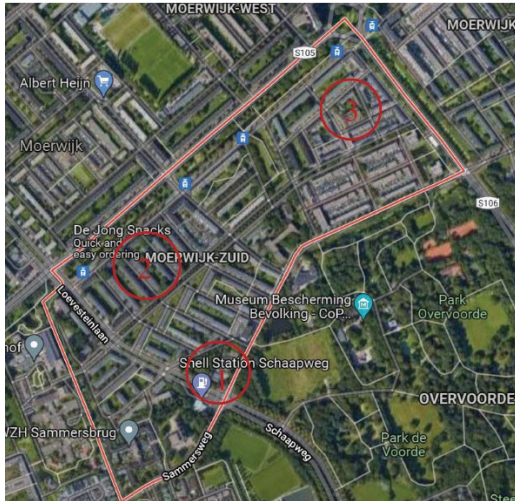


Figure 02: Moerwijk South with 3 chosen locations for the design assignment

In 2022, Moerwijk South had a population of 4,735 inhabitants, with 900 individuals aged 45-65 and 500 individuals aged 65 or older. Approximately 67% of the residents in this area are non-Western immigrants. In the near future, around 1,400 residents will cross the age threshold of 65 years. In 2022, 17% of the 65+ population in Moerwijk South already required informal care, 25% received voluntary assistance, and 6% received a disability pension. Additionally, 57% of the 65+ population and 33% of the 45-65 age group had long-term illnesses. Compared to the overall region of The Hague, where the long-term illness rate is 47% among the 65+ population and 24% among the 45-65 age group, Moerwijk South (and Moerwijk in general) has a higher percentage of individuals with long-term illnesses.

Problem statement

Moerwijk South, like many post-World War II neighborhoods in the Netherlands, is facing the challenge of transitioning into an aging society. The majority of residential houses in the area are four stories high and lack elevators. The dwellings consist of 3-4 room apartments accessed by a central staircase or maisonettes accessed by a gallery, with an average size of 60-80 m². The accessibility of the neighborhood for individuals using walkers or wheelchairs is often problematic. Additionally, loneliness is a prevalent issue among the elderly in Moerwijk South, as they rarely leave their homes and have limited social interactions. In fact, 56% of elderly individuals aged 75 and above frequently experience loneliness (Ministerie van Volksgezondheid, Welzijn en Sport 2018).

Municipalities acknowledge the need to prepare the housing stock and neighborhoods for an aging society. However, this task is complex, involving various scales and dimensions, from individual homes to the overall neighborhood as a living environment for the elderly. The complexity arises from the need to address both physical and social/emotional dimensions of age-friendliness.

At the scale of the dwelling, adjustments must be made to accommodate the use of walkers or wheelchairs, provide space for caregivers, and cater to visually impaired individuals. This requires evaluating all rooms and modifying floor plans. Furthermore, features like spacious balconies should be incorporated, as elderly individuals in need of care spend the majority of their time at home. At the scale of the residential buildings, the installation of elevators is necessary, and landing areas often need expansion to ensure adequate space. These considerations, along with lighting, texture, and material choices, are essential elements to be taken into account. Finally, at the scale of the street, the transition from the home to the neighborhood becomes crucial, as it provides opportunities for social encounters and interactions with others.

Objective

The objective of this research is to explore the concept of living together as a potential solution for the elderly in Moerwijk South to age in place and reduce feelings of loneliness. Research shows that encounter of others helps to feel safe and part of society. Feeling at home has very much to do with knowing your neighbour and have daily encounters (Blokland, T.). The study aims to investigate the willingness of the elderly population in Moerwijk South to engage in various forms of shared living while still maintaining their own apartments. By bridging the gap between the literature on age-friendly cities/neighborhoods and the lived experiences of the local community, the research seeks to understand the preferences and desires of the elderly residents regarding their future living arrangements.

Aim

The aim of this research is to assess the feasibility and acceptance of living together among the elderly population in Moerwijk South. Specifically, the study aims to:

1. Investigate the attitudes and perceptions of the elderly residents towards living together and sharing common spaces while maintaining their own apartments.
2. Identify the specific needs and preferences of the elderly in terms of shared living arrangements, including the types of common spaces they would be willing to share and the extent to which they are open to providing mutual assistance.
3. Assess the potential benefits and challenges associated with implementing shared living arrangements in Moerwijk South, taking into consideration the physical, social, and emotional dimensions of age-friendly neighborhoods.
4. Provide recommendations and insights for policymakers, housing associations, and community organizations on how to create age-friendly living environments that promote social connection, reduce loneliness, and support the well-being of the elderly in Moerwijk South.

By achieving these objectives and aims, the research aims to contribute to the development of strategies and initiatives that foster inclusive and supportive living environments for the aging population in Moerwijk South.

Research Question

Assuming that, as Rusinovic puts it, co-housing can contribute to making people feel less lonely, we asked ourselves the question: What are the perceptions and attitudes of the elderly residents in Moerwijk South regarding the potential of living environments that promote mixed communities, such as co-housing or other forms of shared living, to reduce loneliness and enhance informal support and empowerment?

The question seeks to understand the perceptions and attitudes towards living arrangements of the elderly residents in Moerwijk South that enable them to live among others and receive support while maintaining a sense of purpose in life. By focusing on this question during interviews with the elderly residents, the research aims to gain insights into their perspectives on the potential benefits and challenges of such living environments and their openness to embracing these alternatives.

Method

The research employed a multi-method approach, combining elements of architecture, sociology, and anthropology. Recognizing the importance of understanding the perspectives and experiences of the elderly residents, the students conducted observations, conversations, interviews, and ethnographic studies to gather information about the neighborhood and its inhabitants.

The students focused on bridging the gap between architectural research methods and social sciences, acknowledging the overlap between architecture and anthropology in terms of spatial organization, human dwellings, and the relationship between social life and physical surroundings. They aimed to understand the cultural context and diversity present in the neighborhood, as well as the needs and desires of the elderly population. The most important was the voice of the people who live in the neighbourhood.

Educated as architects who use to study spaces, forms and materiality of a place, the challenge was to step into the field of sociology and anthropology. As Marie Stender writes in her article "Architecture and anthropology have always had overlapping interests regarding issues such as spatial organisation, forms of human dwellings, and the interplay between social life and physical surroundings." (Stender 2017) Stender explains the need of understanding other cultures because nowadays architects work in environments of different cultures. "Anthropology has become particularly relevant to architecture

since the break with modernism and universalism, and because architects are today increasingly working in cultural contexts different from their own.” But its not only working in different cultures, one walk through an urban neighbourhood tells us that the cultural diversity is everywhere. Next to that we have to realize that a mix of ages as well challenges the architect who often has no insight in all groups of age. Therefore the method of observation and talks to people, up to more structured interviews, was the starting point of the whole design exercise.

We used techniques from ethnography and anthropology to conduct information about the inhabitants of the neighbourhood and the elderly in special. We wanted to let them speak. Next to that young people, like students, often do not have frequent contact with the elderly in daily life which means that first questions are about normal understanding like: Who are the elderly? How do people want to live when they get old and more vulnerable? What kind of home do they demand and what do they need to stay involved in their environment?

The research process involved spending time in the neighborhood, engaging in conversations and interviews with the residents, and conducting observational studies. The students also conducted a thorough examination of the neighborhood, studying its existing structures and identifying areas that could be redesigned to accommodate alternative forms of living, such as co-housing or shared living arrangements. The focus was on understanding the future aspirations and requirements of the elderly residents, including their housing preferences and the necessary elements to stay connected and engaged in their environment.

The research drew on a literature review that highlighted seven dimensions to consider when exploring the potential for aging in place: design, accessibility, comfort, maintenance, health and safety, use and control, and stimulus (Mercader-Moyano et al.,2020). These dimensions can be taken into account when doing research in a neighbourhood. Speaking about the *design* component partly is about urban attributes in the public space like benches, public toilets and places to meet, partly about material, colours and contrasts that help the elderly in wayfinding and accessibility. *Accessibility* tells a lot about the barriers people undergo while moving through the neighbourhood. *Comfort* means the comfortable feeling (temperature, light, air flow) in and outside the house. *Maintenance* shows the repair work in a dwelling, house and neighbourhood, it is about bad light conditions in the house, but as well in the streets, or simple a bad pavement which causes falls so that elderly will not feel safe anymore to walk around. Considering the *health and safety* issue different variables are meant, privacy versus publicity as well as fall prevention, which is part of the design as well. The *use & control* dimension shows the daily use of (public) spaces as well as the ease to go to basic services in the neighbourhood. The last dimension about *stimuli* overlaps with design variables, how attractive is the neighbourhood and where are places people like to go?

While the students could not cover all dimensions within the limited timeframe of three weeks, they concentrated on *neighborhood and living preferences, design, accessibility, safety, use and control, and stimulus*. These dimensions provided a framework for understanding the neighborhood and the behavior of the elderly residents. (Figure 3)

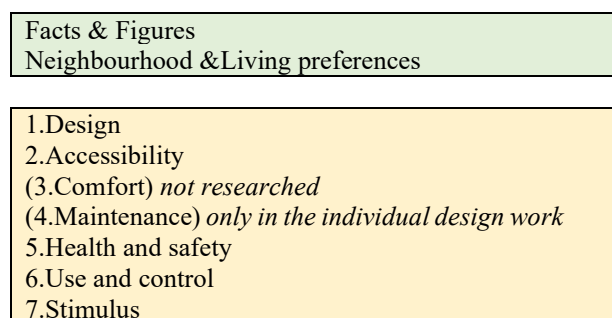


Figure 03. The seven dimensions researching a neighbourhood on the possibility of aging in place (Mercader-Moyano et al.,2020) and the additional dimension of the students above it. Dimension 3 and 4 were not researched by the group.

The topic of *maintenance* was researched in the individual designs, as the most students chose for a transformation of a residential building.

The data collected through conversations, interviews, and observations were transcribed and categorized into personas, representing different lifestyle groups within the community. The findings were also documented through maps, sketches, and photograph series to provide visual representations of the research outcomes.

Overall, the research method involved a combination of qualitative approaches, integrating architectural analysis, sociological understanding, and ethnographic studies to explore the perceptions and attitudes of the elderly residents in Moerwijk South regarding the potential for living environments that foster community engagement, informal support, and empowerment.

Results of the fieldwork

Based on the interviews conducted by the students, several key findings emerged:

1. *Neighbourhood & Living Preferences*: The interviews revealed that residents were open to the idea of sharing spaces and living together in a community. Privacy was still considered important, and co-living was seen as an extension of their current living situation rather than a complete relocation. Caring was seen very positively, some did already, but only small things like doing some shopping or driving a person to the doctor. The desire to live in a community was influenced by the opportunity to choose their potential neighbors. (Interviews were conducted with 2 men and 4 women age: 45; 51; 63; 68; 73, 80).
2. *Design*: The residents expressed a desire for larger balconies that would allow them to enjoy street life and socialize. Currently, the balconies were not usable for this purpose. There was also a need for more social meeting places within the neighborhood, as residents were open to shared spaces as long as they did not replace private spaces.
3. *Accessibility*: While public transportation was well-organized, the lack of elevators in the older residential buildings (built between 1950 and 1970) posed accessibility challenges. Additionally, the affordability of stores was mentioned as a concern, as they were not accessible to everyone.
4. *Health and Safety*: Concerns about safety at night were raised due to inadequate visibility and lighting in the neighborhood. Views of the surroundings were considered important for enhancing safety (speaking to 18 persons in total between 35 and 86 years old).
5. *Use and Control*: Residents expressed a desire for more visibility from residential buildings to the street, as it would increase social control and contribute to a greater sense of safety.
6. *Stimulus*: The residents appreciated seeing others in the neighborhood as long as it was their own choice. However, there was a perceived lack of meeting spaces, both indoors and outdoors.

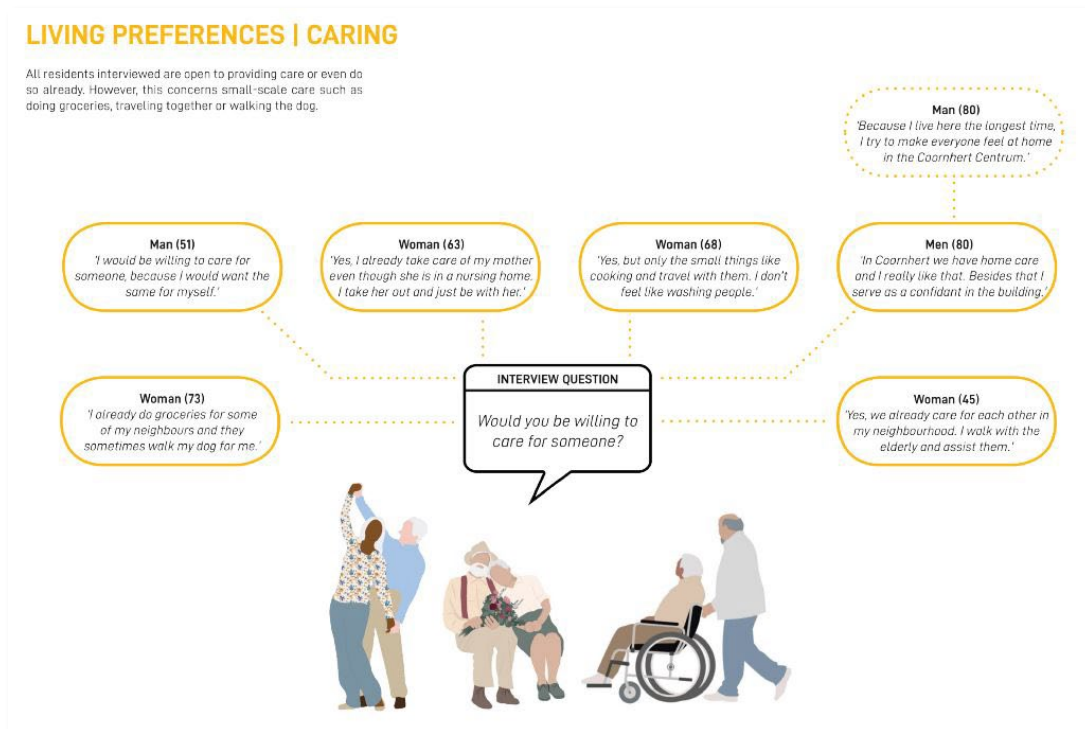


Figure 04: Research report Msc2 2022, p. 33: talks about sharing in Moerwijk South;

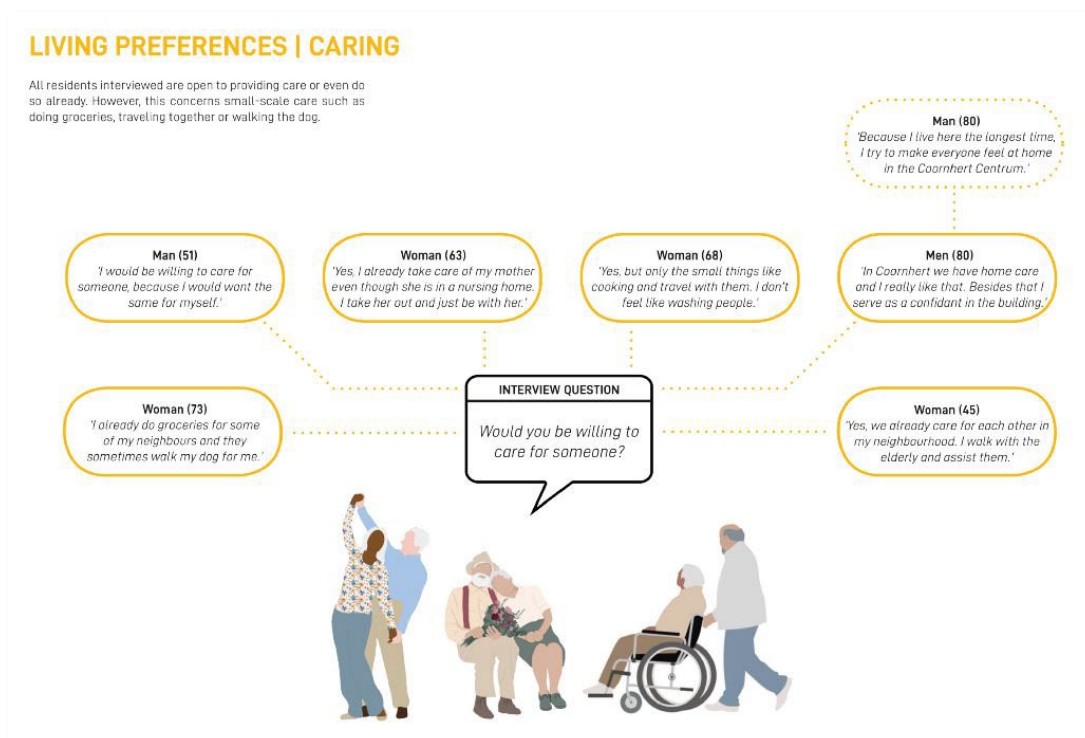


Figure 05: Research report Msc2 2022, p. 34: talks about caring

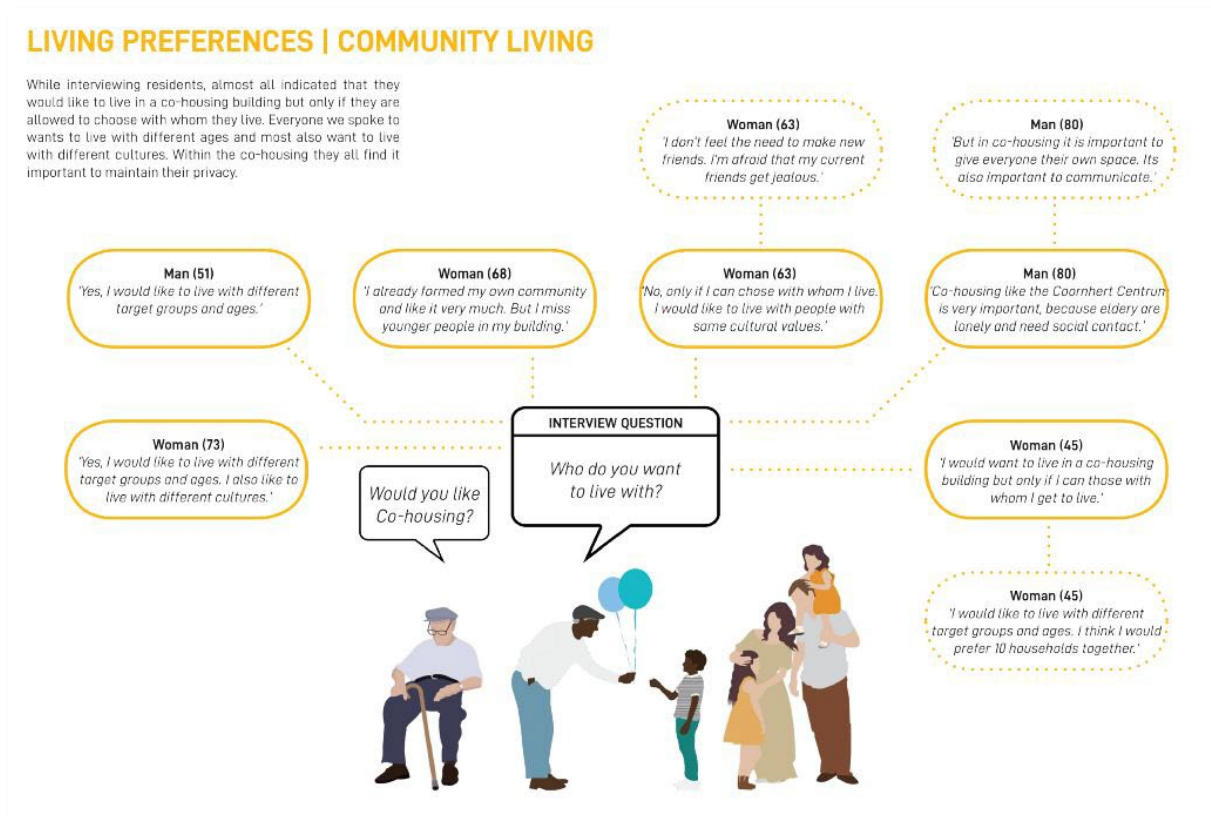


Figure 06: Research report Msc2 2022, p. 33: Talks about co-living

In addition to the interviews, the students conducted observations to map meeting points, examine how residents utilized semi-private spaces such as front yards and collective backyards, and identify positive and negative aspects of street usage. They documented barriers, such as closed courtyards and low walls in front yards, which contributed to a sense of unwelcomeness (figure 07). However, residents also demonstrated attempts to make these spaces their own by personalizing and utilizing them (figure 08). Balconies were often used for storage rather than as functional spaces, and self-made stairs were observed connecting first-floor balconies to gardens (figure 9 and 10).

APPROPRIATION OF PUBLIC SPACE BARRIERS



Figure 07: Research report Msc2 2022, p.74: Barriers

APPROPRIATION OF PUBLIC SPACE COURTYARDS



Figure 08: Research report Msc2 2022, p.75: Courtyards

APPROPRIATION OF PUBLIC SPACE BALCONIES



Figure 09: Research report Msc2 2022, p.72: Balconies and Courtyards



USE OF SEMI-PRIVATE SPACES

In Moerwijk, a lot of porch houses will be found. These buildings do have some green between the road and the building itself. This green space most of the time is being used as a place to store bikes, scooters or is used as a garden for playing and plants.

In some cases, the grass is being claimed by the ground floor residents, like you can see in the right photo. These 'gardens' are easily accessible for all people, but because of the stuff on it and sometimes the small plants next to the road, people that do not live there will not enter it.



Figure 10: Research report Msc2 2022, p.62: Use of semi-private spaces

Overall, the fieldwork provided insights into the preferences, needs, and challenges faced by residents in Moerwijk South, shedding light on the potential for creating more age-friendly and inclusive living environments.

Translations into co-housing concepts

The students were assigned to design proposals for three different locations in the neighborhood:



Figure 11: the three locations

1. "Empty Spot" (Location 1): This location currently has a religious building and is poorly maintained. The municipality offered this spot as a potential site for a small group of residential houses with co-living for the elderly. The students were tasked with designing a new residential development for this location, taking into consideration the needs of the elderly and incorporating co-living concepts.
2. "Post WWII Residential Slabs" (Location 2): This location consists of typical four-story high residential buildings with staircases for each group of 2x4 dwellings. These buildings do not have elevators. The area between the buildings often includes sizable green spaces that are underutilized. The housing corporation HaagWonen expressed interest in this location and discussions were already underway regarding its transformation. The students were asked to propose design ideas for transforming these buildings, potentially incorporating co-housing elements and finding ways to activate the unused green spaces.
3. "Transformed Church and Residential Buildings" (Location 3): This location comprises an existing church that has already been converted into small dwellings for women and single mothers, along with two additional residential buildings. These three buildings form a courtyard space, but currently, they are not utilized together. The students were given the task of designing proposals that would encourage community interaction and connection within this courtyard. They were encouraged to explore co-living concepts and ways to create a more open and welcoming environment, considering the needs of the residents and the existing buildings' characteristics.

The "Co-village" (location 1)

Darren van der Waart, one of the students, chose Location 1 and developed a design proposal called the "Co-village." The Co-village is situated at the edge of Moerwijk South, adjacent to the Zuiderpark. The design consists of five building blocks arranged in a triangular layout, with streets surrounding the site on all edges. The streets from Moerwijk South extend northwards into the Co-village, leading to small public spaces within the development.

The five blocks are designed to accommodate mixed co-housing, catering to seniors, starters, families, and singles. All the dwellings are senior-friendly and designed to be adaptable. The design utilizes a modular system of wooden beams and columns, allowing for flexible changes in floorplans as needed.

Each ground floor of the blocks features a collective activity room for residents to engage in various activities such as billiards, painting, and playing games. There is also a collective kitchen and living room on the ground floor, promoting social interaction among residents. The staircase and elevator

spaces in the buildings are generously sized to accommodate furniture placement, creating additional usable spaces.

Additionally, each block has its own courtyard, providing a private outdoor area for residents. Furthermore, each block includes a collective roof terrace, accessible by an elevator, offering a shared outdoor space with panoramic views.

The Co-village design proposal aims to foster a sense of community and provide a supportive environment for residents of all ages. The emphasis on flexible living arrangements and shared amenities promotes social interaction and a vibrant co-living experience within the neighborhood.



Figure 12: the new Co-village at the edge of Moerwijk-South.



Figure 13: the ground floor. Each co-housing block has one community centre with a staircase, elevator and meeting rooms. The south/west corner offers a restaurant, at the north-east corner is a 'health clinic', which is meant as a neighbourhood health centre.

Figure 14: The system of the floorplans which offer different users a nice dwelling.



Figure 14: The system of the floorplans which offer different users a nice dwelling.

Living outside the box (location 2)

Pawel Andruszkiewicz, another student who chose Location 2, proposed a step-by-step strategy for transforming the residential blocks into a co-housing community. He was particularly drawn to the spacious but underutilized gardens in the area. He observed that the residents currently have limited access to the gardens, as they have to navigate around the entire building to reach them.

Pawel's strategy begins with the removal of barriers that hinder direct access to the gardens. By eliminating these obstacles, residents can easily enter the gardens from their respective buildings. This change would make the garden spaces much more reachable and create opportunities for gardening, recreation, and socializing.

In the next phase of the strategy, Pawel suggests transforming ground floor apartments into collective spaces such as kitchens or living rooms that have direct access to the gardens. This would enhance the connection between indoor and outdoor areas, allowing residents to enjoy the gardens seamlessly from these shared spaces. The ground floor becomes a hub for communal activities, fostering a sense of togetherness among residents.

Finally, Pawel proposes integrating more greenery into the transformed space. This could involve adding additional plants, trees, and landscaping features to the gardens, enhancing their visual appeal and creating a more inviting atmosphere for residents. Additionally, he suggests incorporating one or two collective winter gardens on the central roofs, providing communal spaces for residents to enjoy during the colder months.

Pawel's step-by-step approach focuses on improving access, promoting community interaction, and incorporating green elements to create a vibrant co-housing environment within the existing residential blocks.

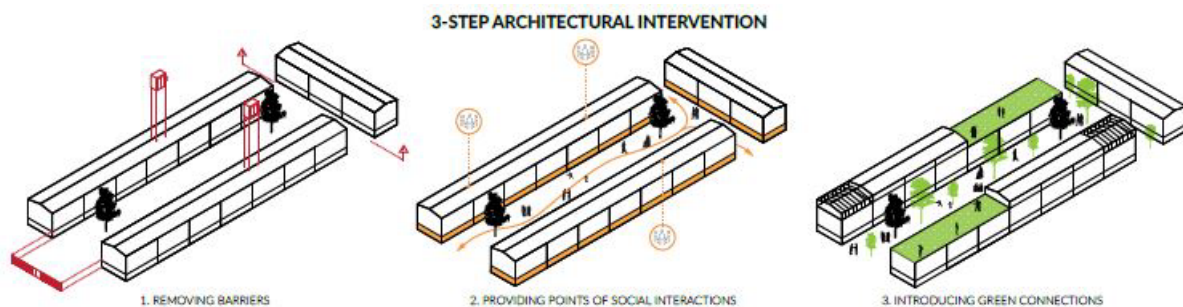


Figure 15: intervention step by step

FLOOR PLAN / LEVEL 0
1:200

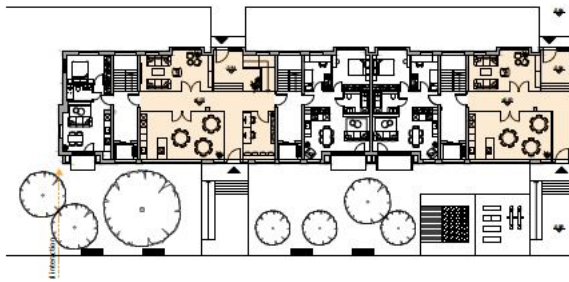


Figure 16: 'go-through' acces with collective rooms on the ground floor

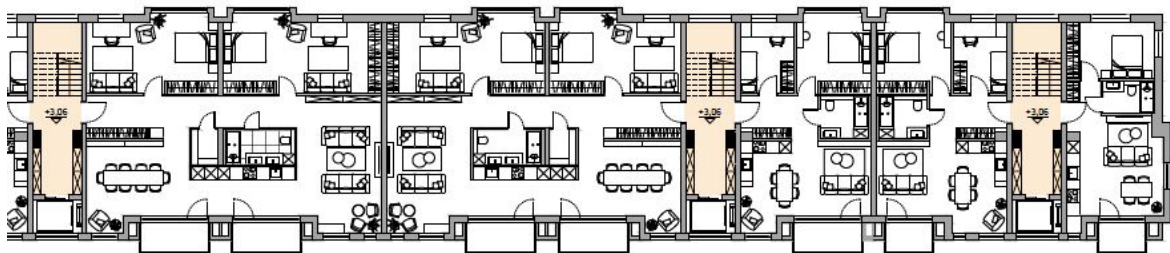


Figure 17: collective kitchen, eeting and living room on the first floor for everyone who lives in this portico, with two small apartments directly connected, sharing one bathroom (for less mobile elderly). There is an elevator.



Figure 18: Impression of the design “living outside the box”

Let the dots connect (location 2)

Tijmen Kuyper, another student focused on Location 2, recognized that many residents in the area expressed interest in co-housing but were reluctant to move from their current dwellings. To address this, he proposed an incremental approach that would allow co-housing to develop gradually. Tijmen observed that the spaces in front of the houses were underutilized, with only occasional furniture and residents sitting outside.

Tijmen's first phase, which he called "sowing the seeds," involved improving the immediate living environment through small interventions. He designed a catalogue of suggestions, which included ideas for enhancing the outdoor spaces and creating more inviting areas for residents to gather and interact. By making these small improvements, Tijmen aimed to foster a sense of community and connection among the residents.

In the second phase, known as "let the seeds grow," Tijmen proposed that as residents got to know each other better and an apartment became vacant, collective rooms could be established. These shared spaces, such as a communal kitchen or living room, would provide opportunities for residents to come together and engage in shared activities. This phase would further strengthen the co-housing concept and encourage social interactions among the residents.

Moving into the next phase, "foster and let it evolve," Tijmen suggested increasing the flexibility of the apartments. This could involve larger-scale changes, such as adding elevators to certain parts of the buildings and creating access balconies. These modifications would enhance accessibility within the buildings and provide additional communal spaces for the residents to enjoy.

Tijmen's step-by-step process acknowledges the reluctance of residents to move while still promoting the principles of co-housing. By gradually implementing small interventions, fostering community connections, and allowing for evolving changes, Tijmen's approach aims to create a co-housing environment that grows organically within the existing dwellings.

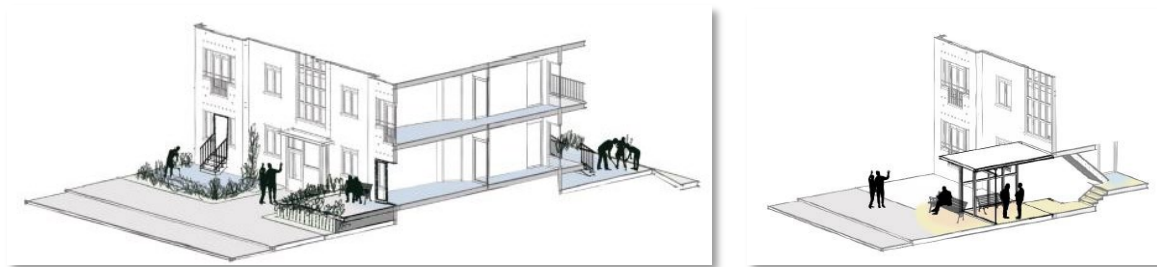


Figure 19 and 20: Two interventions at the frontyard

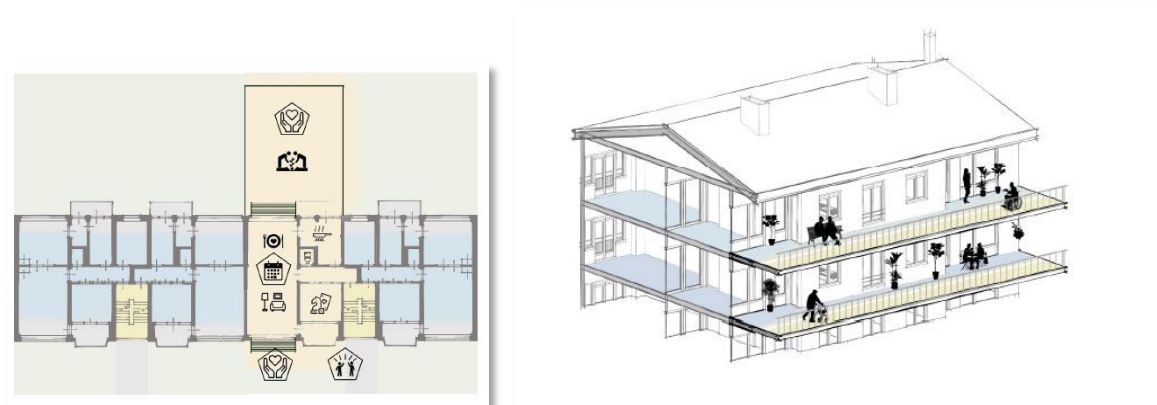


Figure 21: An apartment comes free – let it be a first collective space.

Figure 22: A possible addition of an access balcony with an elevator for the first upper apartments.

Encounter X (location 3)

In the final location, which featured a courtyard enclosed by two residential buildings, a religious building, and an outside storage room, student Shanshan Xie proposed a project called "encounter x." The courtyard was previously unknown and isolated, with little interaction between the residents, including students, elderly individuals, and young women living in the religious building.

Shanshan's idea aimed to create a creative and spontaneous living environment for both the elderly and the younger generation through co-living lifestyles. The project addressed the issue of loneliness, particularly among the elderly who often experience emotional and social isolation. Shanshan emphasized that independence and loneliness are not inherently negative but sought to foster a sense of community and connection.

The project began by encouraging residents, especially the elderly, to develop their interests and hobbies as a means of self-discovery and fostering conversations with others. Different public spaces were introduced to facilitate interactions among neighbors and tourists, allowing for diverse encounters and social engagement.

Shanshan redesigned the interior of the two buildings, transforming the small rooms originally occupied by young residents into small apartments suitable for both the young and elderly inhabitants. The religious building was preserved in its renovated state, and Shanshan created new spaces, including transparent boxes, balconies, and large windows, facing the courtyard. By opening up the religious building to the courtyard, Shanshan aimed to create a transparent and open environment that encouraged interaction and offered scenic views.

The transformation of the courtyard and the integration of the buildings resulted in a more vibrant and connected living environment. The once-isolated courtyard became accessible to the neighborhood, fostering a sense of community and providing opportunities for residents to meet and interact with one another. The project emphasized transparency, views, and the preservation of the existing heritage, while promoting social connections and addressing loneliness among both the elderly and younger generations.



Figure 23: outside impression and the courtyard inside

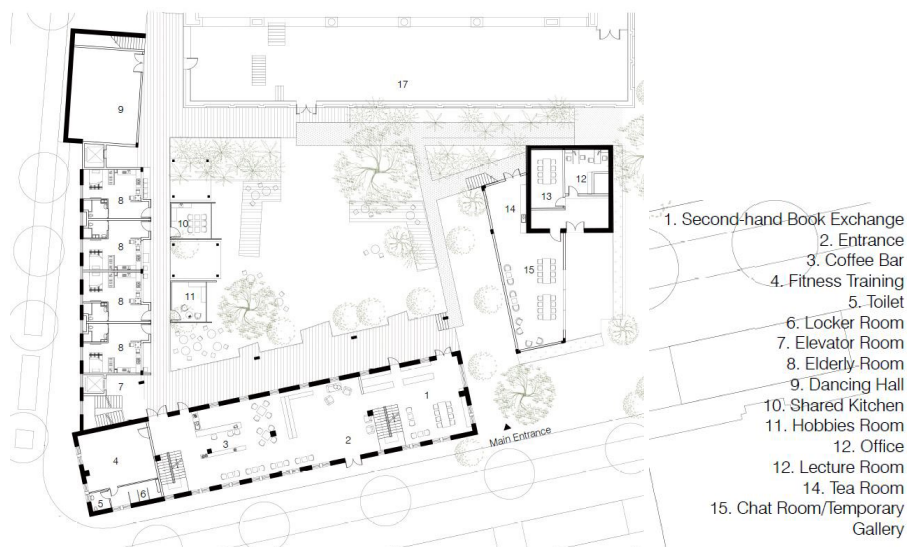


Figure 24: Groundfloor with a huge collective area and elderly apartments with access to collective hobbyrooms and the garden.

Conclusion

In conclusion, for most individuals, aging in place means the desire to remain in their familiar homes and neighborhoods, especially after having lived in the same place for many years. When it comes to alternative living arrangements, particularly for seniors, people may be open to the idea but place great importance on privacy. Therefore, living together in a co-housing setting is seen as an extension of one's own private house. One of the primary reasons individuals choose co-housing is for increased social contact, allowing them to know their neighbors better than they typically would in a regular neighborhood and feel more comfortable asking for assistance. While co-housing appears to help alleviate loneliness, it is not a guarantee. It should not be mistaken as a solution for comprehensive care, as personal body care and specialized care require different approaches and resources.

The student design proposals for the three selected locations in the neighborhood showcased innovative and thoughtful approaches to co-housing concepts. Each location presented unique opportunities and challenges, inspiring the students to envision new ways of fostering community, addressing loneliness, and creating inclusive living environments. Interestingly, the students expanded on the concept of co-housing beyond individual buildings and explored the idea of "co-villages," which extended the invitation to the broader neighborhood. This was particularly evident in the first location. At the "Co-village" site, student Darren van der Waart designed a neighborhood with five building blocks organized as mixed co-housing. The dwellings, designed with senior-friendly features, were complemented by shared facilities and courtyards, accommodating seniors, families, singles, and young professionals. In the second location, student Pawel Andruszkiewicz recognized the potential of underutilized gardens and proposed a step-by-step strategy for transforming residential blocks into a co-housing community. Student Tijmen Kuyper's approach to the second location focused on incremental change and the gradual development of a co-housing community. By initiating small interventions to enhance the immediate living environment and fostering connections between residents, Tijmen aimed to establish a foundation for future growth. The proposed catalog of suggestions and the phased approach allowed for organic and sustainable progress towards co-housing. Lastly, student Shanshan Xie reimagined the final location, placing emphasis on creating an inclusive and vibrant living environment. By prioritizing transparency, views, and preserving the heritage of a religious building, Shanshan aimed to foster openness and community engagement.

Overall, these student proposals demonstrated a profound understanding of the challenges and aspirations associated with co-housing. By embracing creativity, flexibility, and a human-centered approach, the students presented designs that promoted social connections, enhanced well-being, and revitalized living environments. These concepts serve as inspirations for future discussions and actions in creating inclusive and sustainable communities that prioritize human interaction and foster a sense of belonging.

Acknowledgements

The Research Report Msc2 2022 (see figure 04 - 010 as selected illustrations of it) was elaborated by the whole group of Msc2 2022: Andruszkiewicz, Pawel; Atciyurt, Bugra; Dardzińska, Weronika; Geerlings, Dex; Jacobs, Gijs; Kok, Rutger; Kuyper, Tijmen; Lê, Tuyen; Liang, Chu-Yu; Ritsema, Mark Jorrit; Waart, Darren van der; Xie, Shanshan.

References

Blokland, T (2008). *Ontmoeten doet er toe*. Uitgave Vestia. *Ontmoeten doet ertoe* – Essay Talja Blokland – Kennisplatform Corpovenista

Bramfort (2011). *Living together on one's own: Cohousing for older people - an example from Denmark and The Netherlands*. Paper presented at Queensland Shelter Housing Conference, 15-17 June 2004, Queensland, Australia. ResearchGate.

Campen, C.van; Vonk, F.; Tilburg, T.van (2018). *Kwetsbaar en eenzaam? Risico's en bescherming in de ouder wordende bevolking*. Sociaal en Cultureel Planbureau Den Haag.

Cumming, E., Henry, W.E. (1961). *Growing old. The process of disengagement*. New York: Basic Books.

Dannefer, D. (1989). *Human action and its place in theories of aging*. Journal of aging studies, Volume 3 Issue 1 , p. 1-20.

Gaspar, A. (2018). *Teaching Anthropology speculatively*. <https://doi.org/10.4000/cadernosaa.1687>

Hagen, G.J.; Neijmeijer, R. (2020). *Woonprofielen van senioren*. Platform 31 Den Haag.

Jürgehake, B.; Boerenfijn, P. (2022). *An interdisciplinary research method for new models for elderly living environments in an aging society*. Paper at ARCH22 'Enabling health, care and well-being through design research'; 5th Architecture Research Care and Health conference Delft / Rotterdam – the Netherlands – 22nd until 24th of August 2022.

Koerten v. A. (2020). *Onderzoek woonwensen van senioren: Hoe willen senioren wonen?* Geron, Tijdschrift over ouder worden & samenleving. Volume 22 issue 1, p. 61-63. www.gerontijdschrift.nl

Mantingh, I; Duivenvoorden, A.; Klapwijk, J.; Krabbendam, P. (2021). *Ontwerp van Ontmoeten*. Platform 31 Den Haag.

Mercader-Moyano P., Flores-García M., Serrano-Jimenez A. (2020). *Housing and neighbourhood diagnosis for ageing in place: Multidimensional Assessment System of the Built Environment (MASBE)*.

Ministerie van Volksgezondheid, Welzijn en Sport (2018). *Een tegen Eenzaamheid – actieprogramma 2022-25*. Actieprogramma 'Eén Tegen Eenzaamheid' | Publicatie | Rijksoverheid.nl

Powell, K. (2010). *Viewing Places: Students as Visual Ethnographers*. Art Education, 63(6), 44–53

Rusinovic, K.; Bochove, M.van; Sande, J. van de (2019). *Senior Co-Housing in the Netherlands: Benefits and Drawbacks for Its Residents*. International Journal of Environmental Research and Public Health. Public Health 2019, 16, 3776; doi:10.3390/ijerph16193776;

Stender, M. (2017). *Towards an Architectural Anthropology – What Architects can Learn from Anthropology and vice versa*. Architectural Theory Review, 21:1, 27-43, DOI: 10.1080/13264826.2016.1256333

Witter, Y., Harkes, D. (2018). *Bouwstenen voor de toekomst, 15 jaar werken aan samenhang in wonen, welzijn en zorg*. Aquire publishing Zwolle.

Websites

<https://ageinplace.com> (30-03-23)

<https://www.centrumgroepswonen.nl/> (25-5-2023)

<https://www.cbs.nl> , CBS, centraal bureau voor statistiek (25-5-2023)

<https://www.government.nl/topics/care-and-support-at-home/living-independently-for-longer> (30-03-23)

<https://www.un.org/en/global-issues/ageing> (30-03-23)