

Open the Door:

Living Environment Design for Reconciling Social Loneliness in Old Age

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1. Introduction

1.1 Ageing: a global challenge

The population worldwide is ageing rapidly. Every country is experiencing much faster growth in the size of the world's population over 60 years old, which will nearly double from 12% to 22% between 2015 and 2050, while the number of people aged 80 and older is expected to triple to reach 426 million.¹ In addition, considerable evidence confirms the worrying disproportion between the number of children and elderly, especially in the European region: today, people aged 60 and older outnumber children under 5.²

This unprecedented challenge of our demographics requires global actions to meet the changing needs of an ageing population, to provide the opportunity for older people to live a long and healthy life. Ageing brings a higher risk of social loneliness, and limited access to an affordable and high-quality living environment. Since living environments including their homes and neighborhoods, are essential variations that can directly affect older people's physical and mental capacity, it is important to consider environmental and design approaches that ameliorate the losses associated with older age to improve their life quality.

1.2 Fieldwork

As part of the studio 'Designing for Care – towards an Inclusive Living Environment', which focused on the topics of architectural designs for the elderly, this study specifically aimed at building an open and intimate neighborhood through connections in answer to the elderly's urgent problems from aged-related social losses.

¹ "Health topics: Ageing", World Health Organization, accessed October 4, 2021, https://www.who.int/health-topics/ageing#tab=tab_1.

² Ibid.

In order to design *with* the elderly by deeply understanding them as unique individuals, the research is based on one-week fieldwork in 't Nieuwe Kampje, an elderly home in the rural area of Loenen where the inhabitants are mixed of independently living elderly, people in need of care and relatively young tenants. The 5-days stay provides a direct human-centred investigation into the elderly and relevant groups to gather firsthand information, through methods including general questionnaires, deep interviews, observation in communal spaces, mappings for immediate surroundings, sequential photography and drawing. The results of the fieldwork are important raw materials in an early stage of the research that could be sorted into categories as followed:

- 1) A series of *personal diaries*: 10 detailed records of each interviewee in words and sketches, including thorough unit layouts of interior space, detailing of personal possessions, timelines of personal daily routine and social relationships with others, etc.
- 2) Spatial characters and activities in communal spaces, both indoors and outdoors.
- 3) The opinion and role of other supportive groups: caregivers, hosts, nurses and housekeepers etc.
- 4) Preliminary summary: positive and negative feedback from all relevant aspects.

1.3 Striking experience

From the analysis of the fieldwork in 't Nieuwe Kampje, intriguing facts specifically concerning the preferences of private and social spaces highlight the question that this study is intended to look into:

- 1) Connection with people matters more.

It is shown that more spacious space or private time is not so attractive as simply being more with people. On the contrary, almost half of the interviewees voluntarily moved here because their partners died, and they couldn't bear living alone in their former big yet empty houses anymore. The social relationship with neighbors affects the elderly's feelings about this new home more than anything else.

- 2) Communal space is the center of daily routines.

The architectural element that inhabitants care about most is the communal space for gathering, including all the activities that took place there. Attending those social events, such as painting and coloring, knitting, baking, movie and games etc., and even the preparations for attending those seemingly ordinary activities are considered as essential rituals by the elderly.

- 3) Everyone makes one's own interior arrangement.

Inhabitants would change available space in such an unpredictable and different way that in the end, identical living units would present distinguishing features and interior decorative styles related to their owners' identities, no matter what the original design was. It suggests that the architectural interventions inside private space that fits the architect's perspective are not the elderly's major concern.

The findings above are coherent with Loenen's diverse atmosphere of inhabitants from mixed groups, where relationships between *people and people* are widely-perceived as more important than those between *people and place*. Rather than being alone focusing on their private rooms, the strong desire of interacting with people outside living units on daily basis has been emphasized by the interviewees. This common feedback shows that for those who are vulnerable to age-related loneliness, the design of the living unit itself according to the architect's own decisions is overvalued, while encouraging the closer connection with neighbors and further access to communal spaces should be focused on.

2. Problem statement

2.1 From loneliness to *social loneliness*

Loneliness, is "the painful subjective feeling-or 'social pain'-that results from a discrepancy between desired and actual social connections."³ Loneliness has been considered as a major problem of ageing. There are many studies and evidence suggesting that the elderly suffering from moderate loneliness have increased over the past years, particularly among people older than 75 and those with movement difficulties⁴: in 2019, nearly 1 in 10 Dutch people aged 75 and over are frequently lonely⁵. What's worse, evidence shows that loneliness can have significant negative effects on both mental and physical health among the elderly⁶, lower the quality of life, and further compromise their ability to live independently. It is believed that

³ Prohaska T, Burholt V, Burns A, Golden J, Hawkey L, Lawlor B, Leavey G, et al, "Consensus Statement: Loneliness in Older Adults, the 21st Century Social Determinant of Health?" *Bmj Open* 10, no. 8 (2020): 034967.

⁴ Keming Yang and Christina Victor, "Age and Loneliness in 25 European Nations," *Ageing and Society* 31, no. 8 (2011): 1368–88.

⁵ "Social cohesion & well-being," a 2019 survey conducted by Statistics Netherlands (CBS), accessed March 27, 2020.

⁶ Pearl Dykstra, "Older Adult Loneliness: Myths and Realities," *European Journal of Ageing: Social, Behavioural and Health Perspective* 6, no. 2 (2009): 91–100.

loneliness is related to the elevated mortality rates in old age⁷, for its negative outcomes including heart disease, depression and dementia etc.⁸

Loneliness can be caused differently by social or emotional isolation, which requires different ameliorations⁹. Instead of broadening the research to the general emotional state of feeling lonely, the source and type of loneliness focused in this study is limited to those related to *social connection*. The importance of reducing social loneliness can be marked by recent public agendas in a few countries, such as their own “loneliness ministers” appointed by the Government of the United Kingdom and Japan successively in 2018 and 2021.¹⁰ Social relationships are central to the quality of life in old age¹¹, which also could be typically demonstrated during the observation in ‘t Nieuwe Kampje in Loenen. For example, many inhabitants are accustomed to keeping their front doors wide open through different ways even during the midnight, as an obviously welcoming gesture; and when asked about dissatisfactions of the current home, interviewees’ answers referring to more spacious private space or other architectural improvements inside living units are seldom popped up. On the contrary, being in a relationship or coexisting with people in a more frequent and comfortable way is what they care about most. If have to choose, they don’t even mind densifying their internal living space in exchange for close neighbors.

2.2 From social loneliness to *communal space*

Social loneliness resulting from deficits in the broader circle of social contacts, is explicitly emphasized in this study, for it could be addressed by broadening the social network, especially through architectural designs. Studies show that access to *communal spaces*, in general, implies the direct involvement with others which would benefit all residents¹²: the expected increase

⁷ Julianne Holt-Lunstad, Timothy B. Smith and J. Bradley Layton, “Social Relationships and Mortality Risk: A Meta-Analytic Review,” 7, no. 7 (2010): 1000316.

⁸ Luanaigh Conor Ó and Brian A. Lawlor, “Loneliness and the Health of Older People,” *International Journal of Geriatric Psychiatry* 23, no. 12 (2008): 1213–21.

⁹ Weiss, R. S. and J Bowlby, *Loneliness, the Experience of Emotional and Social Isolation* (Cambridge, Mass: MIT Press, 1973).

¹⁰ “Seeking shelter from social isolation and loneliness under the tree of friendship”, Etienne Krug, accessed July 29, 2021,

<https://www.who.int/news-room/commentaries/detail/seeking-shelter-from-social-isolation-and-loneliness-under-the-tree-of-friendship>

¹¹ Ann Bowling, *Ageing Well: Quality of Life in Old Age* (Maidenhead: Open University Press, 2005).

¹² Elizabeth Burton and Lynne Mitchell, *Inclusive Urban Design: Streets For Life* (Oxford: Taylor & Francis, 2006).

of the quantity of social interactions within those spaces is supposed to exert a positive effect on social loneliness¹³. In the literature, communal space has been traditionally defined as “an inclusive, equitable and accessible space that theoretically belongs to everyone”.¹⁴ As an essential tool and contact space, providing communal space as the heart for connection¹⁵ is considered to be an important design intervention in this study. For instance, communal space has been required as a multi-functional asset and necessity for freeing the elderly from the confines of the enclosed bedroom or cramped and dull corridors within the building. In addition, considering communal spaces as important open space and junctions spreading out their local neighborhoods, which develops social mobility of getting about outdoors for the elderly, can also be a vital stimulation of both spontaneous encounters and organized meetings to further promote social connection¹⁶.

The need for those social centers is coherent with the results from fieldwork. For example, according to the interviewees from ‘t Nieuwe Kampje, the most common complaint is about the central hall that used to be their largest communal space. Since it has been changed into a rented-only area, inhabitants feel disappointed in losing an irreplaceable social center, which reflects the importance of vibrant communal spaces to the elderly.

3. Research question

3.1 Main question

What are the design strategies in the living environment for reconciling social loneliness in old age?

When loneliness from the shrinking social relationships becomes the urgent concern behind each older inhabitant’s closed door, this study is aimed at finding architectural interventions that could help to develop close social connection and a vibrant living environment.

¹³ James S. House, “Social Support and Social Structure,” *Sociological Forum* 2, no. 1 (1987): 135–46.

¹⁴ Aelbrecht, Patricia, and Quentin Stevens, eds, *Public Space Design and Social Cohesion : An International Comparison* (New York: Routledge, Taylor and Francis Group, 2019), 2-7.

¹⁵ Dick van Gameren, Hans Ibelings, D'Laine Camp and Peter Mason, *Revisions of Space: An Architectural Manual* (Rotterdam: Nai, 2005), 32.

¹⁶ Sheila Peace, Caroline Holland and Leonie Kellaheer, *Growing Older: Environment and Identity in Later Life* (Maidenhead: Open University Press, 2005).

3.2 Sub-question

The construct of this well-connected elderly neighborhood could be further decomposed into two sub-questions as followed:

1. *How to build intimate social **connection** in-between private spaces in the living environment for the elderly?*
2. *How to create **communal space** for supporting social connection in the living environment for the elderly?*

3.3 Definition for key terms

Design strategies, practical principles and solutions of architectural placemaking relating to programme and space. This study pays particular attention to the ideas of spatial links and the design of movements through the space, for improving the quality and function of space in and around buildings.

Living environment, immediate living spaces that are essential to the elderly's daily life. The term refers to private homes and spaces inside buildings, and outdoor environments that they can frequently use within their local neighborhoods, including streets or other open places that are regarded as familiar spaces for their everyday existence, wellbeing and enjoyment of life (Elizabeth *et al.*, 2006).

For this study, the broader domain of urban planning is not discussed, but focuses on a closer environment within walking distance of home, since older people typically experience mobility problems. Physical decline, incapacity to either drive or to use public transport on their own, limit their independent trips only to places around the local neighborhood. For example, people in their mid-70s will generally take 10-20 min to walk 400m to 500m and cannot walk further than 10 min without a rest.¹⁷

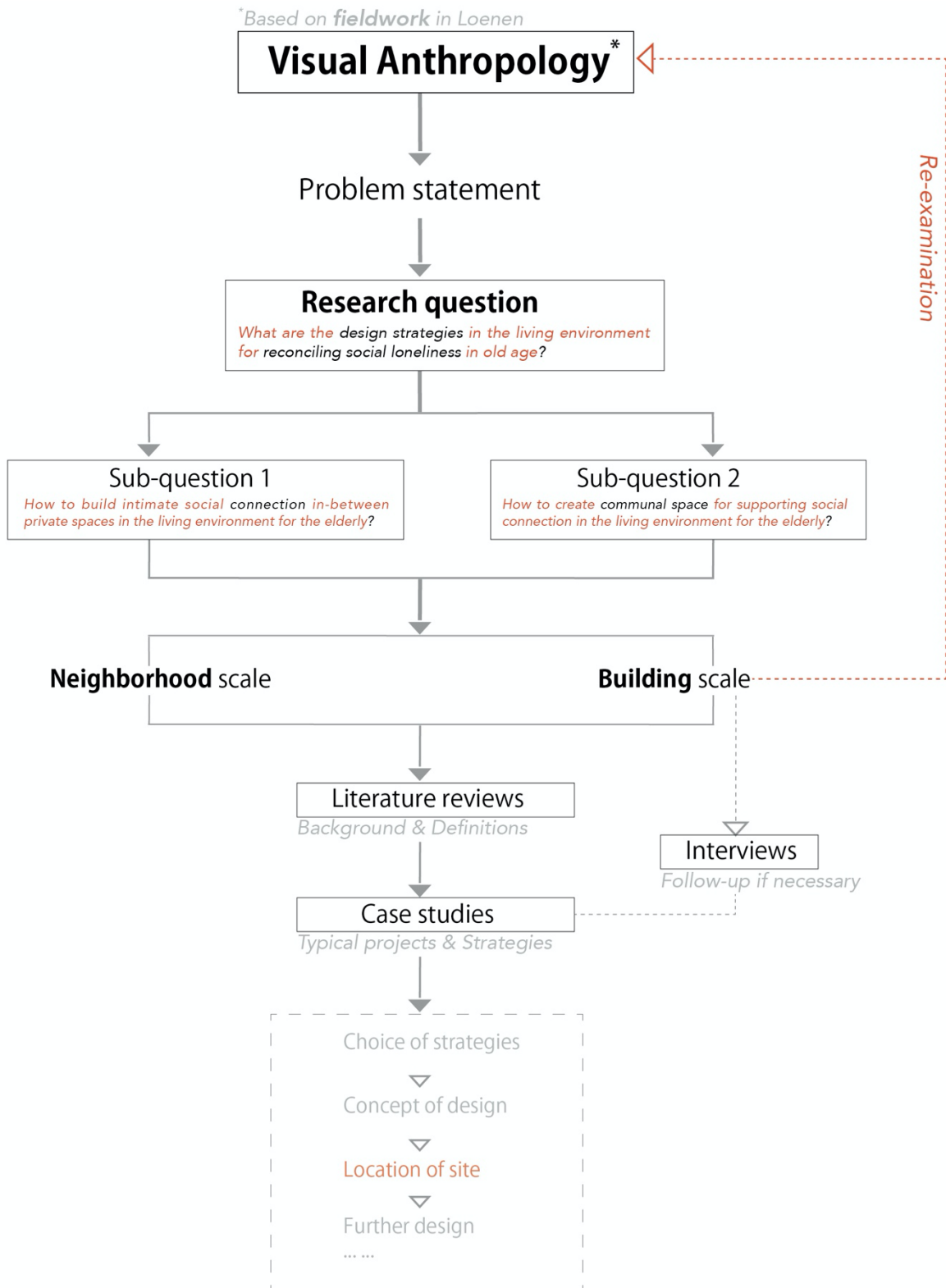
Old age/the elderly, the adults aged 75 years and older. This particular group represents the age span of those experiencing the worrying trend of social loneliness in the survey described in the problem statement.

¹⁷ AIA (American Institute of Architects), *Design for Aging: An Architect's Guide* (Washington, DC: AIA Press, 1985).

Connection, the spatial instrument providing a range of mobility options in the human dimension that stimulates small and casual social movements both inside and outside buildings. This starts at the door of one's private space for the smallest journeys, which enables living units that are occupied and used in very different ways to coexist, e.g. routes of circulation, including the corridor, hallway, gallery etc.; and extends out onto residential streets integrated with the outdoor environment within the local neighborhood.

Communal space, common area and shared facilities that are accessible to all inhabitants, functioning as the heart with welcoming atmosphere for chatting, gaming, sharing, and encouraging unplanned and spontaneous encounters within buildings. At neighborhood level, they present as open squares, community parks, and social amenities etc., which can host regular, voluntary, informal gatherings, and therefore facilitate and foster broader social connection (Patricia *et al.*, 2019).

4. Methodology



The main goal of this study is to consider the possibilities that our living environment could go beyond the adaptation to its own structures, to explore effective design practice for the elderly

among whom social loneliness is widespread. The research questions are focused on design principles and strategies which are suited to specific needs from different scales, including outdoor environment at the neighborhood level, and smaller-scale within the building (elderly homes). The preliminary conclusion consisting of innovative concepts and skills would be integrated as an encouragement for the elderly to get out of their private space for better social connection.

Visual anthropology

The study starts based on visual anthropology and direct contact with the target group, and will go further under this domain from more architectural perspectives. The particular methods include deeper and methodical on-site analysis of the results from the fieldwork, more purposeful observation of the elderly's daily life outside enclosed living units, and visualizing the outcome into place-centred maps and photography series recording behavior patterns in certain spaces. The anthropological research makes up the main body of the study, and re-examination of the fieldwork according to the research question contributes to solid argument and insight into the subject.

Literature reviews

To tackle social loneliness in the living environment through design strategies, the study seeks to gain a more comprehensive understanding with literature search and review as well. A sufficient bibliography consisting of international publications would clarify the background and definitions related to the subject.

Case studies

Case studies are also necessary by taking a detailed look at typical projects. It is important for living environment design and delivery of ameliorative interventions, for a variety of case selection helps to demonstrate the general design solutions and specific architectural strategies including the different types or settings of communal spaces, the logical layouts of floor plans and arrangements of private units, etc.

Interviews

The study requires detailed knowledge about the daily habits, activities, routes, rituals and feelings of the elderly and their supporters outside the private space. Especially from the scale

of building design, if responses collected through the previous fieldwork is not focused enough, follow-up interviews with relevant groups are necessary to include.

5. Hypothesis

“The design and development of buildings and the built environment have the capacity to facilitate or to hinder people’s movement and mobility, and particular designs... are infused with powers of demarcation and exclusion.”¹⁸ Especially for the elderly who often live alone and are more vulnerable to social loneliness, they require not only private homes meet their needs, but also options of ‘journeys’ from inside to outside, to get out and about – spaces for casual stays with neighbors, meeting up with friends, getting fresh air, everyday exercise, or walking the dog within the neighborhood.

Based on previous fieldwork, visual anthropology research and literature review, the study looked at projects and at what makes them satisfying neighborhoods or buildings for the elderly to enjoy closer social connections. It suggests that social loneliness could be ameliorated through design strategies encouraging *social mobility* and *social staying*.

5.1 Social Mobility: connections in-between

“Walkability can make for sociability.”¹⁹ Walking through corridors, or crossing the outside streets, all of those insignificant movements are necessities of daily life and opportunities for social connection, as invitations for the elderly to interact with other people.

From neighborhood level, taking the project *Little Village Neighborhood* in Chicago as an example, an inspiring solution would be creating a ‘walkable neighborhood’ which provides access for elderly individuals to comfortable and secure streets and sidewalks, and to places that draw them out of homes and into the public. When it comes to building scale, other design strategies could be learnt from *De Drie Hoven* by Herman Hertzberger: well-designed detailings within corridor spaces, such as the half-opened front doors allowing informal

¹⁸ Hall, P., and R. Imrie, “Architectural Practices and Disabling Design in the Built Environment,” *Environment and Planning B: Planning and Design*, vol. 26, 3 (1999): 424.

¹⁹ David Sim and Jan Gehl, *Soft City: Building Density for Everyday Life* (Washington, DC: Island Press, 2019), 97.

contacts among neighbors. Social mobility could broaden the maximum scope for social relations.

5.2 Social Staying: communal/collective/public space

A living environment with pleasurable communal spaces to stay in could offer the elderly as many opportunities as possible for social contact. Further, Ray Oldenburg, an urban sociologist, also demonstrates why and how gathering places including collective and public spaces are essential to neighborhood vitality. These spaces for social staying could cover means and facilities for relaxation and leisure like beer gardens, pubs, cafes, coffeehouses, and post offices etc.²⁰

For example, *The East Rock Neighborhood* in New Haven, Connecticut, presents strategies as Oldenburg's advocated concept of 'third places'- creating a series of *informal* gathering places within walking distance of many residents' homes, so that people can easily integrate them into their everyday routines. From building scale, taking project Sonjatun Omsorgssenter in Norway as an example, spacious and centrally located communal spaces are essential. And most of the residents could have eye contact with one of the common rooms as soon as they leave their own private doors.

²⁰ Ray Oldenburg, *The Great Good Place: Cafés, Coffee Shops, Bookstores, Bars, Hair Salons, and Other Hangouts at the Heart of a Community* (New York: Marlowe, 1999).

Plan for Research Plan

The course of 'research plan' gave this study insights in many ways. As a retrospective, the important skills learnt from this course are as follows:

- 1) The structure and diagram of a research plan - a concise, clear and innovative overview of the whole study from the beginning.
- 2) The way to formulate research questions, and pose justifications for specific questions.
- 3) The logical approach to get answers - choices of methods to generate and analyze data.

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