Living Knowhere
Research and design on dementia and architecture

RESEARCH BOOKLET
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INTRODUCTION

summary of dementia
and its consequences
in relation to space
Dementia is a brain illness due to which cognition and/or behaviour is damaged to the point where everyday life functioning is impaired. The loss of cognitive abilities that occurs with dementia leads to impairments in memory, reasoning, planning, and behaviour. Due to the disease, many things become insecure and one's life falls apart.
At the end of a lifetime, after all a person has been through, it is hard to let go. It is hard to let go on home, on memories, on one self. As the disease progresses, many things become confusing and it becomes hard to relate oneself to the surrounding world.
Person’s life irreversibly falls apart till a point where the he or she becomes lost in space and time. With nothing to hold on to, people no longer know who they are and slip into a state of complete dependence.
Although there is only one person with dementia, it always strikes the whole system and many are influenced. For a good reason it is said that with dementia, you see a person die twice, once in mind and then again in the body.
Nowaday’s, being diagnosed dementia means being excluded from the society’s center not only economically and socially, but also literally by means of being moved from home into a special care unit, dependent on help of others. With no way back and no other place to go, many people spend last years of their lives in such situation. When moved, the environment of a nursing home becomes the only environment they perceive.
With dementia progressing, life outside of the caring home becomes more demanding and peoples’ life sphere gradually shrinks. At a certain point, it shrinks in between walls of the care unit only and continues till the point where it becomes the person himself and his immediate bodily surroundings.
In the late stage of dementia, one single room becomes the whole world which tells us how extremely important the direct environment is, as it may contain the whole life of a person at each moment here and now. With so many abilities and certainties slipping away, support from the environment is enormously important as it can be one of the last thing demented people can relate to.
SITE VISITS OBSERVATIONS

pictures and notes on the most common problems environment can cause
Corridors with no point of orientation

Too often buildings I saw were organized in long corridors with private rooms alongside. In such long corridors one has to remember where he wants to go and how to get there which becomes difficult with dementia. With no visual contact with an end destination, corridors offer no chance to relate oneself to something in space and become therefore very confusing. They provide no stimulation and no natural activity to join. On contrary, they are discouraging and demotivating with sound echoed and with many doors leading to other peoples’ rooms.
Privacy traded for Solitude

Regarding old people's common fear to engage in new, unknown activities, they very often felt demotivated to leave the room without assistance. Especially with dementia, people are afraid of failure and embarrassment, and they are very often inclined to stay safely in their room. That however leads to a different negative effect which is solitude. All the people I had a chance to talk to felt a very strong urge to mention their loneliness as the main negative factor. Although their private room offered enough space for personalization, people inside them were alone.
To never be alone

On contrary, some care institutions I could see are designed to accommodate two or more people in one room. Living with others seriously questions dignity, individuality and privacy of each person and causes many troubles. Certain level of sharing however seems beneficial. Talking to various nurses revealed that when living in two, people often help each other and keep each other busy.
Floors

Most of the time, buildings were designed in multiple floors to accommodate as many people in one place as possible. However, if one floor cannot work as an independent unit, it becomes hard for people to grasp it. Having to remember a way through a building during which there are many distracting elements seemed to be very difficult even for some people with early dementia that I talked to. Because of the difficulties, many people are discouraged from going and therefore lack the activity’s benefits. It needs human power and help of carers to get people to places of interests if these are not at reach and comfortably found.
Barriers

Majority of buildings are based on commonly known barriers taken for granted; barriers that are visible and reasonably explainable – walls, ceilings, floors or furniture. They can however be questioned by people with dementias, because in later stages of the disease people are no longer capable of such reasoning and analyzing. They do not cognitively think but instinctively rely upon senses and intuitive motoric and their space is then formed by entirely different barriers. Very common barrier during my visits were reflective floors. Despite the fact that they are easy to clean and hygienic, they often resemble a liquid surface and can therefore be an obstacle.
Nature

Nature was many times described as a desired element and preferred as a view from window. Organization in floors however leads to the fact that besides ground floor, no other floor has access outside. Sometimes, elderly homes have balconies but there is no easy way to reach a garden. Very often, people are therefore deprived of this priceless source of relaxation.
Colour

In many cases walls were painted with expressive colors. Yellow, green or orange often dominated the space, especially in the corridors. Unfortunately, despite the good intentions, final result was rather confusing, blurring everything together. When everything is already colored, it is hard to emphasize important elements or places. The overall contrast is lowered and it becomes more difficult for orientation.
Lack of possibilities to engage in familiar, stimulating activities not only cuts short on stimulation but also prevents people from feeling engaged and needed. Without having a possibility to participate, people can never feel like at home. If the space does not provide opportunities for daily activities or cues for participation, people are only left with wandering. Very clear example repeatedly appeared during my visits. To reduce costs, time and work, there is usually a central canteen. Meals are prepared elsewhere without any possibility to join. Such a process is neither familiar nor homely and it detaches people from normal daily life.
Autonomy

Unfortunately, in most cases people had very few opportunities to participate or contribute to the living flow. Meals are usually prepared and brought to the people. Plates are then also washed somewhere else. Laundry is washed and dried outside of people’s reach and the same happens with many other things. As a result people are detached from these routines and spaces where these take place. They are often given no responsibility and no chance to help. Because everything is usually arranged for them, they cannot make any decisions and have therefore almost no chance to feel at home.
Size

There are usually many opportunities to interact with others as there are many people in the nursing homes. With those numbers it however often has a negative effect. With only a few chances to be alone, people can quickly become frustrated by the amount of other people. For example, in canteens, many people gather at the same time. Lots of them need assistance with eating and may feel ashamed for that. With so many people in one big space, it quickly becomes a loud, crowded, and stressful place. People can get anxious and many of them try to leave. Without a chance to divide the space into smaller places, the noise and frustration level spirals up.
Abrupt changes

Some people were discouraged because there was an abrupt transition between the private space and public one. Right behind the door of a room, there is a public space mostly in form of a long corridor. That leads either to a common space or represents a common space itself. There is commonly no transition or a semi-private space to adjust to the amount of people and level of activity. The public space is usually quite featureless, offering no different levels of privacy which makes people stay alone in their rooms.
RESEARCHED TOPICS

summary of topics researched in literature and triggered by site visits
Non-institutional character

Architecture has a power to create link between presence and past. By being recognizable even in later stages of dementia, it can provide a sense of familiarity and normality. In such case, people can find familiar aspects of their living environment and the ambiance of how they lived for much of their lives. Architecture can help create this sense of normality to allow people relate themselves to it and accommodate their everyday routines and habits. Space allowing familiar actions helps people feel at home and many design guidelines therefore call for a home-like, personalized atmosphere.
Sensory stimulation

When due to the disease, cognitive faculties are declined or lost, what remains are direct sensations. People with dementia react to sensory stimulation till very long and architecture possesses qualities and means to achieve such experience. Reducing unnecessary clutter and accentuating places which can engage people in stimulating activities creates a balanced diversity of stimulation. Right balance between overstimulation and deprivation can offer something to each and every single patient.
Way finding/ readability of the environment

With dementia, both cognitive and behavioral ability to reach spatial destinations is significantly lowered. Such loss of orientation in space can be a horrifying experience and therefore the building should offer a solid support instead of being an obstacle. Straight layouts of circulations, no dead ends and as little changes in direction as possible are proving to be beneficial. Too many options in form of too many doors or too many decorations can cause confusion and loss of attention. On contrary, space with a clear composition which is easy to overlook reduces stress from not knowing where to go.
Nature

One can never have enough of nature. Nature changes during seasons, even during the daytime and never fades. It is also a natural indicator of time and serves as a reference of what season and time of day it is. For every human being as well as for people with dementia, nature provides unique source of relaxation and stimulation. It provides opportunities for walks, gardening as well as for meditation and contemplation.
In old age, certain level of impairment, such as mobility difficulties or problems with hearing and vision, are natural. To help compensate for the latter, amount of light has to be higher than normal. Ideally, majority of light comes from a natural source because sunshine is not only pleasant but also beneficial. Creating alternating areas of light and dark within the building can enhance and guide people's movements. Equally beneficial is enhanced strategy of day and night light rhythms.
Use of colour can play a vital role in strengthening an atmosphere of security and well-being. Use of typical local materials and colours helps link the place to its regional context and therefore makes it easier to dwell in and relate oneself to it. Colour however has to be applied in harmony with other forms, materials, textures and surfaces to create a balanced, understandable composition. Colour can enhance contrast between significant elements or softly mark a different zone or area.
Autonomy

In well-designed settings, people with dementia can still maintain their independence. Within safe boundaries, it is possible to still use their remaining skills and give them thus a desired piece of autonomy. The environment doesn’t have to be deficit-oriented, preventing from mistakes and damages by not allowing any actions. It can, on contrary, enhance peoples’ remaining skills and inclinations. Providing spaces for activities that people can still do gives them chances to feel needed and independent.
When there is need for other people helping with private, daily activities such as getting dressed, having a shower or using a toilet, there is very little dignity left. Very often, personal pride is sacrificed for the sake of safety and functionality. When already so many abilities, skills and achievements one can be proud of are slipping away, preserving as much as possible of what is left of the person’s self-respect is important.
Sense of belongings

If there are activities to join and help with, people will naturally feel more at ease and part of the whole. Feeling responsible, needed and valuable in your surroundings is one of the fundamental conditions to feel comfortable and at home. Environment can prepare ground for such therapeutic concept where people are part of daily activities and have options to join or not.
Privacy

Having a personal, safe space, with own belongings and familiar surroundings is important for everyone. Probably even more important it is for people with dementia living in a care institution. Their room becomes a whole world and the only reminder of how the person used to live. With their private space, they always have a space to return to, space which resembles home and recalls memories.
Social interaction

Need of human contact is very important for every person. Although with dementia interest in other people gets significantly lowered, interaction with others is a ways to keep challenged and involved. Mutual communication recedes with progression of the disease, but there are means to enhance it. Accommodating people in small groups in which they have better chance to remember one another helps feel more relaxed. Arrangement of rooms and furniture can help and guide people to a certain behaviour and so too it can accommodate an easy interaction. Alternating levels of privacy together with semi-public and public spaces creates different environments for different kinds of social activities and therefore everybody can find something suitable.
DESIGN PRINCIPLES

design patterns learned from literature, observations, interviews and people with dementia themselves
Compact building layout

Small building or small independent units within one building eliminate the need to remember directions. When everything is at reach and preferably also visible, people can react and decide at a moment without having to memorize and find their way. Compact layouts with short distances offer clear overview which is beneficial both to people with dementia as well as to their care givers. Resulting elimination of corridors and dead ends contributes to the overall easiness.
Having visual contact with main points of the building reduces stress from having to search for a particular place. Seeing the possibilities eliminates the cognitive, decision making process. Once a person has eye contact with a destination, he or she does not have to seek for it anymore. Opening spaces one to another for better visual connections also allows sounds and smells to spread. These are valuable cues for people with dementia, evoking feelings and making it easier to arrive to a desired destination.
Clear distinction of spaces and mainly of their functions gives people comprehensive indications of what to do and how to behave. Basic spaces such as kitchen, dining area or a living room are inscribed deep in people's memories and create a familiar environment. Unlike „day rooms“, „therapy rooms“ or corridors, these core spaces indicate well what they are for. Knowing what to do, feeling relaxed and calm is equally beneficial to people with dementia as well as to their carers and visitors.
Differentiation of spaces for people with dementia can be marked by various means. Less obtrusive barriers than a physical wall such as changes of materials, colors, columns, ceiling heights or levels of light allow for smooth orientation within a building. Besides signings and pictures, these are more natural, subtle cues which can be used to guide people through the space. Creating various patterns of light and dark spaces enhances people's movements and so does changing heights of ceilings. Transitioning from a lower space to a higher, brighter one is accompanied by curiosity and therefore it can help people initiate their journey. Vice versa, retreating to a more enclosed space can be enhanced by lowering the ceiling.
Activities

Providing space and allowing for various daily activities is extremely important. Activities of everyday nature are familiar to people and as such they offer a chance to keep up with what they had been doing their whole life. Cooking, grooming, watering plants and many other activities that people can engage in give them a sense of responsibility and belongings. Moreover such activities provide natural source of many stimulation. They are both a therapy as well as part of a normal life. Through actions, sounds, smells and various tactile stimulation can be achieved. Creating spaces for these activities and their cues gives life to the building as well as to the people.
Sensory stimulation

Sensory stimulation brings relaxation even at a late stage of dementia and very often it is one of the things people have left. Because it is processed by a part of brain which remains intact the latest, sensations have the power to trigger memories and emotions till very long. For that reason, it is important that a building itself is a rich source of diverse sensory experiences ranging from materials and atmospheres to activities. Providing stimulation which is natural, coming from everyday activities makes people stimulated in a pleasant and familiar way. Designing the space in such a way that it is possible to hang the laundry or sit in an evening sun brings in a seemingly simple but very valuable quality.
Zoning

It is important to offer different levels of privacy so that everybody can find where he or she feels best. If there are places to be alone, to be with others, places to just watch the others or to be with a family, the whole place becomes a rich pallet of possible experiences. Variety of semi private spaces offers possibilities for different activities to enjoy with others as well as alone.
Creating transitions between different spaces and levels of privacy gives people the time to settle and adjust to the change. Small in-between spaces can link places with different functions, noise and activity levels. Such gradual flow between spaces is important on various levels. Helping people deal with a change between private and public is equally important as providing a calm transition for visitors between outside and inside.
Environments of elderly homes are surprisingly dynamic. As a natural part of their ever changing nature, people die and are exchanged by new ones regularly. Moreover, the disease progress with different speed with each person and every person deals with it his or her own way. In each stage, people have different needs and their life sphere gets smaller. Meanwhile, there are couples formed and new friendships discovered. Families come and spend time in the space as well as therapist and sometimes animals. Buildings should therefore be able to adapt to all these situations by being flexible and vivid.
One can never have enough of nature. Nature changes during seasons, even during the daytime and as such it is a natural indicator of time. It serves as a reference and helps position oneself in time and space. For every human being as well as for people with dementia, nature provides unique source of relaxation and stimulation. Access to nature relieves and freshens up, it provides opportunities for walks, gardening as well as for meditation and contemplation. Well-structured and designed outdoor space which leaves space for all of these activities and others can enhance the quality of life to a great extent. Equally important is bringing nature inside in form of plants or animals.
Use of materials which are not only pleasant to look at but also tactile and stimulating contributes to the overall richness of the environment. Without being offensive, natural, well-known materials are easy to understand for people with dementia. In balance with furniture and colors, materials can help accentuate and distinguish certain spaces. Unlike materials that are reflective, slippery or difficult to clean, well chosen materials can increase the overall experience of both people with dementia as well as their carers.
Functionality

Enough storage space, short distances or clear overview all contribute to easiness of the care home. Smooth work of nurses saves their time and energy which can then be given to people with dementia.