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Adjusting an older residential care facility to contemporary dementia care visions

Iris Van Steenwinkel, Elisabeth Verstraeten, and Ann Heylighen

Abstract: Older residential care facilities are increasingly confronted with an incongruity between contemporary visions on dementia care and outdated infrastructure. In this context a case study analyses how the architecture of such a facility hampers or supports the implementation of its dementia care vision. Interviews, participant observation and document analysis offer nuanced insights into the interplay between care vision and architecture. The latter's limitations include its spatial organisation, lack of high-quality communal areas, authoritarian character and hospital-like atmosphere, while potential lies in using adaptable lighting, homelike materials and furniture, and small spatial interventions. These interventions can be framed within a major renovation in the long term, which would allow to realize far-reaching improvements in the ward. Since many older facilities display similar features, the case study's approach and outcome can help them in adjusting their outdated infrastructure to increase the autonomy of people with dementia and support their individuality and emancipation.

1 Introduction

In the 1970s, attention grew for integrating people with dementia in society, increasing their autonomy, and supporting their individuality and emancipation. These objectives were not yet translated into architectural design practice, however (Mens & Wagenaar 2009). The residential care facilities (RCFs) built at that time often have an institutional, hospital-like character (de Rooij 2012). Today it is even more emphasized that, since dementia is currently irreversible, focusing on its medical aspect contributes little for the person with dementia. Contemporary visions on dementia care put this person's experience and quality of life centre stage (Finnema et al. 2000). In this experience, an important role is played by the physical environment (Calkins et al. 2001, Van Audenhove et al. 2003, Sternberg 2009, Van Steenwinkel et al. 2014). Yet, because the existing infrastructure cannot always be replaced, often an incongruity exists between a RCF's dementia care vision and its outdated architecture. This paper addresses this incongruity between care vision and architecture in the case of a particular RCF, referred to as Hilltop

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(pseudonym). We analyse what Hilltop's care vision implies within its architectural context. Central in this study is the question to what extent the architecture hampers, or holds potential for, the implementation of dementia care concepts considered important at Hilltop.

2 Context

Dementia is a syndrome associated with progressive memory impairment and loss of other cognitive functions (American Psychiatric Association 2000), with far-reaching consequences for patients and their environment. There are several types of dementia and different, not clearly discriminated stages in the dementing process, which may succeed each other at different rates.

Hilltop can be situated in the recent evolutions of visions on dementia care. Whereas this care used to focus on the underlying pathology, in the 1970s attention shifted towards the psychological and emotional well-being of people with dementia (Finnema et al. 2000). For Hilltop's directors the most prominent features of dementia are disorientation in time, space and identity, inability to perform daily activities and, as a result, loss of dignity. To cope with these features, the directors consider it essential to offer **structure** in both environment (space) and schedule (time), guarantee **safety and security**, and stimulate **autonomy**.

This evolution in visions on dementia care has implications for the care architecture. A transition is taking place from hospital-like RCFs to housing schemes directed at normalisation and well-being, like small-scale normalised living (Verbeek et al. 2009). The latter denotes a housing and care type where six to 16 persons with dementia, with professional guidance, form a household in a for them familiar and homey environment (Van Audenhove et al. 2003).

Due to the ageing population, however, the demand for high-quality housing comes with a demand for *more* housing. Since the latter cannot be met with new built projects only, pressure on older RCFs increases. These are often confronted with an outdated infrastructure (Coomans et al. 2011), as is the case for Hilltop. Although it adopts a contemporary vision on dementia care, the implementation of this vision is not always straightforward due to the RCF's architecture. Hilltop accommodates two wards for people with dementia, situated in a building from 1994, designed with a focus on offering efficient care. This can be derived from the central kitchen for all seven wards, long monotone corridors leading to nursing stations, and small living rooms. Moreover, the building was designed not specifically for people with dementia and due to later extensions, most wards are difficult to reach. Like several other RCFs in Flanders, Hilltop is thus confronted with a demand for more and higher-quality housing for people with dementia.

3 Methods

The case study presented here combined multiple methods: participant observation, interviews and document analysis.

To gain insight into daily life at Hilltop, the second author (henceforth 'the researcher') volunteered in one ward, one morning per week during two months. This allowed her to become familiar with the ward through **participant observation**. The ward was selected in consultation with the directors. Of the two wards for people with dementia at Hilltop, it is the more problematic because there is less space for the same number of residents. Participant observation started at 8 a.m., when part of the residents had already been waked, and ended at 12:30, during or after lunch. The researcher's tasks included assisting caregivers in preparing and serving breakfast, assisting residents in taking their meal or using the toilet, accompanying them and listening to their stories, etc. Because most residents spend most of the day in the living room or central hall, most observations were done there. Yet, the researcher also spent time with residents in their private rooms. Assisting bedridden residents with their meal made sure that they were not overlooked. During the fieldwork notes and sometimes pictures were made. These were processed in a report on the day they were made.

The researcher also conducted **interviews** with the management (general director and director resident care, quality coordinator, palliative referent, and psychologist/referent dementia) and the ward's residents. All interviews were semi-structured around open questions. The interviews with the management aimed at getting to know the RCF, their vision on dementia care and its impact on architecture. The interviews with residents tried to gain insight into what is important to them. Interviewing people with dementia comes with several challenges. For some of them, finding words and following complex conversations is difficult or impossible. Moreover, they often have difficulty to stay focused on the conversation and topic and process questions. For this reason, the researcher conducted multiple shorter informal conversations with several residents. She listened to their stories and asked short questions when possible.

All interviews (except for two) were audio-recorded and transcribed verbatim. Based on the transcripts a content report was made that summarizes the interview's major points, followed by a narrative report that addresses its storyline more elaborately. Subsequently, themes from each interview were abstracted, based on which the interviews were analysed and conceptualised.

The observations and interviews were complemented with a **document analysis** of Hilltop's website and vision statement, the building plans, as well as pictures, notes and sketches made during the fieldwork. The plan analysis started from spatial themes that address the impact of the built environment on people's experience (Nylander 2002, Ching 2007, Unwin 2014). Examples include spatial organisation, materiality, light, and circulation.

4 Findings

This section describes the limitations and potential of Hilltop's architecture for realising its vision on dementia care.

4.1 Limitations

To start with, the **spatial organisation** suggests that the building was designed from a vision that gave priority to efficient care, rather than to residents' perspective and daily activities. The layout seems to be conceived to **limit** staff's **walking distances**: a central nursing station from which corridors with private rooms depart (Fig.1). This spatial organisation hampers hominess and security and offers residents little normalisation and spatial structure.

Fig.1 Floor plan of the ward's current situation

Second, the focus on staff's **circulation** results in little attention for spaces where residents can reside. Judging from the ward's layout, the designers assumed that residents would stay most of the time in their private room. The living room accommodates only 15 of the 30 residents, the others sit in the central hall. The latter shows little flexibility since the staff's run lines need to be kept clear (Fig.2). As the **communal rooms lack** an **adequate arrangement**, the ward fails to offer residents all facets of life. For instance, there is neither a kitchen where residents can be involved in preparing meals nor a sitting area — two places that are closely linked with normalisation and hominess. Residents can sit only at a table or in a row against the wall, and have few opportunities for variation in the interior and use of spaces. As no other options are available, except for the private room, residents rarely change places in between meals, which reduces the structure in

their day. In summer the terrace offers more opportunities for variation in the use of spaces. In winter this is not an option, however.

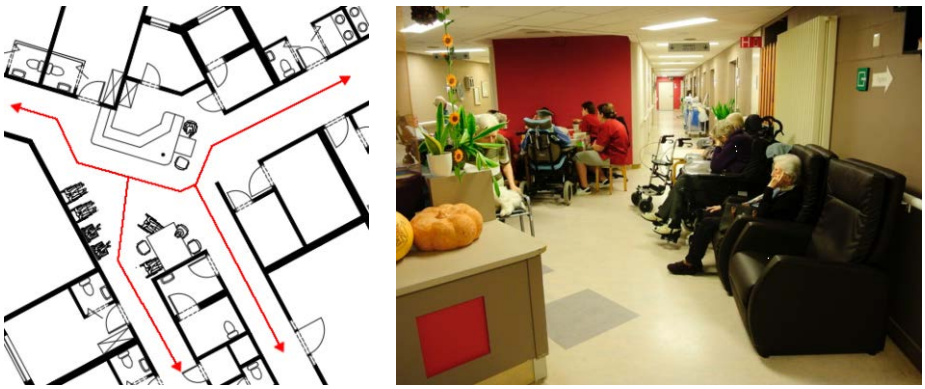

Fig.2 Circulation dominates the central hall

Because the building was designed for efficient care, whereby residents seemed to be of secondary importance, the spatial organisation radiates an **authoritarian character** towards them. This third limitation is exemplified by the central nursing station which acts as a control point. The authoritarian character contributes little to a homelike and secure atmosphere. Moreover, it contradicts Hilltop's care vision, in which residents are equal to the staff and every resident should be treated and cared for as an individual and with respect.

Fourth, the **materials** used give the ward a **hospital-like character** while the **similarity** between the corridors contributes to **disorientation**. Everywhere the same materials are used while few landmarks are present. This is especially the case in the corridors, which are long, identical in terms of material use, and radiate a hospital-like atmosphere (Fig.3).

A final limitation is the fact that **daylight** is present only in the living room and private rooms. By consequence, residents seated in the central hall cannot benefit from the advantages of daylight and the **structure in time** it offers. Since different activities overlap, they do not offer much structure in time either: due to the staff's busy schedule and the few opportunities for variation in the interior and use of spaces, meals usually lack a clear start and ending, which reduces their value as structuring element.

4.2 Potential

Despite the architecture's limitations, several adaptations are possible to improve the residents' quality of life. To start with, much can be improved through small and medium interventions, which can be implemented relatively simply, in the short term, and are limited in terms of cost. They can be framed within larger renovation works in the long term to improve the ward in a radical way. The latter should be considered as lines of thought, not as concrete design proposals.

Fig.3 The three corridors are long, identical and hospital-like

Small and medium interventions

The institutional **light fittings** that are currently used in the corridor (Fig.3) could be replaced by more homelike fittings. Furthermore, using higher intensity ambient bright light and offering a view outside is very likely to improve the day-night rhythm and **orientation in time** for residents (Day et al. 2000, Thorpe et al. 2000, van Hoof et al. 2009), especially for those who reside in the central hall. In addition, the staff could look for ways to better delineate structuring activities, such as the organisation of serving the meals.

Wall and floor finishing in corridors and rooms could be adjusted to create a warmer atmosphere. **Material** use would also allow to address residents' dis**orientation in space**, e.g., by distinguishing corridors through colour or decoration. Individualising the doors of the private rooms with pictures, objects or colours would assist residents in locating their own room (Lawton et al. 1984).

The **furniture** shows room for improvement too. By using tables with a more appropriate size in the living room, more **space** would become available for either more residents to sit in the living room, or another function; e.g., making more room around the piano would allow using it or creating a reminiscence corner. The standard RCF chairs and sofas could be replaced by furniture with a more **homelike** character, without losing sight of criteria related to maintenance and ease of use. The built-in closets in the rooms can be substituted by personal closets.

Technology might offer a solution to lock the private rooms and other spaces for people not allowed to enter. Introducing personal bracelets would ensure that residents can enter their own room, but not that of others. This contributes to the resident's **security** and **privacy**, and might heighten the level of **autonomy** (Godwin 2012). Currently, most doors to the private rooms are locked during the day to avoid that residents enter the wrong room. As a result, residents who want to go to their room have to ask the staff first.

The **bathroom** in the private rooms could be renovated to make it more **user-friendly**. The door opening could be adapted such that it is directed at the room. If the door occupied a slanting side of the bathroom, the room would look larger and residents would no longer have the feeling of entering through a narrow corridor – between the closet and bathroom wall – before reaching the actual room. The direction of rotation would ensure that residents' **privacy** is guaranteed when staff enters.

Finally, opportunities exist to create **more space** through small interventions. On the one hand, the ward adjoins the entrance hall where the elevator arrives. The latter is rather big for its role as passageway. By using part of the hall to create a sitting area (see Fig.4), the hall becomes part of the dwelling and forms an entrance instead of the corridor. Circulation would still pass through this hall, so the solution is not perfect. Yet, more **differentiated** places would become available to residents; e.g., those who eat in the central hall could be brought there in the afternoon. Staying there would be more pleasant than staying in the central hall as it is less busy and **daylight** enters through the big window. Because the corridor joins onto the hall, residents would no longer be confronted with the closed door at its end.[1]

Second, the central nursing station could be removed. It strongly contributes to the central hall's authoritarian character. Even more, it is rarely used and most tasks now executed there can be done also at a table among residents. For tasks that do require isolation, the staff can use the small table in the administrative room. By removing the desk, the central hall's authoritarian character would be reduced while the **staff** would mingle more with the residents. Also, more space would become available in the hall, allowing for a more **flexible** configuration.

Major renovation

The smaller interventions mentioned above can be framed within a major renovation in the long term, which would allow to realize far-reaching improvements in the ward. Fig.4 shows a possible intervention; Fig.1 shows the current situation by way of comparison. Note that the smaller interventions are integrated in this proposal. By working in this way, one can avoid that a certain intervention is nullified by an intervention a few years later.

The rationale behind the proposal is the following: why would residents and visitors need to enter the building through the main entrance, if they could just as well go directly to the ward's front door? The far end of corridor 2 is situated close to the street. Currently there is an emergency exit, which could be renovated into an effective front door of the housing unit. Through this door, visitors would enter a big living room with an open kitchen, a sitting area, and eating area. This room could be created by removing four private rooms at the far end of the corridor and constructing a new extension. By transforming the old kitchen and living room into three new private rooms, only one room would be lost. The new living room would offer a comfortable place to reside during the day, providing enough space for all residents and allowing a flexible set-up. Because of the large number of residents, preparing complete warm meals in the open kitchen would remain impossible. Yet, soup and dessert could be made within the ward, allowing residents to assist. This intervention would add a living room with much daylight and differentiate day and night zones, which would benefit residents' orientation in time.

[1] Although the problem might move to the door of the entrance hall.

Fig.4 Floor plan proposed renovation

The old entrance would become a service entrance through which the meal trolley is brought and staff can reach other wards. Also residents and visitors could keep using this entrance when they want to take the elevator to the cafeteria. Because the central hall no longer serves as extension of the living room, much space would become available. This would allow extending the nave of corridor 3 with extra storage room. Next to it a table or sofa could be installed for residents who like to retreat or a reminiscence corner can be created.

Enabling residents to go outside in a safe and comfortable way, also in winter, would enhance autonomy and health (Chalfont 2005). In Fig.4 a door is foreseen from the living room to the **garden**. Through the use of technology, the door could be always accessible for residents who are allowed to go outside independently. Without doorstep the door should make it easier for residents to go outside. Hanging coat hooks wit coats against the wall could prompt residents. Also the garden could be improved such that residents can better enjoy it. The garden could offer activities by laying out paths or a small vegetable garden. A vegetable or herb garden is laid out best as a 'herb table' so that it can be reached easily by residents, including wheelchair users (Kamp 2005). Finally, in the part of the garden that is accessible for the residents, the pétanque court or other play equipment could be (re-)installed to encourage enjoyment and human relationships (Chalfont 2005).

6 Conclusion

This paper explored through a case study how an older RCF's outdated infrastructure influences the implementation of its contemporary care vision. The study was motivated by the challenges the ageing population poses and the evolution toward higher-quality and person-oriented care for people with dementia. We analysed to what extent the RCF's architecture holds limitations or potential for a better implementation of this care. A combination of fieldwork and document analysis offered insight into the daily routine in one ward and architecture's influence thereon.

The analysis suggests that the architecture's major limitations include its spatial organisation, lack of adequate communal areas, and authoritarian character. The latter seems to suggest that residents are of secondary importance. Despite the staff's efforts this character cannot be hidden. Due to the lack of space there is little flexibility and few facets of daily life can be accommodated. Nevertheless there is considerable room for improvement through different interventions. These are expected to contribute to a better implementation of the RCF's contemporary care vision and to a higher quality of life. At the same time, we should not forget that the physical environment is but one factor that plays a role in residents' quality of life. Other efforts made by the directors and caregivers are at least as important.

A limitation of the study is that residents and staff were not involved in co-designing the improvements. This is because the study was originally intended as an exploration and preparation for the actual work. However, Hilltop's management considered the results so valuable, that some of the suggested changes have already been implemented. The floor material has been replaced by parquet-like laminate, creating a more homelike atmosphere. The desk of the central nursing station has been removed and part of the entrance hall has been annexed. Removing the desk resulted in more space in the central hall. Because extra space has been added at the end of the first corridor, less residents sit all day in the central hall or stand waiting at the front door until someone opens it. For Hilltop it is important to continue trying to improve the residents' quality of life through small and large interventions. The case study's results offer a basis to understand the different dynamics in the ward and make targeted interventions in the future. At the same time it is also important that Hilltop continues to work on aspects that are less dependent on the architecture (relationship between residents and staff, activities offered) as these can help counterbalance the building's authoritarian character.

Since many older RCF's share similar features with Hilltop – long, hospital-like corridors attached to a central area with nursing station; lack of daylight and high-quality communal areas; authoritarian character; hospital-like materials – this case study can help to identify limitations and potentials of their architecture. Both the approach and the outcome of the case study might offer inspiration to other RCFs who want to adjust their outdated infrastructure to contemporary care visions.

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