

# The Living Edge: Connection to Nature for People with Dementia in Residential Care

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## **Introduction**

This chapter describes an example of how a research project created a positive experience for residents in a residential care home through participatory engagement between people with dementia, the researcher and the natural world. The research is concerned with connection to nature for people with dementia and included three studies by the author over a two-year period. Study One was a user needs analysis consisting of interviews and focus groups (Gibson and Chalfont 2007). Study Two was a comparative examination of the potential for connection to nature provided within 14 different care home settings, focusing on the architecture and landscape (Chalfont 2006). This chapter draws primarily from Study Three, which investigated the potential benefits of ‘edge spaces’ of buildings by bringing people into contact with nature while engaging them in conversation. Sensory stimulation was experienced from a comfortable location either just inside or outside the building. The research aimed to answer the following question: given the opportunity to sense the natural environment and to engage with someone socially at the same time, in what ways might a person use this experience to enhance his or her well-being?

The study reported here drew upon the concepts of personhood and the maintenance of self, and the methods of psychological therapies, horticultural therapy and meditation. Theoretically, engaging people with the natural world could reinforce their sense of self. The usual question-and-answer interview format was rejected. Instead, given opportunities for self-direction, people used nature as a tool for self-expression, with some creative and unexpected results. Furthermore, when participants connected

to nature and to another person, they used the experience to reinforce their identity.

Within participatory engagement is an assumption that certain values and principles are important. This study demonstrated the importance of one principle in particular:

- engagement – ensuring that all people involved have the opportunity to participate as they would like.

This was achieved by empowering participants during dialogue to lead the discussion. Giving the time and space to explore areas they found meaningful, and issues they felt to be important, ensured that all participants had the opportunity to participate as and how they wished.

The objectives of the chapter are to:

- present an example of research in care homes that addresses connection to nature for people with dementia
- give a brief overview of why connection to nature is beneficial
- introduce the concept of ‘edge space’ in care environments
- give examples of how people enjoy the natural world
- demonstrate a person-centred methodology that enabled creative uses of nature by participants, some with fairly advanced dementia
- demonstrate how both the social and physical environment enhances well-being
- show how people with dementia use nature creatively
- give environmental design guidance to include a connection to nature
- recommend caregiving and research methods that help people express and maintain their identity through social engagement.

The chapter is organised in five sections. ‘Connection to nature’ contains the rationale for the research, a brief overview of relevant literature, and some of the barriers to providing nature in care homes. ‘Edge space study’ gives the background and theoretical framework for the approach. It then describes the study, sites, participants and methodology. ‘Findings’ reports some of the nature-related activities people enjoyed. Excerpts from the edge space dialogues show how people with dementia used nature creatively to express themselves and to reinforce their identity. The penultimate

section explores the 'Implications' of the study and recommends good practice within care homes to improve quality of life, including improvements to environmental design, caregiving and research methods. 'Conclusion' presents a summary of the chapter.

## **Connection to nature**

This section reviews the benefits a connection to nature might provide for a person with dementia, and the barriers to providing such a connection in residential care environments.

### **Benefits of connection to nature**

Connection to nature has multiple human benefits which can be gained both actively and passively. Walking, gardening and lawn sports provide the benefits of physical exercise, fresh air, sunshine and social interaction. Even visits to the outdoors have proved beneficial. A study by Rappe and colleagues described the relationship between the reported frequency of visits to an outdoor green environment and self-rated health in 45 female nursing home residents. A strong positive association was established between the reported frequency of visiting outdoors and self-rated health (Rappe, Kivelä and Rita 2006). Environmental support for older people's outdoor activities has been shown to have a positive effect on their well-being and quality of life (Sugiyama and Thompson 2005).

Studies have also investigated passive interactions such as viewing a garden. Lowered blood pressure and heart rate were shown to be correlated with increased health and well-being of elderly women from simply viewing a landscape (Tang and Brown 2005). In a controlled study of older people, blood pressure, pulse rate and the power of concentration were influenced significantly by a period of rest in a garden (Ottoosson and Grahn 2005). These researchers found that a garden can restore an elderly person with low psycho-physiological balance to a state of better harmony. An outdoor visit was important for recovery from stress and fatigue and the improvement was especially significant for the most susceptible. Receiving massage is also a relatively passive connection to nature and one that has been found to benefit the person. Sensory stimulation from aromatherapy massage with lemon balm (*Melissa officinalis*) essential oil resulted in an overall improvement in agitation for 35 per cent of subjects (Ballard *et al.*

2002). In a randomised controlled trial examining the effects of aromatherapy massage and conversation on behavioural disturbance reported by Smallwood and colleagues (2001), significant improvement was found in the motor behaviour of persons with severe dementia. Behavioural disturbances were reduced with the combination of aromatherapy and massage by as much as 34 per cent.

### The meaning and benefit of 'edge space'

The concept of 'edge space' has been explored in various fields including architecture, geography and environmental psychology. An edge is a boundary or a transitional space, such as between public and private space, between indoors and outdoors, and between domesticated and wild. According to Christopher Alexander the edge is a lively place:

When it is properly made, such an edge is a realm between realms: it increases the connection between inside and outside, encourages the formation of groups which cross the boundary, encourages movement which starts on one side and ends on the other, and allows activity to be either on, or in the boundary itself. (Alexander *et al.* 1977, p.755)

Alexander said that buildings are generally thought of as turning inward but must be rethought as also 'oriented toward the outside' (p.753). Edges are often attractive places: for example, in cities we can see the popularity of pavement cafes. Edges are where a person can spend time, where actions can develop and where the person becomes stimulated by, and oriented towards, the outside natural world (Chalfont and Rodiek 2005).

### Barriers to connection to nature in residential care

The care environment includes people being cared for, people providing that care, the physical aspects (architecture and nature) and the organisational and policy framework. Any of these factors may prevent a connection between the person with dementia and the natural world. Because so many factors must align, even a simple walk outside is a challenge in many long-term care facilities.

The barriers to outdoors are related to social or policy aspects, physical environment aspects or the person's physical condition and mobility. Social or policy aspects include insufficient staff help; lack of awareness of benefits of outdoors; lack of planned activities outdoors such as walks; staff not

available to assist; no use of volunteers; lack of family involvement in outdoor events or visits outdoors; policies not permitting residents outside alone; and lack of regulations for outdoor space (Cutler and Kane 2005; Kearney and Winterbottom 2005). Physical environment barriers are shown in Box 6.1 below.

### **Box 6.1 Physical barriers to the use of outside spaces by older people with dementia**

- lack of shade or protection from weather
  - gradient changes at entrances (step or threshold at door)
  - limited access to the garden
  - no direct route from person's rooms
  - no unlocked route
  - no hard surface walking paths leading to amenities
  - no seating or covered seating
  - lack of tables
  - outside areas not secured or enclosed
  - lack of edge spaces
  - boring spaces
  - no view to real life
  - residents on upper floors
  - no direct access off the unit
  - not conducive to privacy or to social relationships
  - seating and tables not clean, dry and in good repair
  - too far to go from indoor areas to outdoor spaces
- (Chalfont 2006)

The architecture also plays a role in facilitating sensory stimulation from nature. Factors include how well the building lets in light and fresh air, provides views, orientates the person to time of day and year, provides green nature, encourages walking, attracts wildlife and connects to the local neighbourhood. Accomplishing these depends on being able to move about freely. The building design or care practice may limit movement by residents, by urging residents to sit down, and locking or camouflaging doors to outdoor areas.

## Edge space study

The edge space study was chosen for this book because it demonstrates that caregiving and the physical environment can mutually engage a person, and by so doing, bring a creative approach to person-centred care. This section will provide the background for the study and outline the theoretical framework for the approach. It will then describe the study, the sites, the participants and the methodology.

### Laying the groundwork

In the five years prior to carrying out this and other studies, the author visited 30 dementia care facilities in the UK, 5 in Norway, 2 in Sweden and 6 in the USA, examining their potential to provide residents with a connection to nature. He also carried out a prolonged observational study of daily life in two care homes in the UK as part of the Engineering and Physical Sciences Research Council (EPSRC)-funded INDEPENDENT Project. This included an analysis of the physical features of the rooms and buildings where the participants spent most of their time. Some of these results can be found elsewhere (Chalfont 2006, 2007a). Of particular interest were how the building and landscape were designed and how the residents used them. Inventories were made of the built and natural elements and the activities such elements afforded. The situation of the building on the site and within the neighbourhood, and its proximity to local area natural resources were also considered, to gain an understanding of the potential for connection to nature at various scales.

### Theoretical framework

Theoretical support for the edge space study comes from the areas of personhood and the maintenance of self, psychotherapy, social and therapeutic horticulture and meditation.

#### PERSONHOOD AND THE MAINTENANCE OF SELF

The concept of positive personhood draws on the work of Kitwood, Gilleard and others. Gilleard first conceptualised dementia in terms of 'personhood' (Gilleard 1984), specifically 'the loss of the person' (p.18) and the 'fading of self' (p.10). Kitwood and Bredin expanded this concept by

saying that ‘the key psychological task in dementia care is that of keeping the sufferer’s personhood in being’ (Kitwood and Bredin 1992, p.41). Gilleard’s conceptualisation connects the physical environment and the sufferer’s personal reality, and most importantly, this is accomplished through interaction. The quality of the interaction largely determines the positive or negative effect on personhood, which is by definition social, because it ‘emerges in a social context...guaranteed by the presence of others...’ (Kitwood and Bredin 1992, p.272). By 1997, Kitwood had defined personhood as ‘a standing or status that is bestowed upon one human being by others, in the context of relationship and social being’ (1997, p.8). Others have also said that ‘the threatened loss of self does not appear to be linked to the “progress” of the disease but rather to the related behaviour of significant others’ (Bond and Corner 2001, p.104). There is a link between engagement with others and well-being that in dementia is specific to a person’s ability to maintain a coherent sense of self.

Discourse analysis of conversations by people with dementia has provided insight into their maintenance of self. Sabat and colleagues have been developing the various ‘selves’ of a person with dementia and the support or threat posed by the focus of the attention of others (Sabat and Collins 1999; Sabat and Harré 1992; Sabat, Napolitano and Fath 2004). Characteristic of this area of research is the analysis of conversations between a researcher and a person with dementia with whom the researcher had developed a long-term, trusting relationship. This is not one characterised by a dynamic such as ‘researcher–patient’ but rather by one of ‘person-to-person’ (Sabat 2002, p.28). The participants had been known by the author for at least two years at the time of the edge space dialogues. These associations were ones of acceptance and trust.

Evidence from a study involving people with dementia in residential care supported the relevance of a socio-biographical theory of self (Surr 2006) through the use of unstructured interviews with 14 people with dementia:

Relationships with family, other residents and care home staff were important for maintenance of self. Social roles related to work, being part of a family, caring for others and being cared for, were particularly significant for self in this group. (Surr 2006, p.1720)

Surr’s work drew upon theories of interpersonal relationships for maintenance of self. One such theory, Winnicott’s caring environment (Davies and Wallbridge 1981), suggests that ‘quality of interpersonal relationships

is an essential component of preservation of self and therefore should be considered a crucial element in dementia care that aims to uphold self' (Surr 2006, p.1721). According to Surr, Goffman argued that institutional living held great potential for loss of self (p.1723). One reason cited for this was restriction on access to the outside world.

## PSYCHOTHERAPY

The second area lending support to the study is an approach to well-being through psychological therapies, which is becoming more widely practised. A review of psychosocial interventions for people with dementia described current methods, including the psychodynamic approach, reminiscence and life review, support groups and cognitive/behavioural therapy, behavioural approaches, memory training and reality orientation (Kasl-Godley and Gatz 2000). Cognitive stimulation therapy (CST) has been shown to significantly improve cognition and quality of life in older people with dementia. CST has similarities with the edge space study. For instance, it involves 'gentle non-cognitive exercises to provide continuity and orientation... multi-sensory stimulation where possible and encouraged the use of information processing rather than solely factual information' (Spector *et al.* 2003, p.253).

Psychological therapies involve engaging the person psychologically and emotionally. The edge space study showed people engaging with their environment psychologically and emotionally, and communicating with a listener. As engagement and communication are key ingredients for a therapeutic encounter, the interactions in edge space were potentially of therapeutic benefit for the participants.

## SOCIAL AND THERAPEUTIC HORTICULTURE

The third area of theoretical support is drawn from the practices of social and therapeutic horticulture (STH), in particular the triangular dynamic in which the person is engaged both with natural elements and with another person. The general model for the interactions that occur in STH is for the client and the therapist to converse while engaged in horticultural activities. The plant becomes the focus and clients are able to use nature as a metaphor to communicate their feelings and work through the emotions they may be experiencing. During this process, nature is used as a therapeutic tool and human interaction in relationships is the mechanism by



which this occurs. Actual participation in activities of horticulture, such as planting, potting or caring for plants, is normal practice during a session of STH. This interaction occurs indoors or outdoors by using a range of different plant materials and activities in various settings. Similar to STH, the proposed experiments in edge space were designed to see if nature might be useful to people with dementia as a tool to facilitate personal communication. This study draws from the theory and practice of social and therapeutic horticulture the concept of human engagement in proximity to nature for therapeutic benefit.

## MEDITATION

Theoretical support for the study also draws upon recent work in the area of meditation for people with dementia. People with advanced cognitive impairment can be instructed in meditation, can practise with support and guidance, and can benefit by decreased agitation, increased group participation, improved self-control and increased relaxation (Lindberg 2005). Meditation or spiritual practices can be learned because guided imagery is not dependent on stored memory. Guided imagery allows for creative use of the senses which serves to diminish the person's sense of isolation. During the meditation or spiritual practice the person is fully active and directive. In this way, participation promotes relational, emotional and spiritual well-being (Lindberg 2005). Meditation and guided imagery provided further theoretical support for the study by demonstrating creative use of the senses during social interaction.

## Study description

The study investigated interactions between people and nature, facilitated by the built and social environment, with the expected outcome of contributing to the well-being of the participants. 'Edge spaces' of buildings seemed promising places where this might occur. The study required sensory stimulation from nature and dialogue with another person to occur simultaneously. Sensory stimulation indoors through a window might include sights and sounds, while outdoors it would also include temperature, fragrance and the feeling of sunlight and air on the skin.

The dialogues were held in an indoor or outdoor edge space which afforded connection to nature, and where the participants felt comfortable to spend time talking to someone. Similar to leading a guided imagery

session or a meditation, the researcher acted as a catalyst to the interaction by empowering the participant to be fully active and directive (Lindberg 2005). The edge space provided sensory stimulation from nature to which the participant could respond. Facilitating an enjoyable and potentially beneficial interaction was the intended outcome, similar to a guided imagery session. For this to be possible for a person with dementia, the researcher must 'meet them where they are' psychologically. Hence, the protocol involved a gentle and flexible approach to communication. Essentially, the dialogue was intended to be an informal friendly chat, putting the clients in charge so they could lead the dialogue wherever they wished.

### Study sites

The two residential care homes in the study each had a dementia care unit providing enhanced care to ten residents. The homes were similar in age, size and style of the building. One was in a built-up residential neighbourhood and the other was more isolated with larger areas of open space surrounding it. They were also different in terms of the organisational running of the home, with each place being a reflection of the skills, style, personality and experience of the staff members and the individual managers. The study sites were edge spaces inside or outside the homes.

An indoor edge space is near a window (or a door) with furniture for two people to sit (or a clear space to stand) within hearing and speaking distance of each other. Indoor edge spaces were located in bedrooms, dining rooms or lounges. An outdoor edge space is an outdoor space adjacent to the exterior wall where two people can sit or stand not far from (and within view of) the entrance. Outdoor edge spaces were located in an enclosed garden or patio area.

### Participants

Eleven residents in the two homes participated in the study by meeting these criteria:

- having a diagnosis of dementia of any type
- expressing a willingness to talk to the researcher
- able to stay alert, awake and aware for at least 15 minutes
- able to comprehend and respond to verbal communication

- able and willing to give verbal consent to participate
- able and willing to give written consent to participate (or advocate).

One person had mild dementia, one had severe dementia and the rest were in the mild to moderate stages. One participant was male and all were white British. The ages ranged from 66 to 89 with a median age of 82.

## Methodology

When considering methods and tools for human–environment research, existing studies in dementia care settings are more often comparative than exploratory. The comparative approach requires methods for looking at differences in the effect of the intervention on a person. It also makes some preliminary assumptions about what can be improved and how. Such studies adopt a clinical trials approach to carrying out and measuring interventions, both care interventions and those in the physical environment. For instance, a study may look at the effects of sensory stimulation on the person with dementia, such as aromatherapy massage, as described previously. A study by Ottosson and Grahn (2005) compared effects on people after two different stimuli: viewing a garden or viewing a wall. The possible ways these stimuli might affect the person were determined beforehand. For instance, increased well-being can be measured by various physiological factors (heart rate, blood pressure, etc.). This is valuable work which gives us much-needed quantitative data and conclusive findings on the value of garden environments.

Another type of comparative study might explore effects on behaviour by modifying the environment. An example of a redesign of the physical space can be found in a study on the effect of an enhanced nursing home environment (Cohen-Mansfield and Werner 1998). In this study a home environment and an outdoor environment were enhanced with benches and additional visual, olfactory and audible stimuli. As a result, participants spent more time in the enhanced environments, used the benches and experienced a positive impact on their mood and behaviour: ‘less trespassing, exit-seeking, and other agitated behaviour in those who pace’ (p.199). Residents found it more pleasurable. Staff and family also preferred the enhanced environment.

Both sensory stimulation (Ballard *et al.* 2002; Smallwood *et al.* 2001) and sensory environment interventions (Cohen-Mansfield and Werner 1998) involving people with dementia were to some degree effective in

reducing so-called 'negative' behaviours, including agitation, shouting, wandering (*sic*) and behavioural disturbances, as well as providing an increase in positive behaviour and effects. But such studies, whether about an intervention in care or in the physical environment, take as their starting point the desire to modify what is seen as problem behaviour or negative well-being. Conversely, an exploratory approach might seek to generate an experience that is not pre-determined, but open to potential synergy of the intervention itself. In the exploratory study reported in this chapter, sensory stimulation through a connection to nature benefited a person with dementia in ways that were not pre-determined. Essentially, the experience of the research exercise provided the space and time in which the participants could determine for themselves how that time was spent and could direct the course of the conversation accordingly. By adopting this exploratory approach the outcomes were determined by the individuals, demonstrating an innovative person-centred research methodology.

This exploratory approach also positioned the research within an environmental framework. In other words, it was not research about care environments. It was research of environments themselves. People were not asked to reflect upon or think about how they use space, what the home meant to them or how satisfied they were, etc. The person's use of the space was central to the research, which was carried out in the environment it was investigating, and included enabling the person's use of it.

Dialogues were audio-taped and the primary data were gathered during these social interactions. 'The commitment to understanding participants' perspectives implies investigating the experience, meanings, intentions and behaviour of people with dementia on their own terms. This inevitably means using fieldwork methods which get the investigator close to the subject of study' (Bond and Corner 2001, p.106).

Unlike a semi-structured interview with pre-determined discussion topics, this study endeavoured to generate dialogue with no particular agenda. This shifted the intention from gathering data to initiating social interaction for its own sake, the interaction being the object of interest, rather than the topic being discussed. Support for this approach was found in Surr's (2006) work with people with dementia in residential care, in which she allowed participants 'to direct the interview and set the agenda' (p.1724).

The methodology for the edge space study also included photographing the building; taking notes about how the residents, staff and visitors used it; measuring rooms and distances to outside, etc. Floor plans of the

buildings and site details such as landscape elements, outdoor areas, and neighbourhood were also gathered.

Ethical approval for carrying out the research was gained through both the university and the Central Office for Research Ethics Committees (COREC). Ongoing consent was gained from participants throughout the research and written consent was gained prior to the dialogues, either from the residents or their relative/advocate. Verbal consent was achieved by asking the participants prior to and during the dialogues if they wished to continue to participate.

## Findings

This section shows some of the ways three participants identified themselves through enjoyment of nature-related activities, both presently and in the past. From the edge space dialogues, examples are given of people using nature creatively in order to express themselves, and how such engagement supported their sense of themselves by reinforcing their identity. This is one of the key dimensions of quality of life in care homes as identified in *My Home Life* (Owen and NCHRDF 2006).

The natural world had previously played a role in the lives of many participants, and some believed they still continued to participate in these ways. Activities people identified with included crown green bowling, swimming, going away on holiday, playing golf, walking in the countryside, gardening, walking around the garden or just ‘pottering’ in the garden. Social relationships with neighbours were developed in conversations ‘over the fence’. Having a warm sunny ‘sitting out’ place was identified as a positive aspect of the garden. Some people fondly remembered older relatives whom they associated with the greenhouse, the allotment, farm animals, pets or walks in the country. Particular plants, flowers and fruit trees were mentioned. A nearby park was identified for the sporting activities it offered.

In the following examples of dialogue, PwD = the person with dementia, and GC = the researcher.

### Sporting in the countryside

One gentleman in the study had led a very active life and still clearly identified himself as carrying on an outdoor life, although that was not the case.

- GC: What can you see out there?
- PwD1: I can see all that...all that...where the football pitches used to be and caravans at the top there, and come in and come down. There's the church on the left hand side... See that church?
- GC: Yup.
- PwD1: St Aidan's Church. You used to come through into the park where you used to play football, everything, cricket. Well, schools used to use it you see. And then further on...all sorts of sporting activities going on, you know, netball for ladies, bowls, you know things like that...
- GC: Do you get outside very much?
- PwD1: Yeah, we go into Derbyshire quite a lot and that... Play sports, things like that...winter time...indoor games.

### Caretaking in the neighbourhood

In this next example, a woman was able to retain her identity as a compassionate and generous neighbour, long after she no longer cared for 'everybody and their mother's cat'. The conversation was with a professional carer (PC) who was able to reinforce the person's identity through shared knowledge of the person she had been in the past, even if in care the person with dementia was no longer able to participate in that activity.

- PC: You used to look after cats, didn't you?
- PwD2: Oh, he did he used to look after mine. Don't I look after them now?
- PC: I don't know.
- PwD2: No, I don't think I do. Oh I used to look after everybody and their mother's cat. Didn't I?
- PC: Every cats on main road.
- PwD2: They all come up to my place.
- PC: I know you feed 'em, that's why.
- PwD2: I know we did. We fed 'em all. Still, if summat's hungry and you've got summat to feed it, let it have it I say. May be wrong.

## Visiting the garden

In this example the woman identifies herself as a garden person by saying that she still goes out into the garden 'many a time of day'. This daily routine from the past, even though it no longer occurs in the care home where she lives, is a fondly remembered activity that reinforces her identity, she being a person who likes 'a little bit of garden'.

- GC: What did you like about that garden?  
PwD2: I don't know. I liked it. I like this one and all. I like a little bit of garden.  
GC: When do you go out into the garden?  
PwD2: I go out many a time of day. Walk through garden and have a look at things.  
GC: What sort of things do you see?  
PwD2: Oh little bits of flowers. Daffodils and all sorts. Not elaborate, not an elaborate garden.

Later on, she identifies herself as independent in terms of this activity, because she can do it 'on me own'.

- GC: Do you go out into the garden on your own?  
PwD2: Sometimes I walk round it if it's a nice day.  
GC: Did you go out with somebody else?  
PwD2: Nobody to go out wi' when everybody's gone to work. So I have a walk round on me own.  
GC: What can you see from that garden?  
PwD2: Not a lot. Just an ordinary garden with some garden next door, and flowers and things. It's all right.

## Helping Father

In the following dialogue another woman began on the topic of gardens and quickly moved to her relationship with her father.

GC: Did you used to have a garden?  
PwD3: Two.  
GC: Two! Tell me about them.  
PwD3: We were always in the garden.  
GC: What was it like?  
PwD3: Oh garden was all right except when he started having us 'it's your turn to this and it's your turn to that'.

### Caretaking the chickens

While on this topic, she was looking out of the window...

GC: What did you like to do in [the garden]?  
PwD3: I wasn't bothered about ought [anything] in garden. One of me [?] coming through now.  
GC: What's coming through? Show me. [She points out the window to a blackbird on the hill.]  
Oh, right. What is it?  
PwD3: It's one of the chickens. Don't know which one it is.  
GC: One of the chickens? (Mm) How many chickens do you have?  
PwD3: I don't know, it's got two or three. Sometimes they alright, sometimes they's difficult, run away.  
GC: Is that your job? What did you have to do with the chickens?  
PwD3: Sometimes you have to, you know, feed 'em first, and wash 'em.

Her experience of caring for chickens was reawakened by the sight of a blackbird outside the window. The moment was also made possible through engagement with a listener who encouraged sensory stimulation from nature. During such stimulation this dialogue became meaningful. By recalling her chicken caretaking experience she identified herself as responsible, adept, caring and knowledgeable.



## Being with someone

In this next example, a woman quoted earlier began by discussing a small hill in the view out of the dining room window. This led rather quickly to her revelation of an intimate relationship.

GC: Have you ever been up on top of that hill?  
 PwD2: I don't think so. I think Tommy has but I haven't.  
 GC: Who has?  
 PwD2: Tommy.  
 GC: Tommy? Who's Tommy?  
 PwD2: Used to be with me.

The natural world for some participants provided a language of metaphor with which they were able to communicate spiritual matters. In the following example this same woman who was in the last year of her life was able through a connection to nature in the presence of another person to raise moral and ethical issues.

## Personifying the blackbird

GC: There was a bird a few minutes ago you told me you saw up on that hill.  
 PwD2: Ay. Has he gone?  
 GC: I don't know, can you see him?  
 PwD2: No.  
 GC: Do you remember what he looked like?  
 PwD2: Oh I do, a tan, dark coloured bird.  
 GC: What was he doing?  
 PwD2: Just looking at us lot, thinking when are we going to throw him any grub. Did we give him something?  
 GC: I don't think we did.  
 PwD2: He'll think we're so many miserable boogers. Well he would, wouldn't he. Wouldn't you, if you were hungry and we didn't give you a bit of nought to eat? You'd think to your sen [self] you're a miserable sod, wouldn't you? And I would.

## Predicting her future

After about a ten-second pause she began to raise the issue of her own mortality.

PwD2: How much more have you to do?

GC: Today...

PwD2: Only today? I've more than today I think. I think I have more than today to do.

GC: More than today?

PwD2: I think so...

In this brief and extraordinary exchange, a person with dementia moved fluidly from discussing wildlife to commenting on her life expectancy. Nature opened the door for this to occur. But it also required a listener to allow moments of silence in the dialogue. During such a moment, this person with dementia was able to shift the topic to a more profound and perhaps spiritual level.

The edge space dialogues enabled people with dementia to use nature to express themselves and to maintain personal identity through interaction with others. Edge spaces can be locations for social interaction and sensory stimulation from nature, with the potential to stimulate and enhance communication. This use of a person-centred research method in a specifically enabling space resulted in maintenance of self which is a contribution to the well-being of people with dementia (Gillies 2001; Harman and Clare 2006; Harris and Sterin 1999).

## Implications

Efforts to provide a participatory experience within a therapeutic framework can improve quality of care by contributing to a person's sense of self and personal identity. Working to help residents maintain their identity is a key dimension of quality of life according to *My Home Life*. The study described above was a creative approach to person-centred care as it allowed people with dementia to identify themselves through the recalling or re-imagining of favourite or meaningful activities. Social interaction enabled them to maintain their identity in spite of limited participation.

The research has quality of life implications for design, caregiving and methodology.

## Design implications

A care environment involves both physical elements and human interactions. The building and the contributions of individuals are equally important in providing optimal quality of life. This study demonstrated that views from edge spaces stimulated dialogue for people with dementia, and helped to reinforce personal identity by providing opportunities for creative self-expression. The following design guidance can help care environments to facilitate connection to nature.

### BUILDING ORIENTATION AND DESIGN

The height and physical positioning of the building on the land will impact the sensory experience of people using the home. The yearly path of the sun and how light and air enter the building largely determine the patterns of sun and shade inside and out, as well as the microclimates of spaces adjacent to the building.

### USE OF SPACE AND TIME

Consider the times when rooms are used. They are best when well lit with sunlight and more likely to feel warm and inviting. Consider the views at different times of day. Is there local activity to stimulate conversation or a peaceful green view for relaxing? Where possible, plan the use of the room for when the lighting and views are optimal.

### STRUCTURE AND FURNITURE

What a person is capable of doing in a space depends partly on physical features. Tables and chairs are often necessary for activities. The proximity of furniture to windows determines view potential. For useful outdoor spaces, provide access for mobility, comfortable sheltered seating, proximity to the entrance, manageable walks, beauty and sensory stimulation. Will the effort to go outside be rewarded by the experience that awaits a person?

## ROUTINE DOMESTIC NATURE-RELATED ACTIVITIES

Increasingly, the therapeutic role of normal domestic activities in the lives of people with dementia is being recognised, valued and promoted (Knocker 2007). Participation can generate meaningful conversation and bring purpose and useful occupation to people's lives, as well as structure to their day. Nature-related activities can also provide exercise and fresh air, and can connect people to their local community and neighbourhood. Examples include hanging out the washing, pottering in the garden, sweeping the path, picking fruit and preparing vegetables for a meal.

### Caregiving implications

Spending time talking to people with dementia is therapeutic as it provides necessary social interaction. This remedies the often short task-orientated exchanges between residents and caregivers which are unfortunately too common in many care settings. Meaningful conversation with a person provides him or her with opportunities for self-expression. Furthermore, the caregiver becomes aware of the self-identity roles that the caregiving process and activity interventions could then be designed to support.

### Research implications – person-centred methods

People do not operate in a spatial or a social vacuum. Their response and interaction emerges out of the social and physical context of the moment. In this study, a research space, which is also a person's living environment, empowers and enables that person's interactions within it. A research exercise can potentially provide an environment and investigate it at the same time. In this way human–environment interaction reflects a methodology of participatory engagement – a creative approach to person-centred care.

Design, care and research implications were briefly mentioned. To *design for nature in dementia care*, by addressing the physical and social aspects of the care home environment, consult the book by that title (Chalfont 2007b).

## Conclusion

This study supports the importance of maintaining identity in later life and offers one research method to achieve it within the context of care

homes. While personal identity can survive through late stages of dementia, social identity depends on interaction with others (Sabat and Harré 1992). Therefore, failure to recognise people's identity and provide them with the necessary tools and opportunities to maintain it will reduce their well-being. On the contrary, according to Cohen-Mansfield, Parpura-Gill and Golander (2006), 'understanding and enhancing a person's identity can improve overall care for people with dementia, resulting in more individualized care and thereby enhancing the person's well-being...[furthermore] long-term care settings must strive to provide avenues for identity expression' (p.211).

The following points illustrate the key messages and implications of this chapter for work within care homes:

- A care home involves the residents, the staff, the building and the natural world – successful improvements involve both people and place.
- Connection to nature depends on physical and social elements.
- The building orientation, furniture, physical elements, and the schedule of daily use affect the lighting, ambience and views of any room, impacting the person's experience within it.
- A view to nature can stimulate the senses, prompt social interaction, provide topics of conversation, nurture spirituality, improve caregiver interaction and enhance family visits.
- Edge spaces of buildings can potentially contribute to well-being.
- A person's ability to engage in nature-enhanced dialogue seems undiminished by even advanced levels of cognitive impairment.
- The natural world provides a language of metaphor to communicate spiritual matters.
- The research process can be a creative experience for the participant.

This chapter provides evidence that recognising and attending to each of these points can help to maintain the identity of older people with dementia living in care homes, and enhance the care experiences of their families and staff working with them.

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