

Circulation

Those with cognitive impairments often experience deficits in areas such as disorientation, memory loss, problem solving, reasoning, judgement, attention, awareness and visual comprehension to mention a few. There are also sensory losses that result in difficulty interpreting what is seen, heard, felt, smelled and tasted. These are all important points to be aware of when considering the circulation spaces as they influence the individual's ability to navigate their environment, affecting one's autonomy, sense of security and privacy.

- What are your first impressions?
- Is the space formal/informal?

Cognitive impairments such as dementia can cause individuals to feel confused as to what the appropriate behaviour should be; this can be eased if the environment has clear indications through its design and atmosphere to make this understood. Creating clear cues in a comfortable and welcoming setting can promote and encourage decision making in a non-threatening calming environment.

- Is there enough natural/artificial light for you to see clearly?

It is important to maintain the correct balance of natural and artificial lighting in circulation areas. Too much direct natural light and artificial light can cause glare and cause agitation, however, with too little light many may struggle to navigate, as the aging eye needs an increased amount of light. Margaret Calkins books on the aging senses (bibliography) discuss the different lighting options in great depth.

- Are the rooms off a central area or corridor?



Whether the space is our own house, hotel or residential/nursing home, how the rooms are arranged in the space influences how we initially chose to navigate around the space. There are many possible layouts however there are two prominent categories, those where rooms are focused around a central area, and those off a corridor be it single or double loaded (rooms off both sides of a corridor).

It is widely accepted that the corridor option is not ideal, however with economical considerations this option is the most feasible. In this case it is important to attempt to design the corridors to be as short as possible, with good natural/artificial lighting and with recessed (seating/activity) areas to

break up the space. It is also advisable to create a circulation route that loops, or if this is not possible, use the ends to create a glazed sitting area.

Rooms that surround a main space are advantageous as they exploit the ability to directly view activity spaces creating direct cues, however, over stimulation may pose a problem.

- What can you hear?
- Do you understand what you are hearing?

Sensory cues can be significant especially when they trigger a familiar response or memory, these types of cues might include, a piece of music, sound of a bath running, smell of a favorite bubble bath or laundry powder, morning coffee or bread baking, all of which can help orientate a person to an anticipated place.

- Does the space assist you in understanding the building?

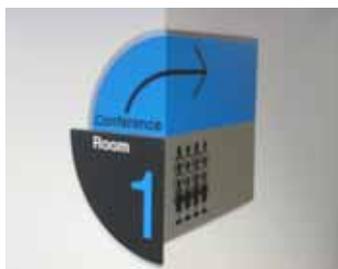
Meaningful and familiar cues are the most successful when used in a clear layout with visibility of selected components, and attention to appropriate scale all of which can help assist in understanding the building.

- Do you know how to behave?

A degenerative disease such as Alzheimer's (a disease which causes dementia) can result in an individual's cognitive abilities declining in stages of time. As the disabilities increase in severity, it may reach a point where access to all areas of the building is no longer a safe or secure option.

However, when a locked door is approached and not able to be opened (especially a glazed door), an obvious sense of frustration can be expected. In order to avoid such reactions areas can be camouflaged to work in reverse of a direct cue. Doors can be painted the same colour as the wall, handles can be made difficult to see, handrails and skirting's can be continued along door.

- How do you decide which direction to go?



It is important that the design of the environment promotes maximum exploitation of available skills in order to maintain them for as long as possible. This can be realised through the use of direct and indirect cues providing the environment does not become over stimulated.

A combination of direct and indirect cues are required to help make particular areas clear. Direct cues highlight places of focus and indirect emphasise a tool to guide the person to a place¹.

Signage can be both direct and indirect, depending on where they are placed. This photograph above (Iris Murdoch Centre) illustrates how signage can be used around corners to add to its range of visibility. Ideally signage should combine word and symbolic association. It is important that the text is large, preferably with dark lettering on a light background, with realistic graphics as opposed to abstract. Additionally, signage should be well lit and positioned in a place which is most likely to be seen, this is often lower, as it has been noted that people with cognitive disabilities such as dementia tend to look mostly towards the floor, as they walk.

Handrails with grooves on the end to signal end, or entrance to a room can be another useful indirect cue for those who are visually impaired.

■ How can you tell what each door in the hall means?



A way of highlighting a particular room (especially required when living in a home with multiple rooms) is to signal individual traits through the use of personalised doorways. Aids for personalisation might include the use of photographs of the person (age appropriate as different people recognise themselves more strongly at different times in their lives, it is worth working out what age the individual responds most strongly with). Additional cues might include; name plate, number, colour of door, or objects. An additional way to highlight a particular door is for it to be recessed; creating room for personal objects with appropriate levels of illumination to highlights selected cues.

■ Do all the doors look the same or are some distinctive?



As a way of direct cueing it is suggested that significant doors such as bathrooms are highlighted with a particular style or colour. Bright yellow is an ideal choice (as shown here at the iris Murdoch centre) as Colour Agnosia that causes reduced colour sensitivity, exhibits reds, oranges and yellows as the easiest to distinguish. Areas such as the bathroom, W.C should be represented in an identical manner throughout a building, to keep the cue consistent.

- Do you think you would feel more comfortable if you could see in a room before you enter?



Being able to see into a space, be it through a window or a glazed panel in a door, can provide benefits for those with cognitive impairments such as dementia. As previously discussed, knowing how to behave in a particular situation can cause anxiety. Therefore, by enabling the individual the opportunity to see what is going on in a room, and decide whether to participate or not, allows the individual to feel autonomous and in control of their decisions.

The photo above shows the application of a window to provide views into a shared sitting area at Burnfield Care Home; alternative options might include opening particular areas, such as the dining room or activity room into the circulation space, whilst defining the areas with low walls, glazed walls etc It could be argued that this kind of direct visual connection maximizes way-finding, however, it could be equally said that it creates visual clutter and such spaces are not conducive in maintaining concentration.

- Is this a space where you could spend a lot of your time?
- Is it the heart of the home and the best place to see all the comings and goings?
- Is it a safe place to sit, would you get in the way?

Circulation spaces can provide a lively active area in which many people would enjoy spending time just observing. Recessed seating areas can help to break up long corridors whilst allowing a person to passively or actively participate in activity from a safe location.

ⁱ Fleming, R., Forbes, I., Bennett, K. (2003)