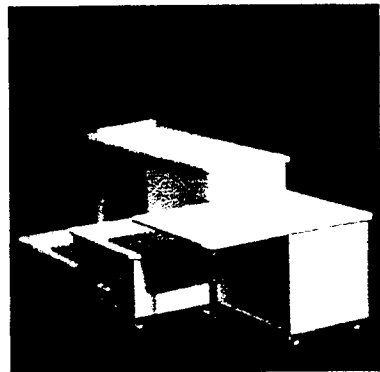


**Chapter 3**  
**The Physical Environment and**  
**Dementia Day Care**



## Introduction

The role of the physical environment in adult day care has rarely been explored. In general terms, issues associated with the physical setting are limited to appearance, safety, wayfinding, thermal comfort, and sensory stimulation (Lindeman, et.al., 1991). While these issues have been raised, little design guidance or research has been conducted in specific regard to adult day care. Of great concern to care providers is the compliance of the physical setting with building codes and regulations. The difficulty with this is that many codes do not even address adult day care, resulting in the misapplication of other codes to this very unique place type. As one example, one adult day care operates under a perpetually suspended certificate of occupancy, as they do not comply with *child* day care standards!

Because of this lack of definition of adult day care, the National Adult Day Services Association has recently crafted a set of standards and guidelines (NADSA, 1997). Issues of the physical setting raised by these guidelines include: provision of program space per client; distance to and quantity of toilets; and many others which are really reiterations of most life safety code issues. Thus even in terms of standards there is little guidance in regard to the physical design of adult day cares.

*Currently, the standards and guidelines for adult day care tend to remain focused on life safety and hygienic concerns, rather than a more critical consideration of therapeutic goals.*

## Three Primary Facets of Quality in Adult Day Care

The most complete inquiry into the physical design of adult day cares was a study by Diaz Moore (2000) in which three adult day cares are examined in a comprehensive, comparative case study. Through a bottom-up analysis rooted in the daily life experience of each place, three facets of place quality emerged as the primary qualities shaping the character of adult day care as a place:

- Participant control;
- Social Affordance; and
- Adaptability.

*The three primary facets of adult day care quality are:*

- *Participant Control;*
- *Social Affordance; and*
- *Adaptability.*

### *Participant Control*

An omnipresent dichotomy between organizational and participant control exists in all chronic care settings, including adult day care. Control has four aspects: control over resources; control over choice; control over access; and conformity to expectations (c.f. Altman, 1975;

*Participant control is the degree to which a participant*

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Kahana, 1982; Moos & Lemke, 1996). In general terms, it is staff who provides participants with the resources necessary for any given therapeutic activity. This empowers staff and compromises the exhibition of self-initiation of clients. Often adult day cares attempt to keep large groups of participants together either not providing options or restricting their use. Finally there is a powerful sense of social obligation in adult day cares as all interactions occur in a public arena. Yet often, the cueing of expected behavior is so poor or conflicted that it is difficult to determine what is appropriate. Together with the heightened sense of social obligation, this likely precipitates a safe harbor course of action – withdrawal.

*is enabled to exercise personal choice and is facilitated to do so in a socially acceptable manner.*

### *Social Affordance*

Four types of social interactions may occur in a place: public interactions, which tend to be impersonal; socio-consultive, which are congenial in nature; personal interactions, where attachment begins to develop; and intimate interactions (Hall, 1966). Most of the interactions in adult day care would be classified as public. Such interactions involve the least commitment and allow the person to remain on the periphery of the action. Because of the lack of commitment and their superficiality, they are typical the least meaningful interactions. There are several issues related to the social affordance found in adult day care:

*Social Affordance is the degree to which the place enables social interaction.*

1. The aggregation of large groups – larger than that required for any particular activity to occur (i.e. 18-24 people in a discussion when 8-12 would do);
2. The spatial distance that results from aggregating such a number of individuals together which cue public behavior;
3. The poor social legibility often found in adult day cares that operate within multi-purpose rooms; and
4. The high degree of visual exposure which heightens the sense of social obligation, which together with the previous point, is a source of great conflict.

### *Adaptability*

Often the focus of adaptability is limited to how accessible the environment is to the needs of the wheelchair-assisted. Here, adaptability is seen as having three aspects: customization of the physical environment; policy variance / programmatic variety; and staff improvisation. Often the physical settings of adult day cares are designed with a great sense of flexibility. However, often once a program is found to work to a modicum of success, such programs cease to vary and seize the flexibility inherent in the physical design. Such flexibility is often afforded by the provision of wide-open

space, however such configurations of space also render a high degree of visual exposure. While this assists staff in their surveillance of participant activity, it also coercively restricts staff improvisation by being subjected to the scrutiny of peers. Such a situation tends to reinforce doing things “by the book,” even if the organization seeks more improvisational acts from its staff.

*Adaptability is more than adapting to the needs of the differently abled; policies and programs may adapt to changing needs and staff need to adapt in everyday situations.*

**The Resulting Character of Adult Day Care:  
The Church Basement**

The core pattern of adult day care as interpreted by Diaz Moore (2000; 282), is “The Church Basement” which is meant to convey “the concept of a large, undifferentiated space in which different activities take place and from which there is little, if any, variation in activity and degree of visual exposure.” This character is associated with providing participants with a uniform stimulation level throughout the day, by keeping them within the same spatial confines. Props are usually few and far between and often access is controlled by staff. Such spaces coercively encourage larger group sizes and higher participant – to – staff ratios. Due to overpopulating theory, such groups may discourage participant involvement and the lack of cues may strip vital environmental information from individuals who need all the assistance they can get in deciphering what is appropriate behavior. Add to this the shortened attention span of the cognitively impaired, and there is a recipe for thwarting therapeutic benefit. All in all, Diaz Moore (2000) assesses this core characteristic of adult day care as being associated with:

- Minimizing participant privacy;
- Enhancing organizational control;
- Providing unfettered visual access;
- Supporting adaptability;
- Reducing social affordance; and
- Maximizing safety.

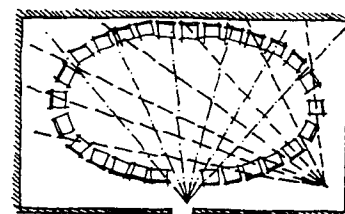


Figure 3.1: Diagram of the “Church Basement” (from Diaz Moore, 2000).

*Many Adult Day Cares implicitly recreate conditions of the Church Basement in their facilities. The church Basement is meant to convey “the concept of a large, undifferentiated space in which different activities take place and from which there is little, if any, variation in activity and degree of visual exposure.”*

**Emerging Design Issues for Improvement**

*Social Legibility*

One aspect of the social legibility of physical settings is how

different spaces are spatially organized in relation to one another. These spatial relationships, Hillier (1996:24) argues, tend to “generate and constrain some socially-sanctioned — and therefore normative — pattern of encounter and avoidance.” In so doing, they help define the nature of the place. For instance, a solid wall between two adjacent spaces suggests that those two spaces have no functional relationship basis for their adjacency. Once a door is punctured through the wall, that relationship is completely changed. In examining these types of spatial relationships in a set of adult day cares, Diaz Moore (2000) found their spatial definitions to have a tremendous range of variance. This suggests that how places of adult day care are to function remains quite ill defined. The development of these relationships and how they facilitate specific activities and thereby forward particular goals would be an area of inquiry well worth investigation.

Within each setting, the cueing of socially-expected activity is quite weak. Little is easily understood by participants about what is to occur there, the process of interaction that will take place and one’s role in facilitating that activity. The social illegibility of the situation is likely to create a sense of disorientation. Together with the social obligation of public interactions established by the typical openness of the setting, these are likely to create tremendous burden and perhaps an overload of environmental press for individuals at these competence levels. What one is supposed to do, how they are to relate to others and how such actions are to take place is central in shaping one’s behavior, their assessment of the place and therefore impacts their affective response to the situation. If these socially shared understandings are not comprehensible; people’s behaviors, affective states and overall experiences of the place are compromised. If, as Calkins (1996:38) points out, “people with dementia find it more difficult to meaningfully encode unfamiliar information and experience greater difficulties recalling new or unfamiliar information,” the importance of familiarity and redundant, consistent cueing is essential in easing the “demand” of interpreting the purpose of the place.

### *Socio-Physical Aspects of Group Size*

In order for an activity to have maximum benefit, the number of people engaged in the activity needs to be approximately equal to the number required for the interaction to be perpetuated. Usually the activity to participant ratio in adult day care greatly exceeds the number of participants necessary to enact the activity. Barker’s (1968) “undermanning” (sic) theory suggests that a surplus of participants in an activity

actually excludes people from participating. This can partially explain the degree of low social engagement found in these places (c.f. Diaz Moore, 2000). Creating congruence between activity and group size would influence both activity and architectural programming of adult day care and have a significant impact upon the negotiation of this place-type in the larger society.

Another impact of large activity groups is the physical reality that people take up space; therefore the larger the group, the greater the distances involved. Hall (1966) suggests that distances of greater than twelve feet imply that interactions are public in nature. Such public interactions have several characteristics. First, they are the least therapeutically beneficial (Unruh, 1983). Second, they are the types of interactions to which people feel the greatest need to act appropriately (Archea, 1977). DeLong (1970) notes that due to sensory acuity losses, such as hearing and vision impairment, the personal distance schemas of the elderly are likely to be shorter in distance, suggesting that a distance shorter than twelve feet is likely to be where “publicness” is perceived. Because most activities in adult day cares occur in groups of twelve or more, distances between participants are likely to extend close to or beyond twelve feet. This physical reality itself compromises the therapeutic potential of such activities.

### *Universal Design*

Stemming from both the issues of participant control and adaptability stems the important concept of universal design. In an effort to maximize participant independence and yet be responsive to changing needs, the concept of universal design can be defined as “the design of products and environments to be usable to the greatest extent possible by people of all ages and abilities” (Story & Mace, 1999: 2). It is almost impossible to fathom an environment that could ever be used by all people under all conditions achieving the same degree of success. For this reason universal design is best considered an approach to design rather than an outcome.

The Center for Universal Design has established seven principles to guide the design process aspiring to achieve the goals of universal design. These seven principles are:

- *Equitable Use*  
The design is useful and marketable to people with diverse abilities.
- *Flexibility in Use*  
The design accommodates a wide range of individual preferences and abilities.
- *Simple and Intuitive Use*

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Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills or current concentration level.

- *Perceptible Information*  
The design communicates necessary information effectively to the user, regardless of ambient conditions of the user's sensory abilities.
- *Tolerance for Error*  
The design minimizes hazards and the adverse consequences of accidental or unintended actions.
- *Low Physical Effort*  
The design can be used efficiently and comfortably and with a minimum of fatigue.
- *Size and Space for Approach and Use*  
Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture and mobility.

### Summary

The emerging design issues of Social Legibility, Socio-physical Aspects of Group Size, and Universal Design are directly derived from the three facets of place quality that are central to adult day care; namely, Participant control; Social Affordance; and Adaptability. These issues structured the inquiry as outlined in Chapter 4 and presented in Chapter 5. Chapter 4 will discuss the process (or method) by which these issues were explored and Chapter 5 will present the innovative solutions designed in response to these issues.