

# Physical and Virtual Environments: Meaning of Place and Space

David Seamon

Since the 1980s, occupational therapists and scientists have given increasing attention to how qualities of physical environments and places contribute to human health, well being, and productive occupations (Corcoran & Gitlin, 1997; Dunn et al., 2003; Gitlin, 2009; Kielhofner, 1995, ch. 7; Kiernat, 1987; Rowles, 2003; Stewart et al., 2003; Ulrich et al., 2008). In this overview, I emphasize how human beings experience environments, places, and spaces; therefore, I draw largely on phenomenological research. Most simply, **phenomenology** is the description and interpretation of human experience (Finlay, 2011; Seamon, 2000; van Manen, 1990). In this chapter, I briefly describe the phenomenological approach and then consider four environmental themes important for occupational therapists and scientists: (1) place; (2) environmental embodiment; (3) home and at-homeness; and (4) digital technology and virtual places.

## Phenomenology and Occupational Therapy

To study human beings phenomenologically is to study human experiences, behaviors, situations, and meanings as they arise in the world of everyday life. For occupational therapy and science, one significant phenomenological topic is the **lifeworld**—a person or group's everyday world of taken-for-grantedness normally unnoticed and thus hidden as a phenomenon (Finlay, 2011; Seamon, 1979; Toombs, 2001; van Manen, 1990). One aim of phenomenological research is to disclose and describe the various lived structures and dynamics of the lifeworld—for example, the mostly unnoticed but crucial importance of places in peoples' daily lives. An understanding of a client's lifeworld is central for occupational therapists, since, typically, the taken-for-grantedness of his or her world has shifted or disappeared, including occupational dimensions (Channine, 2009; Finlay, 1998; Padilla, 2003).

Most of the time in everyday life, the lifeworld is transparent in the sense that day-to-day life just happens, grounded in spatial-temporal patterns that are more or less regular (Seamon, 1979). An integral part of this lived transparency is good health, which is lived as a kind of tacit attunement normally not given direct attention (Carel, 2008; Gadamer, 1996; Stefanovic, 2008; Svenaeus, 2001; van Manen, 1998). In contrast, illness and disability activate a resistance to the usual lifeworld in that they transform its transparency into awkwardness, unease, or discomfort. Daily life that, before, simply unfolded and happened without the need for self-conscious awareness, is now a continual event to be faced, whether because of pain, inconvenience, or inability to perform as usual. In this sense, one task of occupational therapists is to understand the client's former mode of "being at home" and to locate pathways whereby he or she can re-access and recover that mode, in the same or related fashion (Svenaeus, 2001, pp. 94-104). As the next sections demonstrate, qualities of places and physical environments can help facilitate this return to "being at home."

## Place and Occupational Therapy

One integral dimension of the lifeworld is **place**, which can be defined as any environmental locus that gathers individual or group meanings, intentions, and actions spatially (Casey, 2009; Malpas, 1999; Relph, 1976/2008). A place can range in scale from a furnishing or room to a building,

neighborhood, city, or region (Manzo, 2005; Relph, 1976/2008). One of the most accessible phenomenologies of place is geographer Edward Relph's Place and Placelessness (Relph, 1976/2008). Relph argued that the existential crux of place experience is insideness—in other words, the more deeply a person or group feels themselves inside an environment, the more so does that environment become, existentially, a place. The deepest experience of place attachment and identity is what Relph termed existential insideness—a situation where the person or group feel so much at home and at ease in place that they have no self-conscious recognition of its importance in their lives, unless it or people change in some way—for example, one's home is destroyed by flood or one is no longer able to walk because of an auto accident. In one sense, a major aim of occupational therapists is working with a client in ways whereby, as much as possible, they might help him or her reestablish existential insideness.

In his phenomenology of place, Relph described several other modes of place insideness and its lived opposite, outsideness—a situation where the person or group feels separate or alienated from place in some way. These modes of place experience (table 18-1) are useful for the occupational therapist because they provide an accessible language through which can be identified particular place experiences in terms of the intensity of meaning and intention that a person and place hold for each other. Through illness or accident, for example, one's taken-for-granted sense of existential insideness can be ruptured, and he or she falls into a particular mode of existential outsideness in which the lifeworld as it was before is now different, often strangely or uncomfortably so. Relph's modes of insideness and outsideness offer a flexible means for distinguishing the lived experience of place from its material or assumed qualities. In domestic abuse, for example, the home, typically a place of existential insideness, becomes a place of existential outsideness.

One example of how the themes of place, insideness, and outsideness can offer occupational therapists valuable insights is the research on rural older people conducted by gerontological geographer Graham Rowles (2003). Emphasizing that their lifeworlds typically involve strong emotional attachments to place, Rowles identified three dimensions of place related to Relph's theme of existential insideness: first physical insideness, a sense of being physically entwined with the environment; second, social insideness, whereby older people feel an integral part of their community through social relationships and exchanges; and, third, autobiographical insideness, the ways in which places and place qualities coalesce into an environmental mosaic relating to and marking out one's personal and communal history in relation to those places (Rowles & Watkins, 2003, pp. 78-79). Rowles (1999, p. 270) emphasizes that understanding place experience is important for occupational therapists because it reveals "the role of the person's experienced spatiotemporal environment in conditioning his or her response to dysfunctions and to intervention strategies meant to remedy them."

A second illustrative study drawing on the theme of place is health sociologist Andrew Moore's case study of the lived process whereby hospice day-care patients came to understand the hospice as a place in the context of their illness (Moore, 2010). Moore identified and documented three stages in the process: first drifting, a situation immediately before and shortly after arrival when patients were uncertain about the hospice and questioned its sustaining value. As patients spent time there, drifting shifted to sheltering, a feeling of familiarity and at-homeness. In turn, sheltering set the stage for venturing, the patient's seeking out new experiences and situations. Through this process of "place making," patients "found 'home', both within the self and within the world" (ibid., p. 160). One important occupational component of the lived shift from drifting to sheltering was the availability to patients of complementary therapies, including massage and aromatherapy, which Moore found significant for helping patients form trusting, embodied relationships with the staff, other patients, and the hospice as a place.

Table 18-1. Modes of Insideness and Outsideness (based on Relph, 1976/2008, pp. 49-55)

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Existential insideness  | Feeling completely at home and immersed in place, to such a degree the experience is not usually noticed unless the place dramatically changes in some way (e.g., one's home and community are destroyed by natural disaster). The mode of place experience most human beings strive for; typically, the mode of place experience that occupational therapists work toward recovering for their clients.                                                                                                          |
| Existential outsideness | Feeling alienated or separate from place, which may seem oppressive or unreal; e.g., the experience of homesickness or the deep sense of disjunction one feels, having suddenly become disabled because of an accident. The mode of experience that many people fall into after a disabling accident or after becoming ill or learning they are ill. A major task of the occupational therapist is to help clients shift, as much as possible, out of existential outsideness back toward existential insideness. |
| Objective outsideness   | A dispassionate attitude of separation from place, which becomes an object of study or directed attention; e.g., designing a hospital using measurable criteria like size of potential patient pool, square footage based on functional needs, building layout determined by staff efficiency, and so forth.                                                                                                                                                                                                      |
| Incidental outsideness  | The experience in which place is a background or mere setting for activities; e.g., the short-term patient's limited relationship with the hospital environment in which she finds herself temporarily.                                                                                                                                                                                                                                                                                                           |
| Behavioral insideness   | A deliberate attending to the appearance of place; e.g., using environmental cues like landmarks and signage to find one's way around a place. The first stage in becoming an insider to a new place; e.g., mastering the layout of a hospital complex where one has just started working.                                                                                                                                                                                                                        |
| Empathetic insideness   | Being open to place and attempting to understand it more deeply; e.g., the occupational therapist's effort to see and to understand the client's lifeworld as it really is and not as the occupational therapist supposes it to be. See case study 18.1, "An old woman's lifeworld."                                                                                                                                                                                                                              |
| Vicarious insideness    | Deeply felt secondhand involvement with place; e.g., learning about worlds of illness or disablement through films, novels, or autobiographical accounts (e.g., Bauby, 1997; Frank, 2002; Hockenberry, 1995; Hull, 1990; Murphy, 1987). See case study 18.1, "An old woman's lifeworld."                                                                                                                                                                                                                          |

## The Lived Body, Body-Subject, and Environmental Embodiment

In exploring human experience, phenomenologists emphasize that humans are bodily beings, a lived fact important for occupational therapy's central focus on the well being of the whole person. A phenomenological perspective claims that bodily being is more than physical corporeality: "The body is our basic mode of being in the world, consciousness is embodied consciousness, and a person is embodied being, not just the possessor of a body" (Madjar & Walton, 1999, p. 4). Phenomenologists speak of the **lived body**—a body that simultaneously experiences, acts in, and is aware of a world that, normally, responds with immediate pattern, meaning, and contextual presence (Finlay, 2006; Seamon, 2012; Simms, 2008b; Toombs, 2001). The lived body is the primary means of being in, experiencing, and encountering the world. The lived body falls ill, it experiences pain, it fails to heal, it heals badly, it becomes older, it remains impaired, it returns to good health, it learns new ways to cope with illness or disablement.

In considering the environmental and place dimensions of the lived body, phenomenologists focus on **environmental embodiment**—the various ways, both sensorily and movement-wise, that the lived body engages and coordinates with the world at hand, especially its environmental aspects (Gallagher, 1986; Seamon 2012; Simms, 2008a & b). A key thinker is French phenomenologist Maurice Merleau-Ponty (1962), who emphasized what he termed **body-subject**—the pre-reflective but intelligent awareness of the body manifested through habitual action and typically in sync with the environment in which the action unfolds. Body-subject can incorporate considerable temporal and environmental versatility as expressed in more complex bodily movements and ensembles extending over time and space (Allen 2004, Cole 2004, Hill 1985, Seamon 1979). One can speak of at least two such ensembles: first, **body routines**—sets of coordinated corporeal actions sustaining a specific task or aim, for example, driving, cooking, or lawn mowing; and, second, **time-space routines**—sets of more or less habitual bodily actions that extend through a considerable portion of time, for example, a getting-up routine, a going-to-the-gym routine, or a going-to-church-and-lunch routine (Seamon, 1979, 2002). Clearly, many occupational activities involve such taken-for-granted bodily ensembles.

For teaching occupational therapy, body-subject and its extended habitual patterns are an important dimension of everyday human experience that can be explored through firsthand phenomenological exercises—for example, having occupational-therapy students move a thing that has a place in their home to a different place; or setting oneself to go to a destination by a route other than the one he or she normally travels (Seamon, 1979). It is important that students really see and understand the significance of the lived presence of body-subject dynamics in their own daily experiences so that they are better able to empathize with the lifeworld changes, distortions, and difficulties that often accompany a client's illness or disablement.

Also useful in facilitating an understanding of body-subject are phenomenological studies describing how illness or disability shift one's sense of environmental embodiment. One striking example is the first-person phenomenological work of philosopher Kay Toombs (2001), who suffers from multiple sclerosis, an incurable, progressively disabling disease of the central nervous system. In her narratives, Toombs elucidated how the illness has affected her ability to see, to hear, to sit, and to stand. Through her perceptive description and interpretation, one realizes the ways in which her lived relationship with space and place has become progressively more limited and more unsettling. For example, Toombs described how her loss of mobility has resulted in a "profound disruption of the lived body" in regard to her everyday environment:

In the normal course of events, locomotion opens up space, allowing one freely to change position and move towards objects in the world. Loss of mobility anchors one in the Here, engendering a heightened sense of distance between oneself and surrounding things. A location that was formerly regarded as "near" is now experienced as "far." For example, when I could walk, the distance from my office to the classroom (about thirty yards) was unremarkable—as were the stairs I climbed to reach the third floor of the building. As my mobility decreased, the office appeared near to the classroom on the way to the lecture, but far from it on the return journey; the stairs became an obstacle to be avoided, as much as possible, by using the elevator. Today, if I were to be without my wheelchair, the distance from the office to the classroom would appear immense—absolutely beyond my capacity to reach it. And the third floor is unattainable when the elevator malfunctions, leaving me stranded waiting for the repairman. . . .

Loss of mobility illustrates in a concrete way that the subjective experience of space is intimately related to both one's bodily capacities and to the design of the surrounding world. The answer to the question, "Is it too far to go?" has little to do with the distance that can be measured in feet or yards. For the person with mobility problems, the answer depends, in large part, on what is between here and there. Are there obstacles that make it impossible to maneuver with crutches or a cane? Is the terrain suitable for a wheelchair? (Toombs, 2001, p. 249).

Phenomenological explications like Toombs' are important for occupational therapy and science because they provide detailed, experience-grounded depictions of specific modes of illness and

disability and how they rupture the lived transparency of the lifeworld, including aspects of environmental embodiment (van Manen 1998). Related phenomenological studies focus on blindness (Hill, 1985; Allen, 2004); deafness (Finlay & Molano-Fisher, 2007); Alzheimer's (Todres & Galvin, 2005); multiple sclerosis (Finlay 2003); mental illness (Walton, 2001), child and adult motor disabilities (Bjorbaekmo & Engelsrud, 2011; Cole, 2004; Connolly, 2010; Gooberman-Hill, 2007); living with chronic pain (O'Loughlin, 1999); dealing with chronic leg ulcers (Bland, 1999); surviving breast cancer and mastectomy (Shin, 1999); disabled persons' mastering wheelchair use (Standal, 2011); and rehabilitation following flexor tendon surgery (Fitzpatrick & Finlay, 2008).

One exemplary study is movement educator Maureen Connolly's efforts to embed meaningful movement into the everyday school activities of children with ASD—Autism Spectrum Disorder (Connolly, 2010). Recognizing that these children do best when everyday routines and schedules are highly predictable, Connolly aimed, through environmental alterations and movement education, to help children “gradually learn to accept greater levels of variation and unpredictability” (ibid., p. 114). For example, Connolly created a classroom environment incorporating subdued lighting; thick, absorptive, unstable surfaces; contrasts in ceiling height; and different places within the classroom for different tasks and functions. These design elements slowed and organized the movements of the children and provided a means, through physical contact, for them to experience a more placid and bodily-grounded engagement with their surroundings.

As Connolly's teaching efforts suggest, an integral component of environmental embodiment is the physical and spatial environment in which the lived body finds itself. Sometimes drawing on **universal design** (fabricating products and environments that work well for almost everyone), occupational therapists and other professionals have considered how architecture and environmental design can sustain and enhance patients' and clients' lifeworlds (Preiser & Smith, 2011; Rickerson, 2009; Söderback, 2009; Treffer & Hobson, 1997; Ulrich et al., 2008). Brooks and colleagues, for example, examined how patients in assisted-living and rehabilitation settings made use of bedside-table devices and then designed three improved “smart stand” prototypes more efficient in terms of object reach, placement, storage, and mobility (Brooks et al., 2011). In a study that examined assisted-living residents' walking behaviors, Lu (2010) developed design recommendations to improve residential walkability, including looped indoor and outdoor walkways; hallways with furnished alcoves usable by residents who otherwise might obstruct corridors; and windowed interior walkways that offer residents a visual connection to the world outside, especially the natural environment (Ulrich et al., 2008, pp. 87-91).

## Home and Universal Design

Another important aspect of the lifeworld is home and at-homeness (Blunt & Dowling 2005; Gitlin, 2003; Mallett, 2004; Manzo, 2003; Moore, 2007; Rioux & Werner, 2011; Seamon, 2010). These studies indicate that home has specific physical, personal, social, cultural, and political dimensions but, experientially, is lived as a human and environmental whole that incorporates and facilitates a wide range of existential significances. Home is not only a physical place, but a locus of activities, an anchor of identity, a repository of memories bonding past and present, and a center of stability and continuity (figure 18.1). This literature also emphasizes that some homes can involve a “shadow side” of discomfort, distress, and trauma—for example, homes of domestic violence (Anthony, 1997; Blunt & Dowling, 2005; Manzo, 2003).

For occupational therapy, one key conceptual and lived division is home as a physical environment versus home as a locus of human life and meaning (Rowles, 2006). In studying the former, one considers the home as a dwelling incorporating the equipment, things, and spaces of daily living. One important question is how the dwelling's design and construction sustain or interfere with

environmental embodiment, especially if residents are ill, older, or dealing with impairments (Eisenfeld, 2010; Kopec, 2006). In regard to aging, for example, research demonstrates that older people typically spend more time in the residence and increasingly centralize their home by setting up “control centers”—for instance, a favorite chair and side table that allow the older person an easy reach to many of his or her daily needs (Rosenfeld & Chapman, 2008; Schaie et al., 2006). In addition, older people may rearrange furniture and other home furnishings to remove obstacles to mobility or to



Figure 18.1. An older couple at home in their living room in northern England. Photograph by Walter Lewis and used with permission. © 2011 Walter Lewis.

provide sturdy anchors so they are less likely to fall when walking (Rowles, 2006).

There is also the question of how, through design, existing houses and dwelling units can be modified to match more closely the lifeworld needs of residents as they age or become ill or less able (Kopec, 2006). Occupational therapists and other professionals have been actively involved in working out effective ways, through environmental interventions and assistive technology, to make home environments more accommodating—for example,

widening doors, installing grab bars, adding entrance ramps, providing intercom systems, and so forth (Cook McCullagh, 2006; Corcoran & Gitlin, 1997; Iwarsson,

2009; Söderback, 2009; Steinfeld & Danford, 1999; Treffer & Hobson, 1997). In some situations, however, environmental interventions and assistive technology in the home can disrupt residents' lives as Moore and colleagues (2010) demonstrate in their study of the medical equipment and technology that many children with complex needs depend on in their homes: “The home space becomes an appropriated landscape—no longer a family landscape but a landscape of care, ‘like a mini hospital’, with some parents feeling this particularly keenly” (ibid., p. 4).

Drawing on the principles of **universal design**, architects and interior designers have made major efforts to envision housing and other environments that accommodate the needs of users, whatever their age or degree of impairment (Cook McCullagh, 2006; Jennings, 2009; Preiser & Smith, 2011; Steinfeld, 2010; Steinfeld & Danford, 1999). This work is grounded partly in understanding how people function at different stages of life and in regard to different degrees of ableness and disablement (Kopec, 2006). One aim is homes that support **aging-in-place**—in other words, dwelling units that residents, if they so choose, can occupy from childhood to old age unless illness or impairment come into play (Rosenfeld & Chapman, 2008; Steinfeld, 2010; Young, 2011). As indicated by the dwelling design illustrated in figure 18-2, this **universal housing** includes such features as:

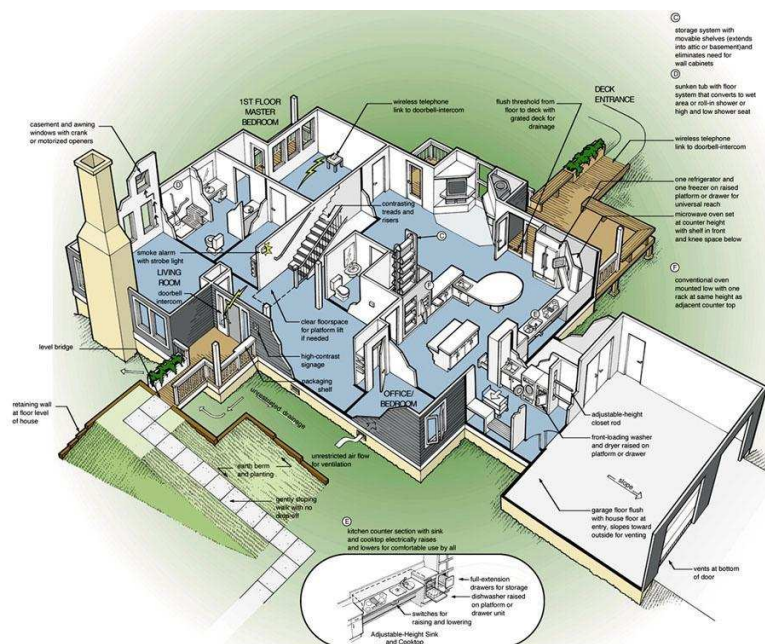
- stepless entrances with flush thresholds;
- kitchen and laundry appliances at convenient heights;
- bathing fixtures allowing multiple bathing options;
- clear sightlines and adequate space for wheelchair use, including wide hallways, pocket doors, roll-under sinks, and wheelchair-height fixtures.

Designers developing universal housing emphasize that issues of convenience, mobility, accessibility, and visitability are not limited to the dwelling alone but extend to the realm of the dwelling's immediate surroundings and larger neighborhood (Steinfeld, 2010). Research demonstrates that, for a wide range of individuals, gardening is often an important domestic occupation, and one design focus is integrating nature, especially gardens, with the home environment (Ashton-Schaeffer & Constant, 2005; Bhatti, 2006; Cooper Marcus & Barnes, 1999). If a universal dwelling is located in a car-dependent neighborhood, it cannot provide wider-scale accessibility for

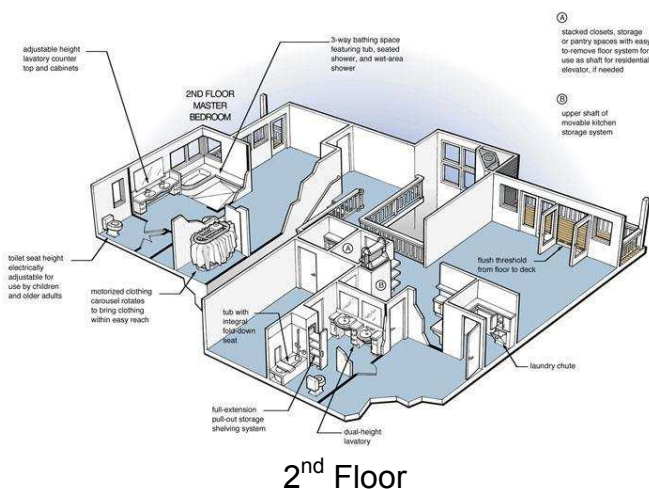


residents who cannot drive—an increasingly important group as the populations of Western countries age. Many architects and planners today favor compact, humanly-scaled communities providing easy access to a wide range of functions, services, and activities (Seamon, 2002; Steinfeld, 2010). Such walkable, handicap-accessible neighborhoods might motivate residents to be more physically active and thus provide valuable health benefits (Frank et al., 2003). In addition, the higher densities and a more active street life might motivate residents to feel responsibility for their neighborhood and be more willing to look out for each other (Gardner, 2011; Klinenberg, 2002; Mehta & Bosson, 2010; Oldenburg, 1999; Rosenbaum et al., 2009). The occupational therapist plays a pivotal role in regard to housing needs because he or she has an intimate knowledge of clients' home requirements, restrictions, and possibilities. He or she can serve as an important go-between for helping clients articulate their environmental situation and needs to architects, interior designers, and contractors. Knowing clients' limitations firsthand, the occupational therapist can play a central role in “design teams” that plan aging-in-place or impairment-accommodating housing and neighborhoods (Gitlin, 2004).

Figure 18-2, Two-story universal house. Source: W. Preiser & K. Smith, eds., 2011. *Universal Design Handbook*, 2<sup>nd</sup> edition ( New York: McGraw-Hill), p. 24.6; illustration by Ron Mace and Rex Pace, Center for Universal Design, North Carolina State University, Raleigh; used with permission of the Center for Universal Design.



## Ground Floor



## 2<sup>nd</sup> Floor

## At-Homeness and Occupational Therapy

Besides being a physical dwelling that founds a particular mode of daily living, the home is also a constellation of experiences, meanings, and situations that relates to residents' personal and communal sense of identity and belonging (Manzo, 2003; Percival, 2002; Rowles, 2006; Rowles & Chaudhury, 2005; Stafford, 2009). One phenomenological concept that helps integrate the lived dimensions of home is **at-homeness**, which can be defined as the taken-for-granted situation of feeling completely comfortable and intimately familiar with the world in which one lives his or her everyday life (Seamon, 1979, p. 78; Oldenburg, 1999, p. 39-41). For the clients of occupational therapists, at-homeness has often been disrupted or eroded; a delineation of the lived dimensions of at-homeness provides one means for considering the client's residential needs more precisely and thinking through ways they might be restored or better accommodated.

Table 18-2 depicts the existential structure of at-homeness in terms of five lived qualities that can support or undermine a sense of familiarity and comfort (Seamon, 1979, 2010). First, rootedness refers to the quality of at-homeness to organize the habitual, bodily stratum of a person's life and is intimately related to environmental embodiment and body-subject. Literally, the home roots the person spatially, sustaining a physical center for departures and returns. In cases of impairment, illness, or aging, rootedness may be displaced by disconnectedness, which can include spatial disorientation, bodily discomfort, or loss of mobility and accessibility. Second, appropriation refers to a residents' feeling a sense of autonomy and control in regard to their home and immediate surroundings. At least in the modern Western context, appropriation typically includes a sense of privacy, whereby residents and family can readily be alone. Compromised through disablement or illness, appropriation devolves into imposition, a situation where the resident less autonomous and more dependent on external assistance, whether human, environmental, or technological.

A third quality of at-homeness is at-easeness, which refers to the "freedom to be." In a situation of at-homeness, residents can be what they most comfortably are and do what they most wish to do, a situation that can shift into uneasiness when a lifeworld is upset in some way. Unlike appropriation, which relates more to physical and psychological control of the home, at-easeness relates to inner mood and sense of well being. To be at ease is to have readily available the things and situations that give one everyday satisfaction and sustain the lifeworld's transparency and taken-for-grantedness. Fourth, regeneration refers to the restorative powers of home and at-homeness. Regeneration involves the home not only as a site of relaxation and rest but also as a place of psychological recuperation and rejuvenation. In a disrupted lifeworld, regeneration becomes degeneration due to stress, worry, or physical difficulties associated with sleeping and resting. Finally, warmth speaks to an intangible atmosphere of sustenance and well being that often involves positive emotions like joy and happiness. Sometimes the warmth of home life perseveres in times of illness or impairment, or it can disappear or devolve into coldness. A sense of place becomes spiritless space.

These five lived qualities of at-homeness are heuristic and broadly diagnostic in that they provide one way to think through a particular client's home situation (Moore et al., 2010, pp. 4-5). For the occupational therapist, different clients' everyday worlds will involve different combinations and intensities of the five qualities of at-homeness. Their potential value is that each points toward a different set of possibilities and means for transforming a quality's negative pole into its positive opposite. For example, rootedness is grounded in the lived body, and one occupational aim is to find ways, through environmental intervention, assistive technology, and the client's rehabilitation efforts, to return his or her lifeworld to its former taken-for-grantedness in terms of bodily actions and routines. Or, in regard to at-easeness, the occupational therapist works to learn a client's daily pleasures and satisfactions and find ways whereby they might be re-incorporated in his or her everyday life, though sometimes in revised or partial ways. The central



aim in using at-homeness as a diagnostic focus is to envision the client's abled and impaired lifeworlds from a multi-dimensional perspective that might spur creative interventions not imagined otherwise (see case study 18.1, "an old woman's lifeworld").

Table 18-2. Aspects of At-homeness: Sustaining and Undermining Dimensions (based on Seamon, 1979; p. 87; 2010, p. 238).

| Sustaining aspect    | Description                                                                                                                                                               | Spatial expression                                                                                                                                                                                         | Undermining aspect                                                                                                                             | Implications for occupational therapy                                                                                                                                                                                                                                                                  |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Rootedness</b>    | Organizes the habitual, bodily stratum of a person's life; intimately related to environmental embodiment and body-subject.                                               | Concentrated in places, paths, and points of use, especially favorite places within and around the home; undeveloped in unused portions.                                                                   | <b>Disconnectedness:</b> Involves spatial disorientation, bodily discomfort, or loss of mobility and accessibility.                            | Ensure meaningful daily occupations can be maintained through retraining and environmental supports. Focus on the client's bodily "doing" and "being in and around the home, especially bodily routines and actions.                                                                                   |
| <b>Appropriation</b> | Involves feeling a sense of autonomy and control in regard to home and immediate surroundings; typically includes a sense of privacy.                                     | Roughly concentric and generally strongest for most important "centers" in the home; intensity in proportion to use and attachment; relates to "centers," paths, places for things, and things themselves. | <b>Imposition:</b> Includes loss of autonomy; dependence on external assistance, whether human, environmental, or technological.               | Provide adequate human help and assistive technologies to support personal autonomy and self-worth—e.g., installing appropriate bathing equipment so client can maintain independence.                                                                                                                 |
| <b>At-easeness</b>   | Involves "freedom to be" and contentment; relates to inner mood and sense of well being; things and situations that give everyday satisfaction are readily available.     | Usually strongest in the home but possible in other places outside the home (e.g., third places) where person feels comfortable and relaxed.                                                               | <b>Uneaseness:</b> Involves a situation where comfortableness of lifeworld called into question by personal, social, or environmental changes. | Enable satisfying occupations that can be engaged in alone or with others—e.g., working to maintain client's valued hobbies.                                                                                                                                                                           |
| <b>Regeneration</b>  | Relates to restorative powers of home and at-homeness; home not only as a site of relaxation and rest but also as a place of psychological recuperation and rejuvenation. | Generally associated with the home, but possible in other places with restorative powers—e.g., the route one walks her dogs each day.                                                                      | <b>Degeneration:</b> Relates to disruption in rest and regeneration due to personal, social, or environmental changes.                         | Enable relaxing occupations through environmental modifications—e.g., incorporating more appropriate lighting or changing room use. Consider how such modifications may shift daily activities—e.g., if a living area is converted to a bedroom, where will the client go to relax and engage leisure? |
| <b>Warmth</b>        | Relates to supportive ambience of sustenance and well being; invokes positive emotions like kindness, cheerfulness, good will, and camaraderie.                           | Most common in interior spaces and expressed by decoration, sense of order, and interpersonal harmony; also present in cared-for outside environments like gardens.                                        | <b>Coldness:</b> Relates to an unpleasant or hostile environmental ambience; spirit of place devolves into raw material space.                 | Work with client's values and find compromises—e.g., managing a level of cleanliness that is acceptable or de-cluttering a space but preserving what is most meaningful for client.                                                                                                                    |

## Real Places, Virtual Places, and Occupational Therapy

Even in its first decade, there is considerable indication that digital technologies will dramatically reshape human life in the 21<sup>st</sup> century (Borgmann, 1999; Friesen, 2011; Horan, 2000; Relph, 2007). Currently, we can envision only glimpses of what robotics, virtual realities, and **information and communication technologies** (ICT) might mean for occupations and occupational therapy (Fok, et al., 2009; Mihailidis & Davis, 2005). The desire of older and less able individuals to live independently has spurred development of the **smart house**, which incorporates robotics, networked appliances, and other digital devices connecting residents with their home and wider community (van Berlo, 2002). This integration of home services with technology is called **domotics**, which works to “improve safety, security comfort, communication, and technical management in the home” (Rosenfeld & Chapman, 2008, p. 25). One example is digital lighting that automatically provides residents moving through their home with an illuminated pathway, helping to reduce falls. Also significant are domestic robotic devices that include wheel chairs, “seeing eye dogs,” and “robotic assistants,” the last of which can provide, among other home services, physical therapy and mental stimulation (Broekens et al., 2009; Rosenfeld & Chapman, 2008, p. 97). In addition, these robotic devices can monitor health and behaviors and connect residents to health-care providers and to friends and relatives living elsewhere (Rosenfeld & Chapman, 2008).

More transformative technological possibilities for occupational activities involve innovations in the **brain-computer interface** (BCI), which allows objects and images to be manipulated via sensory devices registering brain waves or facial movements (Graham-Rowe, 2011). By shifting the eyes or picturing an action or symbol cognitively, the user can direct a robotic assistant, activate networked appliances, or manipulate items on a computer screen (Geng et al., 2010). For many older and impaired individuals, this technology could well be life-changing, since one gains the mental and physical autonomy to control computers, wheel chairs, assistive technologies, and other aspects of the person’s everyday environment. Perhaps even more compelling is the coupling of BCI with virtual-reality technology, which allows people with impairments to generate and participate in online virtual worlds like “Second Life,” where users (called “residents”) meet other residents, socialize, create virtual homes and other virtual places, offer virtual goods and services, and so forth (Graham-Rowe, 2011).

Currently, there is much controversy as to whether virtual worlds and virtual places will ever be able to comprehensively simulate their lifeworld originals and, if they can, what impact such vicarious simulations might have on those real worlds and places (Borgmann, 1999; Fok et al., 2009; Friesen, 2011; Haythornthwaite & Kendall, 2010; Horan, 2000; Relph, 2007). At this point, the technical and representational possibilities of virtual reality are in their infancy and will probably require a mode of creativity different from traditional creative forms like imaginative literature or film. As Relph (2007, p. 8) explains,

Virtual places don’t have readers or viewers—they have participants. The original author of a virtual place in some fashion has to anticipate how participation might occur and to provide suitable cues and possibilities for it, though in a fully interactive virtual place, as in a real place, the imaginative involvement of participants will lead to changes that can in no way be anticipated. There are few rules or guidelines for this and the most compelling virtual places might be regarded as continuously changing works of art that reflect the combined imaginations of those who are simultaneously participants and authors.

Whatever form a mature virtual reality eventually takes, it is almost certain that the medium will have a major impact on occupations and occupational therapy because the creative result will be virtual worlds in which a person, no matter how impaired, can participate, whether in firsthand virtual creation or in secondhand virtual involvement. Virtual worlds and virtual places may provide

a radically innovative means for occupational therapists to assist clients in recovering and recreating what was called, at the start of this chapter, “being at home.” In this sense, occupational therapists will contribute to fabricating virtual places that allow clients to become involved in virtual occupations unlikely or impossible in the clients’ real worlds—for example, an older woman’s “operating” a virtual café or a wheelchair-bound man’s “flying” a virtual airplane. Clearly, virtual realities will entail potential problems, including time wasting, titillation, and addiction. For creating a new world of occupations, however, virtual reality and virtual places will more than likely constitute a remarkable new subfield in occupational therapy and science.

### **Case Study 18.1. An Old Woman’s Lifeworld**

The environmental themes discussed in this chapter are illustrated by the lifeworld of ninety-year-old, indigent Londoner Maudie Fowler, a character rivetingly portrayed in African-British novelist Doris Lessing’s *Diaries of Jane Somers* (Lessing, 1984). For students learning to become occupational therapists, this novel can be revelatory because it portrays, in gritty, unflinching detail, the everyday life of Maudie as she struggles as an impoverished, older woman living alone in a large, 1980s city. Maudie’s life is presented through the eyes of character Janna Somers, a fashionable, middle-aged magazine editor who befriends Maudie after they accidentally meet waiting in line at a local pharmacy. Maudie’s world is a life of limitations imposed by circumstances, chance, and age. When Somers first meets encounters Maudie, she sees “a tiny bent-over woman, with a nose nearly meeting her chin, in black heavy dirty clothes... [and] a sweet, sour, dusty sort of smell. I saw the grime on her thin old neck, and on her hands” (ibid., p. 12, p. 13). Over time, Somers becomes Maudie’s only friend and takes care of her until she dies of stomach cancer several years later.

Lessing’s novel provides an unforgettable rendering of place, at-homeness, and environmental embodiment as expressed in Maudie’s everyday life (Seamon, 1993). Physically, her world is small spatially and includes her apartment, the street where she lives, and a corner grocery store run by an Indian man with whom she often quarrels because she feels he overcharges. The three-room apartment Maudie has occupied for over forty years is the center of her world, but Maudie long ago lost interest in housekeeping and maintenance: “I have never,” says Somers of her first impression, “seen anything like it outside of condemned houses.... The whole place smelled, it smelled awful.... It was all so dirty and dingy and grim and awful” (Lessing, 1984, p. 14).

Somers recognizes that, by modern housing standards, Maudie’s apartment should be condemned, yet “by any human standard she should stay where she is” (ibid., p. 103). She reaches this conclusion because she gradually understands that the decrepit apartment is Maudie’s entire world, providing the only reason left for her to live. As she declares to Somers: “‘I’ve never not paid [the rent], not once. Though I’ve gone without food. No, I learned that early. With your own place you’ve got everything. Without it, you’re a dog. You are nothing. Have you got your own place?’—and when I said yes, she said, nodding fiercely, angrily, ‘That’s right, and you hold onto it, then nothing can touch you’” (ibid., pp. 18-19).

One of the most powerful aspects of Lessing’s *Diaries* is getting readers to understand that, in regard to lifeworlds, the seemingly obvious often intimates a much more complex situation. For example, Somers comes to realize that her unpleasant first impression of Maudie’s apartment is not because Maudie is slothful but because she has gradually been worn down by the grind of physical upkeep: “What makes poor Maudie labour and groan all through the day [is] the dredge and drag of maintenance” (ibid., p. 127). Environmental embodiment for Maudie has become bodily weakness and mobility difficulties that restrict what she can manage. At one point, Somers describes Maudie’s typical day, emphasizing the overwhelming difficulties of reaching for an object, shifting

rooms, feeding the cat, or going to the toilet—efforts and actions that, for the able person, are taken-for-granted and inconsequential:

Morning... oh, the difficulties of morning, of facing the day... each task such a weight to it... She sits there, thinking, I have to feed the cat... I have to... At last, she drags herself up, anxious, because her bowels are threatening again, and, holding on to door handles, chair backs, she gets herself into the kitchen. There is a tin of cat food, half empty. She tries to turn it on to a saucer, it won't come out. It means she has to get a spoon. A long way off, in the sink, are her spoons and forks, she hasn't washed up for days. She winkles out the cat food with her forefinger, her face wrinkled up—is it smelling perhaps? She lets the saucer fall from a small height on to the floor, for bending forward makes her faint. The cat sniffs at it and walks away, with a small miaow. Maudie sees that under the table are saucers, bone dry and empty. The cat needs milk, she needs water. Slowly, slowly, Maudie gets herself to the sink, pulls out of it a dirty saucer which she has not got the energy to wash, runs water into it. Finds a half bottle of milk. Has it gone off? She sniffs. No. She somehow gets the saucer on to the floor, holding on to the table and nearly falling. The cat drinks all the milk, and Maudie knows she is hungry.

Under the table not only the saucers, one, two, three, four, five, but a cat mess. This reminds Maudie she has to let the cat out. She toils to the door, lets out the cat and stands with her back to the door, thinking. A general planning a campaign could not use more cleverness than Maudie does, as she outwits her weakness and her terrible tiredness. She is already at the back door: the toilet is five steps away; if she goes now it will save a journey later. .. Maudie gets herself to the toilet, uses it, remembers there is the commode full of dirt and smell in her room, somehow gets herself along the passage to her room, somehow gets the pot out from under the round top, somehow gets herself and the pot to the toilet (ibid., pp. 115-116).

Over time, Somers comes to see the lived ponderousness of Maudie's lifeworld: "I have realized how heavy everything is for her" (ibid., p. 105). Somers gains her most important insight into Maudie's situation shortly after bathing her for the first time. She understands that the bodily unpleasantness is not really Maudie, who is "still there, alert, very much all there, on guard inside that old witch's appearance. She is still there, and everything has collapsed around her, it's too difficult, too much" (ibid., p. 55). Somers realizes how physical infirmness can impede a person's actions toward the world:

I am thinking how Maudie Fowler one day could not trouble herself to clean out her front room, because there was so much junk in it, and then she left it and left it; going in sometimes, thinking, well, it's not so bad. Meanwhile, she was keeping the back room and the kitchen spotless... She wasn't feeling well, and didn't bother, once, twice—and then her room was not really cleaned, only the floor in the middle of the room sometimes, and she learned not to look around the edges or under the bed. Her kitchen was last. She scrubbed it and washed shelves, but then things began to slide. But through it all she washed herself, standing at the kitchen table.... Then she left longer and longer between washing her hair... and then she did not wash her clothes, only took out the cleanest ones there were, putting them back grubby, till they were the cleanest; and so it went on. And at last she was upright in her thick shell of black, her knickers not entirely clean, but not so bad, her neck dirty, but she did not think about it, her scalp unwashed (ibid.).

Lessing's account of Maudie's life is significant for occupational therapists because it offers sobering insights into one older person's lifeworld. More so, Lessing's account illustrates a mode of empathetic insideness that is the crux of all effective occupational therapy: Becoming aware of a person's lifeworld in a non-judgmental way and using that awareness to return that person to as much health and well being as possible. Lessing's frank, brutally realistic account of Maudie Fowler demonstrates that positively changing another person's life is not always possible. If occupational interventions are to work, however, they are best grounded in the kind of sympathetic insight that phenomenological understanding can help facilitate (Finlay, 2011).

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## **Glossary**

**Aging in place:** Designing dwelling units such that residents, if they so choose, can occupy their home from childhood to old age unless illness or impairment come into play.

**At-homeness:** the taken-for-granted situation of feeling completely comfortable and intimately familiar with the world in which one lives his or her everyday life.

**Brain-computer interface (BCI):** A developing digital and electronic technology that allows objects and images to be manipulated via sensory devices registering brain waves or eye and facial movements.

**Body routines:** Sets of coordinated, habitual bodily actions sustaining a specific task or aim, for example, driving, cooking, or lawn mowing; also see body-subject and time-space routines.

**Body-subject:** The pre-reflective but intelligent awareness of the body manifested through habitual action and typically in sync with the environment in which the action unfolds; plays a major role in the habitual, routine aspects of the lifeworld; also see body routines and time-space routines.

**Domotics:** The science of using digital applications to integrate home services with technology; the aim is to improve residents' comfort, communication, safety, and health by using such digital innovations as networked appliances, robotic assistants, and other technologies connected residents with their home and wider community; also see smart house.

**Environmental embodiment:** The various ways, both sensorily and movement-wise, that the lived body engages and coordinates with the world at hand, especially its environmental aspects.

**Information and communication technologies (ICT):** An umbrella term referring to broadband, wireless, and mobile computing as they combine with the internet and with social media such as blogging, social networking, gaming, and email.

**Lifeworld:** The tacit, taken-for-granted context, tenor, and pace of daily life to which normally people give no reflective attention; a major focus of phenomenological investigation.

**Lived body:** a phenomenological concept referring to the ways in which our existence as bodily beings contributes to the constitution of human experience and to the human lifeworld; the phenomenologist argues that the lived body is the primary means of being in, experiencing, and encountering the world; also see body-subject.

**Phenomenology:** A philosophical tradition that examines and describes phenomena—i.e., things and experiences as human beings experience those things or experiences. Phenomenology focuses on describing and interpreting human experience. A major effort is to identify and depict broader, underlying patterns and structures (e.g., place, lived body, at-homeness, and so forth) that give coherence to the richness and “chaos” of everyday life; also see lifeworld.

**Place:** Any environmental locus that gathers individual or group meanings, intentions, and actions spatially; a fusion of human and natural order and any significance spatial center of a person or group’s lived experience; also see lifeworld.

**Smart house:** Dwelling design using computer technologies to incorporate robotics, networked appliances, and other digital devices connecting residents with their home and wider community; the house is “smart” in the sense that it can respond, through digital directives, to the residents’ everyday needs in terms of lighting, thermal comfort, security, and so forth; also see domotics.

**Time-space routines:** Sets of more or less habitual bodily actions extending through a considerable portion of time, for example, a getting-up routine, a going-to-the-gym routine, or a going-to-church-and-lunch routine; also see body-subject and body routines.

**Universal design:** Design that works for everyone; fabricating products and environments that are usable by all people, to the greatest extent possible, without the need for modification. Also called “inclusive design” and “life-span design.”

**Universal housing:** Dwellings, housing, and neighborhoods that address the needs of all users, whatever their age or degree of ableness.

## **Recommended reading**

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van Manen, M. (1990). *Researching Human Experience*. Albany, NY: State University of New York Press.

## **Recommended films**

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Schnabel, J. (2007). *The diving bell and the butterfly* (Miramax).

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