

Temporal aspects of homes: a transactional perspective*

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There are many ways of studying homes, each focusing on a different aspect, such as physical qualities, satisfaction, use patterns, and phenomenological experiences. Our thesis is that, central to any of these aspects of homes, and therefore integral to the distinction between *house* and *home*, are the temporal qualities of linear and cyclical time and their subordinate qualities of salience, scale, pace, and rhythm. The goal of this chapter is to propose a general framework that describes these key temporal qualities in the context of a broader transactional orientation. The chapter has four major sections: (1) a description of the transactional world view and of the home as a transactional unity; (2) a discussion of the proposed temporal framework bolstered by examples from a variety of societies; (3) two case studies that demonstrate the application of the framework; and (4) potential research and practical implications of the model.

TRANSACTIONAL PERSPECTIVE

The proposed framework is derived from a transactional perspective in which events are treated as

holistic unities comprised of three major aspects: people/psychological processes; environmental properties; and temporal qualities (Altman & Rogoff, 1986). Two key assumptions in this perspective are that people and their environments are an integral and inseparable unit; they cannot be defined separately, and indeed are mutually defining. Second, temporal qualities are intrinsic to people-environment relationships, so that homes are conceived of as a dynamic confluence of people, places, and psychological processes.

The transactional view has been explored by philosophers (Dewey & Bentley, 1949; Pepper, 1942) and has been adopted by some psychologists, especially those in environmental psychology (see Altman & Rogoff, 1986; Barker, 1968; Ittelson, 1973; Proshansky, 1976; Wicker, 1979, 1986). Our conception of the home as a transactional unity is diagrammed in Figure 1. Transactional processes in homes occur at the level of action and at the level of meaning; they can be events, activities, meanings, evaluations, or any other psychological process. A few such processes are illustrated in the circumference of the diagram in Figure 1; many more could be added. The model is meant to apply to transactions involving diverse peoples and relationships (e.g., in the diagram, *people* can refer to an individual or a group), at many levels of environmental scale (e.g., the physical environment can refer to an object, place, room, or entire home; the social environment can refer to individuals, families, or groups). Person, environment, and time are identified separately in

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Figure 1. The home as a transactional unity

Figure 1; for ease of description, however, their inherent inseparability is depicted by the presence of dashed rather than solid lines.

Before exploring in detail the temporal qualities of homes, we will first describe the smaller circle in Figure 1, which portrays three general processes by which people can be linked to homes: (1) social rules and social relationships; (2) affordances; and (3) appropriation practices. As will be seen, these processes can only be understood as dynamic transactions involving people, place, and time. Note that these processes span the three aspects of the transactional whole to represent the binding of all three into a unity.

Social Rules and Social Relationships

The category of social rules and relationships encompasses a broad range of dynamic interpersonal processes that occur in homes, including social and cultural norms and rules, affective, emotional, and evaluative bonds, and cultural rituals and practices. These concepts have been summarized nicely by Rapoport (1977, 1982), who defined *environment* as a complex and systematic organization of *space*, *time*, *meaning*, and *communication*. These four facets occur simultaneously in a variety of configurations. For example, arrangements of homes around a center or plaza versus row arrangements are likely to reflect and foster different forms of communication between

neighbors, different temporal flows of interaction, and different types of interpersonal relationships. Similarly, organization and use of space inside the house support different kinds of communications and meanings for residents.

Social rules describe what behaviors are appropriate and expected in settings at particular times, thereby giving meaning to the settings, people, and their behaviors (Argyle, 1976, 1979; Rapoport, 1982). In all societies, social norms and roles dictate how homes should be used, the times and places for entering, entertaining, sleeping, and eating as well as a myriad of other behaviors and symbolic practices (Gauvain, Altman, & Fahim, 1983; Haumont, 1976; Laumann & House, 1972; Lawrence, 1979, 1982b; Morris & Winter, 1975). Social norms and roles are also reflected in the very designs and configurations of residences, the types and locations of furniture and objects, and the like (Altman, 1977; Altman & Gauvain, 1981; Laumann & House, 1972; Pratt, 1981).

Persons are also linked to their homes by affective and emotional bonds; social relationships are manifested in spatial, psychological, and interpersonal terms, as people use objects and areas in the home to engage in social interaction, mutual succorance, and the like. According to interviews with residents (Csikszentmihalyi & Rochberg-Halton, 1981; Horwitz & Tognoli, 1982; Korosec-Serfaty, 1985; Lawrence, 1982a), the home can also be a symbolic representation of those relationships, as it becomes associated with memories of past interactions and ties between people.

The home also reflects cultural values regarding personal and social identities. For example, the home often symbolizes the establishment of a new household and is frequently involved in wedding rituals such as building a new home or transferring ownership of an existing home to the newlyweds. Or, newlyweds' residences often reflect familial links, such as in matrilineal compounds, and communal living arrangements (Kitahara, 1974; Murdock & Wilson, 1972; Whyte, 1979). In some situations, a wedding may not take place unless the couple can inherit a family farm, thereby providing them with economic resources and a place to live (Hajnal, 1965; Matras, 1973); in others, the family's matrilineal or patrilineal residence determines which family name the children will use (Whyte, 1979). The home can also reflect the very structure of the family, such as in traditional Turkish families, where a son replaces his

father as head of the family when the aging father moves into the son's home (Duben, 1982; Kagitcibasi, 1982). In these and other rituals and traditions, the home is integral to and reflects a variety of social and cultural values regarding individual and family identities.

Affordances

The term *affordance* was coined by Gibson (1979) and indicates that objects and environments are perceived according to the meanings, actions, and behaviors they imply, rather than according to their specific physical characteristics. For example, a chair is not perceived as something with discrete physical characteristics, but as something to sit in. Thus, the emphasis in this linkage is on utilitarian functions and their psychological significance. The home is the locus of many utilitarian activities (personal hygiene, sleeping, cooking and eating, etc.) that lend unique psychological meanings to its objects and places.

Places in the home may serve varied functions at different times of a day or year or even in different historical periods. Thus, the affordance qualities of a home can change with circumstances, architecture, culture, and history. When the affordance functions change, the perceivers' experience of the environment can also vary, such as when the kitchen in Australian homes became integral to the house (Lawrence, Chapter 5, this volume).

Appropriation, Attachment, and Identity

Appropriation, attachment, and identity refer collectively to the idea that people invest places with meaning and significance and act in ways that reflect their bonding and linkage with places. At a general level, *appropriation* means that the person is transformed in the process of appropriating the environment. Appropriation can take diverse forms, including taking control over, becoming familiar with, investing with meaning, cultivating and caring for, and displaying identity and belonging with a place or object (Korosec-Serfaty, 1976). The term *appropriation* also connotes mastery or efficacy, such as when people exercise territorial control, and regulate use by others (Altman, 1975, 1977) or gain efficacy through having and using possessions (Furby, 1978; Green-

baum & Greenbaum, 1981). Similarly, the ideas of place attachment and place identity suggest that when people attach psychological, social, and cultural significance to objects and spaces, they thereby bond themselves and the environment into a unity (Gerson, Stueve, & Fischer, 1977; Relph, 1976; Stokols & Shumaker, 1981).

The concepts of *social rules and relationships*, *affordances*, and *appropriation* reflect the transactional unity of people and environment. The home is an important repository within which these phenomena are manifested and, indeed, the home is partly described by and gains meaning in terms of these phenomena. Similarly, these phenomena are understood partly in terms of the home as an intrinsic aspect of their meaning. Thus, places and processes are inseparable and mutually defining aspects of one another.

And finally, although we have not stressed the temporal component, time is integral to these processes. First, these processes must be seen as occurring over and in time. Second, the processes are *time bound*, by which we mean that their meaning, nature, and probability of enactment can change with the resident's own changing life stage, and their meaning, nature, and occurrence can change with social and cultural changes, that is, from one historical period to another.

TEMPORAL QUALITIES OF HOMES

By our definition, homes intrinsically contain temporal qualities; they reflect dynamic, flowing, and changing relationships between peoples and environments. These relationships have histories and futures as well as a present, they involve change and stability, recurrence, and rhythm. Figure 2 presents a framework of temporal qualities of homes that is based on the work of others who have described psychological aspects of time (Lynch, 1972; McGrath & Rotchford, 1983; Rakowski, 1979; Tuan, 1977).

Linear Time

One major dimension of the present framework is the distinction between linear (past, present, and future) and cyclical, or spiraling, recurrent temporal features of homes. Within each of these general





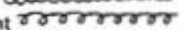
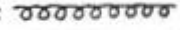

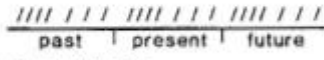
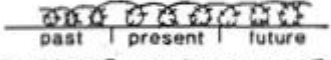
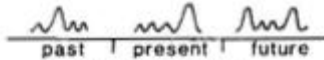
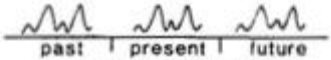
	LINEAR	CYCLICAL/SPIRALING
SALIENCE (Temporal focus of events)	 <p>Salience can be past \triangle, present \triangle, future \triangle, or any combination \triangle.</p>	 <p>Cyclical salience can be past, present, future, or any combination thereof.</p>
SCALE (Scope of events)	 <p>Short- and long-scale events.</p>	<p>Duration of recurring event and interval between recurrences</p> <p>short/frequent </p> <p>long/frequent </p> <p>short/infrequent </p> <p>long/infrequent </p>
PACE (Rapidly or density of events)	 <p>Rapid $////$ and slow-paced $///$ events</p>	 <p>Rapid wavy and slow-paced wavy cyclical events.</p>
RHYTHM (Regularity or patterning of events)	 <p>Variable pattern</p>	 <p>Recurring pattern</p>

Figure 2. Temporal dimensions of homes.

qualities are subordinate properties: *salience*, or the relative emphasis on past, present, or future times; *scale*, or temporal breadth and scope; *pace*, or the density or rapidity of events; and *rhythm*, or the regularity of the pace or pattern of events. Although various writers have identified other temporal qualities, we have selected these constructs because they consistently seem to be reflected in descriptions of home use and meaning.

According to McGrath and Rotchford (1983), whereas philosophers have debated whether time is purely linear or purely cyclical, psychologists have tended to assume that it has both qualities. Linear time, and its associated continuum of past/present/future, contains two important qualities: the first property is the dynamic, flowing, changing, and ongoing aspect of events; the second quality is continuity. Flow and change are explicit aspects of the three person-environment linkages that we described earlier; thus people are linked to homes through dynamic changing processes. Furthermore, people and their relationships grow and change, and these changes are reflected in the use of and association with their

homes. And, as was mentioned earlier, these changes occur at the social as well as at the individual levels.

However, no less important is the notion that familiarity and continuity also give meaning to and link people to places. «In time a new house ceases to make little demands on our attention, it is as comfortable and unobtrusive as an old pair of slippers» (Tuan 1977, p. 184). Relph's (1976) concept of *inside* also suggests that continuity and the accumulation of memories are an essential quality of homes.

The home is a place of continuity across the past, present, and future in many societies at the level of the individual, family, or group. For example, Hardie (1981; Chapter 9, this volume) describes the living arrangements of the Tswana people of South Africa, who believe that the spirits of family ancestors reside in their courtyards and protect the family from evil. The family cannot move to a new homestead without making special arrangements to move the spirits as well. Thus, the past lives in the present (indeed, the Tswana think of these ancestors as being in the present rather than in the past), and the home is a repository for the history of the family.

Similar unions of persons, places, and linear temporal qualities occur in several societies. For example, in traditional Chinese families, it is customary for couples to visit a family shrine in the home as part of the wedding ceremony in order to obtain the ancestors' permission to marry (Fried & Fried, 1980). On the Greek island of Nisos (Kenna, 1976), daughters inherit the family home as part of their marriage dowry. The daughter who was named after the grandmother who lived in the house is the one who inherits the home, «so the same name will be heard in the house» (Kenna, 1976, p. 26). In this way, continuity is achieved through formal procedures by which the home is transferred from one generation to the next. The Tikopians of the Solomon Islands (Fried & Fried, 1980) maintained continuity in an even more concrete way. Before missionaries discouraged the practice, those who died were buried under the floorboards of the home, so that they could remain with their family and protect them. The dying would discuss the burial with the family and speak of being with them even after death.

Continuity is also evident among people who move from one residence to another, such as nomads, migrants, and retirees. Although the environment of nomadic peoples changes as frequently as they move, many of them maintain continuity by consistently using particular furniture arrangements, tent orientations, and positions relative to others in a group as well as by practicing rituals for reestablishing the home (Altman & Gauvain, 1981; Forde, 1950; Lowie, 1954; Tanner 1979; Nabokov, 1982). Efforts to maintain continuity have also been noted among people who voluntarily change residences. Work by Lawrence (1982a, 1983) indicates that preferences for present and future home styles, decoration patterns, and the like often show continuity with previous home styles. The elderly in the United States frequently crowd their retirement apartments with furniture and memorabilia in order to bring their memories with them (Csikszentmihalyi & Rochberg-Halton, 1981; Howell, 1980).

The effort to maintain continuity also occurs when people are forcibly relocated. For example, Gauvain, Altman, and Fahim (1983) analyzed the relocation of 50,000 Egyptian Nubians who moved when the Aswan Dam was built in 1963-1964. Gauvain *et al.* described how the people attempted to reestablish their linkages to homes by replicating decorat-

ing practices and modifying the design of homes. (See also Karpas, 1976, for a discussion of house design in squatter settlements).

Future-oriented qualities of rituals and ritual objects in homes are often quite explicit. Thus, among ancient Romans, particular house gods were honored because of their believed ability to protect and guarantee the family's future (Orr, 1980). Similarly, among the nomadic tribes of northwest Australia, each tribal subgroup is responsible for a territory or home range. An essential feature of the territories are rocks on which are painted figures depicting different species of plants and animals. Annual ceremonies are held to «freshen» or repaint the figures in order to assure the prosperity of the plants or animals, thereby assuring the tribe's future hunting and gathering success (Blundell, 1980).

In summary, the property of linear time deals with past, present, and future aspects of person-environment relationships. Although meanings and actions can be predominantly related to the past, present, or future taken singly, it is often the case that an act, ritual, or object associated with one temporal referent blends into another, that is, past-oriented actions or objects often bring the past into the present and sometimes ensure that the past and present will continue into the future. Although these examples have stressed continuity, change is also an essential aspect of person-home transactions, and the mechanisms by which individuals and cultures balance continuity and change are an equally important topic of study.

Cyclical Time

The second overarching dimension of our framework involves cyclical properties of person-environment events in homes. Cyclical features of homes refer to repetitive and recurring activities and meanings, with cycles potentially recurring daily, weekly, monthly, annually, or in some other regular or semiregular fashion. Thus, Lynch (1972) referred to the rhythmic repetition of events, «a heartbeat, breathing, sleeping and waking, hunger, the cycles of sun and moon, the seasons, waves, tides, clocks» (p. 65). In a more poetic and phenomenological vein, Eliade (1959) used the concept of *sacred time* to describe religious or quasi-religious events that involved a reactualization, reliving, and repetition or earlier

sacred events through the performance of a unique and new event.

For some societies the concept of cyclical time is literal; in others cyclical time incorporates a linear conception as well, such that what occurred before does not literally ever recur in identical form. Thus, in the Judeo-Christian value system there is a blending of cyclical and linear time, and for the great preponderance of Western society, the idea of *spiraling recurrence* is more accurate than the idea of *identical recurrence*. The idea of spiraling recurrence is depicted in Figure 2 through irregularly patterned spirals.

Examples of cyclical/spiraling events in homes are evident in a broad variety of writings. Bachelard (1964), Korosec-Serfaty (1985), and others (e.g., Pétonnet, 1973; Saile, Chapter 4, this volume) refer to daily practices that are part of the rhythms of homes, for example, affordances such as eating and work cycles, and appropriation routines that involve certain places in homes. All of these result in the home and its activities, places, and associated cognitions being unified in a recurring and cyclical pattern.

In addition to daily rhythms, many authors have described the home in relation to seasonal cycles and rhythms. For example, Tuan (1977) dealt with how people in different societies occupy and use different homes at different times of the year. Pétonnet (1973) described surveillance zones that seemed to fit into daily as well as seasonal cycles. The residents whom she observed would work in open windows or sit at certain focal points at regular times of day, but these surveillance activities were only apparent during warm weather. Seasonal cyclicality is also evident in the celebration of annual or seasonal holidays such as religious and cultural holidays (Thanksgiving, Christmas, Chanukah), and family rituals (birthdays or anniversaries) (Rakowski, 1979).

Another aspect of cyclical/spiraling time has been called *entrainment* (McGrath & Rotchford, 1983) or *synchronicity* (Lynch, 1972). Entrainment is the process of adapting asynchronous cycles (e.g., of different lengths) to one another, or accommodating recurring activities to a dominant cycle, such as when people migrate or vary their living patterns to adapt to seasonal availability of food (Hardie, Chapter 9, this volume; Lowie, 1954; Tuan, 1977), or in modern times, when daily homebound cycles are adapted to

the work schedule. Michelson (1975, 1977) studied time budgeting and activity patterns in and around the home and found that residence location, commuting patterns, and commercial utilization are interrelated. He even suggested (1982) that houses be built close to work sites or have access to work sites and that shopping centers be provided enroute, thereby facilitating the entrainment of the home-based cycle to the work-based cycle.

Pétonnet (1973) also noted several instances in which daily routines seemed to be entrained to a larger cycle. In her observations of French public housing residents, the men's cycle was adapted to the work cycle, the children's to the school cycle, and the women's to both of these and to those of their neighbors and the larger society (e.g., the work hours of social service agencies). Furthermore, these patterns operated within a larger seasonal cycle, as women stayed indoors in cool weather and opened their homes or stayed outdoors more in warm weather. Thus, entrainment involved temporal cycles embedded hierarchically within one another, with personal cycles woven into the hierarchy.

These two overarching features of our framework — linear and cyclical/spiraling time — can be described in terms of four other dimensions: temporal salience, scale, pace, and rhythm (see Figure 2).

Temporal Salience

Salience refers to the temporal focus of a person-environment transaction. The term derives from the concept of *time orientation* that means that one's thoughts, actions, or feelings can be directed toward the past, present, or future (Hoornaert, 1973; Rakowski, 1979). An object is past salient if it reminds one or is associated with actions relevant to some past experience or transaction. It is future salient if it prompts future actions or refers to symbolic, cognitive, or affective aspects of some future event. And a place, object, or event in the home is present salient if its focus is primarily in the immediate present. Objects, places, activities, and events in the home can contain two or more foci simultaneously.

Salience is relevant to both linear and cyclical/spiraling time. Csikszentmihalyi and Rochberg-Halton (1981) elicited descriptions of objects in homes, and frequently found references to past, present, and

future linear salience. Respondents described the history of an object (e.g., how it had been acquired and used) as well as its future (e.g., plans to pass it on to their children). These authors did not inquire about nonsignificant objects; however, implicit in their discussions is the notion that temporal salience is related to the importance or meanings of things, that is, the richer and more important the history and present of an object and the more significant the future plans for it, the more central it is to the person.

The salience of an object or place in homes is not fixed; salience can rise or fall at different times, making the concept of temporal salience a dynamic one. An object might not be noticed for years, or one of its meanings or plans for action might lay dormant until circumstances combine to bring that object or meaning to the fore. Csikszentmihalyi and Rochberg-Halton's interviews imply that a person's psychological experience regarding a place or object depends upon which meanings are associated with it at any particular time.

Salience in cyclical/spiraling time also refers to the temporal focus of meanings and actions. Spiraling time refers to recurrences, and as a ritual or act is performed, the participants can be reminded of certain past, present, or future relationships, activities, beliefs, values, and events. Blundell (1980) described the annual freshening ceremony of Australian aborigines as bonding the people to their clans, to their ancestors, and to their descendants, that is, to social relationships in the present, the past, and the future. Hobel (1960) described the annual reunion of the Cheyenne tribe into a single living unit as an event that bonded individuals to the past, present, and future.

Note that cyclical salience is also a dynamic concept, with activities and rituals often simultaneously conveying more than one temporal referent. For example, many groups harvest and store certain kinds of foods at certain times of the year, depending on seasonal availability (Bolton, 1979; Forde, 1950; Hyde, 1959; Korosec-Serfaty, 1984; Tanner, 1979). The activities can be both present and future salient, because they are current and because they are designed to assure the future wellbeing of the family or group. The activities can also be implicitly past and future salient when the participants are aware that the present activities fit into a total historical, cultural, and lifelong cyclical pattern of gathering and processing of food.

Temporal Scale

The concept of *scale* is typically used in architecture to refer to variations in the size or scope of an environment. In a similar way, temporal scale refers to the temporal scope of an event. Scale is an intrinsic part of events; their onset or duration cannot be imposed or defined independently of the events themselves. In linear time, as depicted in Figure 2, brief or small-scale events can be termed *incidents*, for example, an accident, a trip to the store, entertaining in one's home. Lengthy or large-scale events can be termed *stages*, and they include long and complex combinations of peoples, places, and relationships, for example, a friendship or old age. Work on environmental autobiographies (Cooper-Marcus, 1978; Horwitz, Klein, Paxson, & Rivlin, 1978; Rowles, 1980) indicates that scale is an inherent part of people's memories of their homes and other environments. Some places reminded people of specific incidents such as birthday parties and holidays; others brought to mind periods or stages in their lives, such as early marriage, or childhood.

The concept of scale is implicit in the idea of life stages, and the home is also often involved in rites of passage or transitions from one stage to another. The primary example of this, of course, is marriage, which represents a new household composition or the establishment of a new household (Bartels, 1969; Gregor, 1974; Hoebel, 1960; Kagitcibasi, 1982; Kenna, 1976; Murdock & Wilson, 1972; Ottenberg, 1970; Timur, 1981).

Other rites of passage are also celebrated in the home. For example, the Cree Indians celebrate a child's first steps with a «walking-out» ceremony that symbolizes the child's future role in maintaining the family home (Tanner, 1979). The Macha Galla of Ethiopia celebrate a child's early years with a ritualistic walk around the house in order to introduce and bind the child to the home where she or he will live (Bartels, 1969). In ancient Pompeii, an adolescent celebrated the transition into adulthood by dedicating an amulet to one of the household gods (Orr, 1980). And a number of societies and groups have rituals associated with death. Ancient Scandinavians would carry the corpse out through a particular door of the home (Doxtater, 1981); Navajo Indians of the American Southwest would burn a home if the resident died in it (see Gauvain, Altman, & Fahim, 1983). Such ceremonies helped purify the home after death and

hastened the entry of the deceased into the afterlife. In addition, these actions and rituals serve to provide definitive temporal boundaries or demarcations to life stages. In these examples, the home is integral to and symbolizes an important transitional event in people's lives.

The concept of scale is also evident in cyclical or spiraling time. Cyclical events consist of both the length of the interval between recurrences and the durations of the events themselves (Figure 2). There can be short intervals between recurrences, such as in daily or weekly practices in homes, for example, affordance-related activities of hygiene, and eating; customs or social relationships such as regular prayer and religious activities; family meetings and discussions; or time-linked appropriation of different rooms and objects. There can be relatively long intervals between events as well, such as annual celebrations of birthdays and holidays. Similarly, the recurrent events can be brief (e.g., a family prayer at the dinner table), or lengthy (e.g., a several-day celebration of religious or cultural holidays).

As with linear scale, cyclical scale is, in our framework, defined in terms of intervening activities and events. That is, although the interval between recurrent events can be indexed as the «amount of chronological or clock time that passes», our perspective suggests that it is appropriate to index intervals in terms of the numbers and kinds of intervening events. Similarly, the duration of the recurring events should be measured as a coherent behavior sequence rather than according to an externally imposed time period that is unitized in terms of minutes, hours, days, or weeks.

There are any number of cyclical events that vary in their duration and interval length. For example, annual seasonal cycles are commonly associated with agricultural or preindustrial societies but can also have significance for other societies through annual holidays, family gatherings, and rituals (Rakowski, 1979). What determines the cycle length and activity duration is complex. In some cases, cycle length is influenced by the physical maturation of residents, by environmental constraints such as the day/night cycle, and seasonal or lunar changes. The Christian Christmas holiday season is an annual event held on the same calendar date; yet it can involve events spanning several days or even a month (Werner, Oxlay, & Altman, 1983). The Christian Easter is also held annually, but the date varies because it follows a lunar

calendar. Here, too, the duration of the celebration can vary; some people celebrate the entire Lenter period; others celebrate Easter week, Good Friday, or only Easter Sunday, and so forth. In other cases, home-related rituals occur periodically when «the time is right» and last until some phenomenological experience is achieved. For example, Hoebel (1960) mentioned three major Cheyenne Indian ceremonies, any one of which could mark the annual regathering of the tribe into a communal living unit. Zuni house-blessing rituals, described in detail later, are held annually, but the exact date varies from year to year and is not known until specified by the religious leaders.

Temporal Pace

Pace refers to the relative rapidity or density of experiences, meanings, perceptions, and activities. Activities or experiences (whether ongoing, recollected, or anticipated) can have a rapid pace, with details and events moving quickly, or they can have a slow, gradual pace, with events unfolding in an unhurried fashion. The immediate events surrounding wedding ceremonies in many societies are often fast paced, whereas periods of extended mourning can be slower paced. Certain areas in the home can often come to be associated with activities of different paces. Consider, for example, the Western home, in which the kitchen is often a busy fast-paced area, whereas the bedroom is more relaxed and slow paced. Furthermore, the pace of an area can vary from time to time, such as when a kitchen is variably fast and slow paced, depending on the family's ongoing activities. When these paces vary on a recurrent basis, we speak of cyclical/spiraling pace, such as when the pace of activities in the kitchen increases and decreases as mealtimes approach and pass. Cyclical/spiraling pace will be illustrated in more detail later in the descriptions of Zuni Shalako house-blessing ceremonies and French residents' seasonal harvesting activities.

Temporal Rhythm

Rhythm refers to regularly occurring patterns and sequences of behaviors, feelings and experiences within events. Patterns and sequences can involve

variability in activities or the paces of activities, participants, or any other aspect of the events. For example, in a single day, activities can flow at fast and slow paces, different people can come and go, staying variable lengths of time, and so on. These variations would lend a particular pattern of activities and experiences to the day. When such patterns are repeated on a regular and predictable basis, we speak of a rhythm in the home. Patterns can be composed of many aspects, and this complexity is represented abstractly in Figure 2 as nonrecurrent and recurrent sequences and configurations of events and activities⁽¹⁾.

According to phenomenologically oriented writers (Bachelard, 1964; Dovey, Ch. 2, this volume; Korosec-Serfaty, 1984; Pétonnet, 1973; Seamon, 1982), it is the sequential and recurrent repetition of actions and meanings and the regular involvement of people, places, and processes that create a sense of rhythm, and the sense of regular rhythm that in turn gives one a sense of home. A number of authors have stressed that the home is a rhythmic place and that the development of rhythmic patterns contributes to the transformation from a house to a home (e.g., Lawrence, Chapter 5, this volume; Saile, Chapter 4, this volume). Rowles (1980, 1981a,b) examined daily patterns and rhythms and learned that many elderly residents of a small town had regularly established routines that lent a varied activity pattern or rhythm to their days. Many would rise at a particular time, sit at a particular window of their home during a specified period to watch regular passersby, call their friends, raise the shades, and wave to neighbors. They spoke of these activities as recurring on a systematic and regular basis from day to day and as being favorite and special aspects of their daily routines.

The unities of the home illustrated in Figures 1 and 2 and in the text are quite extensive and not easily grasped through a single analysis. The model we have proposed is deceptively simple in that it contains a

(1) The height, or amplitude, of these curves has been defined as «the degree of change within a cycle» (Lynch, 1972, p. 77) and could refer to changes in activity rates during the harvest season, changes in the amount of social contact during the Christmas season, and so forth. We might have drawn curves of slightly different heights to indicate that these recurrent events are not necessarily identical but can vary in amplitude from occurrence to occurrence. An additional kind of change that might be conveyed by amplitude is change in psychological experience, or the psychological intensity of an event. We have found little discussion of the relation between time and psychological significance but intend to explore this idea further.

relatively small number of separate elements, that is, three kinds of dynamic person-environment linkages (affordances; social rules and social relationships; appropriation, attachment, and identity), and several temporal qualities through which the linkages operate or exist (linear and cyclical qualities coupled with salience, scale, pace, and rhythm). However, the framework is complex and implies an almost bewildering array of research topics, levels of analysis, and points of entry into the study of homes. That is, each of the properties is multifaceted (e.g., appropriation can take many forms; linear scale includes short- and long-duration events as well as life stages and life-stage demarcations, etc.), and events often involve many properties simultaneously. For clarity of exposition, we have treated the properties separately; however, the model is meant to apply to transactions at many levels of scale, involving all possible combinations of people, place and time. In particular, it is important to recognize that the temporal qualities do not occur independently of one another. Events contain salience, scale, pace, and rhythm, and although one could examine these qualities separately, events are only fully comprehended when the four are examined simultaneously.

One can use the framework detailed in this chapter to examine different aspects of transactional unities in homes, to focus theory and research on practical designs, to identify gaps in one's own thinking or in a body of literature, and generally to guide research and theory. In the next section, we will explore the model's usefulness by undertaking two case studies. That is, we will describe aspects of home use in two very different societies, using our concepts of person-environment linkages and the eight temporal qualities as a framework for our presentation. These intensive analyses also illustrate how the holistic model can be applied to single groups, thereby complementing our previous strategy of demonstrating that many societies share these transactional features.

ATTICS AND CELLARS IN RURAL FRANCE

Korosec-Serfaty's (1984) analysis of French residents' experiences and uses of their attics and cellars illustrates how our framework can be used to portray the transactional nature of homes. Based on intensive interviews with residents, she found that behaviors, activities, meanings, beliefs, and attitudes

in and about their homes' cellars and attics are congruent with our earlier classification of person-environment transactional unities. For example, cellars and attics were described as having affordance features, in that people stored and did things in them that were functional and important in everyday life. Firewood and coal were stored in the cellars; cheeses and wines were prepared and kept in the cellars; fodder and hay for animals were pitched into and stored in the attics; children played in the attics; women did their laundry and ironing in the cellars, and so forth.

Korosec-Serfaty's interviews also revealed that there were transactions associated with social relationships. For example, the attic often involved play relationships between siblings and friends, and evoked memories in older people of childhood relationships and romances, family history, cultural and religious affiliations. Respondents also sometimes referred to gender-linked activities associated with these places, such as cheesemaking by women and wine preparation by men, thereby making salient the homes as a locus of social bonds, rules, and norms.

Finally, cellars and attics in rural France also seemed to reflect appropriation, attachment, and identity. The preparation and storage of food in attics and cellars often gave people a sense of control and order, lent a feeling of security, shelter, and privacy, and made the future more predictable. Even the tendency to store unusable or infrequently used things in attics and cellars was associated with a sense of belongingness — to the past, present, and to an indefinite future in which one might need an object. These and related activities and meanings yielded a sense of identity, attachment, and appropriation to the home and to these particular places in homes.

Korosec-Serfaty's analysis also revealed strong temporal qualities of attics and cellars. Linear aspects of time were vivid in the minds and actions of residents, and the salience of past, present, and future objects and events was frequently reported. For example, many residents noted how books, photographs, diaries, collections, items of clothing, and pieces of furniture tripped off recollections of the past: their childhood, parents and grandparents, and events and activities in their lives. Furthermore, some people remembered attics and cellars as places of hiding and safety in World War II, evoking memories of relationships and cultural events of that period. In these past-salient references, one also sees the temporal quality of scale. Thus, an object or place some-

times referred to a small-scale incident, such as a pair of shoes that tripped off memories of a wedding day. More often, people reported larger scale events or stages in their lives; for example, baby clothing and photographs often keyed off recollections of childhood in general, not specific incidents. The temporal concepts of pace and rhythmic patterns did not appear in past-salient aspects of cellars and attics, either because they were less vivid in past-temporal references or because they were not elicited in Korosec-Serfaty's analysis.

Respondents also described present and future linear referents. For example, cellars often were salient in present activities, as people reported going there one or more times a day to get foodstuffs, do laundry, or to obtain privacy. Furthermore, as might be expected, most present-salient examples involved small-scale events, that is, specific activities and limited periods of action. In present-salient cases, the pace and pattern of activities were usually explicit, in contrast to past-salient reports. Thus, the performance of household chores reflected a more defined pace and systematic pattern of events than did general recollections of the past.

Attics and cellars also had future-salient qualities. People reported that certain items, such as photographs, diaries, clocks, and heirlooms, were being kept as inheritances, to be passed on to their children and grandchildren. In some cases, items were to be used in a specific future event, such as a wedding, thereby reflecting a small temporal scale. In most cases, however, the scale of the future temporal period was larger; for example, a clock was to be used by one's heirs throughout their lives.

An object or activity sometimes involved several temporal referents simultaneously. For example, family heirlooms occasionally evoked past and future orientations, as an object reminded people of their parents or grandparents, and at the same time was described as something to be passed on to subsequent generations.

Attics and cellars also had cyclical/spiraling temporal qualities, although these usually related to affordance activities, not to meanings and feelings, and to present- and future-oriented events, not to past events. For example, cheesemaking, food preparation, and winemaking were described as occurring during certain seasons, weeks, or times of day, with such work being salient to both the present and future. Thus, people went to the cellar for food supplies on a

recurring and regular basis to meet present needs, and they prepared wine and cheese or pitched hay and fodder into the attic for future needs.

These and other cyclical activities also varied in temporal scale. Some recurred annually or seasonally, with a long interval between the cyclical events, for example, storing hay, whereas other events recurred almost daily, such as doing laundry and ironing. A second facet of temporal scale in our framework is the duration of a cycle. Thus storage of hay and fodder requires more time to complete than does doing laundry or ironing, yielding differences in the length of a recurring cycle. So, the data reflect how one must take into consideration both the length of spiraling events and the interval between events.

Korosec-Serfaty's respondents did not appear to emphasize pace or rhythm of events associated with attics and cellars — as hurried or unhurried, following a certain cadence and sequence, and so forth. However, one can readily imagine that laundering, cheesemaking, or wine preparation have aspects of hurriedness or slowness as well as systematic rhythms and sequential patterns of activity. Indeed, many such activities can probably be treated as behavior settings (Barker, 1968) in which specified programs, patterns, and sequences of behaviors are enacted by participants. For example, the storing of hay involves cutting, drying, bailing, or gathering, and hauling and placement in the attic. These activities occur in a certain sequence, pace, and rhythm, with various actors playing out managerial, support, and laboring roles in different phases of the process.

In summary, Korosec-Serfaty's data illustrate how linear and cyclical features of time are an intrinsic aspect of affordance-, social relationship-, and appropriation-related phenomena that occur in attics and cellars, as are the temporal dimensions of salience, scale, pace, and rhythm. On the other hand, not all combinations of psychological/environmental/temporal qualities appeared in the data. For example, we found no instances of cyclical past-, present-, or future-salient aspects of social relationships or appropriations and attachments, whereas there were many references to linear features of social relationships. In contrast, there were many examples of cyclical activities associated with affordances, for example, cheesemaking, wine preparation, and food storage. Future research may be necessary to ascertain whether these gaps are a function of data collection or actual qualities of attics and cellars.

HOUSE-BLESSING CEREMONIES: PUEBLO OF ZUNI

The Pueblo Indians live in tightly knit and compact communities in the southwestern United States. In portions of some Pueblo communities, homes are terraced in stepwise fashion, sometimes being four and five storeys high. Although terraced homes are still found in Pueblo communities, it is common nowadays to build freestanding, separate dwellings. In spite of changes over the years in their physical design, homes have a central place in Pueblo culture and appear to exhibit a transactional unity of the type described throughout this chapter. Because of our own experience and because of the availability of extensive literature on the subject, we will focus on the homes of the Zuni people, one of several Pueblo Indian cultures (Bunzel, 1932; Cushing, 1974; Parsons, 1939; Saile, 1977; Stevenson, 1904).

The religion and cosmology of the Zuni people are so rich, complex, and pervasive in everyday life that we cannot even begin to describe their many facets. Although we do an injustice to cultural and religious beliefs and practices in effecting any separation of one feature from the others, we will focus on the home as a single but essential feature of Zuni culture.

The home is a sacred place in Zuni. It is a «living» thing, is blessed and consecrated, is a location for communication with the spirit world and with God, is a place for religious observances, and is a setting within which occupants reside, live, eat, and raise children. The central place of the home in Zuni culture is made salient through an elaborate annual ceremony in which as many as eight new homes are blessed and consecrated. This ceremony, the Shalako, is part of a larger winter solstice observance (Shalako is actually the culmination of year-long events) and is highlighted by a 24-hour period of religious activities associated with the blessing of the new homes. The ceremonies involve special dances, prayers, and activities throughout the community and in the homes being blessed. Central to the 24-hour ceremonies are the Shalako figures. These elaborately decorated 10-foot-tall masked figures are manned by carefully selected members of the community who train for a year to assume their religious roles.

The various ceremonies and prayers during the Shalako ceremony involve social relationships, affordances, and appropriation and identity. For

example, social relationships are manifested in the custom of feeding all who come to the Shalako houses, including strangers and those outside the community, thereby symbolizing friendship and bonds with all people. And part of the ceremony involves symbolic feeding of the spirits of ancestors who are believed to come up the Zuni River for the ceremony in order to reestablish social bonds with their families. The coming together of relatives, friends, community members, and strangers in the Shalako House further symbolizes the social relationships and bonding of people with one another.

Zuni values emphasize communality over individuality, and the processes of attachment, identity, and appropriation reflect this communal tone. Although we have treated them separately, appropriation and attachment qualities of homes merge with social relationships in the Shalako example. Rituals, prayers, and activities simultaneously bond people to the home itself, the clan (familial subdivisions within the tribe), community, ancestors, and spirits and gods. For example, residents and the house are attached to the clan by virtue of the fact that the home is built cooperatively with clan members. In addition, it is richly decorated for the Shalako ceremony with rugs, jewelry, shawls, and other materials given by the clan members. The community is entertained and fed in the house, symbolizing that the home, its residents, and the clan are linked to the larger society. In addition, identical events occur simultaneously in several new homes during Shalako, yielding a broad bond to the community and the religious value system. Finally, the Shalako ceremony occurs throughout the village as well as in particular homes, thereby further bonding the community together.

Affordances, or utilitarian aspects of the home, are displayed throughout the Shalako house-blessing ceremonies, particularly in relation to food production and preparation. For example, the symbol of corn is prevalent, and dancers and ceremonial figures are sprinkled with commeal or corn pollen, prayers are made with corn kernels, and seeds are planted in the floor of the home. Food appears in other rituals associated with health and well-being, and in prayers for rain and other aspects of agricultural productivity.

The Shalako ceremony and the larger temporal events within which it is embedded unify psychological and social processes and homes in a transactional

whole. Although the main Shalako ceremony occurs in a 24-hour period, it is embedded in a longer time frame that extends several days after and several weeks before the 24-hour ceremonies. Moreover, even these events are part of a year-long series of activities that are initiated almost immediately following the completion of the Shalako activities. Thus, events surrounding Shalako occur from one winter solstice to another, although the scale, pace, and rhythm of events change throughout the year. The year-long events are very complex and involve cycles of activities within larger cycles, rituals and practices that vary in duration of cycles and intervals between cycles and differences in the pace and rhythm of temporal events.

The annual cycle begins with the naming of the households that will be blessed at the next Shalako observance and the appointment of the «impersonators» or Shalako dancers who will be central to the ceremonies a year hence and who will impersonate or represent the rain god. Soon after their appointment, the impersonators begin a lengthy period of learning prayers, chants, rituals, and dances under the tutelage of the elders and religious leaders of their clans. Throughout the year they participate in daily, monthly, and other recurrent and cyclical religious activities associated with their special roles — daily offerings of prayer to the rising sun, evening prayers at the river, monthly prayer activities at holy places in the surrounding countryside, and the like.

By virtue of their religious, historical, and cultural training and extensive contact with their mentors and community the impersonators and those around them are embedded simultaneously in a blend of past-, present-, and future-salient cyclical events. The religion and culture of the Zuni people are brought to the fore in the process of learning history, religious prayers, and rituals, dancing, and so forth. Thus the past is learned for its own sake but is also brought into the present on a regular basis, and in a way that extends into the future, that is, the impending Shalako ceremonies and the long-term future of the homes and occupants that will be blessed.

The impersonators also work throughout the year for the household who will entertain them at the time of the Shalako ceremonies — bringing in wood, working in the fields, building the house to be blessed, and the like. These affordance and social activities.

Over a long time scale, therefore, a variety of smaller scale cycles of activity come to be associated with the Shalako ceremony.

Several weeks before the Shalako ceremony two of the impersonators begin a complex period of counting down toward the main ceremony. Their activities involve daily rituals and prayers, for instance counting off the days remaining before Shalako by means of a string with knots symbolizing the days. Here again, a number of small-scale, recurring cycles are woven into the longer year-long cycle. These cycles and the durations between them are short, yielding a quickening pace and quickly recurring cyclical events. Eight days before Shalako, sacred clown figures appear in the evening, visit throughout the community, announce the coming of Shalako, and begin a retreat. Four days before the ceremony another group of sacred figures appears. They signal the impending events and engage in various ritual activities. In the intervening days, more and more activities, rituals, and religious events occur, thereby quickening the pace, telescoping the temporal scale, and creating an atmosphere of excitement.

The 24-hour Shalako ceremony begins in the late afternoon, when the Shalako figures appear in the distance on the south bank of the Zuni River. For the next few hours various figures, including the impersonators, leave the Shalako masks at the riverfront and go to all parts of the village to announce the impending arrival of the figures, plant prayer sticks under the threshold of the homes to be blessed, and sprinkle cornmeal, seeds, and other materials at the threshold and around the home.

In the next phase of the ceremony, when it becomes dark, the Shalako figures are led by their clan members, who chant and sing along the way, to the homes to which they have been assigned. When they reach a home, the clan members surround the Shalako figure and sing and pray at the threshold, following which the figure enters the home. Clan members, villagers, and visitors are assembled in the home to watch the next phases of the ceremony. There is then a period during which a group of male singers chants and prays, which is followed by a lengthy ceremony in which the impersonators, who have temporarily emerged from the Shalako masks, chant from memory the history of the Zuni people from their origin to the present time. In this historical recounting, the past is salient but is linked to the

present as the history of the people is updated, made a continuous and unending stream, and taught anew to the assemblage of infants, children, adults, and elderly members of the community. The oral recitation also includes future-oriented prayers for the health of the residents of the home, for many children who will live to old age, for rain and good crops, and so forth. Simultaneously, there are repeated references to spirits and gods of the past, ancestors, and important historical events.

The linking of past and present occurs in a variety of forms throughout the Shalako ceremonies. For example, following the oral history recitation, women bring large tubs of food into the house (much of the food is supplied by members of the community). The Shalako impersonators take a sample from each tub and carry the food to the Zuni River, where they feed the spirits of the ancestors who have come up the river from a distant place to participate in the Shalako ceremony. Thus, past and present are salient and fuse in this part of the celebration.

The Shalako ceremony is interrupted near midnight by a meal to which all are invited. Members of the community, Indians from other tribes, and non-Indians, many of whom are strangers, are entertained with politeness and grace, in spite of the labor and expense required. The activity is present salient and involves social relationships with a variety of people. The mealtime event also alters the pace and rhythm of the ceremonies by demarcating sharply the earlier events from the forthcoming dramatic dance of the Shalako figures.

After midnight, the people reassemble in the house to be blessed, and the Shalako dance begins. Following a period of chanting by the men's group and additional prayers and rituals, the 10-foot Shalako figures dance for several hours until morning. The dance is stylized and repetitive and follows a certain pattern and pace. Sometimes a second impersonator joins the dance. Periodically, the Shalako dancer returns to a corner of the room and is surrounded by assistants who hold up blankets to hide the fact that the impersonators are changing places in the figure. This recurring cycle of dancing and switching of dancers occurs over several hours until dawn. Attention by observers appears to be unswerving and patient. The repetitive dance process, like the preceding and remaining chants, creates a sense of fusion of past, present, and future in a way that defies total description. One is completely caught up in the event,

and one suspects that participation on several occasions produces a phenomenological blending of past, present, and future, or a form of timelessness that has been often used to describe Zuni and other Pueblo cultures (e.g., Tuan, 1977).

On the following day, the Shalako figures participate in a new cycle of events — the race of the Shalakos. The figures reassemble at the river, thereby completing the cycle from the time of their first appearance in the village. They then participate in a complicated series of events, part of which involves racing to the river one by one in order to demonstrate their «strength» and burying prayer sticks in designated holes in the ground. This part of the ceremony, although the culmination of the 24-hour period, is not the end of the year-long celebration. For several days thereafter, the sacred clowns and other figures continue the celebration, dancing and playing in the plaza and throughout the community, and engaging in ritual activities in the designated house.

The Shalako ceremony and its year-long events are primarily cyclical rather than linear because they recur year after year. They also reflect past, present, and future salience, singly and in combination, and involve affordances, attachments and identities, and social relationships. Moreover, the Shalako activities display variations in pace and rhythm, with slower paced events occurring throughout the year, with a buildup to the rapidly paced 24-hour period of prayer, dancing, and ritual activity. Furthermore, the Shalako observance reflects a myriad of differences in temporal scale. Embedded within the large-scale, year-long events are a series of small-scale subevents, for example, the assembly at the river, the march to the houses to be blessed, the chanting of the men's groups, the recitation of the history of the Zuni people, the meal, the Shalako dancing, the race at the river, and the celebrations that follow in subsequent days. As the year progresses, the scale of events, that is, the intervals between activities and the durations of the activities themselves, become telescoped and accelerated in pace as they lead up to the 24-hour period. Following the 24-hour ceremonies the scale lengthens for several days and the pace slows, signifying the ending of one cycle of events and the beginning of another.

It is through this array of events that new homes, which serve as symbols of all homes in the community, become rooted in a transactional unity with the people, culture, and natural environment.

IMPLICATIONS FOR FUTURE RESEARCH

This chapter illustrated how homes can be viewed as transactional unities wherein phenomena are treated as dynamic confluences of people, processes, environments, and temporal qualities. In particular, we have focused on temporal qualities of homes in terms of a number of selected dimensions: linear and cyclical time and temporal salience, scale, pace, and rhythm.

This temporal framework, applied to homes in a variety of societies and contexts, has implications for future research and theory. First and foremost, our analysis suggests that a home can profitably be treated as a holistic transactional unity. Instead of researching and theorizing about the separate physical, psychological, and interpersonal qualities of homes, a transactional approach calls for an examination of homes as integrated unities of physical, psychological, and temporal features. Concepts of social relationships, appropriation and attachment, to name a few, need to be studied simultaneously in relation to their physical and temporal aspects. The home, therefore, is defined by, incorporates, and gains meaning through the psychological and interpersonal events that occur in it. Similarly, psychological and social processes require incorporation of physical and temporal qualities into their very definition. These processes occur in physical settings, and understanding them requires inclusion of the nature of the settings into the definition and conceptualization of the processes. Neither the physical settings of the homes nor the psychological and social processes with which they are associated can be disentangled from one another.

The focus of this chapter has been on temporal qualities; therefore, the basic prescription is that temporal features of transactional unities be incorporated into research and theory. That is, the focus should be on dynamic processes, rather than on the static aspects of homes. This view suggests that the researcher or practitioner should study the processes involved in making a home, the uses and activities of the home, the relationships that grow and change there, the relations among the person-environment linkages and psychological experiences, and so forth. Furthermore, the focus should be on the specific temporal qualities that we have detailed. How time relates to meaning and the development of person-environment bonds is an empirical question, and many hypotheses could be tested: Are both a past and

a future essential to feeling at home? How much time and what kinds of activities and meanings must transpire in the process of establishing a home? Relative to others, are people who engage in a greater variety of transactions differently bonded to their environments? Does the psychological experience of the transaction moderate the nature of the person-environment bonds, for example, does the pleasure or displeasure with which one appropriates through decorating, or does one's satisfaction with the results of decorating affect the meaning of a home? Are rhythms an essential quality of viable home living? Do significant and nonsignificant objects and events differ in their temporal depth (that is, the extent of their temporal associations)? Observations, questionnaires, and interviews can be used to explore linear and cyclical aspects of the present, memories of the past, and expectations for the future in terms of the subordinate dimensions of salience, scale, rhythm, and pace. Furthermore, as shown in the case examples of attics and cellars and the Zuni Shalako ceremony, these temporal properties should be viewed in combinations rather than as separate independent qualities.

Temporal qualities of homes have typically not been the focus of systematic research but have emerged as incidental aspects. For example, although several authors speak of the rhythms of the home and anecdotes from a few residents attest to the importance of rhythms in home life, there has been little systematic research on this aspect of temporality or how it relates to meaning. Similarly, although scale was evident in many descriptions of objects and homes, few authors proposed how scale links with meaning.

In sum, although we found many examples of time-linked practices and activities in homes, few of the accounts invited systematic attention to the range and scope of temporal dimensions or to the linkage of these to uses and attitudes in homes. Some authors did stress the importance of time and person-environment bonds (e.g., Csikszentmihalyi & Rochberg-Halton, 1981; Furby, 1978; Korosec-Serfaty, 1985; Lawrence, 1982a, 1983), but many others simply described temporally based practices, leaving their significance to the reader's inferences. Research is needed to examine these complex interrelationships among the aspects of the transactional model.

Temporal issues also need to be examined in terms of individual and cultural differences. For example, whereas Furby (1978) and Howell (1980)

felt that people needed to represent their memories in their possessions, others (Csikszentmihalyi & Rochberg-Halton, 1981; Rakowski, 1979; Tognoli, 1980) argued that there are large individual differences in the extent to which this is true. And on the surface there also appear to be wide variations in societies in respect to home-linked qualities. These variations need to be examined in a systematic and comparative way, in terms of their similarities and differences and universal and idiosyncratic qualities.

A final area of research and theory concerns further development and elaboration of our conceptual framework. The model is based on evidence selected in a nonsystematic way from different societies and different scales of persons and environments. Furthermore, neither we nor the authors who described practices and rituals in homes can be sure that the interpretation made of them represents accurately their use and meaning to the residents; thus support for the framework is tentative, and the model may not have broad generality. Although it would have been useful, we were unable to find sufficient and accurately interpretable information about any single society to fit the entire framework. Only additional research, specifically designed to test the model, will permit an evaluation of its full utility. Our analyses of French attics and cellars and the Zuni Shalako ceremony involved application of the model to many facets of single groups, but even this was on a limited basis and may have contained biased interpretations.

Moreover, the framework is incomplete. We examined only three general categories of person-environment linkages (social relationships, attachment and appropriation, affordances), and we are aware that these could be expanded and distinguished and that other kinds of linkages might be identified. In addition, there are many other temporal qualities of homes that may be explored in future research and theory. Although our examination of the literature on homes suggests that the temporal dimensions of our framework (linear and cyclical/spiraling time, salience, scale, pace, and rhythm) were the most evident and pervasive, they represent only a few temporal qualities that may be relevant to home environments.

Lynch (1972), McGrath and Rotchford (1983), and others (Gibson, 1975; Rakowski, 1979) have identified other temporal features of person-environment transactions that may also warrant attention. For example, although Lynch used concepts similar to aspects of the present model, he also introduced the

properties of amplitude (the degree of change within cycles) and regularity (the degree to which behavioral patterns remain stable and unchanging). In contrast, Rakowski (1979) and Hoornaert (1973) stressed people's psychological experiences of time. Rakowski focused on future-time perspective, examining differences in psychological outlook by groups as function of their future-time perspective. Hoornaert was also interested in time perspective, examining in detail its various aspects (e.g., extension, density) and distinguishing it from other psychological experiences of time (estimation, orientation, calculation). So, there are undoubtedly a variety of temporal features of person-environment transactions that may require attention beyond the few employed in the present framework.

In summary, we have proposed a transactional framework of homes that includes several temporal person-environment linkages. Our analysis suggests that a transactional approach can be applied to the understanding of homes in many societies. Most importantly, we proposed that future research could profitably use this framework to examine in a systematic way the home as a transactional relationship of people, processes, places, and time.

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