# OUR COMMON HOUSE:
# USING THE BUILT ENVIRONMENT TO DEVELOP SUPPORTIVE COMMUNITIES

By

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TABLE OF CONTENTS

page

LIST OF TABLES

LIST OF FIGURES

Figure Page

Abstract of Dissertation Presented to the Graduate School
of the University of Florida in Partial Fulfillment of the
Requirements for the Degree of Doctor of Philosophy

# OUR COMMON HOUSE: USING THE BUILT ENVIRONMENT TO DEVELOP SUPPORTIVE COMMUNITIES

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Awareness of the need for alternative community models that are socially and ecologically healthy has led some Americans to try cohousing, where a renewed "sense of community" and a move toward environmental stewardship are encouraged through design and everyday practices. In cohousing, individual households join to create a community by participating in the design and administration of the common property, sharing tasks, assisting each other, gathering for communal meals, and establishing a social network reminiscent of extended family structures.

Further dissemination of cohousing requires understanding its model. Of particular interest is finding out whether and to what extent the physical patterns of cohousing communities contribute to advance residents toward more sustainable and socially healthier living. Substantial and continuous reference to "social contact design" as an essential component of cohousing suggests that specific physical features of these

communities—increased density, inward-facing layouts, grouped structures and emphasis on pedestrian circulation—may be a way to represent, encourage or channel the social interaction sought by their residents.

This research used an action research process to examine the cohousing model and to explore the linkages between its social and physical patterns. It relied on qualitative formal analysis of architectural drawings and photographs to describe the physical setting of a case study community and on experiential methods such as participant observation and interviews to document the behaviors of its residents. The inquiry centered on the desired interaction and on the design features of the community involved in the development and consolidation of any of those behaviors.

The linkages between the social and physical patterns observed in the case study community are explained in light of environment-behavior theories. Results showed that the social contact design strategies implemented in the case study community facilitate social contact among neighbors and foster feelings of safety within the community; and to some extent contribute to existence of a neighborhood support network and allow residents to participate in community governance and maintenance. Results suggest that cohousing may be a viable model for creating socially and environmentally healthy neighborhoods with a sense of community.

# CHAPTER 1
# CREATING COMMUNITY IN AMERICA

Today more than a third of American households live in the residential enclaves we call suburbs (US Census Bureau, 1999, Table 2-1). However, the mainstreaming of the suburbs has not prevented early and sustained criticism ranging from claims that suburbs "lack form" (Mumford, 1938) or prevent rich human interaction (Riesman, 1956); undermine the social and economic life of the city (Jacobs, 1961; Kunstler, 1994), and cause environmental damage (Calthorpe, 1993). Additionally, criticism has focused on the shift from a "people order" to a "place order—a segmentation of people and activities by location" (Taylor, 1988, p. 167) in the modern city. More recently, the social consequences of suburbanization, or "the growing spatial separation of the new residential areas from the main employment centres" (Hall, 1996, p. 305), has been questioned, as well as the housing pattern that prevails in the suburbs.

Suburbs are areas of single family homes clearly separated from the city by a system of transit ways. Their design stresses independence and isolation of the domestic environment. This design originally stemmed from a desire to ensure family-friendly areas free of general traffic interference and away from other perils of the city, that were consequently regarded as the optimal social and physical unit for " 'that larger family—the neighborhood group' " (Hall, 1996, p. 196). Yet the same features that were meant to preserve our social institutions are now suspect of rupturing our social fabric. Some believe that a strong association exists between the physical separation of work, care and

leisure into highly differentiated environments and what is perceived as a nonconnected life experience (Calthorpe, 1993; Katz, 1994; Langdon, 1994; Scanzoni, 2000).

Such lack of connectedness is further evidenced in the design of the subdivision and the layout of the houses of suburban America and prompts similar concerns about its effects on social interaction. The housing pattern that prevails in suburbia echoes the notion of the nuclear family as a "self-contained, self-sufficient unit" (Hasell & Scanzoni, 1997; Scanzoni, 2000): detached homes separated from each other by a system of lawns, setbacks and seven and a half meter-wide (24 feet) streets that seem to discourage, rather than facilitate, interaction among neighbors. Therefore the question is whether the "American Dream" of living in detached, suburban houses designed for formulaic households that are no longer the norm and whose dynamics have changed is still valid (Calthorpe, 1993; Hayden, 1984; Hayden, 1989; Weisman, 1992). Socioeconomic changes such as the movement of women into the workforce, increased longevity, and higher divorce rates have redefined the traditional structure of the nuclear family and rendered the suburban model obsolete. Weisman admonishes that,

> If we fail to recognize the demographic facts of contemporary household diversity, we will continue to design and build housing in community patterns and densities that more or less suit the traditional, autodependent nuclear family that exists today more in myth and nostalgia than in reality. (Weisman, 1992, p. 149)

We have slowly realized that for the growing sector of the population comprising two-earner households, lone residents, elderly citizens, and single-parent families[1], this

[1] According to the latest (1997) American Housing Survey figures 25,263,000 households—a full 25.4% of reported units—consisted of single adults of any age; of these 15,298,000 were 65 years of age or older. In addition, 6,354,000 households, 6.4% of the population, were consisted of single parents with one or more children (US Census Bureau, 1999, Table 2-9).

dream is now ill fitting since “many now understand that without a full-time caretaker the suburban dream cannot function" (Calthorpe, 1993, pp. 18-19).

In addition, suburban sprawl has come under further criticism as a model that excessively encroaches on the natural environment, generates extensive impervious surface coverage, exacerbates consumption of resources, and increases the need for vehicular transportation. Under these circumstances, the prevalent feeling is that “how much responsibility the suburbs bear for today’s widespread ills is difficult to say with precision… but the suburbs are implicated in the downward spiral” (Langdon, 1994, p.2).

The gradual acceptance by the general public of a new environmental paradigm that acknowledges the effects of human action on local and global ecosystems (Bechtel, 1997), coupled with awareness of changing social and economic demographics, have signaled the need to research the correspondence between the lifestyle aspirations of the citizens and the urban patterns of our cities. To the list of criticisms to suburbia, we now add claims that it lacks physical and social connectivity.

This dissertation addresses the need to search for and explore new neighborhood models. It is founded on the recognition that our current patterns of housing, transportation and land use are mismatched to present needs; and that these patterns have ultimately failed to provide and foster desired degrees of connectedness or community.

## Quest for Community

Hasell and Scanzoni (1997) claimed that the “quest for community” and calls to create alternatives to suburban living in the form of “new urban villages” are frequent concerns that have found outlet in both policy and academic circles. Quoting Toffler, McCamant & Durrett (1994, p. 202) state that “everywhere we find a new concentration

on *community* and *neighborhood*." Wolf (1999) linked the desire for community to the notion of livability that is currently driving a new urban migration in America, what he terms the Fifth Wave[2]: the mobilization of residents from metropolitan suburbs to towns with a high quality of life. Along with cheaper real estate, better education, cleaner environment, safety, and a strong job market, the existence of a "sense of community" in these towns are reasons cited for the relocation of between 750,000 and 1.6 million Americans a year (pp. 17, 36).

At the same time, radical thinkers contest the notion of America as a land of "rugged individualism" claiming the existence of a "thirst for community" throughout the country (Peck, 1993, p. 14), and citing Margaret Mead's claim that "99% of the time humans have lived on this planet [has been] in groups of 12 to 36 people . . . [because] for the full flowering of the human spirit we need groups, tribes, community" (Utne, 1993). Yet, despite the ubiquitous mention of Americans' yearning for community in the media and the abundance of publications on the topic (see Peck, 1993; Shaffer & Anundsen, 1993; Whytmyer, 1993), community seems to be an elusive concept.

Although the general usage conveys notions of people joined by a common belief or purpose and sharing a common history, we may also –and often do– include a spatial dimension when we refer to community. Therefore, community can be defined as "an aggregate of people who occupy a common and bounded territory within which they

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[2] Wolf identifies five urban migrations in American history, starting with the arrival of European settlers that built the first towns in the country. The sequence continues with the population of the West, driven both by federal policies and private land speculation schemes (Second Migration), the migration of rural peoples to the big industrial centers in the 1800s (Third Migration), and the relocation of urban residents to suburban rings around the cities during the twentieth century (Fourth Migration) (Wolf, 1999, pp. 9-15)

establish and participate in common institutions" (Spreitzer, 1992), which acknowledges the overlapping existence of both its physical and social aspects.

However, in the context of social disciplines community also connotes a state of deep or responsible connection with others (Scanzoni, 2000, p. 6; Peck, 1993, p. xx). Thus, claims of having a sense of community or being "in community" refer to the quality of connectedness in the sociophysical community. According to Fromm (1991; 2000) and Shaffer & Anundsen (1993) this social connectedness is expressed through a range of behaviors that include knowing and interacting with others, depending on one another and helping each other when in need, belonging to something greater than oneself, feeling secure within the community, participating in common activities, making decisions together, and having access to community administration and upkeep (Fromm, 1991; Fromm, 2000; Shaffer & Anundsen, 1993).

It follows that although suburban neighborhoods are communities (populations that partake of a set of social institutions and share a definite spatial locus) the question is whether their residents develop or retain a sense of community. Thus, one response to those who question the adequacy of suburbia to meet our current needs has been an interest in the creation of community. However, the relative importance assigned to either the spatial or the social dimension of community may explain some recent approaches to creating community in America.

**Expert Approach: Community by Design**

In the 1990s, after decades of revisiting development practices in America, the efforts of urban planners and designers to address environmental responsibility and social connectivity led to the formulation of a theory for transit-oriented, traditional, or neotraditional neighborhood developments (NTDs), known as New Urbanism. New

Urbanism seeks to overcome the fragmented experience and hollow feeling associated to the generic, undifferentiated architecture and disjointed fabric of our towns by addressing their design (Calthorpe, 1993; Katz, 1994; Langdon, 1994), in apparent response to the city dramatically described by Jacobs (1961) as a sacrificial victim of poor planning and worse design.

The theories of New Urbanism are founded on a belief that there are timeless and universal design principles in traditional towns from which suburbia has strayed and which are credited for producing sustainable settlements with a strong sense of community. The NTD model addresses ecological concerns through densification, lessened impact on the land, and less reliance on the use of vehicular transportation (Calthorpe, 1993; Langdon, 1994). At the social level, the model looks to the past not with nostalgia but with respect for principles thought to have produced "more finely integrated, walkable communities with a strong local identity and convivial public spaces" (Calthorpe, 1993, p. 21). Accordingly, NTD prospects call for the connection and regrouping of the now segregated elements of the city: housing, shopping, jobs, parks and civic areas. They stress the need to facilitate and to take advantage of pedestrian transportation; to provide a diversity of urban experiences; and to curb sprawl to within sustainable limits (Katz, 1994).

Praised as a step toward more sustainable urban developments and credited by some for revitalizing decaying city centers (Katz, 1994), New Urbanism theory nonetheless can be censured for its architecturally determined attempt at solving social problems. Indeed, practitioners of New Urbanism design seem to put a premium on the formal expression of their developments. The prevailing implication in New Urbanism

discourse is that recreating the physical character of traditional towns is not only environmentally advantageous, but will eventually lead residents toward the intense social interaction and connectedness of old (Duany & Plater-Zyberk, 1991; Katz, 1994; Langdon, 1994).

However, New Urbanism is an expert or top-down paradigm in which the degree to which prospective residents contribute ideas or are allowed involvement in the design and operation of the community is often weak and indirect. Design firms specializing in NTDs, such as DPZ Architecture, use week-long charrettes, or design workshops, that engage all interested parties in the pre-design phase, from planning officials to interested citizens. But, because of the scale and nature of the projects, advocacy or interest groups tend to represent the future resident population. For practitioners, this has proven to be an efficient method that "helps to educate the participants, incorporate their contributions, verify decisions and diminish the adversities of the ensuing permitting process" (Duany & Plater-Zyberk, 1991, p. 23).

Although decisions made through the charrette form the basis of the urban codes that regulate building in the community and that inform its urban design, resident participation remains limited. Therefore, the designer maintains direct and indirect control and responsibility for the final result first by shaping the urban environment and later by enacting the codes. Because of this, traditional neighborhood developments can be just another housing solution in a trend to market "community as commodity" to the American public (Scanzoni, 2000, p. 95). In consequence, New Urbanism remains focused on the physical construction of community and embraces a philosophy of "salvation by bricks" (Bishop, 1998) that fails to directly engage the end user. It narrows

its definition of community and poses obstacles to achieving the state of deep connectedness to which many aspire.

**Alternative Approach: Community by Action**

A different approach to creating community is the grassroots movement to develop fellowships as an alternative to mainstream living. A limited, yet growing number of "intentional communities" (ICs) has appeared in the last decades in North America[3] that define themselves as "group[s] of people who have chosen to live together with a common purpose, working cooperatively to create a lifestyle that reflects their shared core values" (Questenberry, 1995, p. 1). Intentional community is a loose label for organizations in a variety of persuasions that may range from the strongly ideological to the merely pragmatic, and that differ in philosophy, leadership or behavioral norms. Yet these communities share ideals and goals of ecological and humanist nature among which providing members with an intense community experience is key (Kozeny, 1993; Kozeny, 1995). Supporters of ICs claim that they cater to those who "bemoan the 'loss of community,' and are looking for ways to reintroduce community values into their lives" (Kozeny, 1995, p. 1).

Intentional communities may involve the material environment in the making of a fellowship, but because their paradigm focuses on its social rather that its physical construction, normative practices for physical design are not necessarily prescribed. Rather, ICs stress the role of resident commitment to, and active participation in, the creation of community. In doing so, ICs lay the ground for establishing deep and

[3] A population of 8,000 or more was reportedly living in nearly 200 intentional communities listed in the Directory of Intentional Communities (DIC) in 1990; and by 1995 almost four times as many communities were already suspected in existence (Questenberry, 1995).

responsible connections among members that lead to the development of a sense of community.

Intentional communities gain significance in light of theories that validate action as the instrument for uncovering social truths and generating social order, with which clearly the intentional community movement is conceptually aligned. Intentional communities are examples of purposeful collective action where interested groups participate in projects aimed at enacting a change in their lifestyle, and with ideological implications for social change. Their goal is the creation of community, understood as social connectedness, through a variety of strategies that often also include the creation of the physical community. Their tradition dates from the Utopian communities of the nineteenth century, many of which affixed on a set doctrine, theory or belief, and put strong cooperative emphasis on their social, economic, and spatial organization (Franck & Ahrentzen, 1989; Hayden, 1981; Hayden, 1984; Holloway, 1993; Kanter, 1972).

However, as Norwood and Smith point out, in contrast to earlier intentional communities "most now follow an egalitarian and participatory social structure that respects an individual's needs while maintaining the unity of the group" (1995, p. 45), and increasingly lean toward ecologically sustainable housing. Among these, the intentional communities known as *cohousing* address social connectivity and environmental sustainability through both design and action.

**Cohousing Approach: Community by Design and Action**

Cohousing is an emerging housing option that has been in use in Scandinavia for the last 30 years, following a long tradition of collective housing concepts. These traditional *kollectivs* provided the inspiration for a group of Danish citizens lead by architect Jan Gudmand-Høyer to create an updated version of the model in the early

1970s, which they called *bofællesskab* or "living community."[4] In the late 1980s California architects Kathryn McCamant and Charles Durrett introduced the model to America and started its dissemination with the publication of a book based on their research of the Danish communities (Franck & Ahrentzen, 1989; Fromm, 1991; Fromm, 2000; McCamant & Durrett, 1994; Milman, 2000; Vestbro, 2000). McCamant & Durrett are also credited with translating the term, bofællesskab, which they originally called *co-housing* to reflect the collective nature of this type of housing.

Today there is an incipient cohousing movement in North America, with more than 120 communities in different stages of development.[5] A nonprofit national association, The Cohousing Network (TCN) works to disseminate this housing model and to promote its application in North America. The Cohousing Network has regional chapters, holds annual conferences, hosts a web site and an online discussion list, and publishes the specialized journal *CoHousing*. Their goal is to have at least one cohousing community in every major metropolitan area by 2005 (Durrett, 2000a). Figure 1-1 shows similarities in the physical layout and land use patterns of cohousing communities in Scandinavia and America. It also shows how—along with its social organization—the environmentally-friendly development approach of the cohousing lifestyle has been transferred across continents.

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[4] A more literal translation of the term is or "livingtogetherness" (Weisman, 1992, p. 155).

[5] In July 2000 there were 96 completed communities with 1,175 households in USA and Canada (Tarnay, McIntyre, & Blank, 2000). Besides those in North America and Denmark, today there are also cohousing communities in Sweden, Norway, Finland, Iceland, the Netherlands, Great Britain, Canada, Australia, New Zealand, and Japan.

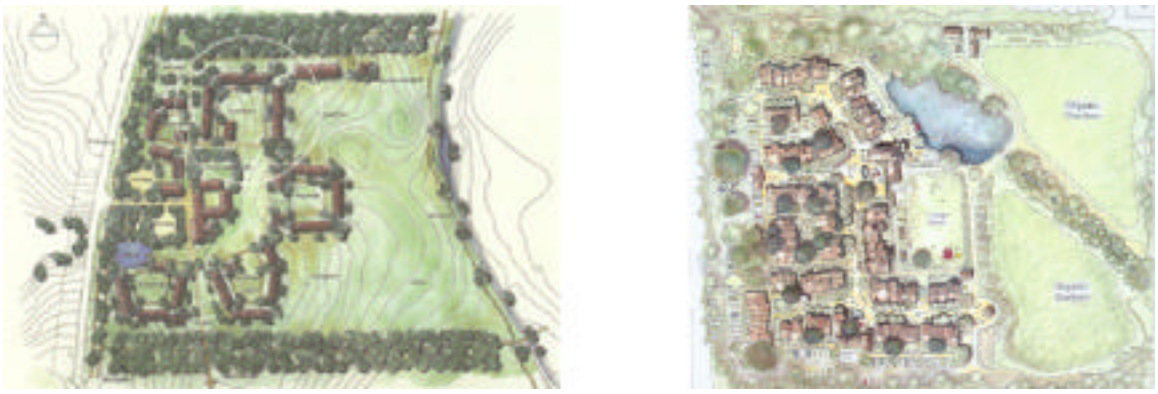

Figure 1-1. Danish cohousing model as applied in America. A) Munkesøgård cohousing site plan, Roskilde, Denmark, 1999. Source: Munkesøgård cohousing brochure, Roskilde, Denmark, 1999. B) East Lake Commons site plan, Atlanta, GA, 1999. Source: East Lake Commons brochure, Atlanta, GA, 1999.

**What is cohousing?** As described by literature, "cohousing is the name of a type of collaborative housing that attempts to overcome the alienation of modern subdivisions in which no-one knows their neighbors, and there is no sense of community" (TCN, 1996). Researchers regard cohousing as an attempt to compensate for the separation of work, care and leisure into highly differentiated environments, as well as the stresses associated to detached suburban living, by bringing neighbors together and building a supportive and nurturing community (Franck & Ahrentzen, 1989; Fromm, 1991; McCamant & Durrett, 1994; Norwood & Smith, 1995).

Yet, unlike other intentional communities, cohousing is basically a movement of homeowners that share some eminently practical concerns. Cohousing can be defined as a private initiative to build neighborhoods with strong resident participation in all stages, and with parallel goals of fostering environmental stewardship and social cohesion at the domestic level. Proponents claim that cohousing addresses sustainability concerns and provides a caring and supportive neighborhood environment with a sense of community:

> Cohousing communities balance the traditional advantages of home ownership with the benefits of shared common facilities and ongoing connections with . . . neighbors. These cooperative neighborhoods are one of the most promising solutions to many of today's most challenging social and environmental concerns (TCN, 1996).

According to McIntyre,

> cohousing has such exciting potential because it offers greater accessibility to the benefits of intentional community living to a broad population, notably the home-buying middle class. This includes folks who may not find appeal in joining . . . [other kinds of communities] but for whom the benefits of living in community are just as real, for themselves, their children, and for our world's future (McIntyre, 2000, p. 27).

The cohousing approach implies three substantial differences from other types of intentional community: the rejection of set ideologies, the absence of social hierarchy, and the lack of a shared economy system. Cohousing groups do not target specific populations or doctrine groups;[6] rather they claim to "espouse no ideology other than the desire for a more practical and social home environment" (McCamant & Durrett, 1994, p. 17). Cohousing communities are by definition democratic. McCamant stresses that this is one of the main characteristics of cohousing, emphasizing that "If [a] community has a leader that sets policy or establishes standards unilaterally, it is not cohousing" (TCN, 1996). Similarly, cohousing members keep separate income sources because, as Durrett notes, "if the community provides residents with their primary income, this is a significant change to the dynamic between neighbors and defines another level of community beyond the scope of cohousing" (Durrett, 2000b, p. 11).

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[6] However, recently the apparent benefits of cohousing have caught the attention of some interest groups in America, as revealed by advertisements in specialized journals and electronic pages seeking, for instance, cohousing for adults-only groups (see *CoHousing*, Winter 200, volume 12, number 3, p. 24) or cohousing for Jewish families (see http://www.shalomctr.org/html/shalomctr/comm002.html, accessed 01/27/00).

**Design in cohousing**. Cohousing is a comprehensive community model with social, physical, and procedural dimensions. The social environment of cohousing is founded on intentionality, democratic inclusion of residents, and the development of a neighborhood support network. The physical environment is designed for sustainability and social contact. The process is based on strong resident participation, which leads to community self-governance (Cooper Marcus, 2000; Franck & Ahrentzen, 1989; Fromm, 1991; Fromm, 1993; Hanson, 1996; Hasell & Scanzoni, 2000; Hayden, 1984; Horelli & Vepsa, 1994; McCamant, 2000; McCamant & Durrett, 1994; Norwood & Smith, 1995; Scanzoni, 2000). The result is a community model where lifestyle aspirations of the residents seem to fit tightly with the shape of their built environment. In consequence, design is a major factor in cohousing.

Theorists and practitioners of cohousing issue and promote a set of basic norms for the design of cohousing communities that are known as either “design for social contact" (Fromm, 1991), “intentional neighborhood design” (McCamant & Durrett, 1994), or “design that facilitates community” (Durrett, 2000). These *social contact design* principles comprise a series of features thought to foster propinquity among neighbors. Increased building density, shared common spaces, in-facing porches and windows, grouped spaces and structures, peripheral parking, emphasized pedestrian circulation, and common facilities—especially a common house, functionally and symbolically equivalent to a village’s civic center, are mentioned as its most prominent features (Franck & Ahrentzen, 1989; Fromm, 1991; Fromm, 1993; Fromm, 2000; Hanson, 1996; McCamant & Durrett, 1994). The general implication in social contact

design is that these features will somehow increase social interaction and lead to the development of a strong sense of community.

Despite the differences in purpose and the scale and scope of their application, NTDs and cohousing developments are epistemically related in that both social contact design and NTD design guidelines are directed toward improving the quality of life of residents through the physical construction of space. Furthermore, both approaches evidence a marked parallelism in their specific prescriptions for design that enhances community. Of the New Urbanism guidelines, those dealing with concentrating buildings, enhancing pedestrian transportation and conceiving streets as "outdoor public rooms"—convivial exterior spaces for social interaction—(Calthorpe, 1993; Duany & Plater-Zyberk, 1991; Katz, 1994; Langdon, 1994) can be regarded as expressions of social contact design. Not surprisingly, like the New Urbanism practitioners, cohousing residents claim they are "building community" (TCN, 1996).

**Action in cohousing.** Yet, the impact of action in creating cohousing communities cannot be disregarded. Firstly, cohousing is by definition a proactive development paradigm. Cohousing communities are affiliated with the Intentional Community movement and listed with the *Communities Directory* (2000), implying that their residents pledge to the basic mission of all intentional communities: to create a selected lifestyle by living together and working cooperatively to achieve it (Kozeny, 1995). Second, cooperative action is a central tenet of the cohousing model. Neighbors are expected to, and do contribute substantial decisions to the design of their community, participate in its management, share property and responsibilities, and develop an

interdependent support network (Franck & Ahrentzen, 1989; Fromm, 1991; McCamant & Durrett, 1994).

However, resident participation in cohousing is voluntary and dependent on individual skills and degrees of commitment to the project. Participation starts with the formation of the group at or before the community design phase—usually several years before move-in—and continues throughout in the management of their community (Fromm, 2000; McCamant & Durrett, 1994; Olson, 1992). Collaboration is essential for the formation and evolution of the community, and becomes particularly significant when residents engage in the design and development of the project. Along its duration it becomes the testing ground for the residents' commitment to the project[7] and the means through which the community builds cohesiveness. As Fromm (2000) points out, it offers residents the chance to move from an individual to a collective mode of thinking and to "coalesce as a group," that is, to become a community. Furthermore, sustained participation in the design process is regarded as the opportunity for the residents to develop the basic communication skills and decision-making strategies they will need to live cooperatively and manage the community once it is built (Fromm, 2000; McCamant & Durrett, 1994; Olson, 1992).

Lastly, claims for democratic inclusion of all community members are addressed through the dynamics of cohousing governance. Opportunity for equal access is manifested in the lack of a hierarchical structure and as a preference for the use of vote

[7] Complaints about the length of the development process and the cumbersome demands of attending endless meetings over the two years that on average this process takes (Fromm, 2000) are recurrent in cohousing circles (see for instance comments posted on Cohousing-L, c.f. Olson, 1992). This is also one of the factors that cohousing

and consensus decision-making strategies (Fromm, 2000; McCamant & Durrett, 1994; Olson, 1992), which require extensive discussion to solve issues that affect the collectivity. Through cyclic transfer between thought and action this process enables residents to revisit the goals of their community periodically and to direct physical and social adjustments when needed.

## Opportunity for Research

As enthusiasm for the cohousing model arises, we need to understand what is the source of its appeal. A preliminary assumption is that cohousing combines characteristics from two other paradigms—New Urbanism and intentional communities—that have already gained some acceptance in North America, and therefore may have a stronger potential for delivering the social and ecological worlds in demand. However, one significant aspect of cohousing is the value attached to the physical dimension of the community at a domestic scale, and the credit it is given for contributing to create the desired sense of community.

Although historical evidence indicates that traditionally people have suspected the existence of a link between the behavior of social groups and the environment built around them, there is still much research to be done on the mechanics of these processes. Theories developed in the last forty years linking spatial configuration to human behavior—known as Environment-Behavior studies—build upon the premise that the built environment affects behavior and thus social interaction (Bechtel, 1997; Lang,

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practitioners are attempting to solve by "streamlining" the cohousing development model (Paiss, 1998). See chapter 2.

1987). [8] Thus, environment-behavior research rests on the interaction that we infer exists between individuals and social groups and the physical locus of their behaviors. A study of cohousing offers the opportunity to contribute to this body of knowledge by exploring the unique phenomenon of communities purposely designed for social connectivity and support.

In addition, this dissertation attempts to compensate for the lack of research on the physical environment of a cohousing community as a means to represent, encourage or channel the kinds of behaviors and social interaction sought by its residents. As will be discussed in Chapter 2, most published studies on cohousing are either of normative (Hanson, 1996; Norwood & Smith, 1995) or descriptive nature (Cooper Marcus, 2000; McCamant & Durrett, 1994); or they focus on the social or on the ecological aspects of cohousing (Fromm, 1993; Fromm, 2000; Hasell & Scanzoni, 1997; Hasell & Scanzoni, 2000; Meltzer, 2000; Ontkush, 1996; Scanzoni, 2000; Spreitzer, 1992). Seldom do they explicitly address the linkages that may exist between the physical and social structures of these communities. However, there is substantial and continuous reference to the principles of social contact design as a basic component of cohousing (Franck & Ahrentzen, 1989; Fromm, 1991; Fromm, 2000; McCamant & Durrett, 1994), suggesting the need for this research.

**General research question.** Given that cohousing is founded on the notion that the built environment is part of the equation that leads to the creation of caring,

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[8] Historical examples, such as the Renaissance quest for an ideal city form that would foster virtuous conduct in its citizenry (c.f. Filarete, Campanella, Alberti,) prove that long before Barker and Wright's systematic experimentation confirmed the importance of behavior settings (Bechtel, 1977; Bechtel, 1997; Schoggen, 1989) we have acted on the belief that environment and behavior are mutually influenced by the other.

supportive communities, any attempt at understanding the cohousing model must start with addressing the validity of this premise. Probing further on the implications of this basic premise demands an examination of the particular material and emotional exchange going on in a cohousing community—the behaviors that make up for a sense of community—and of the physical characteristics of the community that correspond with the architecture of cohousing. Moreover, it demands examining the specific ways in which these two may affect each other.

# CHAPTER 2
# LITERATURE REVIEW

Vestbro (2000) shows that European collective housing has been extensively researched, particularly in Sweden, where a variety of alternative housing experiments have benefited from governmental support. A list of seventy-five references, most of them in Scandinavian languages, document both empirical and theoretical research on collective housing and related issues. Topics covered range from historical overviews to descriptive accounts of existing collective communities and evaluations of their efficacy in providing social support. Theoretical papers and books substantiate the potential of collective housing for addressing gender and children's issues and for advancing sociopolitical change. As reported by Vestbro, published studies of the design aspects of Scandinavian cohousing center on spatial syntax analysis, which focuses on access control and the inner power struggles of a community (Hillier & Hanson, 1984). Despite the ample range of subjects covered in the bibliography surveyed by Vestbro, there is no mention of studies on other socio-spatial issues of European cohousing.

## American Cohousing Literature

American cohousing, being a more recent phenomenon, has undergone few examinations. After more than a decade, McCamant & Durrett's *Cohousing: a Contemporary Approach to Housing Ourselves* (1994) still remains the most significant work on the subject, and the fundamental reference and source book of the cohousing movement in America. The book translates the bofællesskab idea for the American audience, introducing the concept of cohousing in simple and engaging prose, based on

the knowledge the authors garnered from direct contact with collaborative communities in Scandinavia over the course of several years. Whereas the original edition, published in 1988, focused on the cohousing communities that had been the subject of their overseas research, the updated (1994) edition includes descriptions of six of the first cohousing projects in North America, thus lending credibility to the notion that this neighborhood model can be successfully applied to our milieu.

Without doubt, the dissemination of cohousing in America can be traced back to McCamant & Durrett's efforts. It entailed active campaigning to spread the concept using presentations and slide shows "because the public cannot demand what it has not yet learned about" (McCamant & Durrett, 1994, p. 203). The publication of *Cohousing: a Contemporary Approach to Housing Ourselves* was instrumental in this respect. Their description of the social and formal aspects of cohousing makes a convincing argument for it as a desirable alternative to mainstream living.

To show the flexibility of the cohousing concept—and presumably also to simplify it for its introduction to the general public—McCamant & Durrett (1994, pp. 38-42) reduce the common characteristics of cohousing developments to four. As stated in the book "none of these elements is unique, but the consistent combination of all four is" and has come to define cohousing (p. 43):

- Participatory process—cohousing communities are formed, planned and developed with the active participation of prospective residents;
- Intentional neighborhood design—based on the principles identified as social contact design in this dissertation, the physical environment of cohousing encourages connectedness within the community;
- Extensive common facilities—the common house and other collectively-owned facilities supplement the individual dwellings for practical and social purposes;
- Complete resident management—residents are responsible for community management and maintenance.

Also implied, rather than directly stated in the book are two additional characteristics common to cohousing communities which seem to be significant enough to McCamant & Durrett to warrant their inclusion in more recent documents (Durrett, 2000, p. 11; TCN, 1996):

- Non-hierarchical structure—residents take on leadership roles in different tasks but leave major action and policy decisions to the community;
- Separate income resources—residents have independent means of income that are not tied to community finances.

In this dissertation research, these six characteristics are taken as the measure of a cohousing community. As explained in chapter 3, they are used to establish the validity of using a selected community as a representative example.

Additionally, *Cohousing: a Contemporary Approach to Housing Ourselves* aims to provide the reader with a basic understanding of the cohousing process by following through all the steps in the creation of a community Chapter thirteen [in] the updated edition "From Dream to Reality: the Development Process", describes participatory development including issues of group organization and decision-making, and the many alternatives available and variations possible at each step in the process. As a result, the reader is left with an understanding of the uniqueness inherent to each cohousing solution, which should be appealing to an individualistic culture such as ours.

Chapter fourteen "Design Considerations" offers a comprehensive overview of the issues surrounding the physical environment of a cohousing community, expanding in what McCamant & Durrett understand as intentional neighborhood design. The chapter addresses a range of solutions for the design of the commons, the common house and the individual units, citing the opportunities for social contact to be had in each. In the same spirit as the previous chapter, the design considerations presented here stress the need to develop a design solution that will cater to the specific needs and context of each

cohousing group, the size of the community, its location, site characteristics, budget, and so on.

Specific issues addressed in this book section are the layout and character of the site plan, the massing of buildings, the location, uses and spatial configuration of the common house, circulation within the community, the design of play areas and transitional spaces, and the architecture of the private dwellings. However, following the prevailing architectural paradigm, although the book describes and illustrates what social contact design entails, in neither case do the authors provide an explanation for the behavioral outcome of implementing the proposed architectural features. This apparent oversight suggests that the linkages between social and spatial patterns seem to be widely held as self-standing truths that require no explanation, and indicates the need for in-depth scrutiny.

Also noteworthy for the cohousing movement is Hanson's *The Cohousing Handbook: Building a Place for Community* (1996), an application manual for forming and building cohousing communities. It surveys the human, financial, legal, environmental and design issues involved in the process of creating a community, including recommended practices for the development process and the physical features of the community. Hanson defines cohousing by listing McCamant & Durrett's first four descriptors, namely participatory process, intentional neighborhood design, extensive common facilities, and complete resident management. To these he adds "optimum community size", "purposeful separation of the car", "shared evening meals", and "varied level of responsibility for development process" (p. 3). Of these, the inclusion of shared evening meals as a characteristic of cohousing is an important contribution to the concept. Hanson points out that the cohousing practice of having regularly scheduled

meals in the common house is a Danish tradition that "effectively brings residents together for a convenient and pleasurable time of fellowship and sharing" (p. 3). Shared meals are a cohousing tradition that because of its omnipresence[1] and social and spatial significance must be included in any description of the concept.

On the other hand, optimum community size and purposeful separation of the car—both partial expressions of social contact design—and similarly, the extent to which residents or professionals participate in the development process, though seemingly crucial concerns for the success of a cohousing project, are discussed in McCamant & Durrett's *Cohousing: a Contemporary Approach to Housing Ourselves,* as well as in other sources. Chapter 7 "Design Considerations" discusses the advantages of relegating cars to the periphery of the commons, creating a network of pedestrian pathways, placing the kitchens of the private units facing the pathways, locating the common house centrally, and restricting the community size to between 12 and 36 dwellings (pp. 117-120). As in McCamant & Durrett's book, Hanson's recommendations stem mostly from empirical knowledge garnered through examination of the practices implemented in built communities. That these two significant works endorse user-sanctioned practices without providing substantial explanations for their believed behavioral outcome is another indication of the need for formal research into these issues.

**Cohousing in Context**

Aside from these, a number of books dealing with cohousing have been written in America since the late 1980s: Franck & Ahrentzen's *New Households, New Housing* (1989); Fromm's *Collaborative Communities: Co-Housing, Central living, and Other*

[1] Of the 44 cohousing communities listed in the Communities Directory, 27—or 61%—claim eating together 2 to 5 times a week; another 11—or 25%—declare sharing communal meals once a week to up to three times a month (2000, pp. 164-191).

*New Forms of Housing with Shared Facilities* (1991); and Norwood & Smith's *Rebuilding Community in America: Housing for Ecological Living, Personal Empowerment and the New Extended Family* (1995). All of these books to varying extent trace the origins, describe and make distinctions between the different variants of collaborative communities and collective housing that have sprung up in Europe and America in the last half of the century and point to the latest developments in community design. In contrast to McCamant & Durrett's book, these are general overviews that include, but do not specifically focus on, cohousing. Although they contribute important information on the physical features of cohousing, their most significant contribution in this sense is placing cohousing within the larger context of alternative housing models such as communes, one-kitchen housing, or cooperatives, and highlighting its advantages.

A number of descriptive and evaluative studies on cohousing communities in America have been published individually in trade magazines (c.f. *CoHousing*; *Communities*), refereed journals (c.f. *Progressive Architecture, The Journal of Architecture and Planning Research*) and conference proceedings. A number of dissertations and theses are also mentioned in cohousing circles. Olson claims to have identified 43 academic theses[2] on cohousing in existence by January 2000 (Olson, 2000), though the most frequently referred to are Spreitzer's (1992) and Meltzer's (2000a). As in McCamant & Durrett's second edition (1994), Fromm (1993) and Cooper Marcus (2000) portray case experiences and projects from Europe and the US, summarizing the

[2] According to Olson, 30 of these theses are in architecture and 13 in other fields; most of them are at masters level (37) and 14 belong to either California or Washington institutions. However, none of them are cited in the commercially available literature. Similarly the implication that stems from Olson's lack of direct reference to any of them is that at least for the purposes of cohousing practitioners and enthusiasts, is that either academic documents such as these are not readily accessible or their content does not translate easily into practical applications.

social and physical aspects of each community. However, again these studies are descriptive in nature and other than presenting the concept of design for social contact featured in cohousing projects, they do not speculate on the specific linkages that may exist between the physical and social structures of cohousing communities.

**Cohousing and Society**

The social aspects of cohousing have been researched more extensively. Again the work of Franck & Ahrentzen (1989) and Fromm (1991) provide useful insight into the rationale behind this housing form. Their works refer to the utopian communities and the feminist proposals of the nineteenth and early twentieth centuries as the sociological precedents of the cohousing movement. Hayden (1981; 1984; 1989) is cited recurrently by them and by Vestbro. Throughout her work, Hayden traces the relationship of housing models to gender roles in American society and establishes the need for a housing model that affords women the equality denied them by suburban living. Significantly, in *Redesigning the American Dream: the Future of Housing, Work, and Family Life* Hayden (1984, p. 137) presents the cohousing community at Tynggarden, outside of Copenhagen, Denmark, as a successful example of housing that carries "a complex social program and cultural agenda into fulfillment." Although not mentioned by its current name, Hayden's may be the earliest reference to cohousing in an American publication.

As stated above, Vestbro (2000) reports on a series of foreign-language studies on the social, economic, and political underpinnings of collective housing. Two English-language pieces are significant contributions to this body of work: a chapter by Horelli & Vepsa in Altman and Churchman's *Women and the Environment* (1994), and Scanzoni's *Designing Families: the Search for Self and Community in the Information Age* (2000). Horelli & Vepsa validate cohousing in light of the Nordic Council of Ministers' New

Everyday Life project (NEL), a multinational initiative for women's empowerment in which they participated. Cohousing is introduced as an example of an intermediary social structure that allows bringing out into the neighborhood those services traditionally assigned to individual households, such as the provision of meals and the care of children and the elderly. The theory behind this project, and Horelli and Vepsa's paper, is that pooling resources and sharing domestic tasks among neighbors eases individual burdens, promotes disadvantaged citizens, and consolidates society.

**Cohousing and social reform.** Scanzoni probes further on this idea. *Designing Families* builds upon an earlier article by Hasell & Scanzoni (1997) which looks into the issues leading toward suburban alienation in America and introduces cohousing as a viable alternative. More importantly, cohousing is seen as expression of "familism" whereby a group of families form a kin-like alliance to support and help each other, and where shared physical space encourages and symbolizes household interdependence. *Designing Families* presents an extensive social analysis of changing gender roles, couple relationships and the structure of families in the post-modern or Information Age. This leads Scanzoni first to propose reforms to the non-connected lifestyle that prevails in America—a six-point family policy—and second, to consider alternatives to current housing patterns, aware of the power of place to affect social interaction.

Conceptually, Scanzoni supports the notion that space is political; therefore his book centers on the leverage afforded by democratic housing models such as cohousing, where residents participate in the design, development, and management of their community. In this context, the struggle between personal or household independence, and dependence on the community is solved as the group works toward voluntary interdependence. Strongly inspired by the Scandinavian New Everyday Life Project,

Scanzoni regards cohousing as a first but necessary step toward a social revolution that should lead to greater and widespread equality among all members of society.

This is a powerful assertion that moves cohousing from option—a housing alternative to combat environmental deterioration and suburban isolation, to need—a model for the creation of social, human, physical, and conceivably financial capital. Scanzoni bases his claim on consideration that cohousing provides opportunity for empowering women by providing a safe and connected domestic environment, making parenting public—sharing child care among the community, and reducing opportunity for violence by embracing consensus-seeking and other forms of non-violent decision-making. However, even as Scanzoni acknowledges the role played in all this by the physical environment, the book does not, nor intends to, explore the specific connections between physical design features and political issues such as control, access, privacy, or freedom.

**Cohousing in Detail**

**Post-occupancy evaluations.** Research that focuses on specific aspects of cohousing is found in the work of Fromm (2000), Hasell & Scanzoni (2000), Meltzer (2000b), and Ontkush (1996). Fromm's entry, *US Cohousing: the First Five Years* must be mentioned as a particularly significant study, as it is based on a series of surveys and post-occupancy evaluations (POE) that aim toward describing the trends for demographic composition, development process, and programmatic characteristics of cohousing communities in America. In the mid-1990s, Fromm ran surveys in 24 cohousing communities and along with Don Lindeman, did POEs of three more analyzing the process of creating a cohousing community in America and assessing resident

satisfaction with cohousing—which she equates with the efficacy of cohousing to deliver community connectedness and support.

A variety of cohousing development modalities have appeared in North America in the effort to adapt the Scandinavian model to our customary legal and financial practices. Fromm (2000) identifies two distinct cohousing development approaches depending on the future residents' degree of participation in the project prior to its construction, but acknowledges that a variety of options exist that range from the developer-driven to the self-built, and speculates on their effect on community cohesiveness. The project or traditional development model, inspired in Danish cohousing, entails some resident participation in all phases of the process from site identification, definition of goals, community design, project financing, marketing and sales. Fromm finds residents credit this process with letting them acquire communication and problem-solving skills and to develop "group coalescence." In contrast, the lot development model centers on a development team that initiates the development and later sells single lots to be developed individually by prospective residents. Fromm claims that this model speeds the process, lessens financial risks, and tends to produce more individualized dwellings.

Fromm mentions the recent appearance of a third development process. In this for-profit streamlined model a developer controls development, finances, and site and unit design, though limiting resident participation. Fromm asks whether in these less participatory options residents will ultimately feel the same degree of community that exists in traditional project developments. Although Fromm reports findings some "understandable" dissatisfaction with the development process, other responses point to widespread positive evaluation of cohousing itself. The main finding that stems from this

research is that “American cohousing provides a strong ‘sense of community’” among neighbors, as measured in terms of participation as well as social interaction, cooperation, and practical support. As described in chapter 4, these criteria are instrumental in studying the social patterns of cohousing for this dissertation research.

**Cohousing as affordable housing.** Convinced of the empowering promise inherent in collective housing and the potential of collaborative arrangements for fostering economic self-sufficiency, in early 1990s Hasell & Scanzoni promoted the implementation of cohousing strategies in a HUD complex for a group of low-income single mothers in a north-central Florida town. Their article, *Cohousing in HUD–Problems and Prospects* (2000), reports on the outcome of this social experiment and suggest the ways cohousing could be used as a tool to enact social change. A conclusion gleaned from this experience is that cohousing may hold promise for application outside of the middle-class strata that has traditionally built it. Their experience showed that residents of government-sponsored low-income housing can understand the advantages of, and be willing to participate in, cohousing-type arrangements. However, the barriers that prevented the successful implementation of the cohousing model for low-income solo mothers stemmed from lack of institutional support, suggesting these may be the real obstacles for its widespread application.

**Pockets of application.** In his paper *American Cohousing: the Reasons and Rationale Behind this New Form of Cooperative Living*, Ontkush (1996) reports on his survey of 17 local and overseas cohousing communities to study the reasons why people would choose to live in cohousing communities. Responses were compared to basic demographic information and quantitative information on features of the communities. Ontkush found that there are two basic pockets of application for cohousing, which he

called “committed communitarians” and “community commodifiers” for the degree of correspondence between the manifest reasons for joining cohousing and the actual community practices found in each case. He speculates that the former may have more success in their venture as their commitment stems from a true need for community support.

**Cohousing and the environment.** Meltzer (2000b) reports on the results of his long-term research[3] on the application of environmental practices in cohousing communities in his article, *Cohousing: Verifying the Importance of Community in the Application of Environmentalism*. This thorough study centered on a multiple-case study of 18 American cohousing communities—over 70% of those built at the time—to obtain quantitative data on their population make up, community characteristics, use of resources and consumption habits. Physical features of cohousing, in particular the characteristics and use of the common buildings, are discussed in this paper in terms of their compliance to environmental principles. Significantly, results showed residents were able to transfer environmental awareness into everyday practices. Assessment of their behavioral change led Meltzer to state that cohousing provides the “social, instrumental and physical context” that fosters and supports environmental sustainability.

Claims that cohousing is an ecologically-friendly housing solution may be questioned in light of the wide range of possible layouts, organization patterns, and the number of pro-environmental practices that cohousing groups may favor. Meltzer’s work is significant in that it finally confirms these claims, thus validating cohousing as a viable alternative to sustainable development, considered beyond the preservation of resources

[3] The full version of this research makes up his doctoral dissertation, *Cohousing: Toward Social and Environmental Sustainability* (2000a). The abstract and table of contents can be accessed from http://www.aiid.bee.qut.edu/~meltzer/PhD.htm

(Brundtland World Commission on Environment and Development, 1987) to include also the preservation of social life for the benefit of future generations.

**Users speak out.** No bibliographic review of cohousing research would be complete without reference to the media whereby cohousing residents, enthusiasts, and practitioners share information, advertise housing opportunities and services, and discuss their experiences. The monthly magazine *CoHousing*, published since 1987, features general-interest articles that cover a wide range of topics (c.f. Durrett, 2000; Keifer, 2000; Leach, 1999; Lindeman, 1995; Lindeman, 2000a; Lindeman, 2000b; Lowe, 2000; McCamant, 2000; Meltzer, 1997; Norwood, 1999; Oldham, 2000; Osmon, 2000; Paiss, 1998; Tarnay, McIntyre, & Blank, 2000). The on-line discussion list *Cohousing-L* typically runs issues in cycles as participants voice questions that generate interest to other members; messages are preserved in archives that allow retrieving past queries (see Olson, 1992). In presenting the insiders' perspective, *CoHousing* and *Cohousing-L* allow investigators to understand the actual challenges posed by the application of cohousing to real-life situations, and as such become invaluable research instruments.

## Void in the Cohousing Literature

It is clear that the existing literature on cohousing does not explicitly address the linkages between the formal or spatial features that are prescribed for cohousing communities and the behaviors and social interaction these may in fact afford their residents. Shaffer & Anundsen (1993, p. 157) note that a major issue for cooperative households today "not so commonly discussed but growing in importance, is how the physical design of housing affects relationships within and without." However, as stated before, there is recurrent reference to the principles of social contact design and their importance to cohousing (Franck & Ahrentzen, 1989; Fromm, 1991; Fromm, 2000;

McCamant & Durrett, 1994; Meltzer, 2000b) and to sustaining a sense of community among its members. This indicates the need to describe and explain the extent to which such design features are present in a cohousing community and whether they in any way represent, encourage or channel the social contact desired by the residents. Exploring these mechanisms becomes a key question considering that the notion of cohousing centers on building communities and furthermore, on *building community.*

Allusion to the need for increased density and associated concepts such as grouped structures or compact design, as well as references to the notion of commons and the features usually associated to it: peripheral parking, and a system of pedestrian pathways and courtyards, are plentiful in the literature above and in cohousing discussion circles (Olson, 1992). Mention of common structures, and in particular, of the common house and its importance for the project, are equally abundant. Every description of cohousing mentions the common house prominently as one of its features; and in fact Meltzer (2000b) found it to be the most recurrent common structure in the communities he surveyed. Besides Meltzer, Fromm (2000), along with McCamant & Durrett (1994) document in many ways its greater size and cost relative to the individual units, and suggest its presence relates to a tendency to reduce the area of the units as compared to the residents' previous living arrangements. Scattered throughout the literature there are comments, some of them anecdotal, on the practical and emotional effort and time invested in the design, operation and upkeep of the common house; however, none of these studies discusses the rationale behind this expense.

The literature on cohousing seems to imply that the common house is significant for reasons beyond providing a place for communal gatherings. This notion is conveyed by the tendency to place the common house centrally located within the community and

its inner pathway system, as indicated by the graphics that complement published works (c.f. Fromm, 1993; McCamant & Durrett, 1994). However, Fromm (2000), Meltzer (2000b) and Ontkush (1996) report that the common house is not used in American cohousing as intensely as would be expected—given the manifest goals of the communities—nor is actual attendance to common events as frequent as claimed.

The above bibliography survey reveals the need to probe further into the socio-spatial issues of cohousing. This need is justified by the current interest in cohousing and the demand for its application in a variety of cultural and geographical milieux. There is an opportunity to make a contribution to the understanding of this model and its apparent potential for sustaining a supportive community. Given that social contact design figures preeminently in the oral, written and graphic accounts of cohousing communities, it suggests the need to research the contribution that these particular physical features are believed to make to the life of a collaborative community.

# CHAPTER 3
# METHODOLOGY: RESEARCHING SOCIAL CONTACT AND DESIGN IN A COHOUSING COMMUNITY

This dissertation is set out as a qualitative exploration of complex interdisciplinary issues surrounding a very recent phenomenon: the emergence of an alternative housing model that entails not only the construction of physical space but the reconstruction of social relationships at the neighborhood and domestic levels. This dissertation aims to allow for better understanding of this phenomenon and as exploratory research, "to examine the feasibility of further study by indicating what might be relevant to study in more depth" (Hart, 1998, p. 47). As stated in chapter one, the main question revolves around the social contact design features that are used in the design of cohousing communities in the belief that they play a part in developing their desired community connectedness and support. The inquiry is inscribed in an action science framework and uses a case study strategy and a variety of participatory techniques and graphic analyses to explore the linkages between the social behaviors and physical features of an example cohousing community.

## Action Science, Research, and Social Change

Greenwood and Levin advance the notion of *action science* as a discipline "centrally concerned with the practice of intervention" (1998, p. 190). Action science embraces the holistic, organismic, or general systems view that "the world is a complex, interacting array of [organic, inorganic, and sociocultural] systems and system processes" (p. 70) whose dynamics can only be understood by studying the effects of change in

them. Similarly, in his proposal for a new theoretical movement in the social sciences, Alexander (1988) foresees the need for a theory of action or "the contingent element of behavior" that along with normative rules and material environment structures society. In assigning central importance to action, Alexander credits individual and collective effort with potential for directing social change; a thought that is also captured by social scientists who embrace *action research* as "a research practice with a social change agenda" (Greenwood & Levin, 1998, p. 4).

Kurt Lewin, thought to have coined the term action research (AR), models social change as alternating stages of change and stasis, not unlike Kunh's (1996) interpretation of the dynamics between normal science and scientific revolution. Greenwood and Levin elaborate upon Lewin's work to propose a research practice that is intricately tied to social change, and in fact is seen as an ongoing participatory process that facilitates the transition between these stages. They agree with Lewin's assertion that the best way to understand a system is by inducing its change. This thought informs the notion, also supported by Dewey, that learning stems solely from action, which leads to considering that understanding derived from intervention will be by definition more accurate or more rigorous, and thus "better science" (Greenwood & Levin, 1998). As a result, they claim that action research is "the only sensible way to generate and test new [social] knowledge" (p. 4).

AR—and the more hands-on approach of participatory action research (PAR) (Whyte, 1997b)—follow Alexander's theory by favoring use of anthropological methods that "treat the diversity of experience and capacities within the local group as an opportunity for the enrichment of the research-action process" (Greenwood & Levin,

1998, p. 76). They claim that general modes of discourse and research, among them exploration, are valid and significant scientific goals that advance social science knowledge (Alexander, 1988). It follows that awareness of the significance of addressing real-life problems and of the contribution that may be made by the subjects involved in them are fundamental to social inquiry.

This is a radical proposition that subverts the traditional relationship between subjects and observers by engaging the subjects in the decision-making process. It has consequences for researchers as they take on a new role, that of involved participants working in partnership with the subjects to explore, conceptualize, solve, and implement solutions to social problems in iterative cycles of thought and action. Again, by democratizing the decision-making process the subjects are empowered to take action in a way that closely reflects their interests. As Hart points out, the purposes and features of action research are "to help a group help themselves through research…[that is,] to empower the respondents to 'research themselves and their situation' and on this basis take responsibility for their own situation" (Hart, 1998, p. 46). In consequence, subsequent action researchers have proposed that action research and related methodologies are basic for delivering a truly democratic society (Greenwood & Levin, 1998) and have applied it on human relations and industrial production systems.

## Methodological Considerations: Applying Action Research to Cohousing

The proactive approach inherent to cohousing suggested the research strategy for this dissertation inquiry. There seems to be an ontological agreement between cohousing and action theories, rooted in their conviction that action is the means to test social theory and promote social change. Furthermore, the cohousing movement, in promoting a new

kind of community as a solution to perceived social and environmental ills, is conceptually aligned with action theories which seek "the advancement of science and the improvement of human welfare" (Whyte, 1997a, p. 9) through direct intervention. In actually building a community to suit their aspirations for community, cohousing residents are putting a theory into practice: that the physical environment is a major factor in the development of social connectedness and support.

On the other hand, the concordance of the cohousing process to action research strategies seems evident. Active participation in the development and management of their community affords cohousing residents the opportunity to constantly examine and reflect on the correspondence between their physical and social environments. Therefore, cohousing residents are in fact unwitting researchers engaged in an assessment of their housing model, and they garner an expertise that can be capitalized upon to inform formal research.

In addition to drawing from the action model as the theoretical construct that sustains this inquiry, two additional considerations led this dissertation in the direction of action research. One, action research recognizes that social process cannot be separated into discrete units, but rather, they flow in continuum. Hence, action research favors and validates open-ended, or exploratory, inquiries that support the notion that "the change process has an open starting point and often no absolute final goal" (Greenwood & Levin, 1998, p. 18). Similarly, the newness of the cohousing phenomenon, which arguably accounts for the minimal substantive research available, provides no precedents for comparative studies or quantitative research, suggesting the convenience of setting up this study as an open-ended research devoid of hypotheses. In consequence, this

dissertation attempts not demonstration, but understanding. It looks for patterns or trends that might persuade others of the existence of possible associations between the social and the physical structures of a cohousing community.

Second, action research favors the use of experiential techniques such as participant observation and interviews as fundamental study tools. The premise is that the knowledge gleaned by researchers in collaboration with the parties affected by or interested in an issue is an often disregarded yet fundamental component of social science research (Greenwood & Levin, 1998; Whyte, 1997b). Further considerations contributing to the decision of approaching this study with an action research strategy stemmed from the actual possibility to tap into the information accumulated by cohousing residents. And moreover, that cohousing residents are willing to share this information directly as well as through written and electronic media in their effort to disseminate the cohousing lifestyle.[1]

However, there are basic issues that separate this inquiry from typical action research. Action research usually entails the inclusion of expert professionals in a group of subjects to help define their problem and then organize the efforts to analyze it, propose a solution, and devise an action plan (Greenwood & Levin, 1998; Whyte, 1997a; Whyte, Greenwood, & Lazes, 1997). This research has a more limited scope. That cohousing has already embraced and in effect implemented social contact design as a tool in building communities, is indicative that residents are acting on the belief that there is some connection between this specific design model and social connectedness. In this

[1] See for example the magazine CoHousing, Olson (1992), and TCN (1996).

sense, in each cohousing community the problem that affects the subjects has already been defined by them, given an initial solution, and is being executed in plan.

Of interest to this research is the fact that the proposed solution includes social contact design as part of the answer to the problem—the need for community. However in cohousing, residents led by experts—designers, architects, or developers—engage in a participatory process akin to the action research model to chose among and implement these social contact design strategies in their communities. Thus, the role of the researcher in this study has been to join an action process now in progress to observe and to document one of its aspects and then to interpret and explain its workings for further applications. This is not different from the general participatory action research strategy that "begins with a combination of theoretical and practical concerns, [followed by] an extended PAR process . . . [and leads to] the subsequent reformulation of existing explanations" (Whyte et al., 1997, p. 53). As one cohousing resident puts it,

> while we have been in residence since April '97, the project is in many ways still under 'development', for we are continuing to explore just what 'intentional community' means when laid on the complex web of urban life, and the myriad ways large and small that we can activate shared values through community life. (B.M.S. and S.M.S. in Lake Claire residents, c. 1998).

**Research model.** Figure 3-1 represents the three-layered model used for this dissertation. The first, or epistemological, layer refers to the origins and general methods of the research, which reside in action science. Action science provides the conceptual grounding and the motivation for exploring aspects of what the researcher believes is a significant social phenomenon: the paradigm shift (Kuhn, 1996) from suburban single-family detached housing to intentional, collective housing arrangements. The second layer refers to the general strategy for this investigation, which follows action theories

through action research as described above. At the core of this layer is the proactive approach taken by the study community residents to define and research a problem and propose and implement a solution. The caveat holds that in this case, as the action process is already under way, the participation of the researcher has been limited to that of witness to the process. However, a secondary action research process was derived from the main one, as the study community residents joined the researcher in exploring the correspondence between the physical and behavioral dimensions of their community.

The third layer refers to the investigation method implemented for this dissertation research, which centers in the development of a case study that describes and analyzes the physical environment of the community and the social interaction of the residents, and explains their correspondence in light of Environment-Behavior theories. The model represents the sources that feed the case study, namely testimony derived from participant observation and interviews, as well as from literature, theoretical constructs, and evidence from graphic documentation and architectural analytical techniques. In general, this research looks into both the physical features of cohousing communities and the collective behaviors and interaction therein identified with a sense of community. However, because the general question asked in this dissertation is directed at the correspondence or fit between the two, the investigation demands a twofold approach with strategies that allow describing each of the two components in this sociospatial dichotomy, and exploring its connections. The complexity inherent in this quest suggests the need to use a range of different theories and methods suited to each portion of the research; its involvement with social action confirms this need to better corroborate the findings (Greenwood & Levin, 1998).

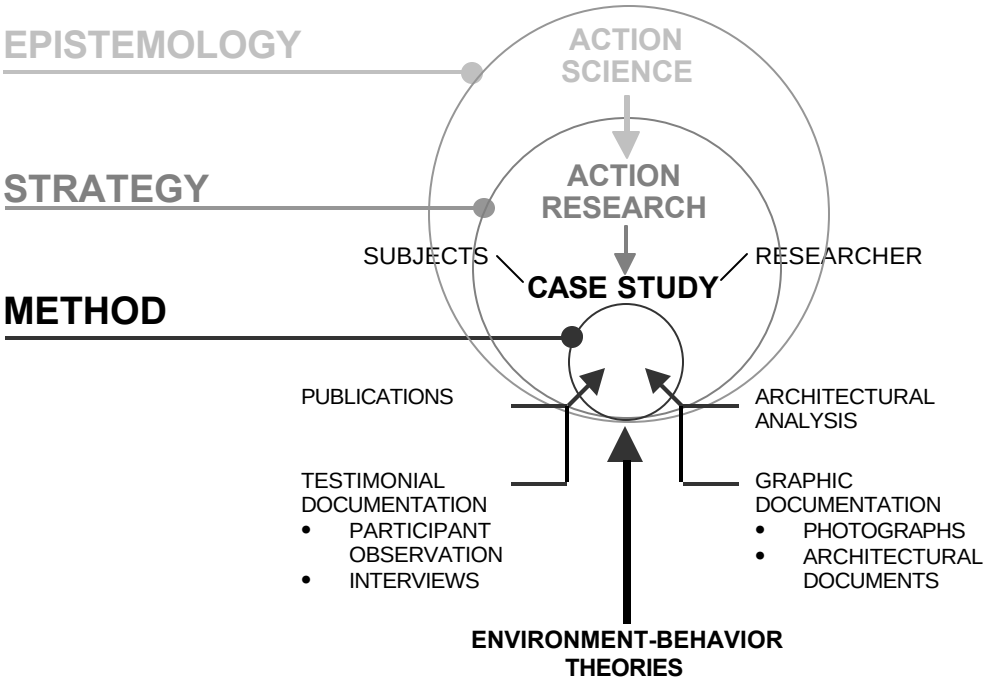


Figure 3-1: Research model

## Research Plan

This study began in 1997.[2] It consisted of three distinct phases with increasing levels of engagement and commitment to the project. The preliminary phase entailed gathering general documentation about cohousing, identifying the research topic, selecting appropriate research method and strategy, and preparing the research prospectus. This was followed by a pre-development phase that centered on doing background research and establishing preliminary contacts with cohousing communities

[2] The first eighteen months were devoted to the extensive preliminary phase and to the selection of a dissertation committee. The following eighteen months entailed carrying out the plan approved at the time of the Qualifying Examination in April 1999. Final write-up was done during the Fall and Spring semesters in 2000-2001.

to ensure the feasibility of the project and the selection of an adequate, i.e. representative, case study.

The final or development phase centered on studying the case community to address the questions posed in this dissertation. The approach chosen for this research entailed the use of participatory techniques, therefore the community was visited on five occasions during an 18-month period between 1999 and 2000. Visits ranged in duration from three to ten days each. In two opportunities—for the lengthier stays—the researcher was housed with a host family, and had the opportunity to participate in their daily activities and interactions with other neighbors and to experience directly the impact of the built environment on this interaction. In addition, throughout the course of the research there was frequent electronic and telephone communication with the architect and residents of the case study community.

The case study was informed by written and graphic illustrations from publications and documents such as original design drawings and project plans furnished by Greg Ramsey, Preston & Associates, and Village Habitat, of Atlanta GA, as well as by interviews and observational methods. The research used open-ended interviews with individuals and small groups to allow for different options of disclosure, and efforts were made to interview every adult resident. In-depth, focused, or long interviews with selected key informants added to the knowledge gained by less individualized means. These interviews centered on a protocol that included specific research questions directed toward addressing the general and particular queries posed in this research, as described further on.

A description of the community's design features was needed as a reference from which to assess their correspondence to the reported and observed social interaction of this cohousing community. This description took the shape of a formal or architectural analysis, the fundamental tool used in architecture and design disciplines for describing and understanding buildings and spatial phenomena. Findings were interpreted in light of Environment-Behavior theories, which attempt to explain the linkages between human actions and their settings. In sum, the approach to this research has been to engage in an in-depth study of a single community to illustrate if and how it builds a sense of community assisted by its housing environment. The ultimate motivation is to allow a better comprehension of the cohousing model and to signal avenues for further research.

**Background research.** Aside from engaging in the cohousing bibliography described in Chapter 2, and regular monitoring of on-line cohousing discussion circles to "take the pulse" of the cohousing movement and the issues that concern cohousing residents, the researcher set to gather background information on the cohousing model and the cohousing movement. To this effect, the researcher joined a group of cohousing residents and developers for a tour of Danish cohousing communities during the summer of 1999, and attended the annual North American Cohousing Conference the following fall in Amherst, Massachusetts. Both events entailed visits to cohousing communities, interaction with their residents, and participation in common meals, which in the case of the Denmark visit allowed observing the buildings and experiencing this lifestyle in their place of origin.[3] Additionally the North American Cohousing Conference offered

[3] The Danish cohousing tour was organized by the Cohousing Network and advertised on their web site. A total of eight people form around the united States joined the 7-day tour, which took them to eleven different communities in and around Copenhagen,

opportunities for lodging with a cohousing family for the duration of the event, and to participate in a series of lectures, roundtables and workshops with cohousing enthusiasts and practitioners.[4]

These two experiences proved significant to the research in many ways. First, they provided the opportunity to preview a range of cohousing communities, thus allowing this researcher to relate them to the information already obtained from the literature. Principally among them, the researcher was able to confirm the existence of a wide variety of sizes, locations, layout options, and operational organizations in cohousing communities. Second, and following from this, visits to a series of cohousing communities provided references for gauging the relevance of the physical features and social behaviors observed in the case study community. Third, participation in conference events with cohousing experts offered opportunities for formal learning and informal contact with the pioneering thinkers and practitioners who have introduced, researched, published, and developed cohousing communities in America. Finally, consistent with the participatory approach used in this study, there is the enhanced learning that stems from direct experience as opposed to passive documentation.

**Case Study Strategy**

Because the aim of action research is "to improve future actions by understanding earlier, similar changes" (Zeisel, 1981, p. 65) this dissertation used a case study strategy

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Roskilde, and the Zealand peninsula. The tour included a visit to the two oldest *bofælesskaber*, Sættedammen (1972) and Skråplanet, designed by Jan Gudmand-Høyer and completed in 1973.

[4] The 1999 North American Cohousing Conference included lodging at Pioneer Valley Cohousing and visits to Pine Street, New View, and Cambridge cohousing communities. Events included presentations by The Cohousing Network officers, *CoHousing* magazine editors, and cohousing designers and developers such as Charles Durrett and Kathryn McCamant, Chris Scott Hanson, and Jim Leach.

to document, describe and explain the observed linkages between the physical environment that exists, and the social interaction that goes on, in a representative cohousing community. For the purposes of this research, case studies are defined as "an in-depth, multifaceted investigation, using qualitative methods, of a single social phenomenon" (Orum, Feagin, & Sjoberg, 1991). However, this definition needs to be extended for application to the investigation of an environment-behavior, rather than a social, phenomenon, which entails considering as the unit of analysis a system consisting of these two aspects of a cohousing community.

Again the same rationale that supports the use of an action research approach for this inquiry can be applied to uphold the use of a case study strategy. Orum, Feagin and Sjoberg state that a case study conveys four fundamental lessons:

> 1. It permits the grounding of observations and concepts about social action and social structures in natural settings studied at close hand.
> 2. It provides information from a number of sources and over a period of time, thus permitting a more holistic study of complex social networks and of complexes of social action and social meanings.
> 3. It can furnish the dimensions of time and history to the study of social life, thereby enabling the investigator to examine continuity and change in lifeworld patterns.
> 4. It encourages and facilitates, in practice, theoretical innovation and generalization. (1991, pp. 6-7)

Certainly, like action research in general, case studies focus on real life problems and aim toward future intervention. Furthermore, case studies are by definition comprehensive in scope and admit a variety of participatory techniques, which makes them particularly apt for researching the transdisciplinary and potentially complex problems intrinsic to environment-behavior science. However, it is frequently pointed out that the limitation of the case study approach is that by focusing on the study of an example, findings are case-specific and therefore prevent their extensive generalization to

a wider context. Many researchers agree to the difficulty of basing generalizations on a case, yet admit that this method provides useful knowledge to uncover trends or to suggest possible relationships among factors given that examples are by definition representative of a larger category (Yin, 1994; Zeisel, 1981). By similar reasoning, Greenwood and Levin further note that because case studies are indeed representative examples, theory can be questioned when or if a case study fails to support the theory (1998).

Furthermore, as Orum, Feagin & Sjoberg (1991, p. 15) indicate, "the case study may suggest that two phenomena are related to each other, even though it cannot furnish proof of their link in many relevant situations." Thus, they claim that its value resides in its potential for generating persuasive arguments and in the precision that stems not from producing exact proof, but in "recording social life as a meaningful whole, not as the sum of lifeless quantitative units" (p. 12).

**The case study community.** This research takes Lake Claire Cohousing in Atlanta, GA, as its case study. The selection of this cohousing community as the object of study stemmed from a series of practical considerations aside from the requirement that it be representative of the cohousing typology. Early on in the research, the possibility to follow a cohousing process from its inception had been offered by a group of Gainesville residents intent on creating one such community in Alachua County; however the initiative failed by 1998. The ensuing absence of cohousing communities in the North-Central Florida region led to inquiries for cohousing communities located within four to six hours of driving distance from Gainesville.

The results showed two groups at the "forming" stage, one around Tampa and one in the Florida Panhandle, and no cohousing communities in Alabama or South Carolina. Fortunately, two cohousing communities were detected in Georgia: East Lake Commons—at 67 units the largest cohousing project in America—which at the time of this writing is still undergoing construction; and Lake Claire Cohousing, a recent, yet consolidated community of 12 units in midtown Atlanta. Of the two, Lake Claire proved the best option. Not only was it completely built and operative in time for the research, but also the residents were extremely receptive from the start and agreed to collaborate in this venture.

Furthermore, although falling in the lower end of cohousing community sizes,[5] a preliminary assessment found Lake Claire representative of the cohousing model. It features the four fundamental characteristics that McCamant & Durrett describe as essential to the model: participatory process, intentional neighborhood—here referred to as social contact—design, common facilities, and resident management (McCamant & Durrett, 1994, pp. 38-44). Following the cohousing model, Lake Claire consists of individual households living on jointly owned land and sharing a range of facilities in the community common house, where among other events, regularly scheduled meals are prepared and consumed by all, satisfying Hanson's (1996) common meal requisite. For four years neighbors helped develop Lake Claire[6] and since the spring of 1997 have gone

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[5] Based on their Danish experience, McCamant & Durrett suggest that the optimal size for a cohousing community extends between 13 and 34 households (McCamant & Durrett, 1994, p. 160). However, recent surveys show that American cohousing communities span all the range from six to 67 households, and occupy from less than one to over 35 acres (Tarnay, McIntyre, & Blank, 2000). See Table 4.4.

[6] Architect Greg Ramsey, in partnership with a core group of future residents, developed Lake Claire Cohousing. (Lindeman, 2000a; Lindeman, 2000b). See Table 4.1.

on to manage the community, sharing tasks and responsibilities in its maintenance and administration through a system of committees and volunteer work quotas. Lake Claire also meets the two additional requirements later proposed by McCamant (TCN, 1996) and Durrett (2000): residents neither are organized in a hierarchical structure nor share an economy. Moreover, the community strives to reach the sustainability ideal associated to the cohousing concept through green practices and design, which granted it an AIA award in 1998.[7]

**Experiential Techniques**

Two basic experiential techniques were used in this research: interviews and participant observation. The research relied strongly on participant observation, described as "a way to collect data in a relatively unstructured manner in naturalistic settings" and more specifically as "a method in which an observer takes part in the daily activities, rituals, interactions, and events of the people being studied as one of the means of learning the explicit and tacit aspects of their culture" (DeWalt, DeWalt, & Wayland, 1998, p. 260) and for capturing at once both the *emic*—or the insider's—and the *etic*—or the outsider or researcher's—views. Furthermore, Whyte (1997a) claims that participant observation is particularly suited for action research; the same could be said of its suitability for observing sociospatial pairs.

This research concurs with the assertion that by experiencing a problem as a subject, the researcher is poised to grasp the multidimensionality of complex problems and thus can do a better job of interpreting them (DeWalt et al., 1998). The case for the use of participant observation is that it not only enhances the quality of data obtained

[7] Lake Claire Cohousing and its designers, Village Habitat and Preston Associates, Inc. of Atlanta, won the American Institute of Architects (AIA) Georgia Excellence in Design

during fieldwork; but it also enhances the quality of interpretation of the data. This method affords the researcher the unique insight that stems from experiencing the common and uncommon behaviors of the social group studied. As a complement to more formal research strategies such as identifying a sample and conducting an interview or survey, it allows building a more accurate theory to understand and explain expressions of thought and action. DeWalt, DeWalt & Wayland claim that "the field worker who doesn't try to experience the world of the observed through participant observation will find it much harder to critically examine research assumptions and beliefs, and themselves" (DeWalt et al., 1998, p. 265).

Following this approach, during the eighteen months of this dissertation fieldwork, the researcher visited the community approximately every three or four months. On two opportunities she stayed within the community, once as guest of a Lake Claire family and on another visit she rented a home from another family that was away on vacation. During these stays, the researcher visited with neighbors either at their homes or in the common house, met some of their friends or relatives, attended common meals and other community events, participated in domestic activities, and helped neighbors with chores. Residents showed the researcher their homes, invited her over for tea or dinner, and took her along for outings around the community and for visits to their places of employment, the local park and the grocery store. Other experiences in which the researcher participated included shopping for groceries for a common meal as well as cooking a meal for thirty residents, and assisting with community maintenance.

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Award for Sustainability in 1998. See chapter 4.

Just as with participant techniques, there is indication of the adequacy of using interviews for this research. On the one hand, action research demystifies scientific inquiry by valuing the input derived from general modes of discourse as significant scientific tools that advance social science knowledge and promote change (Alexander, 1988; Greenwood & Levin, 1998). It follows that knowledge gained from interviews with those involved in, or affected by, a social issue have the potential to affect social change. On the other hand, Action Research credits the information garnered by researchers directly from the subjects as essential for understanding the task (Greenwood & Levin, 1998). Thus, information derived directly from interviews with residents of the case study community was admitted as an essential component, and was instrumental to the implementation and the outcome, of this research. Finally, regarding the interview method, Zeisel (1981) also points out it is particularly suited to discovering personal definitions of complex environment-behavior situations, and indeed proved significant for uncovering underlying issues and individual interpretations of observed phenomena.

The list of specific research questions included in Appendix A and summarized in table 3-1, provided a basic structure for the interviews. The list of questions starts with elementary questions to define the terms and establish the grounds for the research, and gradually narrows to questions designed to exact specific answers to the query—whether the design for social contact model facilitates the development of a sense of community in a cohousing neighborhood.

Table 3-1. Summary of revised research questions

| | |
|---|---|
| 1. | What are the essential supportive behaviors and social interaction sought by members of the cohousing community? |
| 2. | Are particular physical features of their cohousing community considered in any way a factor in the development and consolidation of supportive behaviors? |
| 3. | What kinds of activities are held in the common house? |
| 4. | What is the perceived significance of these events? |
| 5. | What are the specific features of the common house that are seen to afford these activities? |
| 6. | What has been the impact of building the common house? |
| 7. | Do residents suggest that the common house is considered a) a landmark or reference point for the community or for the neighborhood at large; and/ or b) an extension of their private space? |
| 8. | How has the development model of the community affected the design outcome? |
| 9. | In general, does the design for human contact model facilitate development of a sense of community? |

**A sense of community.** Understanding what is meant by a sense of community in the context of cohousing communities was crucial to this research. Fromm describes a sense of community in the following terms:

> A sense of community encompasses *membership*, a feeling of belonging to the group; *contact*, that members are in proximity and available to each other; *influence*, where each person can have some effect on the group; *fulfillment of needs*, knowing that the group can help meet each other's needs; and a *common history* and sharing common experiences. (Fromm, 1991, p. 159)

After two decades of research into related issues, this preliminary definition has been refined and given operational form. Fromm's report on her 1990s post-occupancy evaluations (POEs) of a number of American cohousing communities, mentioned in chapter one, provided the basis for designing the interview questions and for describing the social behaviors reported and observed in Lake Claire residents. In these studies, a group of specific behaviors that people identify with having a *sense of community*—what Fromm calls "community indicators"—were used to assess resident satisfaction with

cohousing and by inference the existence of a sense of community. The behaviors surveyed included "knowing neighbors' names, conversing with them, looking after neighbors' children, asking a neighbor's help when ill, feeling secure within the community, and participating in its supervision and care" (Fromm, 2000, p. 105). Following Fromm, for this research these behaviors have been grouped into four different categories for the different types of behaviors represented in her community indicators: interaction, support, safety, and participation.

Seventeen of 24 adult residents were formally interviewed. Five others were unable to grant the researcher structured interviews citing schedule conflicts or lack of time, although they volunteered comments during common meals and other casual encounters, and the remaining two residents[8] were unavailable on any of the occasions that the research was conducted. Interviews were carried out usually in the interviewee's home or in the common house and lasted between 30 minutes and one hour. Other less formal conversations, that nonetheless followed the interview guidelines, were carried out while walking around the neighborhood or running errands with some neighbors. Individuals and couples were targeted for the formal interviews to allow the opportunity of more personal disclosures. In addition, many informal conversations that yielded answers to the research questions happened in the course of some community activity in which the researcher joined the residents—such as during common meals, meal preparation or cleanup, gardening, or looking after children. In fact, very often it was not possible to separate interviewing from participation.

[8] These were short-term residents who reportedly were not involved in community life: one was at the time renting a room in one of the units, the other was temporarily staying with relatives.

**Analytical Techniques**

As stated, this dissertation looks at the correspondence or fit between the social behavior of cohousing residents and the form and features of the physical environment of a cohousing community—its buildings, spaces and circulation. Again as stated, the strategy followed was, on one hand, to describe the social behaviors of the case study community residents as observed and experienced, as well as reported by them. The other task at hand is to provide a complete and meaningful description of the built environment of the case study community. In both cases the focus is on the precise issues or elements that may help uncover particular environment-behavior connections. In particular, the study of the physical environment of a cohousing community is directed at identifying the presence, and investigating the expression, of the social contact or intentional neighborhood design features described by McCamant & Durrett (1994) in the case study community. By highlighting these features, this study becomes the fundamental instrument whereby environment-behavior connections of the case study community are exposed.

**Architectural analysis.** The description of the physical environment can and should stem in part from its observation and experience by the user. In *Experiencing Architecture*, Danish architect S. E. Rasmussen posits that design must above all consider the utilitarian nature of buildings and their impact on human activity and consciousness. He cautions that,

> it is not enough to see architecture; you must experience it. You must observe how it was designed for a special purpose and how it was attuned to the entire concept and rhythm of a specific era. You must dwell in the rooms, feel how they close about you, observe how you are naturally led from one to the other. You must be aware of the textural effects, discover why just those colors were used, how the choice depended on the

> orientation of the rooms in relation to windows and the sun. (Rasmussen, 1962, p. 33)

Therefore, this dissertation offers a report on the architecture of Lake Claire Cohousing as observed and experienced personally by the author in the course of the research. However, given that the overarching intention is to generate useful architectural knowledge, this dissertation also includes a description of the form and underlying order of the physical setting using the schema and vocabulary of the design disciplines. This strategy entails reducing the observed design to its essential constituents—mass, space, and circulation—and examining their configuration, organizing principles and interrelationships. Associated with it are comments on form, light, views, materials and furnishings as well as the presence of axes, symmetry, balance, hierarchy, proportions, scale, repetition of elements, and rhythm. Finally, this description addresses the functional relationships both of the individual units and common house in the cohousing, and of the cohousing as a whole as it relates to its urban context.

Form—understood here as geometric configuration and relationships—and more specifically the form we give the environment, is the basic problem of design (Ching, 1996; Lang, 1987; Rasmussen, 1962). Studies of form, called morphologies in the biological sense, address not only the description of form—"the size, shape, and structure of…[organisms] and the relationships of their internal parts" (2001)—but also the explanation of form in terms of general principles, and the relationship of form to performance. Similarly, the architectural analysis of a building—in essence, a morphology—refers to a study of the form of a building that lists its features, that is, statements describing at least two parts of a building and the relationships between the

parts, and the logic behind it. In other words, architectural analyses offer a systemic view of spaces and buildings which allows describing and understanding the compositional elements, geometry and organization present in a design, and their inter-relationships, and are usually expressed as a collection of abstract diagrams and simplified architectural drawings for ease of visualization. For this reason, they are the tools used by designers to compare these features to the parameters or external constraints of a design, such as functional, technical, or aesthetic requirements.

The architectural analysis in this dissertation, and the structure used for describing the physical environment of the case study community, uses a simplified scheme based on Ching's method (1996), as shown in figure 3-2. According to Ching, built structures of any scale can be described by examining their relation to the surrounding context, as well as the shape, definition, and organization of its main design systems—space, structure, enclosure, and circulation. More specifically Ching identifies the shape and definition of singular forms—where "form" is understood as volume or mass—and space, the spatial organization and the connection of two or more forms and spaces, as well as their circulation, proportion, scale, and ordering principles as the essential elements that inform a morphological study. These are "the critical means of architecture . . . [that] comprise the timeless and fundamental vocabulary of the architectural designer" (1996, p. 6).

In the interest of clarity, and also to allow for a wider audience to understand these concepts, these categories have been reorganized in a way that facilitates connecting them with the experiential assessment of the architecture. Thus, as shown in figure 3-2, this dissertation discusses the abstract and perceptual properties of the

constituents of the built form. It addresses the *spaces* or voids—also called "cavities" (Rasmussen, 1962) featured in the design, where human activities take place; and the masses that surround, define, and shape them—giving them *enclosure*, also perceived as volumes, solids (Rasmussen, 1962), or "forms" (Ching, 1996). Finally, relating to the perception of space, which we experience "in relation to where we've been and where we anticipate going" (Ching, 1996, p. 228), the description of the physical environment of the case study community discusses the *circulation system* or path of movement through space.

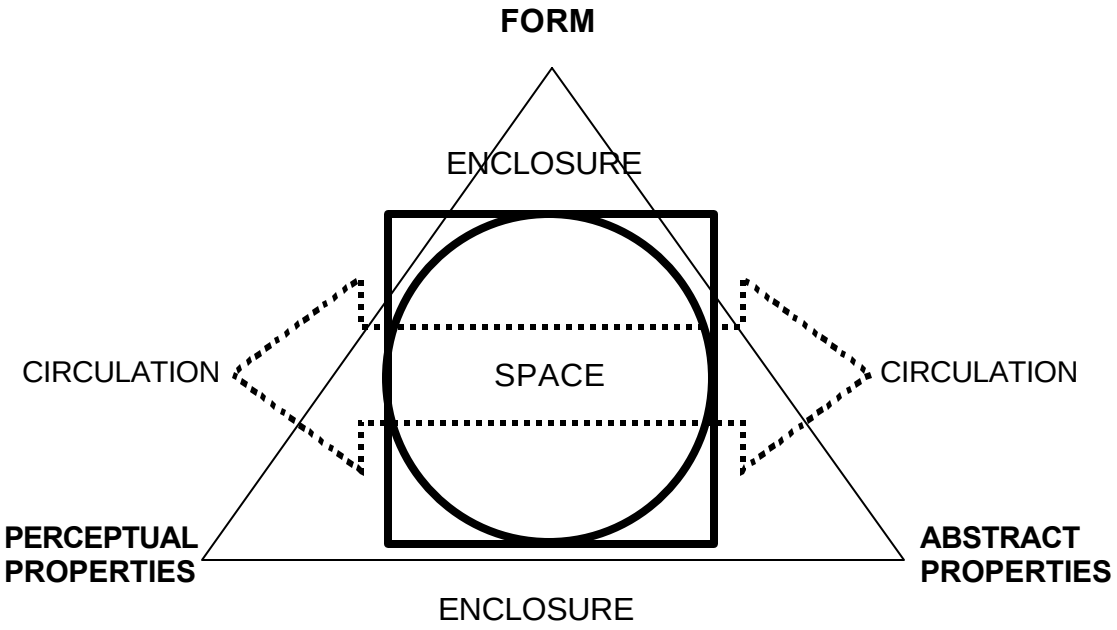


Figure 3-2. Architectural analysis model

In sum, what this dissertation calls an architectural analysis is a compounded description that addresses both the abstract and the perceptual qualities of the built environment. This is a purposeful approach aimed at apprehending the full range of factors that comprise the architectural experience because "part of our experience of architecture may be based largely on our enjoyment of…physiological responses…but

the fullest experience of architecture comes from expanding our knowledge of a building, its structure, its history, and its meaning" (Roth, 1993, pp. 4-5.)

**Environmental Design Theory**

In order to make a contribution to environmental design theory so as to "enhance understanding of what architects traditionally have called 'architectural form' and its utility for people at both an action level and an emotional level" (Lang, 1987, p. 19) this research looks at a concrete issue through the lens of Environment-Behavior Research (Bechtel, 1997)—also known as Environmental Psychology, Environmental Sociology, Human Ecology, or Person-Environment Studies (Lang, 1987). This aspect of environmental design theory provides the framework for illuminating and discussing the observed linkages—or the lack of linkages—between the physical and social patterns of the case study community. Therefore, it is environment-behavior theories that allow understanding whether or not the physical environment of the case study cohousing in any way enables or impedes the observed interaction and supportive behaviors associated with a sense of community.

The foundation of environment-behavior studies is the admission that behavior occurs *somewhere*; furthermore, that particular settings are associated with particular activities and thoughts: a bedroom is associated with intimacy and rest, much as a street is associated with circulation and communication. This evident truth is probably the source of the idea that the built environment is a major determinant of human social behavior (Lang, 1987; Rapoport, 1969) and furthermore, that it has the power to induce civility and in many ways better the lives of people. Despite lack of conclusive proof, throughout history architects and designers traditionally have embraced and consequently based their practice on belief that there is a causal relationship between the shape of the

environment and resulting human actions. However, the evidence suggests that such determinism has failed to produce the desired results, particularly as it concerns Modern architecture. Among others, Lang (1987) claims that the series of international conferences known as CIAM (Congrès Internationaux d'Architecture Moderne) that dictated urban design strategies in the 1930s and 1940s "exhibited a belief that through architectural and urban design all kinds of social pathologies could be eliminated." One reason for the perpetuation of this belief, Lang adds, has been "the lack of clarity in the specification of the relationship between the independent variables (the environment) and the dependent variables (social behavior)" in research; and another, its "simplistic reading" by designers—and its consequently misled application (p. 102).

On the other hand, awareness of the importance of the relationship between social and spatial phenomena has for some time driven efforts within the social sciences to understand the impact of setting for or individual behavior, the collective behavior of societies, and the specific, localized patterns of behavior of a culture. Unfortunately these efforts have for the most part failed to engage widespread interest among the practitioners who are ultimately responsible for applying the findings (Altman, 1975; Lang, 1987). There are, however, a few architects, designers, and planners, who along with social scientists believe that there are significant conceptual and substantive connections, or linkages, between the environment and human behavior. Interest in this interface was fueled within the social sciences by the ecological concerns of the 1960s. This was concurrent with a revision of architecture prompted by "the disastrous social and environmental consequences of modernism [which led] architects and theorists… to examine the possibility of a social content in architecture" (Melhuish, 1996). However,

antecedents for environment-behavior research can be traced further back, to the emancipatory designs of the early portion of the century and to the behavioral studies carried out during and immediately after WWII (Bechtel, 1997; Hayden, 1981; Hayden, 1984; Lang, 1987; Weisman, 1992). Yet it was not until the last half of the twentieth century that the field of Environment-Behavior studies grew as a separate discipline.

**Affordances.** There are a few basic premises underlying environment-behavior studies, two of which address the goals and the means of building the human environment. First, that the built environment caters to a series of decreasingly urgent human needs as described by Maslow in 1954: not only to a need for shelter and security—tied to physiological needs and survival—but to psychosocial needs for affiliation or belonging, esteem, learning or self-actualization, and lastly for cognitive and aesthetic satisfaction. Second, following Gibson (1979), the premise is that the environment offers an array of opportunities for satisfying these needs—called *affordances*—which individuals may perceive, identify, and act upon, based on their particular and shared motivations and competencies.

In the behavioral sciences, environmental affordances are defined as "what the environment permits or provides for interaction" such as objects, people or possible activities in a particular situation (Miller, Shim, & Holden, 1998, p. 388). For the design disciplines, environmental affordances need to be restated as the features of the natural and built environment that allow specific behaviors to take place or that allow specific experiences and symbolic associations to be made. Affordances are expressed as "a property of [the environment's] layout, of the materials of which it is fabricated, and of the way it is illuminated—with reference…to a particular set of people" (Lang, 1987, p.

23). So, the key notion is that rather than determining behaviors, the environment *affords* them. It follows that by affording certain activities and evoking certain associations—but not others—the features of the physical environment play a significant role in defining our thoughts and actions and our relations to others.[9]

**Behavior settings.** Experiments by Barker and Wright in the late 1940s led them to formulate what came to be known as behavior setting theory (Barker, 1968; Bechtel, 1977; Bechtel, 1997; Gifford, 1997; Schoggen, 1989), which states that particular behaviors tend to consistently occur in given environments or *settings* according to preset programs or *standing patterns of behavior*. Thus the environment—natural or built—can be thought of as an open system consisting of behavior-environment couples or *synomorphs*, that at the same time shape and are shaped by human action. Behavior setting theory goes beyond the notion of affordance by clarifying that the environment provides structured behavioral input in the form of both environmental and psychosocial cues: a setting with specific characteristics—not only layout and furnishings but also participating population—and a program that defines and regulates possible behavior. Moreover, behavior setting theory argues that

> the environment provides inputs with controls that regulate the inputs in accordance with the systemic requirements of the environment, on one hand, and in accordance with the behavior attributes of its human components, on the other. This means that the same environmental unit provides different inputs to different persons, and different inputs to the same person in response to that person's behavior change; furthermore, it means that the whole program of the environment's inputs changes if its

[9] This simple yet powerful concept has widespread direct or indirect implication in environment-behavior research. While Skjavaeland and Garling's (1997) examination of interaction spaces specifically centers on Gibson's notion of affordance, there is abundant material that is epistemically aligned with the concept (cf. Alexander et al., 1977; Cooper Marcus & Sarkissian, 1986; Gehl, 1987; Jacobs, 1961).

> own ecological properties change—if it becomes more populous, for example. (Schoggen, 1989, p. 191)

Similar to behavior setting theory, pattern language theory[10] (Alexander, 1979) posits that for each behavior, activity or event there are congruent settings or patterns, that is, the patterns of events, or activities, that keep happening in a place and give it vitality "are always interlocked with certain geometric patterns in the space" (Alexander, 1979, p. x). Thus, "each building and each town is ultimately made out of these patterns in the space, and out of nothing else: they are the atoms and the molecules from which a building or a town is made" (p. 75). The basis of pattern language theory is the idea of *fit* (Alexander, 1966), a reinterpretation of the synomorph concept: specific patterns of the environment—in a sense, behavior settings—fit specific patterns of activity, or the program. It follows that specific features of the environment are required for optimal performance of any action, that is, they are the most adequate or provide the "best fit", and conversely, that not providing affordances, or providing less fitting settings equals to putting obstacles for behavior, which then needs to be overcome by intense motivation to perform it.

Pattern language's interpretation of the spatial-behavioral link illustrates the different approaches taken by environmental psychology—which aims toward positive theory and tends to credit behavior as the driving force in the creation of space—and the design disciplines, which direct their endeavor to the formal structure of space. In fact, pattern language takes the form of a normative theory of design with implications that make it attractive for cohousing. It implies that by incorporating a series of universal and

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[10] The participatory, non-empiricist, sociological approach taken by Alexander and his collaborators has been the subject of much criticism, however, as Dovey points out,

timeless patterns as prescribed into a coherent design system or *language* the resulting spaces will be "alive", that is, rich in human activity, interaction, and meaning (Alexander, 1979; Alexander et al., 1977).

Furthermore, the difference between affordance and behavior-setting theories is a matter of the degree of coercion granted to the physical environment in shaping human activity. While the former eschews assigning the setting coercive power (Lang, 1987), the latter takes a possibilistic approach positing that "the environment sets certain limits on human behavior, allowing for a finite range of behavior" (Gifford, 1997, p. 390). At the most extreme behavior-setting theory leads to the notion that "there is no such thing as the design of space or spaces. Behavior, not space, is enclosed by architecture. No dwelling, building or city is planned to be empty" (Bechtel, 1977, p. vii). However, theories such as these that relate environment to behavior are not deterministic. Neither behavior-setting nor affordance theories imply that there is a causal connection between environmental features and the observed actions, or the thoughts, of individuals or groups, but rather, that those specific environmental characteristics are necessary—although not sufficient—conditions for them to take place. Miller, Shim and Holden remind that "a key point in the notion of affordances is that they are volitional; the individual may or may not make use of the latent potential available in objects, persons, or activities" (Miller et al., 1998, p. 388), and urge the realization that they are also not universal. Similarly, Alexander makes it clear that

> Of course, the pattern of space, does not "cause" the pattern of events. Neither does the pattern of events "cause" the pattern of space. The total pattern, space and events together, is the element of people's culture. It is

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pattern language theory represents "a substantial quest for a new paradigm for
(Dovey, 1990, p. 77).

> invented by culture, transmitted by culture, and merely anchored in space…But there is a fundamental inner connection between each pattern of events, and the pattern of space in which it happens. For the pattern in the space is, precisely, the precondition, the requirement, which allows the pattern of events to happen. (1979, p. 92)

Recognition that behavior is linked to its setting in this dissertation follows a probabilistic approach (Gifford, 1997; Lang, 1987) in allowing a margin of uncertainty that behaviors will be performed as expected in any particular setting. Understanding that behavior is affected by a range of factors in addition to the physical environment leads to embrace the notion that "the various environmental and other factors that operate set up certain odds [for behavioral outcomes]…Depending on the number, strength, and direction of these influences, the odds of the individual behaving in these ways vary from quite low to quite high" (Gifford, 1997, p. 390). Therefore, given specific patterns of the built environment and with specific motivations, there is only a probability that certain behavior will follow.

**Spatial and territorial behavior.** Two additional premises underlie environment-behavior studies, which address people's use of space to deal with privacy, safety and communication. One, that humans exhibit spatial behavior, that is, that we use the space around our selves to serve protective and communication purposes (Aiello, 1987; Hall, 1966; Sommer, 1969); and two, that as individuals and as groups humans perform territorial behaviors to fulfill a range of psychosocial needs (Altman, 1975; Brower, 1980; Brown, 1987; Hall, 1966; Taylor, 1988).

Spatial behavior, or *proxemic*, theory is based on the notion that the mechanisms whereby people regulate interaction distance relate to their perception and interpretation of stimuli and the ensuing fight-or-flight responses that in some ways are not unlike those of other animals. First developed by Hall (1966) and Sommer (1969) in the 1960s,

proxemics establishes that these mechanisms center on the individual's sense of an enveloping *personal space* (Sommer, 1969) whose boundaries are flexible and adapt to the interaction distance demanded by each social situation. A third stage in the evolution of this concept is Aiello's (1987) rephrasing of the theory, which posits considering the *interpersonal distance*—which focuses on the role space plays in communication along with that of defense—as the key concept. It ensues from this notion that individual and social behavior, and the interaction between individuals, can be regarded as mediated by space. Furthermore, proxemic theory implies that the distance we set from others is one mechanism whereby we control our sensory—visual, olfactory and auditory—exchanges with others (Lang, 1987) and the access we grant others to our self—in other words, our privacy (Altman, 1975). Thus, interpersonal distance either affords or discourages specific interactions between two individuals or in a group: it affects the character and form of the interaction whether it entails verbal or non-verbal communication, or direct physical contact.

Territorial behavior—also called *territoriality* (Hall, 1966), *or human territorial functioning* (Brower, 1980; Taylor, 1988)—theory states that like most animal species people identify with and thus "lay claim" to the territory they occupy or that otherwise belongs to them, demarcating it and reacting to its encroachment. However, as Brown notes,

> the most general difference between human and animal territories is that human territories serve different needs. "Whereas animal territoriality is rooted in physiological needs connected with survival, human territoriality may also embrace 'higher' needs for, say, status, recognition by others, and achievement or self-image"…Territories also facilitate the achievement of certain human psychological processes including needs for privacy, intimacy, and solitude (1987, p. 510).

Altman claims that "personal space and territorial behavior function in the service of privacy needs and, as such, are mechanisms used to achieve desired levels of personal or group privacy" (1975, p. 6). However, whereas personal space is attached to the individual, territorial behaviors center on a fixed geographical space (Bechtel, 1997), therefore interpersonal distance affects personal privacy but territorial behavior has implications for private space and what it may afford the individual. Lang implies that the concept of territory has further reaching consequences for design than the concept of personal space because it is territorial control that "allows fulfillment of some basic human needs: the need for identity, the need for stimulation,…the need for security [and] the need for a frame of reference" (1987, p. 148).

Laying claim to a territory is usually accomplished through some sort of markers, which applies to the personalization of homes and the workplace to define an individual's occupation of these spaces, as well as to the construction of park fences or city walls to define the boundaries of collective property. Territoriality thus is also intricately tied to notions of ownership, dominance and social control, and to varying extents informs the group of theories—Defensible Space, CPTED, Situational Crime Prevention, and Environmental Criminology—that address the effects of social misbehavior (Schneider & Kitchen, 2001).

Considered in the wider context of what territorial behavior may imply for societies, it can be related to the political struggle for access to the material resources of the land and to land itself. As Lefebvre declares, "Space is not a scientific object removed from ideology or politics; it has always been strategic… Space has been shaped and molded from historical and natural elements, but this has [traditionally] been a

political process" (1976, p. 33). Environment-behavior researchers have followed this lead. For example, Hillier and Hanson's access analysis theory builds on this concept. It provides a cue for studying the power struggles that are evidenced in the physical environment by granting or denying access to private space. Access analysis establishes that the correspondence between the physical and social pattern of a community arises because buildings " individually and collectively, create and order space, [allowing us] to recognise society: that it exists and has certain [visible] form" (Hillier & Hanson, 1984, p. 2).

To summarize, environment-behavior theories address the identification and connections, or linkages, between the built environment and the social behavior of individuals and groups. Their objective is "to describe and explain how the layout of the environment affords [behavioral] mechanisms and the importance of designing environments that do afford them" (Lang, 1987), which has applications for the development of a human-based theory of architecture. Given that this approach has yet to become widespread among social scientists and environmental designers, these theories still seem to be an uneven body of knowledge. However, they are a serious attempt to identify, describe, and explain the reciprocal effects between the environment's physical characteristics and the ensuing individual and collective action and social interaction, expressed in terms of behavior. But this is a young field whose development and consolidation awaits the necessary paradigm shift in mainstream social science research and environmental design practice. As stated earlier, this research aims to make a contribution in this direction.

# CHAPTER 4
# PHYSICAL AND SOCIAL FACTORS OF A COHOUSING COMMUNITY

The case study community, Lake Claire Cohousing—originally called Arizona Avenue Commons—occupies approximately 4,000 $m^2$, or one acre, in midtown Atlanta. It accommodates 14 households in 12 different units: one divided into two flats, and another has an annex. Individual units typically occupy 89.1 $m^2$ (990 SF) and feature two bedrooms and one bath. The community also features 1,575 $m^2$ (17,500 SF) of common areas that include open spaces, parking for 22 vehicles, and a 378 $m^2$ (4,200 SF) three-story common house.

**Urban context.** Lake Claire Cohousing is located in the Lake Claire/Candler Park district, a mid-town residential area of single-family cottages dating from before World War II, known today for its interest in environmental conservation. Although the district emerged as a streetcar suburb, it still retains the pedestrian character and some of the local commerce of the original neighborhood (Preston & Associates, 1997). Commerce is distributed between community based shops—shown as A in Figure 4-1, and the Little Five Points urban village—reputedly "Atlanta's biggest alternative business center" (2000, p. 199), shown as B. These are located at a walking distance from Lake Claire Cohousing of between 0.5 and 2.1 km (0.3 and 1.3 miles). Within a five-kilometer (approximately three-mile) bicycling radius is the Decatur regional commerce center (C), located at 4.2 km (2.6 miles) from the community. The community is served by city buses two blocks north of the site and by the Metropolitan Atlanta Rapid Transit

Authority (MARTA) mass transportation trains. As indicated in Figure 4-1, a passenger station (B) is located just one kilometer (0.6 miles) from the site.

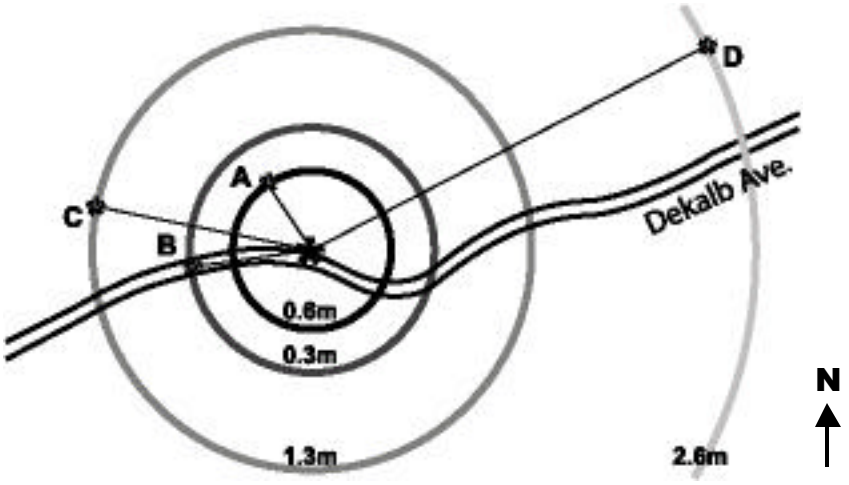


Figure 4-1. Urban context diagram. Lake Claire Cohousing is at the center, on the north side of the Dekalb Avenue transportation corridor. Radii show the distance of the different commercial activity centers—A, C and D—and the MARTA station (B) to the community. (After Preston & Associates, 1997)

Lake Claire Cohousing's near context consists of blocks of single-family detached cottages. Access to and from Lake Claire Cohousing is through two local streets, one of them a cul-de-sac, that border the property on its East and West sides. The southern boundary of the cohousing lot is defined by a high-traffic transportation corridor that connects the district with the Atlanta downtown and the interstate highway system. The corridor comprises Dekalb Avenue—a three-lane thoroughfare—and across from it, the rail lines of both MARTA and the CRX freight trains. Across from the property there is the Lake Claire land trust—a 81,000 $m^2$ (2-acre) local green preserve that features open spaces with assorted fruit trees, a picnicking gazebo, a drumming circle and fire pit, and a small building with a community sauna. Further west bordering the land trust, is a two-

acre property belonging to the Amata cooperative community, which features cultivated land and a pond.[1]

The original project for the cohousing community conceived it as part of a larger urban intervention project as illustrated in Figure 4-2. It was aimed at linking disperse open spaces available at that time in the immediate neighborhood: the proposed Lake Claire Cohousing site, the land trust, the existing cooperative gardens, a viable 6,000 $m^2$ (1.5 acre) privately owned lot along Dekalb avenue, and the city right-of-way and cul-de-sac of Arizona street.


Figure 4-2. Lake Claire renovation project master plan. Drawing shows the community-oriented neighborhood elements: the proposed (1) CSA gardens and (2) neighborhood business center; the existing Lake Claire land trust (3) and cooperative community's (4) green areas; the cohousing common house (5), and the Arizona street cul-de-sac (6) to be developed as a plaza. (Source: Preston & Associates, 1997)

[1] The Amata urban co-op is a diversity-oriented intentional group of owners and renters with different levels of participation and decision-making. They claim to be solely committed to "community, ecology, and health and [to] welcome others who share this commitment" (2000, p. 199).

The plan proposed building the cohousing community as a first phase, followed by construction of a neighborhood business center with mix of housing, office and retail in the private lot marked number 2 in Figure 4-2. Additionally it called for the connection of Lake Claire Cohousing to the land trust and beyond to the cooperative gardens through the cul-de-sac, converted into a community plaza, and the utilization of a portion of the open areas for community-supported agriculture (CSA) gardens, marked number 1 (Preston & Associates, 1997). Though the second phase remains unbuilt, Ramsey is confident that it may still be implemented, albeit partially, some time in the future (Ramsey, 2000).

## Development Process

Lake Claire residents report that a series of shared interests drove the project, namely home ownership, but also a sense of community—among others, opportunity for resident participation, and environmental preservation or sustainability (Lake Claire resident interviews, 1999-2000). One resident explains that in the creation of the cohousing neighborhood,

> There were two main focuses [sic]: 1) environment [and] 2) community. Environmentally, by building cluster housing, land was used more wisely. As a group sharing resources we can each use up less resources individually. Also as a group we can do more effectively things such as composting, recycling, organic gardening, and cooking healthy vegetarian meals. Our plan was to have a community much like a village where people know each other, care about each other, help when needed, and share celebrations…[and also] interact with the surrounding community. (B. J. S. in Lake Claire residents, c. 1998).

**Participation.** Lake Claire Cohousing falls within the traditional, or what Fromm (Fromm, 2000) calls “project”, development model. These are communities developed by a core group of future residents who take on a variety of responsibilities in the project

and in some cases, such as in Lake Claire, become de facto developers. Residents in Lake Claire report having acted as publicists, marketing executives, treasurers, secretaries, and financiers as well as co-designers. One resident reports she "helped some with marketing, with minute taking at countless meetings, and with planning the landscape"; another claims she "was instrumental in doing the early publicity…[and] providing 'seed money' for the project". A third resident says he "served as a facilitator for the group meetings for a period of several months prior to construction" and his wife "served on the Executive Committee as secretary" (Lake Claire residents, c. 1998).

Greg Ramsey, an environmentalist architect who had previously interned in McCamant & Durrett's firm, designed Lake Claire cohousing. In 1993 he and his wife started an umbrella group to disseminate the idea of cohousing in Atlanta; from this effort arose the group of enthusiasts that joined the Ramseys in developing Lake Claire. Similar to the pattern described by Fromm, who claims that "this development process takes, on average, 4 years" (2000, p. 96) the project timeline extended over four and a half years from site identification in early 1993 to move-in in the spring of 1997. One resident's experience illustrates the process:

> I attended my first cohousing meeting March 18, 1993. From then until March 28, 1997, when I moved into the cohousing, I participated in a meeting almost every week, as we planned the project. I served at times as secretary and at times as treasurer…the meetings were held in my apartment home for a while. I am now a homeowner…[in] Lake Claire Cohousing. My main role has been that of a participating member who believed in the project and 'hung in there' during the most difficult times. (B. J. S. in Lake Claire residents, c. 1998)

Largely, cohousing practitioners tend to follow McCamant & Durrett's participatory design approach (Hanson, 1996; McCamant & Durrett, 1994). This approach calls for future resident participation in the programming phase after which the

designer, working closely with them, develops a project that "translate[s] their goals and objectives into an actual design . . ., educate[s] the group about the social consequences of various design decisions" (McCamant & Durrett, 1994, p. 165) and directs the group toward architecturally meaningful results. This approach is intended to ensure that the resulting physical environment of a cohousing community is as much a collective effort of the residents as the product of an expert's vision and skills.

This seems to have been the case in Lake Claire. Those residents who joined the project since its inception report having participated extensively in the design process, though the extent to which they contributed specific design decisions is not clear (Lake Claire resident interviews, 1999-2000). Conversely, Ramsey reported the challenge of trying to meet individual requirements in addition to stringent budgetary, regulatory and programmatic demands. This resulted in what he describes as "twelve custom-designed units" despite having based the community design on a limited number of dwelling types (Ramsey, 2000). Although residents declare almost unanimous satisfaction with the final design and praise the architect's skills, comments attest to the difficulty of reaching agreements on practical and aesthetic issues, and indicate that often the designer's criteria prevailed. However, they still regard the resulting design as a collective effort (Lake Claire resident interviews, 1999-2000). The following resident comments confirm this assessment:

> We spent a lot of time trying to make every single resident happy, allowing for so many variables and upgrades that the project became almost twelve individual homes rather than a multi-family project. But in a way, this also became one of its greatest strengths because as I look out my balcony down the courtyard, I see such a variety of facades, and the play of all the different angles is what makes it not feel like an apartment complex, and more like a village. (N. L. in Lake Claire residents, c. 1998).

> The architect created a design on a one acre space for twelve dwellings with private patios, a common house with a garage and a basement workshop area, two courtyards, space for a large vegetable garden, and a parking area for eighteen cars. This was done taking into serious consideration the often conflicting needs and desires of thirteen individual resident units, and it incorporates numerous unexpected encounters with beauty. (L. M. in Lake Claire residents, c. 1998).

In general, participation—whether during the design phase or in community management and maintenance—makes cohousing, as Scanzoni noted, "by no means an idyllic, conflict free environment…cohousing is marked by nonstop decision making, tortuous negotiations, and sometimes by conflicts that turn out to be nonnegotiable" (Scanzoni, 2000, p. 81).

**Sustainability.** The other two concerns were met with different degrees of success. The Lake Claire Cohousing project won the 1998 American Institute of Architects (AIA) Georgia Excellence in Design Award for Sustainability for its pro-environmental features, which included siting, landscaping, energy management and climate control (Preston & Associates, 1997). Lake Claire Cohousing was built on a lot that was then described by neighbors as a "fairly bleak landscape", a "troublesome vacant lot with difficult design constraints" and a "security concern" (Lake Claire residents, c. 1998). Reportedly, adjacency to the thoroughfare and the train tracks was a factor in the acquisition of the lot for the cohousing community as, despite its mid-town location, it had long remained undeveloped for being considered undesirable (Ramsey, 2000). Indeed, the lot is crossed by a six-meter (20 feet) wide sanitary sewer easement along its southern boundary, which had to be integrated into the design. Both the cargo and mass transit trains that run parallel to the transportation corridor across from Lake Claire Cohousing pose acoustical concerns. Additionally, due to its location the lot had a "light

industrial" zoning which the Lake Claire project developers successfully fought in order to build the multifamily project.[2]

Sustainable features incorporated in the design included such best practices as increased density and grouped housing (Brundtland World Commission on Environment and Development, 1987; Calthorpe, 1993), which free green land, reduce impervious surface coverage, and optimize resource consumption. Furthermore, Lake Claire Cohousing buildings are designed in accordance with passive solar design criteria.[3] House widths are narrow and openings are provided on opposing sides so as to allow for cross-ventilation. Shaded common areas cool the air, and some buildings feature ventilation cupolas for passive air cooling. Low-volume plumbing fixtures were installed to conserve water. Buildings were equipped with a hydronic heat system, which combines heating for both indoor space and domestic water; in addition solar panels for water heating were installed in two homes. Buildings were also insulated and sealed with wet spray cellulose to avoid energy transfer between interior and exterior environments. Life-cycle costs were taken into consideration by use of cement fiberboard siding and engineered wood structures made of wood by-products (Preston & Associates, 1997). Buildings were also sited so as to create a barrier that buffers noise for the surrounding neighborhood (C. P. in Lake Claire residents, c. 1998).

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[2] Residents and neighbors cite initial lack of receptivity to the cohousing idea by the city government and count it as a hindrance in developing of the project: "The least successful aspect of the project has been the need to negotiate with city government a zoning and tax code that supports and promotes (rather than tax and suppress) neighborhood organizations/property intended for community recreation, education and celebration" (C. P. in Lake Claire residents, c. 1998).

[3] Passive solar design systems use adequate siting, landscaping and the properties of materials and other features of a building's envelope—rather than mechanical systems—for heating and cooling its spaces.

However, a main consideration for building the cohousing community in this lot stemmed from interest in a local land trust across the street from the lot, along with "the tradition of positive neighborhood activism it represented" (Lindeman, 2000, p. 10). In fact, the Lake Claire land trust is managed by a board of trustees from, and maintained through membership fees contributed by, the neighborhood residents. Today the cohousing is one of its sponsors. The trustees had vested interests in the success of the cohousing project, which was considered a far better option than previous development proposals.[4] One trustee, who saw the cohousing residents as "new ecology-oriented members for the land trust", explains their involvement:

> The Lake Claire Community Land Trust owns land adjacent to the project, and of course we have been very interested in this development's progress. I was early in the process involved in meetings and discussions to make sure the plan would work well from a neighborhood viewpoint (N. G. in Lake Claire residents, c. 1998)

Furthermore, this trustee's assessment that the cohousing community "is a very positive addition to our neighborhood, and feelings among neighbors is that we're fortunate to have this addition to our community" (N. G. in Lake Claire residents, c. 1998) suggests that the approach of the cohousing—addressing both social and environmental sustainability through participation and preservation—made their project desirable for the LakeClaire/Candler Park neighborhood.

**Home ownership.** The Lake Claire Cohousing project also attempted affordability and sought to provide housing for a mix of incomes on the premise that "mixed income within the community significantly increases the potential for shared personal resources" (Preston & Associates, 1997). However, despite aiming toward

[4] An attempt to convert the vacant lot that the cohousing now occupies into a single-room occupancy hotel was rejected by the surrounding neighborhood (Lake Claire resident

affordable housing prices in the $70,000 to $100,000 per unit range, escalating costs—reportedly due to construction costs increases—brought the range of unit prices to $80,000 to $130,000 at completion (Lake Claire resident interviews, 1999-2000; Lindeman, 2000). This presented a challenge for some prospective residents. However as referred by them, creative strategies were sought to solve the problem. Dividing a large unit into two separate flats owned in association by two individuals allowed the community to offer these units at an affordable price each—approximately $60,000—and retain the less affluent members.[5] One resident comments,

> [The cohousing units] did not end up more affordable than other houses in our neighborhood. At one point I thought I was not going to stay in the project because of not enough funds. But our architect worked out a plan where another single parent and I could share one house and buy it together (B. J. S. in Lake Claire residents, c. 1998).

A local real estate agent estimated the cost of a typical Lake Claire Cohousing unit at $150,000 or more by the end of 2000. This was about half that of comparable houses in the surrounding Lake Claire/Candler Park area, which are 60 to 70 year-old single-family detached structures sitting on 540 $m^2$ (6,000 SF) lots.[6] However, prices of two units that have been resold since the community was built have reportedly fetched almost twice their original worth (A. B. in Lake Claire resident interviews, 1999-2000). This has nonetheless generated some uneasiness among neighbors. As property equity rises, so do property taxes, prompting some neighbors to question whether their homes

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interviews, 1999-2000; Lake Claire residents, c. 1998).

[5] Two individuals formed a legal partnership for the tenure of the unit. Specific portions of the joint property were then allocated to each partner in a separate transaction. This arrangement is similar to one described by Sættedammen residents in Denmark (multiple authors, 1999a).

[6] This estimate was confirmed from flyers picked up in the neighborhood during the research period, which offered a two-story four-bedroom "legal duplex" for $275,000 and a craft-quality three-bedroom cottage with "Key West style" pool for $366,000.

will continue to be affordable in the long run (Lake Claire resident interviews, 1999-2000). Table 4-1 summarizes the main development data of Lake Claire Cohousing.

Table 4-1. Development data

| | |
|---|---|
| DEVELOPMENT TEAM | |
| Architect | Greg Ramsey, Preston & Associates Inc. |
| Project Manager | Greg Ramsey, Village Habitat |
| Developer | self-developed by residents |
| Builder | John Robinson, Multi-Family Services |
| Construction Lender | Tucker Federal |
| TIMELINE (site identification to move-in) | 4+ years |
| TOTAL PROJECT BUDGET, approx. | $ 1,200,000.00 |
| Land | $ 60,000.00 |
| Site development | $ 140,000.00 |
| Construction costs | $ 700,000.00 |
| Project/Financial costs | $ 300,000.00 |
| LOT SIZE | Approx. 4,000 $m^2$ (1 acre) |
| LAYOUT | clustered, 4 unit types |
| NUMBER OF UNITS | 12 (one unit converted into two flats, another has annex) |
| TYPICAL UNIT | 990 SF, 2 BR, 1 BA, 2 parking spaces |
| UNIT PRICE RANGE at completion | $60,000.00 (flats) to $130,000.00 |
| COMMON AREAS (includes common house) | 1,575 $m^2$ (17,500 SF) |
| COMMON HOUSE | 378 $m^2$ (4,200 SF) |

(Sources: Lake Claire resident interviews, 1999-2000; Lindeman, 2000; Preston & Associates, 1997; Ramsey, 2000)

## Social Profile

In February 2000 there were 37 residents in Lake Claire, along with four dogs, a half a dozen cats and an assortment of smaller creatures. However, observations suggested that this number hovers over 40 due to the existence of a floating population of extended visitors, home businesses employees and children caretakers. Associate members of the community[7]—a status that grants non-resident members participation in

[7] In February 2000 there were two families—a total of five individuals—from the surrounding neighborhood registered as associate members of Lake Claire Cohousing. This is by no means unusual. Similar arrangements were reported by at least two other cohousing communities in Massachusetts (North American Cohousing Conference,

cohousing community activities through payment of an annual fee, meeting a work quota, or both—also add to this population.

As shown in Table 4-2, out of the total population of 37, children comprised more than a third, including one teenager. Adults tended to be mostly in the 35 to 55 year-old range, which roughly qualifies them as members of the Baby Boom generation. In general, Lake Claire Cohousing residents tend to fall within the white, middle-class, college-educated population segment that has been originally drawn to this movement (Fromm, 2000) despite claims that cohousing caters to a diversity of races, ethnicity, incomes, and sexual and religious orientations. In fact, in February 2000, 89% of Lake Claire residents were Caucasian, and the majority of adults reported having higher education—two adults were college students, and an overwhelming 87.5% held either basic college or graduate degrees, with two residents being college faculty.

Table 4-2. Demographic profile—individuals, February 2000

| RACE | | % | AGE | | | % | EDUCATION LEVEL | | % |
|---|---|---|---|---|---|---|---|---|---|
| POPULATION | 37 | 100 | POPULATION | 37 | | 100 | | | |
| White | 33 | 89.2 | Children | 12 | | 32.4 | | | |
| Non-White | 4 | 10.8 | Teenagers | 1 | | 2.7 | | | |
| | | | Adults, total | 24 | | 64.9 | Adults, total | 24 | 100 |
| | | | 20 to 35 | | 5 | | College or graduate | 21 | 87.5 |
| | | | 35 to 50 | | 15 | | Some college | 3 | 12.5 |
| | | | 50 to 65 | | 4 | | | | |

personal communication, 1999). Explaining the benefits of this status, one Lake Claire associate member claims that her family "gets the best of two worlds" by being able to participate of the cohousing activities and yet having greater privacy and a larger home (L.G. in Lake Claire resident interviews, 1999-2000).

However, vouchsafing for the community's commitment to uphold the cohousing diversity ideal, five residents—13.5% of the Lake Claire population—represented ethnic minorities.[8] Most residents practiced one of three major religions and at least one resident was reported as having non-heterosexual orientation. Also, as Fromm claims is frequent in cohousing (2000), the majority of Lake Claire residents said to have had prior experience in some sort of cooperative living, had experienced living in other cultures, or both (Lake Claire resident interviews, 1999-2000). Multicultural experiences reported were either studying or working in other countries—usually Latin America, Africa or Europe—or extensive travel, and speaking languages other than English.

Significantly, most residents also claimed having volunteer experience or engaging in some sort of activism—environmentalism, human rights, and religious or social service (Lake Claire resident interviews, 1999-2000). At least four Lake Claire residents claimed Peace Corps experience; two others presently dedicate a substantial portion of their time, mostly weekends, to environmental education and providing free health care in a rural community. One resident works for an international democracy-watch organization, and five other adults are reported as being active in their own religious communities. Moreover, the community sponsors an African refugee family, which entails giving the family practical and emotional assistance in their adaptation to American society. Professions reported in Lake Claire included fine or performing arts (five), education (four), business (three), health professions (three), and social work (two). In February 2000 there were also two college students, one architect, one social

[8] One African American, one Hispanic-American, one Asian-American, and two mixed-race children.

scientist, one physical scientist, one engineer, and a real estate agent living in Lake Claire (Lake Claire resident interviews, 1999-2000).

Table 4-3 shows that in February 2000 there were 14 households in Lake Claire Cohousing including a single person living in an annex built off of one of the larger units. Of the total number of households 64%—nine households—were first-generation owners, that is, they were part of the original group that founded the community, or purchased their unit nearing its completion. Two households were second-generation owners (later arrivees) who purchased units from founding members. Reasons for departure were reported in one case as dissatisfaction; the other founding family left for the second—and larger—cohousing community built in Atlanta. The remaining three households were renting. Of these, the families leasing complete units were doing so temporarily and owners were expected to return within the following year.[9] However, though during the research period one family was letting out space—an independent annex—permanently and another family was renting a room in their home, the number of renters in the community is said to vary seasonally with the needs of the owners. Therefore the Figure s reported at the date of observation may not necessarily represent long-term Lake Claire Cohousing demographics,[10] though their variation has evident consequences for the population composition of a community this size.

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[9] The need to rent their units obeyed to special circumstances. Reportedly, one family took a year-long sabbatical to do social service during the Millennium Jubilee, thus making their home available for twelve months in 2000; another owner moved away temporarily for personal reasons. This unit was available for rent for six months, after which the owner returned to the community (Lake Claire resident interviews, 1999-2000).

[10] As of this writing, there is only one unit leased in Lake Claire Cohousing. The number of individuals renting space from cohousing families remains the same at two, however the households who rent are not all the same as during 2000. In addition, as vacations

Regarding household composition at the time of research, out of 14 households in Lake Claire Cohousing 57%—eight households—were couples with children, and four households, or 29% were single adults of any age. The remaining households were a single parent with a child, and a multigenerational household, each representing 7% of the population. This compares closely with data from the US Census Bureau, which shows that for 1997 the demographic composition of American households was 53.2% married couples, 25% single adults, 6.4% single parents with children, and 2.3% multigenerational (US Census Bureau, 1999). Similarly, median household income in Lake Claire was reported by residents to be at least $40,000, which compares to the median income of $38,885 for American households in 1998 (US Census Bureau, 1999) and places Lake Claire residents, as Fromm noted, within the middle class income range.

Table 4-3. Demographic profile—households, February 2000

| **HOUSEHOLD COMPOSITION** | | % | ANNUAL INCOME | | % | TENURE | | % |
|---|---|---|---|---|---|---|---|---|
| TOTAL HOUSEHOLDS | 14 | 100 | TOTAL HOUSEHOLDS | 14 | 100 | TOTAL HOUSEHOLDS | 14 | 100 |
| Single adult(s) | 4 | 29 | Up to $40k | 6 | 42.9 | 1st. generation | 9 | 64.3 |
| Single parent with children | 1 | 7.1 | $40k to $100k | 4 | 28.6 | 2nd. generation | 2 | 14.3 |
| Couple with children | 8 | 57 | Above $100k | 4 | 28.6 | Rental | 3 | 21.4 |
| Multigenerational | 1 | 7.1 | | | | | | |

## Physical Profile

As stated before Lake Claire Cohousing occupies an area of approximately 4,000 $m^2$ (one acre) that accommodates 11 units and two flats, for a total of 13 dwellings. In

approached, at least one family advertised an offer to sublet their unit for the summer of

comparison, the size of American cohousing as compiled by The Cohousing Network varies from less than 4,000 $m^2$ to over 140,000 $m^2$ (one to over 35 acres) for six to 67 units, and averages 24 units per community (Tarnay, McIntyre, & Blank, 2000). These numbers parallel the rule-of-thumb dictated from Danish cohousing experience that communities should have between 13 and 34 units (McCamant & Durrett, 1994). Table 4-4 shows these Figure s along with other physical data, or design factors, of the Lake Claire Cohousing community.

Table 4-4. Community design factors

| | LAKE CLAIRE | NATIONAL | | DANISH | |
|---|---|---|---|---|---|
| | | Range | Avg. | Range | Pref. |
| Community size | 4,000 $m^2$ | < 4,000 - 140,000 $m^2$ | | | |
| Number of units | 12 | 6 to 67 | 24 | | 13 to 34 |
| Common areas | 1,575 $m^2$ | | | | |
| Common area per unit | 131,2 $m^2$ | | | | |
| Common house size | 378 $m^2$ | 90-630 $m^2$ | 315 $m^2$ | | |
| Common house area per unit | 31.5 $m^2$ | 9-27 $m^2$ | 13.5 $m^2$ | | |
| Common dining room size | 49.5 $m^2$ | | 72 $m^2$ | | |
| Common kitchen size | 17.1 $m^2$ | | 33.3 $m^2$ | | |
| Cohousing unit size, typical | 89.1 $m^2$ | 65.7-167.4 $m^2$ | | 58.5-104.4 $m^2$ | |
| Single-family house, median | | 152.6-164.7 $m^2$ | 153.2 $m^2$ | | |

(Based on information from Fromm, 2000; McCamant & Durrett, 1994; Preston & Associates, 1994; Preston & Associates, 1997)

Similarly, the size of Lake Claire's common house, at 378 $m^2$ (4,200 SF) falls in the national range of 90 $m^2$ to 630 $m^2$ (1,000-7,000 SF) (Fromm, 2000) yet exceeds both

2001 (Olson, 1992,ed accessed Oct. 1, 2000).

its average size, 315 $m^2$ (3,500 SF), and its common house area per unit, 31.5 $m^2$ (350 SF) versus 13.5 $m^2$ (150 SF). According to Fromm's POEs, typical units in Lake Claire, averaging 89.1 $m^2$ or 990 SF, are within the boundaries of American cohousing communities—65.7 $m^2$ (730 SF) to 167.4 $m^2$ (1,860 SF). These units are evidently smaller than the median for a single-family detached home in America, reported at 153.2 $m^2$ (1,702 SF) from a range of 152.6 $m^2$ to 164.7 $m^2$ (1,696-1,830 SF) (US Census Bureau, 1999).[11] In contrast Danish cohousing units range from 58.5 $m^2$ to 104.4 $m^2$ (650-1,160 SF) in size, reflecting the European tendency for more compact dwellings than those favored in America. Again referring to Table 4-4 common areas in Lake Claire Cohousing occupy approximately 1,575 $m^2$ (17,500 SF), equivalent to 131.2 $m^2$ (1,458 SF) per unit, although more than half this space is taken up by parking and vehicle circulation infrastructure. However, as Table 4-5 shows, approximately 501.3 $m^2$ (5,570 SF) corresponds to usable outdoor space, which includes the common house deck and porch, two courtyards, a pedestrian path, and an organic vegetable garden.

Table 4-5. Common areas design factors

| | | INDOOR | OUTDOOR | TOTAL |
|---|---|---|---|---|
| COMMON AREAS (approx.) | | 378 $m^2$ | 1,197 $m^2$ | 1,575 $m^2$ |
| Common house | | 378 $m^2$ | | |
| Common house expansion | | | 72 $m^2$ | |
| | Porch | 45.9 $m^2$ | | |
| | Deck | 26.1 $m^2$ | | |
| West courtyard | | | 63 $m^2$ | |
| Pedestrian street + patio | | | 146.7 $m^2$ | |
| East courtyard | | | 151.2 $m^2$ | |
| Parking lot | | | 695.7 $m^2$ | |
| Organic garden | | | 68.4 $m^2$ | |

[11] Unfortunately, the US Census Bureau's housing survey (1999) does not carry data for attached single-family home sizes, which would have been more significant for comparisons.

(Based on information from Fromm, 2000; McCamant & Durrett, 1994; Preston & Associates, 1994; Preston & Associates, 1997)

The common house features three functionally distinct levels, the main one being the one occupied by the common dining room and kitchen, which between the two occupy 66.6 $m^2$ or more than half its floor area. Though equal in size (126 $m^2$), the allocation of spaces in each floor shows marked differences: whereas the attic is—at least for now—a continuous space, the main floor appears to be highly partitioned to allow for all the additional spaces that were required by the program: children's playroom, laundry facilities, information hub (or lobby), restroom, and mail facilities. Though there are four different unit types in Lake Claire Cohousing that range from 89.1 $m^2$ to 1126 $m^2$ (990-1,400 SF), the most recurrent or typical unit is also the smallest, excepting the two flats created by subdividing a larger unit. However, this research estimates the overall average size of Lake Claire Cohousing units at 117 $m^2$ (1,300 SF). Number of bedrooms vary from one to four for all types of units, the typical unit having only two; similarly for the bathrooms the typical unit has only one although other units have from 1½ baths to three. However, the bedrooms tend to occupy most of the unit area (40% in the typical unit). The social areas are second in size, occupying some 27 $m^2$ (300 SF)—30% of the typical unit area, and range from 22.5 $m^2$ to 40.5 $m^2$ (250-450 SF) for all other units excepting the flats. Noticeably, the area exclusively dedicated to circulation tends to occupy only a small percentage of the floor area both in the units and in the common house, ranging from seven to 12%, which points to the economy of space in these designs. For these and other numerical data on the physical features of Lake Claire Cohousing, refer to tables 4-6 and 4-7.

Table 4-6. Common house design factors

| | | | | |
|---|---|---|---|---|
| TOTAL AREA | | | | 378 $m^2$ |
| Basement | | | 100% | 126 $m^2$ |
| | Wood shop (in progress) | 43.4 $m^2$ | 34% | |
| | Parking - 4 vehicles | 60.1 $m^2$ | 48% | |
| | Bicycle storage | 22.5 $m^2$ | 18% | |
| Ground floor | | | 100% | 126 $m^2$ |
| | Dining room | 49.5 $m^2$ | 39% | |
| | Kitchen | 17.1 $m^2$ | 14% | |
| | Children's room | 17.6 $m^2$ | 14% | |
| | Restroom | 3.6 $m^2$ | 3% | |
| | Laundry | 8.1 $m^2$ | 6% | |
| | Lobby | 12.6 $m^2$ | 10% | |
| | Storage (total) | 2.25 $m^2$ | 2% | |
| | Circulation (total) | 15.3 $m^2$ | 12% | |
| Attic (unfinished) | | | | 126 $m^2$ |

(Based on information from Fromm, 2000; McCamant & Durrett, 1994; Preston & Associates, 1994; Preston & Associates, 1997)

Table 4-7. Typical unit design factors

| | | Typical unit | Range | Average | % |
|---|---|---|---|---|---|
| Area | | 89.1 $m^2$ | 89.1-126 $m^2$ | 116.7 $m^2$ | 100% |
| Number of stories | | 2 | 2 to 3 | | |
| | Ground floor height | 2.8 m | | | |
| | 2nd floor height | 2.5 m | | | |
| Structural module | | varies | | | |
| Number of bedrooms | | 2 | 1 to 4 | | |
| Bedroom area | | | 9.5$m^2$ / 15.9 $m^2$ | | 40% |
| Number of baths | | 1 | 1 to 3 | | |
| Living/dining area | | 27 $m^2$ | 21.6-40.5 $m^2$ | | 30% |
| Kitchen area | | 6.1 $m^2$ | 4.3-12.1 $m^2$ | | 7% |
| Storage area | | 9.8 $m^2$ | | | 11% |
| Circulation | | 6.4 $m^2$ | | | 7% |

(Based on information from Fromm, 2000; McCamant & Durrett, 1994; Preston & Associates, 1994; Preston & Associates, 1997)

# CHAPTER 5
# DESIGN IN A COHOUSING COMMUNITY: ARCHITECTURAL ANALYSIS FINDINGS

## Architecture of the Commons

### Layout

As described in chapter four, Lake Claire Cohousing occupies a narrow, longitudinal lot bordered by a busy transit corridor to the south. The lot has a roughly trapezoidal shape 135 meters (450 feet) long by a width that tapers from 39 meters (130 feet) along the east boundary to some 31.5 meters (105 feet) to the north. The short east and west sides front two-lane city streets, one leading to Dekalb avenue and the other being a cul-de-sac beyond which lies the community-owned land trust. The site slopes toward the southwest corner, where originally there was approximately a 7.8-meter drop (26-foot) from the upper northeast corner. As suggested by Figure 5-1, the geometry of the site, and the conditions imposed by its southern boundary influenced the basic massing, layout of, and access to, the community. In response to these conditions, the parking lot for the 12 unit dwellings—along with a system of walls and vegetation—was placed in a thin strip along the southern border. This creates a barrier that separates the community from its less desirable neighbor while at the same time avoiding construction over the sewer easement. However, this strategy narrows the effective area left for building to widths ranging from 24 to 13.5 meters (80 to 45 feet). It strongly demands some sort of linear configuration for the buildings such as aligning them along the site's length, which was the solution adopted in the design. As a result, the length of the lot is

emphasized, revealing its potential for direction, movement and views along its axis,[1] which are used to advantage in the Lake Claire design.

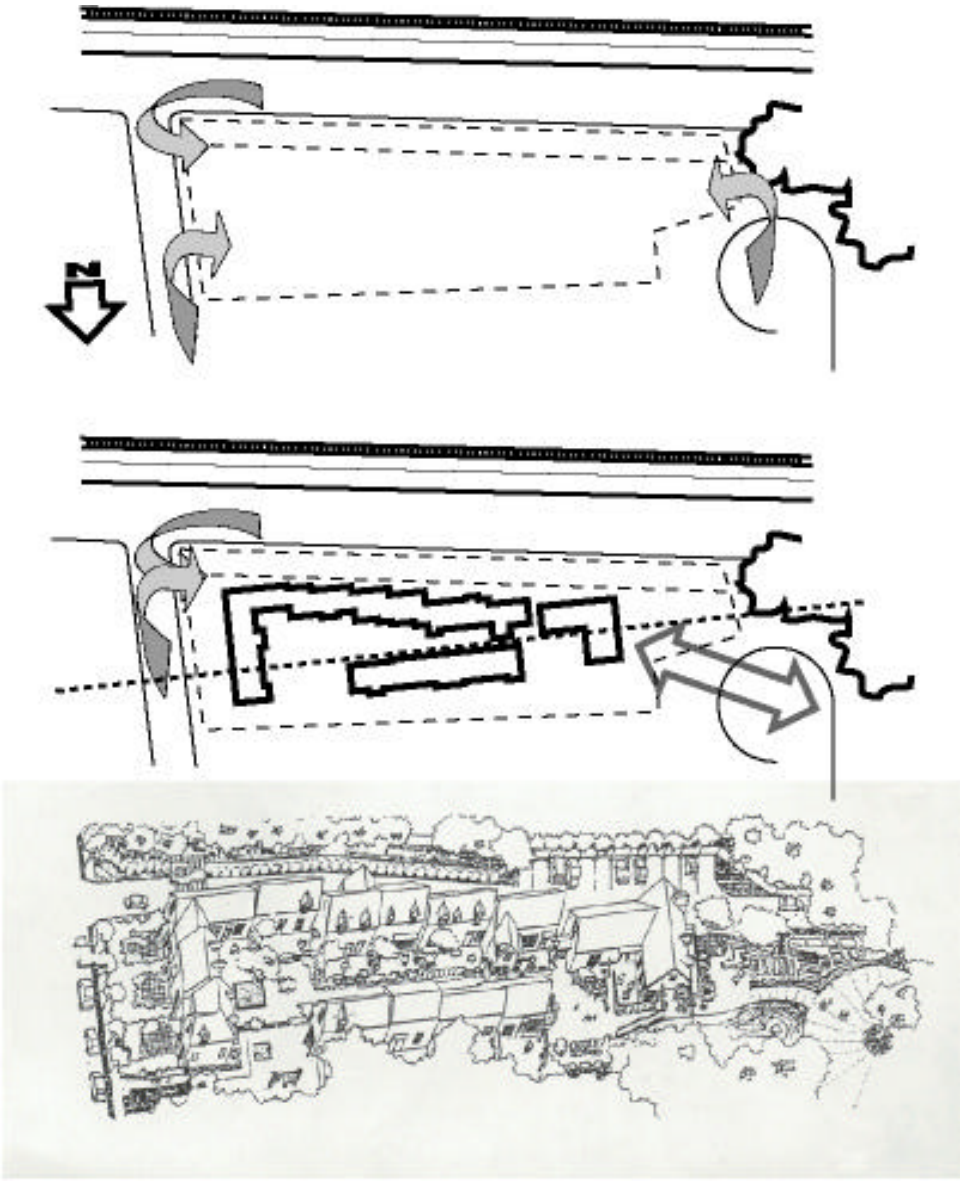

Figure 5-1. Design solution (based on Preston & Associates, 1994). A) site constraints: main thoroughfare, train tracks and sewer easement to the south, land trust across from the cul-de-sac to the west, two-lane street to the east. B) design response: vehicular access limited to the south-east corner, buildings form a barrier between the commons and the thoroughfare, common house located toward the community and the land trust. C) axonometric view of the built project

[1] An axis is defined as "a straight line to which elements in a composition are referred for measurement or symmetry" (Ching, 1996, p. 379).

Desire for creating a protected common space within the community —the commons—as required by social contact design (Fromm, 1991; Fromm, 2000; Hanson, 1996; McCamant & Durrett, 1994) was solved by enclosing a longitudinal space between the buildings. As illustrated in Figure 5-1, the layout reflects the trapezoidal shape of the lot. Dwellings are clustered into two facing rows of houses with sloping roofs, the rows being linear forms created by sequencing adjacent dwellings that share common walls. In Lake Claire the longer cluster, or south row, is turned at a straight angle to provide the enclosing mass at the east end of the property.[2] Along with the common house—placed on the west end—the house rows contain a strictly pedestrian open space consisting of two distinct courtyards and a connecting "street".

**Ordering principles**[3]

Ordering principles of balance and repetition are evident in the layout. Reduced to abstract forms, the design of Lake Claire Cohousing can be described as having an axis defined by parallel building masses and terminating in two focal or "centralized" forms at the extremes, represented by the courtyards. The layout is thus perceptually directional, with spatial and visual goals at either end of an axis. At one end there is the common house and a preceding courtyard, at the other, a larger open space bounded by dwellings. Figure 5-1.A shows that the axis divides the composition roughly in half, though the forms are asymmetrically organized about it. However, the design is balanced, that is, in "a state of equilibrium [or harmonious relationship] between contrasting, opposing, or

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[2] Like lines, linear forms retain their axial character even when bent or segmented, especially if they can be perceived as visually continuous. Often linear buildings are flexed or split in response to specific features of the site (Ching, 1996).

[3] Designers use a variety of strategies or principles to create order in an architectural composition, not only geometry, but also symmetry, hierarchy, rhythm, transformation, or the inclusion of an axis or a datum (Ching, 1996).

interacting elements" (Ching, 1996, p. 379). Though different, both sides keep an equivalent relationship to the axis due to the similar visual weight they carry: while one building cluster is shorter but massive—less articulated,[4] and closer to the axis, the other is longer, more articulated, and progressively distanced from the axis. Though linear in character and forming large continuous masses, house rows are broken into individual units through slight set-backs. Figure 5-2 shows how the house row forms are usually articulated to reflect individual property boundaries. The elevations in figures 5.3 and 5.4 evidence how variations in the number, placement and size of fenestration and other additive and subtractive elements such as balconies, porches and overhangs also contribute to this articulating effect. Differentiation between the north and south house rows is further achieved through the use of materials: brick facing for the north row, and lap cladding for the south one.

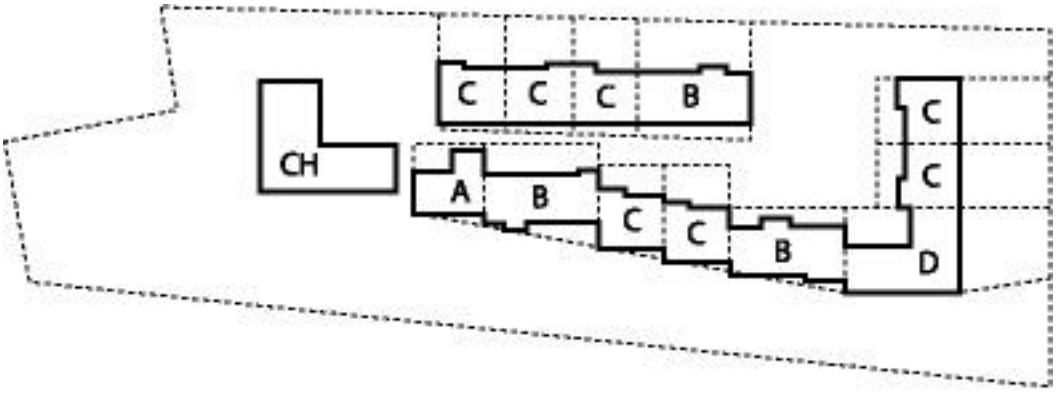
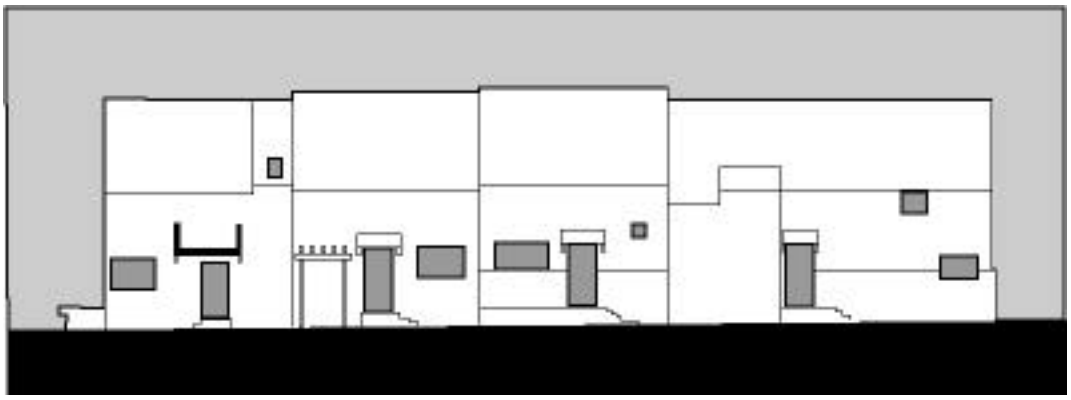



Figure 5-2. Layout (after Preston & Associates, 1994). Shown: the common house (CH), the different unit types (A-B-C-D), and the allocation of private lots—represented by dashed lines--within the property.

[4] Articulation is defined as "the act of joining things in such a way that motion is (1997); however in architecture it also carries the connotation of making visible the different components that make up an entity. Thus, when an element is said to be articulated it means that it can be read as a whole consisting of two or more distinct parts.



A

B

Figure 5-3. North row elevations (after Preston & Associates, 1997). A) front elevation, toward the commons; B) back elevation.

However, a sense of unity is achieved in the composition through repetition of some patterns. Though in Lake Claire Cohousing there is no overt repetition of like elements—the design avoids the "cookie cutter" approach that prevails in many suburbs, the existence of a shared design language[5] relates the dwellings. This entails repeating variations on a basic house type, as well as featuring forms, structural modules, materials, and details that are recurrent throughout the building group.

[5] This dissertation follows Alexander's use of the term (design) "language" (1977), taken to mean the structuring system for selecting, combining and organizing particular design elements in a composition. Thus, a design language refers to the physical elements of a building as well as their organization, hierarchy, order, logic, the relationship between the parts and the whole, and the meaning that is conveyed through them (Stroeter, 1994).


Figure 5-4. South row elevations (after Preston & Associates, 1997). A) front elevation, toward the commons; B) back elevation.

Further unity for the group results from the treatment given to the common house. Though in plan the common house is presented as an isolated element, it is actually proximal enough to the adjacent house row to become integrated to it through spatial tension.[1] Thus, the common house is combined with the longer south row to effectively read as a u-shaped linear element, and along with the north row, completely defines a protective enclosure for the common space. As described further on, additional strategies were also implemented in the design of Lake Claire Cohousing to visually connect the common house to the house rows.[2]

**Proportion and scale**

Despite the overall horizontal emphasis of the buildings in Lake Claire Cohousing, individual buildings are vertical. It seems that multiple-story structures were a necessary response to the narrow conditions of the site, coupled with the programmatic requirements to build at least 12 units and at the same time free space in plan. Thus, the strategy adopted was to increase building density within the cohousing by grouping structures and building upward. As noted before and seen in figures 5.3 and 5.4, dwelling units typically have a proportion[3] of at least 1.5:1 height to length that is emphasized by

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[1] Spatial tension is a relationship that "relies on the close proximity of the forms or the sharing of a common visual trait such as shape, color or material" (Ching, 1996, p. 56) to connect two or more forms.

[2] Extensive renovations were made to the dwelling unit adjacent to the common house between 1999 and 2000. Among these was the construction of a wing that bridges above the previously existing gap between the unit and the common house. Further commentary on this issue follows in the next sections.

[3] Proportion and scale refer to the measurable or perceived relative sizes of the elements in a composition and serve to convey notions about priority or importance. Proportion is "the comparative, proper or harmonious relation of one part to another or to the whole with respect to magnitude, quantity or degree" (Ching, 1996, p. 382)—in this case the dimensions of masses and spaces in the cohousing. Similarly, scale refers to the dimensional relationship of architectural elements as compared to some standard or point

the sloping roof line, gables and fenestration. Similarly, the open space or commons at the tightest point in the pedestrian street takes on an approximated 3:1 proportion when viewed in section, and is therefore perceived as a narrow, tall passage. Nonetheless, the only overall proportioning system evident in Lake Claire Cohousing, other than the repetition of a structural module, conforms to the constraints imposed by the wood frame construction of the dwellings, with rectangular bays typically of 3.4 to 7.4 meters (11 to 24 feet). Since these modules show some variation from one building to the next, it seems that a proportioning system was outweighed by the practical requirements imposed by the site and the functional requirements for household units.

An interesting feature of Lake Claire Cohousing is its urban scale—the relative size of its buildings to their immediate context—when compared to the building density of the cohousing community as opposed to the density of the surrounding neighborhood. Figure 5-5 illustrates the contrast in densities between the cohousing development and the surrounding neighborhood. Lake Claire Cohousing fits a dozen attached dwellings in a 4,000 $m^2$ (acre-sized) lot where ordinances would usually dictate building no more than six single-family detached houses.[4] However, the increased density in the cohousing doesn't create a negative visual impact in the neighborhood. Buildings in Lake Claire, though somewhat taller than the residences that surround the cohousing, cannot be perceived from Arizona street because of their location to the inside of the lot. Instead the two-story common house, which fronts the street and thus provides the measure for

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of reference, or "how we perceive or judge the size of something in relation to something

[4] This estimation is based on the size of the surrounding properties, which average 6,000 SF (A. B. in Lake Claire resident interviews, 1999-2000).

comparison, takes on the scale of the surrounding neighborhood homes, efficiently blending in with its urban context.

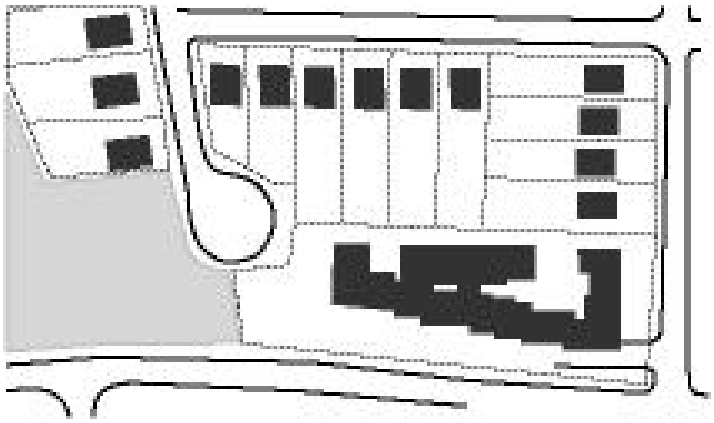

Figure 5-5. Neighborhood density contrast (after Preston & Associates, 1997)

Similarly, because of the articulation of the house row seen from the back street, the cohousing can be read as a series of attached dwellings that conform to the surrounding urban scale, rather than a homogeneous mass. As shown in Figure 5-6, the main design strategy used to achieve human scale is to distinguish individual dwellings by means of setbacks. This has the effect of breaking down the length of the house row into smaller parts whose measures are closer to human dimensions and thus are not overpowering. In turn, the setbacks create a succession of small-scale spaces adequate for human activities that along with the placement of furnishings along the commons, and the fenestration of the buildings convey a very pleasant sense of scale.

**Space and enclosure**

Figure 5-6 also illustrates the creation of positive, or non-residual, outdoor spaces enclosed within the buildings of the cohousing community. In discussing the adequacy of positive spaces to social interaction, Alexander explains that “positive spaces are partly enclosed, at least to the extent that their areas seem bounded…and the ‘virtual’

area which seems to exist is convex" (Alexander et al., 1977, p. 519). That is, positive spaces are such that any line joining two opposing corners always falls inside the area, and therefore they tend to convey sensations of enclosure and focus.

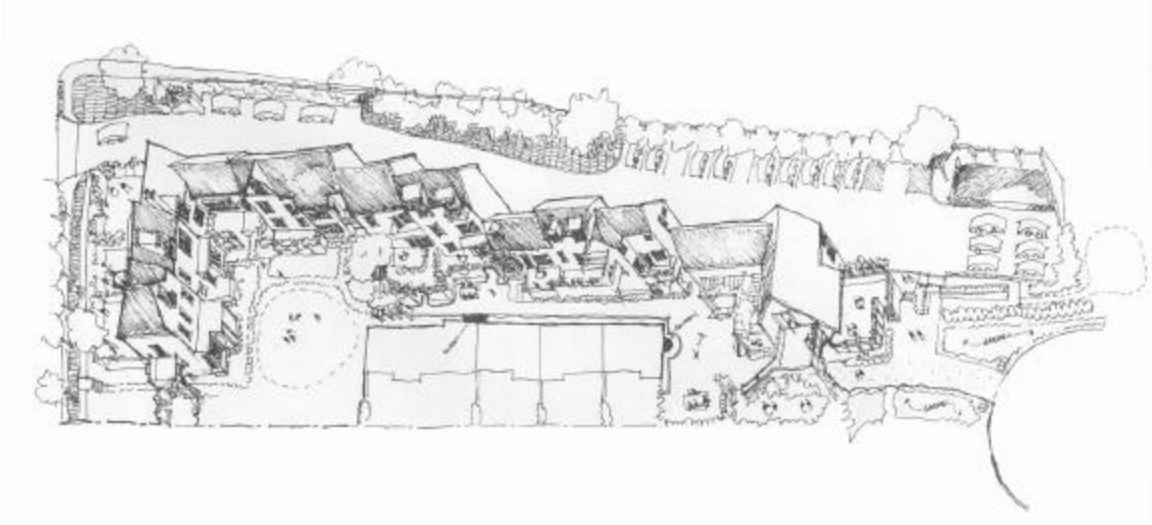

Figure 5-6. Isometric view (source: Preston & Associates, 1994). Notice the articulation of buildings and the landscape features of the common spaces; the short unit row is not shown.

As noted before, the commons comprises two main open areas, which are in fact positive spaces, located at either ends of the community axis. These spaces are spatially and functionally distinct, and have been differentiated through use of "hard" or "soft" surfaces and edges, thus indicating the kinds of activities afforded by each. A roughly square courtyard adjacent to the common house deck is located at the west end of the commons. This clearly defined space is enclosed by the outer walls of the common house, the lateral face of the north row, and a line of vegetation that runs across the north edge of the property. Its "hardscaped" surface, covered with a layer of lose gravel, as well as the location of the dinner bell at the bottom of the common house terrace stairs, and a monumental fountain on the end wall of the north row suggest that this space is associated to formal community activities. As seen in Figure 5-7 formality is reinforced

by its connection to the common house, which opens doors, windows and a deck used as common house expansion toward this courtyard.

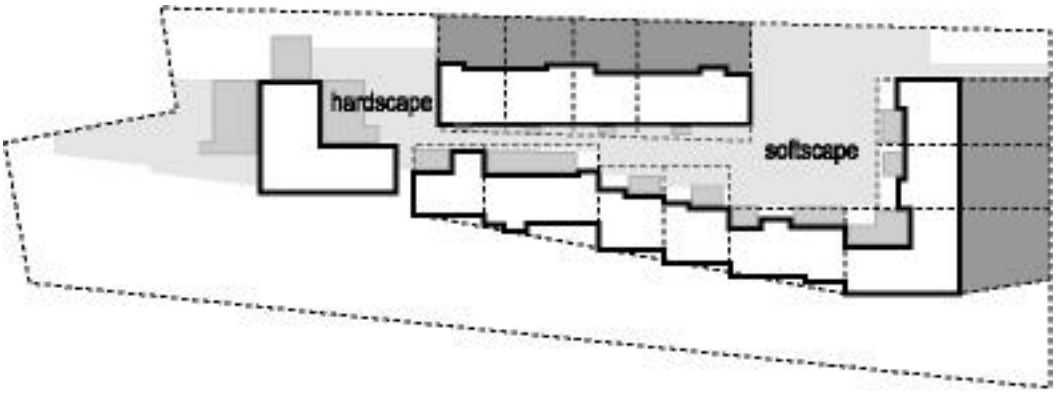


Figure 5-7. Spatial system of the commons (after Preston & Associates, 1994). Shaded areas identify the social spaces in the community, with increasingly darker shades representing corresponding degrees of greater privacy. Notice that other than the homes, the most restricted areas are located at the periphery of the commons.

The other positive outdoor space in the cohousing is the lawn—or softscaped courtyard—located at the east end of the commons. This courtyard is a squared shape loosely defined by the receding façades of the house rows that surround it and the vegetation running along the property line. It is the community's largest open space, occupying roughly 15.5 by 15.5 meters (50 by 50 feet), and doubling as community playground. The surface is mostly covered with grass and a grown tree with a tree house and swing indicate its main use as a play area. Neighbors refer to this space as softscape in Alexander's sense, that is, it has irregular surfaces of paving interspersed with grass and moss that are "soft enough, at least, to show the passage of time, in gradual undulations and unevenness" and make a connection to the earth (Alexander et al., 1977, p. 1141). So, in contrast to the concrete paving and clay tiles found along the pedestrian street, toward the east courtyard the paving gradually breaks into stepping stones that

contribute to the less rigid definition of this area. The property lines shown in Figure 5-7 are not evident in the community, and there is no overt demarcation of private boundaries. Instead, there is a system of transitional semi-private spaces or "soft edges" that define the limits of the commons, as shown in Figure 5-7. Quoting Gehl, McCamant & Durrett define a soft edge as "a semiprivate area or garden patio between the front of the private dwelling and the common area…[which result in] 'comfortable resting areas, placed on the public side of the buildings and with direct connection to them'" (McCamant & Durrett, 1994, p. 180). As a result, the transitional spaces attached to the units flow into the commons, creating both a privacy gradient and a visual continuum.

The enclosure of the spaces in the commons in Lake Claire stems from the social contact design guidelines found in cohousing literature. These protected areas are located central to the commons whereby "small children…can be watched easily from the houses or by other people in the vecinity" (McCamant & Durrett, 1994, p. 40). The opportunity for having "eyes on the street" in Lake Claire Cohousing was achieved by locating the common house and dwelling entrances facing the common spaces. In addition, as shown in figures 5.3, 5.4 and 5.8, both the common house and the units in the south row open vistas to the commons—particularly to the east courtyard, creating opportunities for surveillance, yet feature fewer openings toward the parking lot or the side streets. Such opening placement also recognizes the need to limit southern solar exposure in Atlanta's 33° latitude by reducing glazing in this orientation, and to respond to the noise generated by, and unattractive vistas inherent to, the Dekalb avenue border. Similarly, units in the north row have limited openings in the south façade. Small openings provide visual privacy despite the short distances between facing buildings, just as the architect intended

(Ramsey, personal interview, 2000). However, dwellings in the north row lack the same degree of visual access to the commons that is granted to the rest of the community.

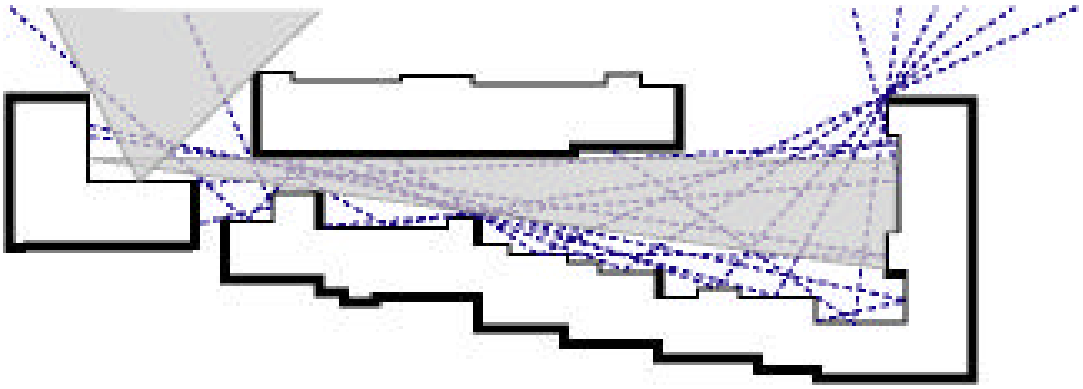

Figure 5-8. Community main enclosure and vistas (after Preston & Associates, 1994). Heavy lines identify facades where fenestration is minimal. Shaded areas show the range of views from the common house to the community; areas bounded by dotted lines show the range of views from the dwellings to the commons.

**Circulation**[5]

Access to and from Lake Claire Cohousing is through the narrow sides of the lot, which correspond to the two local streets. Figure 5-9 shows that the pedestrian approach from the back street is tangent to the community, on the east end of the south row, while the pedestrian approach from the cul-de-sac street is tangent to the side of the common house. These lateral approaches create a condition whereby visitors are offered a sequence of short views of the sides of the buildings before they are allowed to enjoy a complete view of the community. Vehicular access to the parking lot occurs at the lower east end of the site, near the junction of the back street and DeKalb avenue. Vehicular circulation is restricted to the narrow strip allocated to parking along the south boundary

[5] According to Ching (1996) the circulation systems through space consist of approach, entrance, and path; the latter characterized by the sequence of spaces and their relationship to the path, and the form of the circulation space itself.

of the property, avoiding the invasion of cars into the commons. An additional vehicular entrance is provided as a fire lane that leads from the cul-de-sac to the west edge of the west courtyard. Figure 5-9 shows that contact between the pedestrian and vehicular circulation is limited to four points, all of them located on the west sector of the property. The approach to the commons from the parking lot, marked 2 in figures 5.9 and 5.10, is through an L-shaped flight of stairs along the gap between the common house and the south house row. This approach also offers a limited view of the commons, but because of the 2.7 meter (9-foot) difference in height and the close spacing between the buildings the view into the commons is yet narrower.

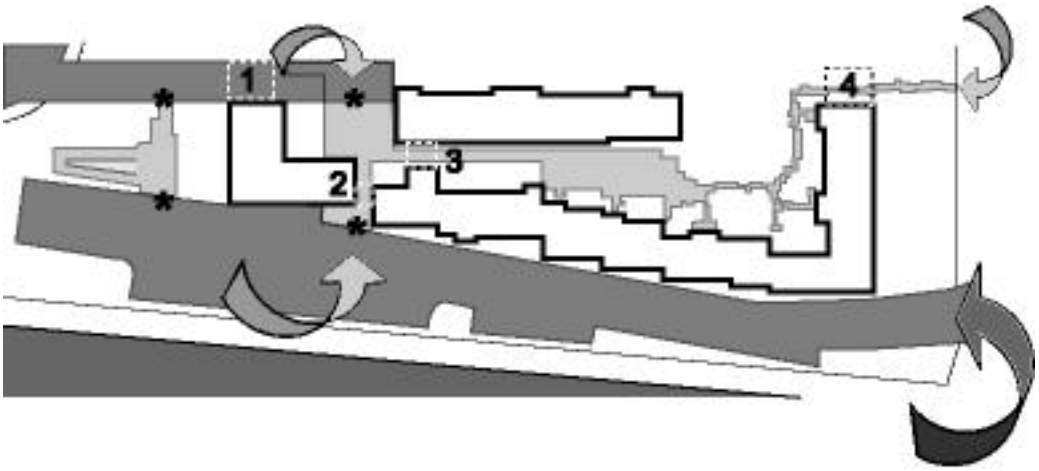


Figure 5-9. Circulation systems (after Preston & Associates, 1997). Light shaded areas represent pedestrian circulation, darker ones represent vehicular circulation, and asterisks mark their contact points. Arrows show points where the circulation systems are entered; numbers identify the gateways or portals that signal entrance into the commons.

The perimeter enclosure of the Lake Claire Cohousing consists of a masonry wall toward the transit corridor and 1.2 meter (four feet) high wooden fences along the back street. However, noticeably, there are no lock gates to enter the community. Instead, entrances are marked by a recurrent pattern of portals or gateways that correspond to the

access points indicated in Figure 5-9. These are bridge-like structures formed by the projection of decks from the building volumes, and have the formal effect of bringing down the urban scale of the city to the domestic scale of the community and therefore indicating the transition between the interior and the exterior of the community. Their readily identifiable shape, shown in Figure 5-10, allows these gateways to contribute further to the spatial characterization of the community.

Furthermore, as they create a pattern of expansion, compression, and release of the outdoor space, they signal passage from the public expanse to the guarded environment of the commons. As described before, one is located to the side of the common house upon entering the community from the fire lane; another is located between the common house and the south house row, to signify entering the community from the parking lot. A third one is located at the farthest end of the south house row, upon entering the community from the east-side street. Interestingly, a fourth portal—marked 3—is located between the long and short rows of houses, and reads as a symbolic gateway for entering the private space of the pedestrian path wherein the homes can be entered.

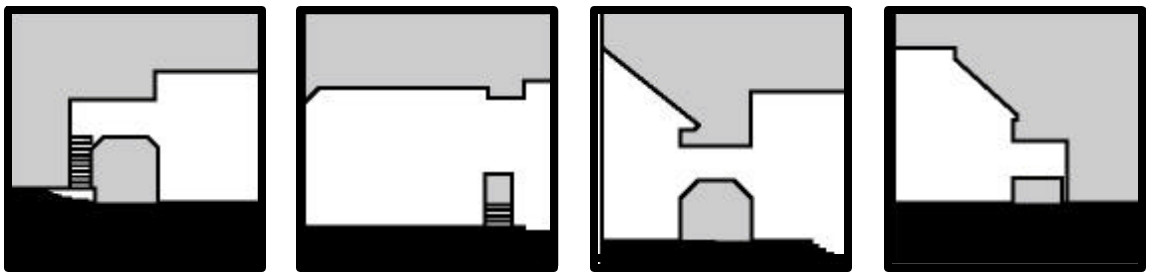

Figure 5-10. Gateways 1 through 4 (after Preston & Associates, 1994): Gateway 1 to the side of the common house toward the Arizona street cul-de-sac; Gateway 2 as seen on entering the community from the parking lot; Gateway 3 from the hardscaped west courtyard when entering the pedestrian path; Gateway 4 upon entering the community from the rear street.

As a consequence of the layout, circulation in Lake Claire Cohousing occurs predominantly along the longitudinal axis, where the design features a pedestrian street linking the courtyards enclosed in the protected space. The circulation path follows the sequence from the public space of the Arizona street cul-de-sac to the west courtyard and across it past the common house and under the inner portal to the pedestrian street. From here, through the community in between the house rows, the circulation path expands and then meanders around the east courtyard and out to the street in the rear, as seen in Figure 5-9. The pedestrian street is then the main connector for the cohousing dwellings, with the communal open spaces located at the endpoints. The individual units as well as the common house are entered through this circulation space, and because there is no alternate path in the community, activity along the pedestrian street is maximized. Vertical circulation is necessary due to the differences in level between the commons and the Arizona street access—where the difference is approximately 1.2 meters, or four feet, to the common house level, and even greater between the commons and the parking lot. Additional stairs are required from the front of the cul-de-sac to the common house porch and from the parking lot to this point. AV-shaped 1:12 ramp system allows for handicap accessibility from the parking lot into the community. Both the ramp and the stairs make for oblique approaches that "enhance the effect of perspective on the front façade and form of a building" (Ching, 1996, p. 231).

As shown in Figure 5-9, the form of the circulation space is increasingly bordered by soft edges as it widens toward the east end of the commons. Therefore, though linear, the circulation path features a series of amenities and seating opportunities—such as fountain ledges, benches and doorsteps, that enliven its function by defining transitional

spaces for privacy or activity (Alexander et al., 1977; Gehl, 1987; McCamant & Durrett, 1994). Moreover, the resulting width of the pedestrian path becomes a critical element in this design, as seen in Figure 5-11. The pedestrian path is a strip whose width increases toward the east courtyard; it opens into a small patio before changing into a winding path that encircles the lawn. However there is a 22 meter (72 feet) stretch in which the path is only three meters (ten feet) wide between façades. This distance is unheard of for American urban neighborhoods such as the surrounding Lake Claire/Candler Park area, where homes face each other across 7.4 meter-wide (24 feet-wide) streets.

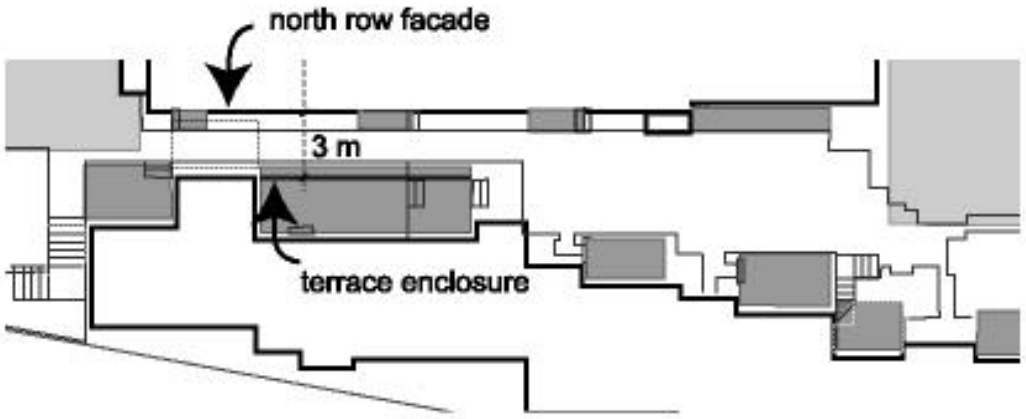


Figure 5-11. Close-up of the circulation through the commons (after Preston & Associates, 1997). Figure shows the sector with a critical 3-meter (10 feet) distance between structures. To the left of this passage is the common house courtyard; the passage opens up to the left into a wider, amenity-filled circulation path.

## Architecture of the Common House

Findings from surveys and post-occupancy evaluations of American cohousing communities revealed that in addition to having a central location, the common house is often assigned a larger size and budget than the individual units (Fromm, 2000). Furthermore, best practices for cohousing design suggest locating it equidistant and

highly visible from all home units, in a way such that “residents must pass it in the course of their daily activities” (McCamant & Durrett, 1994, p. 177). Accordingly, the Lake Claire common house is placed prominently with circulation routed alongside it. However, it is not centrally located but instead it sits at the west-end of the community fronting the land trust across from the cul-de-sac street. Location of the common house reportedly was determined by the need to relate it to the land trust as proposed in the Lake Claire neighborhood renovation master plan (Lake Claire resident interviews, 1999-2000; Ramsey, personal interview, 2000). As a result, the Lake Claire common house serves as a hinge that articulates the urban space of the neighborhood and the private space of the cohousing commons. However, this location runs against cohousing guidelines by compromising the visual access to the common house from all but five dwellings, as illustrated by Figure 5-8.

Notwithstanding its location, the common house is the centerpiece of the Lake Claire community. Also, consistent with Fromm’s findings the common house is by far the largest, and thus presumably also the costliest, structure in the community (refer to tables 4.1 and 4.4). It is a three-story L-shaped volume partially joined to the dwelling units and related to them in style, surface treatment and modularity. There are no specific design features, other than relative size, that set it apart from the other structures in the community. Figure 5-12 shows that the main floor of the common house features a series of adjacent spaces for laundry facilities, a children’s room, mailboxes, and a large dining room that opens into a commercially equipped kitchen. However, the common house has an intimate scale that is conveyed by the height and floor dimensions of its interior.

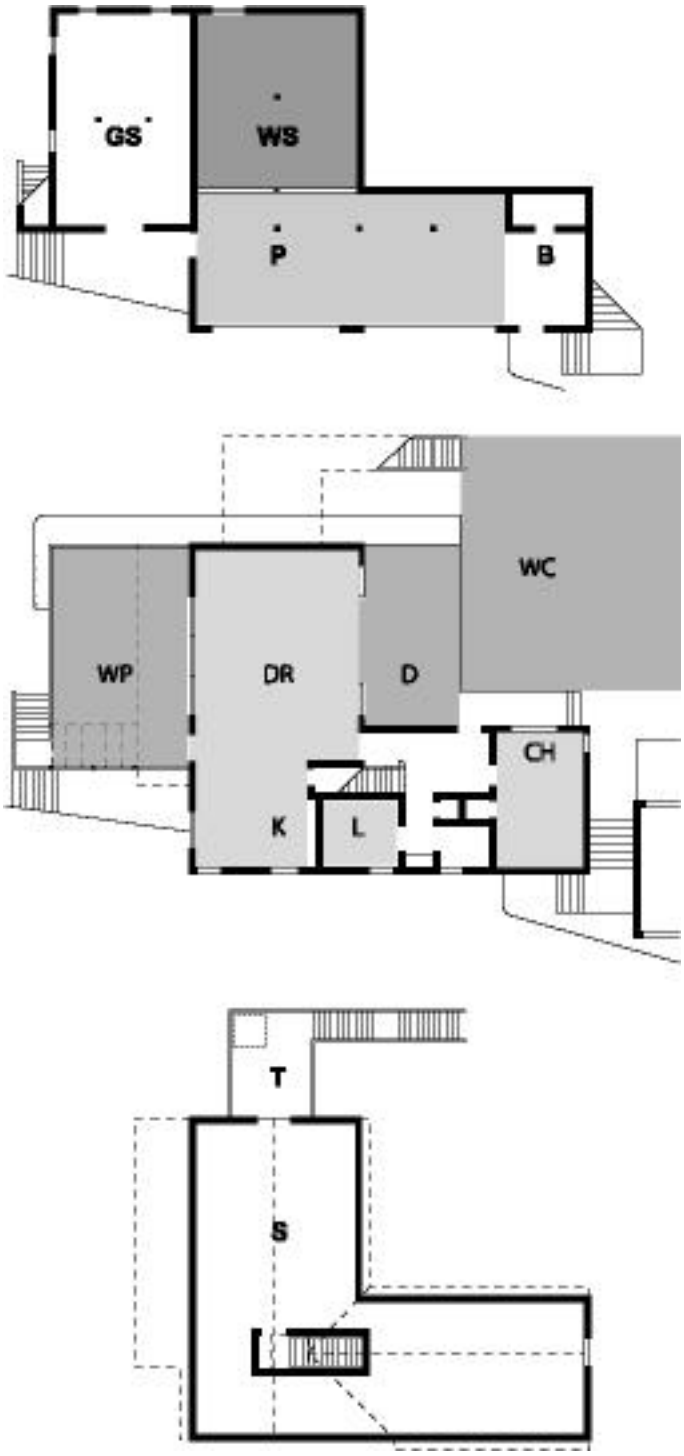


Figure 5-12. Common house plans (after Preston & Associates, 1997). A) basement, showing the garden storage (GS), wood shop (WS), parking (P) and bicycle storage (B). B) ground floor and its connections to the west porch (WP) and west courtyard (WC) through the deck (D). Main social spaces are marked DR (dining room), K (kitchen), L (laundry) and CH (children's room). C) attic, showing the storage space (S) and the terrace (T).

Like all buildings in Lake Claire Cohousing, the common house is a wood frame structure on concrete foundations, with exposed trusses and beams and interior drywall partitions, and like the south row, with cement fiber board lap siding on the exterior. The structure follows a 3.4 by 6.5-meter (11 by 21 feet) grid, which doesn't deviate substantially from that of the dwellings. Indoor heights vary from eight feet in the basement, to ten feet in the main floor, to an average eight feet under the sloping roof of the attic.

As shown in Figure 5-13, at 6.2 by 8.6 meters (20 by 28 feet), the communal dining room, which occupies more than half the common house floor areas at this level and seats two dozen people, is also the largest indoor space in the community. A small deck that opens to the west courtyard provides spatial and visual expansion for the communal dining room. An attached 5.2 by 8.6 meter (17 by 28 feet), partially covered porch created under the sloping eaves of the common house roof toward the street cul-de-sac further complements this area. Wood floors and railings relate these spaces to the interior of the common house, where these materials prevail. The storage attic seen in Figure 5-12 occupies the upper floor space under the sloped roof, and as of this writing the attic remains unfinished and has not been assigned uses, pending funding and design decisions by the community (Lake Claire resident interviews, 1999-2000; Ramsey, personal interview, 2000). Similarly, the lower level or basement, a roughly finished area dedicated to parking and storage, is entered independently from the outside and thus has no spatial connection to the interior spaces of the common house. Just like the attic, it is actually undergoing construction, and a wood shop is being built in a space previously allocated to parking.

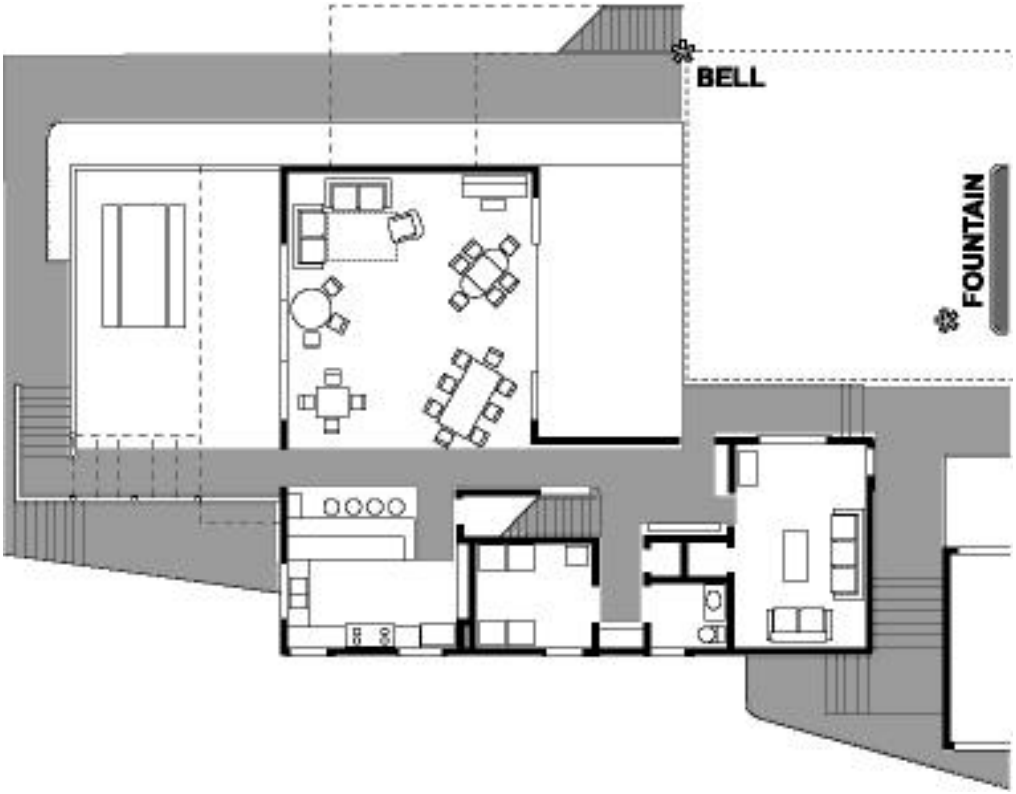


Figure 5-13. Common house main floor (after Preston & Associates, 1997). Shaded areas represent circulation through and around the common house; asterisks identify the location of the dinner bell at the base of the terrace stairs, and the monumental fountain on the end wall of the north row.

Following the pattern set for the buildings, most of the common house openings or fenestration are located in its northeast and west façades, toward the common space of the community and the surrounding neighborhood. This orientation provides preferred visual connections into the neighborhood and commons area. From the dining room a set of four glazed doors open to the courtyard through the deck, and low windows and a main door connect it to the west-facing porch, establishing the functional links of the interior and exterior spaces of the common house. Similarly, the children's room features glazed openings toward the commons and the pedestrian path, next to another glazed

door at one end of the lobby. Openings toward the south are limited, and as a result there is an evident contrast between the highly articulated façades fronting the community, as opposed to the rather closed sides that face the urban spaces. This arrangement of openings still allows abundant daylighting of the interior spaces.

As shown in Figure 5-13, interior circulation in the common house is compact, occupying a node from which all the indoor spaces can be reached. Figure 5-14 illustrates the perceived shape of the common house circulation that is similar in shape to that of the community, with two activity areas connected by a narrow passageway. Circulation in the common house consists mainly of the staircase that leads to the attic and the ample distribution hallway that doubles as a lobby. This lobby serves as the information hub of the community and features four bulletin boards, mailboxes, and additional resident boxes or "cubbies" for internal communications. Circulation from the lobby and the outdoor spaces converges in the community dining room, which can be accessed directly from the street by the west—or main—door, through the lobby, or through the glazed doors that open onto the deck to the east. Despite its location toward the front of the cohousing, the main door has no outward feature that make it an important entry point to the most dimensional and functional building in the community. In addition, the kitchen reads as a space within the larger space of the dining room, separated only by a dining counter. The open layout connects the kitchen with the dining room it serves, and aside from visually expanding the space of the dining room, eliminates the need for additional circulation.

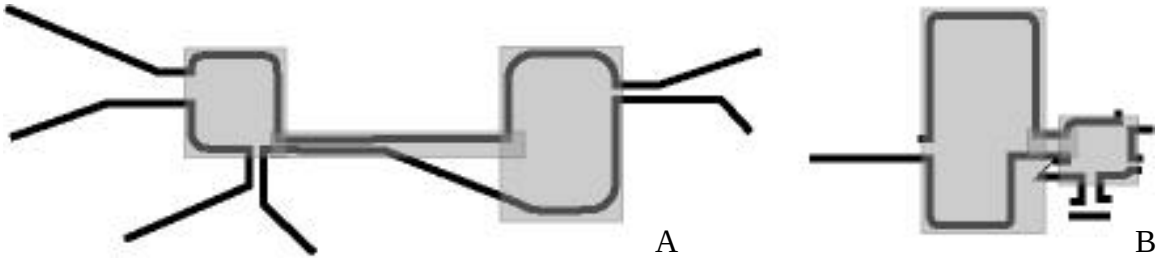


Figure 5-14. Perceived shapes of the circulation spaces. A) in the commons; B) in the common house. The pattern consists of two major spaces with access to secondary spaces or volumes, and a narrow connecting passageway. Notice the pattern of expansion-compression and release evident at four points in the community circulation system.

The common house is furnished with donated pieces or with furniture placed in custody there for the enjoyment of all. An assortment of different tables and chairs along with a couple of sofas, coffee tables and an upright piano make up the dining room furniture, as shown in Figure 5-13. Similarly, the common kitchen has been stocked with dinnerware that has been passed on by residents, and the children's room holds a variety of resident-owned toys and playthings. Half the appliances in the laundry room, a set of 24 identical folding chairs for the dining room, as well as the sauna that is being installed in the upper floor deck have also been donated. In sum, other than the specialized pieces of equipment needed for the common kitchen operation—the commercial-grade stove and oven, sink and dishwasher—the trend in Lake Claire Cohousing has been to furnish the common house with used items.

**Architecture of the Typical Unit**

As noted by Ramsey, despite having started from a quartet of standardized models—two of which are shown in figures 5.15 through 5.17—with the intention to reduce costs and facilitate the design process, the final result was a collection of custom-designed homes (Ramsey, personal interview, 2000). The standard models share

common overall shape, structure, and materials, however these core designs were enriched and transformed with the addition of unique features. Resident decisions affected not only the selection of window types, balconies, porches and other additions that were discretionary for the unit owner–and desirable to achieve the "village look" that the design strives for (Lake Claire resident interviews, 1999-2000; Ramsey, personal interview, 2000)—but also the layout of the interior spaces in the units. Despite featuring several variations, as shown in figures 5.2 and following, seven of the 12 unit designs were based upon the same model—called "C" in the original project. This model is referred to as "typical" for the purposes of this research.

Like the common house, all of the units are wood frame buildings on concrete foundations, with sloping roofs, exposed beams, and drywall interior partitions and ceilings. Most units also feature cement fiberboard lap siding. The typical unit features two bedrooms and one bath, an attic or studio, and an open kitchen incorporated into the living-dining area. The kitchen and social areas are located in the ground floor, whereas spaces such as the bedrooms and studio take up the more private upper floors. The three other unit models feature additional bedrooms and bathrooms, but the social areas remain roughly equivalent. The structural module used for the dwellings varies slightly for each model, though all measure approximately 5.5 to 7.4 meters (18 to 24 feet) squared, with 2.7 meter (nine foot) high ceilings, which approach the structural dimensions of the common house. This illustrates as noted previously that other than the size, there is little distinction between the common house and the dwellings. Similarly, the exterior aspect of the units in the long house row—cladding and fenestration pattern—resemble that of common house. The dwellings in the north row however, feature few openings along

with brick facing on the façades toward the pedestrian path in response to privacy and climatic concerns. Nonetheless, their rear or north façades once more mimic the other cohousing buildings by featuring lap cladding and a larger number of openings.

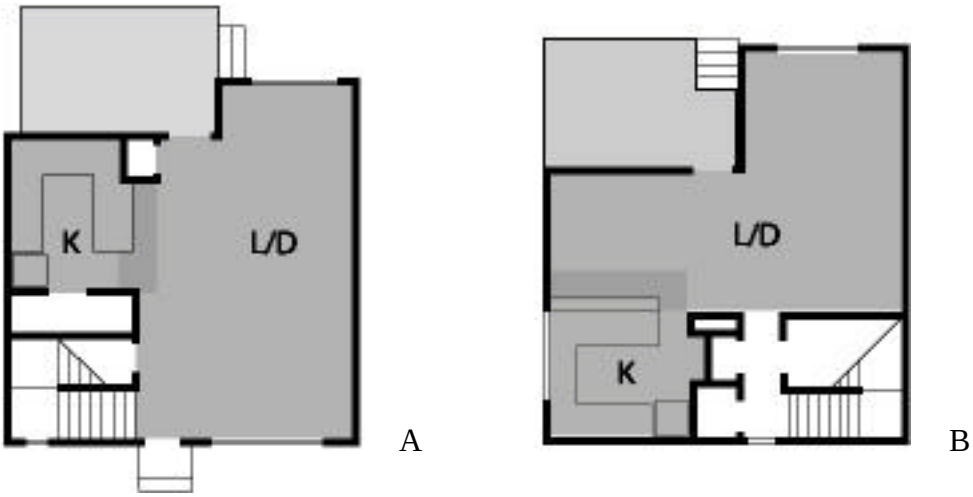


Figure 5-15. Unit plans (after Preston & Associates, 1994). Figure shows the spatial distribution of the ground floor for A) typical unit, B) custom unit.

As indicated, there are transitional spaces that create buffer areas between the dwelling interiors and the communal property of the commons as illustrated in Figure 5-7. These can take the form of porches, terraces and patios that can accommodate outdoor activities, or just a flower bed and a doorstep; in either case their function is to afford different degrees of desired privacy and interaction (Alexander et al., 1977) and expand the perceived boundaries of the individual property[6]. Transitional spaces in Lake Claire Cohousing are located toward either the commons in the south row, behind the dwellings and toward the north boundary of the cohousing property for the north row houses, or

[6] In Lake Claire though each dwelling unit is allocated a "shadow" that defines the legal boundaries of the private property; in practice—as reported by residents and confirmed by observation, these boundaries are not strictly enforced. Residents appropriate the areas directly in front or behind their homes by occupying them with outdoor furniture,

both, as in the case of the three units in the west end of the community. Entry into the dwellings is always frontal, and departs from the circulation path in the commons. Entrances, like other custom features, vary from one unit to the next, and they provide a singular opportunity for personalization through changes in paint, glazing and ornament.

There is economy of space throughout the design of the units in Lake Claire Cohousing, as exemplified by the design of the typical unit. Verticality is evident in proportions that result from the typical unit featuring a compact floor plan and three stories. Notice, from Figure 5-15 that the circulation is also kept at a minimum—short hallways and centrally located interior stairs, and just as in the common house, the design of the kitchen allows for visual expansion of, and spatial integration with, the social areas. Kitchens either feature windows to the common spaces or look toward these spaces across the social areas. This follows cohousing tradition (McCamant & Durrett, 1994) in the belief that this layout will increase opportunities for overseeing and thus participating in, activities taking place in the commons. This is true of the units located in the south row, however as noted before those located in the north row have more restricted visual access to the commons (Preston & Associates, 1994). In general, efficiency characterizes the design of the typical unit in Lake Claire Cohousing. Similarly to the common house, the typical unit receives abundant light from the fenestration, and its interior dimensions though reduced provide the necessary affordances for the needs of a small family, conveying an intimate domestic scale.

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landscape, or personal belongings, and by maintaining them (Lake Claire resident interviews, 1999-2000).

Figure 5- 16. Unit plans and elevations: typical unit—type C (Source: Preston & Associates, 1994)

Figure 5-17. Unit plans and elevations: custom unit (source: Preston & Associates, 1994)

## Social Contact Features

Ramsey's perspective on community-oriented architecture, inspired in the work of Christopher Alexander and shaped by contact with environmentalist thinkers, exposure to the connected lifestyle of provincial French villages and work in McCamant & Durrett's firm (Lindeman, 2000a, 2000b; G. Ramsey, personal interview, Feb. 2000), entailed embracing social contact design as the key design strategy for the Lake Claire project. The architectural analysis found Lake Claire Cohousing to exemplify the general social contact design approach that the reviewed literature cites in association with the creation of a sense of community (Franck & Ahrentzen, 1989; Fromm, 1991; Fromm, 2000; McCamant & Durrett, 1994; Meltzer, 2000). Furthermore, Lake Claire Cohousing was found to exhibit each of the specific social contact features mentioned in McCamant & Durrett (1994), Hanson (1996), Gehl (1987), and Fromm (1991; 2000), as detailed in Table 5-1. Lake Claire Cohousing features shared open spaces or commons surrounded by private dwellings. It features structures that are grouped so as to increase proximity and free green land. Parking is peripheral in Lake Claire, favoring pedestrian circulation within the commons. The commons are a safe, child-friendly environment, free from vehicular transit that can be monitored from in-facing windows and kitchens. Lake Claire Cohousing features extensive common facilities contained within a conveniently located common house; and a collection of transitional spaces such as in-facing porches, small terraces and garden patches that create a privacy gradient and provide opportunity for informal gathering.

Also as noted in Table 5-1, these features largely correspond to a number of the socio-spatial patterns described by Alexander (1977), found to be present in vital communities, and presumably conducive to the creation of a live, and socially active

community.[7] Among others, Lake Claire Cohousing features a promenade—pattern 31, carefully studied degrees of publicness (36), and houses clustered in rows (patterns 37 and 38). It features common land (67) surrounded by buildings, with a series of connected spaces for child play (68) and other spaces conceived as "public outdoor rooms" (69)—outdoor spaces designed to accommodate social activities. Lake Claire Cohousing centers in the family (pattern 75) by catering to its need for home ownership (79) and providing a "house for a small family" (pattern 76).

Table 5-1. Summary of social contact design features as described in literature

| | McCAMANT & DURETT (1994) | HANSON (1995) | GEHL (1987) | FROMM (2000) | FROMM (1991) | ALEXANDER (1977) patterns | **LAKE CLAIRE COHOUSING (1997)** |
|---|---|---|---|---|---|---|---|
| COMMONS (shared open spaces) | X | | | X | X | 67, 68,68, 69, 106, 115, 129 | **X** |
| IN-FACING PORCHES, WINDOWS, KITCHENS | X | X | | X | | 140, 164, 192 | X |
| GROUPED STRUCTURES | X | | | X | | 37, 38 | X |
| PERIPHERAL PARKING | X | X | | X | X | 97 | X |
| PEDESTRIAN CIRCULATION | X | X | | X | | 31, 100 | X |
| EXTENSIVE COMMON FACILITIES | X | | | | | | X |
| CENTRALLY LOCATED COMMON HOUSE | X | X | | X | X | | X |
| INFORMAL GATHERING SPACES | X | | X | | | 69, 124, 125, 142, 160 | X |
| CHILD-FRIENDLY ENVIRONMENT | X | | | | X | 68 | X |
| PRIVATE DWELLINGS | X | X | | X | X | 75, 76, 79 | X |
| PRIVACY GRADIENT/ TRANSITIONAL SPACES | X | | X | | | 36, 127, 140 | X |

[7] Alexander's pattern language is presented as a collection of socio-physical features that have been identified as factors in the creation of socially active places. Patterns range from the ideological to the pragmatic, and cover a wide range of scales: urban,

The design features a pedestrian street ( 100) and parking that is shielded from the city streets ( 97). Mainly, the commons at Lake Claire Cohousing feature two major positive outdoor spaces (pattern 106) plus a variety of "activity pockets" ( 124) and stair seats ( 125) that may account for these spaces being perceived as living or active courtyards ( 115). Reflecting its emphasis on community, buildings in the cohousing center on their common areas ( 129) yet create an intimacy gradient ( 127) that allows for varying degrees of privacy by removing the most private areas from the commons. Buildings participate of the commons by featuring windows, balconies and terraces that overlook the street (patterns 140, 164 and 192)—and thus allow indoor-outdoor connections, and by sculpting the building edge ( 160) so as to "knit the inside of the building to the outside" (Alexander et al., 1977, p. xxix).

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architectural and interiors. His book, A Pattern Language (Alexander et al., 1977) compiles and numbers these patterns so they can be systematically applied to design.

# CHAPTER 6
# SOCIAL CONTACT IN A COHOUSING COMMUNITY: PARTICIPATORY RESEARCH FINDINGS

This researcher's participation in the lives of the residents of Lake Claire Cohousing were directed first at exploring the existence of a sense of community in the cohousing in terms of the behaviors described by Fromm (2000), and when found, describing and explaining these behaviors. Secondly, these experiences were directed at obtaining the residents' views of any reciprocal interactions there might be between the social behavior and the physical environment of the cohousing neighborhood. In particular, the interview questions outlined in Appendix A and summarized in Table 3-1 were designed to describe these behavior/space interactions explicitly in the voice of the subjects. According to the research plan outlined in Chapter 3, experiential techniques such as participant observation and interviews conducted over 18 months from 1999 to 2000 in the Lake Claire Cohousing community yielded the findings reported in this chapter. Except when noted otherwise, answers reflect the opinions or the behaviors expressed by most of the interviewees. Following their request, residents have not been identified by their names, except for Greg Ramsey, the community's architect and resident designer. Table 6-1 summarizes the findings that stem directly from the research questions and related observations. The following sections expand on these findings and relate them to the four behaviors that define a sense of community: interaction, participation, safety, and support.

Table 6-1. Summary of most frequent answers to research questions

**QUESTION 1**

a) Residents know and interact with each other
b) Interaction takes many forms: casual and scheduled, direct or mediated
c) Residents share childcare and look after each other's children, pets and property
d) Residents run errands and do tasks for each other
e) Residents receive help when ill or otherwise in need
f) Items are shared or passed on to others within the community
g) The community supports and encourages a diversity of lifestyles among its members
h) Residents feel secure within the community
i) Residents participate in community management and share responsibilities
j) Residents join regularly for common meals
k) Community management and common meals are a constant source of interaction
l) Residents share a range of additional activities and rituals

**QUESTIONS 2-5**

a) Social interaction occurs mostly in the commons and in the common house
b) Peripheral parking is not identified as a feature conducive to interaction
c) Proximity and density seem to affect interaction
d) Residents believe/behaviors suggest that the location and characteristics of the circulation spaces affect interaction
e) Residents believe/behaviors suggest that the massing/fenestration of buildings affects interaction
f) Residents believe/behaviors suggest that the existence of transitional spaces affects interaction

**QUESTIONS 6-9**

a) Existence of the common house makes a range of social activities possible
b) Common house features afford these activities—community seeks to improve features
c) Residents do not "hang out" in the common house
d) Residents assign practical, though not symbolic importance to the common house
e) Residents committed to building the common house as an essential component of the project
f) The location of, and access to, the common house respond to external design considerations
g) The interior design of the common house is a source of concern for the residents
h) It is unclear whether residents consider the common house an extension of their home

**QUESTION 10**

a) The community was created through a project development model
b) Both the residents and the architect report having had to make design compromises
c) Residents desire additional space in their homes
d) In general residents report satisfaction with the resulting design
e) Design encourages/supports environmental awareness and conservation practices
f) Both the residents and the architect are aware of the need to make changes to respond to aging population

**QUESTION 11**

a) The development process is identified as the initial source of interaction and cohesiveness for the community
b) Community members share a vision/goals/purpose
c) Residents believe/observations suggest that social contact design features support the development of a sense of community among neighbors

## Interaction

Observations indicate, and interviews confirmed, that residents in Lake Claire cohousing know and interact with each other regularly. Based on formal and informal questioning, residents could cite not only each other's names—some even could recall the names of their neighbors' pets—but their occupations, schedules and particular habits. When asked to describe their relationship with their neighbors, answers ranged from "friends" to "extended family" or as one neighbor aptly put it, "more than friends, but less than family" (Lake Claire resident interviews, 1999-2000). Evidence in the form of community maps that some residents agreed to draw show a clear familiarity with the make up and location of each household in Lake Claire Cohousing, as exemplified in Figure 6-1.

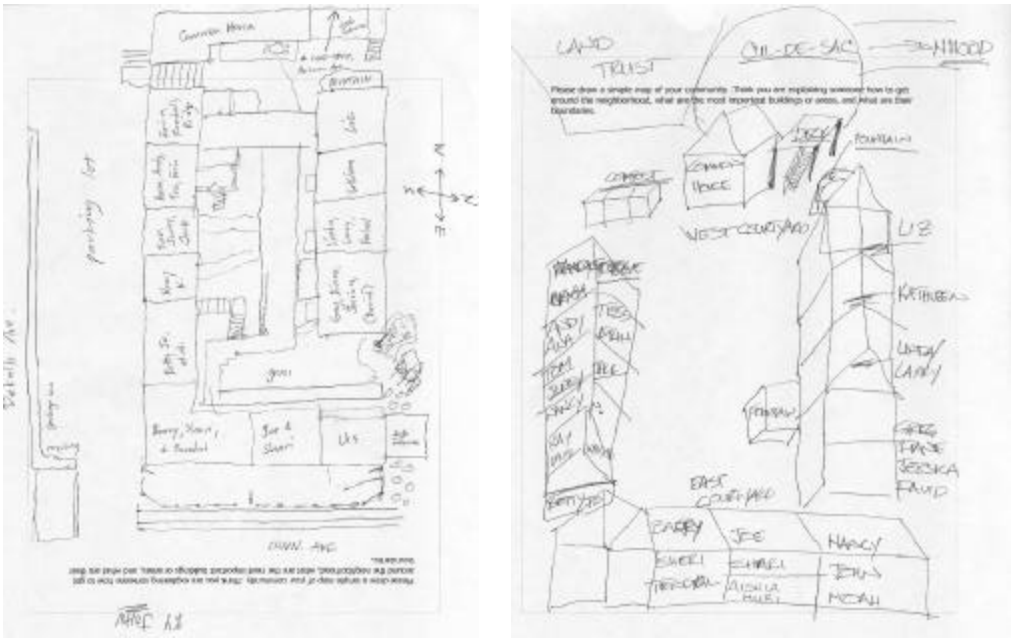


Figure 6-1. Lake Claire Cohousing community maps, as drawn by residents, June 1999. Notice the familiarity with the layout and main features of the cohousing, as well as the complete identification of the members of each household.

Observed, reported and experienced interaction with neighbors in the cohousing community takes many forms. It ranges from the casual, such as chatting when encountering neighbors in the commons, to the scheduled. However, residents consistently report that most casual interaction occurs as people walk along the pedestrian path when coming in or leaving the community, in the common house lobby as people pick up mail or read the bulletin boards, during common meals and community meetings, or when sharing responsibility for some task (Lake Claire resident interviews, 1999-2000). Noticeably, residents did not single out the common—peripheral—parking lot as a place where significant interaction takes place, perhaps due to the lack of emphasis this particular community puts on vehicular transportation.

Observations confirm that casual resident interaction occurs constantly in the pedestrian path as well as in the common spaces of the courtyards and the common house, indicating that in Lake Claire these spaces are heavily used. Neighbors were observed to gather in the small common house deck that fronts the common space, where the long views from the other extreme of the community converge, rather than in the West porch, which faces the cul-de-sac. Other indicators attest to this preference. The space fronting Arizona Street lacks ornamentation and appears to be underused, a fact confirmed by the architect's mention of the possibility of appropriating some of its area for inclusion as common house indoor space (G. Ramsey, personal interview, Feb. 2000). Accordingly residents claim, and observations confirmed, to use the main door of the common house less frequently than the ones toward the common space (Lake Claire resident interviews, 1999-2000).

Though interaction among neighbors occurs constantly in the commons, some patterns of occupation were evident. In general, the common house was observed to be empty during most of the day. Residents were seen as they crossed the grounds on their way to work or school, including two people employed in a home based business. Otherwise very little activity—mostly residents picking up mail or doing laundry, the occasional parent with a toddler or the comings and goings of workers doing repairs—was observed in the mornings. Most observed activity occurs in the late afternoons after children have returned from school and adults from work, and on weekends, and in general it has its locus in the east courtyard. Some seasonal variation was also perceived in the activity patterns of the community with more outdoor activities happening when there is fair weather, suggesting that as residents confirmed, interaction tends to be more intense during the warmer months of the year (Lake Claire resident interviews, 1999-2000).

In addition, neighbors consistently reported visual access to the common space, the need to circulate through it, and especially the tightness of the pedestrian street as critical for both desired and undesired levels of interaction and privacy. Different residents claimed that this layout—and in particular the width of the pedestrian street—either “eases,” “nudges” or “forces” them into socializing with others (Lake Claire resident interviews, 1999 to 2000). Residents were seen to socialize along the common path and to occupy some of the transitional spaces around the commons, and use the assorted furnishings around it—not only chairs and benches but also ledges and steps, when interacting. Residents reported that though private dwellings may have ownership over some of these spaces and outdoor furniture, all are welcome to enjoy them. Yet

interestingly, one of the most recent members of the community pointed to the existence of what she labeled “a definite sense of ‘this is my porch, this is my yard, these are my son’s toys, and you respect that’,” that is, a clear definition of ownership over objects and space. The following excerpt from an interview illustrates her perception:

> Interviwee: Like, if my daughter steps on somebody’s flowers, somebody will say “don’t do that, you’ll ruin so-and-so’s flowers,” or “try not to break it,” or, you know? And everybody is friendly about it, but I feel very clear about what belongs to everybody, what is common property, and what.
>
> Researcher: And what would you say, from your experience living here, is the common property?
>
> Interviwee: The common house and maybe a few of the toys, and like the play area where the children play, and then the courtyard back there and maybe the garden area. But, other than that everything else is very designated, it’s owned. I mean, the parking spaces have numbers, I mean, how much more owned can you be? Everybody says things that communicate [this] in a very like digestible, palatable way. I never feel that anyone is hoarding. Definitely they *are* sharing. But it’s still clear that there is ownership of space (Lake Claire resident interviews, 1999-2000).

Visual access was also identified as an issue for both protecting privacy and allowing interaction. At least five residents from both the north and south rows complained that the lack of visual access to the common house prevents them from knowing whether there is ongoing activity, and thus regard it as an obstacle for interaction. It was further observed that residents resort to a series of strategies to regulate the visual and physical access from the common space and across dwellings. While residents who said to be undisturbed by visual intrusion into their homes leave their fenestration exposed, others cover the windows partially or totally with blinds or screens, or shield them with outdoor fences. Others still devise behavioral strategies like posting notes or otherwise letting neighbors know when approaching their homes is welcome. To assist in their interaction, the community puts out an information sheet with

each adult neighbor's home and office addresses and telephone numbers, and availability—such as "call before" or "just drop in"—that is circulated to all. The community also has a series of bulletin boards in the common house lobby where internal information—for instance, the agenda for upcoming meetings, proposals on specific issues, and announcements, as well as chore sign-up sheets—is posted. In addition, there are the cubbies, strategically located next to the mailboxes, where residents leave notes or items for each other.

These and other features of the common house, like the existence of a playroom for the children, were seen as a conduit for social interaction. Parents were seen to interact the most with others in the community. Parents of young children report that they interact more with other parents with whom they share similar needs (Lake Claire resident interviews, 1999-2000), implying that for them children are a potential source of interaction with like adults. Parents were observed sharing child care and engaging in activities like craft making with their own children and those of their neighbors, or going to the neighborhood parks with other parents and their children. One telling piece of evidence witnessed one evening was a couple of parents taking their toddler—along with towel, rubber toys, and bubble soap—for a joint tub bath with his neighbor playmate. When questioned, one mother explained this activity gave their single children the opportunity to have the kind of experience usually afforded only to those who have siblings. Obviously, this activity was also an opportunity for both couples to socialize while tending to their children's needs. Similarly, residents in the 20 to 35 year-old bracket—all of them single, three without children—were seen to interact less with other members in the community. Of these, two residents said to be willing to interact more

but argued having other activities or commitments outside of the community that limited their opportunities to socialize with the cohousing group. The remaining three either reported or were regarded by the group as having low interest in socializing (Lake Claire resident interviews, 1999-2000).

On the other hand, organized interaction stems mainly from either social activities or community responsibilities and outreach, and seem to have their locus in the common house. The location of these activities in turn mobilize residents along the pedestrian street and common areas and thus may increase opportunities for casual interaction. More than half the residents reported having downsized their previous homes by moving to Lake Claire Cohousing (Lake Claire resident interviews, 1999 to 2000). The prevalent feeling is that houses are small and prevent large gatherings at home. Under these circumstances, the common house provides the sole locale for large group interaction. At least 18 different kinds of organized activities were reported, observed, or experienced by the researcher that involved interaction with some or all members of the cohousing community, most of which take place in or around the common house or throughout the commons, as shown in Table 6-2. Organized activities in Lake Claire Cohousing can be described as falling into seven general categories: administrative, maintenance, commercial, (strictly) social, educational, volunteering, and wellness activities. Administrative and maintenance activities are tied to the responsibilities inherent to ownership of the commons and as such are to some extent obligations, but also expressions of participation, as described further on. Administrative activities comprise monthly community business meetings for dealing with community finances, policies, and other problems, and for planning upcoming events and community work, and

biweekly group sessions with a coach in which residents work on their communication and conflict resolution skills. This category also includes meeting in small groups to address specific projects that can take place in the private dwellings and are scheduled as needs arise.

Table 6-2. Organized activities in Lake Claire Cohousing[1]

| | | LOCUS | | | TIME FRAME | | | | PARTICIPANT | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Common House | Commons | private dwellings | 1 or more times per week | 1 or more times per month | 1 or more times per year | varies | adults | adults and children | varies | includes others |
| Administrative | • business meetings | X | | | | X | | | X | | | |
| | • group sessions | X | | | | X | | | X | | | |
| | • committee meetings | X | | X | | | | X | X | | | |
| Maintenance | • dish washing | X | | | X | | | | X | | | |
| | • recycling & composting | X | X | X | X | | | | | X | | |
| | • common house upkeep | X | | | | X | | | X | | | |
| | • landscaping | | X | | | X | | | | X | | |
| Commercial | • produce distribution | X | | | | X | | | X | | | X |
| Social | • common meals | X | | | X | | | | | X | | X |
| | • celebrations | X | X | | | | | X | | | X | X |
| | • entertainment | X | X | | | | | X | | | X | X |
| Vacations* | • yearly retreat | | | | | | X | | | X | | |
| | • camping | | | | | | | X | | X | | X |
| Educational | • talks | X | | | | | | X | | | X | X |
| | • craft making | X | X | X | | | | X | | X | | |
| Volunteering* | | | | | | | | X | | | X | X |
| Wellness | • yoga sessions | X | X | | X | | | | X | | | |
| | • sing-alongs | X | | | | X | | | | X | | X |

[1] Activities as observed or experienced by the researcher or reported by residents in the course of this investigation Activities marked with an asterisk have their locus outside of the community but engage a number of residents and provide opportunity for social interaction, therefore they are included in this list.

Maintenance activities comprise doing the chores required for the upkeep and growth of the community—such as washing dishes after a common meal, recycling garbage, cleaning and tidying up the common house, or the construction of the woodworking shop, which reportedly currently engages men from three different households (Lake Claire resident interviews, 1999-2000). This activity category also comprises landscaping the commons, which is usually done during "community work days" that beyond allowing to accomplish a variety of tasks, offer additional opportunity for resident interaction. Doing other chores can also be a source of casual interaction for Lake Claire residents. Despite having washer/dryer hookups in their homes, ten out of thirteen households (76% of the population) use the laundry facilities located in the common house. Neighbors reported choosing not to have their own washing/drying appliances and instead using the common house laundry as much for environmental reasons and the need to gain extra storage area at home, as for the opportunity to socialize with others while doing chores (Lake Claire resident interviews, 1999 to 2000).

Commercial activities are for example, the distribution of produce from a Community Supported Agriculture (CSA) group to which most cohousing households are affiliated. Membership in this group entails payment of an annual fee, set at $300 per year for this group, which entitles the members to receive set amounts of fresh, organically produced, seasonal vegetables once a week during the harvest season from May through October. Produce is brought to the Lake Claire common house for distribution to the affiliated members in the cohousing and the surrounding neighborhood, and becomes another occasion for casual social interaction, which the researcher was able to witness in July 2000. In this visit, the researcher noted that in

addition to claiming their bag of potatoes, squash, okra, tomatoes and eggplant, residents could purchase freshly picked blueberries, organic honey, and handmade soaps.[2]

Other activities that bring neighbors together and thus allow for interaction are celebrations and scheduled entertainment. Residents report that very often they celebrate social occasions such as birthday parties with their community neighbors, and very often these events take place in the common house. For example, one neighbor recalled that having wed in another state to allow for her family and that of the groom to attend, the couple chose to hold a second wedding reception in the cohousing with their neighbors and friends. The festivities occupied the common house and a structure specially set up for the occasion in the commons (Lake Claire resident interviews, 1999-2000). Entertainment, like watching favorite shows or special event telecasts together in a neighbor's home, or the occasional showing of movies in the common house, also foster resident interaction. One late evening during the study period the researcher observed that one resident visited her neighbors in pajamas and robe. One of them explained that they had a weekly date to watch an emergency room drama on television together, an activity they cherished because she said, her neighbor being a physician, could explain the plot and the details of the show, adding to their enjoyment. When asked whether she used to do this prior to moving to the cohousing the other answered, "Oh no, I wouldn't go out [dressed] like this in my old neighborhood!" (Lake Claire resident interviews, 1999-2000). Other examples of entertainment activities reported by the residents include roasting marshmallows and telling stories by a fireplace set in the west courtyard in the

[2] This group was started by one Lake Claire resident on land owned by her family in North Georgia. Today the membership totals over 30 households in the greater Lake Claire area, who pick up their produce at the cohousing common house.

winter, or else joining others for making music in the early evenings. As told by the residents, some activities start spontaneously such as when one resident brings out his guitar to play in his porch, and eventually a small crowd gathers around (Lake Claire resident interviews, 1999-2000).

Another group of activities observed or reported in Lake Claire Cohousing can be generally labeled as educational. This refers to gatherings that bring neighbors together when guests or residents share their knowledge or lead activities on a specific subject. For instance, one neighbor who is an amateur astronomer, has given a series of lectures with telescope observations for the community; other times they have had cohousing or intentional community personalities to visit and engaged them to chat on their area of expertise (Lake Claire resident interviews, 1999-2000). Craft-making, which takes many forms from finger-painting in the east courtyard to baking cookies or bread in the common house oven, or carving pumpkins in the common house deck are other reported activities that provide opportunity for interaction between the younger and older members of the community. Wellness activities that cater to the physical and spiritual health of community members also afford social interaction. Examples of these are Yoga sessions held on Sunday mornings—usually attended by a couple of residents but open to all who wish to participate—and monthly gatherings scheduled by a family who bring members of their congregation to Lake Claire for gospel sing-along sessions (Lake Claire resident interviews, 1999-2000).

Finally, there are two other types of activities that offer opportunity for social interaction among the cohousing residents, though they take place outside of the community. These refer to the recreational activities such as a yearly retreat—as

reported, attended by all households—aimed at deepening the connections among community members, and group camping trips to the beach, usually held during vacations, which on a more limited scale serve the same purposes. An example of these is the camping trip to an island state park off the Georgia coast that reportedly the whole community took over the millennium New Year (Lake Claire resident interviews, 1999-2000). Volunteering activities afford additional interaction among the cohousing residents as many share interests in environmental preservation or social activism and thus join to offer service, such as sponsoring refugee families and assisting them in their adaptation to American culture. In the summer of 2000 the researcher had evidence of one activity that spans several categories, when a group of three residents from different cohousing households were seen drying out their tents in the east courtyard upon returning from a camping trip with their own and their sponsored children.

**Common meals.** Among the organized activities common to cohousing communities, "breaking bread together" at common meals seems to be the quintessential opportunity for social interaction with members of the community, their guests, and neighbors. Blank (2001, p. 21) reports that beyond her personal experience as a cohousing resident, her TCN-sponsored survey of the common meal practices of 19 cohousing communities, led her to conclude that "common meals are for the most, if not all residents, 'the glue that holds us together'" (p. 21). In this study Blank found that the frequency of common meals in the cohousing communities surveyed was one to five times a week, with two or three common meals per week being the most frequent. Lake Claire Cohousing also falls within this range. Common dinners are held twice a week, on Thursday and Sunday evenings, the former being open to the public. In addition, there

are biweekly potlucks, held prior to the coaching sessions, and Sunday bagel breakfasts. Informal group meals held in the homes or in the common house provide additional opportunities for social intercourse. Residents informed that though most meals are held within the common house—as observed in the course of this research—on occasions they flow out to the commons. Weather is a factor for this, so that summertime dinners or Sunday morning bagels and coffee are frequently consumed in the common house deck (Lake Claire resident interviews, 1999-2000).

Blank (2001) detected that in the surveyed communities 35 to 55% of the residents in the "large" communities (54 people or more) eat at the common meals, whereas attendance increased to 59 to 70% in smaller communities. Similarly in Lake Claire, anywhere from a dozen to 20 or more people, young and adult—usually 25 to 30, including guests, or roughly 73%—participate in these weekly gatherings.[3] As seen in Figure 5.13, the common house dining room seats between 22 and 28 people at one time, which is confirmed by the number of like chairs (22) and stools (4) in this space. However, additional chairs exist—and the sofas and outdoor picnic table—that expand the seating capacity of the dining room. Noticeably, opportunity for interaction with a range of people seems to be maximized by not having assigned seats at the tables, therefore people join in as they arrive and take a seat wherever there is room.

On one of the lengthier stays at Lake Claire the researcher had the opportunity to prepare a common meal for the community, tutored by one of the residents. A vegetarian

[3] In the seven meals that the researcher had the opportunity to attend on different occasions while at Lake Claire, attendance verged around 25 for the common meals, except for a larger party where there were over 35 people. However, attendance at the bagel breakfast was much smaller, at 8 people.

menu[4] was planned ahead of time and posted on the dining room board so those residents could decide whether they would like to attend or not. When asked how many people were expected to show up for the meal, the tutor replied that although they never know for sure, amounts of food are generally estimated for thirty people[5] (Lake Claire resident interviews, 1999-2000). The meal preparation process started with a visit to the local farmers' market the day before in order to obtain the freshest produce. The common house keeps a stock of certain staples and condiments, such as olive oil, sea salt and herbs, that cooks can help themselves from. The cook, who is later reimbursed from the fees paid by the diners, pays for the purchase. In her 19-community survey, Blank found a wide range of strategies for tallying the cost of the common meals and billing the diners. These ranged from splitting the cost of each meal and reimbursing the cook in cash right after the meal, to a credit system in which residents pay a monthly sum that may be compounded into their homeowner's fee (Blank, 2001). In Lake Claire the cost of the meals is estimated based on experience, and range from $2.75 to $3.50 for "big people" and around $1.50 for "little people," depending on the richness of the fare. This falls within the range reported by Blank (2001), that is, $2.50 to $3.50 for adults, and children pay half price. There is a jar in the Lake Claire kitchen counter where residents deposit their payment after the meal; on the overall it is a system based on trust in which

[4] Vegetarian fare is the norm in the Lake Claire Cohousing common meals, and foods are prepared taking care to set aside a portion of the dishes that have eggs or dairy products and exclude these ingredients for those who have food allergies or are lactose intolerant. Smoking is not allowed in the common house, but alcoholic beverages such as wine, in moderation, are welcome at the meals.

[5] The Lake Claire system allows for residents to help themselves from the leftovers at no charge, if there are any.

all acknowledge that either the cook or the diners may sometimes come up a couple of dollars short.

Preparation times for the common meals varies depending on the complexity of the menu and the number of diners, and often cooks make some of the dishes at home to suit their schedule. The industrial capacity of the stove, sink and dishwasher at Lake Claire address the needs of such a large population and proved to be quite helpful for the task. However, without doubt due to inexperience in catering a meal for thirty, the researcher spent four hours preparing a dinner consisting of chowder, salad and dumplings. Dessert and additional bread was provided by the tutoring resident. When dinner is ready the dinner bell is rung to call in the neighbors; the meal is served buffet-style on the kitchen counter toward the dining room, and neighbors help themselves and take a seat in the dining room. After eating, diners pick up their dishes, discard leftovers in the compost bin, and return dishes to the kitchen counter to help those in charge of clean-up. Based on this experience, the researcher was able to assess that beyond the social intercourse that arises spontaneously among the diners, there is opportunity for interaction among the cooks and between the cooks and the diners, who comment on recipes and taste, lend a hand in the preparation and serving of the food, and share the latest gossip.

Overall, resident responses and behaviors suggest that the features of the common house, and the existence of the common house itself have clear implications for the social interaction of Lake Claire neighbors. Largely, residents elaborated on the convenience or practical advantages offered by this structure, which mainly compensates for the limited size of their homes and allows for a series of complementary activities as described above

(Lake Claire resident interviews, 1999-2000). In addition, some Lake Claire residents exhibited strong feelings for the interior character of the common house. Contrasting views were voiced on the use and design of the 126 $m^2$ (1,400 SF) attic reserved for future expansion that the community is currently debating, and in particular on the furnishing and decoration of the common dining room (Lake Claire resident interviews, 2000).

However, when asked what is the most important building in the community, residents consistently mentioned their own homes rather than the common house and rated the common house second in importance after their own homes (G. Ramsey, personal interview, Feb. 2000; Lake Claire resident interviews, 1999 to 2000). Similarly, when asked whether they regarded the common house as an extension of their homes, most responses resembled that of the resident that vaguely claimed "to some extent, well, yes" (Lake Claire resident interviews, 1999-2000). Ambiguity toward the common house is corroborated by the lack of personalization evident in its main entrance doors, which contrasts with the abundance of furnishings, lighting and art objects placed in front of the homes. Additionally, residents were not observed to make purposeless visits to the common house, and though two residents did mention sometime going to the common house to seeking interaction, all agreed they do not "hang out" there (Lake Claire resident interviews, 1999-2000).[6]

[6] This opinion concurs with that of several Danish cohousing residents asked the same question by the researcher in the summer of 1999. To them too the most important building in the community is their home, and the common house is where people go for common meals and community meetings, not to "hang out" (personal communication, 1999).

## Participation

After participating in the initial design and development of their community, as described previously in this chapter, cohousing residents keep participating in shaping their community because, as Ramsey states (personal interview, Feb. 2000), Lake Claire is "a work in progress." Residents contribute ideas, information, decisions, and even labor to complete the unfinished portions of their project—the landscaping, building the wood shop in the basement, or deciding and in the future building the interior spaces in the attic—or to adapt the community to the changing needs of its population. During the course of this research renovations were made to the unit adjacent to the common house, which had been recently purchased by a young family, to accommodate the needs of its new owners.[7] Though the family had been considered a perfect candidate, that is they shared the vision of the community and were willing to adopt the cohousing lifestyle, they needed additional space and would need to make renovations that would affect the architecture of the community. Participation of community members was decisive for meeting the needs of the newcomers and preserving the design of the cohousing. The group discussed and finally approved a solution: to sell them rights for building on the air space over the staircases that lead from the west courtyard to the parking lot (Lake Claire resident interviews, 1999-2000; G. Ramsey, personal interview, Feb. 2000, 2000), creating what in this dissertation is called Gateway 2.

As in the preliminary phase, decisions were made through consensus decision-making, a process favored by cohousing literature (Hanson, 1996; McCamant & Durrett,

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[7] This was the second and most recent turn out of the community since its inauguration. Reportedly, the previous owners, who had participated in the Lake Claire project early on, had misgivings about the small size of the community. They put their unit up for sale

1994; Norwood & Smith, 1995) and widely mentioned—though frequently the source of complaints—in cohousing discussion circles (multiple authors, ongoing). Furthermore, because consensus, called "the most inclusive form of decision-making" (Hanson, 1996, p. 31), requires that every member agree to a solution before a group can adopt it and take action, has implications for community building and beyond it for social change. Schaffer explains that

> Consensus rests on the belief that every member of the group—however naïve, experienced, confused, or articulate—holds a portion of the truth and that no one person holds all of the truth. It assumes that the best solution arises when everyone involved hears each other about every aspect of the issue while keeping an open mind and heart. As participants let go of their positions and simply report information—including gut feelings, practical considerations, and sudden inspirations—the best course of action becomes evident. Everyone in the group then feels comfortable enough with the decision to participate in the action. (Shaffer & Anundsen, 1993, p. 281)

However, as many cohousing communities seem to agree, consensus decision-making has its downside, namely the "endless hours" spent on meetings exploring all the possible angles of any one issue, and the consequent delay in arriving at decisions which seem to especially aggravate proactive personalities (Lake Claire resident interviews, 1999-2000). Lake Claire residents, like many others as reported in cohousing discussion circles (Olson, 1992), made comments on the difficulty of the process and complained of wear-out. Recalling the tradeoffs necessary during the design process, a resident claims that "there were countless design compromises, and since all decisions were made by consensus, all members participated at every intersection" (L. M. in Lake Claire residents, c. 1998). Another more bluntly states,

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and moved to East Lake Commons, a newer and larger cohousing located not far from Lake Claire.

> The community was developed and manages by consensus. "Process" is a word we did not want to hear for a while after the development phase. Choosing paint color seemed to especially require compromises on everyone's part due to the emotional impact it carries. And yes, I made compromises and tradeoffs during the project development. (N.N. in Lake Claire residents, c. 1998)

Interviewed residents confirmed that not only the exterior color of the buildings, but the interior paint of the common house dining room were the subject of lengthy, heated debates that ended when a color consultant was brought in to assist the residents in the decision. In the end, as one resident confided, "the final decision did not please everybody. . . it was a matter of relinquishing control by exhaustion" (Lake Claire resident interviews, 1999-2000).

Past the development phase, cohousing residents participate in the ongoing management of their community. McCamant & Durrett lay out the process whereby cohousing residents "in keeping with the spirit in which cohousing is built" manage and maintain their community: residents have general meetings attended by all adults, usually once a month, to discuss and decide on "major" issues, events and policies. Additionally, work groups made up of a smaller number of residents take on responsibilities for specific tasks or areas of action (McCamant & Durrett, 1994) and report to the group. Lake Claire Cohousing also follows this pattern. Every adult in the cohousing is expected to contribute a work quota of twelve hours per month in a combination of preparing meals and any of the chores required for the daily operation and maintenance of the community, or the special projects required for its ongoing construction. All the adults in the community attend the "business" meetings once a month to discuss issues, establish policies, and plan activities. Specific tasks, such as preparing a newsletter or other printed material, programming social activities, or planning for repairs in the

commons, are addressed in committees of two or more adults, who meet as needed. Chores comprise preparing dinners and washing up dishes after the meals, and repairs and routine maintenance such as landscaping—cutting grass monthly, raking chips and maintaining the fish pond; plus recycling, maintaining the compost site, sweeping walks and steps, and arranging baby sitting for the scheduled meetings. In addition, there are weekly common house chores—cleaning the kitchen, cleaning the refrigerator, cleaning the laundry and restroom, cleaning the children's room, or washing the common house linens, and monthly common house deep-cleaning. The common house lobby bulletin boards feature forms for residents to sign up for individual chores, as well the agenda for upcoming meetings, opinions and proposals submitted for consideration of the members, and other information on opportunities for participation.

However, as seems to also be a concern in other cohousing communities, judging by comments posted in the cohousing discussion list (Olson, 1992), the level of commitment to meet the assigned work quota varies greatly, and residents acknowledge the difficulty of enforcing compliance. In this respect, the small size of the community is seen as a hindrance. At 14 households and 27 adults, Lake Claire residents claim to be taxed by the demands of the day-to-day operation of the community because as one resident states, "in a community of this size it really shows if someone doesn't do the

(Lake Claire resident interviews, 1999-2000), adding, "I wish we were larger . . . sometimes it is very hard to keep up with all the work [that needs to be done]." Understandably, one of the criteria expressed by Lake Claire residents when looking for

short- or long-term tenants for their homes[8] is their willingness to participate in the maintenance and management of the community (Lake Claire resident interviews, 1999-2000). Labor shortage in the community is compensated by having "community work days" in which most residents participate to accomplish particular—usually larger—renovation or maintenance projects. Though residents described community work days as "unstructured" events in which, despite usually having a project coordinator, "the first hour or so is spent deciding who does what" (Lake Claire resident interviews, 1999-2000), the researcher was able to observe the activity during the workday one Saturday. In this occasion, notices were posted in advance on the common house door announcing the day's program: planting plants in pots, removing debris and logs from under the common house deck, setting stones for the fountain, raking leaves from the west courtyard, and securing vertical vines to the walls on the north row. Eleven adults and two children participated in these activities, which coincided with the common house deep-cleaning day, from mid morning to mid afternoon.

**Support**

Supportive behaviors expressed by neighbors are perhaps those most immediately identified with a sense of community: sharing childcare and looking after each other's property, or pets; helping each other with tasks and errands; carpooling or giving each other rides; caring for others when ill and receiving help when in need. In sum, an aspect of community is having a support network, a circle of trusted people with whom to share

[8] During the almost two years that the researcher was involved with Lake Claire Cohousing, one unit was rented for six months and another for one year. In the summer of 2000 one of the units was rented first to relatives of another cohousing family, and then for one week to the researcher. Another family has advertised their interest in leasing their unit during the summer of 2001.

experiences and who can be relied upon (Stoller, 1970). The support network in Lake Claire Cohousing seems to be particularly strong. Along with the common history that arises through the community development process, allowing the residents to "coalesce as a group" (Fromm, 1993), intentionality—that is, commitment to a shared vision or set of common goals—undoubtedly lay the foundation for developing a support network. The Lake Claire Co-Housing Community Credo, a leaflet issued during the development process, claims,

> We believe that how we live on a day-to-day basis ultimately determines the state of our environment and the community at large. We plan to create a community based on shared values and a common goal to live in community. We respect one another's differences as well as our commonalities, as we work to achieve a balance between privacy and community that will encourage personal development.

This vision has been kept and is reaffirmed by the residents' willingness to work toward enhancing their interpersonal communication skills and improving their problem-solving strategies, which they do jointly with a specialist in biweekly sessions.[9] In addition, it is possible that the size of the community, which as explained before poses a burden for meeting the needs of the community's maintenance and management, may be a factor in the consolidation of the support network in the community. Stoller (1970) claims that groups of three to four couples formed successful support networks to regenerate social structures lost through mobility and separation from the extended family. Similarly, a study by Dunbar and Spoors (1995, p. 275) suggests that individuals tend to develop a "support clique" of roughly six to 12 people they "would normally approach for advice or assistance when in difficulty," a size well within that of Lake

[9] These sessions were held on two occasions during the study period. However, given their private nature, access was restricted to the permanent members of the community and therefore the researcher did not participate in them.

Claire's adult population. Additionally, Lake Claire residents have cited proximity and visual access as factors in the development of their support network because simply, it is easier to obtain the help of those who are close by and whom they see regularly (Lake Claire resident interviews, 1999-2000).

Information from interviews and observations confirmed that Lake Claire residents frequently care for each other in many ways. Sitting neighbors' dogs and cats, providing transportation and shopping for others seem to be regular practices (Lake Claire resident interviews, 1999-2000). During the research periods, a parent was seen every morning taking his daughter and two more neighborhood children to school. One of the residents, a nurse, provides first aid to the neighborhood children and reportedly is whom parents seek for initial diagnoses. One resident told of neighbors bringing her soup every night when ill with the flu, and another told how her neighbor had taken extra pains to comfort her after a relationship breakup. Very often neighbors were seen caring for other neighbors' children. For example one afternoon during the study period, a neighbor took the son of the researcher's host to her home so that the child's mother could take a much-needed nap. Also during a workday in July 2000, a neighborhood mother looked after hers and other children while their parents participated in the maintenance efforts. But most significantly, the researcher learned that at a time when ill health prevented a single parent in the community to provide and care for herself and her child, the community put forth an extraordinary show of solidarity and support. One neighbor took in her dog, others arranged a short-term lease for her unit, and a couple became legal guardians to her son and provided him a home and emotional comfort. They wanted the child to remain in Lake Claire while his mother was away, because they

felt that having been raised in the cohousing and with the neighbors, “this is his home and we are his family” (Lake Claire resident interviews, 1999-2000).

Other observed behaviors further speak of the way the support network operates in Lake Claire and illustrate the way the community upholds cohousing’s pledge to environmental preservation. A series of items are actively circulated in the community, expressing not only the residents’ environmental concerns for lessening waste and optimizing resource use, but also their commitment to helping each other. Residents borrow objects and furnishings from each other and even from the common house –for instance, when having dinner guests at their home the researcher’s hosts brought in extra chairs from the common house. In addition books, household objects, toys and clothes—especially those of children in their growing years—are passed on from one family to another. The resident that has the only fax machine in the community makes it available for all to send and receive documents. Residents report that cars that are little used or that have special features, like a couple’s van or the architect’s truck, are loaned to neighbors on a regular basis (Lake Claire resident interviews, 1999-2000). Residents told the researcher that during an unusually strong ice storm hit Atlanta in January 2000 power lines were taken from some units to serve others. Some families moved in with neighbors or bunked together in the common house—which along with the north row units were spared from the power shortage—sharing food, blankets and companionship (Lake Claire resident interviews, 1999-2000).

Furthermore, not only was the community willing to increase its building density to allow creation of additional space for its newest members, but the researcher witnessed how space itself could be traded in Lake Claire to address the needs of neighbors. In

early 2000 there was talk among the neighbors that one Lake Claire couple would need to seek a solution to accommodate the needs of their expanding family. By mid-year, when their new baby had already been born, the couple and their adjoining neighbor—a single person whose spare bedroom was rented out to a college student—were exploring the legal and physical feasibility of purchasing, leasing or in some way reassigning this space to them (Lake Claire resident interviews, 1999-2000).[10]

There are, however, other more subtle ways the Lake Claire community expresses support among its members. As mentioned in previous sections, commitment to religious, political and ideological diversity is a tenet of cohousing, and indeed during the research period Lake Claire counted Protestants, Catholics, Jews and Muslims, as well as non-believers, among its residents (Lake Claire resident interviews, 1999-2000). Having a mixed-income population is also mentioned as a goal of cohousing communities, and though up to this day this seems to have been an elusive goal (Ontkush, 1996), the Lake Claire community addressed this issue by making changes to its design. As described above, splitting one unit into two flats allowed the community to retain two members that otherwise would have abandoned the project due to lack of funding. As one resident

[10] This type of arrangement seems to be frequent in cohousing neighborhoods, where residents take pains to remain. On two occasions during her visit of cohousing communities in Denmark, residents mentioned to the researcher that exchanging or trading portions of property to adjacent neighbors was a frequent practice. In Sættedammen, the oldest of the Danish cohousings, one resident explained that in order to make room for a new baby, he and his wife had acquired space from their upstairs neighbor, which they connected to their property by means of an internal staircase. In BO-90, an urban community in Copenhagen, a resident explained he had leased—and physically connected—a spare bedroom and bath to his next-door neighbor (multiple authors, 1999). These arrangements were possible because the units were designed with built-in flexibility in recognition of the life-cycle changes expected in a population, and aided by legal and banking systems in Denmark that facilitate the creation of cooperative arrangements among neighbors.

explained, if the community hadn't been supportive, "we wouldn't have the Wendys or the Sues" (Lake Claire resident interviews, 1999-2000).[11] However, this research found that strategies to accommodate people's differences in Lake Claire Cohousing go beyond mere tolerance. Residents report that efforts are made to celebrate holidays in ways that are sensitive to all beliefs. The common house fare acknowledges different dietary needs or preferences, such as those of vegan or of lactose-intolerant members, a fact the researcher was able to confirm when preparing a common meal. Dogs are kept indoors to prevent them from trespassing on their neighbors' property. "Gentle" parenting—giving children choices and responding to their special cognitive limitations and emotional needs—was observed to be prevalent in the community, indicating support for the needs of the younger community members. Support for the health of the cohousing members is expressed through wellness practices such as banning smoking form the commons and the common house.

Finally, though also an expression of the democratic ideals at the root of the cohousing paradigm, participation in community management and upkeep, and in particular the use of consensus-decision-making, are supportive behaviors that confer leverage to each community member. So is participation in the design of the community, as illustrated by this example: paradoxically, in the face of the apparent conflict over the interior design of the common house the architect did not produce a solution. When asked why, his wife explained this was done intentionally so as to allow residents freedom to decide on this matter (Lake Claire resident interviews, 1999-2000). Residents recalled that to select the artwork that was to be placed in the common house, every

[11] The names of the residents have been changed to preserve their privacy.

household was asked to propose two pieces of their own that they would like to have in it. Community members then voted for the 12 most desirable pieces, which were then used to decorate the common dining room and the lobby.[12]

However, other issues that stem from the design of Lake Claire Cohousing have negative implications for support. Oversight in considering the changing needs of the residents in the course of their life cycle—which the architect now admits, and has committed to address (G. Ramsey, personal interview, Feb. 2000, 2000)—fails to provide support for their daily activities as they age and their health deteriorates. As described in the previous section, dwellings in Lake Claire are multi-level structures that must feature internal staircases. Furthermore, as illustrated in Figure 5. 9, circulation in the community is routed along the pedestrian street that crosses the commons, with access points solely at its west and east ends. Though this design strategy was seen to favor interaction, it also caused problems to neighbors living most distant to the entrances. In addition, because of the topography of the site, a flight of stairs is needed to go from the parking lot to the entry point into the community. Even though a ramp was built to provide accessibility for wheelchairs, strollers, and carts, the increased distance that results from its length, its placement at the far end of the community—beyond the common house, don't seem to favor its use by neighbors. Residents reported also being inconvenienced by the need to cross the loose gravel fire lane to enter the commons, mostly when having to carry groceries or heavy luggage across the cohousing. One resident told the researcher she had been particularly aware of the limitations in their community design

[12] Though this method was intended to ensure that the individual preferences of every resident were represented in the common house, anecdotally, in the end many residents

by having had to move several pieces of furniture into her unit on three different opportunities (Lake Claire resident interviews, 1999-2000). As the researcher witnessed, residents deal with this inconvenience by passing grocery bags from the parking lot through the windows of the south row units. Another alternative is to park on the street in the rear, which allows level entrance into the community; however, the paving there is also uneven as it consists of a sequence of stepping stones set on the lawn. Echoing the concerns of the elder members of the group, the same resident pondered, to her regret, how long she—with failing eyesight and knees—would be able to continue living in Lake Claire. "Whenever I return from work and it is dark, I fear I may trip over . . . It is a pity but [unless some changes are made] I don't think many of us will be able to age in the community" (Lake Claire resident interviews, 1999-2000).

**Safety**

Ensuring a feeling of safety for residents is the one aspect of a sense of community that is most clearly addressed by social contact design, which prescribes the creation of a protected space at the core of cohousing neighborhoods (Fromm, 1991; Fromm, 2000; McCamant & Durrett, 1994). As described in previous sections, in Lake Claire the commons are enclosed by the buildings and separated from vehicular intrusion. Furthermore, the pedestrian path and east courtyard spaces can be visually controlled from the surrounding homes, most of which open their kitchen windows to it, leading residents to consider it a safe environment for the children. In the course of the interviews residents consistently agreed they felt safe in the community and parents claimed Lake Claire to be a "wonderful place" to raise their children (Lake Claire

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manifested not being pleased by the choices made (Lake Claire resident interviews, 1999-

resident interviews, 1999-2000). As mentioned above appreciation for the quality of the cohousing environment seems to find outlet in the opportunity it offers for self-expression. One resident mother explained that, having lived previously both in the inner city and in a suburban subdivision, the cohousing setting offers her family the safest option:

> We lived in a more urban setting when [my daughter] was a small child, and we rode the bus, and we were in downtown a lot . . . And then we lived in an extreme suburb . . . in a community of a lot of elderly people . . . so there weren't a lot of children. So, coming here I think, was very refreshing for her. Because there [are] so many children, and there [are] toys, and there is this really funky outside kind of thing, with lights and the way people decorate their doors…Every time I bring another kid over here [to visit] it reminds me how special, for my child, this kind of setting is. You know, it's real artistic, and creative, and she likes it. She likes it a lot . . . that has been the biggest plus about being here . . . the biggest benefit about being here is the growth I've seen in her. She was really nervous and really afraid to be outside where we lived before, and now she goes out by herself. She finds things to do, she finds kids to play with, she is a lot more secure. (Lake Claire resident interviews, 1999-2000)

Confirming these assertions, residents were observed to freely leave objects, mostly shoes, toys and small pieces of furniture, outside their homes in the commons. Some residents reported not locking their doors when in the community during daytime. However, not all residents shared the same confident feeling. Residents living in the corner unit—level with the juncture of the transit corridor and the rear street—expressed concerns over the safety of their back entrance (Lake Claire resident interviews, 1999 to 2000), which they regarded as the most vulnerable spot in the community. They were observed to take special care in guarding their property with an alarm system that was not observed in other units or in the common house. Residents in the corner unit further mentioned considering an increase in the height of the existing 1.3 meter (four feet) high

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2000).

wooden fence that encloses their backyard and that of the two other back units to ward off their feelings of uneasiness (Lake Claire resident interviews, 1999 to 2000). Additionally, the three dwellings with backyards to the street in the rear were seen to follow a crime-fighting strategy of providing minimum maintenance to the yards, not leaving items outside, and restricting visual access to the inside of their homes by drawing curtains and shades. The premise, residents reported, is that this will make their property less inviting to trespassers (Lake Claire resident interviews, 1999 to 2000).

Though their concerns seemed not to be shared by other residents, they may be rooted on the perceived undesirability of bordering Dekalb avenue, which as stated in chapter four was one of the criteria influencing Lake Claire Cohousing's design. However, when asked about the safety of the Lake Claire/Candler Park neighborhood in general, residents could find no major crime event to mention but nonetheless claimed that the area was constantly subject to lesser felonies (Lake Claire resident interviews, 1999 to 2000). Their perception is confirmed by information drawn from the local newsletter, which lists two stolen and three vandalized cars, plus two house break-ins as the crime statistics for June 2000 (Lake Claire Neighborhood Association, 2000).[13] When asked whether these statistics were representative of other months, a neighbor answered "actually, these are pretty good—usually [the list] is twice as long" (Lake Claire resident interviews, 1999 to 2000). However, when asked whether the cohousing itself had been the object of such crimes, the researcher learned that in the four years the community has been operating there have been no break ins and no other crimes than a

[13] Several attempts were made to obtain more reliable crime statistics for the area, without results. However, through personal communication with the author of the report

couple of stolen bicycles and minor thefts from unattended autos (Lake Claire resident interviews, 1999 to 2000). Thefts have usually occurred in the parking lot, which is not only open and closer to Dekalb Avenue, but also not easily surveyed from the dwellings due to the limited number of windows that open onto it.

Again as described, despite fronting a freely accessible tract of land and bordering a busy traffic corridor that locals consider a security threat, Lake Claire is not a gated community. Observations confirmed that it is possible to enter the community openly from the front and back neighborhood streets, and furthermore, the electric gate initially proposed for the parking lot has never been installed for financial considerations (Lake Claire resident interviews, 1999 to 2000). In general, it appears most cohousing residents are content with implementing behavioral deterrents. Some interviewed residents declared deciding not to leave valuable items in plain view of the street or in the parking lot, and believe this measure to be the most effective strategy and to have discouraged further transgressions. Some neighbors even advised the researcher that when parking in the lot, the preferred practice is to leave the car unlocked to prevent vandalizing (Lake Claire resident interviews, 1999 to 2000). These findings point to the idea that feelings of safety within the community stem as much from the characteristics of its built environment as from the thoughts the residents associate with it. The insightful comment made by one neighbor the that, given the openness of the cohousing, those who feel safe within the community do so out of choice, concurs with this assessment:

> What makes it difficult for me to just feel completely safe is because I know that people can walk off the street in the back—and they do, all the time: neighbors, people from across the street, people who don't live here .

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the researcher learned that the source of the statistics listed in the newsletter is actual 911 police reports, and thus they are presented as reliable data in this dissertation.

> . . I think that because I know that there is no lock, there is no barrier, there is nothing that keeps outsiders from coming here, to me it's like everybody has decided to feel comfortable. It's not a real barrier that exists. It's just like in their minds they feel like there is a separatedness. (Lake Claire resident interviews, 1999 to 2000).

**Sense of community.** The above findings indicate in a variety of ways that Lake Claire residents believe to have in effect achieved a sense of community in their neighborhood. Aside from engaging in behaviors that represent the four dimensions of community discussed above, namely interaction, participation, support and safety, to varying degrees they share a common history and a common vision, and seem to have developed strong bonds to each other and to the group. One neighbor's assessment of her community confirm the extent to which this is so, as revealed by the following excerpt:

> A bunch of things I love about our cohousing community and a few things I hate. I love. . . The noise of familiar people through open windows . . . My son, an only child, has eight siblings . . . Boisterous meals with piano playing in the background…Quiet meals on the front porch followed by long conversations . . . The grass courtyard, always a party: kiddie pool, meals al fresco, kids playing complex games, gossip, wagon rides . . . Having people bring us soup and shop for us when we are sick . . . People's front doors as art . . . The fascinating angles made by the lines of our rooftops, each one different . . . The variety of spiritual beliefs and practices among us . . . and the great discussions on spiritual paths . . . Getting to borrow a neighbor's bike after mine was stolen . . . the ability to borrow a car in emergencies helping us to remain a one-car family . . . A few things I hate . . . So many meetings . . . Waiting in line for laundry . . . Wish there were some older people . . . and wish there was more racial diversity (Lowe, 2000, p. 34).

To which she adds in conclusion, "our house is smaller than the one we left, but our HOME is so much bigger."

# CHAPTER 7
# DESIGN AND SOCIAL CONTACT IN A COHOUSING COMMUNITY

The general research question addressed in this dissertation is whether the built environment of a cohousing community in any way contributes to creating and sustaining collaborative behaviors among its neighbors. More specifically, it inquires about the form of, and reasons for, this contribution. As stated in Chapter 2, because cohousing neighborhoods are thought to be *building community*, cohousing residents are by definition acting on the belief that their environment is a significant variable for their social project. Therefore the key issue becomes exploring the mechanisms through which the built environment of a cohousing community may play a part in developing such connectedness among neighbors.

Findings from the Lake Claire Cohousing study, reported in chapters 4 through 6, partially illuminate the general question. They indicate that existence of specific design patterns in the case study community—the social contact, or intentional neighborhood, design features—to varying extents correspond to observed behaviors expressive of a high degree of connectedness or community. Location of facilities and circulation patterns were found to be propitious for social interaction, proximity was found to facilitate expressing support, and sharing common property was found to provide opportunity for participation and a sense of unity. Furthermore, residents were found to feel safe in the commons. However, findings suggest that definition of public and private arenas and privacy itself need to be constantly negotiated in the community. Closer scrutiny of these findings reveals to what extent and why the built environment of Lake

Claire Cohousing partakes of the residents' expressions of interaction, participation, support and safety—what is known as a sense of community (Fromm, 2000).

## Interaction, Participation and Support

Fromm (2000) established that knowing and interacting with neighbors is a significant aspiration for those seeking an intense community experience.[1] The abundant and frequent social interaction directly observed and experienced by the researcher within the Lake Claire community and corroborated by resident accounts comprises a wide variety of both casual and scheduled social exchanges. Aside from the spontaneous interaction that occurs in association with scheduled activities such as during common meals, community meetings and when performing community-related tasks, casual or non purposeful interaction occurs in the course of daily activity like the comings and goings of residents, when picking up mail or when doing chores. It can happen almost anywhere in the commons, but occurs mostly along the pedestrian street, in the courtyards, or in the common house. Findings indicate that such informal opportunities to meet others, and the concurrent opportunities to socialize, are affordances built into the design of Lake Claire Cohousing.

As explained in Chapter 3, affordances mean following Gibson, that the environment, whether natural or man-made, offers an array of physical settings or patterns—its layout, contents, materials and so on—which individuals may identify as opportunities for behavior. Once these opportunities are identified, individuals may decide to use them depending on their own biological and social competencies and needs

[1] Constant informal contact among people is a requisite for developing intimate relationships (Alexander et al., 1977), which in turn are necessary for meeting needs for

(Gibson, 1979; Lang, 1987). These opportunities are the environment's affordances, or qualities of the environment that invite action—after Lewin's 1936 concept of invitational quality, or *Aufforderungscharakter* (Lang, 1987). Affordances can also be thought of as non-verbal cues for behavior (Rapoport, 1982) that are expressed through, or encoded in, environmental features. However, enjoyment of affordances rests firstly on an individual's ability to read the environmental cues. Rapoport (1982, p. 68) notes that

> human behavior, including interaction and communication is influenced by roles, contexts, and situations that, in turn, are frequently communicated by cues in the settings making up the environment; the relationships among all these are learned as part of enculturation or acculturation. The fact is that we all rely on such cues in order to act appropriately, although clearly some people are more sensitive than others.

An important consideration follows: though the environment may elicit associations for specific experiences, responses to these associations are ultimately volitional. In other words,

> It is highly questionable to claim that a design will have particular behavioral outcomes without first taking into consideration the predispositions and the motivation of the population concerned. If there is no overt or latent desire for interaction between people, for example, then the behavior is unlikely to take place, whatever the layout of the environment might afford, unless there is an accompanying change in the social and administrative system. (Lang, 1987, p. 102)

Researchers agree that individuals seek different degrees of interaction depending on motivation but also, among other factors, on their personality (Cooper Marcus, 1995) and social and cultural differences (Hall, 1959). The implication for this dissertation research is clear: even in the context of cohousing, where residents manifest interest in

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affiliation and belonging such as being part of a group and feeling appreciated by others (Lang, 1987).

establishing deep connections with neighbors, interest in—and need for—socializing and other supportive behaviors will vary across individuals and circumstances. However, the affordances or invitational qualities of the cohousing environment are the mechanisms that ensure that opportunities to act are generally available.

**Affordances of the common house**

The layout of Lake Claire Cohousing illustrates this point. Existence of a common house where facilities are concentrated—playroom, laundry, lobby, storage attic, workshop, kitchen, and particularly the common dining room where most scheduled activities take place—affords for chance encounters among neighbors not only in the common house itself, but also in its immediate surroundings. The common house is therefore functionally central to the community—an activity center rich in affordances for both purposeful or programmed, and non-purposeful or casual, resident interaction.

Existence of a laundry room in the common house is identified by some residents as an affordance for socializing and cited as one reason to use the facility (Lake Claire resident interviews, 1999-2000). Turning the common house lobby into an information hub—by concentrating bulletin boards, mailboxes and cubbies there—makes it a required daily destination for most residents. Furthermore, the interior layout of the common house main floor, seen in figures 5-12 and 5-13, increases opportunity for chance encounters within the building. Potential for crossing paths with others is boosted by existence of a node or "centralized collection point" (Lang, 1987) created by distributing the smaller rooms within the common house around the lobby, where entrance to the common house and stairs to the attic also converge.

Aside from providing the facilities—kitchen and common dining room—for regularly scheduled common meals, the common house hosts 14 other types of organized

activities, summarized in Table 6-2. Attendance to these events is afforded by the existence of a locale large enough—and furnished adequately—to allow large groups to gather. Residents report that availability of this space compensates for the lack of such in their homes, and therefore admit to using it as needs arise for all sorts of group activities (Lake Claire resident interviews, 1999-2000). Affordance for these activities is explained by the room geography of the common dining room: its large dimensions as well as its abundant lighting, ease of access, sturdy materials that take wear well, and light-weight furnishings that can be moved at will. In this sense, the small size of the homes—at 89.1 m2 (990 SF) smaller than the typical American single-family home[2]—discourages large gatherings at home. Conversely the small size of the homes affords extensive use of the common house, and the opportunity for socializing it carries. Furthermore, locating the common house toward the street cul-de-sac allows visitors to easily approach the building and thus this eases interaction with others beyond the cohousing community. Affordance for holding common meals, according to Blank (2001) the "glue that holds [the community] together," is provided also by having an efficient, commercially equipped kitchen; additional opportunity for socializing across the group is afforded by the flexibility inherent in the seating arrangements of the common dining room.

**Affordances of the commons**

Observations found the two courtyards of the community, and in particular the east courtyard, to be the neighbors' favorite gathering spots. Under a behavior setting interpretation, the common house, and the system comprised by the two courtyards and

[2] According to the most recent national housing survey, the median for single-family detached homes in US is 153.2 m2 or 1,702 SF (US Census Bureau, 1999, Table 4-4).

the pedestrian street—that is, the commons—are the most central behavior settings of the community. That is, they are the most populated spaces, richest in activity, and with clearly established boundaries and behavioral programs (Bechtel, 1977; Bechtel, 1997). Such appeal may stem from their being conceived as public outdoor rooms—open spaces designed and furnished to afford a range of social activities (Alexander's pattern 69)—and particularly from their configuration. Alexander (1977) claims that bounded, focal—that is positive—spaces like these (pattern 106) are conducive to interaction. This layout also corresponds to the concept of *sociopetal* space—space that encourages face-to-face contact among its occupants—which research has shown to grant affordances for social interaction (Lang, 1987). However, the different characteristics of the courtyards, their edges and particularly their ground surfaces, afford different yet complementary activities. In contrast to the west courtyard, which has cement and gravel paving, stone-faced planters and fountain, and other "hard" features, the softscaped east courtyard, with its lawn, foliage rim, and grown tree—complete with a swing and tree house—is an invitation to play. Accordingly, observations found this space to be used intensely and spontaneously by children, particularly during weekday afternoons and on weekends. In addition, because it is also the sunniest and largest open space in the community it affords a range of outdoor activities for both children and adults. Doing yoga or drying wet tents after a camping trip, as referred in Chapter 6, are examples of these.

Because of the numerous opportunities for action afforded by the common house and the east courtyard, locating each one at opposite ends of the property attracts a flow of people who find opportunity to meet and socialize with others as they cross the commons. In this sense the common house and the east courtyard act as the activity

goals of a circulation system, which in response to the site's constraints consists of a single linear path or pedestrian street. Consequently, and since the circulation pattern of the community does not afford alternatives for foot transit within the community, opportunities for chance encounters are maximized along the path. Furthermore, feeding the people flow along the path directly from each of the units optimizes the operational distance, or degree of ease for reaching the endpoint goals, of the pedestrian street.

Most residents indicated being affected by this design. However, differences in residents' reactions to it illustrate that affordances are behavioral opportunities to which people respond based on their own interests and competencies (Gibson, 1979; Lang, 1987). Those willing to socialize regard this layout as a vehicle for interaction, claiming it eases socializing with neighbors. In contrast those less interested in social exchanges—self-reported introverts—indicated casual interaction along the pedestrian street tends to occur at times despite their wishes (Lake Claire resident interviews, 1999-2000). By expressing that this feature "nudges" or "forces" them to socialize with neighbors, they are admitting to identifying in the pedestrian street a strong affordance for social interaction.

Placement of entrance doors and fenestration towards the circulation spaces and courtyards afford additional opportunities for casual interaction as it allows meeting others as they come in and out of their homes. This is an important affordance for Lake Claire residents. Possibility to look from the dwellings toward the common house or the commons allows seeing whether there is activity going on and thus detecting opportunities to socialize, an affordance which is denied to residents whose windows are placed parallel to or against the vistas. Looking into the commons is regarded as an asset

for those seeking social exchanges, some of whom claimed that lack of such visual access curtails their potential for neighbor interaction (Lake Claire resident interviews, 1999-2000). However, some residents reported preferring the visual protection *not* looking directly into the commons conferred them (Lake Claire resident interviews, 1999-2000). These affordances are supplemented by opportunities for socializing that stem from the transitional spaces alongside the path, as well as from in-facing porches and doorsteps. Furnished with benches and chairs that indicate the activities afforded, these spaces—Gehl's soft edges (McCamant & Durrett, 1994)—invite refuge for rest and intimate conversation along with opportunities for prospecting—observing others.[3] Moreover, transitional spaces along the path create pockets of activity—Alexander's pattern 124 (1977)—affording niches for social interaction that may account for the vitality evidenced in the Lake Claire commons.

It is clear from this evidence that the design of Lake Claire Cohousing has carefully planned built-in affordances for social interaction among neighbors, thus contributing to one of the aspects that define a sense of community. This is particularly true of non-purposeful, spontaneous interaction. Abundant opportunities for unexpected encounters are specially afforded by the functional centrality of the common house—its activities, dimensions, location, ease of access, and interior design—as much as by the characteristics of the circulation path: its length, shape and its relationship with the buildings and spaces it serves. This concurs with Lang's (1987, p. 157) claim that "functional distance between units…and functional centrality of commonly used

[3] Prospect/refuge theory claims that people tend to prefer places that offer opportunities for observing others from a safe vintage point, and that these preferences are tied to satisfaction of basic biological needs (Scott, 1993).

facilities…are major predictors of the interaction patterns of people who inhabit residential areas." Yet affordances of the parking lot again illustrate that these are passive properties of the built environment that are intentionally activated by users. Grouped parking affords residents to meet others when leaving or arriving in the community by car. However, as the tendency among Lake Claire residents is to favor alternatives to automobile transportation, little activity was observed in the parking lot and few residents mentioned this feature as one conducive to interaction (Lake Claire resident interviews, 1999-2000). As a result, this affordance appears to be less significant for informal interaction.

Likewise, the built environment of the case study community appears to play a less decisive role regarding programmed, purposeful social interaction given that residents—to varying degrees—are committed to attending these activities and may be motivated to attend them even in the absence of environmental affordances. The evidence presented indicates that the Lake Claire environment affords these activities only insofar as it provides a fitting setting, and that again these affordances reside mainly in the characteristics of the common house, namely its dimensions, access, equipment and furnishings. On the other hand, the importance of these activities for favoring interaction within the group is illustrated by the fact that the common house was observed to lay empty during most of the weekdays—when no activities are scheduled. As residents clearly stated they do not make purposeless visits—they do not "hang out"—in the common house (Lake Claire resident interviews, 1999-2000), affordances in the common house are activated mainly for and by scheduled social interaction. This finding follows Lang's (1987, p. 162) assertion that "communal lounges afford opportunities for

people to meet but for this to occur there needs to be some catalyst. The catalyst may be an individual who brings people together . . . or a common activity or topic of discussion."

**Affordances for participation and support**

Similar observations can be made concerning the affordances for resident participation and expressions of support among neighbors. As described in chapters 4 and 6, Lake Claire Cohousing residents have a continuum of opportunities for participation in their community, from the early stage of forming the group, designing and developing the project, to participation in the daily operation of their community, its administration and maintenance. Observations indicate, and interviews confirmed, that there is no substantial difference in the extent of participation in community management due to resident seniority (Lake Claire resident interviews, 1999-2000). Though variations in the degree of participatory action were observed among and reported by residents, on the overall those who joined the community in the later part of the development phase or even after the project was completed currently participate of the community as much as others. Furthermore, latecomers indicated not feeling less a part of the community by not having participated in the development phase (Lake Claire resident interviews, 1999-2000). One possible explanation for this is that, as Ramsey noted (2000), "Lake Claire is a work in progress" and therefore current residents constantly have the opportunity to contribute decisions to the design. Examples of this are the opportunity to participate in the design, and actual construction, of the common house attic and workshop, in the landscaping, and in the common house interior design. However, the evidence suggests that there are no specific features, or patterns, of the Lake Claire Cohousing built environment that can be regarded as direct affordances or preconditions for participatory

action to occur. Instead, the built environment of Lake Claire Cohousing as a whole furnishes the motivation, the focus and the locale for these behaviors; thus it provides an indirect affordance for participation and consequently, contributes to sustaining a sense of community among neighbors.

A collateral issue concerns the size of the Lake Claire population. Resident interviews indicate that members of the cohousing consider their community to be somewhat understaffed for the amount of work entailed by running it (Lake Claire resident interviews, 1999-2000). This follows the prevalent notion that "a small community requires more compatibility, allows less diveristy, and requires a greater commitment from each individual" (McCamant & Durrett, 1994, p. 159). However, the researcher found Lake Claire Cohousing to be a well kept, socially active community, evidencing that despite this shortcoming, resident participation in community management is at least sufficient for meeting their needs. Furthermore the number of units in Lake Claire Cohousing[4] is within the range for optimal community functioning—13 to 34—according to cohousing standards. Behavior setting theory offers an explanation for the apparent discrepancy in these perceptions. Because behavior-setting pairs are by definition stable couples, *underpopulation* of a behavior setting, that is, having a slightly smaller population than that required for its optimal functioning, doesn't change its standing pattern of behavior. Rather it pressures the existing population into greater interaction and participation (Bechtel, 1997). Behavior setting research has found that

[4] As noted in Chapter 4, although there are a dozen units in Lake Claire, division of one unit into two flats and adding an annex to another puts the effective number of dwellings at 14.

> the inhabitants of underpopulated settings, in comparison with inhabitants of adequately populated settings, engage in more actions…, stronger actions . . . , more varied actions . . . , more centripetally directed actions . . . , and more actions that originate and terminate in other inhabitants . . . The picture that emerges is one in which the inhabitants of underpopulated behavior settings are busier, more vigorous, more versatile, more oriented vis-à-vis the settings they inhabit, and more interdependent (Schoggen, 1989, p. 202).

In other words, they tend to perform more roles and to assume a greater variety of roles; that is, they interact and participate more. Therefore when a behavior setting is underpopulated, as seems to be the case in Lake Claire Cohousing if considered a behavior setting in itself, the size of its social community—which relates to the size of the physical community—affords the intense participation people equate with a sense of community.

In a like manner as for organized interaction, supportive behaviors in Lake Claire seem to stem mostly from the residents' interest in, or need for, assistance. Again they seem to be afforded chiefly by the opportunity cohousing offers for developing a support network among neighbors, rather than from specific environmental affordances. However, expressions of support in Lake Claire Cohousing are also related to some patterns of the environment. Basic support of the community for its members is expressed, and in this sense afforded, by existence of a series of tangible and intangible features. These range from banning smoking from the common house—controlling indoor air quality to allow for better health, to provision of an indoor playroom that allows children a place of their own in the common house, to existence of a set of ramps that allow less able residents access to the commons. In contrast, basic support for life-cycle physical changes of the residents is not equally afforded. Some residents expressed concerns that the design of the community did not provide the necessary affordances for

"aging well" in the cohousing (Lake Claire resident interviews, 1999-2000), an admitted collective design oversight (Lake Claire resident interviews, 1999-2000; G. Ramsey, personal interview, Feb. 2000).[5] Complaints centered on the need to use stairs to the commons from the parking lot, to reach the common house and within the units, and on the unevenness of the paving in the east courtyard and the fire lane.

On the other hand, observations noted and residents availed the idea that proximity—and to some extent the layout of the community—facilitates expressing interpersonal support within the group of the form that tends to exist among members of an extended family or among close friends. Propinquity is also related to interaction, though as Gans (1967) showed, it is only one of many factors for the interaction between suburban neighbors. However proximity, and the opportunity for daily encounters that it offers, makes it easy for neighbors to be in touch with each other and therefore to detect opportunities to express their support. This is the case in Lake Claire, where the compact layout of the community further allows residents to visit each other without leaving the commons or crossing a street. In Lake Claire propinquity seems to afford solidarity and connectedness by making it easy to take warm food to a sick neighbor or to "keep an eye" on the neighbor's children, pets, or property. It affords toddlers to share a bath and neighbors to wear their robes when sharing a favorite late-night television show.

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[5] As explained by the architect, during the design phase the community did not include the notion of design for the elderly in its project agenda (G. Ramsey, personal interview, Feb. 2000); rather it seems that awareness of this concern—which the community is committed to addressing—has risen as residents mature. Lessons learned from the Lake Claire experience prompted Ramsey to incorporate more accessibility features—such as providing units with a bedroom and a full bath downstairs—in the design of East Lake Commons cohousing, in whose design he also participated.

**Affordances for unity**

Belonging to a group and feelings of being "part of something larger than the sum of individual relationships" (Shaffer & Anundsen, 1993) are alternate definitions for community. Though participation is credited with being the mechanism whereby the group coalesces into a whole (Fromm, 1991; 2000; McCamant & Durrett, 1994), group unity is afforded by other features of the community. Beyond having a common history—which is a direct result of the years spent participating together in the cohousing venture, and thus an affordance of the participatory process—legally sharing the property and managing it consolidates the unity of the group. So, as in the case of participation, the built environment of the cohousing community is in itself an affordance for the social integration of the group. A subtle reference to this unity is the use of a common architectural language for the buildings. Despite the overt customization of the units[6] keeping a similar scale, materials and details contribute to allow reading the different structures as a group, and to connote a sense of "we."

Existence of a common house is another reference to the cohesion of the group. Questions about whether the common house has a symbolic role—specifically, if it represents group unity, an indirect affordance for establishing a sense of community—were prompted from the literature review, as discussed in Chapter 2. Findings indicate that the Lake Claire common house is the largest and, initially, the costliest structure in the community (c.f. Chapter 4), therefore suggesting that the common house might have greater importance for Lake Claire residents than the other buildings. Holding celebrations, administration meetings, and other events of significance for the life of the

community in the common house make it functionally equivalent to a village's town hall. However, interviews indicated that, just like their Danish counterparts, cohousing residents do not consider the common house the most important building in the community,[7] but readily acknowledge the convenience of having it (Lake Claire resident interviews, 1999-2000). The conclusion is that existence of a common house is a bonus feature that affords the opportunity to carry out a series of activities that for lack of space or specific equipment cannot be performed elsewhere in the community. Though the common house may embody their concept of community, it appears that the importance of the common house to sustaining a sense of community is often overestimated in the literature.

A pertinent observation is that the idea of having a common house may be practical but not essential to the connectedness of a cohousing community. This notion may be anathema to the movement, but there are well functioning cohousing communities that for some reason do not have a common house. Considering the advantages and disadvantages of building an after-the-fact common house, Bruce Oldham—architect and founder of the eight-home Pine Street Cohousing in Amherst, MA[8]—ponders on the activities, unity and symbolism it may eventually afford:

> The question for us as a community is—will the substantial additional effort and commitment to achieve a common house have a proportional

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[6] Variations in the design of the dwellings provide variety and a village ambience, yet they are not substantial enough to compromise perceiving that the group of buildings—like those in a village—have a shared architectural style.

[7] Residents consistently answered that their own homes are the most important building for them. See Chapter six.

[8] We can speculate that need for having a common house is related to community size. The arguments presented above indicate that the main function of the common house is to provide affordances for activities that require large numbers of people to gather. For communities as compact as Pine Street Cohousing, this need may not be as pressing.

> increase in our community amenity? Will the effort and the end product bind us still more strongly? . . . Is it true, as Katie [McCamant] and Chuck [Durrett] believe, that the presence of the common house is the essential ingredient that distinguishes cohousing from a well-functioning neighborhood? (Oldham, 2000, p. 17)

The significance of the common house to a sense of community may be explained by the potential for social representation it carries. Cohousing media (c.f. Olson, 1992) and literature claim that the common house is the "heart of the community" (Hanson, 1996, p.132; McCamant & Durrett, 1994, p.40) or its "central structure" (Norwood & Smith, 1995, p. 392). Prescriptions for locating it centrally in the commons abound, which Lake Claire residents questioned when deciding to place their common house not at the center but at one end of the property (Lake Claire resident interviews, 1999-2000). Architectural analysis of the case study community revealed that physically, rather than the "heart" of the cohousing, its common house was akin to the "face" of the community—literally, its façade—an equally important metaphor.

Rapoport's non-verbal communication approach states that the different characteristics of the environment provide cues which individuals interpret as meanings, or indications for behavior, based on their acquired associations (Rapoport, 1982). Shared images of the house as the seat of a family may allow regarding the Lake Claire common house—as explained, designed and scaled to match other single-family cottages along the cohousing's street—as a home, and thus its owners as a family cluster. Having the common house face outward to the surrounding vicinity, and making it the image the community offers the world, affords associations with collectivity and community, and thence with the unity of the group.

## Community and Privacy

References to contrasting needs for community and privacy are plentiful in cohousing literature. Norwood and Smith (1995, p. 220) claim that "privacy is the issue raised most often by Americans who are considering some sort of community. . . . How to achieve ecological living and personal empowerment while maintaining agreed-upon levels of privacy, is a social organization and design challenge." Scanzoni also agrees that "from ancient times to the present, the single biggest problem facing collaborative communities has always been how to manage the inevitable tension between individual freedoms and group responsibility" (2000, p. 78). He adds that in particular for cohousing the quest for a balance between meeting individual household and group needs—freedoms vs. responsibilities—is always a constant and tortuous struggle. This dilemma seems to be shared by many in the cohousing movement (Olson, 1992) and appears to be an issue too in Lake Claire Cohousing though many, like Shaffer and Anundsen (1993, p.157), claim that part of cohousing's appeal arises from its ability to offer a "satisfying mix of dependence and interdependence, privacy and intimacy."

As noted in Chapter 6, the stepping of the buildings and the placement of fenestration and doors in them reveals that Lake Claire Cohousing was carefully designed so as to minimize possible threats to privacy. Though attached, existence of insulating firewalls between units lessens opportunities for auditory invasion into adjoining homes. Similarly, preventing alignment of bedrooms and other private spaces from different dwellings as well as averting direct views from one unit into another is achieved by stepping back the units along a row, and assisted by the customization options offered to Lake Claire homeowners. Reducing the number and size of windows on the south façade of the short unit row, which is compensated by having larger openings toward its back—

or north—façade was done as much for climate considerations as for limiting visual intrusion into the facing long unit row (G. Ramsey, personal interview, Feb. 2000). This solution, shown in figures 5-3, 5-4 and 5-8, allows the longer row of houses to feature its fenestration preferentially toward the north and grants its residents solar protection and visual access to the commons. At the same time it safeguards the homes from views from the parking lot and the street beyond it. On the other hand, stepping back the units toward the wider east end of the property, so as to increase the distance between unit rows as much as allowed by the site, is another measure that tends to forestall unwanted visual access to the dwellings.

However, these affordances for privacy are counteracted by negative affordances that stem from the need to meet other programmatic requirements of the cohousing, and illustrate the difficulty of reaching a balance between community interaction and privacy needs. Such is the case of the affordances of the pedestrian path. Whereas the glazing in doors and fenestration allows visual access into the commons and therefore affords knowing if some event is taking place or if there are neighbors available for interaction, it also allows passersby visual access into their neighbors' homes. Evidence suggests that this affordance poses privacy problems. Some residents were observed to draw curtains, shades, and other concealing devices to prevent visual access into their homes, and yet others were seen to use a range of behavioral strategies to discourage unwanted interaction. Other features of the pedestrian path create additional privacy conflicts. In particular, the sensation of circulating along the pedestrian street in the stretch where the width of the path narrows to just three meters (ten feet) can be aptly described as that of

being funneled through the community.[9] In addition, projecting eaves, furnishings and vegetation growth encroach on this passageway so that people circulating through it must pass each other very closely. Under these conditions, residents report feeling *compelled* to interact (Lake Claire resident interviews, 1999-2000).

Spatial and territorial behaviors, according to Altman (1975) the main mechanisms for achieving privacy, provide insight into the above observations. According to Gifford (1997), Altman's frequently quoted definition of privacy as "selective control of access to the self or to one's group" captures the essence of the concept. It stresses one, that individuals may seek privacy individually or with others; and two, that privacy refers to managing—selecting and controlling—access to self. In other words, privacy refers to the need to regulate information on, and interaction with, oneself through a range of sensory avenues (Gifford, 1997). On the other hand, privacy itself serves to meet universal human needs for security, affiliation, and self-esteem. More specifically, privacy gives the individual personal autonomy, opportunity to release emotions or to engage in self-evaluation, and options for several modes of communication and interaction (Gifford, 1997; Lang, 1987).

More specifically, Altman notes that privacy is a dynamic "interpersonal boundary-control process" that is set in motion to reduce any difference between desired and achieved privacy (Altman, 1975). Different circumstances—the setting, standing pattern of behavior and the cultural context—as well as an individual's personal characteristics determine the degree of privacy sought at any time. Desired privacy is reached through territorial modifications or changes in behavior, which include adjusting

[9] This sensation—a pattern of spatial expansion, compression and release—is the result

the interpersonal distance between interacting individuals.[10] Inability to reach desired levels of privacy due to physical constraints imposed by the environment—such as not being able to avoid others when walking along the pedestrian path or being visually invaded by neighbors looking into the dwellings from the commons—may account for the discomfort manifested by some Lake Claire neighbors (Lake Claire resident interviews, 1999-2000).

Of the three types of environmental features identified by Hall (1966), *fixed features*—Sommer's *hard architecture* (1969)—that is the unmovable, inflexible patterns of the built environment such as layout and walls, are the least amenable to alteration. Therefore in order to communicate and meet their privacy needs, people tend to manipulate the *semifixed features* or furnishings of the environment which by their very nature change very easily (Rapoport, 1982), or resort to adjusting the *informal features* of the environment—human behavior. The practices among some Lake Claire residents to add shades to, or plant bushes in front of, their windows, or to let neighbors know their privacy preferences, as reported in Chapter 6, illustrate this idea.

In addition, the force with which the space where the pedestrian street narrows in width drives people to interact is a particular case of community-privacy conflict. Reports that interaction is practically unavoidable in this space (Lake Claire resident interviews, 1999-2000) is the result of their being coerced by the environment into crossing others at distances so short that olfactory and tactile contact is unavoidable, especially when the vegetation at the path borders is allowed to overgrow. A possible

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of entering and then leaving a tight space between the buildings.

explanation is that Lake Claire residents feel unable to regulate access to their selves while circulating in this space, that is, that in this extreme situation, they cannot adjust their interaction distances. An unpleasant sensation of crowding in this place may ensue, that is, "when the privacy-regulation system does not work effectively, causing more social contact to occur than is desired" (Altman, 1975, p. 154).[11]

Furthermore, residents' appraisal that this pedestrian street passage "forces" them to socialize may be a reference to differences in the privacy expectations among members of the cohousing. Explaining the mechanics of spatial behavior for achieving intimacy equilibrium in an interaction, Aiello (1987) mentions that individuals develop personal expectancies for desired privacy. When their expectancies are not met in an interaction, individuals activate immediacy responses such as adjusting interpersonal distance, eye contact, and facial expressions. Altman (1975, p. 63) also notes that "personal space involves expectations about interpersonal goals, which are then related to distance and position in space . . . Personal space, therefore, deals with how people expect space to be used/" Mismatched interaction expectations, and even misreading of the heightened sensory stimuli brought about by confinement within the passage may be construed by some neighbors as a cue for desired interaction or as an indication that greater intimacy than intended is sought, leading to discomfort and feelings of lack of control.

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[10] Whereas too much privacy may lead to social isolation, too little privacy is an emotional threat (Malven, 1990) that can lead to perceptions of crowding, lack of control over one's environment, and even negative behaviors (Lang, 1987).

[11] Despite the high density of the community and the proximity among the buildings, residents did not report nor indicate through their behavior that crowding was an issue in Lake Claire Cohousing. This illustrates that also for these residents crowding is not linked to spatial density as much as it is linked to the experience of being overwhelmed by population (Bechtel, 1997).

**Privacy gradient.** Definition of a private space is another mechanism whereby people may achieve desired privacy levels. Different classifications[12] for territories were devised in the 1970s to represent the existence of a system of nested spatial levels from the individual outward, which include not only the portable personal space, but also geographically fixed territories that follow a *privacy gradient*. Private spaces are those closer to the self and include both the attached personal space and the central home territories, which are most associated with, and actively defended by, individuals. At the other end of the spectrum are the public spaces, which comprise all the behavior settings that lie at the periphery of the privacy gradient and which are not the subject of permanent territorial claims by the individual. Between these two extremes there are semi-private spaces, or territories owned in association with others, and semi-public spaces or territories that may be temporarily claimed by the individual despite being mostly open to the public.

Researchers agree with Newman's claims that existence of a privacy gradient provides well being and a sense of security. Aiello (1987) stresses that beyond providing opportunities for defense, the other fundamental function of spatial behavior—and thus of privacy—is communication. In terms of Altman's definition of privacy, existence of a privacy gradient provides well being because it allows managing the setting so as to ensure adequate degrees of intimacy for the desired interaction and levels of disclosure of information about the self. Alexander captures this idea in his pattern 127 "intimacy

[12] The most widespread nomenclature is Newman's (1972), however as used in this dissertation, the concepts included notions taken from later revisions by Porteous in 1977 and by El-Sharkawy in 1979.

> In any building—house, office, public building, summer cottage—people need a gradient of settings, which have different degrees of intimacy . . . When there is a gradient of this kind, people can give each encounter different shades of meaning, by choosing its position on the gradient very carefully . . . [whereas] homogeneity of space, where every room [or space] has a similar degree of intimacy, rubs out all possible subtlety of social interaction in the building (1977, p. 610).

As depicted in Figure 5-7 there is a spatial system in Lake Claire Cohousing that loosely matches the legal property boundaries of each individual dwelling. It represents a hierarchical organization of the cohousing spaces in a privacy gradient radiating from the commons, the community's internal public space—though in essence corresponding to Newman's semi-private concept—to the internal private spaces within the homes. In addition, the system of portals or gateways in place in the community provides additional non-verbal cues to set the boundaries of the innermost spaces.

On the other hand, the common house is clearly a semi-public space for the community, but it is private to outsiders. A series of transitional spaces, such as porches and decks, balconies and terraces, and allocated garden patches, are claimed by residents (or by the community, as in the case of the west porch, the common house deck, and the organic garden) to varying extents. This is evidenced by placement of physical markers such as outdoor furniture, ornaments, by landscaping, and by behavior. It is unclear whether these spaces are semi-private or semi-public. For instance, though garden chairs along the pedestrian path are, as a resident put it, "definitely owned" (Lake Claire resident interviews, 1999-2000), residents and even visitors like the researcher are welcome to sit on them and even to move them around the commons. Sitting on a neighbor's porch is also not a cause of concern for the owners, yet observations suggest that residents are aware of each other's property boundaries and tend not to infringe on them. A better understanding of their role is made by seeing them under El-Sharkawy's

classification (Lang, 1987) of “supporting” spaces that buffer between the “central” space of the home (or the common house) and the “peripheral” territory of the commons (or the surrounding neighborhood).

Though homes are private territories by excellence, it was observed that many cohousing neighbors leave their doors unlocked during the daytime or give other neighbors additional sets of keys to their homes. However, although access is in principle granted to others, there were no reports or observed events that indicated trespassing is an issue for the group. This suggests that strong indicators of privacy—the norms established for the setting program, physical markers and other behavioral cues—are in place in Lake Claire Cohousing. In addition to the dwellings, the backyards are the other intensely private spaces of the community. Those to the back of the north house row, though unfenced, occupy a narrow strip between the homes and the cohousing property boundary; those toward the rear neighborhood street are enclosed between locked fences. In either case, backyards are only accessible through the individual homes, which clearly defines access rights.

**Personalization.** Territoriality allows meeting basic human needs related to privacy, among which are security and identity. Regarding the latter, Lang states: “Identity—which is associated with the needs for belonging, self-esteem and self-actualization identified by Maslow—is the need to know who one is and what role one plays in society" (1987, p. 148). Researchers suggest that personalization, that is, marking a territory for communication and defense purposes by placing personal objects, decorating it, and otherwise customizing the space to reflect occupation, is the territorial behavior that best suits expressing identity. As noted above, semifixed features of the

environment are the ones that more readily allow communication and thus are ideal vehicles for self-expression. This is the sense of Gehl's demand for the creation of "soft edges" around buildings (Gehl, 1987). In addition, following her assessment that the house is a mirror of the individual's self, Cooper Marcus (1995, p. 8) claims that "more and more, I found…that it is the movable objects in the home, rather than the physical fabric itself, that are the symbols of self." Rapoport (1982, p. 92) provides an explanation for this finding. Adding to their susceptibility to change, he points out:

> In our own culture, there is another possible reason why semifixed-feature elements may be more important [for communication], which has to do with the difference between designers and users…Users, it is suggested, may be much more interested in decisions about furnishings, arrangement, and the like…Thus in our own culture, both in domestic and nondomestic situations, semifixed-feature elements tend to be used much—and are much more under the control of *users*; hence they tend to be used to communicate meanings.

Observations in the case study community suggest that personalization is a widespread behavior. Opportunities for self-expression—in essence, an affordance for personal support—were initially afforded to residents through the participatory process and thence by incorporating it as part of the standing pattern of behavior. This entails engaging the residents in an on-going process of creating a festive "village look" for the community through personalization of transitional spaces and backyards, and particularly, of their front façade and entrance doors. Different door types and colors, hanging holiday tree lights on vegetation and doorframes, as well as an assortment of furnishings, garden sculptures and wind chimes characterize the community—and thus personalize it—as a whole. However, they are also used for expressing individual stylistic preferences—some have abstract or "designer" ornaments while others feature

more expressionistic (casual, artistic) artifacts—and territorial possession of outdoor spaces, and lastly, for establishing privacy levels.

Personalization of doors as evidenced in Lake Claire Cohousing captures the importance of threshold in arousing interest and marking the transition between spaces with different degrees of privacy and territorial control (Lang, 1987; Rapoport, 1969). In contrast, the entrances to, and semi-public spaces around, the common house show significant difference. There is little evidence of personalization in these territories; they are sparsely furnished and lack the profuse ornamentation that characterizes similar spaces in and around the dwellings. The ambiguity expressed toward considering the common house as personal property (Lake Claire resident interviews, 1999-2000) may be at the root of this behavior. Cooper Marcus found that in shared households where residents are not the owners, residents personalize their private rooms but the communal rooms tend to remain un-personalized; whereas in shared households where the communal rooms are perceived as being others' property, residents may feel tension unless property is clearly established (1995). It is suggested that the individualism conveyed through personalization is not compatible with collective ownership of the common house, or that residents are at odds to express a collective self. Unable to include objects that comprehensively represent the group, these territories remain un-personalized.

Issues surrounding the exterior colors of the house rows and the interior design of the common house lend some support to this interpretation. The experience had during the development phase, as reported by residents, indicates the difficulty of finding a color scheme that pleased all. Though the community brought in a consultant to advise them

on this issue, not everyone was pleased with the final results. Later on, when deciding on the colors and ornamentation of the communal dining room and kitchen, residents decided to take a different approach and voted their preferences out of a selection of proposed artwork, but again there was some discontent (Lake Claire resident interviews, 1999-2000; Lake Claire residents, c. 1998; G. Ramsey, personal interview, Feb. 2000). During the research period, participant observations indicated that there is still some divergence among residents' assessment of the common house interior design: whereas some are comfortable with the casual ambience that stems from having an eclectic mix of furnishings and ornaments in the common house, others regret not having a carefully designed look. Some manifested being affected more than others did by the inability to express their preferences in this territory to which they have ownership—and thus occupation and self-expression rights—and attempted to alleviate it by donating furnishings to, or placing favored objects in, the common house. Not personalizing the territories surrounding the common house is then, a third strategy that clearly avoids conflict, yet it misses on the affordances for conveying to others information about the people who inhabit the community.

**Feeling Safe in the Community**

As described in Chapter 6, residents report feeling safe in the cohousing community, and specifically that the commons is a safe environment for themselves and for their children (Lake Claire resident interviews, 1999-2000). This perception is confirmed by observed behaviors such as unsupervised school-age children playing in the commons, unlocked house and vehicle doors, and the usual practice to leave personal objects—toys, household items, pieces of clothing—outdoors overnight. The information

available on criminal offenses for the Lake Claire/Candler Park area though largely informal, indicates that despite people's perception that the bordering Dekalb Avenue corridor is a threat to the neighborhood, no major crime has taken place there throughout the cohousing's existence (c.f. Lake Claire Neighborhood Association, 2000). Furthermore, there is no history of crime in the cohousing other than a couple of bicycle thefts or minor car breaks (Lake Claire resident interviews, 1999-2000).

Architectural analysis of Lake Claire Cohousing suggests that the layout of the community and the strategic placement of doors and fenestration, as well as the existence of transitional spaces around the commons provide affordances for safety within the community. The buildings—dwellings and common house—create a protective barrier that contain and shelter the commons. Doors and fenestration have most vistas into the commons and thus provide plenty of opportunities for informal surveillance of the grounds and any ongoing activity, as does the existence of transitional spaces or activity pockets from which adults can perform unobtrusive control of the commons. However, residents reported that the few incidents had have taken place in the parking lot, a space not only closer to the transit corridor, but also where lack of "eyes on the street" make its surveillance difficult. Residents also report that implementing simple behavioral strategies such as leaving car doors unlocked and not leaving valuable objects in plain sight has prevented further occurrences (Lake Claire resident interviews, 1999-2000). It was also observed that the cohousing lacks gates at all but one of its entry points. The only gate in place, what this dissertation calls Gateway 4 in the northeast corner of the site, does not feature security hardware. As a result, the community is freely accessible

to anyone, or as one resident noted, there are no “real barriers” to prevent eventual trespassing (Lake Claire resident interviews, 1999-2000).

**Defensible spaces.** Defensible space, Crime Prevention Through Environmental Design (CPTED), situational crime prevention, and environmental criminology are independently developed theories based on mutually supporting concepts (Schneider & Kitchen, 2001) that include the role the environment plays in facilitating or in discouraging crime. Strategies to create defensible spaces follow the work pioneered by Newman in the 1970s that states that crime prevention is connected to territorial behavior. Particularly, that “in areas characterized by high rates of crime, the major factor determining resident feelings of physical security is the extent to which they feel they can exercise territorial proprietorship and physical control over their surroundings” (Malven, 1990). The more recent CPTED and other environmental crime prevention design strategies elaborate on Newman’s work to include behavioral constraints, event management and the “timescape” of criminal opportunity. However, human territorial functioning is a major factor for all of them.

Environmental crime prevention design strategies indicate that in order to create defensible space, territories should be clearly designated, defined and designed for crime prevention (Hutchinson, 2001). As a general approach it is recommended that territories be divided into small, clearly defined zones that follow a privacy gradient from the most central, secure spaces to the public areas with unrestricted access; that these areas be defined and their access be controlled through symbolic or physical barriers, which may include security hardware; and that informal—and if needed formal—surveillance of the

territory be possible. These strategies capitalize on territorial behavior theories, on the premise that

> A strong sense of territoriality encourages the individual to take control of his or her environment and defend it against attack. A sense of territoriality is fostered by architecture that allows easy identification of certain areas as the exclusive domain of a particular individual or group. This feeling is enhanced when the area involved is one the individual can relate to with a sense of pride and ownership (Gardner, 1995).

As noted, the design of Lake Claire Cohousing takes a defensible space approach. It features a system of space defined by changes in pavement, vegetation, and personalization, which allow expressing ownership and different levels of resident control over these spaces. Common areas are easily surveyed from the buildings thanks to the location of doors and fenestration and assisted by abundant—though not uniform[13]—lighting during nighttime. A series of barriers—some physical like locks, or the buildings themselves, and some symbolic like the four gateways—restrict or indicate restriction of, access. Though there are no gates to the commons, buildings and storage rooms are protected with security hardware, and one unit features an alarm system. It is significant to note that violations have occurred in the areas where these strategies are not effectively implemented.

A key issue to understand the implications such design strategies have for a sense of community is the idea that "*fear of crime* is greater than *fear* of *crime,*" that is, that fear of crime is statistically more widespread and more frequent than crime itself (Taylor, 1987, p. 975). It may even be even more damaging for a sense of community. Taylor also notes that disrepair and incivility, problems at the low end of a disorder continuum leading up to vandalism, theft and violent crime, are also more common and more

recurrent than crime. Associations that events along the disorder continuum are equivalent or that they naturally tend to escalate, usher feelings of fear and a host of negative behavioral responses. This is particularly true if uncivil behaviors are prevalent in an area or if they are close to individuals' homes, or if inferences are made that because there is social disorder residents are personally threatened. Research has found that under these circumstances people tend to withdraw, interact less with neighbors and use public spaces less (Taylor, 1987). The conclusion is that fear of crime, or lack of feelings of safety, can erode a neighborhood's sense of community.

**Broken windows.** Though territorial behaviors play a part in this process, territoriality, if understood as the animal urge to "lay claim and defend a territory" (Hall, 1959, p. 146; see also Sommer, 1969) does not provide a satisfactory explanation. Rather, the social dimension of territorial behavior as "the relationship between an individual or group and a particular setting, that is characterized by a feeling of possessiveness, and by attempts to control the appearance and use of the space" (Brower, 1980, p. 180)[14] explains the link between fear of crime and community decay, or "the process whereby one broken window becomes many" (Wilson & Kelling, 1882). The broken window analogy refers to the mechanism that leads from order maintenance to crime prevention, and conversely from fear of crime to community breakdown and to the "anxiety now endemic in many big-city neighborhoods" (Wilson & Kelling, 1882, p. 31).

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[13] One CPTED strategy is to provide uniform levels of light to avoid creating shadow pockets where possible violators may hide (Gardner, 1995).

[14] Brown (1987) lists 17 different definitions of territoriality, classified in two groups, those that emphasize occupation and defense, and those that stress organizational or attachment functions. Hall's and Sommer's fall in the first group, Brower's in the second. Recent definitions embrace both aspects, yet favor the latter.

Broken window theory states that if one window is broken and not repaired, soon all windows will be broken, that is, that disrepair is interpreted by people as an indication of lack of ownership—no one cares. The opposite stands, that tended property is indicative of emotional and financial investment and tends to be related to likelihood that it will be actively defended. According to Wilson and Kellig, the lowering of communal barriers or loss of a "sense of mutual regard and the obligations of civility" (p. 31) is an invitation to disorderly conduct and further vandalism, which in turn changes residents' perceptions of the safety of the neighborhood. Residents modify their behavior in response to a feeling that crime is on the rise: participation and interaction decrease, and as a consequence informal social controls of the community are weakened, and the community becomes in fact more vulnerable to crime.

This theory concurs with research findings that "at the level of the primary territory, studies of living environments demonstrate that the long-term stability of the residential environment system is related to the establishment of territoriality" (Brown, 1987, p. 518). It notes that the prevalence of lack of territorial markers and other indications of ownership, identity and occupation, as well as lack of defense, are non-verbal messages that cue residents to avoid these territories and seek the protection of central, protected spaces. Seclusion results in lessened use of interaction spaces and their affordances for social exchange. It also makes these spaces less defensible. While research suggests that residents believe territorial markers to be crime deterrents, and furthermore, that the more territorial markers the stronger will be the defensive response of the occupants; other studies provide some indication that non-victimized sites do have

more territorial markers and signs of activity than do sites that have been subject to crime (Brown, 1987).

Taylor (1987) offers an alternate explanation for this process in terms of behavior setting theory. On the premise that a stable neighborhood meets the criteria for a behavior setting, it stems from considering that territorial behaviors are informal means of social control or of enforcing the norms established for a setting's standing pattern of behavior. Personal markers and other territorial cues communicate to outsiders the behaviors expected in the setting, whereas territorial reactions of the setting population are the mechanisms whereby deviant behavior is vetoed or countered. Territorial behaviors are expressed more strongly in the spaces that are more central to the individual and his or her household, and weak in public spaces that have looser behavioral programs. Thus disorderly conduct is perceived as more threatening near home than it is in public spaces. It follows that absence of territoriality is akin to "the breakdown of an orderly setting program" and thus, that "fear of crime is a reflection of the loss of territorial control" (p. 975).[15]

Furthermore, Taylor suggests that disorder tends to occur in the interstices between behavior settings, where there is no clearly defined setting program. The contraction of established behavior settings brought about by the loss of territorial control expands the gaps between viable behavior settings, creates affordances for further uncivil conduct and beyond it, for crime. Other than lack of surveillance, being outside of the highly defined behavior setting that is the commons, is a possible explanation why the

[15] Research indicates that "in fact, at the block level, fear of crime and territorial cognitions reflecting a lack of territorial control correlate better than .7" (Taylor, 1987, p. 975).

few incidents had in Lake Claire occurred in the parking lot. Exclusion from the established behavior setting also explains why residents with backyards to the rear street believe these to be to some extent unsafe, and why residents in the corner unit where the transit corridor is closest are the only ones who have installed electronic security devices.

Regarding Lake Claire Cohousing, existence of designed crime prevention features provides some explanation for the feelings of safety manifested by the residents (Lake Claire resident interviews, 1999-2000). Yet implementation of defensible strategies seems to have not been consistent throughout, as evidenced by the lack of personalization of the common house—which nonetheless is protected by a privacy gradient—and by the lack of occupation signs in the backyards that front the rear street—which nonetheless feature enclosing fences. However, Schneider & Kitchen (2001, p. 24) aptly point out, after thirty years of implementing similar strategies still "the question comes down to being able to 'prove' that CPTED and defensible space interventions work to reduce crime."

Territorial behaviors expressed by the residents, and in particular personalization—which is so profuse in Lake Claire—may be another factor in creating a safe community. Brown suggests that "the very act of personalizing or caring for one's territory may create strong bonds of attachment to the territory" (1987, p. 519). Following broken window theory and Rapoport's (1982) non-verbal communication approach, it is suggested that tended and highly personalized property such as the case study community is, not only signals outsiders that the Lake Claire residents individually "care." It also sends other residents messages of reassurance that they all care, and thus that they are identified with the community and will collectively defend it against crime.

It is suggested that one resident's assessment that the safety felt by the cohousing residents stems from psychological factors rather than from physical restraints is correct. The conclusion is that as this resident noted, in their minds, Lake Claire cohousing residents have decided to feel safe in the community (Lake Claire resident interviews, 1999-2000).

Finally, absence of physical barriers to prevent access to Lake Claire Cohousing seems to run against defensible space norms. Research indicates that desire for a sense of community is the most important factor for erecting gates and walls in middle class communities such as this one, for whom "protection of property and property values" vis-à-vis fear of crime and outsiders is the prime motivation (Blakely & Snyder, 1995, p. 1). However, during the course of interviews residents stated that lack of gates in the cohousing was an expression of their desire to be an "open" community in all its connotations (Lake Claire resident interviews, 1999-2000; G. Ramsey, personal interview, Feb. 2000). This posture seems to endorse Blakely and Snyder's (1995) criticism that gated communities—primarily a metropolitan phenomenon—reflect America's "pattern of segmentation and separation by income, race and economic opportunity" (p. 1) and Scanzoni's claim that they symbolize "the determination of the 'haves' to maintain a lifestyle wholly separate and distinct from the 'have-nots'" (Scanzoni, 2000, p. 97). Moreover, that they tend to reduce participation of their residents in the larger social community and thus "this narrowing of social contact is likewise narrowing the social contract" (p.3). The decision of Lake Claire Cohousing residents not to feature physical barriers to access their commons is indicative of a deep understanding of the concept of community. Theirs is not an enclosed, isolated haven

where a sense of community is preserved from outside influence, rather it is a free, welcoming community committed to help create a safe and civil society.

# CHAPTER 8
# THEORY FOR COHOUSING DESIGN

As claimed in Chapter 1, this dissertation addresses the need to search for and explore new neighborhood models. It recognizes that our current patterns of housing, transportation and land use are mismatched to current needs, and that these patterns have ultimately failed to provide, nor foster, desired degrees of connectedness or community. Similar observations have been made recurrently, and especially from the 1970s on, about modern architecture and its inability to reach the social goals which were in its origins major concerns. Some observe that the widespread notion to regard design as a visual art has led to "excessive concern with form and shape" in detriment of function (Gifford, 1997). Others decry the prevalence of a narrow definition of "function" that focuses on efficiency but excludes a range of psychosocial human needs as well as a limited—organismic—model of human nature that values meeting physiological requirements such as the need for shelter above social needs (Lang, 1987). However, Lang (1979; 1987) specifically targets the discipline's theoretical basis, which he claims is still today underdeveloped despite the technological and formal advances made in the last hundred years. In addition, Lang claims that the still prevalent stimulus-response approach for modeling environment/behavior interactions that guided the Modern Movement has led to false assumptions and deterministic stances on the nature of this relationship.

> The result is that architects . . . often have assumed that because two variables are correlated, they are also linked causally. This has led to

> erroneous conclusions about the effect of the built environment on people. . . . Community facilities are said to create communities, parks to reduce vandalism, architectural unity to create social unity, architectural magnificence to lift spirits. Often these pairs of variables are indeed correlated, but to assume that they are linked causally without considering intervening variables is a foolhardy belief in architectural determinism (1987, p.11).

Lang concludes that in order to improve the knowledge base of the discipline, and to improve our ability to forecast the behavioral outcomes of design action, we must develop architectural theory. Theory allows us to substitute design based on knowledge for design based on belief; or at least as Neutra stated, to guide design by "tangible observations rather than abstract speculations" (Lang, 1987, p. 12). Results from focused research that explores, describes and explains the relationship between the built environment and human behavior make it possible to build positive and normative theory and therefore tend to increase the predictability of design action.

Environment-behavior theories are significant steps in this direction. Behavior-setting concepts indicate that human behavior, though inextricably tied to the physical configuration of settings, results from preceding human action to establish a behavioral program. Spatial and territorial behavior theories clarify that our use of space obeys to psychosocial and cultural factors that often override biological imperatives. Affordance theory reverts back to the individual the power inherent in space, that is, because affordances are inert properties of the environment, taking advantage of its invitational qualities is prerogative of the user. Such recognition that social and not physical variables are the major determinants of social patterns precludes any notion that there may be a causal relationship between the built environment and human activity.

The environment-behavior connection is particularly complex for housing. Jacobs notes that “there is no direct, simple relationship between good housing and good behavior" (Jacobs, 1961, p. 113).[1] This assessment becomes particularly significant in the context of cohousing. Cohousing is presented as an alternative to mainstream housing that can meet expectations for life with a sense of community. Furthermore, cohousing communities are purposely designed for social connectivity and support. The apparent success of cohousing as a satisfying neighborhood model—confirmed by the rapid dissemination of the concept throughout North America and projections for capturing ten percent of the housing market by its second decade (Durrett, 2000; Hollander, 2001)—lend credibility to this belief.

Yet further dissemination of the model may be curtailed if cohousing fails to deliver on its social promise, especially in light of the current interest in cohousing and the demand for its application in a variety of cultural and geographical milieux. The recent trend to build ready-made cohousing communities[2] that allow prospective residents to bypass the lengthy project development process central to the community-building experience is particularly suspect. Such formulaic approach sanctions the belief that there is a causal relationship between the existence of social contact design features

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[1] The Pruitt-Igoe public housing complex in St. Louis, MO is perhaps the most infamous example of the difficulty of predicting the behavioral impact of housing design. Initially considered a paragon of good public housing design, its demolition was ordered only two decades after its construction because its physical features—intended to improve the social patterns of its resident population—were by then believed to be alienating and a threat to their safety and well being (Alexander et al., 1977; Jacobs, 1961; Lang, 1987; Schneider & Kitchen, 2001; Weisman, 1992).

[2] Trend-watchers have recently noted that as cohousing becomes more popular and demand for this lifestyle increases “enterprising developers are already considering creating prepackaged ‘cohousing’ and inviting community-starved suburbanites to move (Hollander, 2001, p.4).

in a neighborhood, as represented in cohousing, and the subsequent appearance of supportive behaviors among its residents. Clearly illustrating Lang's concern, this strategy disregards the impact of a significant variable in the creation of community, namely opportunities to aggregate the group by working toward common goals, to learn essential communication skills, and to develop a common history (Fromm, 1991; 2000; McCamant & Durrett, 1994; Olson, 1992; Shaffer & Anundsen, 1993). Furthermore, it weakens the cohousing concept by lessening the scope of resident participation. Deprived of much of its action component, cohousing is reduced to just other attempt at creating community by design.

In contrast, residents of "traditional" cohousing communities such as Lake Claire Cohousing in which participation in the development process is substantial, clearly assign a greater value to intentionality and action and in consequence do not center their social expectations solely on the design of their built environment. Still, they are embracing the idea that that the physical shape of their community is a major factor for achieving a sense of community, and crediting social contact design for it.

## Theoretical Considerations

Observations referring to the methods used in—and the scope of—this research, have risen upon its conclusion. The following observations are as much a reflection on the lessons learned from this experience as they are indications for further research aimed at contributing to the development of a positive, that is explanatory, theory for cohousing design in its two manifestations: procedural and substantive theory (Lang, 1987).

**Procedural theory.** It is proposed that a procedural theory for cohousing address not only the processes of praxis in the field (Lang, 1987) but also the process of inquiry

from which praxis may obtain directives. Practitioners from the design, construction and social disciplines gathered at the 1999 North American Cohousing Conference have already made a similar proposal. In this event cohousing professionals voiced the need of reliable data that might be used for understanding the cohousing market and fine-tuning the design and development processes, and thus for delivering a more satisfying product (North American Cohousing conference, personal communication, 1999). Concerns centered on the efficiency of the development process and the adequacy of the physical characteristics of existing communities, and it was specifically suggested that case studies and post-occupancy evaluations (POEs) be the means to arrive at this data. As a result, the following year The Cohousing Network announced having created a position for coordinating research efforts in the field (c.f. Olson, 1992).

A second observation stemming from this dissertation is whether the case study approach taken in this research allows generalizing the above findings to the wider category of American cohousing communities. As noted in Chapter 3 (c.f. Greenwood & Levin, 1998; Orum, Feagin, & Sjoberg, 1991; Sjoberg, Williams, Vaughn, & Sjoberg, 1991; Yin, 1994; Zeisel, 1981), the main advantage of case studies is that they explore an issue in depths not easily achievable by other methods, and thus are ideally suited to understand the multifaceted environment-behavior issues. It was also noted that, though clearly not "good science" to generalize findings from one case, individual case studies allow to detect relationships among factors, generate "persuasive arguments," and illuminate avenues for further research for the category of which the case is representative. Such has been the aim of this study.

Case studies appear to be particularly suited instruments for cohousing research given the liberty—vested in the cohousing concept—each group has to determine the makeup, goals, development, physical shape, and operation of their community. Shaffer & Anundsen note that "cohousing is a concept, not a blueprint. You can readily adapt it to urban, rural, and suburban settings and vary the form depending on the needs and desires of its members" (Shaffer & Anundsen, 1993, p. 158). The resulting community diversity makes it difficult to perform strictly comparative studies and conversely suggests the need to study each community as a unique example. However, the accretion of knowledge made possible through carrying out a collection of individual case studies can build up to a knowledge base from which solid inferences may be made about the category (Yin, 1994; Zeisel, 1981); a recommendation made here for cohousing research. Furthermore, it is suggested that successive case studies similarly include quantitative data on the social and demographic profiles of the communities and descriptions of the physical as well as of the social patterns observed, so as to compile the type of data that can be eventually quantified for statistical assessment. In addition, inclusion of architectural analyses such as the one performed on Lake Claire Cohousing allow describing these communities in terms that are most comprehensible and practical for those who will design and build them.

A final observation on procedural theory refers to the idea that, for cohousing studies to be an instrument for social change—as befits action research (Greenwood & Levin, 1998)—the inquiry process should be included into, and the researcher must be party to, the creation of a cohousing community. As has been claimed in this research, a study such as this one follows AR strategies. However, time, budget, and practical

limitations prevented this research to be carried out strictly as action research, which ideally entails a joint venture between interested individuals and willing experts to first identify and then research an issue, propose and implement solutions, and evaluate their success (Greenwood & Levin, 1998; Whyte, 1997). The disclaimer was made earlier that in the face of these limitations this researcher joined an AR process already started by the cohousing residents and their architect. In this process the problem—how to create a supportive community—had already been assigned a solution or working hypothesis: a supportive community is created through intentional action and social contact design. By taking on the role of an informed witness to this process, documenting and framing it in the context of a scientific discipline, the researcher lent the Lake Claire experiment the missing components for it to fully become action research. Therefore the AR circle was completed with the subsequent exploration of the effects of implementing the hypothesis, description and explanation of the observed phenomena, and assessment of its outcome.

**Substantive theory.** A second set of observations concern the scope of cohousing: what is cohousing, what does it exactly do for its residents and for society, and why and how does it do it. These broad questions represent the idea behind substantive architectural theory, which Lang (1987, p. 18) describes as being directed at describing and explaining "the nature of the phenomena with which architects and other designers have to deal in their work." Of these phenomena, the forms of application and further dissemination of the cohousing model have been concerns expressed recurrently throughout this dissertation and, as mentioned above, are pressing questions for the cohousing movement. They imply specifically questioning whether cohousing—or some variation of the model—is susceptible of application to a variety of social, geographical

and cultural milieux. This question is particularly important for those of us who believe cohousing may be a viable solution to the urban and social problems we currently face.

The use of the cohousing model to address the social and housing needs of different interest groups, for instance for elders, childless adults or for members of a given religion, has been debated often in cohousing circles (see Olson, 1992). Similarly, in the course of informal conversations with cohousing residents and practitioners during the 1999 North American Cohousing Conference, it was discussed whether cohousing could be easily applied for cultures that had household compositions vastly different from those for whom cohousing was originally intended. To this effect Kathryn McCamant mentioned to this researcher having explored the feasibility of developing a cohousing for a group of Central American families, and having been challenged by the need to consider the existence of live-in household workers (personal communication, 1999) . At the core of this issue are questions about the elasticity of the cohousing concept: how much can it be stretched in order to meet challenges such as this and still be cohousing? McCamant & Durrett are reported to state that having offered a new housing alternative, the challenge awaiting cohousing over the next ten years is exploring how far the terms of the housing debate can be shifted and in which directions it can be pushed (Hollander, 2001).

Accordingly, we need to explore whether the cohousing model can be used to advance other housing types to better match their residents' lifestyle aspirations,[3] or

[3] For instance, some college housing projects directed at students with families—such as the five family housing projects at the University of Florida—already include some physical features (grouped housing, common facilities, common grounds and a common house) of the cohousing model. The question posed here is whether these physical features could be enhanced and possibly combined with behavioral strategies to improve

whether lessons learned from the cohousing experience can have applications to other forms of housing to make them more egalitarian, more socially active, and more sustainable. A question that has surfaced for some time in cohousing circles is whether cohousing is in any way compatible with New Urbanism or neotraditional neighborhood developments (NTDs). Professionals gathered at the 1999 North American Cohousing conference (personal communication, 1999) debated this issue; it has also been the subject of articles in trade magazines (c.f. *CoHousing*, Fall 1997, Spring 1999) and of recurring discussions in the movement's listserve (see Olson, 1992). Along with cohousing, NTDs share goals for sustainability and creating a sense of community. Given that many design strategies are common to both models, the prevailing idea is that cohousing is a subset of New Urbanism and that understanding and applying New Urbanism design principles can lead to better cohousing designs. On the other hand, incorporating the lessons learned from the cohousing experience to planning and development towns and suburbs may be the way to deliver deeply connected communities. However, achieving this goal will entail not only revising the urban scale of these developments (Norwood, 1999) but also reconsidering the participation afforded to residents in shaping their social and physical community (Leach, 1999).

**Normative theory.** A final observation concerns normative, or prescriptive, theory or recommendations for design action (Lang, 1987). Consistent with the comments expressed above—particularly cohousing groups' right to self-determination—this dissertation follows the lead of McCamant & Durret's seminal book (c.f. McCamant & Durrett, 1994), and eschews presenting detailed design norms in favor of

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the quality of life of the student families and to meet demands for "greening" the

comprehensive explanations of a successful example. Direct application of design guidelines cannot provide the rich insight that can be obtained from exploring and assessing illustrative examples for their application to specific circumstances. Moreover, it is suggested that development of a normative theory for cohousing design is not in the best interest of the cohousing cause. Existence of universal normative guidelines may not only be difficult to compile, but their validity may be highly questionable. Reducing cohousing design to formulaic prescriptions again lessens the cohousing concept by endorsing the notion that there are clean, causal associations between cohousing design and expected residents behaviors and community connectedness.

## Intentional Neighborhood and Social Contact Design

The considerable and continuous reference to the principles of social contact design found in cohousing literature (Franck & Ahrentzen, 1989; Fromm, 1991; Fromm, 2000; McCamant & Durrett, 1994), and particularly the prescription of social contact design features as essential ingredients of cohousing, endorse the belief that specific patterns in the built environment are one variable for creating and sustaining deeply connected neighborhoods. Thirty years of cohousing experience in Scandinavia and ten in North America have confirmed these strategies as best practices—by inference that they are the best fit for the social interaction and supportive behaviors to which cohousing residents aspire.

Findings from this dissertation validate these assumptions. They suggest that, for the case study community, the existence of social contact design features—among others shared open spaces, grouped structures, peripheral parking, pedestrian circulation,

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university.

extensive common facilities, and a strategically located common house—contribute to creating and sustaining a sense of community among neighbors. However as discussed in Chapter 7, each of these features, and often their combination, do so through a variety of processes and with varying degrees of importance. Though this research has taken a qualitative, rather than quantitative approach, it may be inferred that the relationship between the existence of social contact features and the interaction, participation, support and safety evidenced in the community is by no means a linear correspondence. As stems from the above findings, psychosocial factors such as individual and collective motivation, commitment, and action—which, because they fall outside the scope of this research, have not been specifically evaluated—may be strong intervening variables.

In particular, it stems from this research that the social contact features present in Lake Claire Cohousing provide substantial affordances for interaction. This validates Fromm's (1991) coinage—and this dissertation's use—of the term *design for social contact* to identify these features, as it stresses their potential for affording social interaction more explicitly than does McCamant & Durret's *intentional neighborhood design* (McCamant & Durrett, 1994). To summarize, social interaction among neighbors of the case study community is invited primarily by the functional centrality of the common house and by the characteristics of the circulation system. Particularly it was noted that the centripetal design of the community, congregating activities in the common house, routing the pedestrian circulation along a sole path, and having a large indoor space in the common house that compensates for the small size of the dwellings, are strong affordances for informal, or casual, social interaction. Furthermore it was also noted the activities programmed in the Lake Claire common house further increase the

common house's affordances by acting as catalysts for formal, or scheduled, interaction. However, findings from this research indicate that the same design features that invite social contact are in some cases—such as in the shape, dimensions and vistas to and from the pedestrian path—at the same time negative affordances for privacy. The need to counteract these forces is solved in Lake Claire Cohousing through implementation of territorial controls, such as definition of an intimacy gradient, extensive personalization, or both, which allow individuals to control desired levels of privacy.

In addition, affordances for security are also clearly embedded in the physical patterns of Lake Claire Cohousing. The social contact design features seen in the cohousing clearly overlap with defensible space and CPTED prescriptions to provide territorial designation, a system of physical or symbolic barriers, and abundant opportunities for surveillance. The claim follows that the social contact design approach taken contributes to the development of a sense of safety in the case study community. However as noted, the process by which such features lead to this feeling involves not only the environment; in the case of Lake Claire Cohousing human territorial functioning—expressed chiefly through personal markers—appears to be a likely intervening variable. Because of their relevance to these two dimensions of a sense of community, namely interaction and safety, as stems from the Lake Claire experience, this dissertation suggests that personalization, privacy gradients,[4] and other territorial control measures should be added to the necessary social contact features for cohousing design.

[4] Though not explicitly included among their intentional community design features, McCamant & Durrett (1994) do include the need for having privacy gradients as one of the main cohousing design considerations.

Findings from this research also suggest that social contact design features as expressed in Lake Claire Cohousing provide indirect affordances for sustaining a sense of unity among neighbors. Group unity—the feeling of being part of something larger than themselves (Shaffer & Anundsen, 1993) complements and strengthens the operational definition of a sense of community embraced for this research. To this end, jointly owning and managing the property and having common goals and history are direct community unifying factors. In addition, the ability of the buildings to represent the group of cohousing members through its architectural image—an aggregation of similar, yet distinct entities—and existence of a common house, are also environmental affordances that allow associations with group unity and by inference, with a sense of community.

However, results from this dissertation suggest that affordances for participation and interpersonal support are less strongly conveyed by patterns of the built environment than are affordances for social interaction and safety. Positive affordances for supportive action are provided by the proximity inherent in Lake Claire's grouped housing and to some degree by the inclusion of accessibility features in the cohousing. Similarly, as discussed in Chapter 7, opportunities for participation are intrinsic to the cohousing concept, development process, and daily operation. Existence of common grounds and a common house in Lake Claire provide the locus for interaction and therefore provide indirect affordances for participation, and hence for establishing a sense of community among neighbors. However, this study found that aside from psychosocial factors, direct affordances for participatory action are tied to existence of the cohousing itself, rather than to specific features of its built environment.

The observation is that, whereas opportunities for social interaction and safety are included into the social contact features of Lake Claire Cohousing, participatory—and to a lesser extent supportive—behaviors tend to occur independent of the configuration of the cohousing environment. Rather, they seem to arise in this community out of the residents' motivation, or need for and interest in, these practices. It may be said that of the four dimensions of a sense of community, while interaction and safety are expressed *in* the physical environment of the cohousing, participation and support are expressed *about* the physical environment of the cohousing. Therefore, findings confirm it is the affordances of the social contact design features in their communities—opportunities to share and to reach out to others, to meet and to gather, to feel and be safe, to conserve resources or to socialize with neighbors—along with the competency of the residents to identify these affordances and their willingness to act upon them, that uphold their social project. This is a subtle, yet important distinction to make. It clarifies that even in the presence of a well-fitting environmental pattern such as Lake Claire Cohousing has been shown to have, psychosocial variables are decisive for behavior.

## Cohousing, Action and Social change

Hayden (1984, p. 40) affirms that "because the form of housing carries so many aesthetic, social and economic messages, a serious misfit between a society and its housing stock can create profound unrest and disorientation." Similar fears, already referred to in Chapter 1, to varying extents lie behind the quest for new housing and neighborhood models that has spawned New Urbanism, the formation of intentional communities, and cohousing. However, social researchers believe that a comprehensive approach is needed that targets not only the shape of housing but the shape of society and

its institutions, which inevitably asks for social change. Weisman (1992, p. 125) states that in order to "address the current misfit between old houses and new households" there needs to be first, a recognition of the changing makeup of the American family; second, a reconsideration of the spatial characteristics of the housing, to include flexibility, multifunctionality, and demountability; and third, the creation of social structures whereby the local community takes on many of the roles traditionally assigned to the family. Moreover, she notes that a major component of the problem resides in the physical and structural distance that exists between home and the sources of production and services. Therefore she demands that "it is an absolute necessity of modern life that our housing be attached to a network of community-based social and domestic services" (p. 119). Hayden (1984, pp. 226-227) further comments on the need to overcome the observed dissociation of the work and home environments by "domesticating" public space and by bringing the amenities and opportunities of the city closer to home, noting that "private life and public life, private space and public space are bound together, despite all the cultural pressures to separate them.

Underlying these proposals is the idea that current housing patterns discriminate against the traditionally house-bound members of society: women, children, the elderly, the poor and the incapacitated. The call for redesigning the domestic space is therefore no less that a demand for social and political changes to empower less advantaged citizens. It is tempting to think that cohousing has a social mission of this type, given that the support network that develops among cohousing neighbors tends to mutually serve a range of needs within the domestic domain. Furthermore, cohousing can take on and deliver a number of services—for instance, food production and preparation,

recreation, child and elder care, transportation—at the interface between the private spaces of the homes and the public spaces of the city: that is, within the immediate neighborhood.

However, researchers note that cohousing communities lack political or ideological mission (McCamant & Durrett, 1994) and prefer to concentrate on the very practical task of creating "a home and community that they can control, with problems they can solve, and issues on which they can reach consensus" (Fromm, 1991, p. 15). Scanzoni (2000) stresses that nor does cohousing pretend to substitute for government programs, but rather, that cohousing residents seek to include an additional dimension of connectedness into their lives, and assesses that

> although cohousing was conceived and born in the late 1960s, it was not designed as a means to further the long-term revolution in gender and family patterns . . . It is simply a practical strategy intended to reform some of the shortcomings of the 1950s family style—especially its social and spatial isolation . . . It is . . . highly pragmatic and non-ideological . . . And that is precisely the point. Aside from sustainability, cohousing holds little in the way of a social or political agenda (pp. 98-99).

Nonetheless cohousing may be a first step in the direction of social change; a step leading to a stage wherein the social revolution initiated in the mid-20$^{th}$ century can be completed to achieve total social equality (Scanzoni, 2000). This vision is embodied by yet another Scandinavian proposal, the New Everyday Life project (NEL) (c.f. Horelli & Vepsa, 1994; Research Group, 1991), which also includes the built environment of the neighborhood as a vehicle for reaching its goals. But in contrast to cohousing, NEL is directed toward enacting social, and eventually political, change. NEL envisions creating new types of neighborhoods conceived as "zones of productivity" that create and reward the tangible and nontangible productivity of its members (Scanzoni, 2000, p. 128).

Moreover, NEL neighborhoods are to be collaborative communities specifically geared toward developing partnerships between advantaged and disadvantaged citizens—Gidden's (1995) "positive welfare"—and thus to the production of fruitful social structures. "It is a structural setting—a situation—in which the genders could perhaps learn to hammer out the details of an alliance that furthers their own interests as well as those of their children" (Scanzoni, 2000, p. 128).

As a closing reflection of this dissertation research it is suggested that even if the cohousing movement—or individual cohousing communities—doesn't expressly seek to subvert the existing social order, its mission to "build community one neighborhood at a time"[5] carries the implicit intent to propagate some small-scale, localized forms of social change. The premise underlying this approach is that the personal and collective benefits had from a sense of community can be infused to the larger society along with dissemination of the cohousing model. A popular explanation is that

> regardless of the form of government and of society, most of our contacts from week to week and from year to year are these first-hand personal relations with people close to us. If these relations are fine, then the greater part of our lives is fine, and that fineness will constantly infect the community and all its social units beyond the community (Morgan, 1993, p. 213).

A more substantive explanation resides in the function of the supportive behaviors at the center of community connectedness. Supportive behaviors are the basis for building *social capital*, a system of shared social obligations and resources or "giving and getting" within the community (Scanzoni, 2000). Developing a social support network among members of a community creates a buffer that protects households from the

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[5] *Building community one neighborhood at a time* is the Cohousing Network's slogan (TCN, 1996).

effects of the natural and manufactured stresses that impinge on their lives, and become particularly significant in the "runaway world" (Giddens, 1995) of today. Furthermore, the process whereby supportive behaviors lead to social capital and thence to community connectedness rests on the impracticality to constantly tally given versus received favors, which compels support network members to keep participating in the exchange to keep receiving (Scanzoni, 2000).

As described, supportive behaviors evidenced in Lake Claire Cohousing indicate the existence of a sense of community. More specifically, they reveal the existence of a virtual favor bank in which residents invest and from which they derive social benefits in the form of emotional and practical help. Furthermore—supporting the suggestion that cohousing communities are a step toward effecting social change of the form proposed by NEL—these behaviors indicate the construction of positive welfare alliances within the community and among community members and disadvantaged citizens. Dividing one unit into two flats so as to make them affordable to residents with small incomes; sponsoring a refugee family; and donating weekend time to provide free healthcare to inhabitants of a rural community are examples of such partnerships. So is the widespread circulation of goods among the community. For example, this practice entailed a resident access to neighbors' bicycles and cars, as well as borrowing "ladder, power sander, books, toys, party clothes, eggs, soy sauce" and taking needed items from the common house giveaway pile: a pair of roller blades and "seven shirts, five pairs of pants, three pairs of shorts, a copy of Gray's Anatomy, and two antique Italian lamps" (Lowe, 2000, p. 34).

There is however, one other mechanism by means of which cohousing is influencing social change. Participation in community management and governance, and especially participation in the shaping of community has implications for granting residents social empowerment. Furthermore, it has ideological consequences. Lefebvre (1976, p. 31) states that "space is not a scientific object removed from ideology or politics; it has always been strategic . . . space has been shaped and molded from historical and natural elements, but this has [nonetheless] been a political process." This is illustrated by constant reference to pattern language as a source of inspiration and insight by cohousing practitioners (McCamant & Durrett, 1994; Ramsey, 2000). Its appeal may be due to it being able to express valid environment-behavior concepts in terms that make them applicable to design, but it also may be explained by Dovey's (1990) assessment that Alexander's theory represents a quest for a new environmental design paradigm. However as Dovey added, pattern language is also a politically laden design strategy:

> A good portion of the pattern language requires the erosion of capitalism as a prerequisite. While the exact forms of a necessary socio-political order are not clear it would seem to be at once socialist, egalitarian, non-hierarchical, non-bureaucratic, small scale, communal, and somewhat anarchic (p.79) . . . The pattern language as a whole implies an environment that reflects a bottom-up process, reflecting the diversity and raggedness of everyday life. It is an environment that is not compartmentalized nor rigidly ordered, controlled not from above but from beneath. It is an environment of gardens growing wild—pattern 172, of animals integrated into neighborhoods—pattern 74—and of mixed housing, commerce and industry—patterns 9, 48, 157 (p.82).

In allowing communities not to be single handedly shaped by planners and designers but through the collective effort of its residents, participatory design strategies in general transfer much of the weight of design decisions—and the leverage associated

with it—from the professional to the end user. The relevance of—and to some in the architectural disciplines, the threat inherent in—these design approaches lie in their potential for overriding professional practice and thus for subverting traditional social structures. However as Dovey notes, "in a global context of over a billion poorly housed people and massive unemployment, such a process may be the only one that is practical" (p. 82).

**Social and environmental sustainability.** Though Hayden (1984, p. 205) alerts that "architecture can't bring about revolution; spatial change by itself can't effect social change," the combination of intentional design strategies and participatory action offered by cohousing holds promise in this direction, and furthermore, it the direction of environmental preservation. Meltzer's [1997 #87; 2000 #29; 2000 #102] research already has shown that cohousing not only provides a ecofriendly physical setting, but also a social context in which pro-environmental attitudes are fostered and perpetuated. The Lake Claire case study confirmed these findings. Along with increased building density, energy conservation features, xeriscaping, and other physical features that granted it the 1998 AIA Georgia Sustainability Award, residents were observed to engage in a range of green practices that included recycling, reusing, composting, ridesharing, and organic gardening.

Concepts of *voluntary simplicity* and "stepping lightly on the Earth" (Elgin, 1993) are favored in cohousing circles (c.f. Olson, 1992) and often woven into the mission statement of these communities along with goals for achieving a sense of community (c.f. TCN, 1996). The Lake Claire "credo" states that

> We believe that how we live on a day-to-day basis ultimately determines the state of our environment and the community at large. We plan to

> create a community based on shared values and a common goal to live in community. We respect one another's differences as well as our commonalities, as we work to achieve a balance between privacy and community that will encourage personal development (Lake Claire Cohousing, 1992, c.f. Figure B-2).

Voluntary simplicity—"a manner of living that is outwardly more simple and inwardly more rich" (Elgin, 1993, p. 25)—entails careful consideration of the impact of lifestyle habits on interpersonal relations, the structure of society, and the health of the environment. It credits conscious decision or intentionality as the means to achieve personal growth, social equity, and ecological sustainability—like action science, this philosophy is founded on individuals taking responsibility for social change. Therefore, in contrast to those who live simple lives as a result of poverty or tradition, those who like cohousing communities embrace voluntary simplicity represent the spearhead of a movement of purposeful action toward social and environmental health. Dass (1993, p. 17) describes this outlook as the meeting of Eastern and Western knowledge, claiming that

> A cycle of learning is being completed. The time of withdrawal is moving into the time of return. The exploration of new ways of living that support new ways of being is a movement that arises from the awakening of compassion—the dawning realization that the fate of the individual is intimately connected with the fate of the whole.

Findings from this dissertation research allow proposing a conceptual model for cohousing, seen in Figure 8-1, which highlights intentionality as the driving force in achieving a sense of community and thence on countering the effects of the natural and manufactured risks (Giddens, 1995) that beset us. In this model, the social contact features that are the tools of intentional neighborhood design, coupled with the social intentions of cohousing residents, lead to the behaviors—social interaction, participation,

expressions of support, feelings of safety, and a sense of unity—that represent the existence of deep and responsible connections within the group, or a sense of community. This connectedness, however, has ultimate goals of leading toward a sustainable lifestyle in its two dimensions: social equality and environmental conservation. The shape of the built environment is therefore a significant component in this equation in that it supports, facilitates and represents the social intentions of the group. This is a deceptively non-ideological or apolitical approach. In addressing the construction of space and fostering simple living at the neighborhood level cohousing makes a strong comment on the shape of society and the well being of future generations. Furthermore, it conveys the idea that individuals are accountable for their actions and thus need to take action to create the sustainable world to which we aspire. In this sense, cohousing communities are in fact building community one neighborhood at a time, and furthermore, showing us how to build a sustainable future.

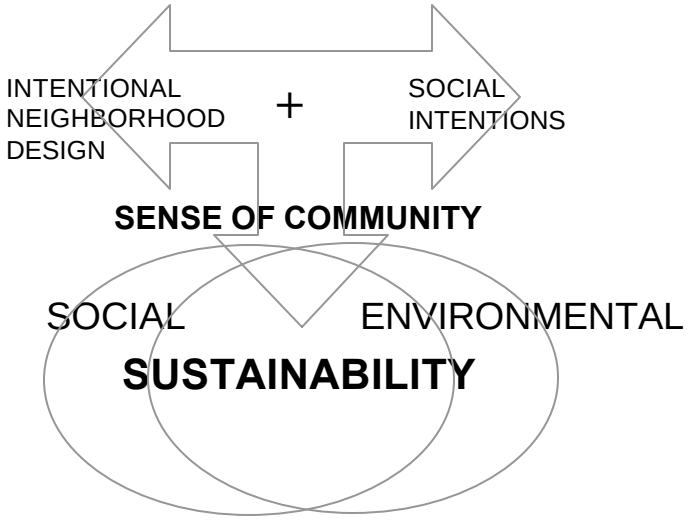


Figure 8-1. Conceptual model for cohousing

# APPENDIX A
# RESEARCH QUESTIONS[1]

As stated in the body of the dissertation, the main problem of this research is, to what degree and how does the built environment contribute to develop and consolidate supportive behaviors in a cohousing community? More specifically, this research asks, is the physical environment of a cohousing community to any extent a symbol, a vehicle or a catalyst for the essential behaviors and social interaction sought by its members? Or, to what extent –if any- and how does the physical environment of a cohousing community represent, encourage or channel the essential behaviors and social interaction sought by members of a cohousing community?

The following list of questions provided the structure for the interviews carried out with Lake Claire residents throughout this research[2]. Questions are grouped into thematic units that reflect the issues underlying the research, the rationale for which is explained based on the initial assumptions made in the dissertation. Questions progress from basic queries for establishing the kind of social behaviors that cohousing residents

[1] The specific questions and interview outline described in this appendix were approved by the University of Florida Institutional Review Board as per Protocol # 1999 – 771. For the purposes of giving the dissertation greater clarity, the order of the original questions has been somewhat altered, and some issues have been regrouped. The questions were asked during several visits between 1999 and 2000. Interviews targeted individuals as well as small groups to allow the opportunity for different degrees of disclosure.

[2] This questionnaire was used as a guideline or script for interviewing Lake Claire Cohousing residents and should not be considered a fixed list of questions such as those in a survey. Instead, they were used flexibly to allow the researcher to explore specific issues as they arose during the interaction. Also, because interaction with residents

report, to more specific inquiries on the impact of the cohousing architecture on them, as perceived by the residents. Hence, the first question is,

1. What are the essential supportive behaviors and social interaction sought by members of the cohousing community?

Cohousing literature at large mentions achieving "a sense of community" as cohousing's main quest. Fromm (2000) identifies as "community indicators" knowing neighbors names, talking with neighbors, looking after each other's children, receiving help with tasks and errands, and when ill; feeling secure, and participation in community management. The emphasis on meal sharing that is a defining feature of cohousing suggests the need to inquire about this as a desired social interaction among members of the community. Thus, the question continues, do –and to what extent- cohousing residents know neighbors names, talk with neighbors, look after each other's children, receive help with tasks and errands, and when ill; feel secure, participate in community management, share meals, and/or engage in any other supportive behavior?

2. Are particular physical features of their cohousing community considered in any way a factor in the development and consolidation of supportive behaviors?

The social contact design formula adopted for cohousing communities comprises, aside from grouped housing and pedestrian paths, peripheral parking, semi-private porches and front yards, common outside areas and a common house (McCamant and Durret, 1988; Fromm, 1991). This implies that proximity is thought to be conducive to propinquity, and that this in turn should somehow induce familiarity and supportive behavior. In other words, are –and if so, how- the community's grouped housing,

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included participant observation and experiences, the researcher was on occasions offered

pedestrian paths, peripheral parking, semi-private porches and front yards, common outside areas and/or common house features considered in any way a factor in the development and consolidation of supportive behaviors? That is, which of the above physical features can be connected to some extent to one or more of the specific supportive behaviors identified in a cohousing community?

Out of the possible answers, it is expected that the common house will be singled out somehow. This expectation is grounded on recurrent references made in bibliographic sources that assign the common house a significant role in cohousing community designs and suggest this is somehow the seat of the community. Reported activities held in the common house include community group meetings –both social and administrative-, shared meals, and child care; some communities also report holding workshops, cultural events, or other planned activities. Most communities report providing facilities in the common house for shared laundry and mail (McCamant & Durrett, 1988; Meltzer, 2000; Fromm, 1991; 2000). Informally gathered data suggests the need to include celebrations and planned recreational activities; these sources also suggest a trend toward providing some computer or office services for the community. So the third tier of questions is,

3. What kinds of activities are held in the common house? Are community group meetings –both social and administrative-, shared meals, celebrations, child care and/or planned recreational activities held in the common house? Does the community hold workshops, cultural events, or other planned activities in the common house? Do residents join for crafts, hobbies or handiwork in the common house? Do residents

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answers to some questions as part of an ongoing informal exchange.

perform some computing or office work in the common house? What is the average attendance at these activities? How frequently do these activities occur? How much is the common house –if at all- used as a sort of clubhouse or gathering place, or just to "hang out"? Which of these activities could be held elsewhere with similar results? And if so, where and how? Have in fact said activities been held elsewhere in this community, currently or in the past? Furthermore,

4. What is the perceived significance of these events? Do residents of cohousing communities place special importance on any of the activities held in the common house or do they regard any of these activities as essential to their way of life? And, why are these activities held in the common house and not elsewhere? More specifically,

5. What are the specific features of the common house that are seen to afford these activities? Are the fixed features of the common house, such as its location, dimensions, interior space allocation, layout, and surface materials particularly conducive to these activities? And are its semi-fixed features such as lighting and furnishings seen in any way as contributing factors to the development of said activities? Do the equipment, furnishings and decoration of the common house suggest that special care has been taken in its interior design?

6. What has been the impact of building the common house? What were the issues raised during the community design process in this respect? Do residents feel that some trade-off was required, such as sacrificing home unit space (and expense) in order to be able to build the common house? And, if so, how do they feel about this trade-off? What was the schedule for common house construction and what does it say about the residents' priority (or lack of) given to the common house?

Direct or implied references to the common house as the structure that symbolizes the spirit of the community are plentiful in cohousing circles (Olson, 1992) and literature (Norwood and Smith, 1995; McCamant & Durrett, 1994; Hanson, 1996; Fromm, 1991: see also the *CoHousing* journal). Therefore beyond inquiring about the practical uses of the common house, it is necessary to ask,

7. Do residents suggest that the common house is considered a) a landmark or reference point for wayfinding within the community or for the neighborhood at large; and/ or b) an extension of their private space? In this sense, are the boundaries between the private and public areas of the community clearly defined and do private areas intrude into the common house? Do the residents suggest that the common house is to any extent a symbol of their community?

Participatory design is another salient feature of cohousing (McCamant & Durrett, 198; Fromm, 1991; 2000). It suggests that the actual design of a community is fashioned -at least in part- on the residents' affordance needs and that it somehow corresponds with their notions on the physical environment of cohousing. However, it is possible to question whether the architectural design of the community has captured the residents' aspirations, or whether the built design reflects the particular views of the acting practitioner. The following group of questions explores this issue:

8. How has the development model of the community affected the design outcome? Has the correspondence between residents' needs and designer's intent been maintained throughout the development process? How and to what degree have the designer's preferences influenced the residents' decisions throughout the design process?

And, are residents satisfied with the results? What would residents change if given the chance to do it over again?

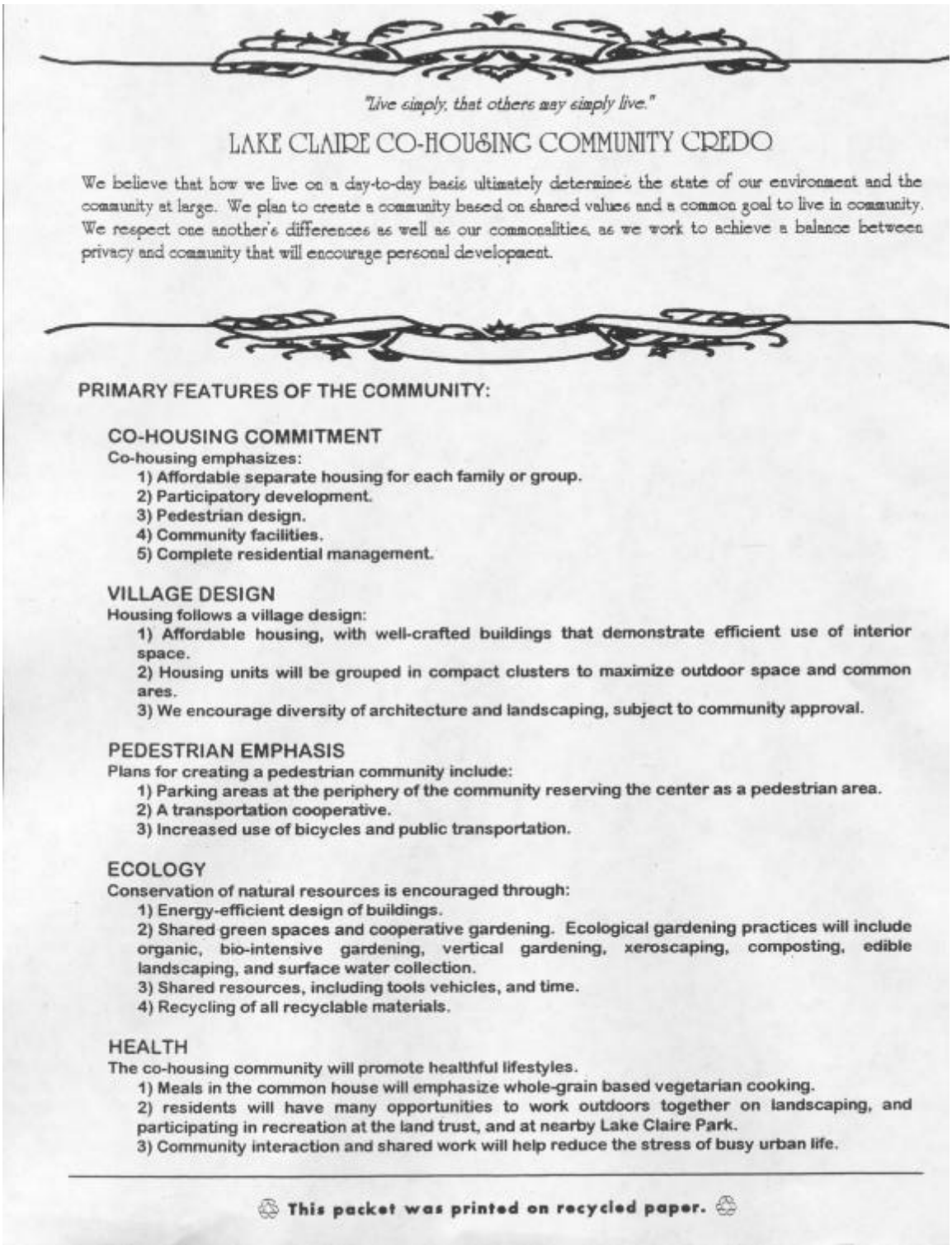
Finally, action research implies engaging the subjects of a study in a joint quest in search for answers to a problem (Greenwood and Levin, 1998). Consistent with the scope of this study as action research, cohousing residents will be queried for lessons learned. In retrospect, based on their experiential study of the cohousing model, can the case study community residents answer,

9. In general, how and to what extent are essential supportive behaviors and social interaction among members of the community represented, encouraged or channeled through specific features of their built environment? Does the design for human contact model facilitate development of a sense of community? Is proximity conducive to propinquity, and does it in turn induce familiarity and supportive behavior? In sum, what are the lessons learned?

APPENDIX B
PICTORIAL ESSAY OF LAKE CLAIRE COHOUSING[1]


Figure B-1. Lake Claire Cohousing sales board. Residents have kept it posted on one side of the common house as a memento of the development process. Notice the original sale price was between 80.000 and 110.000 dollars per unit in 1995-1996. The advertisement evidences how at that time the cohousing concept needed explaining.

[1] The following figures illustrate key issues discussed in this dissertation on the physical and social features of Lake Claire Cohousing as documented by the researcher during her visits to the community from 1998 to 2000.



*"Live simply, that others may simply live."*

## LAKE CLAIRE CO-HOUSING COMMUNITY CREDO

We believe that how we live on a day-to-day basis ultimately determines the state of our environment and the community at large. We plan to create a community based on shared values and a common goal to live in community. We respect one another's differences as well as our commonalities, as we work to achieve a balance between privacy and community that will encourage personal development.

### PRIMARY FEATURES OF THE COMMUNITY:

#### CO-HOUSING COMMITMENT

Co-housing emphasizes:

1) Affordable separate housing for each family or group.
2) Participatory development.
3) Pedestrian design.
4) Community facilities.
5) Complete residential management.

#### VILLAGE DESIGN

Housing follows a village design:

1) Affordable housing, with well-crafted buildings that demonstrate efficient use of interior space.
2) Housing units will be grouped in compact clusters to maximize outdoor space and common ares.
3) We encourage diversity of architecture and landscaping, subject to community approval.

#### PEDESTRIAN EMPHASIS

Plans for creating a pedestrian community include:

1) Parking areas at the periphery of the community reserving the center as a pedestrian area.
2) A transportation cooperative.
3) Increased use of bicycles and public transportation.

#### ECOLOGY

Conservation of natural resources is encouraged through:

1) Energy-efficient design of buildings.
2) Shared green spaces and cooperative gardening. Ecological gardening practices will include organic, bio-intensive gardening, vertical gardening, xeroscaping, composting, edible landscaping, and surface water collection.
3) Shared resources, including tools vehicles, and time.
4) Recycling of all recyclable materials.

#### HEALTH

The co-housing community will promote healthful lifestyles.

1) Meals in the common house will emphasize whole-grain based vegetarian cooking.
2) residents will have many opportunities to work outdoors together on landscaping, and participating in recreation at the land trust, and at nearby Lake Claire Park.
3) Community interaction and shared work will help reduce the stress of busy urban life.

**This packet was printed on recycled paper.**

Figure B-2. Lake Claire Cohousing statement of intentions or "credo". Used during the development process for publicity purposes, it outlines the main features of the project as well as the basic tenets of the group. Notice the emphasis on ecology and health appears early on and is carried to the type of paper used for the flyer.

Figure B-3. View of Arizona Street. Lake Claire Cohousing—formerly Arizona Street Commons—is located at one end of the street. Notice the residential character of the street and the scale of the homes.

Figure B-4. Cul-de-sac at the south end of Arizona Street. To the left is the Lake Claire Land Trust entrance; to the right (not shown) is the access to the cohousing community.

A

B

C

Figure B-5. Cottages on Arizona Street. A through C: single-family houses such as these are representative of the Lake Claire/Candler Park area. They date from the 1930s or 1940s and typically occupy 540 $m^2$ (6,000 SF) lots. Careful ornamentation and landscaping and the use of bright colors for the facades are evidence of the artistic, upwardly-mobile character of this midtown neighborhood.

Figure B-6. Community-based shops along McLendon Street. The Lake Claire/Candler Park area is a popular midtown recreation place. Crowds from all over Atlanta line up on the sidewalk in order to have weekend brunch in the bakery at left, three blocks north of the cohousing.

Figure B-7. Local commerce at Little Five Points. The lively urban village—known as "Atlanta's biggest alternative business center" (2000)—approximately 0.5 Km (0.3 miles) away from Lake Claire Cohousing.

Figure B-8. Dekalb Avenue on the southern border of the cohousing lot. Notice the width and continuity of the thoroughfare, designed for high-volume, high-speed vehicular traffic.

Figure B-9. Back of Lake Claire Cohousing toward Monterrey Street. CRX freight and MARTA mass transit trains run parallel to the lot on the south. Proximity to the train tracks generates unwanted traffic and noise.

Figure B-10. Southeast corner of Lake Claire Cohousing at the intersection of Dekalb Avenue and Monterrey Street. Notice the power lines overhead, the high-traffic thoroughfare and the vacant lot on the right-hand corner, showing the loss of residential character in this corner of the neighborhood.


Figure B-11. Entrance to Lake Claire Park. Along with the larger Candler Park, located eight blocks farther down the avenue, and the Lake Claire Land Trust, this city park—a wooded creek off of McLendon Avenue, five blocks northeast of the cohousing—comprises a unique system of in-city green recreational areas.

A

B

C

Figure B-12. Views of the Lake Claire Land Trust. A) entrance to the land trust from the Arizona Street cul-de-sac, showing the shed containing offices, storage and a public sauna room; B) fruit trees and swing; C) drumming circle with fire pit.

Figure B-13. Main façade of the cohousing, from Arizona Street. The west-facing porch and organic vegetable garden in front of the common house make the transition from the public city spaces.

Figure B-14. Parking lot. The buildings form a barrier toward the parking lot to detach the community from undesirable environs. The stairs and handicap access ramp to the left are needed to negotiate a 2.7 m (9-foot) level difference from the parking lot to the commons. Below the common house porch is garden equipment storage.

Figure B-15. Entrance to the cohousing parking lot from the corner of Monterrey Street and Dekalb Avenue. There are no gates or security devices that prevent access to the community through the parking lot.

Figure B-16. Lake Claire Cohousing garbage storage bins. The community uses only seven large bins instead of the 13—one bin per household—which would usually be filled. This illustrates the efficacy of the cohousing residents' recycling and composting efforts.

Figure B-17. Monterrey Street façade. The cohousing property features an open entrance to the parking lot and only a wooden fence along this border. Backyards are given minimum maintenance presumably to make them less inviting to strangers.

A

B

Figure B.18. Gateway 4: pedestrian entrance. A) from Monterrey Street; B) from the cohousing. A lightweight wooden fence with a spring lock under the terminal unit's deck closes off the property on the northeast corner.

Figure B-19. Entrance to the cohousing. The commons can be entered directly through the common house or through the fire lane, passing under the common house attic deck —Gateway 1—to the left of the building. Visitors enter the common house from Arizona Street, where non-resident cars can be parked.

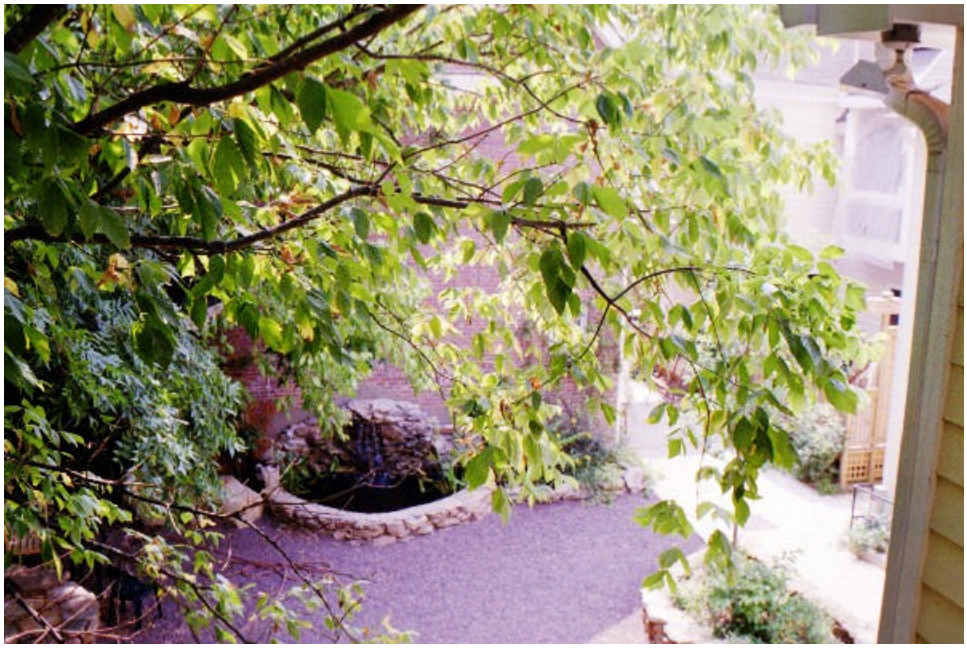


Figure B-20. View of the west courtyard hardscape from the common house attic deck. Surface materials are gravel, stone and concrete paving; vegetation is confined in stone planters; a fountain attached to the north row's side wall provides additional interest.

Figure B-21. View of the west courtyard upon entering the cohousing. The L-shaped common house (yellow building to the right) frames a small deck. Similarly lap-clad units continue in the south house row; the brick-faced north house row faces them at a three-meter (ten feet) distance.

Figure B-22. Gateway 3. Balcony from a south house row unit bridges the short distance between the south and north house rows.

Figure B-23. View from the west courtyard toward the commons under Gateway 3. A portal or gateway is defined under the bridge between the north and south house rows, enclosing vistas and signaling the passage to the private areas of the commons.

Figure B-24. View from the west courtyard to south house row. Forms and materials are similar for the common house (to the right) and the units, however, buildings are articulated to provide visual variety and human scale.

Figure B- 25. Entrance from the parking lot—Gateway 2—between the common house and the south house row. The unit closest to the common house was expanded by building over the air space between the buildings; as a result the existing passage was closed overhead, defining a third portal.

Figure B-26. View of the common house through Gateway 3. The common house closes off views at the west end of the commons; glazed doors to the common dining are the goal of the long vistas along the path.

A

B

C

D

Figure B-27. Pedestrian street views. Because there are no alternate circulation routes in the community, activity is maximized along the path. Width of the path varies along its length, with its most critical distance toward Gateway 3, where buildings face each other at three meters, or ten feet—figures A and C. Other factors affect the perceived width of the pedestrian street, such as seasonal plant growth (figures B and D), placement of furnishings and ornamental elements along the path, and human scale (figures A, C and D).

Figure B-28. Pedestrian path ending into the east courtyard. The form and texture of the circulation spaces become less rigid as the pedestrian path flows into grass-covered open areas. Buildings in the south house row are stepped back to widen the passage, and cement paving gives way to loose clay tiles.

Figure B-29. East end of the commons. The circulation path widens into a small paved patio that precedes the east courtyard, the largest open space in the community. Assorted furnishings, ledges, and shaded spots define pockets of activity around this area.

A

B

C

Figure B-30. Soft edges: transitional spaces around the commons. A) semi-private spaces are indicated by thoughtful placement of vegetation, building set backs, fences, furniture, and under projecting balconies. B) and C) small covered areas in front of the homes such as porches become comfortable resting areas and render the perceived building edge permeable to human activity.

A

B

Figure B-31. East end of the south house row. The cohousing building row bends at a right angle toward the east end of the property (Figure A), closing off the commons. The last three units are differentiated by their reddish color (Figure B); in addition, the terminal unit features a covered porch that provides further enclosure. A narrow passage to the left of this unit leads to Monterrey Street through Gateway 4.

A

B

Figure B-32. Play area in the east courtyard. A) softscaping features such as lawn furnishings, play equipment , grass coverage and irregular stepping tiles convey a notion of the activities that are possible in this space. B) the commons' largest tree provides support for a swing and a tree house, and shade during the warm season.

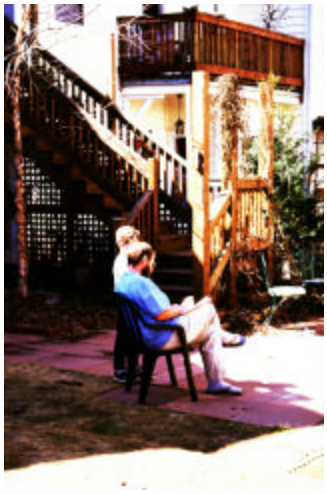
A

B

C

Figure B- 33. Winter activities in the east courtyard. A) through C) deciduous vegetation that provides shade in the summer allows low winter light into the units; while affording children to enjoy the sunny play yard during the cold season. Even in the wintertime, the east courtyard's softscape makes it the preferred place for the children.


A


B

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D

Figure B-34. Social interaction in the commons. A) through D) the commons support a variety of casual interactions among the members of the community. Transitional spaces open to the commons allow those who enjoy them to socialize with passersby or with others within visual range. Chances to meet others are increased by locating dwelling entrances toward the commons; opportunities for casual encounters are maximized along the pedestrian street.

A

B

Figure B-35. Views into the commons. A) fenestration of the south house row; B) view of the commons from a south unit kitchen. Abundant fenestration that opens views from the units into the commons allows parental surveillance. This kind of "eyes on the street"—one of the practices recommended by defensible space and CEPTED theories—make this a safe place for the children.

Figure B-36. Backyards of units toward the north border of the cohousing property. The north house row units feature few openings in their south façade (toward the pedestrian path) to prevent privacy conflicts; in contrast these units open their vistas to small private expansion areas in the back.

A

B

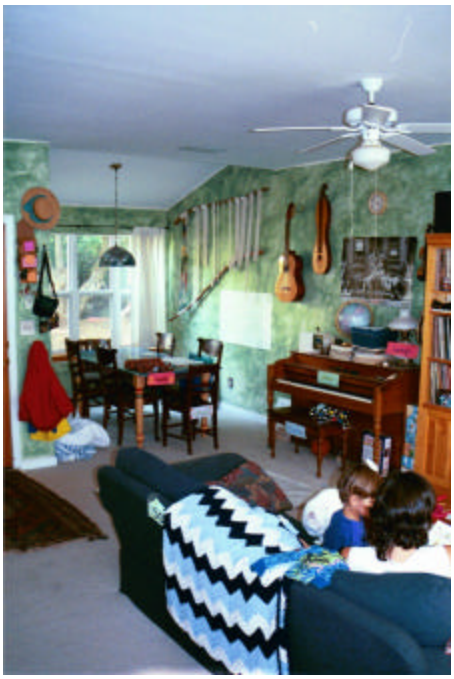
C

Figure B-37. Custom detailing of individual units. A) through C) during the design process owners had the opportunity to customize their units by making slight changes to the type plans and by selecting the number and placement of openings, and the existence and dimensions of balconies and overhangs.


A B

Figure B-38. Entry doors. A) to dwellings; B) common house front door on Arizona Street (left) common house side door, toward west courtyard (right). Dwelling entrances offer opportunities for customizing the façade to reflect the owners' aesthetic and privacy preferences. In contrast, the common house front and side entrances lack personalization.

A



B

C

D

Figure B-39. Dwelling interiors. A) through D) individual units come in four basic designs, some of which feature high ceilings, exposed beams, and open staircases. A variety of windows plus lack of partitions in the social areas contribute to create lighted, continuous interiors that seem spacious beyond their tight dimensions.


A

B


C

Figure B-40. Economy of space in dwelling designs. A) dwelling designs make the most of the space available as exemplified compact circulation and kitchens that open to the living/dining. Spaces under the sloping roof make convenient storage attics or guest alcoves, or are used as studios (Figure B) or home businesses (Figure C).

Figure B-41. Common house main entrance.


A


B

Figure B-42. Main entrance details. A) front door; B) welcome board announcing the dinner schedule for community meals. Though little used by residents, the door to the west porch is the main entrance to the common house; a second door (not shown) toward the west courtyard is preferred. Entrance to the common house illustrates the simple yet hospitable lifestyle embraced by the community; visitors are greeted with an invitation to share a meal with the neighbors.


A


B


C

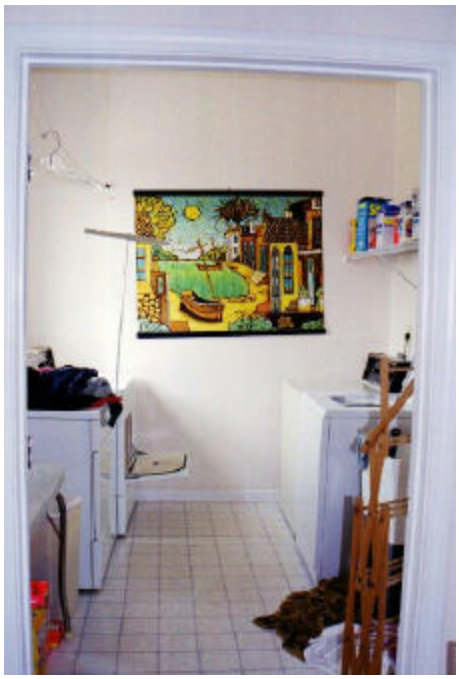

D

Figure B-43. Common house interiors. A) and B) children's room; C) laundry room; D) attic. A variety of uses are accommodated in the common house. Two thirds of Lake Claire households use the common house laundry; the children's room offers an indoor play area for the younger members of the community. The upper level of the common house is used as collective storage space, pending its final design.

A

B

Figure B-44. Common house attic deck. Future plans for the common house attic include reconsidering possible uses for the deck such as installing a jacuzzi or a hot tub. A) after a resident donated the tub, its location was chalked in on the floor. B) the jacuzzi rests in place pending installation.

Figure B-45. Seating area in the common dining room. There is no distinct living room in the common house; instead furniture—a rug, two sofas, a piano—is used to define a quiet corner where residents can relax.


Figure B-46. View of common dining room toward the kitchen. The dining area features a range of seating options that include round and rectangular tables as well as seating at the kitchen counter. Additional folding chairs expand the seating capacity of the dining room. The open kitchen design allows the kitchen to be spatially connected to the living room.

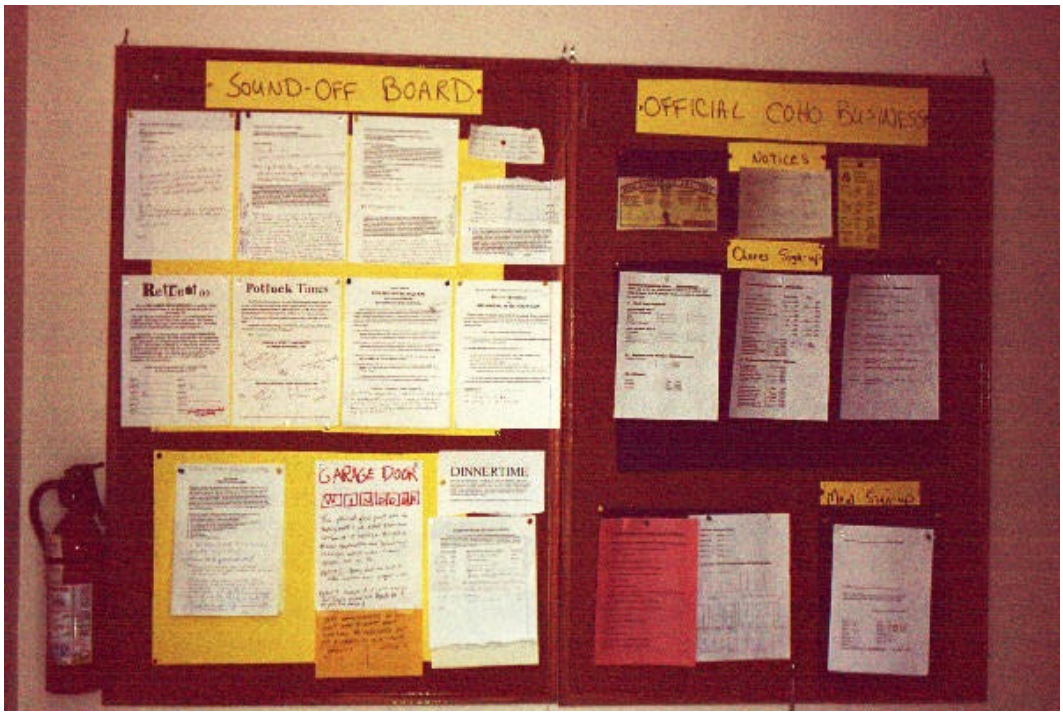
Figure B-47. Community kitchen. Industrial-capacity stove and oven, sink and dishwasher (not shown) facilitate preparing and cleaning up after large meals. Designated cooks can use an assortment of pans, kitchen utensils, and dinnerware that are kept in labeled drawers and shelves. Basic staples are kept in a cupboard under the common house stairs (not shown).


Figure B-48. Menu board. The menu is written on a board to the side of the kitchen counter to assist neighbors in deciding to join the group for the evening's meal. Prices are posted for large (adults) and small (children) people; non-residents pay slightly higher fees.

Figure B-49. Scenes from a common meal. Celebrations and ordinary common meals are held in the common dining room; crowds of 30 or more can be accommodated thanks to flexible furnishing such as lightweight moveable tables and folding chairs.

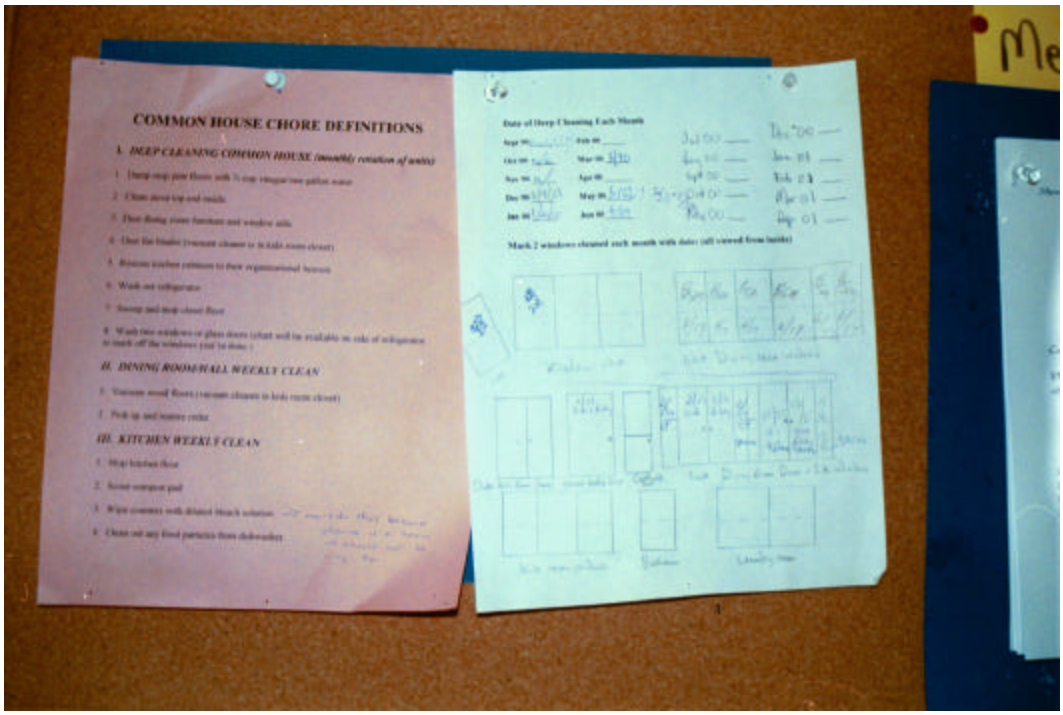
Figure B-50. Activity in the common house porch. The west-facing porch provides additional space for common house expansion; a large wooden picnic table and benches take the overflow when dinner crowds become too large.


A

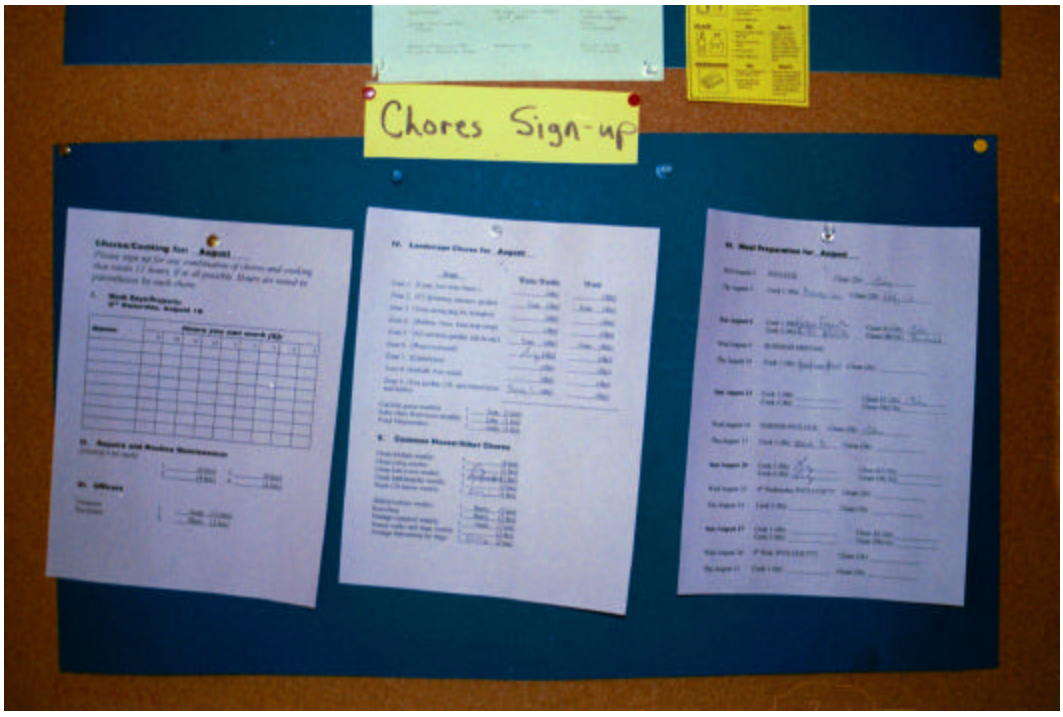



B

Figure B-51. Bulleting boards in common house lobby. The circulation space connecting the different areas in the common house—side entry, children's room, laundry, restroom, attic staircase, mailboxes, and dining room—is used as the community's communications hub. A) and B) boards placed on facing walls announce opportunities for participation, internal community issues, and general cohousing news.




A




B

Figure B-52. Bulletin board closeup showing chore boards. All adult Lake Claire residents must commit to 12 hours of any community-related work per week, according to their skills or preferences. Boards in the common house lobby describe chores requirements (Figure A) and allow residents to sign up and tally the group's efforts (Figure B).

A

B

Figure B-53. Residents working on common house maintenance. Chores typically include weekly common house deep cleaning such as tidying up the children's room (Figure A), preparing and serving meals, and washing dishes after a common meal (Figure B).

Figure B-54. Committee meeting at a neighbor's home. Small teams of cohousing residents, or committees, meet regularly to tackle specific aspects of community management. These may include coordinating community outreach efforts, planning activities, developing the community's newsletter, or organizing composting and recycling practices.

Figure B-55. Scenes from a community workday. Resident participation in workday activities is voluntary and counts toward weekly work quotas. Workday activities are usually directed at completing community landscaping or construction projects. Residents of all ages participate in project decisions and tasks, which may include gardening, building a fountain, or raking and bagging leaves.

Figure B-56. The researcher looking at Lake Claire Cohousing community through the lens of her camera.

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## BIOGRAPHICAL SKETCH

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Professor Torres earned her first professional degree in architecture from Universidad Simón Bolívar in 1977. She obtained a Master of Architecture degree from the University of California at Berkeley in 1982 with a grant from the Venezuelan government's Gran Mariscal de Ayacucho (FGMA) foundation. She became a Fulbright fellow in 1996 and is presently a member of the board of the Venezuelan association of Fullbright scholars (AFB). After the Fulbright Educational Exchange Program grant she received funding for her doctoral studies at the University of Florida through a fellowship from CONICIT, Venezuela's National Council for Scientific and Technological Research. While at the University of Florida she earned three consecutive academic excellence awards, including the 2000-01 Alec Courtelis Award for Outstanding Academic Achievement by an International Student.

Professor Torres began teaching in 1986 at Universidad Simón Bolívar, where she concentrated on theory and history of architecture. She continued as a graduate teaching assistant with the Department of Interior Design at the University of Florida, where she

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