

The relationship of past and present homerange for elderly residents in
low-income housing

by

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PREFACE

This thesis represents through a gathering of thoughts and ideas, my search to understand architecture and the larger context of urban design and what it has to do with everyday life. This study is concerned with the use and meaning of public and private spaces within a person's daily environment. The thesis examines how an elderly group of individuals in a low-income designated housing complex use the outdoor spaces near their home and within their community, whether they define the spaces as public or private, and if present use correlates to past use.

It is the main hypothesis that experiences with different spaces that a person gains over an entire lifetime directly affects the experience of space in a person's current everyday life. My primary aim is to investigate the complete environment of public and private spaces within a community that people interact and identify with on a day to day basis; to study the human side of architecture and urban design rather than merely treating the analytical side.

“When we treat architecture analytically, we miss the concrete environmental character, that is, the very quality which is the object of human's identification, and which may give him/her a sense of existential foothold. *Existential space* is not a logico-mathematical term, but comprises the basic relationship between humans and their environment”



Figure 0.1: Rural Boone County, Iowa 1984

Norberg-Schulz (1980, p. 5).

There are four specific qualities in my background that have profoundly affected this research. First, being the fourth generation in my family to be born and raised in central Iowa has strong implications for my sense of order, space and form. The Iowa landscape with its low, stabilizing, ordered ground plane spreads out to the horizon under the incredible expanse of sky, has affected my view of spatial orientation.

When I lived in Boston, Massachusetts, there were only two places I felt truly “at home”. One was the large cemetery in Newton Centre that spread for over a mile and the other was on the coast at Cape Cod. These were the only two places where I could see the expanse of the sky, the formation of clouds, and the flatter horizon that are an important part of the Iowa landscape.

Second, I hold a view of nature that integrates it and the built environment based on the physical processes that create both. People create their shelters, paths



Figure 0.2: Cape Cod, Massachusetts 1984

for movement, and spaces for play using natural materials and processes just like many other creatures in the universe. The primary sources for development of this view of nature are the writings of Henry David Thoreau, Ian McHarg in his book *Design with Nature* (1969), and the more recent work of Anne Whiston Spirn.

A quote from Anne Whiston Spirn from her book, *The Granite Garden*, explains the process of nature and its implications more clearly:

“The notions of nature as individual features like trees, hills, and rivers, instead of the underlying processes that give them form, is deep-seated and persistent, as is the belief that the city exists somehow separate from nature, rather than within it. This attitude has enormous consequences for how we design the city and how we address urban environmental issues. When the structure and form of the urban landscape are congruent with natural processes, cities will be more functional and sustainable. Such

cities will also afford an aesthetic experience of unity with the natural processes that sustain us, an experience that is essential for our survival as a species”

(Spirn, 1989, p. 112).

The third important quality I bring to my work is years of experience working with people who are referred to as “special populations” or “differently-abled”. After working directly with young children and adults in a variety of settings of every day life experiences, I strongly support an approach to planning, design, management and the supportive political legislation that can create accessible environments and buildings.

The concept of universal design is a better approach to designing spaces than meeting the handicapped accessible codes. Universal design suggests that designers can create spaces where anyone, regardless of their age or physical condition, can move through the space, and use instruments and vehicles independently. Also, accessibility should allow for visual and psychological access as well as physical access.

According to Edmond Leonard, Program Director of the President’s Committee on the Employment of the Handicapped in 1979,

“With proper design and construction of outdoor elements, increasing numbers of people in our society can be encouraged to lead more productive lives. In the past, provisions to assure barrier-free site design have been largely neglected. While this inadequacy has not been intentional, it is reality that handicapped people face daily. Those given the responsibility of shaping the exterior and interior environment should be aware of the design needs of all people.”

The social and political consequences of creating an environment or building that denies access and mobility to various populations based on their physical characteristics is “exclusionary design”. Exclusionary design should not be tolerated in a world that values, so highly, the rights of individual freedoms.

Finally, my strong background in fine arts and art history affects how I value aesthetic quality. Many of the streetscapes, public spaces, and architectural structures that form the communities that we live in fall below a minimum level of aesthetic quality. People in communities could strive to understand, define, then develop the level of acceptable aesthetic visual quality for the design of everyday environments.

The social activities that take place in public spaces when relationships are formed among community residents can be enhanced by design that has visually aesthetic qualities.

These four qualities form the base for testing ideas about architecture and urban design. Environments can be designed to help people accomplish their every day activities, develop and maintain relationships with others and form a sense of community identity.

“If the design professionals seriously accept a commitment to make life better for their human clients, they can not avoid the responsibility of creating situations where the people perform at their best because of their environment rather than in spite of it”

(Deasy, 1985, p. 11).

Revising Louis Kahn’s question, “What do buildings want to be?”, (Wurman, 1986) I would ask, “What do we want our cities to be?”

CHAPTER 1. INTRODUCTION

“Our cities must strive to maintain a balance between identity and change. The proper aims of a policy for making the city worthwhile again, and for rebuilding it as a place for living must therefore be to encourage a continuous metamorphosis whilst retaining the city’s identity. The sort of attitude which is hostile to all change, and which is motivated solely by historical or aesthetic considerations of secondary importance, leads inevitably to nostalgia, to uninhabitable conditions and finally to the death of the city”

(Tanghe et al., 1984).

The City

The city; it is a complex urban fabric of streets, buildings, housing and public open space with people living and interacting with their environment on a day to day basis. There have been many articles and books written on the subject of the city and the direct effects the city has on the people who live there.

The one overriding theme is that cities today do not meet the needs of the people who live in them. The built environment that people live, work and play in is falling short of the people’s requirements (Trancik, 1986; Gehl, 1987).

Architecture firms are increasingly emphasizing the environmental context of their buildings while planners, who have traditionally focused on the community as a whole, are increasingly interested in the placement of individual facilities. They unite in agreeing about the emphasis of the entire setting, nevertheless, the residents ultimately make their own determination about relating to the indoor and outdoor spaces.

This is especially true for residents who are elderly, whose lives are largely focused on their home (Altman et al., 1984; Regnier and Pynoos, 1987). Despite all efforts to create an attractive environment for them, each individual will ultimately determine how the spaces work. By creating a detailed picture of the residents everyday life, the design of spaces for residents may come closer to meeting the needs of the individuals.

Much of the literature on site planning and design of an elderly housing complex reveals that many designers view only the housing units and shared spaces within the interior of the complex as significant. A large percentage of the design work is directed to the interior spaces such as the individual units, shared lounges, dining areas, and community rooms. The larger site, neighborhood and community where the housing complex is located is often overlooked entirely (Regnier and Pynoos, 1987; Pastalan and Carson, 1970).

“Community spaces that are intended to encourage social interaction and community activities inside the building are often developed with little thought toward how outdoor seating and outdoor activities can contribute to the social and recreational needs of the residents” (Regnier and Pynoos, 1987). The authors suggest that more research is needed to understand the complexities of designing successful outdoor spaces and understanding the various spaces within the community that

could contribute to residents' social interaction.

The larger context of the neighborhood and the community where the housing complex will be located provides the setting for the residents' daily life. Time spent grocery shopping, going to church, attending social functions, and enjoying parks and other settings may be a significant part of the residents' typical week. The residents respond to the spaces they encounter as they move through the community completing their daily requirements for shopping, socializing, and working. Many spaces near the housing complex may have been overlooked in the design and planning stages. There may be left-over spaces near their homes that are not meeting the needs of the residents.

Also, in many cities, there are left-over spaces between buildings, roads and public places that create real voids. These voids are empty, intimidating, and usually scattered with garbage and other debris. Many buildings and the spaces around them don't seem to go together. People make their way through these spaces while doing their daily errands and chores. People have to look at empty lots overgrown with weeds, under used parks that look isolated and unsafe, and acres of concrete parking lots.

Many argue that the built environment is actually causing great social danger in daily lives because of its design (Newman, 1973; Gehl, 1987; Cape, 1985; Fried, 1963; Hayden, 1981). Buildings with long isolated hallways force people to walk to their apartment without seeing a single person. Separation and alienation can be reinforced by the design of the building and its placement on a site.

Many women in low-income housing projects who are single parents have complained to the authorities that they believe their housing is inadequate and tends

to isolate their families from the surrounding communities (Franck and Ahrentzen, 1989). Not only do the women feel their families are isolated but the women also state that they feel they have very little control over their environment and very little control over drug dealing and other crimes in the housing complex. The women feel unsafe in their home environment and unconnected to the larger neighborhoods (Franck and Ahrentzen, 1989).

Also, elderly people have stated that they do not go out at night as much as they would like because of lower vision capacity and because of concern for their safety. Not only do they limit their activities at night, some elderly people are limiting their travels in the daylight because of these same concerns (Regnier and Pynoos, 1987). In addition, several residents in a post-occupancy evaluation conducted by Galen Cranz (1987) responded that safety and security were important recurrent issues that limited their activities at their elderly housing complex (Regnier and Pynoos, 1987).

By studying a group of people to determine where they go and what activities they participate in, a designer could paint a more accurate picture of the needs and desires people have for public and private spaces outside their homes. The territory a person defines as his or her home, neighborhood, community and larger region to identify and use to satisfy his or her every day needs, desires and special occasions is called the homerange. The homerange that is identified and defined will be correlated to the identified past homerange in the individual's life.

It is the main hypothesis of this thesis that the experience of using public and private space that a person gains in his or her past homerange, directly affects the person's use of public and private space in the present existing homerange.

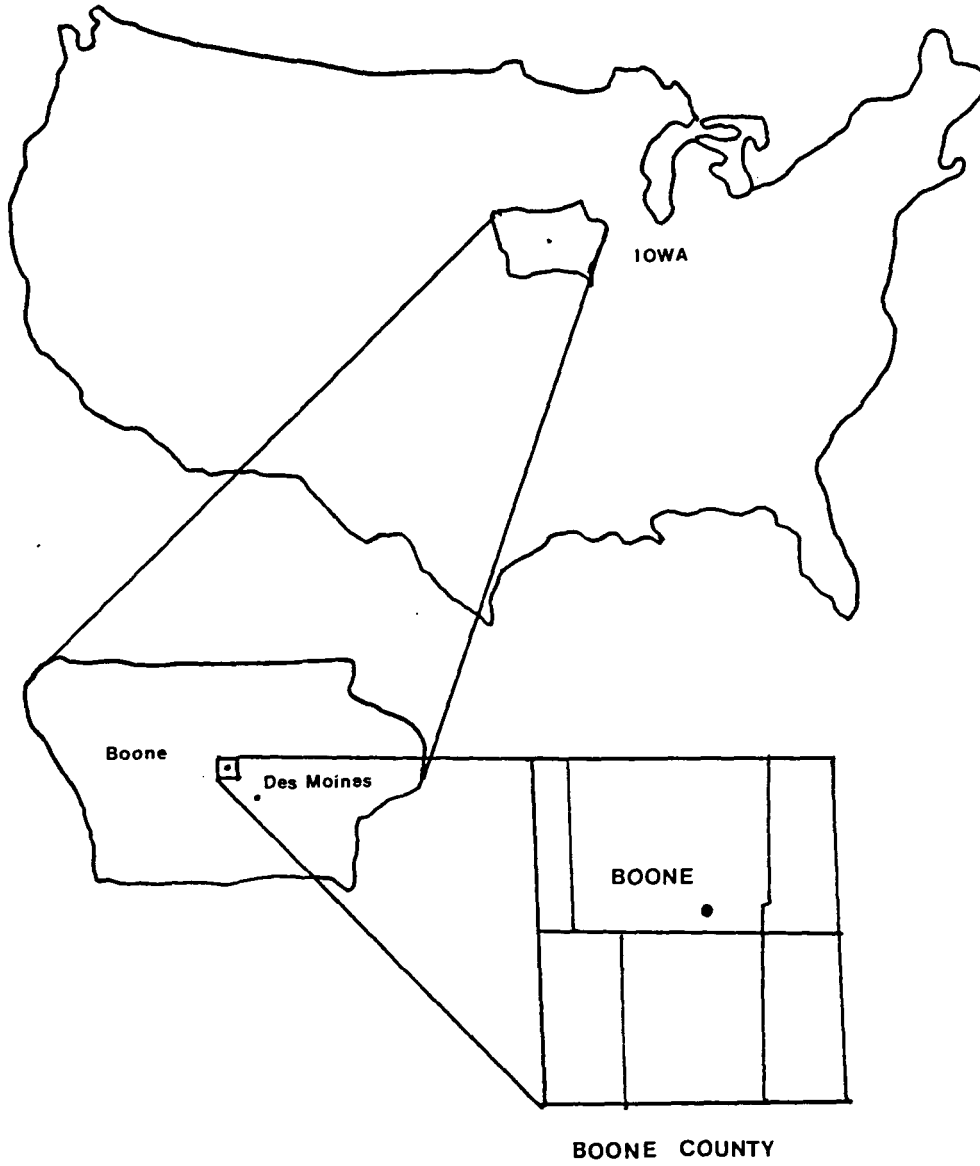


Figure 1.1: Study Site Boone, Iowa

This study is concerned with the identification of public and private space in the homerange, specifically with the identified outdoor spaces near the home and in the larger community. The study group consists of ten individuals in an elderly housing complex called Midtown Village, designated for people over the age of 65, located in Boone, Iowa (pop. 12,484).

There were many reasons for selecting this specific housing complex. The main reasons were the size and location of Midtown Village was adequate to study use of outdoor spaces, the management and residents were favorable to the study and the residents were all over 65 and had limited incomes.

This particular group of people was significant primarily because as a group of elderly, retired residents, their current homerange may be the last homerange in their lifetime. The majority of residents in this housing complex were born in central Iowa and have lived in or near the town of Boone the majority of their lives. This is significant because Boone and the surrounding region has been the setting for the residents' experience with public and private space for an average of fifty years or more.

Study Group

It is important to study elderly people in the United States because much of the literature that exists has concentrated on middle-income families with a husband who works full-time, a wife who works part-time or not at all in the paid labor force, and two young children (Despres, 1989). The fact that many diverse populations go unstudied is significant. The need to study diverse populations can add to the body of knowledge that currently exists.

This study concentrates on the elderly people that live in an elderly housing project in the small community of Boone, Iowa. This population includes many women living independently as heads of households, many differently-abled people, and many low-income people and are one of the many diverse populations that go unstudied.

Studying the elderly is vital because of three primary reasons: 1) the total population of elderly in the United States has risen dramatically and continues to rise, 2) designers tend to have misunderstandings about the elderly people, and 3) elderly people have a large proportion of low-income and differently-abled households.

First, the total population of elderly people is rising and will continue to rise dramatically in the next decade. The American Association of Retired Persons (AARP) estimates that in 1986 in the United States 29.6 million people over the age of 65 represented 12.1% of the total population of the country. This is an increase of 3.6 million people or 14% since 1980 as compared to only a 5% increase for the under 65 age group. Current estimates are that by the year 2010 a full 21.2% of the total population in the United States will be 65 and over (AARP, 1987).

In Iowa, for example, one out of every four residents is now 55 years of age or over. Iowa now ranks third in the nation with over 14% of its population over 65. The state is now first in the nation in terms of the percentage of the population over the age of 85 (AARP, 1987).

Along with these demographic trends is a growing need and mushrooming demand for housing alternatives. Alternatives are needed which allow individuals to maintain their independent values, personalities and life styles. Traditionally, attachment to the home is very strong in the older person with many living in the same

home for forty years or more (Pease and Nusberg, 1984; Pastalan and Carson, 1970; and Fried, 1963).

The second reason for studying the elderly is that many designers may have erroneous ideas about how elderly people live and what kind of environment best suits their needs. By working with elderly people to observe how they live on a day to day basis, designers will gain valuable insights that will be beneficial to the design process. Housing and the site designs that may be designated for elderly populations will be better suited to their needs.

The stereotypes that exist about the elderly can be broken down as a designer recognizes that many of the activities an elderly person does on a day to day basis are the same as the designer's day to day life. A designer may approach the design of outdoor shared spaces differently if the designer recognized the elderly person's needs for this type of space.

The design of the neighborhoods, parks and other public spaces may not be meeting the needs of some of the elderly residents that are located there. Studies on recreational planning show that many parks are designed with the needs of young children and young families, but teen-agers and the elderly are often overlooked in needs assessment (Cipriano, 1985). The design of a new elderly housing development can have significant impact on the residents if their day to day life is not understood by the designer, because the design could limit the residents' activities.

Finally, the third reason for studying the elderly is that the elderly people tend to have a large proportion of low-income and differently-abled households. The elderly populations in the United States have large range of physical capabilities, while many elderly people have full physical capability that has not diminished with age this is

not true for some elderly who have physical limitations that affect their hearing, sight, mobility and stamina.

“With people living well into their seventies, eighties, and nineties it may be expected that the opportunity for a traumatic injury or a debilitating disease during their lifetime is greatly increased” (Robinette, 1985, p. 4). Designers can use their creativity in the design process to design buildings and sites that take the needs of the differently-abled into account.

Studying the elderly involves studying the differently-abled because as people age, their stamina, eye sight, hearing, and mobility may be lessened or restricted. Many elderly people use aids for walking such as canes, walkers, or wheelchairs. The fact that the elderly make up a significant portion of the population, and the fact that everyone will be an elderly person someday should encourage the designer to understand how people of all abilities move within the built environment.

Direct understanding of the way a person uses their environment can add to the process of design to create public spaces that are more closely related to the person’s daily activities. One way to understand a person’s daily activities and needs is by looking at the person’s homerange. *Homerange*, for the purpose of this study, is defined as the physical space, or territory, a person identifies with and uses in his or her community and region to satisfy his or her basic everyday needs, desires and special celebrations.

By studying low-income and possibly differently-abled elderly residents in the United States and determining the physical space needed to meet their daily needs (their homerange), designers can develop creative solutions to meet their housing needs. In this study, many of the elderly residents that live in the Midtown Village,

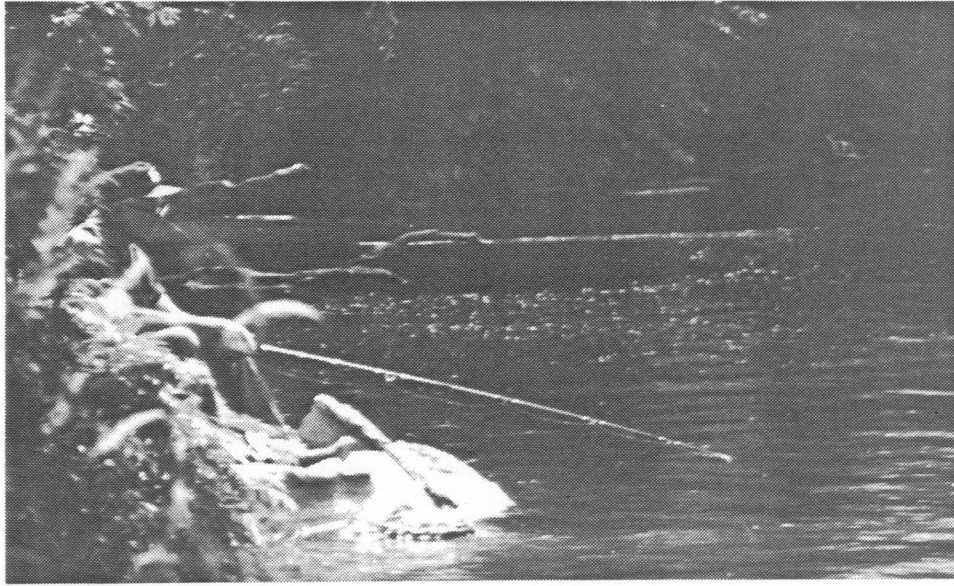


Figure 1.2: Fishing in Don Williams Lake, Boone County, Iowa 1984

are low-income. The residents live in one alternative housing type and by studying the homerange of the residents, knowledge may be gathered to inform the design of other housing alternatives and related site planning and design.

In an article on the education of architects, Robert Gutman (1985) argues that, “many architect students develop plans to be used by members of social classes whose expectations are different from groups, who, in fact, are likely to use them” (Gutman, 1985, p. 77). He continues to suggest that architect students tend to rely on symbols and signage, “without investigating whether the symbol systems really correspond to what the average citizen desires” (Gutman, 1985, p. 78).

However, there have been architecture firms that have adopted a participatory design process to better understand the needs of their clients (Alexander et al., 1987; ARC, 1985; and Garnham, 1985). By analyzing the people in the community that will be most affected by the built environment, designers must look at needs of the

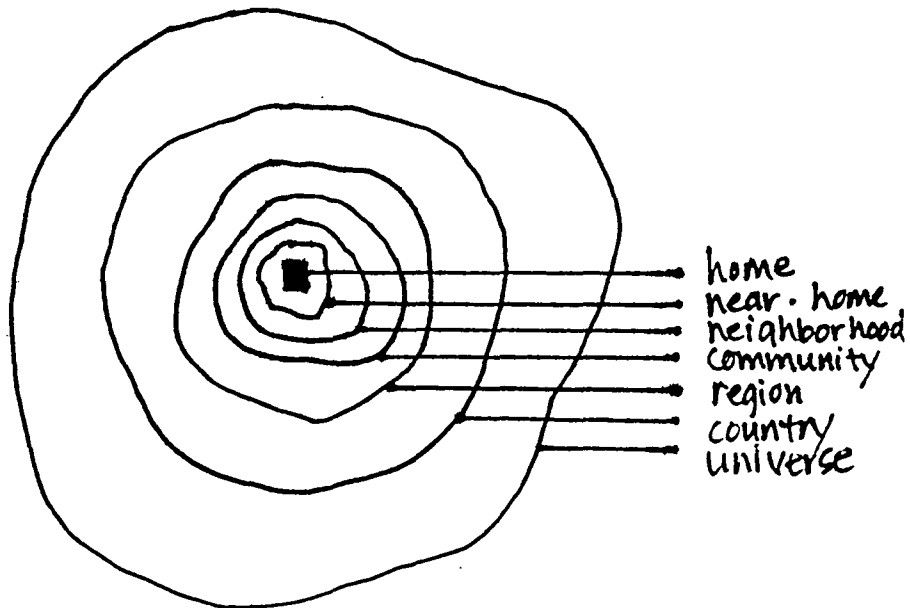


Figure 1.3: Spatial territory defined as homerange

people's daily lives and create the built environment to respond to these needs more directly.

This study will determine the homerange of the elderly people in the Midtown Village Housing Complex. The design of housing projects for elderly people may benefit from the information learned in this study. The information learned in this study may also help inform a designer to make decisions that will meet the people's needs better when designing an elderly housing complex.

Concept of Homerange

Homerange identified by a person can include the home, the paths they travel to and from work, the paths they travel to and from other places, and significant places people identify and use.

Homerange is the term that describes the intricately woven spaces of the home, the neighborhood, the community, and the region that a person identifies with on an even larger scale. “Wildlife biologists call the area over which an animal ranges its *homerange*-the area necessary to satisfy all of its requirements. This varies greatly among species and also according to the quality of the habitat” (Leedy et al., 1978, p. 11).

Many significant places people use as part of their identified *homerange* are their work place, shopping areas, churches, schools, parks, and social gathering places like restaurants, movie theaters, bars, and health facilities. Many celebrations or significant events that are located in a building or place are part of a person’s *homerange*. Events such as birthdays, weddings, funerals, family reunions, and school-related events like graduations and sport activities are held in specific locations that become places full of memories. These places become special to a person and are an important part of a person’s identified *homerange*.

In a broader context, the study of *homerange* could include many dimensions, for example, the concept of *homerange* does not have to be spatially grounded in a physical setting. A person may have needs and desires that are satisfied by watching the international news, keeping up to date in a professional organization by reading papers or exchanging messages on a computer, or even recalling past events that have been significant. A person’s *homerange* may include a series of international colleagues that are only contacted through the computer. The *homerange* could include these daily events that do not happen in a specific space.

It is important to recognize this non-spatially grounded aspect because of advances in technology that people in industrial nations face daily. There are many

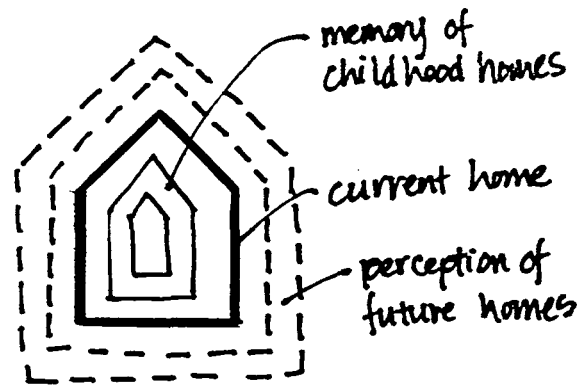


Figure 1.4: Concept of Home: a blending of past, present, and future

factors that could have an effect on the way a person experiences a space. The experience of the past homerange has been affected by many different factors. Age, physical condition, gender, education, income, and perceived social status may all have the potential to affect the way people feel about a space (Rappoport, 1969). For the purpose of this study, the homerange has been defined to include only the activities that are spatially grounded.

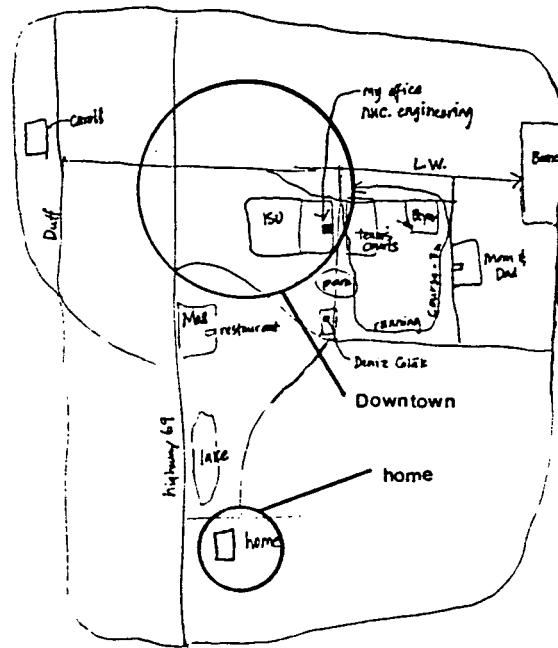
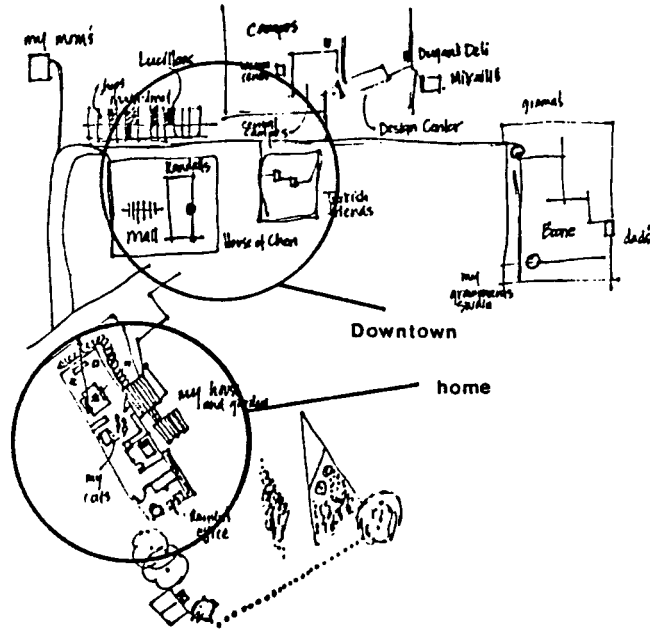
An interesting aspect of the concept of homerange is that memories of past events are an important part of the person's life. People carry their memories with them as they relocate to a new community. Clare Cooper-Marcus, at the 1989 EDRA (Environmental Design Research Association) conference, presented research on the concept of home. Her research revealed that many people have an image of their home that is a combination of memories of all of the homes they have lived in plus their expectation of future homes. This idea might be expanded to the way people identify and think about their community. People may create an image of their community that is a combination of memories of all of the communities they have lived in (Cooper-Marcus, 1989).

Perhaps even though they have moved and are forming a new physical space defined as their homerange, the person will still carry the memory of the previous homerange with them. Spaces that existed in the previous homerange that reinforce the identity of the person may be desired and sought after in the current homerange. This study investigates the concept of homerange as a spatial territory a person defines, identifies with and uses in their community to satisfy their everyday needs, desires, and celebrations. Does the past homerange influence the need to seek out specific types of spaces in every day life?

Figure 1.5 shows two images of homerange with each image created to express the territory that the individual identified with and used on a daily basis. The drawings were created by two individual graduate students who shared a residence in Ames, Iowa. The two drawings show some common ideas but are as unique as each individual. Studies on the concept of homerange are important as a key to understanding how individuals experience and identify with space.

Bloomer and Moore (1977) describe the ways of sensing space, particularly what they define as haptic sense, which is the sense of experiencing the environment by actually being involved and touching it rather than just looking at it. They claim that by dwelling in a building, people develop a fundamental experience that they remember in the next space they dwell in (Bloomer and Moore, 1977).

Perhaps how people feel in public space is actually a collection of memories from all of the public spaces they have ever experienced haptically; by actually moving and dwelling in the spaces. Perhaps how people define a space as public or private or neither is based on their lifetime experience with spaces. People may tend to seek out spaces that they have experienced in a past homerange to relive similar



Different images of downtown and home

Figure 1.5: Two different images of homerange, Ames, Iowa 1988

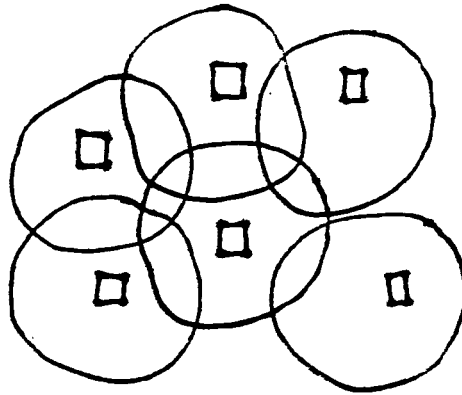


Figure 1.6: Overlapping Homerange: Homerange shared by individuals

feelings. People may also avoid places because of similarities with the past. The collective experiences of many people may determine the preference and the behavior of community members in public spaces.

Where an identified homerange is shared by several people, a common ground or common bond could develop. People begin to form a sense of community as paths and places within the community become shared by many people on a day to day basis. It is where the homerange of one person overlaps with the homerange of another that the potential for a connection can be made and a friendship, an alliance, or a sense of shared community identity can be established.

Where homeranges overlap, they also can be a source of conflict or indifference. The shared paths, spaces, and even the shared resources can create conflict between two individuals, or two groups. Understanding the conflicts between two people or two groups can lead to better ways to design places for the possibility of conflict resolution. Overlapping homeranges can be the starting point for conceptual development of public spaces.

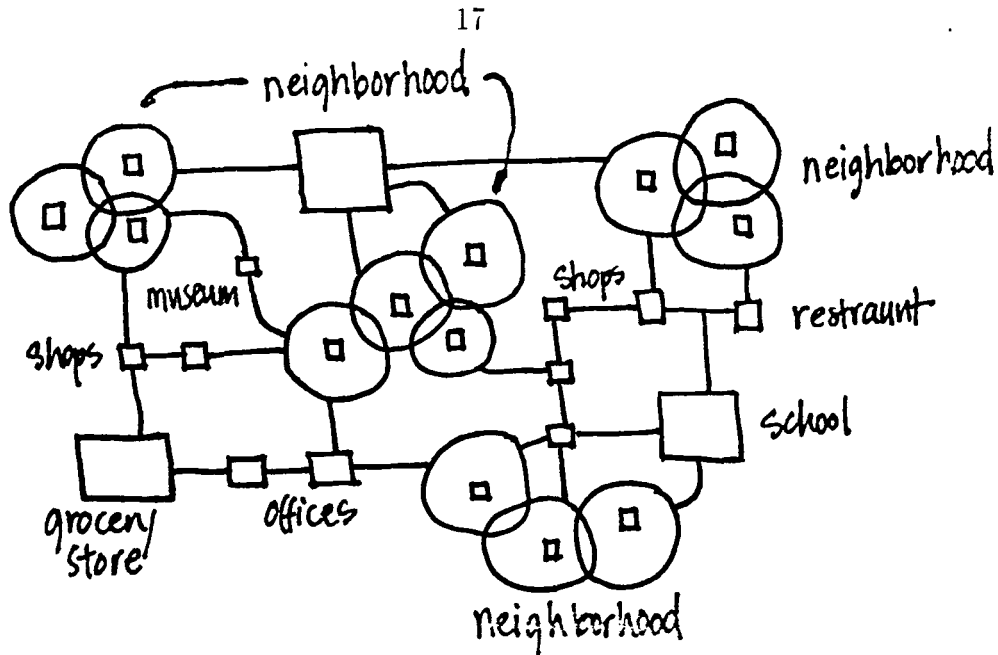


Figure 1.7: Overlapping Homerange: Source of interaction, conflict or indifference

Problem Statement

This study is an examination of how residents in a housing project for low-income elderly interact with specific components of the public realm. Specifically, this study will investigate outdoor spaces in public and private areas. The main objective is to develop new knowledge that can inform future research, planning, design and management of public spaces. The town is analyzed to determine if there are any significant outdoor spaces that the residents use on a regular basis.

The research component will analyze how the elderly residents of the Midtown Village housing complex in Boone, Iowa define their daily needs, the importance of these needs and what physical spatial territory is required to accomplish these needs.

This study concentrates on the individual collection of experiences of public and private spaces that have been built up over a lifetime to determine if a significant



Figure 1.8: Midtown Village, Boone, Iowa 1990

past relationship with the public and private space affects the current relationship with a person's identified homerange. By studying the past homerange that has been identified by the residents, it will be determined how much public spaces are a significant part of past the homerange. Then by investigating the residents' current homerange, this study will look at the correlation between past and present identified homerange.

The primary focus of the research has been to determine if there is a specific need to seek public outdoor spaces. Although this study will analyze the full range of spaces that make up a person's defined homerange, special emphasis is on the spaces in the landscape to determine if the living elements such as plants, trees, and wildlife located in parks, gardens, and other outdoor areas are a significant part of a person's homerange. This need to seek out public spaces outdoors is correlated to the residents' past homerange experience to determine if the past experience with

the outdoors affects the current homerange experience.

The existing spatial territory was analyzed to determine the amount of interaction there is with public spaces outdoors in the landscape. The main question of this thesis is: Do residents with a significant past involvement with the landscape seek experiences with the landscape in their present homerange?

For the purpose of this study the word landscape has been defined as “a man-made system of spaces superimposed on the face of the land, functioning and evolving not according to natural law but to serve a community” (Jackson, 1984). Based on this definition, many outdoor spaces are part of the landscape and this study investigates the full range of spaces the residents use in the landscape.

This study examines specifically the significance of experience gained through past homerange to determine if significant past experience with the landscape has a direct affect on the need to seek out experience with the landscape in the current homerange. There may be a significant background difference in the residents' experience with the outdoor spaces in the landscape. Past experience may affect the present homerange and there may be several reasons like physical stamina, social qualities, available income and time constraints that limit a person's involvement with outdoor activities. This study examines three variables: a change in desire, a change in opportunities available and a change in ability to determine the effect on the connection between the past and present homerange.

Experience with the landscape is defined as direct experience with manipulating, viewing and interacting with the outdoor spaces, public spaces, outdoor elements, and wildlife. Based on the research component, principles for guiding planning, design and management decisions are suggested and illustrated through a proposed possible

design solution for the outdoor spaces at Midtown Village and other public spaces within the community.

Definition of Terms

For the purposes of clarity there are a few terms that are used throughout the study that are defined as follows. Other terms will be defined in the subsequent chapters.

- city: a collective integration over time of people, built form and open space responding to the character of place with the potential to become the expression of a community's greatest aspirations. As Edmund Bacon states on p. 23 of *Design of Cities* (1988) "The city is a people's art, a shared experience, the place where the artist meets the greatest number of potential appreciation."
- designer: the person in a capacity to design manipulate, or change the physical environment; includes architects, landscape architects, and planners, etc.
- differently-abled: the preferred term used to describe a person with a physical or mental disadvantage or disability. The term "handicapped" in the dictionary is defined as "disabled or crippled". The term "differently-abled" is preferred because it suggests being "able" which is defined as "having sufficient ability or resources" along with being different which is defined as "the condition of being diverse, distinct, a variation".
- environmental design research: Definition from the *Exemplary Design Research 1983*, National Endowment for the Arts, Washington, D.C. pp. 8-9 "using the real world as its start and end points, design research implies an iterative

process for creating (through design and policy) and assessing (through design research) the fit between environments and their users and between policies and people.”

- homerange: the physical space, or territory, a person identifies with and uses in his or her community to satisfy his or her basic everyday needs, desires, and special celebrations.
- landscape: “A landscape is not a natural feature of the environment but a synthetic space, a man-made system of spaces superimposed on the face of the land, functioning and evolving not according to natural laws but to serve a community” J.B. Jackson in, *Discovering the Vernacular Landscape*, 1984, p. 8.
- nature: “The order, disposition, and essence of all entities composing the physical universe; including all living things,” *The American Heritage Dictionary*, 1979.
- place: definition taken from E. Relph, *Place and Placelessness*, 1976 “places are a fusion of human and natural order and are the significant centers of our immediate experiences of the world. They are defined less by unique locations, landscape and communities than by the focusing of experiences and intentions onto particular settings.” “The term *place* as opposed to *space*, implies a strong emotional tie, temporary or long lasting, between a person and a physical location” (Sime cited in Altman and Zube, 1989).
- public: “the idea that settings are accessible to everyone- people of a community, state or nation, regardless of age, gender, ethnicity, physical handicap, or other

characteristics; relates to use” (Altman and Zube, 1989).

- space: “the intuitive three-dimensional field of everyday experience; the expanse in which the solar system, stars and galaxies exist (the universe); also, the area provided for a particular purpose, a room,” *The American Heritage Dictionary*, 1979.

Chapter Overview

The following is a description of the chapters contained in this thesis starting with Chapter Two.

- In Chapter 2: *Literature Review*, the literature pertaining to the area of study is summarized as background on relevant research. Much of the literature on public life focuses on two main areas: the home and public spaces indoors and outdoors. The literature and methods used to study these two areas are reviewed. Also, there is a review of the literature on the concept of homerange and the previous studies related to homerange. The literature review guides the hypothesis, research methodology and the planning, design and management strategies.
- In Chapter 3: *Concept Development: Extended Homerange*, the concept of extending homerange is defined and analyzed. This concept is the main component of the research. Chapter three will contain the proposed hypothesis for the thesis.
- In Chapter 4: *Research Methodology*, the research methods used in past research studies on the topic of interaction with the public space including the landscape

are described. The study group and study site along with the housing complex are described to show why this particular housing complex was chosen. The scope of the project has been defined and discussed with the limitations of the project pointed out and the design component defined.

Three research methods have been used in this thesis. They are: direct observation, a sixty-question survey, and a 24-hour resident activity log used as a multi-method approach based on environmental design research. These methods were chosen specifically for this study to support the findings of this small number of residents. The survey instrument, direct observation record, and a summary of the 24-hour activity logs are located in the Appendix.

- In Chapter 5: *Analysis*, the completed survey and the other data gathering methods were analyzed to report significant findings. This analysis of the results are the basis for the planning and design strategies.
- In Chapter 6: *Planning and Design Strategies*, ideas for design of the outdoor spaces at Midtown Village, public spaces in the community and larger region based on the results of the research is developed and illustrated using the strategies for planning, design and management. The strategies focus on three main areas of the study site: (1) the home, (2) near territory close to home, and (3) the extended homerange into the public spaces in the community and larger region.

The design elements are illustrated and annotated to show how the design enhances and supports the concepts explored in the research component. All illustrations and photographs are the work of the author unless referenced.

- In Chapter 7: *Conclusion*, Several ideas for future research and applications to other fields of study are discussed based on the concepts explored in this thesis.
- The thesis is completed with the bibliography and the Appendix that includes the research survey analysis and the actual survey instrument.

CHAPTER 2. LITERATURE REVIEW

“Seen from space, the earth is a garden world, a planet of life, a sphere of blues and greens in a moist atmosphere. At night, lights of the cities twinkle far below, forming constellations as distinct and varied as those of the heavens beyond. Even from this great distance above the earth, the cities are a gray mosaic permeated by tendrils and specks of green, the large rivers and great parks within them. The city, the suburbs, and the country side must be viewed as a single, evolving system within nature, as must every individual park and building within the larger whole. Nature in the city must be cultivated like a garden, rather than ignored or subdued” (Spirn, 1984, p. 5).

The following is a review of the literature that begins to analyze the way people interact with their direct environment on a daily basis. The literature explores two main areas: the concept of home, and the public spaces indoors and outdoors.

The home is often referred to as the base where people can find shelter and security from the outside world. The public spaces indoors and outdoors make up the significant area where many people spend a significant amount of their time. Finally, a review of the literature on the concept of homerange completes this chapter. It is important to understand the literature because the study of homerange looks

both at the home and the public spaces indoors and outdoors as a complete series of interrelated spaces.

Literature on the Home

Clare Cooper (1974) described a phenomenon that her research had uncovered about the relationship between humans and their homes. She talks about the house, “the house becomes its world, its very cosmos. From being a shadowy shell glimpsed out of half-closed eyes, the house becomes familiar, recognizable, a place of security and love” (Cooper, 1974, p. 138). She concludes her article by arguing that humans have always built their houses as symbols of their entire universe and that, “our house is seen, however unconsciously, as the center of our universe and symbolic of the universe” (Cooper, 1974, p. 143).

There are many overriding ideas that penetrate the literature on the concept of home. The home as security, home as reflection of one’s values, home as a permanent base, home as a place of memories, home as the center of life’s activities, and home as a material possession are some of the concepts that appear over and over in the literature (Despres, 1989, p. 2).

The majority of the studies on the concept of home “have dealt with nuclear families—married couples with young children—tending toward middle class standards and living in owned single-family detached houses” (Despres, 1989). As noted in the introduction, demographics have changed in the United States and the research would benefit from analysis of other, more diverse groups of people in their dwellings.

In two books, *The Grand Domestic Revolution: A History of Feminist Designs for American Homes, Neighborhoods, and Cities* and *Redesigning the American*

Dream: The Future of Housing, Work, and Family Life, Dolores Hayden analyzes housing throughout history and concludes with the implications of feminist theories and develops policy recommendations concerning physical planning and the design of housing.

“American cities and housing have not kept pace with the changing needs of households. Women have been entering the paid labor force in larger and larger numbers. Yet housing, neighborhoods, and cities continue to be designed for homebound women. This situation constrains women physically, socially, and economically, and reinforces their dependence” (Hayden, 1981, p. 244).

Policies for housing, neighborhoods, and cities that relate more closely to the needs and realities of women, men, and children have been suggested and would benefit the built environment considerably if implemented on a larger scale (Hayden, 1981). Housing for the elderly often involves many women with various income levels, social needs and physical abilities. Studies on housing that involve the elderly could add dimension to the information available on housing alternatives that better meet the needs of the residents.

Housing alternatives such as shared housing, coops, congregate living, transitional housing, temporary homes have been designed to create more choice for the diverse population and their needs such as the differently-abled, (Architecture Research Construction, 1985; Hobart, 1988; Lifchez, 1987; Nesmith, 1987), single-parent families and women, (Birch, 1985; Bratt et al., 1986; Cape, 1985; Franck and Ahrentzen, 1989; Hobart, 1988; Matrix, 1984), the elderly, (Blackie, 1983; Carstens,

1985; Morton, 1981; Pease and Nusberg, 1984; Rowles, 1980), and low-income people, which often includes women, single-parent families, differently abled, and the elderly (Charette, 1986; Cooper-Marcus and Sarkissian, 1986; Francescato et al., 1979; Greer, 1988).

The literature suggests that studying diverse populations, and not focusing specifically on nuclear families, throughout their entire environment, or homerange, can be beneficial to designers of the built environment. This study which focuses on the low-income elderly can benefit designers of housing alternatives. Some housing alternatives such as shared housing, congregate living housing, and group homes may actually meet the need of maintaining a residents' independence by supporting his or her daily activities in a beneficial way.

The home acts as a critical symbol of who a person is and what kind of life the person leads through its location, design, quality, landscaping and maintenance, as well as other visual characters. The home is the base where people go about their daily routines such as getting up out of bed, getting ready for the day, coming home, preparing meals, preparing special celebrations, seeking private moments, sharing events with families and friends, etc. Rituals performed again and again in our homes connect us deeply to our homes through memories.

“Through rituals not only is the physical environment transformed, but so, too are the human participants and their relationship with the changed place. These rituals are integrated with and regulated by cycles of the seasons, of the regional bio-system, and by the human life span” (Saile, 1985, p. 87).

Rituals can be witnessed in Iowa as the month of March brings significant

weather changes and farmers and gardeners gear up for the coming season. It is a time of renewal and cleaning as small new growth begins to appear all around the house and Canadian geese fly over head to their northern homes. The rituals that are involved in gardening tie people to their environment and add to their awareness of the earth they live on (Francis, 1987; Leedy et al., 1978).

Looking at the home in isolation of its context, the neighborhood, the city, and the extended regional landscape creates a distorted view of how people truly live in the world. It is the intent of this research to argue that by looking at the home within its larger context provides a more comprehensive analysis of the complete placement of people within their environment. Attempts have been made to understand the larger context of the home and how the home fits into this larger context (Taylor and Bower, 1985).

Many of the studies look at the physical territories that animals occupy and suggest that humans also have territories (Rappoport, 1969; Relph, 1976; Leedy et al., 1978). "Wildlife biologists call the area over which an animal ranges its *homerange* or the area necessary to satisfy all of its requirements. This varies greatly among the species and also according to the quality of the habitat" (Leedy et al., 1978). The need to look at the homerange along with the home (or home as a base) would create a more comprehensive analysis of a person's full experience of the environment.

Literature on Public Places

"Public places and spaces comprise a multitude of man-made and natural settings, including urban streets, plazas and squares, malls, parks, aquatic environments, national parks and forests, and wilderness areas.

The importance of these public settings is highlighted by difficult questions of access, control and management; unique needs and problems of different users; and the dramatic reshaping of these environments that has occurred and will continue to occur in the future”

(Altman and Zube, 1989).

Cities are full of spaces that are very important and meaningful to the residents and also full of spaces that people are scared to go near (Norberg-Schulz, 1985; Relph, 1976; Kanter and Millman, 1975; and Matrix, 1984). Cities are full of spaces that people come in contact with every day as part of their identified homerange.

Places are physical spaces that become meaningful to people after they experience them as part of their life. The spaces come to represent experiences in a negative or positive way. People become attached to spaces because of the emotions, memories and feelings that become linked to the specific place. E. Relph (1976), in *Place and Placelessness*, describes the concept of place, “In our everyday lives places are not experienced as independent, clearly defined entities that can be described simply in terms of their location or appearance. Rather, they are sensed in a chiaroscuro of setting, landscape, ritual, routine, other people, personal experiences, care and concern for home, and in the context of other places.” This relates directly to the study of homerange because the homerange is made up of a series of places past and present.

Public places exist all around people in their neighborhoods and communities. People have strong feelings for public places where they have shared important events of their lives with others (Garnham, 1985; Lynch, 1960; Francis et al., 1984). It is the emotions that many members of the community share with each other that makes a

public space become a community special place, or landmark. Many town squares in small communities once held the importance in the daily lives of its community members. Regardless if this has changed now that small towns function differently, public spaces are still an important part of people's daily lives.

“No matter how strong an emphasis, Americans place on home and privacy, there is a concurrent need for community” (Chidister, 1988, p. 42). This need for community creates the need for public spaces that are “responsive to the realities of daily life” (Chidister, 1988, p. 42). The public spaces will need to evolve through a public participation system that relates to what a specific community feels is important.

However, as Michael Brill, in the keynote address at the Eighteenth Annual Conference of Environmental Design Research Association (EDRA) in Canada, 1987, stated so simply, “the literature of public life is a literature of loss.” Brill continues in his address to suggest that public life has been transformed rather than lost and exists in different places such as malls, call in radio shows, and other forms of contact (Brill, 1990).

Regardless, whether the existing public spaces are not meeting the needs of the people who live in cities or the people have chosen other methods of communicating, the true goal of designing public spaces should be to provide an integrated series of spaces where the opportunity for contact among diverse people is made possible. The design of an integrated series of spaces should allow access to all and not limit a person's experience of a space based on physical or social criteria.

People within their communities will need to determine if their public spaces are currently accessible physically, visually, and psychologically. It will be a community decision whether all spaces will be accessible for all residents to use equally.

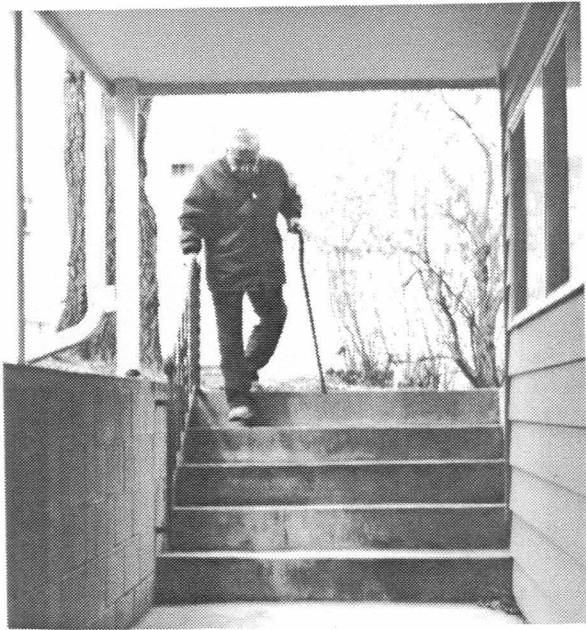


Figure 2.1: Returning from the library, Ames, Iowa 1988

The new American Disability Act recently enacted in the United States will require communities to determine the extent of accessible spaces for their residents.

There are many elderly people living in housing situations that are not currently physically accessible. Figure 2.1 shows an elderly man in Ames, Iowa returning from the library. He has had a stroke and uses a cane for walking, yet he must climb five steps to reach his apartment. People within their communities can analyze the housing stock to designate handicapped accessible apartments to meet the needs of the members of the community that will benefit.

Studies have been completed that describe the importance of nature and human interaction (Kaplan and Kaplan, 1989), preference of nature (Kaplan and Kaplan, 1989) and designing with nature (Hough, 1984). It is important to study how different groups of people interact with the landscape to fully understand how the landscape fits into residents' homerange.

Many elderly people would benefit from more direct contact with the natural forces within the urban environment. Studies have shown that the "quality of the view out the window is a significant factor in the recovery of patients in physical medicine and rehabilitation wards of six hospitals" (Verderber cited in Kaplan and Kaplan, 1989).

Many elderly people may also benefit from direct face to face contact with other people (Pastalan and Carson, 1970). Elderly people may meet their friends in public settings like parks and other outdoor places. But public life occurs in many other places like grocery stores, libraries, and shopping centers. The extent of the elderly person's public life may include a variety of settings. "Much of public life has been transformed, yet many mourn it as a loss because they do not recognize it in its new

forms or in its new places” (Brill cited in Altman and Zube, 1989, p. 14).

Public space includes plazas, town squares, parks, and recreational trails, but it also includes grocery stores, shopping malls, hospitals, churches, and any other space (indoors or outdoors) outside of the home where the potential exists to come in contact with others.

Much research has been done suggesting what criteria is important for a successful plaza. The dimension of control over the space or control to manipulate the space (Francis cited in Altman and Zube, 1989), the clarity of perceiving a space and the surroundings (Nasar cited in Altman and Zube, 1989), sense of *publicness* (Francis et al., 1984), and the physical amenities such as chairs, trees, orientation to the sun, etc. (Whyte, 1982) are criteria that are all important to the success of a public space. Perhaps not any one item can be singled out as the overriding important criteria, and perhaps the criteria become even more important when two or three or several criteria are analyzed as interrelated.

It is the process of designing public places and spaces that becomes the key to the success of the public place. The process that incorporates many different persons' views of what is needed in the space for that specific community is a process where the space can evolve from the community as an expression of shared values. In any community there are going to be conflicting interests when discussing the development of a public space. The process that can identify the conflicting issues and work with the representatives of the community to form a consensus for design, and then work towards implementing a proposed design will have the much needed community support for the long-term maintenance of the space.



Figure 2.2: Festival Marketplace, Boston, Massachusetts 1984

Literature on Homerange

Much of the research that defines an individual's experience of their environment is focused on their immediate experience of the home and ends at the walls of their home. A more involved study of the person's full experience of their environment would include the person's near-range, or their yard and street, the public range, or their schools, work-place and neighborhood, and their far-range, or the entire city or community and the region they identify with.

Taylor and Bower (1985) have studied the home and near-home territories without studying the farther territories that include more of the public domain. "Home is not dislocated but it is grounded in the community context. Linking home to the community, and at the same time buffering home from the community, are home and near-home territories. The control exercised over these outdoor locations, the

responsibilities for management of activities, and up keep, contribute to the immediate society by helping to define and stabilize the standing pattern of behavior on the street block. Investigation of residential functioning in outside spaces moves us toward a more complete understanding of this most central setting-the home" (Taylor and Bower, 1985, p. 210).

By looking at the near-home territories for clues to understand the concept of home, Taylor and Bower have extended the person physically into the outdoor spaces to see if the person identifies with the near-home spaces in the same way as the person identifies with the home. The Taylor and Bower study did not look at any spaces that were farther from the home than the near-home territories. This study proposes that by also looking at the home, along with the near-home territories and territories that go beyond the home a more comprehensive analysis of how a person identifies with the built environment can be achieved.

Homerange can be a more inclusive study of a person's involvement with the physical environment. The concept of homerange needs to be tied to the specific landscape. The streets, yards, neighborhoods, parks, and built environment that make up our living environment are spaces that people form attachments to based on their experiences of these.

Identifying the homerange in a physically measurable space within the community will allow a designer to look for paths, spaces, and areas that community members share with each other. The design of the paths, spaces and areas that the community shares can encourage diverse groups to have contact with each other. Perhaps a person who is limited physically or economically can benefit from the design of places that allow them to move farther from their home and experience more of

their community.

From the home, the neighborhood, and into the community, the public space indoors and outdoors, the built environment can be thought of as a series of integrated spaces where opportunities exist for contact between people.

Summary

There are four main conclusions that have emerged from the literature review:

1. The home, near-home territories and the public spaces are inseparably interconnected. The evaluation of how people interact with the built environment is incomplete without the analyzing the whole territory or homerange.
2. Studies of human behavior and the built environment need to examine diverse populations and not limit the research to nuclear families with middle-level income and associated values.
3. The design of the built environment benefits the community when it allows for public participation within the design, decision, implementation, and maintenance processes. The community has a stake in the process and this vested interest will promote a sense of ownership and identity for the community.
4. The design of the built environment must be intrinsically connected to the specific features of the local landscape, climate, personality of the community, and character of the region. The context must be generator of the design for a better *fit* with the environment which will add to the sustainability of the place. The design of the built environment should be in concert with nature and the natural forces of the local landscape.

CHAPTER 3. CONCEPT DEVELOPMENT

“It seems a commonplace that almost everyone is born with the need for identification with his/her surroundings and a relationship to them-with the need to be in a recognizable place. So sense of place is not a fine art extra, it is something we cannot afford to do without”

(Ian Nairn cited in Relph, 1976, p. 63).

Concept of Extended Homerange

Extended homerange is the physical extension of a person’s range of movement and involvement in their community during their every day activities. For this study, the concept of extending a person’s homerange is assumed to be a positive addition to the experience of their environment. Extending the existing homerange will increase the person’s physical range of opportunities and has been assumed that by increasing the opportunities, the person has more chances to form an stronger identity to his or her community.

A person who is limited, physically or economically, to using only one accessible street or sidewalk, one or two accessible shopping areas, and only a small portion of one park, or other public space would benefit from an analysis of their current measurable homerange. Design that allows for the extension of the homerange to

include better quality spaces or many routes, many shopping areas, and many public open spaces may be beneficial to the person's sense of community and well-being.

Accessibility is defined for this study, as physical, visual, and psychological access to a specific space, path, or building. Physical accessibility takes into account the movement of the differently-abled. Visual accessibility allows observation into and through a space to see activity, the participants, and the design of the space to determine perhaps if the space is safe, welcoming, and public. Psychological accessibility allows a person to feel unhindered and free to enter a space and choose to participate or not in the activities without feeling unwelcome or restricted. Access also includes discovering, learning, and having knowledge about new and existing facilities that may offer a space or a specific service for potential use.

The aspects of choice, control, and diversity of experiences will allow a person to have a fuller experience of their environment. By extending a person's homerange, the designer has opened many doors and has given the person the opportunity to chose contact with others in public settings.

Hypothesis

It is the main hypothesis of this thesis that the experience of using public and private space a person gains in his or her past homerange directly affects the person's use and definition of public and private space in the present existing homerange.

The study followed ten residents of the Midtown Village Apartments through their daily activities. Midtown Village is located in Boone, Iowa (pop. 12,484). There are forty (40) units available for people over 62 years of age or handicapped, with an income limit set for low to moderate income levels.

The study determined what physical space or territory defines the individual's current homerange. This territory will be called the existing identified homerange. The study will analyze the group over a period of four summer months and two autumn months to have a more complete picture of how the people at Midtown Village use and define their environment.

The study investigated how the elderly low-income population used public and private outdoor spaces and how they define these spaces. Also, the study will look for significant shared spaces that exist near their apartments and outside their housing complex in the community of Boone, Iowa.

One assumption in this research is that the built environment where the housing complex is located and public spaces within the community of Boone may not be meeting the needs of the residents in their every day activities. The residents may need to meet and socialize in the outdoor environment and may not have the adequate space for this interaction. Possible potential design solutions can be created based on the residents' existing identified homerange that will offer more choice of public outdoor spaces.

Another assumption in this research is that by defining a person's existing identified homerange, a designer can create solutions for the built environment that extend the homerange to offer more choice of accessible public outdoor spaces, especially if the person is physically or economically limited. Extending the homerange is assumed for this research to be a beneficial addition to the person's daily life. The use and definition of public and private spaces will be correlated specifically to the past homerange.

If a person has had significant experience with public spaces in their past home-

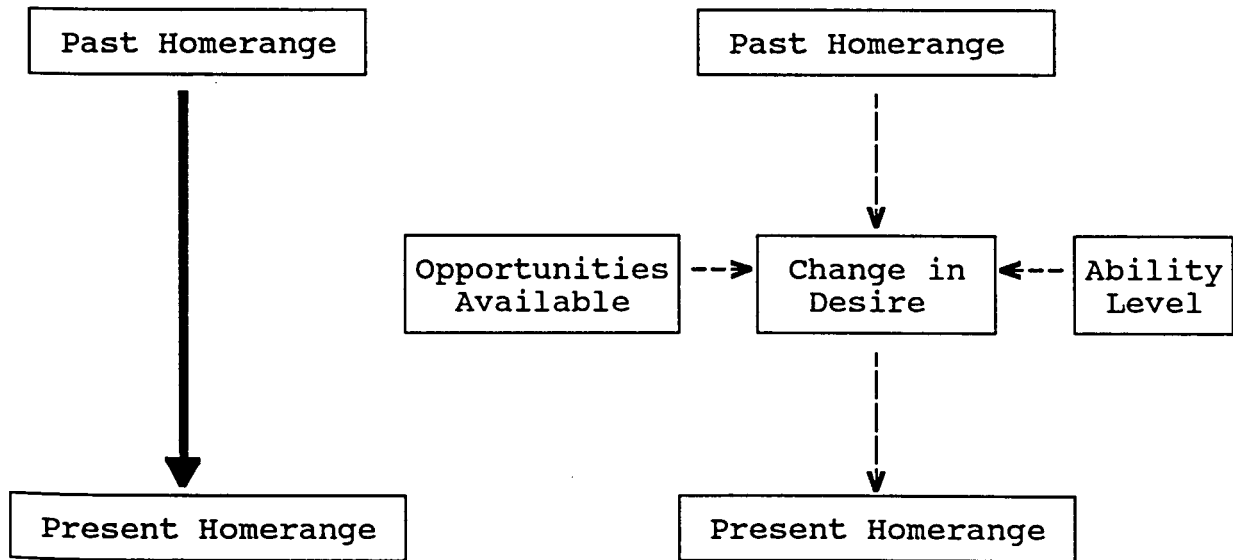


Figure 3.1: Connection between past and present homerange: strong connection or weak connection because of other variables

range, perhaps the person may be expected to seek significant experience with public spaces in their existing identified homerange. Also, if a person has not had significant experience with the landscape in their past then perhaps they will not seek significant experience with the landscape.

The main question of this thesis is: Do residents with significant past involvement with the landscape seek out significant involvement with the landscape in their existing identified homerange?

The research may show one of the four correlations:

1. There is a direct correlation and past homerange does affect the existing identified homerange.
 - a. People with significant past experience with the public spaces seek significant experience with public spaces in their existing identified homerange.
 - b. Those that do not have significant past experience will not seek out significant experience with public spaces.
2. There is no direct correlation and past homerange does not affect the existing identified homerange.
 - a. Many residents seek out experience with public spaces regardless of their past homerange.
 - b. Many residents do not seek out experience with the public spaces even though they had past experience; there are more important variables involved with seeking out a significant experience with public spaces than past homerange.
3. The research may find that everyone has a significant past experience with public spaces in this population, the past experience is then a common denominator

and there are other variables that influence the use or non-use of public spaces in the existing identified homerange.

4. The research may find that no one has a significant past experience with public spaces in this population, and there are other variables that influence the use or non-use of public spaces in the existing identified homerange.

Chapter Four outlines the research methods used to study the hypothesis. Through research, the existing identified homerange can be understood and extended for more opportunities to experience public spaces. The extended homerange into public spaces may create a closer relationship with the built environment by increasing experiences with the landscape to include more contact with nature and wildlife that currently may not be a part of the residents' existing identified homerange.

CHAPTER 4. METHODOLOGY

There are many housing complexes around this country designated for low-income elderly residents that vary greatly in quality, design and size. Many of the housing complexes may have limited amounts of public outdoor space for access by the residents. Social scientists, gerontologists and a number of environmental designers have addressed issues related to older people's lives such as social interaction, privacy, safety and neighborhood mobility (Carstens, 1985).

According to Carstens (1985) there are two major trends in the literature on interactions between elderly people and their environment: 1) a call for a more comprehensive system approach to the planning, design and management of housing for older people and 2) the development of specific design manuals that tend to focus on the interior spaces while overlooking the outdoor spaces entirely (Carstens, 1985).

This study will investigate a housing complex in Boone, Iowa to determine the designation and use of the outdoor public spaces within the housing complex and in the community of Boone.

Project Study Group and Site

An elderly low-income housing complex in Boone, Iowa is the subject of the research for this thesis. The main hypothesis is that experience with the landscape

including all public spaces in the past homerange directly affects the experience with the landscape in the existing identified homerange.

After a lifetime of past experience built up through various homeranges, the homerange within an elderly housing complex may be the last homerange the person will experience within their lifetime. It is important to study this last homerange for clues of affects from previous homeranges. Do experiences and significant places in the past homeranges influence the homerange of a resident in an elderly housing complex? The main focus of this study is to determine whether a significant experience in the past homerange influences the resident to seek similar experiences within their existing identified homerange.

The Midtown Village housing complex in Boone, Iowa has forty units that are designed as a four-plex with one bedroom apartment units. The housing units are set in a 9 to 10 acre site that borders a flood drainage ditch. The drainage ditch forms an edge to the housing complex of mature trees and heavy underbrush. There are many animals such as squirrels, rabbits, ground hogs, and deer living in this treed area that stretches the entire length of one side of the housing complex.

This elderly housing complex was chosen for this study for several reasons. The main reasons were the size of the total complex was small enough for this type of study, the design of the complex had several types of outdoor spaces to consider, and the management and residents were favorable to the study.

Midtown Village is located on a local street off of a major arterial street in Boone. The community of Boone has approximately 12,000 residents and the population has stayed the same for nearly thirty years. It is a small town community with a downtown area that is about ten blocks long.

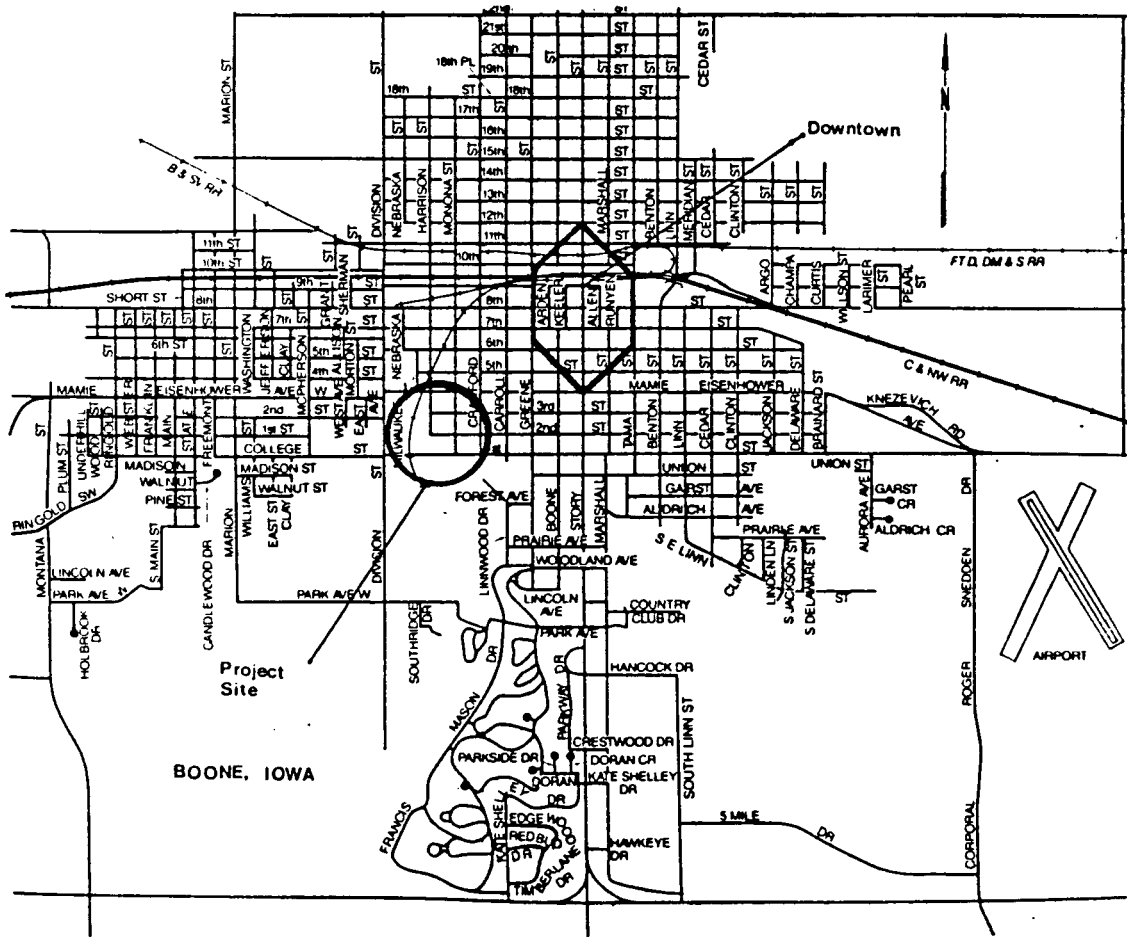


Figure 4.1: Midtown Village: Project Site and Downtown

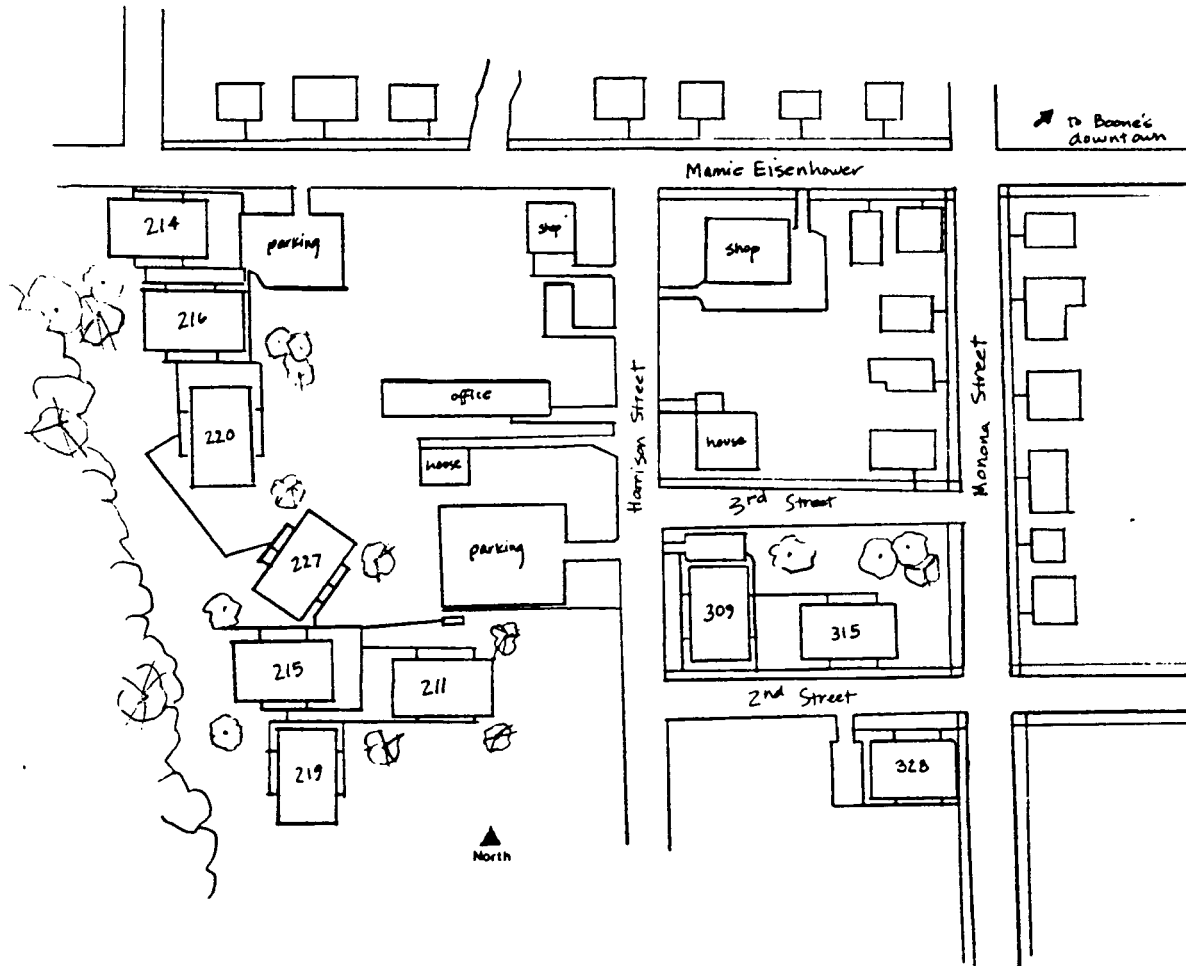


Figure 4.2: Midtown Village: Site Plan, Boone, Iowa



Figure 4.3: Midtown Village: taking home some groceries, August 1990

The four-plex units are low-rise brick construction with pitched roofs. There are two front doors leading to two apartments on opposite sides of the each building. All apartments are one bedroom and the residents are subsidized by Farmer's Home. The residents have many windows with views to the trees and to other residents' apartments.

Adjacent to the low-rise four-plex units are five mid-rise apartment buildings that are three stories in height. These mid-rise apartments are for low-income households in general with a few elderly residents. The design of the apartment building requires that the residents and their guests must climb at least five stairs to enter any unit. The mid-rise buildings are excluded from this study and the low-rise units will be the only units considered.

Within the housing complex, the units are connected by a series of concrete sidewalks that link the units with parking lots. All units can be reached by the



Figure 4.4: Midtown Village: Low-rise four-plex, August 1990

sidewalks. Located in the center of the complex is a designated community room for the residents and their guests. The community room is approximately 24 ft. x 32 ft. with a large window with a view to the heavily treed area. Inside there are card tables, magazines, a television and a few comfortable chairs. There is also a small kitchenette, rest room facilities, and a laundry area.

The residents are all over 62 years of age except residents with certain types of handicaps may be younger. All residents have a maximum income level of 18,000 dollars a year. The rents are approximately 230 dollars a month. The forty units are occupied by approximately fifty residents. There are some married couples but most of the residents are elderly women.

This study has utilized several research methods to try to determine what the residents consider public and private outdoor spaces within the housing complex and within the community. The research methods used for this study are detailed in

the next section. The three methods for this study were designed to investigate the personal lives of each of the individual residents. Many behavioral research methods were investigated before the combination of methods were chosen for this study.

Research Methods

Preliminary Study

A preliminary study was conducted for two months using a technique for direct observation of the site and the residents. The preliminary investigation at Midtown Village began on May 31, 1990. During the months of June and July direct observation was conducted on ten separate days for two to three hours each day and an additional six days for a shorter period of time. The summary of the sixteen day observation period is located in Appendix.

The direct observation consisted of visiting one married couple in the housing complex and observing the activities of the entire complex from the window and by quietly following some residents. Also, at various times of the early evening, a windshield survey was conducted to observe any activities.

The reason for the sixteen day preliminary study during the two summer months was to determine the framework for the research and define some specific outdoor spaces that are in the housing complex. Many of the observed activities took place in the outdoor areas near the housing complex. Based on the direct observation it was determined that there were approximately five areas that could be distinguished from each other and were identified for possible study. Many residents, on the days observed, did not leave the Midtown Village site. Many residents walked on the sidewalks and there was a certain pattern of opening the front door, sweeping the



Figure 4.5: Midtown Village: Sidewalks connecting apartment units, August, 1990

sidewalk, checking the mail, or taking out the garbage.

There are five major outdoor spaces that this study will focus on to determine how the residents define, prefer and use. The five spaces are:

1. near yards
2. yards
3. paths
4. treed edge
5. public spaces within the community of Boone

These five spaces will be analyzed in this study to determine how the residents define them and how the residents use them. Specifically, the study determined

whether experience with the public and private spaces in past homerange has an affect on the existing identified homerange.

The literature review in chapter two summarized the various research methods used for studying human interaction with their home, the public and private spaces indoors and outdoors. The following methods were chosen after the preliminary study. The methods were chosen based on the success of other research projects that were reviewed.

A list of all the residents and a map of the site was obtained from the management of the Midtown Village. The residents were contacted several times informally over the summer to build trust and familiarity. An effort was made at all times by the researcher not to reveal the hypothesis to the residents or the management to assure that the data would be unbiased.

There were a total of three research methods used throughout the study. The research was multi-methodical because of the small populations in an attempt to investigate the hypothesis through different methods. The methods were chosen to concentrate on the actual residents' activities and their use of space. Also, the research methods were chosen specifically because of the nature of the research project. The every day lives of individuals are the basis for the definition of the concept of homerange. The lives of the residents at Midtown Village are made up of personal and public behaviors that can best be analyzed by behavioral research methods.

The three research methods used were:

1. Direct Observation
2. Sixty-Question Survey

3. 24-hour Activity Logs by Residents

Direct Observation

Beginning in June 1990, there were several trips made to the Midtown Village housing complex to observe the activity near the housing complex. After the sixteen day observation, a summary was kept of over thirty trips to the site between June and November 1990.

Data were collected and recorded regarding the date and time, the residents observed, the activity, the weather conditions, and whether or not any resident left the site to an outside destination. The majority of observations were made in the daylight hours, but special observations were made after to dark to determine if there was a significant difference in activities observed.

The direct observation periods recorded activities observed by residents directly such as walking, hanging up laundry, checking the mail, gardening, socializing and taking out the garbage. The observation periods also recorded activities and evidence of activities indirectly such as cars in the parking lot to determine who was there, guests arriving to the complex, new flowers that appeared, laundry on the line and doors open for fresh air and to receive visitors.

Part of the direct observation included listening to residents talk about other residents' activities. Some residents would say they saw another resident going to the hospital, visiting friends, having special visitors and going on trips. The direct observation periods collected information about the residents use of public outdoor spaces within the community of Boone.

Date	Resident	Activity	Weather	Off site Destination

Figure 4.6: Midtown Village Direct Observation Format

Sixty-Question Survey

A survey was conducted at Midtown Village of the ten residents that have participated in the study. Ten residents comprise twenty-five percent of the forty households in the study. This number of households was determined to be adequate for the type of study that was conducted. The survey consisted of sixty questions and took approximately one and a half-hours for each resident to complete. The survey was divided into three parts with twenty questions in each part. The actual survey instrument is located in the Appendix.

The first part of the survey consisted of twenty questions about the places the residents had lived before they moved to Midtown Village. The questions covered the towns they lived in, the yards they had, outdoor places they went to, and other public spaces that they remembered. The main focus of the survey was the near territory to their home and the public spaces in their community that were important to them.

The second part of the survey consisted of twenty questions about the residents' life at Midtown Village in Boone, Iowa. The questions covered the town of Boone, outdoor places that they currently use, and other public spaces that they use. Part Two of the survey was used to paint an accurate picture of the residents' current homerange.

The answers that were collected in Part One were compared to the answers collected in Part Two for each individual resident. This was done to determine if there was a direct connection between the individual's past homerange and their present homerange. The correlation was conducted on each resident individually based on their answers to the survey questions.

The third part of the survey consisted of twenty questions about three specific

variables. A change in the residents' ability level was the first variable, the extent of opportunities available to the resident was the second variable and a change in the desire of the resident was the third variable in this study.

After Part One was compared to Part Two for each individual resident to determine if a direct connection existed between the past homerange and the present homerange, Part Three was correlated with those residents determined to have a weak connection between their past and present homerange. It was assumed that if the resident had a weak connection between their past and present homerange that one or more of the three specified variables would be affecting their current homerange.

In other words, if a resident did not have a direct connection from the past homerange to the present homerange, then perhaps it was because they have experienced a change in their ability level, they have found limited opportunities available, and/or they had a change in their desire for certain kinds of experiences now that they live at Midtown Village.

Part Three was also correlated to the residents with a strong connection between the past and present homerange. It was assumed that if the resident had a strong connection between their past and present homerange that one or more of the three variables would not be affecting the definition of their current homerange or possibly, that in spite of changes in ability or opportunities available, the residents' persisted in satisfying their desire.

The survey instrument was conducted in each of the residents' individual apartments. In the case of a married couple, the questions were asked alternating between the husband and the wife, letting the person asked first answer first and then asking the other person if this answer was the same or different for him or her. Many times

the husband and wife had exactly the same answer, but there were several questions that the husband and wife had different answers, therefore both the husband and the wife were given an opportunity to answer.

The main reason for asking married couples the questions at the same time was that all of the apartment units were one bedroom units. Ideally, the spouse not answering the questions would have been asked to leave the apartment or sit in the bedroom while the other spouse answered the survey. It was determined that asking a spouse to leave or sit in the bedroom for an hour and a half was not considered a good option.

24-hour Logs by Residents

The residents were asked to complete a 24-hour log of their daily activities for two separate days of the week. The residents were asked to record all activities that took more than fifteen minutes of their time. They were to record the start time, the end time, any travel time, the activity, their mode of travel, the destination, how often this occurs (during a week, a month or a year), and the weather conditions.

The residents were asked to record their activities for a full 24-hour time period for the days of Wednesday and Saturday or Sunday. These days were chosen to get a true representation of a typical week day and a weekend day. The form the residents used to record their activities for the two 24-hour periods had a section for all of the categories of information the residents were to list. The residents did not have any difficulty with the activity log with the exception of one resident that did not start the log until Saturday afternoon and she had attempted to go back and record what she could remember for that morning.

MIDTOWN VILLAGE 24-HOUR RESIDENT ACTIVITY, 1990.

Instructions:

List all activities that take 15 minutes or more of your time. Record the starting time, ending time, time spent traveling, mode of travel, destination, how often this activity takes place, and the weather conditions for the day.

Start time	End time	Activity	Mode of Travel	Destination	How often	Weather condition

Figure 4.7: Midtown Village 24-Hour Resident Activity Log

The research methods were chosen to validate the definition of homerange through three separate data collections. The advantage of three methods was the internal check process to measure the validity of the observed activity. Each method had its own advantages and disadvantages, therefore by combining the three methods more can be learned from the residents that can benefit the planning and design process.

Chapter Five describes the data collected from each of the research methods. The major findings of the research are discussed that have led to the planning, design and management strategies. The major findings have been identified based on the data collected during the direct observation periods, in the survey instrument, and in the 24-hour activity logs.

CHAPTER 5. ANALYSIS

Overview

The three research methods that were used in this thesis were completed at Midtown Village Housing Complex. The direct observation consisted of over thirty trips to the site beginning June 1, 1990 and ending November 1, 1990. The other two methods were completed by all ten residents in the study group with all of the data collected determined to be adequate for analysis.

The data from the survey and the 24-hour activity logs were collected from eight women and two men that had volunteered to participate in this project. Both men were married and in addition, four of the women were married. The remaining six women had been married and were widows living alone. Each resident was asked to sign a consent form and state whether he or she would like to use his or her real name. Based on the consent forms, some of the residents' names have been changed.

The average age of the residents that participated in the research project was 76.6 years. The average years that the residents surveyed had lived in Boone County was 64.1 years including one resident that retired here from Rhode Island only four years ago. The average residency at Midtown Village was 8.4 years including four residents that had moved in when it first opened in 1977.

One of the married couples in this study had a significant event occur while the

study was being conducted. One woman, Lillie, lost her husband, Elwin, to emphysema on November 1, 1990. She volunteered to be interviewed twice to allow the additional information about how her use of public space had been altered with the death of her husband. A summary of both Lillie's interview responses are described in her individual case study.

The data collected from each resident were analyzed individually to determine if there was a strong or a weak connection between the individual's past and present homerange. For the purpose of this study, a strong connection between the past and present was defined as significant similarity of identified places, desires and activities within everyday life as identified in the spatial territory called the homerange. The data collected from the residents with a strong connection were evaluated to determine if any of the variables presented in Part Three of the survey were affecting their current homerange. It was assumed that if there was a strong connection between the past and present homerange that the three variable would not be affecting the current homerange.

A weak connection was defined as a changed or altered present territory or homerange with little similarity of identified places, desires and activities within everyday life when compared with the past homerange. The data collected on Part Three of the survey from the residents that had a weak connection were evaluated to determine which of the three variable presented may be affecting the connection between their past and present homerange. It was assumed that if the residents had a weak connection between their past and present homerange then one or more variable presented would be affecting the current homerange.

The data were collected in the survey to determine if there was a strong or weak

connection between the past and present homerange. The direct observation and the 24-hour activity log data were collected to verify and add detail to the residents' identified present homerange. The survey data were analyzed for each individual resident and the residents were divided into the two categories of a strong connection or a weak connection between the individual's past and present homerange.

Summary of Individual Residents

This section is an analysis of each of the ten residents individually. The survey answers have been analyzed for each individual to determine if each resident had a strong connection or a weak connection between their past and present homerange. Each resident was interviewed for approximately one hour to answer the sixty questions in the survey. The residents were also asked to complete two 24-hour activity logs, one on Wednesday and the other on Saturday or Sunday.

Each resident was analyzed individually because it was important to determine the connection between the past and the present. It was important to look at each person individually to determine this connection before analyzing the residents as a group. Each resident signed a consent form for the research and indicated whether their real name should be used.

Case Study 01, Lillie, age 78:

Lillie was raised on a farm in Boone County until 1918 when her family moved to town. She married Elwin in 1936. She remembered many outdoor areas that were significant to her in the past. She had a backyard with a porch swing that was an area where she could be outside with friends. Lillie had a favorite pine tree that she really misses now that she is at Midtown. Her favorite past outdoor place was the

area where her porch swing and flower gardens were located.

Lillie never drove a car and depended on her husband to drive. There were several places in the community she has gone to the majority of her life. Church and the Senior Citizen Center were the two most important places in Boone. She went to many parks as she was growing older and there were several parks that she has gone to the majority of her life. The Des Moines River and the Ledges were two parks she has always gone to and mentioned a close attachment to the Des Moines River based on several positive past experiences.

The occasions that took her out of town were holidays, funerals and weddings. The towns she visited most often were Ames, Des Moines and Audubon where her grown children were living. She chose Midtown because of her husband's failing health and had lived in her previous home in Boone for 29 years.

Her favorite outdoor place at Midtown is her flower garden in front of her apartment where she has planted a variety of perennials and annual flowers. She stated that there is no outdoor space at Midtown to sit and talk with others and this would be a space she would enjoy if created. She currently does not drive a car.

She still goes to the majority of public places in the community that she has gone to the majority of her life. The place she would miss the most is her church. Her husband died in November and her biggest fear is not being able to attend church regularly now because she does not drive.

She responded to several of the variables that were assumed to weaken the connection between past and present homerange. The main variable was limitations due to her husband's health and with his death she recognizes that her life will change.

Case Study 02, Elwin, age 80:

Elwin was born in 1910 and moved to Boone in 1935. He described several outdoor places near his home and within his community that were important to him the majority of his life. The activities he enjoyed were fishing, pheasant hunting, carpentry work, and going to base ball games. His favorite outdoor space was the area outside in his backyard where the porch swing was located. His daughter in Ames has the porch swing now and he mentioned that the swing is something he really misses now that he lives at Midtown.

He moved to Midtown in February 1990 because of his failing health due to emphysema. He described several places within the community of Boone that he has gone to the majority of his life and continued to go to despite his serious health problems. It was during the last three months of his life that he began to notice that his health was keeping him home more often because he tired so easily.

The church and the Senior Citizen Center were the two most important places in Boone and he had gone to both places for several years. The main reasons he went to these two places were social interaction and the need to keep active. He also fished regularly the majority of his life with Lillie. He mentioned that the Des Moines River and the Ledges were two places he has gone to the majority of his life. His favorite outdoor place at Midtown was the area in front of his apartment because he liked to sit and get fresh air.

His health limited his activities within the last year of his life. He mentioned on several questions that he gets too tired to really participate in several activities any longer. He celebrated his eightieth birthday in September with a large family dinner in the community room at Midtown. He was tired at the end of the party but enjoyed seeing all of his children, grandchildren and great grandchildren.

Case Study 03, Evelyn, age 83:

Evelyn was born in Boone and has lived there all her life. She has been a widow for over twelve years. She mentioned several outdoor places near her home and in the community that were important to her all of her life. Her favorite outdoor place was a hill behind the barn on the farm where she lived because "you could sit and see for miles." Her two favorite places were the Church and Colonial House Restaurant which she had gone to the majority of her life.

There were several national, state, and local parks that were important to her the majority of her life. Her favorite place at Midtown was the flower bed in front of her apartment that she enjoyed sitting near in the sunny weather. She mentioned there is not a good place at Midtown to sit and talk to friends because it was too hard to drag chairs outside. She said she had often thought about an outdoor seating area at Midtown and would enjoy using one if it were available. She said she would not use a community garden space at Midtown because she is not strong enough any longer.

Her favorite place in Boone is her church which she attends regularly and rides the church bus that picks up several people in town. The church was the place she said she would miss the most if she were limited only to her apartment. She responded to several of the questions related to the variables assumed to weaken the connection between the past and present homerange. Her stamina and the fact that she no longer drives a car were the two main reasons for changes in the places she currently attends.

Case Study 04, Doris, age 72:

Doris was born in Pilot Mound and moved to Boone as a teen-ager. She grad-

uated from high school in Boone and mentioned several places she had gone to the majority of her life. Her church was the most important place in her life and she said she would miss this the most if she could no longer go. She had a large garden at her home in Boone before moving to Midtown. She and her husband currently live at Midtown but he was not a resident in the study.

There were several parks she had gone to in the area for several years and mentioned that she often drove with her husband up through McHose Park to enjoy the scenery. She no longer drives now that she is older and relies on her husband who is 76 years old for transportation. She had always had a garden and canned vegetables every year until she moved to Midtown Village. She currently plants flowers in front of the apartment and enjoys "working outside to keep her flowers looking beautiful."

She and her husband often drive to Ames to eat at restaurants with their friends. At Midtown she said there is not a good place to get together with her friends inside or outside. The community room at Midtown is located across the street from their apartment and she does not consider this room easy to use.

She responded to several of the variables that affect the homerange with her health and strength the main reason for changing patterns in the places she attended. She commented that she stays home more after dark, gets tired more easily and misses driving to Des Moines now that she lives at Midtown.

Case Study 05, Genevieve, age 85:

Genevieve was born in Boone, has lived there all of her life and was baptized in the church she still attends. She has lived at Midtown since it opened in 1977 and has been a widow for many years. She is very active despite a serious illness (colon surgery) and mentions that she recognizes that she tires more easily and because she

has to sit more often limits her walking when she feels tired. She remembers several outdoor areas in the community that she has gone to all of her life.

She visited her sister in California until her sister died this year. She said she probably would not have gone to California for the first time in years because of her own health but her sister died. Her favorite outdoor place in the past was her garden where she enjoyed working. She has a flower bed at Midtown and chose her apartment specifically because of the view to the trees. She was one of the first residents to move into Midtown and was allowed to choose her apartment.

She currently drives and takes other residents to downtown Boone. There were several places she mentioned that she had gone to her entire life, but the church was the most important place for her. She responded positively to several questions about a the change in her physical ability level because of her recent change in health. She also stated that there are not enough rest rooms or places to sit down and rest downtown and that limits her activities. She stated that she walks often and would use an outdoor sitting area at Midtown Village if one were provided.

Case Study 06, Mary, age 68:

Mary is the youngest member of the study group who retired here with her husband from Rhode Island four years ago because her son moved to Boone. Her husband was not home and was not part of the study group. She stated that when her son moved here, they visited Iowa and “fell in love with the landscape.” She commented that she and her husband drive for miles “just looking at the cornfields and listening to the birds.” Recently over the summer she and her husband went on a paddle boat ride on the Mississippi River and had the best time of their lives. Currently, she is very interested in reading about rivers and watching television shows

about Iowa and the rivers. When she returned to Rhode Island over the summer, she was “shocked by the traffic, the crowds, the lack of open space and the noise” and she stated “people in Iowa are so lucky to have all of this space, development will come some day and people will really miss the land they have.”

She mentioned she was an avid gardener in Rhode Island and was responsible for all of the flowers that are planted around the entire public areas of Midtown and stated that the management gave her flowers and money to buy flowers and seed to do the gardening in several places. She loves to garden and was grateful that the management allowed her to work in so many locations and was the only resident in the study that stated she would use a community garden space at Midtown. Mary was also the only member of the study that said the large open spaces at Midtown were considered her personal yard.

Her favorite place in Boone is the church and in four years has established a very strong tie to the people in her church. She does not drive and relies on her husband to drive and stated that they are both very active and were driving to a place near Omaha the next weekend with two friends to see a large gathering of geese and ducks in a nature preserve. Outdoor spaces had always been an important part of her life and she felt that now that she lives in Iowa she “is closer to nature and the earth than I was in Rhode Island.”

Mary did not have any of the variables that cause a weakened connection between the past and present homerange. The data revealed that she had a strong connection between her past and present homerange even though the actual places had changed, the reasons and desires remained strong perhaps even enhanced by the Iowa landscape.

Case Study 07, Grace, age 79:

Grace was born in Boone in 1911 and is the last member of her immediate brothers and sisters still alive. She was baptized in the church she still attends, was a widow before she moved to Midtown and was the second resident to move in the apartment complex. She remembered several outdoor places around her home and in the community that she used on a regular basis. She also mentioned several parks that she used on a regular basis. Her favorite outdoor space at Midtown is the flower bed in front of her apartment and this area is the only space she considers her front yard. She enjoys gardening and would enjoy an outdoor seating area if one were located at Midtown. She walks regularly around her apartment and currently drives a car.

The most important place to her is her church which she has attended for almost eighty years on a regular basis. She is active in several community and church groups with her low-blood pressure the main reason for limiting activities. She does not drive out of town any longer because she tires more easily. She also no longer drives at night and rides the mini-bus "every so often when I feel I shouldn't drive, but then I am limited to going where it goes."

Case Study 08, Marge, age 72:

Marge was born in Boone County and moved to Boone with her husband in the late 1930's but currently she is a widow. She used to live close to McHose Park and went there for several years with her children and with friends. She had a garden at her home in Boone and her favorite place was near the lilac bushes. She enjoyed walking and mentioned she liked to take photographs of outdoor scenes. The most important place for her in Boone was the church and she also liked going to the Senior

Citizen Center when it opened.

Her favorite outdoor space at Midtown is her flower garden up near the door of her apartment where she has several rose bushes. She said she would love to use an outdoor seating area at Midtown and knows that many others would like it also. She currently drives a car and likes to “drive with friends to the Ledges to see the deer.”

Marge was beginning to see that her strength was deteriorating and she had changed some of activities because she tires easily. But she mentioned this tiredness has just recently began and it only affects her to a slight degree. She still drives, gets uptown as often as she needs and sees her family as often as she likes. It was determined that she had a slightly weakened connection between her past and present homerange because of her health.

Case Study 09, Thomas, age 78:

Thomas was born in Ogden and lived in Boone for many years before moving to Midtown with his wife. She had gone to her sister’s house the day of the interview and is not a member of the study group. Thomas remembered several outdoor areas that he used regularly the majority of his life. His did not have a favorite outdoor place but enjoyed his garden. He fished, hunted and worked outdoors regularly and enjoyed these activities and still fishes at the Des Moines River or at Don Williams Lake every summer.

Church was the most important public place in his life and was involved in many of the church groups. He had a strong connection to the past homerange with none of the three variables changing this connection at all. He currently goes to the same places in Boone that he has for fifty years. He had said the reason he and his wife had moved to Midtown was because of his failing health but they have lived here

for over eight years and there was no data that suggested any change because of his health. He has arthritis but it does not seem to affect his range of activities at all.

He mentioned that he remembered a community garden space that the management created several years ago, but it was a very hot summer and none of the residents used it. He said he was not interested in a community garden space but he would definitely be interested in an outdoor sitting area at Midtown. He said he often takes chairs outside and would like to visit with others on summer evenings.

Case Study 10, Alice, age 70:

Alice was born in Swaledale, Iowa and moved to Boone in 1944 with her husband. She is one of the original residents that has lived at Midtown since they opened thirteen years ago. She had lived the majority of her life in the country and participated in the farm work. She remembers several vacations to see other areas of the country that included many national and state parks. She has a strong connection between her past and present homerange with a strong attachment to the outdoors.

Her favorite place in Boone is her church and she is a member of a kitchen band at the Senior Citizen Center. She goes to many different towns in Iowa with the band to play music for other people and she stays very active even though she has had knee surgery. She stated that she needs to get out of the apartment "much more than once a week, I leave the apartment once a day even when it is thirty below." She still drives a car and has not limited her driving for any reason.

Alice was unique in that she has had a membership to Cutty's campground for over six years. She leaves her camper there and camps every weekend of the summer with her son's family who have a camper there also. She said she loves "going fishing, swimming, picnicing, and walking near the lake." She is very active and also plays

pinochle in several card clubs in town. During the interview she had over six telephone calls in one hour from people in her card club and people in her kitchen band for various reasons. The data revealed that Alice had a strong connection between the past and present homerange.

Summary of Study Group

Based on the examination of the data collected in survey, it was determined that all of residents that were born in Boone County had a connection between their past and present homerange. Two residents showed a very strong connection between there past and present homerange and seven residents were beginning to show a weakened connection that used to be much stronger. One resident who was born in Rhode Island and moved to Midtown four years ago, had a strong connection between the past activities and places she had experienced in Rhode Island and the places she sought in Boone. Even though Mary did not have the specific places that stayed the same over the years, it was significant that she sought the same types of places when she moved to Boone.

Therefore, the data revealed that three (30%) of the residents surveyed in this study were determined to have a significant strong connection between their past and present homerange. This was determined by comparing each resident's survey answers in part one to the answers in part two. Strong connection was defined as significant similarity in places used, reasons for use, and overall definition of the physical space or territory defined as homerange.

Of the residents that remained, seven (70%) of the ten residents surveyed were determined to have a slightly weakened or altered connection between the past and

present homerange due to one or more of the three variables investigated. The seven residents responded that one or more of the variables, 1.) a change in the resident's ability level, 2.) the extent of opportunities available, and 3.) a change in the resident's desire for specific activities, were affecting the spatial definition of their present homerange causing the present homerange to be changed or altered when compared to the past homerange.

The main variable affecting the connection between the past and present homerange was a change in the resident's ability based on their health. A change in health or physical ability was the main reason for a change in the definition of the present homerange. Even though the connection was slightly weakened, the data revealed that the residents had an extensive public life full of different places and activities. These seven residents had serious health problems but attended church, visited others in the hospital, and went to the senior citizen center on a regular basis. Arthritis, colon cancer, emphysema, diabetes, high blood pressure, knee replacement surgery, chronic fatigue and low blood pressure were some of the changes in the residents' health that were mentioned in the survey.

All of the residents, except the youngest (age 68), stated that they need to sit down on occasion. The resident aged 68 stated, "No, I don't need to sit down much. I am really active. But the people here do need to sit down when they walk around. They need an outdoor sitting area that is shaded. I don't think there is enough get together spaces here. It wouldn't cost much, just a covered picnic shelter."

The connection between the past and present homerange was determined by analyzing the answers to the survey questions in Part One based on the past homerange and comparing this to the answers in Part Two which was based on their present

homerange at Midtown Village. The present homerange described in this survey was compared to the data collected during the direct observation periods and to the 24-hour resident activity logs. It was determined that the survey answers collected from each individual resident homerange were verified by the data collected in the other two research methods. The places listed in the survey were similar to the places listed in the 24-hour logs and use of many of the places were observed first hand in the direct observation periods.

The data collected has been analyzed for each of the three research method that were conducted. The data has been summarized and presented based on the significant findings from the entire study group. The data has been presented based on whether the resident had a strong or slightly altered connection between their past and present homerange when significant differences have appeared.

Direct Observation

Based on the data collected there were many significant findings that were worth reporting concerning the relationship between the specific time of day and the specific resident, the specific day and the specific activity, the weather conditions and activity, and specific residents and trips off the site.

The data collected during the direct observation periods revealed that the residents of the Midtown Village Housing Complex used a wide variety of public places in their everyday life. Even the residents with serious health problems left their apartment at least once a day and maintained a close relationship to several community spaces. There were five significant findings of the direct observation periods.

First, the residents had many locations within the community for social inter-

action, however, there were not many locations at the housing complex for social interaction. Churches, grocery stores, the Senior Citizen Center, restaurants, the Ericson Public Library, the Boone County Hospital, Wal-Mart, and several fast-food places such as Hardee's, Kentucky Fried Chicken and Country Kitchen were found to be locations off-site that residents would go. The main reason for going to any of these places was for social interaction. Many residents were observed talking to others once they went to a specific place in the community of Boone.

Although there were several recordings and statements on the survey of activities in public outdoor areas, only trips to indoor locations were observed. The outdoor area located closest to the residents' units was observed to be used the most. A few direct observation periods recorded residents weeding their flowers, but more significant was the evidence observed of new flowers planted between direct observation periods. Although the direct observation did not capture all of the outdoor activities that occurred at Midtown Village, it was clear that gardening had occurred at nearly every residence to a significant degree.

Second, the majority of the residents drove their own car when they left the site. One of the residents observed leaving the site went to another unit in the housing complex to pick up another resident. Of the residents observed leaving the site, all drove to at least one observed location and had a conversation with another person.

Third, there were no activities observed after 9:00 p.m. at Midtown Village. Residents did not drive, walk on the sidewalks or sit outside during any of the observation periods after approximately 9:00 p.m. Many of the residents discussed card club as an evening activity but most of the card clubs would end by 7:00 p.m.

Fourth, the church was a significant location for the many of the residents on

Sunday. Many residents would leave on Sunday morning and not return until after lunchtime. There was one observation period on Sunday where the inclement weather affected the number of residents who left the site to go to church.

The church was a significant public meeting place for all residents in the research study group. During the direct observation periods, other residents on the site would comment, "Oh, yes, she went to church and usually does not come back until 3:00," or "she always drives her neighbor to church every Sunday," or "don't come over on a Sunday-no one will be here at all."

Finally, the fifth significant finding during the direct observation period was, the areas near the housing complex were used for only three types of activities: (a) household custodial tasks such as taking out the garbage, checking the mail, sweeping, and hanging up laundry, (b) short span physical activities such as short walks and weeding the flower bed, and (c) sitting usually in a lawn chair very close to the front door of the individual residents' apartment.

These three types of activities were observed on several occasions near the individual apartment units. The outdoor areas at the housing complex that were thirty feet or more from the building, where the sidewalks were not located, were not used at all during any of the observation periods. Many residents would sit in their living rooms and look out over the outdoor spaces past the sidewalks. Watching and viewing the landscape is a significant type of activity and use for an outdoor space that should not be discounted.

Closely related to the three types of activities observed was the activity of watching and keeping track of other residents. Many residents made comments that revealed that they watch their neighbors and kept track of when their neighbors would

Date	Resident	Time	Activity	Weather	Off-Site Destination
F 6-01-90	221 woman	10:30 a	takes garbage, mail & quiet & door open	sunny, warm	
Su 6-03-90	211 #1	10:00 a	very quiet & door open	cloudy, warm	
W 6-06-90	216 #8	04:00 p	company comes over	sunny, warm	
M 6-11-90	220, 216	02:00 p	residents gardening	sunny, warm	
Th 6-14-90	227	noon	man leaves in his car	cloudy, warm	Boone downtown
Sa 6-16-90	227, 221, 211	03:00 p	door open & guests coming	sunny, hot	
Th 6-21-90	221	09:00 a	woman gardening & door open	sunny, hot	
Th 6-28-90	221	04:00 p	no activity	raining	
Sa 6-30-90	211, 215, 221	04:00 p	people arriving & cars leaving	raining	unsure

Figure 5.1: Summary of Direct Observation in June

Date	Resident	Time	Activity	Weather	Off-Site Destination
Tu 7-03-90	211, 215, 221	11:00 a	no activity	raining	
Su 7-08-90	all	noon	many cars gone	sunny, humid	church
Fr 7-13-90		09:00 p	no one outside many lights on	warm	
Mo 7-16-90	211, 215, 221	04:00 p	car arrives & woman carries bags	sunny, hot	
Su 7-22-90	all	06:00 p	no one outside many doors open	humid	
Th 7-26-90		09:30 p	no one outside many lights on	night	
Sa 7-28-90	215	11:00 a	Mrs. Bruner leaves	raining	EV nursing home
Th 8-09-90	309, 315	11:30 a	residents gardening & one leaves in car	sunny, hot	Wal-Mart
Th 8-16-90	221	02:00 p	resident drives car	sunny	Sr. Citizen Center
Sa 8-25-90	all	02:00 p	many walking & gardening	sunny	
Tu 8-28-90	211, 215, 221	04:00 p	woman using cart to take out trash	partly cloudy	

Figure 5.2: Summary of Direct Observation in July and August

Date	Resident	Time	Activity	Weather	Off-Site Destination
Sa 9-01-90	all	03:00 p	2 guests arrives & many doors open	sunny, hot	
Fr 9-07-90	309, 315	09:00 a	woman leaves in car	sunny	Fareway
Tu 9-11-90		09:15 p	no one outside many lights on	night	
Sa 9-15-90	215	10:00 a	woman hanging laundry	cloudy	
Th 9-20-90	211, 215, 221	07:00 p	doors open & one walker	sunny, cool	
Sa 9-22-90	221	noon	80th birthday party & many people	sunny, cool	
Su 9-23-90	221, 215, 221	10:00 a	many residents to cars	sunny	churches
Tu 9-25-90	all	03:00 p	doors open & no one observed	sunny	

Figure 5.3: Summary of Direct Observation in September

Date	Resident	Time	Activity	Weather	Off-Site Destination
W 10-03-90	221	10:30 a	woman shakes rugs	sunny, cooler	
Su 10-7-90	all	02:30 p	cars begin to return	sunny	
Mo 10-15-90	309, 315	05:30 p	smells of cooking & laundry out	cloudy, nice	
Sa 10-20-90	211, 215, 221	noon	many residents walking on site	cloudy	
M 10-29-90	227	04:00 p	woman taking a walk	sunny, cooler	
Tu 11-6-90	221	01:00 p	funeral for Elwin & many relatives	first snow	church
Th 11-8-90	215, 211	11:00 a	two women drive away separately	sleet	Fareway

Figure 5.4: Summary of Direct Observation in October and November

leave, when they would return, and if they had guests at their apartment.

Sixty-Question Survey

The sixty-question survey data is divided into three major spaces to report significant findings. The results from the survey are reported based on the three major spaces that the residents used on a regular basis. Both categories of residents, those with a strong connection and those with a weakened connection are reported on as a group except when significant differences are present. The answers that were given by the two separate categories of residents are reported for the three types of spaces identified in the analysis. The data is divided into the three types of spaces to organize the data collected into a structure so planning and design issues can be identified.

The three major types of spaces that both categories of residents identified as part of their present homerange are: 1. spaces near the home, 2. community spaces, and 3. regional spaces.

Spaces near their Home

First, when asked if there were any outdoor areas near their home, the majority of the ten residents surveyed described several backyards, porches, gardens and patios that had been important spaces in the past. The main emphasis was on the activities such as watching the leaves change colors, wanting to view water, enjoying the sunshine and gardening. Equally significant was the activity of social interaction. Meeting friends and family in outdoor areas or seeing neighbors and people that were familiar was an important memory of the using outdoor areas near their

home regularly.

Then when asked about their life at Midtown Village, the residents mentioned many of the same types of areas are areas they use regularly. Flower beds were used by all ten residents in the survey. All ten were allowed by the management to plant up to 18 inches from the wall of their apartment and use this for their personal flower bed. The residents had flower gardens that were important to them in the past and many mentioned that since they had always had a flower bed next to their house, they were glad they could have one at Midtown. This demonstrates that many of the outdoor spaces used in the past continue to be used in the present.

When asked if they had a favorite outdoor place, many of the ten residents stated that there were several places they loved to go to such as the parks listed above but their favorite place would have to be their backyard, or their flower garden. Also, when asked if they had a favorite place at Midtown Village, they responded that it would have to be their personal flower garden near their apartment.

All of the ten residents stated that they had fond memories of porch swings, lawn furniture and picnic tables in their previous yards where they could sit and talk with friends outdoors. When asked "is there an outdoor place to sit and talk at Midtown?", all ten said no, however, some mentioned a picnic table near the community room, but even though there was a table, there was not enough shade. All ten said they would use a space for sitting if they had one.

Several residents had specific ideas about where to locate an outdoor sitting space at Midtown. One stated, "up front near the mail boxes to watch the traffic and watch for friends," and several said, they would enjoy a shaded sitting area, "in back by the flowers and trees." Many mentioned that benches along the sidewalks

would be helpful all around the housing complex, if the benches were located near the sidewalks.

All of the ten residents responded that they had a garden or a flower bed in their previous yards. It was significant that all ten also stated that they felt their flower bed space at Midtown to be very important. There were eight residents that said they would not use a community garden space even if it was not too big and if it was partially shaded. One woman said she might use a garden space if it was not too big and it had to be partially shaded. The youngest, Mary (age 68), said she would love a garden space at Midtown and currently uses a space at her son's house which is three blocks away. Mary was the resident who planted all of the flowers around the trees, the garbage bin area, the mailboxes, and the sign for the complex near the parking lot. She said the management gives her flowers and money to buy other flowers to plant around the complex because she had a large garden in Rhode Island and really was interested in gardening.

When asked if they thought any part of the space at Midtown was their personal yard, several mentioned only the space directly in front of their apartment up to the sidewalk which was approximately fifteen feet from their door. One woman, Mary, considered the entire area to the west of her apartment to the treed area as her yard. She was the only resident to manipulate the landscape more than the eighteen inches allowed for a flower bed by the management.

It may be that because she considered the space her personal yard that she felt comfortable manipulating the space almost thirty-five feet from her apartment by planting a large display of flowers. However, the reason for her extensive gardening may be more due to her age and strong physical ability.

Generally, all residents in the study used the flower bed space provided in front, around the corner and along the side of the apartment. The residents were observed gardening and there was evidence that the flower beds were well maintained. One woman commented that she enjoyed the flower bed and was pleased the management allowed the eighteen inches. Grace stated, "We get eighteen inches mainly because they need to make it easy to mow. I have managed to inch, inch, inch my way out."

Community Space

Six of the ten residents surveyed drove their own car in the past and continue to drive their own car currently. The four residents that do not drive, two stated that they used to drive a very long time ago when they had children but don't drive anymore and the two other women never learned to drive a car and relied on their husbands. One woman stated, "When he is sick, sometimes my friend Bernice drives me to Fareway."

One woman, Lillie, in the group who lost her husband on November 1, 1990, remarked that her life would probably change dramatically now because she does not drive a car. When Elwin was ill over the summer, they limited their driving and relied on others to drive them to church and to the Senior Citizen Center. During Elwin's survey he stated "we haven't been to Ames since early May, we haven't driven much last month because it is too tiring to drive."

Lillie recognizes how activities had been limited by Elwin's illness and now with his death, she stated that she was afraid she would not get to church regularly. This response correlated to her response that when asked, "if you were suddenly limited to only your apartment, what places would you miss the most?", she stated the church.

In fact, on this question all ten residents answered that they would miss church the most out of all the places they go. The church represented the greatest connection to the community. Residents were a significant member of their church and the church was a significant part of their lives.

When asked about the places in Boone that the residents used regularly there were six places mentioned by all ten, five places mentioned by eight residents and two places mentioned by five residents. The six top places were church, Fareway grocery, Senior Citizen Center, Colonial House (restaurant), downtown Boone and a house of a friend or relative. In comparison, the residents overwhelmingly stated that these places are places they continue to go to regularly, unless there is “really bad weather”. Many of the places mentioned are places the residents have gone to for over fifty years. Four residents were baptized in the church they attend currently. This is significant because the long term tie to a place through continued use creates a strong sense of community. Sharing significant events with others at church makes the church a strong gathering place to reaffirm their identity.

Some differences that appeared between the two categories of residents were that those residents that had a change in their physical ability needed a place to sit down, stayed home at night more frequently, did not spend as much time outdoors and remember going somewhere recently that was physically inaccessible or was difficult to use. The spaces near Midtown Village that the residents reported to present difficulties for walking were the parts of the sidewalk with uneven concrete squares, a part of the sidewalk that has an uphill slope, and where there is a downward slope at their front door because it gets very slick in the winter.

Most of the residents stated that they could only think of household errands

that they did on a regular basis in the past. Five residents responded that Monday has always been laundry day and one resident stated “Wednesday afternoon after the flyer with grocery coupons come out is grocery day for as long as she could remember.” Many had card clubs that met periodically that were held downtown at various locations or in houses of friends.

When asked about the parks that they used regularly many mentioned the same parks and outdoor areas that they have gone to for several years. Only two residents (a married couple) mentioned that they used to go to Memorial park when the grandchildren played in Little League, but now they do not know anyone any longer and so they no longer go. The main reasons for going to parks were for social interaction and to be near trees, plants, and water. All residents had a wide variety of national, state, and local parks that were part of their background. Although none of the residents had been to a national park within the last two years, several had been out to the Ledges State Park this summer when it flooded.

Some of the area parks that the residents used on a regular basis in the past were McHose Park, Memorial Park, the Ledges State Park, Big Creek and Des Moines River access points. Now at Midtown, the residents continued to use McHose Park, the Ledges and the Des Moines River. Many mentioned that wildlife was a reason they went to parks and that even at Midtown there was a large source of wildlife habitat in the heavy trees on the west edge of the complex. Mrs. Eppert and her grandson had seen a deer there this summer and tried to photograph it. This story was known by almost all of the residents surveyed and Mrs. Eppert, herself commented that she has seen deer there before. She lives in the unit right next to the trees. She even saw a family of cats, a mother and kittens, living there for quite a while.

When asked if they used the Senior Center, all ten said they did in the past and continue to now, and they also use the new community room at Midtown. One resident responded that she has family dinners over there because she “hated to give that up just because her apartment was so small.” The main obstacle for using the Community Room was carrying over everything that would be needed and carrying it all back to the apartment. Many residents do not feel the community room is really a space they feel comfortable using as their own. One woman said, “I always feel as if someone else may need it and I feel like I should go back home.” This is significant because this room offers a larger space for social interaction, yet none of the residents surveyed met each other over there. The residents use it more to meet their family for special occasions.

Overall, the residents had a wide variety of public spaces that they used on a regular basis. When asked if they needed to go out of the housing complex once a week, all residents responded definitely once a week and most needed to leave Midtown Village at least three times a week. The survey data revealed that even if the resident had a serious health problem, public spaces were a significant component of his or her present homerange.

Regional Spaces

All ten residents that stated they would always go to their relatives for holidays, even out of town. At Midtown this has not changed except that one resident stated that sometimes she rides with someone if she has to go out of town instead of driving. The special occasions that took the residents out of town varied among the ten surveyed but mainly they were holidays, funerals, weddings, visiting others in the area

Lillie	Elwin	Evelyn	Doris	Genevieve
Church Center Fareway Stores KFC Doctor Dentist Hospital Hair Salon Library Friend	Church Center Fareway Barber Dentist Doctor Hospital Friends	Church Center Fareway C. House Doctor Dentist Drug Store Hospital Bakery Friends	Church Center Fareway Downtown C. House Beauty Shop	Church Center Fareway Spurgeon's Restaurant KFC C. House Doctor Dentist Hospital Friend
Mary	Grace	Marge	Thomas	Alice
Church HyVee Tic Toc Center WalMart Downtown Friend's Moose Lodge Legion	Church Center Fareway C. House Downtown Library Restaurant DAR Lodge Moose Lodge Legion Doctor Dentist Beauty Shop Friends	Church Center Fareway Spurgeon's C. House Doctor Dentist Hospital Drug Store Beauty Shop Friends	Church Center Fareway Doctor Dentist Big Bear Friend	Church Center Fareway HyVee Deli Doctor Dentist Friends Many Towns Hair Salon
Public places in the present homerange.				

Figure 5.5: Current Public Places in Homerange

Lillie	Elwin	Evelyn	Doris	Genevieve
Ledges Park McHose Park Cemeteries DMS River	Ledges Park McHose Park Cemeteries	Ledges Park McHose Park	Ledges Park McHose Park The Country	Ledges Park McHose Park
Mary	Grace	Marge	Thomas	Alice
Miss. River DMS River Ledges Park McHose Park The Country	Ledges Park McHose Park Cemeteries	Ledges Park McHose Park	Ledges Park McHose Park The Country River	Ledges Park McHose Park Cuttys Camp DMS River Cemeteries The Country Saylorville
Outdoor Public places in the present homerange.				

Figure 5.6: Current Outdoor Public Places in Homerange

hospitals, major shopping trips and vacations to many destinations. The residents surveyed stated that traveling has changed to a certain degree with nine residents stating one or two reasons for not driving their own car long distances now that they live at Midtown.

The one question on the survey that did correlate to a strong connection between the past and present homerange was attending state or national parks. In the past the list of state or national parks that many of the residents went to was very long and included the Ledges State Park. Currently, there were not any residents that have been to a national park within the last year but all of the residents had been to the Ledges State Park over the summer. Many of the residents stated that they went to the park to see how high the Des Moines River was during the flood in July, 1990.

Many commented that they felt attached to the Des Moines River because they had grown up fishing, swimming and canoeing in the river.

The woman from Rhode Island, when asked if there were any new places she really liked she stated that she loved the Mississippi and Des Moines Rivers. She and her husband had traveled to Davenport to ride a paddle boat on the Mississippi River in October. She said she fell in love with the scenery and could ride for miles looking at the trees and the landscape.

Finally, all ten residents responding that they enjoyed reading books and watching television shows like "Nature" in the past and continue to do so now that they live at Midtown Village. Many commented that they watch shows about national parks and other places they have been because they remember visiting the parks and other places and know they will never visit there again. The television shows bring back memories of the visits and many residents stated that remembering the times they visited National Parks and other places with their families was very satisfying.

Genevieve had visited California every summer to visit her sister for several years in a row and they went to several parks together. Her sister died this year in the spring and Genevieve had part of her colon removed in September. She stated, "I did not go to California this summer for the first time. My granddaughter lives in Denver and I might go there next summer. But I saw a show about the San Francisco Zoo and it looked exactly like it did when I was there with my sister. I remembered how much fun we had."

24-Hour Logs by Residents

The 24-Hour logs created by the residents on Wednesday, and Saturday or Sunday were used to verify the survey data. The logs revealed that the survey information was similar to the data collected in the 24-hour logs and this verification added a great deal of information about the typical week of the residents. The logs were well documented and provided a clear indication of the places the residents would go and the activities they would participate in.

There were four significant findings in the logs that are important to report. First, the majority of the residents' survey went to church on Sunday. Many residents had stated that the church was a very important place for social interaction. The logs showed that the average stay church was two hours and forty-five minutes. Many residents also recorded that they went out for dinner after church and did not return until 2:30 p.m. Church represented a place to gather with friends and family with the opportunity to go out to dinner or go out for coffee after church, extending the social activity.

Second, the majority of the residents had friends over on Saturday or went to visit friends on Saturday after running errands in Boone. In fact, all of the four residents who had filled out the logs on Saturday had some form of social contact for over an hour on Saturday was significant. Of the four, two residents had friends over and the other two went to see other friends on Saturday.

Third, there were patterns of "household chores" that appeared on the logs for the majority of residents. There was not much elaboration for details but words like check mail, take out garbage, wash tea cups, and sweep kitchen appeared on every one of the logs. There may be a pattern that forms for each individual if the logs were

Wednesday Logs	Saturday Logs	Sunday Logs
<p>House Chores: cleaning bedroom, shower, baths, and dressing bring in paper open windows and curtains meal preparation cleaning house washing dishes garbage out papers sorted call friends write letters watching T.V.</p> <p>Short Span Activities: weeding garden walking take out garbage check mail check on neighbor laundry exercising sitting outdoors reading newspaper</p> <p>Off-site Activities: visit friends grocery shopping beauty parlor stop at bakery WalMart Avon Apartments Visit Hospital</p>	<p>House Chores: watering plants dusting cleaning blinds making an afghan write letters talk on phone</p> <p>Short Span Activities: weeding garden walking take out garbage check mail exercising reading playing cards watching T.V. play games</p> <p>Socializing: visit friends friends visit relatives visit shopping talking on phone</p> <p>Off-Site Activities: visit friends WalMart Card Club Sr. Citizen Center Library</p>	<p>House Chores: showers, baths dressed for church meal preparation tea talk on phone</p> <p>Off-site Activities: church Country Kitchen Colonial House K. F. Chicken Valentinos</p> <p>Socializing: visit friends and relatives</p> <p>Note: Church is the major event of the day.</p>

Figure 5.7: Summary of 24 Hour Activity Logs

kept over a longer period of time and this activity may be part of a more significant pattern of activities. The small movements around the apartment by opening the front door, raising the curtains and shaking rugs out the door allows other residents to observe that the resident is up and has started the day. The activities may form a ritual of signaling safety and well-being and acknowledging each others presence.

Finally, the majority of residents were very active, even though many residents reported serious health problems. Many of the recorded logs had a full schedule of events starting at 5:30 to 6:00 a.m. and ending around 10:30. Many reported a card club on Wednesday night with the majority of residents home before 8:00 p.m. There was a variety of activities reported by all ten residents with every resident leaving Midtown Village an average of four times during the two recorded logs.

Summary of Significant Findings

There are five main conclusions that have emerged in the analysis of the three research methods used in this study:

1. A significant connection does exist between the past experience with the public spaces and the use of public spaces in the present homerange. The past experience is a common denominator with a strong connection to the Iowa landscape including parks, the Des Moines River and the countryside. A change in physical ability or no longer driving a car were the main reasons for the use or non-use of public spaces in the existing homerange.
2. There is a strong desire for social interaction and in spite of the serious health afflictions of two or three residents, the residents fulfilled their desire for social

interaction. In the town of Boone there were places to socialize that many residents had used for over fifty years, but the residents responded unanimously that there was no outdoor space at Midtown Village for social interaction.

3. The church was the most important public place for all residents in the study. Church represented a place to gather with friends and family on a regular basis and to get together for major events such as weddings, baptisms and funerals. Sense of place was achieved through the rituals at the church and church fellowship which symbolized a strong sense of personal and community identity.
4. Residents used a wide variety of public spaces indoors and outdoors within the town of Boone and the region. Many of the public spaces used by the residents have been a significant part of their lives for over fifty years. The majority of residents were very active, even though several residents had serious health limitations.
5. Rituals around the home and the yard were performed by the majority of the residents. Many activities were observed that may have represented patterns of neighbors signaling each other regarding their safety and well being. The data revealed that most residents opened their curtains, checked the mail or took out the garbage at a certain time in the morning, all signals that help residents keep track of each other.

CHAPTER 6. PLANNING AND DESIGN STRATEGIES

The following planning and design strategies have been developed for the public and private spaces near the Midtown Village housing complex and for the community of Boone, Iowa. There have also been strategies created for planning and design of a new housing facility and public spaces within the homerange region. The strategies were developed based on the analysis of the data collected. Three research methods were used during the investigation of residents' homerange: direct observation, a survey, and a 24-hour activity record.

Based on this research, the majority of residents had a significantly strong connection between their past and present homerange, with several residents beginning to show signs of a weakened connection based on one of three variables: a change in desire, a change in opportunities available, and a change in physical ability. Therefore, the residents have a series of places that have provided a setting for public, social interaction and a sense of community for nearly half a century. This public life is important to their every day lives. The very definition of public life could be expanded to include the spaces people identify and use regularly as part of their homerange. Many spaces these elderly residents have identified with regularly over the past have been overlooked as areas for potential design.

The major conclusion of the research is that homerange, as a defined territory

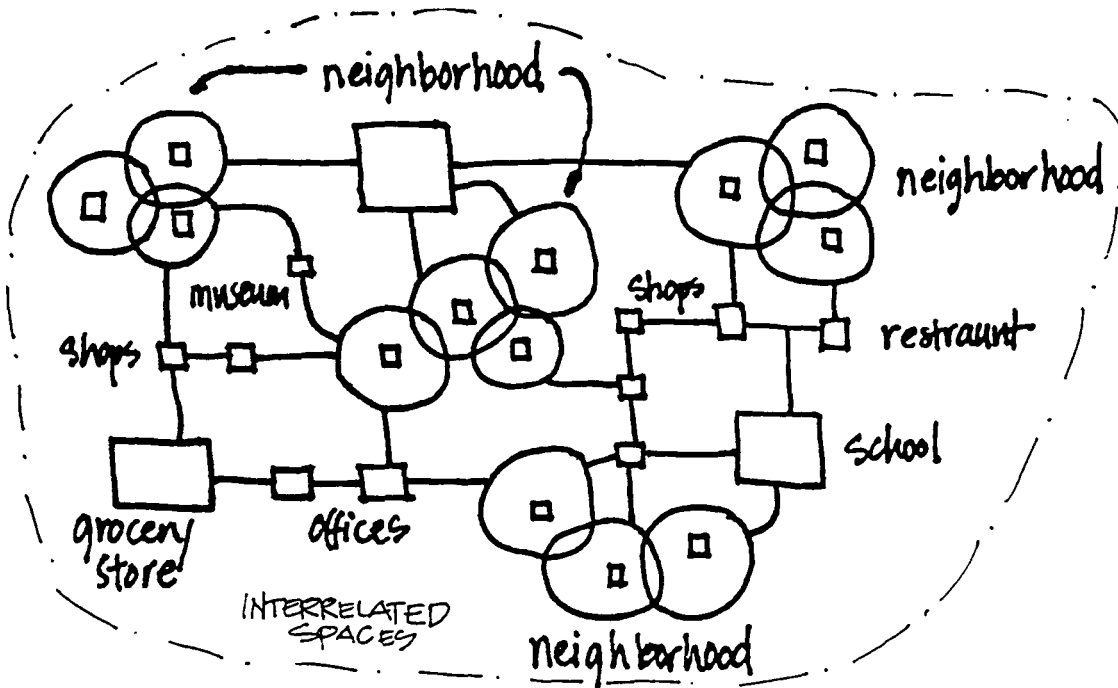


Figure 6.1: Concept for Planning and Design

that the residents used to satisfy their daily desires and needs, is actually a combination of the residents' past experiences that symbolized their life (who they have always been), and their present experiences that symbolize their current identity (who they are).

Based on this research the overall concept for planning and design was to conceive of the entire town as a whole unit of interrelated spaces, natural processes and people. This is similar to thinking about an entire park or playground as a series of interrelated spaces. As it is, Midtown Village is clearly segregated from the surrounding neighborhoods. The town as a park or playground for the residents to play out their every day experiences and interact with others or not would be the basis for

the definition of the individual's homerange. Not segregating the town into pieces by conceptualizing the town as a park or playground allows the planner or designer to think about the town differently because the town is a part of the natural processes that have created it.

“The city, the suburbs and the countryside must be viewed as a single, evolving system within nature, as must every individual park and building within that larger whole. The social value of nature must be recognized and its power harnessed, rather than resisted. Nature in the city must be cultivated, like a garden, rather than ignored” (Spirn, 1984, p. 5). The unique landscape of the town with its natural environment and urban form create a record of the people who have lived there and contribute to its identity. The concept of the town as a park or playground allows the planner or designer to translate the physical space needed to meet the daily needs (the homerange) into creative solutions for housing, transportation and public open spaces that are in concert with nature rather than against it.

Tying the actual landscape and the physical natural processes into design allows the town to develop in harmony with the processes of nature; the air, earth, water, vegetation and animal life all contribute to a town's unique identity. Experience with the town on a day to day basis for years creates a strong connection between the use of the spaces within the town in the past and the need to seek out specific spaces in the present homerange. Creating a whole, unified region that is tied to the actual landscape can strengthen the strong connection to the landscape that was revealed by the data on the study of homerange among elderly residents of Boone. The town must be recognized as an integrated series of spaces that have the potential for people to come together and share their lives through their overlapping

of homeranges. Extending homerange into the community adds opportunities for individuals to strengthen the connection to their community.

“Each city and town must appreciate the social values inherent in natural processes and understand that urban form and human purpose can evolve in concert with nature. Every building, every park, and every highway is designed with more than one end in mind. Each is regarded first as a unit with specific primary uses, then as an element in a small, local system of other buildings, parks and streets, and finally as a part of a larger, regional system of land uses and environments” (Spirn, 1984, p. 262). People are tied to the community they live in based on the data collected in this study. Creating a series of integrated spaces for people to come together and express their community identity is one positive step to strengthen the tie to the community through the actual landscape by extending the homerange.

The planning and design strategies are recommended based on the findings of this study as strategies to extend the residents’ homerange into the community at a greater degree. The main purpose of extending the residents’ homerange is to create more opportunities for social interaction. Through social interaction, identification with community, a sense of security, and ability to share experiences with others is enhanced.

The planning and design strategies have been developed based on the data collected in the three research methods investigating the concept of homerange. These strategies for planning and design have been created specifically for the study site at Midtown Village and the public spaces within the town of Boone and strategies are also that could be used for planning and design of a new housing facility and public spaces within a community.

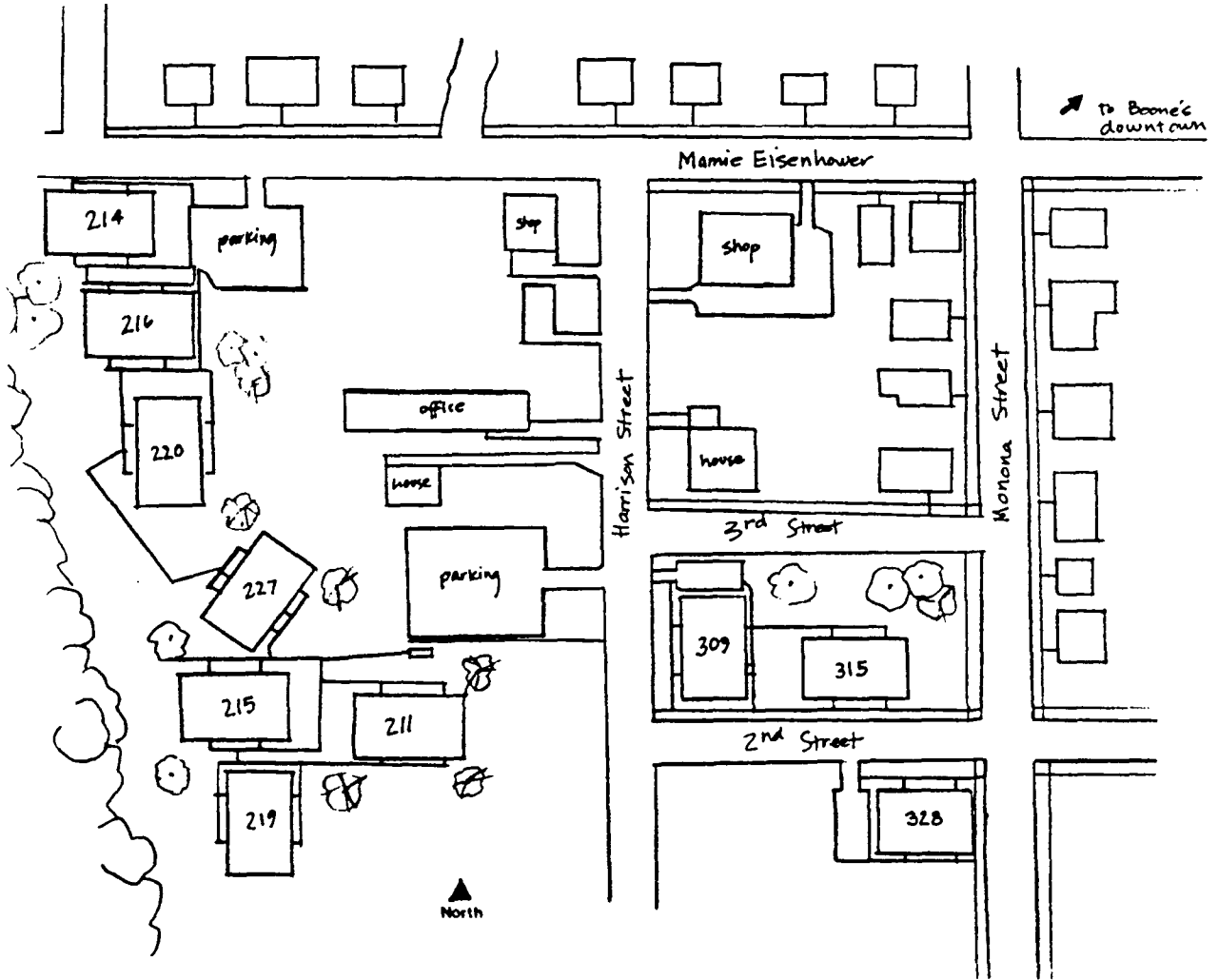


Figure 6.2: Midtown Village: Site Plan, Boone, Iowa

Planning Strategies: Midtown Village

Two major considerations for planning strategies that can benefit the needs of the residents at Midtown Village housing complex have been developed based on the data collected in this research project. The two considerations for planning strategies are: community assessment of public spaces and strengthening neighborhood connection.

The primary concept for planning is to encourage a strong connection to the landscape by identifying and creating an integrated series of spaces for people to come together, share their lives and express their community identity. The planning and development of an integrated series of spaces should involve extensive public participation combined with continued evaluation to fully meet the needs and desires of the community members. The planning strategies have been developed primarily for the use by the local government officials, chamber of commerce or various business groups that have a responsibility or a vested interest in the needs of the public.

Community Assessment of Public Spaces

Downtown merchants through the various business groups could determine if the public spaces in the town of Boone are encouraging social interaction among the elderly. Public spaces can be analyzed for accessibility and their contribution to the sense of community. Design standards could be created and evaluated for public spaces to meet the goals of accessibility and contribute to the social interaction for the elderly.

A full analysis of public spaces within the community can be organized by the local town officials to benefit the entire community with special attention to the requirements for the elderly for social interaction. Groups in the community of Boone

that have a responsibility for the public's interest and needs could analyze public spaces, set standards and make recommendations for implementation of specific public spaces regarding their placement, design and construction.

Neighborhood Connection

Midtown Village residents would benefit from planning strategies that encourage the connection to the adjacent neighborhoods. Visiting with neighbors in outdoor locations such as back yards and gardens was determined to be a memory of several residents that added to their sense of community. Sharing events with neighbors was also a strong tie to the neighborhood as part of the past homerange. At Midtown, the management could encourage social interaction within the housing complex and with adjacent neighborhoods.

By encouraging the connection to the adjacent neighborhoods to the Midtown Village complex, the connection will create more opportunities for social interaction. The pattern of observing neighbors and keeping track of each other can be extended to include the adjacent neighborhood residents increasing the overall sense of well-being in the area. The housing complex residents could increase their safety and well-being by sharing events and establishing relationships with their neighbors outside of Midtown. The richness of the homerange territory would be supplemented by adding spaces outdoor sitting areas, picnic areas and small neighborhood parks in adjacent neighborhoods for potential social interaction.

Other services such as on-site recreational facilities, a coffee room and on-site movies could be planned and designed on location at the Midtown Village site to encourage social interaction among the residents at Midtown Village and the residents

in the adjacent neighborhoods.

Design Strategies: Midtown Village

There are three concepts that a designer can explore to create spaces that are more supportive of the elderly residents' daily needs and desires. The three design concepts are: encouragement of social interaction, recognition of relationship to the past, and reinforcement of a sense of community identity.

The data revealed three specific areas for design that could meet the objective of reinforcement of a sense of community. The three specific areas for design are: spaces for social interaction including an outdoor sitting area, sidewalk rest areas, and extensions of the community room. Along with any design proposal there should be a strong commitment to continued design evaluation for the management of the Midtown.

Outdoor Sitting Area

The data revealed that there was a significant need for an outdoor sitting area on the site at Midtown Village. There were two areas that were suggested as the ideal locations for a potential outdoor sitting area. First, the space to the west of the parking lot by units 211 and 215, near the mail boxes and garbage dumpster was a space suggested by many residents as an ideal space for a shaded sitting area. This location was chosen because it would allow the residents to sit and watch for approaching guests, the arrival of the mail and while waiting for a ride from a friend.

The design of the outdoor space should include shaded areas and protection from the wind along with a variety of possible sitting locations. The space should be

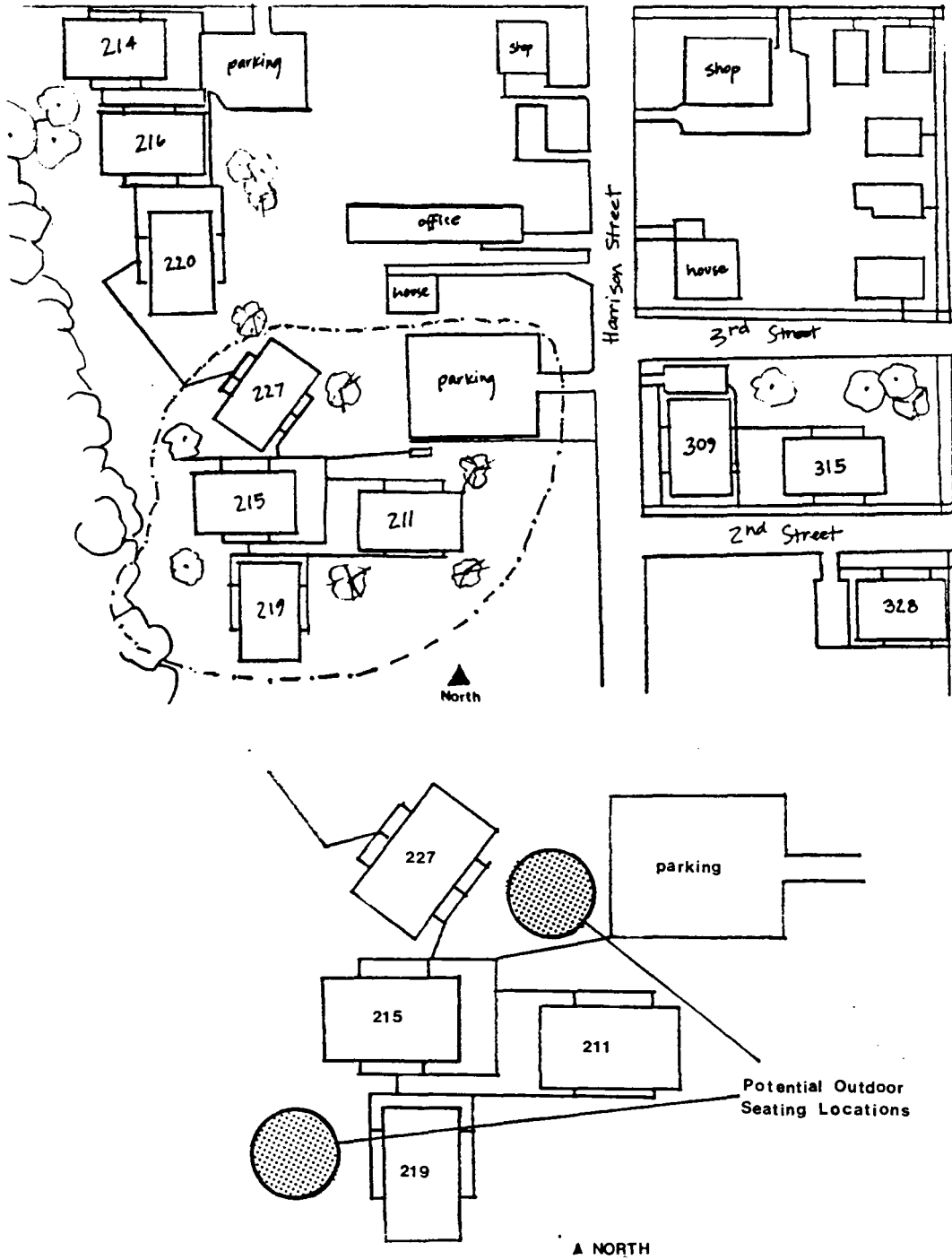


Figure 6.3: Locations for Outdoor Sitting Areas

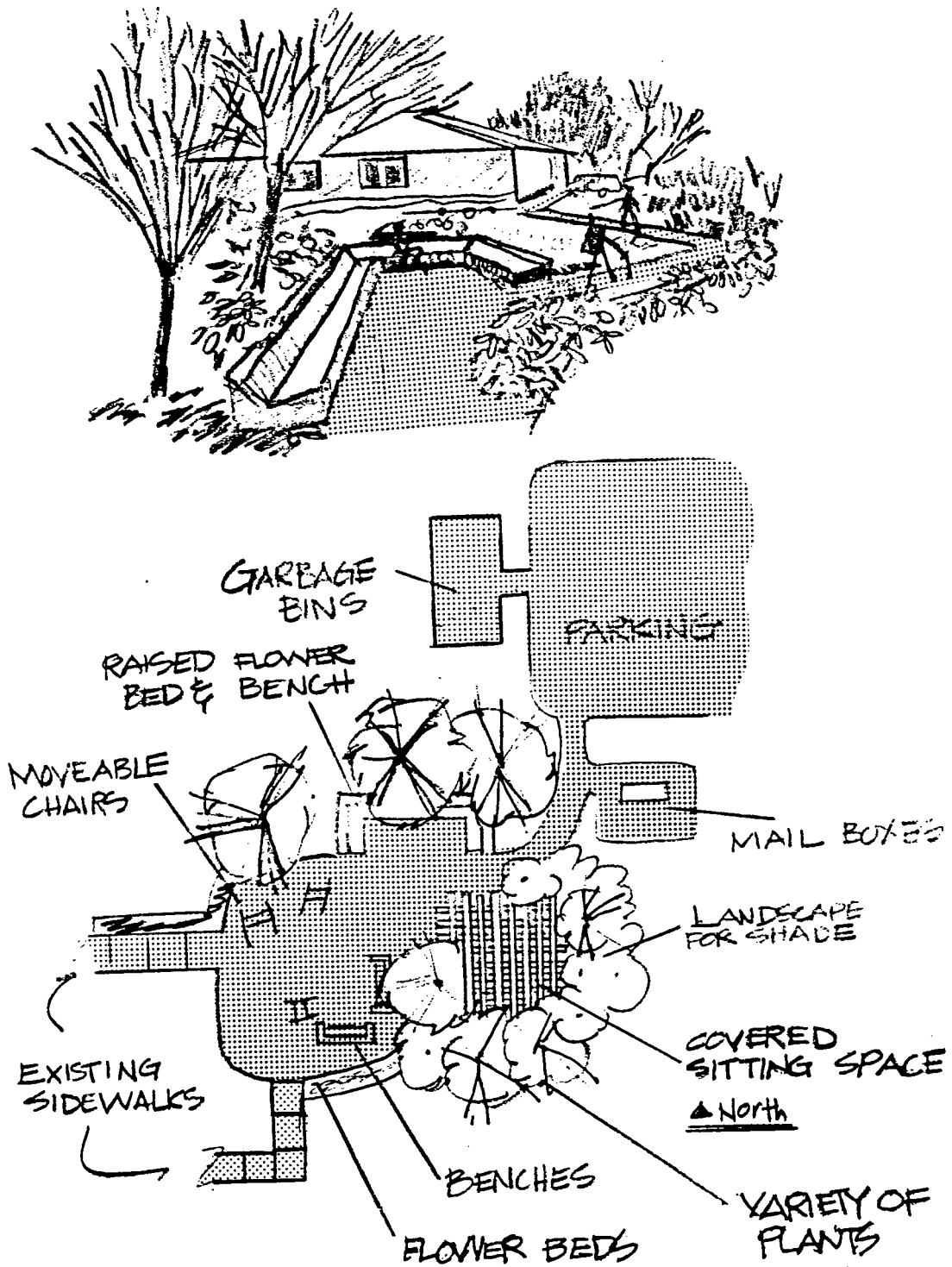


Figure 6.4: Design for Outdoor Sitting Areas

large enough to accommodate several individuals yet intimate enough for a sense of comfort when two people occupy the spot. The overall design should be handicapped accessible and easy to drop in casually. Residents should not feel awkward or inhibited in the use of an outdoor sitting area and the design should communicate easy physical and psychological access.

The total cost of an outdoor sitting area would include the design work, the construction and the overall maintenance. The outdoor sitting area could be constructed by area volunteers to lower the cost. The area should be constructed with concrete or brick paving over concrete and linked to the existing sidewalks for durability and physical accessibility. Concrete paved areas and sidewalks are areas that could have the potential for cost-cutting in the construction phase. The design of the concrete paved areas for walking to benches and the sidewalks should be designed and constructed to meet high design standards for safety.

Trees, shrubs and a variety of landscape materials should be included in the design with open beds for flower planting by the residents. The residents should be allowed to personalize the space to create a sense of ownership. Residents personalized spaces near their apartment and enjoyed the flower beds located in more public locations. The sense of ownership can be expected to contribute to the overall sense of well-being and identity with the Midtown Village residents.

Benches in this area should be set at ninety degrees to allow easy conversation. Movable chairs should be encouraged for better adaptation to the sitting area. Residents should be encouraged to spend periods of time sitting, socializing and enjoying the view by the comfortable design of the seating.

Sidewalk Rest Areas

The second area for design consideration was rest areas along the sidewalks. Many residents stated that they needed a place to sit down periodically when they are walking outdoors. The sidewalks connect all units and offer adequate space on either side of the sidewalk for locating benches. Benches located along the sidewalks should not be randomly placed, but instead should be located near the service areas such as the mail boxes, the garbage bins and the community room. By placing the benches near the locations regularly used, the residents will be more likely to use the benches. Sitting on the bench to rest or to work on a craft project may encourage other residents to sit and socialize. Also, the benches would create one more area for residents to watch each other and keep track of each other.

The benches should be located facing the sidewalk for easy access from the sidewalk. The benches should be placed on a concrete pad for easy accessibility for residents with physical difficulties. There should be areas for flower planting near the benches to personalize the space. Also, the design of the benches should be comfortable and handicapped accessible.

Extension of Community Room

The community room offers the opportunity for extensions off both the east and west doors for outdoor spaces that can extend the function of the room. Covered outdoor sitting areas designed for family picnics or barbecues can offer the residents a place similar to their previous backyards for social interaction. The community room was not used for social interaction by the residents surveyed with the main reason stated as “difficulty moving chairs over for sitting outside.” The additional outdoor

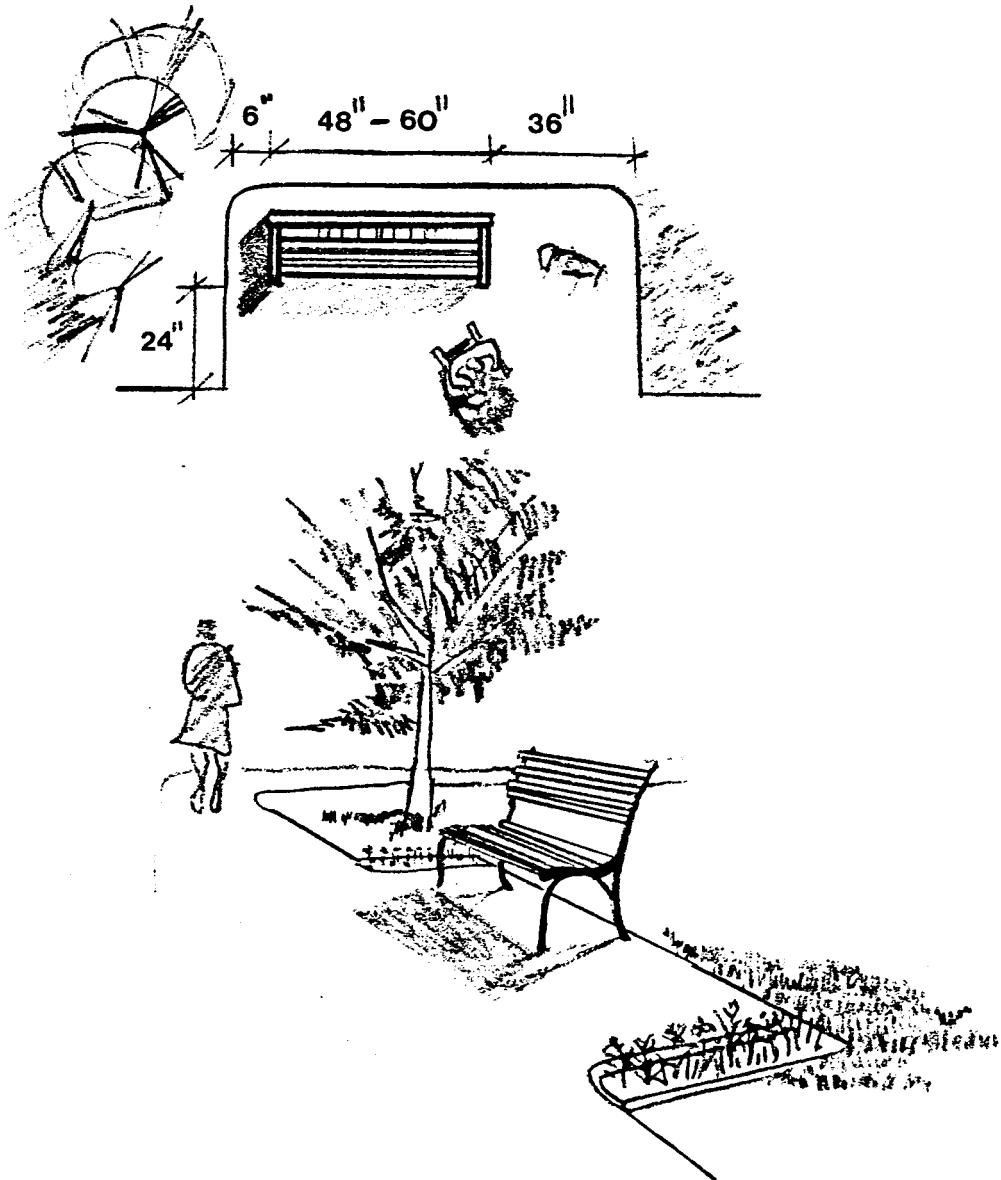


Figure 6.5: Sidewalk Rest Areas

spaces to extend the community room by creating outdoor rooms would offer the residents potential space for social interaction. Storage space could be designed as part of a covered outdoor sitting area for storage of lawn chairs that could be used by the residents.

The community room needs redefinition to make it a more accessible part of the housing facility. This shared space offers the greatest potential for social interaction on the housing site, but according to the data collected, it was not adequately used by the residents.

Redesigning the space to extend outdoors to a patio space may add enough interest to the space to pull residents to the community room for playing cards, watching movies or eating meals together. The outdoor extension could give the community room more visibility to the residents at Midtown and increase the areas available for social interaction. By creating more areas for social interaction the residents will develop a stronger sense of community within the housing complex.

Planning Strategies: New Facilities

Planning the placement of a new housing facility for elderly residents should create the opportunity for the elderly to be close to churches, shopping areas and local public spaces. The primary concept for planning is to encourage a strong connection to the landscape by identifying and creating an integrated series of spaces for people to come together, share their lives and express their community identity. The planning and development of an integrated series of spaces should involve extensive public participation to fully meet the needs and desires of the community members.

There are four planning strategies that should be considered when planning the

placement of a new housing facility for elderly residents based on the data collected in this research project. The four considerations for planning strategies are: assessment of available sites, assessment of public spaces, supportive services assessment and continued evaluation.

Assessment of Available Sites

First, an analysis of available sites should be conducted to identify all possibilities. The sites need to have a potential for open space to be integrated into the housing complex, adequate space for parking cars and a close connection to the downtown area where churches, stores and public spaces are usually located. Based on the data in this study, the elderly residents at Midtown Village had significant experience in public spaces and would benefit from a housing site located “where the action is.”

An assessment of available sites allows the planner to determine the possible opportunities that could add richness to the homerange available for elderly residents. The possible homerange associated with the potential site should offer the residents access to churches, shops, grocery stores, and public spaces indoors and outdoors that are within driving distance of approximately five to ten miles. The majority of residents in this study did not drive out of town for shopping or socializing on a regular basis. The possible sites should be rated for opportunities for social interaction and a decision on the appropriate site should consider this rating along with cost, other development and land use and other planning considerations.

Assessment of Public Spaces

An assessment of public spaces within a community should be conducted as part of the planning process for a new housing facility for the elderly and public spaces within the community. The major contribution of studies on the concept of homerange is the ability to understand the spatial requirements of segments of the populations and their needs for housing, transportation and public spaces indoors and outdoors. Based on the data collected in this study there are specific needs within the homerange that have been revealed for this group of elderly residents. The study could be generalized to other elderly residents within other communities.

Agencies that have the responsibility for the needs and desires of the public will benefit from studies on homerange because any existing or new public space could be evaluated to determine if it meets the needs of the residents within their homerange. Public spaces should offer a wide variety of opportunities in order to make social interaction available. The public spaces should be accessible and tied to the actual landscape.

Based on the data collected in this study the public spaces available in Boone were an important component of the resident's homerange and should be viewed as an integrated series of spaces within the entire community. The planning and design of the entire community as a series of interrelated spaces could strengthen the community's identity by emphasizing the unique physical characteristics of the landscape.

Supportive Services Assessment

Many residents in the study reported visiting local parks to be near nature and for site seeing. A mini-bus could schedule special trips to local parks and drives in the countryside. The additional bus service would benefit elderly residents that no longer drive because the drive to the park or the river for sight-seeing allows the residents to continue activities that were important to them in the past. The homerange would not be limited because the resident no longer drives if the bus service can create special trips that encourage social interaction and opportunities to be near nature.

A review of services available to support the housing complex should be conducted to identify services the elderly residents can benefit from. Supportive services include para-transit, social services, health services and other services that encourage a person to maintain his or her independence within the proposed housing complex. Once a person has been established in a housing complex and has defined his or her homerange, services should be planned to encourage the individual to maintain the relationship with places that have been important in the past.

Needs assessment of the potential residents can be used to identify new, innovative services that can extend the homerange. For example, a traveling art museum shows can bring art to a public place for the elderly residents' enjoyment. Residents that can no longer drive to larger cities can enjoy a traveling art museum show adding to the sense of connection to a larger region and extending their homerange.

Continued Evaluation

Along with the planning process of a new elderly housing facility should be a process for continued evaluation. The continued evaluation can identify problems

that arise and identify successful components of the planning process. Continued evaluation could be in the form of residential satisfaction surveys to determine if public spaces within the community are meeting the need for social interaction.

The residents in the housing complex can be involved in the evaluation process through surveys, public meetings and interviews about the potential of a new housing facility for the elderly. The planning of a new housing facility placement or the planning and design of public spaces could meet the needs of potential elderly residents if the people are allowed to voice their opinions concerning location, design and accessibility.

The cost of public participation in the planning and design process should be factored into the overall project costs. When planning the phases of an evaluation program for a new housing complex, the management should strive to involve the residents. Management has limited resources available and could work with various social and community groups to develop and implement any physical changes.

For example, the planning of an outdoor sitting area at a new housing complex could involve the residents, local architects and volunteer community groups. The actual location could be planned by the interested residents in a public planning meeting, the design could evolve from a public design charette and evaluated with the participation of the residents and the construction phase could be planned as a high school vocational class project or as a project for interested local social, service or church groups. Residents in the adjacent neighborhoods may also benefit from planning an outdoor sitting area that encourages social interaction.

Design Strategies: New Facilities

There are three concepts that a designer can explore to create spaces that are more supportive of the elderly residents' daily needs and desires in new housing facilities and associated public spaces. The three design concepts are: encouragement of social interaction, recognition of relationship to the past, and reinforcement of a sense of community identity.

Based on the research in this study, there were three areas for possible design consideration and two design evaluation strategies identified to meet the concepts of encouragement of social interaction, recognition of relationships to the past and reinforcement of a sense of community identity.

Site Design

The site design should balance the outdoor spaces available for public use with spaces available for private use. Both public and private outdoor spaces are an important part of a housing complex based on the data collected in this study. The design of the buildings can be clustered around courtyards to increase the opportunity to keep track of neighbors. The relationship to the past homes the residents have occupied should be encouraged by providing areas such as front yards, back yards and flower beds when possible because these were areas important in the past homerange.

Clustering seating areas near mail boxes, garbage bins, and other locations the residents use on a regular basis would increase the spaces available for social interaction on the site. The unique characteristics of the landscape should be preserved and enhanced to allow the residents to have a strong connection to the actual landscape.

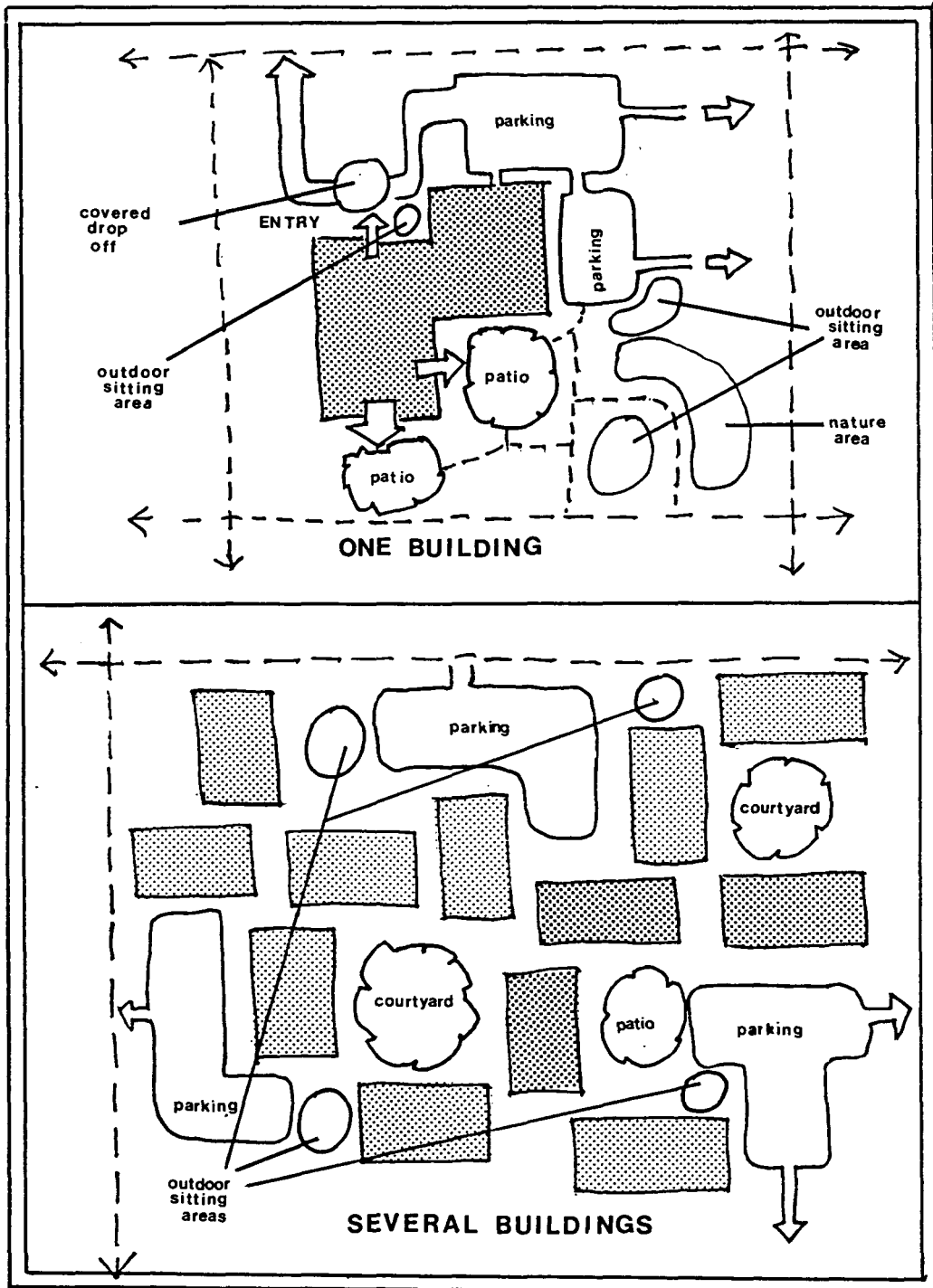


Figure 6.6: Site Design: New Facility

Private Outdoor Spaces

Residents at Midtown used the private space in front of their apartment for growing flowers, feeding birds and sitting in fresh air. The flower space was reported as the favorite outdoor space at Midtown because it was close to the apartment, large enough for adequate flower bed and small enough not to cause fatigue. Private outdoor spaces should be designed near the front door of the unit for personalization of the unit. The residents that may be limited in their physical ability could have assistance from the management to plant flowers if this was important to the resident in their past homerange.

Small areas for personal expression through manipulation of the landscape can add to the residents' sense of identification with the housing unit because control over the environment was an indication of continuation of past experiences in this study. The elderly residents could benefit from design that allows private spaces to create small gardens, control the gardens and observe the growth and development of the plants. The residents surveyed in this study reported that viewing nature in the form of flowers, shrubs and small wildlife such as birds, butterflies and squirrels was an activity that brought them pleasure. Watching the flowers develop and change with the seasons kept the residents connected to the landscape and gave them a sense of passing time.

Larger spaces such a community garden, may prove to be overwhelming for elderly residents because of their health and stamina. By situating some flower beds farther from the individual housing units may encourage exploration but it may also encourage non-use. The residents at Midtown Village described the non-use of a community garden space because it was located too far from the building and had

no shade.

Communal Outdoor Spaces

Perhaps the greatest potential for social interaction is located in shared outdoor spaces. Midtown residents agreed that an outdoor seating area would be an asset to the housing complex. Outdoor seating can be located near the street where the residents can watch traffic, and at shaded areas near the individual household entry. The location should have views and easy access to indoor areas, promote a sense of safety, support drop-by use and add interest and vitality to the site.

Outdoor areas should be designed for potential activities such as family picnics, barbecues and public gatherings but detailed for smaller, more intimate gatherings of one or two people. Older people often spend time sitting and watching the scenery and other people. The design of shared outdoor spaces should have a variety of views, textures and vegetation for potential lengthy visits.

In Iowa, the temperature can reach extreme levels for the elderly residents to be outdoors. The design of an outdoor space to attract elderly residents to socialize and enjoy nature should have landscape elements that protects the residents from the sun, wind, heat or cold. In any design of an outdoor space at an elderly housing complex guidelines for physical accessibility should be followed.

Sidewalks and Parking

Walking was reported by the residents at Midtown Village as their most popular form of regular exercise. Because the aging process, many elderly residents have mobility difficulties, poor balance and slower reaction time. Sidewalks should be

within view of the buildings for the residents to keep track of each other. A series of sidewalks that connect and form a variety of loops can offer a choice of paths within the housing complex for varying degrees of physical mobility.

Resting areas with benches should be designed for older people with handicapped accessible guidelines followed. The benches can encourage social interaction if they are designed to be comfortable, easy to get in and out of and located with orientation to activities. Many residents in Midtown Village said they would use benches near the parking lot while waiting for rides from others.

Parking is important for the residents who drive to maintain the homerange they have established. Parking should be as close to buildings as possible. When asked many residents at Midtown Village stated that it is not a problem to have a view to the parking lot and they would rather have the parking close to the units. Security lighting, a cover over a drop-off area and stalls for the handicapped are some design considerations that need to be included in the design of the parking.

Post-Occupancy Evaluation

“Post-occupancy evaluations should be used to improve planning and design. Post-occupancy evaluations are useful in gaining an understanding of how a building performs and can be used to strengthen the basis for future planning and design decisions” (Osterberg cited in Regnier and Pynoos, 1987, p. 419). Post-occupancy evaluations of housing projects for the elderly would benefit by avoiding the mistakes of past projects and by repeating successful design.

The management of the new housing complex should be encouraged to review past projects with potential residents with the designer to discuss possibilities for

design. The review process would allow the management and residents to view other projects through photographs, architectural drawings and actual site visits. The management and potential residents of the facility will be able to communicate their needs with the designer for a more successful project.

Overall the main goal for planning and design strategies should be to create spaces to increase social interaction. Whether the planning and design strategies are for an existing housing facility within a community or a new housing complex, the strategies should allow public agencies a framework for creating, evaluating and building housing complexes and the associated public spaces within the community to better meet the needs of the community.

CHAPTER 7. CONCLUSION

The research in this thesis revealed that the majority of residents in the Midtown Village Housing complex had a significant connection between their past homerange and their present homerange. The research also revealed that of those residents with a weak connection between their past and present homerange, there were specific variables that were significantly affecting their current homerange. Also, the residents in this housing complex had a strong connection to the landscape that involved a full range of public and private spaces indoors and outdoors. The planning and design strategies described in chapter six illustrate ideas for planning and design that could meet the needs of the residents in their current homerange. This study represents one specific group of the entire population, how that group defines its homerange and the application of this research on the concept of homerange to a specific site and community.

One limitation of the study was the small number of residents that participated in the research project and their homogeneous backgrounds. Nearly all of the ten residents surveyed were born in Iowa and have lived in central Iowa the majority of their lives which contributed to the similarity in answers. A more diverse group may have added interesting dimension to the study of homerange. A second limitation to the study was the residents may have communicated with each other about the

study and may have changed their behavior while the study was conducted. Every opportunity was taken to not reveal the hypothesis to the residents in the study, but because the study group contained ten residents there may have been communication among the residents about the research project.

Finally, another limitation to the study was the data collected from the ten residents may not allow planners and designers to generalize to the larger population because of the small study size. The main goal of research on the concept of homerange was to be able to determine the spatial territory needed to meet the daily needs, identify patterns in the use of public and private spaces and then be able to generalize the findings to larger populations.

This study on homerange identified the need for social interaction in the use of public spaces within the community among the residents in the low-income elderly housing complex. Other studies on the concept of homerange among the elderly should determine whether the need for social interaction and the use of public spaces is true among most elderly people. Further implications for design could be based on additional studies of homerange among the elderly. Patterns found in many studies could form the basis of design guidelines or methods for designing.

Research on the definition of homerange should be structured to discover specific patterns for the use and non-use of space that can be generalized to larger populations for the benefit of planners and designers in the position to create spaces for people. The design of spaces for people can better meet their needs based on a body of knowledge that develops from studies on homerange. The designer would have a framework to test the design of public space to see how the space would fit into the overall series of spaces of the population most likely to use the space in their every

day lives.

Criteria that could affect the concept of homerange are the home location whether it is rural, urban, suburban, or in a wilderness setting, the region of the country, and the mobility level of the population. Homerange should vary in humans like it varies in the study of wild animals because of the different needs, desires and characteristics of the different animal populations specifically related to the climate and region of the territory where the animal is located.

Other studies on the concept of homerange and the significance of specific characteristics can focus on different populations, different sites or geographical territories and different cultures. Studies on homerange should be conducted to uncover patterns of behaviors that begin to reveal how people understand, define and use the spaces in their environment. Many factors such as age, cultural background and socio-economic status could affect the definition of homerange. Studies that build on past research could form the basis for theories about human behavior and the territory needed to satisfy every day needs and desires.

First, the different populations that may be interesting to study include the differences in homerange between age groups such as children, teen-agers, young adults and adults. Future research should focus on the way homerange changes as a person ages.

Second, different sites or regions could be an interesting focus for the study of the concept of homerange. Does the spatial configuration of landscape affect a person's desire for certain types of spaces? Studies of the elderly in New York City or the Appalachian mountains may reveal significantly different images of homerange.

Finally, studies of various cultures would add to the body of knowledge about

homerange. It may be that people in other cultures define their homerange differently as they age when a comparison analysis is conducted. Studies conducted on the different cultures could determine which variables may influence the definition of homerange such as social, economic, or religious factors. Social factors such as personality traits could be studied to determine the affect on the spatial definition of homerange. Economic factors such as income levels could be studied to determine if income greatly affects homerange.

Studies on the concept of homerange should be connected with design implications. The homerange identified should reveal specific design implications that can be developed, tested and evaluated. Evaluation of existing sites based on information gathered in a study on homerange of the user group can inform the design process. The researcher can participate in the design process by conducting design review sessions, community surveys or public meetings to assess reactions to proposed design alternatives.

Design of new public spaces should involve strong public participation in the beginning stages of the design process. The design will benefit from the addition of various viewpoints. Stereotypical ideas of different segments of the population could be avoided if the residents of a community were involved in the design process from the beginning.

This study focused on public and private space within the current homerange as it correlated to the past homerange. Other studies could investigate other elements of homerange such as mobility patterns. Future research can be directed to the development of a concept of homerange for people that travel for an occupation who end up spending more of their time away from home rather than at home. Studies

on suburbs would be an interesting area to research the concept of homerange.

Many research implications have been suggested to further study the concept of homerange. Other studies on the concept of homerange that focus on the non-spatial aspects that evolve with high technology would add to the body of knowledge. For example, many people may have a very limited physical territory that they define as homerange but their computer, fax machine, and telephone allow a non-spatial extension that is international in scope.

Environmental design research on the many variables that could affect the concept of homerange would require a process of developing and implementing new research techniques and could suggest a framework for evaluating current design alternatives. Many variables could affect homerange definition. A study that determines which variable affects the definition of homerange to the strongest degree would add insight to how people use space.

The techniques used in the environmental design research and the concept of homerange may not be a normal part of the planning and design process. There is a need for additional education to encourage planners, designers, and other design researchers of the value of investigating the real, everyday environment that people define as their homerange. As more research on the concept of homerange is completed, the field of design will benefit by understanding how various groups of people relate to space, public or private.

Agencies, local governments and other local groups specifically responsible for the needs of the public would be the primary user of findings from studies on the concept of homerange. These interested groups would be able to implement planning and design strategies to develop spaces within the community based on findings from

studies on the concept of homerange.

The study of homerange could add dimension to the body of knowledge that exists concerning people and their use and attachment to spaces within landscape. There is still much to be gained from researching the concept of homerange. Within the concept of homerange, “the idea of public environment can be re-conceived to include more and thus legitimize, the full range of places related to public life, both as it really is and what could be extending our concepts far beyond the street, the square, and the parks” (Brill cited in Altman and Zube, 1989, p. 28).

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APPENDIX Tabulation of Survey

MIDTOWN VILLAGE SURVEY

Boone, Iowa

Fall, 1990

P. 1

Instructions: Thank you for taking the time to complete this survey. All of your answers will be kept confidential. This survey is in three parts. Each part will take approximately 20 minutes of your time. If you have any questions as we go, please feel free to ask them. The entire survey should take about an hour.

Let's begin the first part with 20 questions about the place you lived before you moved to Midtown Village.

1. Did you spend most of your life in or near Boone County?

2. Were there any outdoors areas near your home that you used regularly? Could you describe them?

3. Did you have a backyard? Could you describe it?

4. Did you have a favorite outdoor place? Could you describe it?

5. Did you have an outdoor place to sit and talk with your friends?

6. Did you have a garden or flower bed space?

MIDTOWN VILLAGE SURVEY
Boone, Iowa
Fall, 19990
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7. Were there any outdoor activities you enjoyed doing by yourself?
8. Did you drive a car before you moved to Midtown?
9. Were there any places in Boone you used regularly? How often?
10. What was your favorite place in Boone to meet your friends?
11. Were there specific days that you would do specific errands in Boone? Can you describe a typical week?
12. Where would you go in Iowa to be near wildlife? How often?
13. Were there any parks or outdoor areas you used regularly? What did you like to do?
14. Did you spend much time outdoors growing up? What activities did you participate in?

MIDTOWN VILLAGE SURVEY
Boone, Iowa
Fall, 1990
P. 3

15. Did you use the Senior Citizen Community Center?
16. Were there places in Boone you have used for several years?
17. What was your favorite place outside of Boone to meet friends?
18. What were the specific occasions when you would go out of town?
19. Were there any state or national parks outside of Boone you visited? What did you do there?
20. Did you enjoy watching TV about wildlife or reading about wild-life in magazines or books?

Cases:	01 Lillie	02 Elwin	03 Evelyn	04 Doris	05 Genevieve
1	yes:1929	yes:1935	yes:1917	yes:1918	yes:1906
2	yes	yes	yes	yes	yes
3	yes	yes	yes	yes	yes
4	yes	yes	yes	yes	yes
5	yes	yes	yes	yes	yes
6	yes	yes	yes	yes	yes
7	no	fishing	gardening	drawing	walks
8	no	yes	yes	yes	yes
9	yes	yes	yes	yes	yes
10	church	church	church	C. house	church
11	no	no	yes	yes	no
12	Ledges	river	river	river	McHose
13	McHose	McHose	McHose	McHose	McHose
14	yes	yes	yes	yes	yes
15	yes	yes	yes	yes	yes
16	yes	yes	yes	yes	yes
17	daughter	daughter	C. house	Ogden	Ames
18	holiday	holiday	holiday	holiday	holiday
19	natl. park	Ledges	natl. park	natl. park	California
20	yes	yes	yes	yes	yes

Cases:	06 Mary	07 Grace	08 Marge	09 Thomas	10 Alice
1	yes:1986	yes:1921	yes:1930	yes:1922	yes:1944
2	yes	yes	yes	yes	yes
3	yes	yes	yes	yes	yes
4	yes	yes	yes	yes	yes
5	yes	yes	yes	yes	yes
6	yes	yes	yes	yes	yes
7	gardening	walks	no	worked	farming
8	no	yes	yes	yes	yes
9	yes	yes	yes	yes	yes
10	church	C. house	church	church	C. house
11	no	no	yes	yes	no
12	river	Ledges	Ledges	Ledges	river
13	McHose	McHose	McHose	McHose	McHose
14	yes	yes	yes	yes	yes
15	yes	yes	yes	yes	yes
16	yes	yes	yes	yes	yes
17	Ames	none	Ames	none	Ames
18	vacation	holiday	holiday	holiday	wedding
19	Ledges	Ledges	Ledges	natl. park	natl. park
20	yes	yes	yes	yes	yes

Tabulation of Survey: Part One

MIDTOWN VILLAGE SURVEY
Boone, Iowa
Fall, 1990
P. 4

In this second part, I am going to ask you a series of 20 questions about your life at Midtown Village. Many of the questions will be similar to the questions in part one. Please answer these questions based on your life at Midtown in Boone. Please ask any questions.

1. Why did you choose Midtown Village?

2. Are there any outdoor areas here that you use regularly? Could you describe them?

3. Do you consider any outdoor area at Midtown Village your personal yard? Could you show me? Does it remind you of your previous yards?

4. Do you have a favorite outdoor place at Midtown? Could you describe it?

5. Is there an outdoor place you can sit and talk with your friends?

6. a. Is it important to you to have your own garden space or flower bed?

b. How often do you use it?

c. Would you use a community garden space at Midtown if one were provided?

MIDTOWN VILLAGE SURVEY
Boone, Iowa
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7. Are there any outdoor activities you enjoy doing by yourself?

8. Do you currently drive a car?

9. Are there any places in Boone you use regularly? How often?

10. What is your favorite place in Boone to meet friends?

11. Are there specific days you do specific errands? Could you describe a typical week?

12. Where do you go now to be near wildlife? How often?

13. Are there any parks or outdoor areas you use regularly? What do you do?

14. Did you spend much time outdoors growing up? What kinds of activities do you participate in?

MIDTOWN VILLAGE SURVEY
Boone, Iowa
Fall, 1990
P. 6

15. Do you ever use the Community Room at Midtown?

16. Are there any places in Boone you used to go to all your life and continue to go to now?

17. What is your favorite place outside Boone to meet friends?

18. What are the special occasions that take you out of town?

19. Are there any state or national parks you go to now? What do you do there?

20. Do you enjoy watching TV about wildlife or reading about wildlife in magazines or books?

Cases:	01 Lillie	02 Elwin	03 Evelyn	04 Doris	05 Genevieve
1	health	health	location	cost	location
2	flowers	flowers	flowers	flowers	walks
3	small	no	no	yes	no
4	yes	yes	yes	yes	yes
5	no	no	no	no	no
6 a	yes	yes	yes	yes	yes
b	often	often	often	often	often
c	maybe	no	no	no	no
7	no	fishing	gardening	no	walking
8	no	yes	no	no	yes
9	yes	yes	yes	yes	yes
10	church	church	church	C. house	C. house
11	yes	no	no	yes	no
12	Ledges	Midtown	Ledges	McHose	McHose
13	McHose	McHose	McHose	McHose	McHose
14	yes	yes	yes	yes	yes
15	yes	yes	yes	yes	yes
16	yes	yes	yes	yes	yes
17	daughter	daughter	no	Ames	Ames
18	holiday	holiday	funerals	holiday	holiday
19	Ledges	Ledges	Ledges	Ledges	Ledges
20	yes	yes	yes	yes	yes

Cases:	06 Mary	07 Grace	08 Marge	09 Thomas	10 Alice
1	location	location	cost	health	location
2	gardens	flowers	flowers	flowers	flowers
3	yes	yes	no	no	yes
4	yes	yes	yes	yes	yes
5	no	no	no	no	no
6 a	yes	yes	yes	yes	yes
b	often	often	often	often	few
c	yes	no	no	no	no
7	gardening	gardening	no	fishing	no
8	no	yes	yes	yes	yes
9	yes	yes	yes	yes	yes
10	C. house	church	church	Center	church
11	no	no	no	no	no
12	Ledges	Ledges	Ledges	Midtown	Midtown
13	Ledges	McHose	McHose	river	Ledges
14	yes	yes	yes	yes	yes
15	yes	yes	yes	yes	yes
16	no	yes	yes	yes	yes
17	Ames	DMS	Ames	DMS	Ogden
18	holiday	holiday	holiday	holiday	holiday
19	Ledges	Ledges	Ledges	Ledges	Ledges
20	yes	yes	yes	yes	yes

Tabulation of Survey: Part Two

MIDTOWN VILLAGE SURVEY
Boone, Iowa
Fall, 1990
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This is part three. Again there will be 20 questions. This is the last section and it would take only about 20 minutes of your time.

- A1. Do you ever get tired and need a place to sit down?
- A2. Do you ever have someone else drive you to church?
- A3. Do you ever ride the minibus?
- A4. Do you ever stay home at night because it may be unsafe to go out?
- A5. Do you spend as much time outdoors as you would like?
- A6. Do you spend as much time uptown as you would like?
- A7. a) Do you get to see your friends as often as you would like?
- b) Have your friends increased their visits now that you are at Midtown?

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Boone, Iowa
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- A8. Do you remember going somewhere recently that was difficult to use?
- A9. If you were suddenly limited to only your apartment, what places would you miss going the most?
- O10. Do you think the City of Boone needs more public places?
- O11. Are there places you would like to go but they are not in Boone?
- O12. Is your church a good place to meet people?
- O13. Does Midtown Village need places for you to sit outdoors?
- O14. Do you think there are enough parks or outdoors areas in Boone?
- D15. Have your shopping need changed any since you moved to Midtown?

MIDTOWN VILLAGE SURVEY
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D16. Has your need to be with others increased, decreased, or stayed the same since you moved to Midtown?

D17. Do you see your family as much as you would like?

D18. Do you have the need to get uptown at least once a week?

D19. Do you watch more TV or read more now that you have moved to Midtown? Do you make more telephone calls?

D20. Are there any new places you go to now that you are at Midtown that you really like?

Cases:	01 Lillie	02 Elwin	03 Evelyn	04 Doris	05 Genevieve
1	yes	yes	yes	yes	yes
2	yes	no	no	yes	no
3	yes	no	yes	no	no
4	yes	yes	yes	no	no
5	no	no	no	yes	yes
6	no	no	yes	yes	yes
7 a	no	yes	yes	yes	yes
b	yes	yes	yes	yes	yes
8	yes	no	yes	yes	yes
9	church	church	church	church	church
10	yes	yes	yes	yes	yes
11	no	yes	no	yes	yes
12	yes	yes	yes	yes	yes
13	yes	yes	yes	yes	yes
14	no	yes	yes	yes	yes
15	yes	yes	yes	no	no
16	same	same	same	same	same
17	no	yes	no	yes	yes
18	yes	yes	yes	yes	yes
19	yes	yes	yes	yes	yes
20	none	none	Midtown	WalMart	WalMart

Cases:	06 Mary	07 Grace	08 Marge	09 Thomas	10 Alice
1	no	yes	yes	yes	yes
2	yes	no	no	no	no
3	no	yes	no	no	yes
4	yes	no	yes	no	no
5	yes	yes	yes	yes	yes
6	yes	yes	yes	yes	yes
7 a	yes	yes	yes	yes	yes
b	yes	yes	yes	yes	yes
8	no	yes	no	yes	yes
9	church	church	church	church	church
10	yes	yes	yes	yes	yes
11	no	no	no	no	no
12	yes	yes	yes	yes	yes
13	yes	yes	yes	yes	yes
14	yes	yes	yes	yes	yes
15	no	no	no	no	no
16	same	same	same	same	same
17	yes	yes	yes	yes	yes
18	yes	yes	yes	yes	yes
19	yes	yes	yes	yes	yes
20	rivers	none	none	WalMart	none

Tabulation of Survey: Part Three