# A CROSS-CULTURAL ANALYSIS OF NEW URBANIST NEIGHBORHOODS IN THE US AND TURKEY: NEIGHBORHOOD FORM, COMMUNITY LIFE, AND RESIDENT EXPERIENCES

**by**

**Kadriye Füsun Erkul**

**A dissertation submitted in partial fulfillment**
**of requirements for the degree of**
**Doctor of Philosophy**
**(Architecture)**
**in The University of Michigan**
**2009**

**Doctoral Committee:**

**Professor Linda N. Groat, Chair**
**Associate Professor Scott D. Campbell**
**Professor Robert L. Fishman**
**Professor Jean D. Wineman**

To my parents, Sevim and Tufan Erkul
Anneme ve babama

## TABLE OF CONTENTS

## LIST OF FIGURES

## LIST OF TABLES

## LIST OF APPENDICES

## ABSTRACT

This study examines the cross-cultural practice of New Urbanism, one of the most internationally influential contemporary urban design models. The goal is to expand knowledge of global practice of urban design via a cross-cultural comparison of two New Urbanist neighborhoods—Ispartakule in Istanbul, Turkey and Cherry Hill Village in Detroit, USA. The research design employs case study methodology combined with quantitative and qualitative tools. The primary data collection tactics are surveys, face-to-face interviews, and structured observations.

The research uncovers the similarities and differences of the two New Urbanist developments in different cultural contexts, with reference to their physical and spatial qualities as well as the residents' motivations, behaviors and attitudes. The primary findings are: 1) The physical and configurational properties of the neighborhoods are significantly different. In the US case, neighborhood form is successfully designed to enhance pedestrian movement and active use of public spaces. In contrast, the design of the Turkish neighborhood has disadvantages that challenge pedestrian movement and use of civic spaces. 2) Public space use and level of social engagement also differ with respect to cultural context. In the US case, streets and civic spaces accommodate a greater variety of activities and are better used than in the Turkish case. Similarly, the US residents are both physically and socially more active than the Turkish residents. 3) Residents' motivations in choosing New Urbanist communities reveal the different priorities of goal-oriented needs in different cultural contexts. US residents consciously chose their New Urbanist neighborhood for its distinct architectural style, traditional town concept and active community life. Turkish residents chose their neighborhood for its high-quality construction and environment.

When New Urbanist practice is adapted to a different cultural context, the outcome can contradict New Urbanist principles: neighborhood form might inhibit active use of public spaces; multiple building types might result in segregation; civic spaces might become deserted; neighborhoods might function as isolated settlements rather than well-integrated centers that promote active urban life.

New Urbanist practitioners should strive 1) to integrate all of the New Urbanist principles in projects rather than following them partially; 2) to think through the configurational properties of neighborhood projects not only within the project boundaries but also in relation to the larger urban context; 3) to ensure the same quality of design in every context via better control of the planning, design and development phases; and 4) to learn more about the cultural context via pre-design inquiries and possibly collaborations with local design firms that have a better understanding of the local culture and building practices. These efforts would help the theory and design to best accommodate user needs, not only in the US but also internationally.

# CHAPTER 1

# INTRODUCTION

## 1.1 New Urbanism as an International Urban Design Model

The purpose of this study is to examine the cross-cultural practice of New Urbanism, as one of the most internationally influential contemporary urban designs. New Urbanism is a design movement with the ambition of changing both the spatial and social environment in the US (Calthorpe & Fulton, 2001; Duany, Plater-Zyberk, & Speck, 2000; Katz, 1993; Kelbaugh & Calthorpe, 1989). In the early 1990s, a group of architects (Andres Duany, Elizabeth Plater-Zyberk, Peter Calthorpe and Douglas Kelbaugh amongst the most prominent) initiated New Urbanism in reaction to the urban problems in the US resulting from suburban sprawl and a car-oriented lifestyle. Since then, New Urbanism has spread to 20 countries and 49 states in the US and has influenced policy makers not only in the US but also in the international context (CNU, 2009b).

According to the Charter of New Urbanism—a guide for public policy, development practice, urban planning, and design—the broad goal of the movement is to build better communities by applying valuable lessons from the past to the modern world, at every scale from region down to block (CNU, 1996). At the neighborhood scale, the design principles are as follows:

1) The neighborhood has a center and an edge; 2) The optimal size of a neighborhood is a quarter mile from center to edge; 3) The neighborhood has a balanced mix of activities—dwelling, shopping, working, schooling, worshipping and recreating; 4) The neighborhood structures building sites and traffic on a fine network of interconnecting

streets; 5) The neighborhood gives priority to public space and to the appropriate location of civic buildings. (Duany & Plater-Zyberk, 1993)

In addition, New Urbanists provide specific guidelines for neighborhood design practice. These guidelines focus mainly on physical aspects such as form and scale of buildings, building typology, arrangement of blocks and building lots, street network, landscape elements and organization and design of civic spaces (DPZ, 2009b; Duany et al., 2000). Starting from a belief in "the power of good design to overcome the ills created by bad design" (that is, the urban environment created by suburban sprawl), New Urbanists suggest that these neighborhood design guidelines will 1) "contribute to the social identity of the community"; 2) enhance pedestrian activity and use of public transit; 3) reduce dependency on car-trips and promote a "fine-grained mix of activity types" along with "a range of housing types for a variety of incomes"; 4) "slow the automobile and increase the pedestrian activity" and "encourage the casual meetings that form the bond of community"; and 5) enhance "community identity and foster civic pride" (Duany et al., 2000).

However, environmental psychologists agree that people evaluate environment according to their goals, aspirations and background and act accordingly (Canter, 1983; Ittelson et al.1974). Moreover, environmental design research does not have conclusive findings on the extent to which the physical design of communities can actually promote social interaction and sense of community through (Festinger, 1972; Fleming, Baum, & Singer, 1985; Gans, 1962; Michelson, 1970; Talen, 2003; Webber, 1963; Wellman & Leighton, 1979). Consequently, the socio-behavioral outcome of any New Urbanist project might be quite different in practice than in theory, particularly in different cultural contexts.

Unless a theory of urban design is informed by actual practice and adapts itself accordingly, it cannot grow and become more than a mere set of prescriptions. Therefore, given the breadth of New Urbanist practice in the international context, it is important to understand how successful New Urbanism is in fulfilling its claims both in the US and abroad. Although the research conducted on New Urbanism in the US is extensive, the studies on international examples are scarce. This study aims to contribute to the literature with a cross-cultural analysis of two New Urbanist

neighborhoods—one in the US and the other in Turkey—to expand knowledge of international urban design practice.

## 1.2 Background

According to the United Nations, 2008 marked the point at which, for the first time in history, half of the world population was living in urban areas. This number is expected to reach 70% by 2050 (UN, 2008). Over the next fifteen years, the growth in the world population will be absorbed mainly by urban areas, which result in significant pressure for growth on cities. The annual growth rate will be particularly rapid in the urban areas of the less developed countries (averaging 2.9%), in contrast to the more developed countries (0.6%) from 2005 to 2030 (UN, 2000). This universal trend is stimulating rapid expansion of leading cities, particularly in developing countries.

In order to cope with this pressure for growth and to compensate for their lack of expertise in the field of planning and urban design, developing countries have been borrowing extensively from urban design and planning models, such as New Urbanism, that originated in the developed countries. Several factors contribute to the diffusion of urban design models around the globe. First is the competition amongst world cities to attract more financial, cultural and intellectual capital. Cities' images—and thus urban design projects—have become powerful marketing tools enabling cities not only to excel in global city rankings but also to provide quality living environments for the increasing urban population.

Second is the globalization of the design profession. An increasing number of American design firms are offering services abroad and operating more internationally than ever. The demand is strong for high-skilled design professionals who have experience in the design and development of large-scale urban projects, such as regional plans, master-planned new towns, and infill projects. This is especially true in the developing countries, where real estate markets are growing fast and local professionals lack both expertise and experience. The design firms in the developed countries easily fill this gap due to their expertise and willingness to expand into new markets.

Third, aspirations for better quality of life also contribute significantly to the global dissemination of urban design models. In many developing countries, the image of an ideal lifestyle is associated with the American way of life. This association naturally creates demand for urban design projects that are either designed by American professionals or able to project that image. Therefore, developing countries demand the services of foreign urban design firms, which are quite successful in creating new settlements with the distinct character and identity the residents of developing countries find so appealing.

In the last couple of decades, the world cities have become laboratories for design professionals who practice, implement and help disseminate urban design models across the borders at a faster pace than ever. The involvement of foreign design professionals in urban design projects helps the world cities project prestigious images. These imported forms of urban design play an important role in defining urban form at the fringes as master-planned communities or parts of mega-projects. They also influence people's lifestyles. Yet how these imported urban design models are adapted to the local urban context and perceived within it remains a challenging question. Scholars working in developing countries suggest that professionals practicing globally need to gain a thorough understanding of the cultural context of the regions where they are practicing (Bor, 1982; Hardie, 1997). An understanding of a region's cultural, social, economic and political background would help designers draw from the cultural context and shape design projects according to the region's particular needs.

### 1.3 Research Goal and Objectives

The broad goal of this research is to expand knowledge of global practices of urban design models via a cross-cultural assessment of New Urbanist developments. The aim is to understand how New Urbanist design practice is adapted and interpreted in different cultural contexts. Therefore, the research will assess the similarities and differences of New Urbanist neighborhood developments in different cultural contexts with reference to their physical and spatial qualities; the residents' behaviors; and motivations, attitudes and perceived meaning.

This research will use the case study as the primary method, incorporating several different tactics. The research will examine two case study neighborhoods (one in the US and one in Turkey) as different interpretations of New Urbanism in practice rather than best examples of New Urbanist practice in Turkey and the US. The main objective is to uncover characteristics of each case study neighborhood holistically as individual cases rather than comparatively.

In order to address the broad research question, this study utilizes the place model as an analytical framework to understand the phenomenon holistically. (Canter, 1977) The place model suggests that "place can be represented as the intersection, and/or association, of three constituent elements: actions, conceptions (or meaning), and the physical environment" (Canter, 1977; Groat, 2000a). Formal and spatial qualities of place—built (man-made) and un-built natural (landscape) elements—influence not only patterns of social life but also associations and conceptions related to that place. Activities and behaviors related to a place define the underlying structure of social practices and public life. Finally, conceptions related to a place—psychological and mental associations—affect perceived satisfaction levels.

Over the years, environmental psychologist Canter has elaborated on his initial three-part model of place, drawing on an array of empirical research. This model remains particularly relevant to design research and practice, as it provides a comprehensive theoretical framework for understanding and analyzing associations between the primary components of urban environments (Groat, 1995; Groat & Wang, 2002; Montgomery, 1998). Many architects and urban designers tend to focus primarily on the physical features of neighborhoods, yet people's activities and conceptions of the designed environment play "a major role in the 'shared aspects of experience' that constitute place" (Groat, 2000a). Consequently, the physical features of various design strategies (in this study New Urbanist design strategies) can best be understood and analyzed as "enablers" rather than "drivers" of desired socio-behavioral outcomes (Groat, 2000a).

Thus the goal is to develop a comprehensive understanding of selected New Urbanist neighborhoods as whole with psychological, socio-behavioral and physical components, and to uncover the similarities and differences of New Urbanist practices in different cultural contexts. The holistic approach provided by the place model is essential to

explicating the relationships between formal, perceptual and behavioral aspects of the selected New Urbanist neighborhoods. Therefore, the research employs three different approaches to understanding the relationship between the three principal components of place.

The first is physical assessment, which examines morphological properties (built and un-built spaces, density, building types, and public spaces) and configurational properties (relationship to the surrounding context, street network, arrangement of civic spaces, and building accessibility) within each case study neighborhood. The aim is to understand

- How similar or different are the morphological features and the spatial organization of selected communities in different cultural contexts?
- What are the configurational properties of each neighborhood that are available to support residents' goal-oriented needs?

The second is the socio-behavioral assessment, which strives to comprehend the life within the case study neighborhoods. This approach inquires into both individual and social activities performed within the neighborhood and into the relationship between spatial features and behavioral patterns. Accordingly, the research questions are:

- What are the types of activities performed by residents within the neighborhoods?
- What are the possible relationships between public space use and spatial configuration?
- What is the potential to create social capital in each community?

Third is the cognitive assessment, which focuses on residents' aspirations and the satisfaction of their goal-oriented needs. The specific research questions addressed within this perspective are:

- What are the aspirations and motivations underlying the decision to move to the case study sites? How do these differ in different cultural contexts?
- How successful are these communities in satisfying the goal-oriented needs of residents?

- Which physical design features of New Urbanist communities are perceived by the residents as supporting social interaction, physical activity levels, sense of community and identity?

### 1.4 Organization of the Dissertation

This dissertation is composed of nine chapters. Chapter 1 gives the background of the topic and introduces the research problem and specific objectives. Chapter 2 discusses the theory and practice of New Urbanism and reviews the literature on New Urbanism. Chapter 3 outlines the methodological and theoretical framework of this research, which is based on the review of relevant literature. Chapter 4 presents the research design utilized to address the research problem of the study. It also explains the data collection tactics and procedures implemented during the fieldwork. Chapter 5 introduces the two case study sites and their surrounding urban contexts in detail. In addition, it presents information on the demographic profiles of survey respondents from both case study sites. Chapters 6, 7 and 8 are the analysis chapters, which correspond to the three research objectives. Chapter 6 presents the morphological and configurational analyses of the case study sites. Chapter 7 assesses the behavioral characteristics of each case study site. This assessment is based on activity observations, interviews and survey findings. Chapter 8 focuses on the perceptual qualities of the case study sites, in other words, residents' motivations and perceived satisfaction. Chapter 9 discusses each case study neighborhood and relevant research findings separately. This chapter also summarizes the contributions and limitations of this research and its implications for future research.

# CHAPTER 2

# THEORY AND PRACTICE OF NEW URBANISM

## 2.1 Theory of New Urbanism: Principles

The ever-increasing suburbanization of American cities since World War II has led to significant spatial, social, economic, ecological and health-related changes. These changes have brought unintended and mostly negative consequences such as edgeless cities, auto-dependent lifestyles, social segregation, increased land consumption, degrading water and air quality, and increasing asthma and obesity rates. In the early 1990s, in reaction to these urban problems, a group of architects (Duany, Elizabeth Plater-Zyberk, Peter Calthorpe and Douglas Kelbaugh amongst the most prominent) initiated New Urbanism as a design movement with the ambition of changing both spatial and social environments in the US (Calthorpe & Fulton, 2001; Duany et al., 2000; Katz, 1993; Kelbaugh & Calthorpe, 1989). Despite criticism mostly from scholars, New Urbanism has since spread to 20 countries and 49 states in the US and has influenced policy makers not only in the US but also in the international context (CNU, 2009b)

Inspired by the City Beautiful movement, the theory of New Urbanism is explicitly built on the works of urbanists like Leon Krier, who praised historic urban types and forms such as squares and streets as the timeless elements of civic architecture (Krier, 1979); Kevin Lynch, who identified the qualities of good city form as legibility, identity, and sense of place and its five basic elements as paths, edges, nodes, districts and landmarks (Lynch, 1960, 1981); Jane Jacobs, who passionately advocated for urban qualities like a lively street life that accommodates a diversity of uses and people, offers opportunities for social contact, and provides a sense of safety (Jacobs, 1961); and Christopher

Alexander, who developed a pattern language in search of universal principles of good form (Alexander et al., 1977)

According to the Charter of New Urbanism—a guide for public policy, development practice, urban planning, and design—the movement's broad goal is to build better communities by applying valuable lessons from the past to the modern world at every scale from region to block (CNU, 1996). New Urbanist advocates call for the restructuring of public policy and development practices to support the principles summarized below:

> [N]eighborhoods should be diverse in use and population; communities should be designed for the pedestrian and transit as well as the car; cities and towns should be shaped by physically defined and universally accessible public spaces and community institutions; urban places should be framed by architecture and landscape design that celebrate local history, climate, ecology, and building practice. (CNU, 1996)

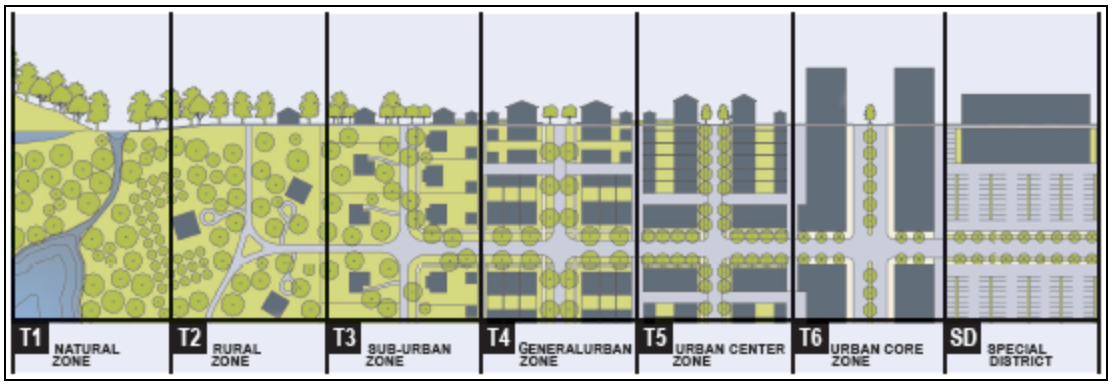


Figure 1.Typical rural-urban transect and transect zones (DPZ, 2009b)

In addition to the main principles defined in the charter, New Urbanists have also developed several tools and strategies for design practice that outline formal attributes of the movement. The Transect creates an urban taxonomy and is complemented by the Smart Code, which provides a detailed description of form-based codes at different scales from regional to building. The Smart Code is intended for implementation by municipalities and local governments as an ordinance and by developers as a guiding instrument (DPZ, 2009b; Duany & Talen, 2002). It aims to identify formal characteristics and standards for each New Urbanist development, such as site arrangement, building placement, height and function, design of civic spaces, parking, lighting, and planting.

The Smart Code favors the use of specific urban design forms, if not specific type of architecture.

There is an ongoing debate amongst the proponents of New Urbanism "as to whether the movement is guided by an open-ended set of principles or a design canon with specific forms or norms*"* (Calthorpe, 2004). Accordingly, there are different approaches to New Urbanism. Jill Grant identifies the four most prominent as follows: 1) *Traditional neighborhood design* emphasizes vernacular or classic architecture to create a sense of place. 2) *Transit-oriented design* focuses on public transportation hubs linked to the regional system to provide a viable alternative to driving. 3) *Urban villages* (found mostly in Europe) focus on self-sufficiency (with mix of housing and jobs) and brownfield redevelopment. 4) *Smart growth* adds government policies and incentives to promote change. The common elements of all these approaches are mixed use, a mix of housing types, compact form, a walkable environment, an attractive public realm, quality urban design, a center with commercial and civic uses, clear edges, narrow streets, and design charettes (Grant, 2006).

Given its evolving tools, strategies and debates, New Urbanism can be defined as a forum for an ongoing reform project rather than a formula (Dunham-Jones, 2008). According to Robert Fishman, New Urbanism means that the traditional vocabulary of urban design—the boulevard, plaza, perimeter block, monument, and above all the pedestrian scale of the street and public spaces—is an integral part of the urban future that can help ensure that not only neighborhoods but also regions are designed with clear centers and edges even in this age of transportation and communication (Fishman, 2005).

### 2.2 The Theoretical Critique of New Urbanism

Although the charter of NU and the tools developed so far outline practical strategies for design and planning, one of the goals of New Urbanists, particularly the supporters of the traditional neighborhood design model, is to create "better communities." In other words, the dream is to return to "*a cherished American icon: that of compact, close-knit community*" by designing environments that would foster sense of community, social interaction, increased pedestrian activity and diversity (Katz, 1993). This implicit social

agenda of creating better communities is based on the beliefs that community is what Americans need and want and that neighborhood design equals community design. For these assumptions and this ambitious goal, New Urbanists have been widely criticized by scholars.

Several scholars have argued that New Urbanism is a new version of Modernist environmental determinism in its beliefs that a certain kind of design can cure societal problems and that designers should plan and build good communities (Grant, 2006; Talen, 2003; Talen, 2008). New Urbanist principles are based on the assumption that if neighborhoods are designed with certain principles and elements, a sense of community will follow. However, previous research has reached no definitive conclusions regarding the relationship between form and function, neighborhood design and sense of community (Fleming et al., 1985; Gans, 1962; Michelson, 1970; Talen, 2003; Webber, 1963; Wellman & Leighton, 1979). The challenge for New Urbanists is to focus on designing neighborhoods that are supportive of human needs and are likely to increase environmental affordance of social interaction, rather than claiming that New Urbanist neighborhoods are actively creating certain behaviors (Jon Lang, 1994; Talen, 2003).

Furthermore, David Harvey drew attention to the “communitarian trap” inherent in the New Urbanist approach. The community, which New Urbanists are aspiring to reclaim, has always been one of the key sites of social control and surveillance. In fact, “well-founded communities often exclude, define themselves against others, [and] erect all sorts of keep out signs" (Harvey, 1997). Therefore, it is difficult to achieve both diversity and sense of community at the same time, as sense of community may be a function of homogeneity (Talen, 1999). In a similar vein, Jill Grant claims that New Urbanist developments in Canada are not much different from gated communities with their homogeneous socioeconomic structure and well-defined edges and identity (Grant, 2007).

Critics have also accused New Urbanism of nostalgia. They see New Urbanists’ use of traditional urban forms and architectural features as a mere pastiche, akin to putting make-up on the conventional way of doing things, since new neighborhoods are developed from scratch with a nostalgic look but without attention to the connections

between spatial forms and socio-economic processes that create these characteristics (Grant, 2006; Harvey, 1997).

Another critique questions New Urbanists' claims that design charettes are inclusive design forums where designers and residents can decide on the design of neighborhoods together. According to this line of criticism, charettes may not be truly participatory when designers present their projects to members of the public who do not have the expertise to criticize or comment on them. As a result, the "expert" role of the New Urbanist designers might in fact facilitate a top-down design rather than truly participatory and inclusive planning that recognizes differences (Bond & Thompson-Fawcett, 2007; Day, 2003; Grant, 2006).

Finally, New Urbanism has been criticized for being exclusively focused on design practice. Most of its leaders are architects who are not acquainted with planning and social theory, and not interested in policy development (Brain, 2005; Grant, 2006). However, this much-criticized lack of deep theoretical ground might allow New Urbanism to become a longer-lived urban movement than its predecessors such as Modernism, which could not remain and hence could not change, grow and evolve. New Urbanism might help create good urbanism in the US by virtue of its ideological flexibility, which allows the integration of several different ideological approaches; its ability to self-adapt according to feedback from real life experiences; and its recognition of strengths of different planning cultures such as regionalism, small-scale diversity and incrementalism, and the significance of the civic realm (Talen, 2005).

### 2.3 International Practices: A Global Model of Community Design?

New urbanism is currently the most dominant normative theory of urban design in the US. In parallel with the efforts of the Congress for New Urbanism in the US, the Urban Village Forum in the UK has been promoting New Urbanist developments under the name of urban villages in Europe—clear evidence of a cross-Atlantic mutual influence (Thompson-Fawcett, 2003a). Although not all of them are labeled as New Urbanist or urban villages, an increasing number of such projects have been developed not only in the US and Europe but also in the wider global context. Several international examples of New Urbanist practice, representing a range of scales, are McKenzie Towne

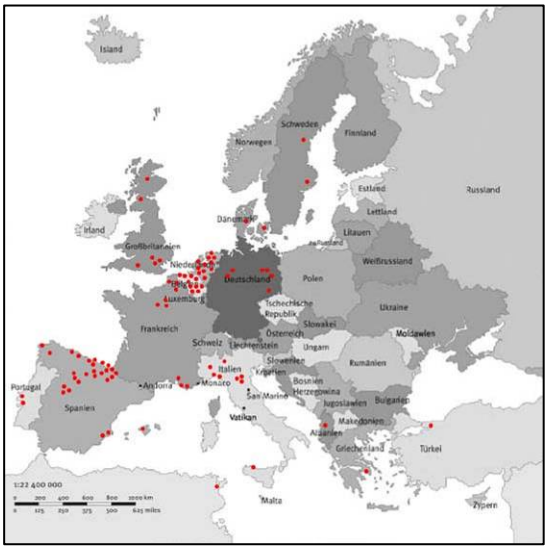
(Canada), Markham (Canada), Upton Village (UK), Poundbury (UK), Tue de Laeken (Belgium), Heulebrug (Belgium), Borneo Sporenburg (Netherlands), Karow Nord (Germany), Fonti di Matilde (Italy), San Bartolomeo (Italy), Sankt Erik (Sweden), Buftea (Romania), Kemer Country (Turkey), Berenice Bay (Egypt), Manama and Muharraq (Bahrain), Jabal Kandama (Saudi Arabia), Dasve Village (India), Platimun City (India), White Town (Japan), Hikone (Japan), Chongming Island (China), Caio Verde (Angola), La Candelaria (Guatemala), Managuita (Nicaragua), Pedra Branca (Brazil), and St. Mary's (Australia) (AVOE, 2008a; CNU, 2009a; DPZ, 2009a).

Although the theory of New Urbanism was formulated as a response to urban problems specific to American cities such as sprawl and auto-dependency, the practice of New Urbanism has already spread around the world. It is shaping not only (sub)urban scenes but also the lives of people across the globe. What are the similarities and differences between the international and American practices of New Urbanism?

Several factors account for the international spread of New Urbanist practice all over the world. One of these is the increasing rate of urbanization, particularly in developing countries. This global trend pressures cities both to expand via new developments at the peripheries and to revitalize underutilized urban areas such as obsolete industrial facilities or rundown neighborhoods. In addition, the competition amongst world cities to attract more financial, cultural and intellectual capital is a significant motivation for both the public and private sectors of every country today. Cities' images—and thus urban design projects—have become powerful marketing tools enabling cities not only to excel in global city rankings but also to provide quality living environments for the increasing urban population.

Another significant factor is the globalization of the design profession. An increasing number of American design firms are offering their services abroad and operating more internationally than ever before. There is a strong demand for highly skilled design professionals who have experience in the design and development of large-scale urban projects, such as regional plans, master-planned new towns, and infill projects. This is particularly true in developing countries, where the real estate market is growing fast, and the local professionals lack both expertise and experience. American design firms willingly fill this gap, as they want to expand into new markets and grow their

businesses. As a result, world cities have become laboratories for design professionals who practice, implement and help disseminate urban design models (such as New Urbanism) across the borders. The involvement of foreign design professionals in urban design projects helps world cities build prestigious global images and reinforce their positions in the global city competition.




Distribution of projects in Europe

Poundbury, Dorchester, Dorset, England

Val D'Europe, France

Heulebrug, Knokke-Heist, Belgium

Figure 2. Geographical distribution of New Urbanist projects entered A Vision of Europe, The Best New Urban Neighborhood Prize Competition in 2008 and three of the prize-winning projects (AVOE, 2008a). http://www.avoe.org/euprizewinner.html

Finally, people's aspirations for a better quality of life also contribute to the global dissemination of New Urbanist projects. In many developing countries, the ideal quality of life is associated with the American way of life. This association naturally creates demand for urban design projects that are either designed by American professionals or able to project that image. Therefore, developing countries demand the services of foreign urban design firms, and New Urbanist developments are quite successful in creating new settlements with the distinct character and identity the residents of these countries find so appealing.

There are other significant aspects specific to different local contexts preparing the ground for dissemination of New Urbanist practices internationally. Each project is subject to adaptation and translation into local contexts to suit local policies, needs and values, these project outcomes help us understand the international practices of New Urbanism. Is it possible for the core New Urbanist principles and forms, which are deeply rooted in American culture, to settle in different contexts without getting lost in translation?

### Variations of New Urbanism in Different Cultural Contexts

Jill Grant, who explores New Urbanist theory and practice in the US, Canada, Europe and Japan, doubts the transferability and universality of New Urbanist principles and argues that there is no single New Urbanism but rather many New Urbanisms (Grant, 2006). According to her, whatever their label, New Urbanist practices have several common principles such as mixed housing types, compact form, pedestrian-friendly streetscapes, and defined centers and edges. Other principles, however, are not universal; these include transportation options, traditional architectural and design patterns, open space networks, and connected street layouts.

In Canada, New Urbanism had such a strong impact on planners and policy makers that it led to the adoption of new requirements such as smaller lots and setbacks in new developments. The new urban plans in Canada accommodate North America's largest concentration of new communities planned according to New Urbanist design principles with significantly high gross residential densities (Gordon & Vipond, 2005). Vancouver preferred a distinctly modernist architectural style, "*a unique manifestation of new*

*urbanism that is denser, taller and without the historical pastiche*" (Grant, 2006). Since Vancouver's policies require compact, intense and mixed uses, the city accommodates high-rise towers but also pays attention to the public realm.

In Europe, despite a growing trend of suburbanization at the edges, both New Urbanist and conventional new suburban settlements display a common pattern of small lots, small homes, and a high proportion of attached or apartment units with reasonable access to public transportation and a greater concern for energy efficiency than in North America. These trends are due to socio-demographic changes: growing student settlements around universities, an increasing number of dual-career households and a parallel delay or reduction of childbearing, a reaction against the suburban lifestyle, and rising land values (Grant, 2006; Hall, 2008). In addition, there is less focus on traditional architectural images and more on modernist architecture in the urban village projects of Europe. In Europe, unlike in America, modernist architecture does not carry negative connotations, and the traditional image of New Urbanism is likely to be perceived as backward-looking (Grant, 2006).

East Asian cities face different problems than their American and European counterparts. Increasing urban populations, affluence and car ownership, along with rising real estate prices at existing city centers, push households to suburban settlements where they can meet their aspirations: more spacious houses at affordable prices and a better quality of life than in crowded city centers. In other words, East Asian cities are currently experiencing pressures similar to those that fueled suburban sprawl in the US in the 1950s. Consequently, high-rise towers, low-rise detached housing at the urban edges, class-based segregation, car-oriented suburbs and changing land use patterns are becoming more common in East Asian countries today (Grant, 2006).

While several New Urbanist principles such as compact high-density cities, integrated mixed use and reliance on transit-oriented networks are inherent in their culture, East Asian cities strongly prefer modernist architectural and urban design over traditional urbanism (Grant, 2006). Given the priorities and cultural values of East Asian cities, the traditional image promoted by New Urbanism is unlikely to be attractive in this context. However, the strong identity of New Urbanist settlements might have some appeal as a status symbol and attract a significant number of people who aspire to a better quality of

life. Ironically, New Urbanism might play an active role in facilitating suburbanization in the East Asian context while being rhetorically against sprawl in the US context.

## Global Diffusion of Gating and New Urbanism

Another pitfall awaiting international applications of New Urbanism is the global trend of "gating," which undermines several of the movement's own principles and claims. In the last couple of decades, an increasing number of people around the world have come to prefer living in gated community developments (Atkinson & Blandy, 2005; Borsdorf, Hoidalgo, & Sanchez, 2007; Coy & Pöhler, 2002; Glazse & Alkhayyal, 2002; Grant, 2005; Hook & Vrdoljak, 2002; Irazabal, 2006; Leish, 2002; Munoz, 2003; Wu & Webber, 2004). Gated communities are usually walled or fenced enclaves with security precautions such as patrolling guards, monitoring cameras and alarms. Such communities also might also offer specialty activity and lifestyle packages, depending on their type (Blakely & Synder, 1997). They have been quite successful in attracting both high-income residents and middle-income groups who are concerned about security (fear of difference and crime), identity (need for status and self-actualization) and property values (return on investment) (Grant, 2006; Low, 2003).

In the US context, gated communities and New Urbanist communities focus on quite opposite values and display different spatial characteristics. On one hand, the design features of gated communities reflect values like exclusivity, privacy, homogeneity, safety and security. These features include large homes on big lots that provide residents with a high level of privacy; a lack of well-designed and connected public spaces (car-oriented streets, lack of public areas) that inhibit the development of an inclusive public realm; restricted access both physically (via spatial elements like gates, fences) and socially (via provision of homes that appeal to only one group of society and guarantee a homogeneous environment for the residents of the gated community) (Blakely & Synder, 1997; Low, 2003).

On the other hand, New Urbanist communities support values like inclusivity, diversity, a lively public realm, and walkability. These values are reflected in design features such as mixed types and sizes of houses arranged in close proximity, reducing the level of privacy and aiming to attract a variety of demographic groups; sidewalks and well-

designed and connected public spaces (parks, squares, playgrounds) that support both pedestrian-oriented activities and active use of the public realm; mixed-use (retail, schools, health care facilities, offices etc.), and accessibility to public transportation so as to integrate the community into the wider urban context rather than isolating its residents (Calthorpe, 1993; Duany et al., 2003; Duany et al., 2000; Katz, 1993).

In different cultural contexts, the above-mentioned values, which represent two radically different approaches of community design, might be lost in the process of adapting to local cultures. Although gated communities might utilize different architectural and urban forms depending on the cultural needs, they represent similar values for the local agents like developers and residents in different cultural contexts therefore are globally preferred by residents sensitive to security, identity and property values.

Conversely, one can hypothesize that because New Urbanism represents culture-specific values and urban and architectural forms, New Urbanist communities are likely to be more vulnerable to different cultural interpretations than gated communities. When they are practiced in the global context, the values represented by New Urbanist communities in the US context are likely to lose ground. New Urbanist communities may convey very different meanings to local agents, who generally have no knowledge of New Urbanism and see these communities merely as neighborhoods with strong identities and certain amenities.

Moreover, in contexts like Europe and East Asia where New Urbanist values (like mixed use, walkability and density) are already embedded in their urban culture, New Urbanist arrangements are more appealing to both real estate developers and people responding to existing local needs. However, a hybrid version that combines New Urbanist spatial characteristics with gated community packaging is likely to be even more attractive. This marriage of the two contrary community models is quite ironic with regard to the New Urbanist claims in the US. At the same time, though, it is very practical in the international context for local developers and investors who want to attract more people to their developments at the urban fringes, as well as for households aspiring to a better quality of life and higher status in a safe environment. As a result, New Urbanist communities with their strong identity might become an ideal (gated) suburban

community model in countries that have started to suburbanize a rapid pace in the last couple of decades.

Figure 3. Photos from Kemer Country in Istanbul (by author)

An example of such a hybrid suburban development is Kemer Country in Turkey. One of the earliest examples of prestigious gated communities in Istanbul, this greenfield development was nominated for A Vision for Europe Prize honoring best new town developments of Europe in 2008 (AVOE, 2008a). The master plan of the community and architecture of one of its early phases were commissioned to Andres Duany and Elizabeth Plater Zyberk of DPZ in 1992. In addition, another well-known New Urbanist group, CHK Architects and Planners (Torti Gallas and Partners), designed the fourth phase of Kemer Country. Both of the design groups employed local architectural types that vary in form according to their placement relative to streets and other buildings. They incorporated Turkish architectural features (like projecting window bays and sloping roofs with deep eaves); continuous walls separating public and private areas, which are specific to local culture; a hierarchy of streets to encourage pedestrian flow and calm automobile traffic; and well-designed public spaces like the village square (DPZ, 2009a; Tagliaventi, 1996; TortiGallas, 2009b). According to the marketing

materials, the aim of Kemer Country was “to create a lost community, a neighborhood, and to instill in it a sense of belonging and identification”; this language parallels New Urbanist rhetoric in the US (KemerCountry, 2003).

Figure 4. Kemer Country (in darker shades), alongside recent residential developments and highway connections (in lighter shades)

However, as the development unfolded, Kemer Country developers also incorporated a golf course, a country club and relatively large homes built on large lots within well-guarded walls. The aim was to blend traditional Turkish architecture and urban character with the American lifestyle to attract the Turkish elite who are accustomed to urban life but aspire to an American lifestyle in Istanbul. The community has been very successful not only at attracting a group of urban elite to suburban areas, but also at setting the trend for future private gated community developments in Istanbul. As a result, Kemer Country encouraged suburbanization, particularly in the once-rural area of the community that has become a major magnet for similar neighborhood developments in the last decade. In this case, New Urbanism played a significant role in promoting suburbanization, exclusivity and homogeneity, contrary to its theoretical principles in the US context.

In sum, New Urbanism has flourished as a reaction to endless sprawl, “placelessness” and auto-dependency in the US. It has promoted walkability, connectivity, mixed use, diversity, mixed housing, quality architecture, traditional neighborhood structure,

increased density, smart transportation, and quality of life to cure American urban problems. It has already become a global phenomenon with an increasing number of New Urbanist communities all around the world. If New Urbanism purports to be universally applicable, then these international examples are where New Urbanists can best learn and adapt both their theory and practices. In Europe and East Asia, it is quite common to see hybrid New Urbanist settlements with features unusual in the US context like modernist architecture, surrounding walls and gates, and an exclusive club atmosphere. As the international cases are more open to interpretation and adaptation by local agents, the international practice of New Urbanism is also vulnerable to meanings and values quite different from—if not completely opposite to—the principles of New Urbanism in the US context.

### 2.4 Prior Empirical Findings on New Urbanism

The growing body of research on New Urbanism can be roughly divided into two groups. The first is concerned with the effect of neighborhood form on people's travel patterns and activity (particularly pedestrianism); the second is primarily interested in social and psychological aspects of New Urbanist communities, such as sense of community, social interaction and social capital. In addition to these two groups, this section presents existing literature analyzing New Urbanist neighborhoods outside US.

Within the first group of literature, several studies tested one of the claims of New Urbanist designers that neighborhood designs featuring compact, mixed-use, and pedestrian-friendly environments affect households' travel behavior and reduce residents' auto-dependence (Joh et al., 2008; Khattak & Rodriguez, 2005; Khattak et al., 2005; Krizek, 2003; Nasar, 2003). Using data from interviews, surveys and travel diaries, these studies compared traditional neighborhood developments with New Urbanist features to conventional suburban developments in Ohio, North Carolina, California and Washington. Supporting New Urbanists' claims, the findings suggest that compared to households in conventional suburbs, households in traditional neighborhoods make about the same number of total trips but make significantly fewer automobile trips, make fewer external trips and travel fewer miles.

Another research stream analyzed physical activity levels, particularly residents' walking behavior, to test the claim that traditional neighborhoods can foster higher levels of pedestrian activity than conventional suburban settlements (Joh et al., 2008; Lund, 2003; Rodriguez et al., 2006). The findings reveal that although there is no statistically significant difference between the levels of physical activity of households living in the two different types of neighborhoods, the households living in traditional neighborhoods exhibit higher levels of pedestrian activity because they walk more for utilitarian purposes. Traditional settlements that combine pedestrian-friendly streetscapes with accessible amenities such as parks and shops are likely to increase pedestrian activity within neighborhoods.

The second body of literature explored social and psychological aspects of New Urbanist communities such as sense of community, social interaction and social capital. Studies testing the claim that traditional neighborhoods promote higher levels of sense of community than typical suburban developments have produced contradictory results. Nasar and Brown and Cropper found similar levels of sense of community in their comparative studies of traditional and conventional suburban neighborhoods in Ohio and Utah (Brown & Cropper, 2001; Nasar, 2003). In contrast, in their comparative research undertaken in Maryland and Oregon, Kim and Lund found significantly higher levels of sense of community in traditional neighborhoods than in conventional suburban neighborhoods (Kim & Kaplan, 2004; Lund, 2002). The difference between these research results might be due to two factors. First, Nasar administered his study in an "old" traditional neighborhood rather than a recently developed New Urbanist development, which might draw a different set of people than an "old" neighborhood. Second, the two groups of studies utilized different sets of questions to measure sense of community in their survey instruments; therefore, the contradictory results might well result from different definitions of sense of community in the scales.

Although Brown and Cropper's study results with regard to sense of community do not parallel Lund's, both studies did find that residents of New Urbanist communities exhibit higher levels of social interaction with their neighbors. According to Lund, residents of New Urbanist neighborhoods have higher levels of pedestrian activity, and people who walk around their neighborhood are more likely to interact with and form relationships with their neighbors (Lund, 2002). Lund's study also reported a significant positive

relationship between the number of walking trips and both the frequency of casual (unplanned) interactions with neighbors and local social ties (Lund, 2003). Similarly, Brown and Cooper reported that the residents of New Urbanist communities present higher levels of neighboring behaviors such as knowing and socializing with their neighbors (Brown & Cropper, 2001). Finally, in a study of Kentlands, a New Urbanist community development in Maryland, Kim found that design elements such as natural features and open spaces play a role in fostering pedestrianism and increasing the likelihood of social interactions (Kim, 2007; Kim & Kaplan, 2004).

The results of the two streams of literature—one analyzing physical activity and travel behavior and the other assessing psychological and social aspects—are complementary. Neighborhoods featuring compact, mixed-use and pedestrian-friendly environments reduce car use and increase walking within the neighborhood. This in turn increases the chances of casual social interaction amongst the neighbors; therefore, it is likely to have positive effect on neighboring behaviors.

The third group of studies analyzed New Urbanist neighborhoods developed outside the US. Although this body of literature is quite limited, the few studies discussed below highlight several unexpected similarities and differences between American and international practices of New Urbanism.

Leyden assessed whether pedestrian-oriented, mixed-use neighborhoods encourage enhanced levels of social and community engagement (i.e., social capital). She analyzed data obtained from surveys that measured the social capital[1] of citizens living in neighborhoods that ranged from traditional, mixed-use, pedestrian-oriented designs to modern, car-dependent suburban subdivisions in Galway, Ireland. The findings suggest that people living in walkable, mixed-use neighborhoods have higher levels of social capital than those living in car-oriented suburbs. Respondents living in walkable neighborhoods were more likely to know their neighbors, participate politically, trust others, and be socially engaged (Leyden, 2003). Leyden's findings are parallel to those of similar studies conducted in the US, which found that walkable, mixed-use neighborhood designs can encourage the development of social capital.

[1] The survey Leyden utilized in this study measures four key aspects of social capital based on rating questions: how well residents know their neighbors, their political participation, their trust or faith in other people, and their level of social engagement.

In a similar study, Thompson-Fawcett assesses residents' experiences in Poundbury, a New Urbanist village development, in Dorset, UK, in order to understand to what extent the planned community succeeded in achieving its goals related to community, urban design, mixed activity, transit and energy. The study reports that a significant majority of respondents feel high levels of sense of community. They emphasize the friendliness and community orientation of Poundbury as valuable features different from those of their previous communities and state that there is frequent interaction amongst neighbors. However, Poundbury's success in achieving a considerable amount of household heterogeneity results in significantly different perceptions of the community amongst residents from different socio-economic, age and tenure groups. These differences lead to tension amongst different class groups that is exacerbated by factors such as a lack of inter-group social interaction and a lack of child-friendly attitudes toward families with children (Thompson-Fawcett, 2003b).

Similarly, Kim's findings reveal that apartment residents in Kentlands (a New Urbanist development in Maryland) demonstrate weaker levels of sense of ownership than people who live in other residential types (homes and townhomes) (Kim, 2001). These findings are quite contrary to the predictions of New Urbanists and suggest that although mixing housing types helps to create heterogeneous neighborhoods to a certain extent, residents of different housing types might not interact with each other in a positive way. One of the possible reasons for this might be the difference in the environmental roles; that is, people evaluate environments purposively (Canter, 1983; Ittelson et al., 1974). People who are motivated to be in the same place for different reasons are likely to perceive the same environment differently; therefore, they behave differently and have different levels of perceived satisfaction.

Another study analyzing New Urbanist communities outside the US is Hess's exploration of residents' use of streets, yards and alleys in three New Urbanist neighborhoods in Toronto, Canada (Hess, 2008). Although New Urbanists emphasize the design of front yards and streets, his findings highlight some unexpected outcomes: back doors are often used as the main entrance since garages are located at the rear of houses, backyards are used more frequently and for a wider range of activities than front yards, and alleys are sites for informal socializing with neighbors. However, Hess stresses that these unexpected patterns do not affect the rates of recreational walking or the use of

front yards as an intentional social space that residents clearly value, as in the case of traditional US neighborhoods where front porches are not merely symbolic but are used as places for social interaction and casual surveillance (Brown et al., 1998; Hess, 2008). Hess's study is noteworthy in drawing attention to the alleys and backyards as semi-public spaces highly preferred over front yards and porches for more private or casual activities.

## 2.5 Significance of Research

In contrast to the growing number of New Urbanist developments in the world, the literature on international examples of New Urbanist communities is scarce. However, it is important to comprehend and learn from the similarities and differences of international examples. Professional planners and urban designers who offer services in the global arena need a thorough understanding of both the local context—its cultural, social, economic, and political processes—and the aspirations of the people for whom they are designing, if their projects are to function as planned (Bor, 1982; Hardie, 1997). Like every Western urban design model applied in different cultural contexts, New Urbanist communities go through an adaptation process when applied internationally. Understanding how they are appropriated by different cultural contexts will help us to understand which New Urbanist claims are relevant in other cultural contexts, to determine whether New Urbanist neighborhoods can respond to the needs of residents in different cultural contexts, to comprehend which design features are more likely to improve the residents' satisfaction, and finally to adapt and develop the theory of New Urbanism accordingly.

Unless a theory of New Urbanism is adapted to the actual practice of its principles and adapts itself accordingly, it cannot grow to become more than a mere set of prescriptions. Therefore, it is vitally important to understand how successful New Urbanism is, as a globally practiced urban design model, in fulfilling its claims in both the US and international context. Although the research on New Urbanism in the US is extensive, the studies on international examples are scarce. This study contributes to the literature with a cross-cultural analysis of two New Urbanist neighborhoods—one in the US and the other in Turkey—and to expand the knowledge of international urban design practice. Consequently, the broad goal of the research is to explore the following

question: “What are the similarities and differences of New Urbanist neighborhood developments in different cultural contexts with reference to their physical and spatial qualities; to residents’ behaviors; motivations, attitudes and to their perceived meaning?” The case studies employed in this research are not literal replications of New Urbanism as they are different from each other in interpreting New Urbanism. However, there are no previously defined propositions as to exactly how the dynamics will play out in different cultural contexts due to the scarcity of existing research in an international context.

# CHAPTER 3

# THEORETICAL AND METHODOLOGICAL FRAMEWORK

## 3.1 Place Assessment

In the 1960s, the reaction to the failure of modernist projects to create livable and vibrant places drew the attention of geographers, planners, psychologists and designers to the concept of place. Similarly, the ever-increasing suburbanization of American cities since the 1950s and its negative implications for public health and the environment have become more and more apparent in the last couple of decades. As a result, the number of scholarly works on the issue has increased. The reaction against the effects of suburbanization—auto-dependency, edgeless cities, loss of sense of place, social segregation, increased land consumption, degrading water and air quality, and increasing asthma and obesity rates—has sparked several design, social and policy movements such as Smart Growth, New Urbanism and Active Living. These movements aim to enhance the quality of urban places and to develop better tools for place-making. In addition to planners, policy makers and designers, public health scholars are also concerned with the concept of place. The growing attention to the health impacts of place—physical, psychological, social, and spiritual—calls for further research that will evaluate qualities of places and suggest evidence-based recommendations for healthy place making (Frumkin, 2003, 2006).

### Theory of Place

The concept of place has been widely discussed and analyzed by scholars in order to understand how to create and examine successful places that are cultivated by people and their activities and associations. The two principal epistemological approaches in

these studies are phenomenological (Norberg-Schulz, 1980; Relph, 1976) and empirical-structuralist (Canter, 1977; Sime, 1995). According to Canter, the aim of environmental design is to create sense of place. He searches for empirical data in order to understand the relationship pattern between environmental qualities and people's responses or behaviors. In his early studies, Canter constructs a three-part model of place, which he explains as follows:

> *[A] place is the result of the relationships between actions, conceptions and physical attributes. It follows that we have not fully identified the place until we know a) what behavior is associated with, or it is anticipated will be housed in, a given locus, b) what the physical parameters of that setting are, and c) the descriptions, or conceptions, which people hold of that behavior in that physical environment.* (Canter, 1977)

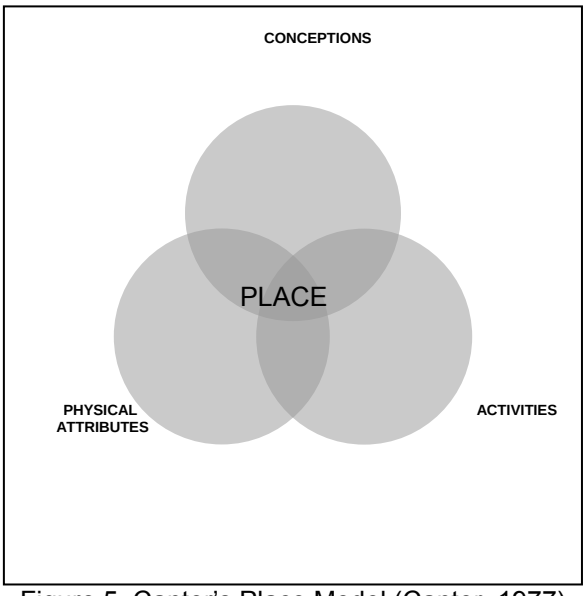


Figure 5. Canter's Place Model (Canter, 1977)

Similarly, environmental psychologist J. Sime asserts that "A place is a whole phenomenon, consisting of three intertwined elements of a specific landscape with both built and natural elements, a pattern of social activities that should be adapted to the advantages or virtues of a particular location and a set of personal and shared meanings" (Sime, 1995). Ignoring one of the components of place—physical, experiential or behavioral—results in misinterpretation; therefore, a place cannot be studied unless both its physical context and the people who use it are addressed. In order to understand place, which is not only a physical construction but also a reflection of society and culture, one must consider both psychological and physiological aspects of environment.

In agreement with the three-part model, phenomenologist geographer, Relph claims that "The identity of a place is comprised of three interrelated components, each irreducible to physical features or appearance, observable activities and functions and meanings or symbols" (Relph, 1976). Unlike Canter, who focuses on empirical evidence in his analysis of place, Relph focuses exclusively on subjective and abstract interpretation of the physical environment. The subjectivity of this approach leaves it open to criticism. However, it is significant that although they apply different methodologies, both Canter and Relph agree on a common definition of the three primary constituents of the sense of place (Groat, 1995).

Building on the above-mentioned previous discussions, Montgomery developed a composite place model that combines all three elements of good place and defines a set of principles of place making in urban context (Montgomery, 1998). According to him, the three primary components of urban sense of place are *form*, *activity* and *image,* as shown in the following figure.

| **Sense of Place** | | |
|---|---|---|
| **Form** | **Image** | **Activity** |
| Scale<br>Intensity Permeability<br>Landmarks<br>Space-to-building ratios<br>Stock (adaptability & range)<br>Vertical grain<br>Public realm (space systems) | Symbolism & memory<br>Imageability & legibility<br>Sensory experience & associations<br>Knowledgability<br>Receptivity<br>Psychological access<br>Cosmopolitanism/sophistication<br>Fear | Diversity<br>Vitality<br>Street life<br>People watching<br>Café culture<br>Events & local traditions/pastimes<br>Opening hours<br>Flow<br>Attractions |

Table 1. Composite Place Model (Montgomery, 1998)

According to this model, the form of environment is the physical setting of place, which is composed of both built (man-made) and un-built natural (landscape) elements. These formal and spatial qualities of urban environment influence not only patterns of social life but also associations and conceptions related to that place. In addition, behaviors, activities and functions related to a particular physical environment define the underlying structure of social and economic practices. Thus, every place has its own rhythm of life, reflecting the essence of public life there. People usually have place-related conceptions that are both physical and mental constructions. The meanings attributed to an environment play a significant role in creating sense of place, because people identify

places not only by physical characteristics but also by psychological and mental associations. Consequently, in order to create a strong sense of place, place has to be considered as a whole created by all three components simultaneously.

Accordingly, the three-part place model described above will outline the general theoretical and methodological framework of this study. The goal is to develop a comprehensive understanding of selected New Urbanist neighborhoods as places—as a whole with psychological, social and physical components—and thus uncover the similarities and differences of New Urbanist practices in different cultural contexts. Therefore, the holistic approach provided by the place model is essential to unfolding the relationships between formal, perceptual and behavioral aspects of the selected New Urbanist neighborhoods.

## Purposive Evaluation of Places

Many environmental psychologists agree that place 1) has multi-model qualities, 2) exists as cognitive presentations within individuals, and 3) is purposively used by people to achieve their goals (Canter, 1983; Ittelson et al., 1974). People are in a place for a reason, to fulfill a certain goal or need; hence, people experience and assess every place with a purpose in mind (Canter, 1991, 1997; Evans & Garling, 1991). Therefore, the purpose of any place evaluation should be to develop a better understanding of how the physical environment contributes to or impedes the goals of the residents who live there. Specifically, the research should aim to clarify “the relationships between both the physical environment and its specific attributes and people's behaviors and subjective responses to that environment" (Marans & Spreckelmeyer, 1981).

In order to evaluate the qualities of New Urbanist neighborhoods as multidimensional places, this study will analyze both objective and subjective attributes. Objective attributes are composed of spatial measures and socio-demographic characteristics, which reflect designer intentions and resident preferences, respectively. Subjective attributes, in other words perceived quality, are people’s subjective evaluations of objective attributes. These evaluations also depend on people’s backgrounds and aspirations (Marans & Spreckelmeyer, 1981). Understanding both objective and subjective aspects will not only help us to evaluate the neighborhoods purposively (that

is, to understand how successful these neighborhoods are in supporting residents' goal-oriented needs) but will also help to fill the gap between theory and practice.

Urban design practice is mainly focused on the physical aspects of place. For example, Traditional Neighborhood Design focuses exclusively on form and scale of buildings, building typology, arrangement of blocks, street network, landscape elements and functions (DPZ, 2009a, 2009b). The assumption is that a certain set of physical design characteristics will foster a certain set of socio-behavioral phenomena; in other words, the environment can be designed to determine behavior. On the other hand, every person evaluates environment according to his or her goals, aspirations and background and acts accordingly (Canter, 1991; Canter & Thorne, 1972; Ittelson et al., 1974; Prohansky et al., 1983). Therefore, the socio-behavioral outcome might be quite different in practice than the theoretical expectations. Unless a theory of urban design learns from subjective understandings of the actual practice and adapts itself accordingly, it cannot grow and become more than just a set of prescriptions.

For the purpose of this research, which conducts a cross-cultural evaluation of New Urbanist communities as multi-dimensional places, it is crucial to understand the goals and motivations of people who chose to live in the New Urbanist case study neighborhoods and how successful these neighborhoods are in supporting residents' goals and motivations. In addition, it is also important to examine to what extent the designers' and residents' purposes align. As Talen argues, inquiring into how residents' preferences are formed and whether the New Urbanist designers' goals are achieved would provide a more complete picture of the success of New Urbanist neighborhoods than would analyzing each New Urbanist claim specifically (Talen, 2005).

Accordingly, this study aims to examine and compare the New Urbanist case study communities with respect to the overlaps between different components of place. The physical, social and psychological aspects of neighborhoods will be assessed through the lens of the place model. In the following sections, the theoretical framework is further developed following the three-part framework. Form of neighborhood examines the spatial configuration and morphological properties of the neighborhoods. Neighborhood life seeks to uncover types of activities performed within the neighborhoods, both individual and social, and the level of social involvement within the community.

Neighborhood perception focuses on residents' motivations in choosing their community and the perceived satisfaction of their goal-oriented needs. Combining all of these elements will provide a holistic picture of New Urbanist neighborhoods and their success from both the designers' and residents' point of view.

## 3.2 Neighborhood Perception: Residents' Motivations and Environmental Assessment

The perceptual approach to the understanding of New Urbanist communities is mainly concerned with residents' preferences—people's goals in choosing the specific community—and the perceived satisfaction of their basic needs. Of particular interest is the role of physical design features in supporting or inhibiting the fulfillment of residents' needs. With this intention, the perceptual approach utilizes a categorical framework of human needs that is based on theories used in the field of psychology and organizational behavior, and later adapted to the field of environment and behavior studies.

This section presents a chronological overview of the relevant literature. First, the theory of human basic needs developed by A. Maslow is introduced. Second, F. Steele's adaptation of this theory as an organizational assessment tool by is presented. Third, J. Lang's utilization of Maslow's theory as a framework to develop an evidence-based normative design theory is discussed. The next part discusses L. Groat's adaptation of the organizational consciousness model, an extended version of the basic needs model, to the field of environmental design as a categorical framework to assess the alignment of designer goals and user values. The summary section outlines the relevant concepts in relation to the general place model and the goal of this study.

### Theory of Human Needs and Motivation

In the field of psychology, one of the most influential theories of human behavior is Abraham Maslow's human needs hierarchy. This model is composed of five basic human needs, four of which are deficiency needs, universally shared by all members of the human species, and one of which is the self-actualization need, which is more idiosyncratic than the other needs. When the deficiencies of basic human needs are

eliminated, psychological illnesses tend to disappear. While satisfying deficiencies helps prevent illnesses, growth satisfaction contributes to positive health (Maslow, 1968).

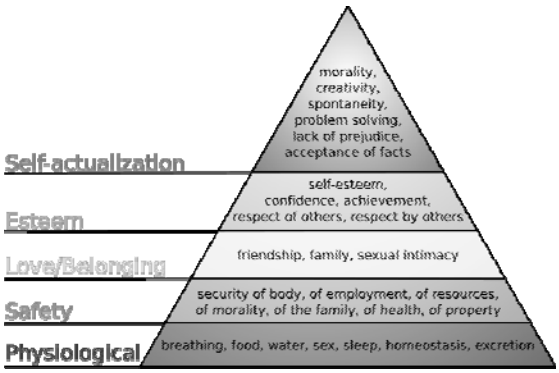


Figure 6. Maslow's Hierarchy

According to Maslow, the *physiological needs* are the basic biological requirements of the human body to maintain the organism at a constant condition, e.g., steady blood pressure. The typical requirements of this level can be defined as hunger, sleep, exercise, sex, etc.

After the first level of the basic needs hierarchy, *the safety need* is the most important effect. This can be defined as the need of security, stability, dependency, and protection; freedom from fear, anxiety, and chaos; need for structure, order, law, and limits; strength in the protector, and so on. As Maslow says, "Practically everything looks less important than safety and protection. A person in this state, if it is extreme enough and chronic enough, may be characterized as living almost for safety alone" (Marans, 1976; Maslow, 1954).

The third level of the hierarchy is *the belongingness and love need,* the need of intimacy, contact and belongingness. This level has direct implications for the social phenomena of feelings of isolation and alienation, which have been increased by mobility, globalization, the breakdown of traditional groupings, the scattering of families, the generation gap, and steady urbanization (Maslow, 1954).

The fourth level of the hierarchy includes *the esteem needs.* This refers to one's need to evaluate oneself highly, which leads to self-confidence, capability and strength. Maslow defines two subcategories of this level: self-esteem (self-respect) and the esteem of

others (respect from others). The former is “the desire for strength, achievement, adequacy, mastery and competence, confidence in the face of the world, and independence and freedom”; the latter is “the desire for reputation or prestige (defined as respect or esteem from other [people], status, fame and glory, dominance, recognition, attention, importance, dignity, or appreciation” (Maslow, 1954).

The highest level of the basic need hierarchy is *the self-actualization need,* which is “the desire to become more and more what one idiosyncratically is, to become everything that one is capable of becoming” (Maslow, 1954). However, prior to the realization of self actualization, the satisfaction of lower-level needs—physiological, safety, belongingness, love and esteem—is critical.

Maslow suggested that all human beings are intrinsically motivated to satisfy their basic needs, which are organized hierarchically based on the principle of relative prepotency, and that this motivation dominates human behavior to a large extent (Maslow, 1954). When one need is satisfied, a higher-level need emerges to dominate the person, and these unsatisfied needs motivate his or her behavior accordingly. Another aspect of the human needs hierarchy is that the needs are related to each other in a developmental way based on an order of strength and priority. That is, lower-level basic needs are relatively stronger than higher needs; for example, physiological needs are stronger than safety needs, which are in turn stronger than belongingness and love needs (Maslow, 1968). However, Maslow emphasized that the basic needs do not necessarily have to be completely satisfied before another need emerges and that many “normal” members of the society are simultaneously partially satisfied and partially unsatisfied at all basic need levels (Maslow, 1954).

Accordingly, one can argue that the five basic needs arrange themselves in a fairly definite hierarchy according to Maslow’s model; i.e., after one is satisfied, another emerges. However, the tidiness of this model can be misleading, and it is important not to oversimplify. Most people are partly satisfied with their all basic needs and partly unsatisfied with them at the same time. “A more realistic description of the hierarchy would be [there is] decreasing percentages of satisfaction as we go up the hierarchy of prepotency” (Maslow, 1954).

On one hand, scholars have questioned Maslow's hierarchy of human needs not only because he used a self-selected group of "healthy and self actualized people" as subjects in his studies, but also because he assumed that basic needs are universal and progressively hierarchical (Alderfer, 1969; Wahba & Bridgewell, 1976). On the other hand, the theory of human needs has been widely adapted, modified and utilized by scholars in a variety of fields like psychology (Ryan & Deci, 2000), education, organizational development (Barrett, 1998; Steele, 1973), management (Alderfer, 1969; Hagerty, 1999), and environmental design (Groat, 2000b; Lang, 1987, 1994) and has proved to be a helpful instrument in understanding human motivations and behavior. While acknowledging the limitations of Maslow's work, this research aims to utilize the basic human needs theory as a categorical framework to develop an understanding of people's motivations and the role of environment in people's satisfaction and growth. In order to establish this framework, the next section presents the adaptation of Maslow's hierarchy of needs in both the organizational behavior and environmental design literature.

### Motivation and Organizational Assessment: Environmental Competence

One of the early adaptations of Maslow's theory was Fred I. Steele's pioneering work establishing the relationship between physical environment and human motivations in the field of organization development and management. Steele outlined a *sociophysical* approach to organization development to increase *environmental competence*—"the ability of individuals and organizations to use full potential of their physical settings"[2] (Steele, 1973). According to Steele, if one wants to change an organization's functioning, one must pay attention not only to social-system properties (like formal structure, rules, group norms, interpersonal behavior, power distribution, etc.) but also to the physical system as a part of the context for the social system. "The setting acts as a moderator—a facilitator or inhibitor—of responses combined in complex ways to result in different performance levels" (Steele, 1973). The level of environmental competence increases with the alignment of settings with the people who use them and the activities for which they are used; therefore, any ostensibly universal solution applied to all settings runs the risk of being inappropriate as often as it is appropriate (Steele, 1973).

[2] "Two factors constitute environmental competence: (1) the ability to be aware of one's physical environment and its impact; and (2) the ability to use or change that environment to suit one's ends" (p.8) (Steele, 1973).

Building upon the connections between organization theory and environment research (Altman & Haythorn, 1967; Festinger et al., 1950; Fiske & Maddi, 1961; Goffman, 1959; E. Hall, 1966; Kurtz, 1969; Manning, 1965; Maslow, 1954; Mogulescu, 1970; Raven, 1967; Roethlisberger & Dickson, 1939; Sommer, 1967a, 1967b, 1969; Steinzor, 1950; Trist & Bamforth, 1951), Steele identified a category system that represents six basic functions that physical settings serve for their users. These six functions are 1) *Security and Shelter*: the extent to which settings provide physical shelter, protect people from the physical elements (like rain, cold, bugs, light, and noise), and provide psychic security (e.g., by affording privacy and protecting people from overstimulation such as overcrowding); *2) Social Contact*: the extent to which physical settings facilitate or inhibit interpersonal contact; 3) *Symbolic Identification*: the extent to which settings provide information about the nature of people who are connected with it (their values, goals, personal preferences, and the like); 4) *Task Instrumentality*: the extent to which settings are useful for the accomplishment of the tasks performed within them, such as physical activities, which take place outside people; interactional activities, which take place between people; and mental activities, which occur within people; 5) *Pleasure*: the extent to which settings provide pleasure for the people who are using them; and 6) *Growth*: the extent to which settings promote growth in the people who use them (Steele, 1973).

Using these six categories, Steele developed a rating system and utilized it as a tool for diagnosing organizational spatial problems. The main goal of this rating system is to put the researchers into the world of users as much as possible and to reveal what a place may facilitate or inhibit for its users, rather than defining a place as simply bad or good for its users. After the quality of a place is assessed (e.g., a positive or negative rating is determined for the office layout's effect on social contact), the users' specific needs and aspirations should be used as criteria for judging whether the place is good or bad for its users; i.e., whether the quality of that place can fulfill users' needs and/or wants. For example, gated communities would be rated highly positively for security and safety. However, they might actually inhibit the basic social needs of contact and growth due to spatial features such as gates, surveillance systems, large lots, lack of public spaces, etc.

Although data sources such as personal observations, personal interviews with users, touring interviews, and change events provide a wealth of information for the

assessment of organizational settings, Steele's category and rating system is designed specifically to interpret qualitative data rather than to collect and interpret quantitative data. Due to its subjectivity, the rating system is limited in some respects, such as reliability and replicability. However, the category system provides a useful framework both for evaluating spatial environment in relation to users' purposes and for incorporating multiple research tactics to improve the analytical rigor of environmental evaluation.

| | CATEGORIES of HUMAN MOTIVATION | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Individual | | | | | Transformation | Common Good | | |
| MASLOW (1954) Human Motivations | Survival | Safety and Security | Belonging | Esteem | | Self-Actualization | | | |
| STEELE (1973) Physical Settings and Organizational Development | Shelter and Security<br>Physical shelter (noise, weather, temperature, bugs, etc.), Psychic security (control, overcrowding, privacy, etc.) | | Belonging<br>Sociopetal x sociofugal arrangement, Relative locations of functions, Mobility, User's choice about contact | Symbolic Identification<br>Information about the system, Individual identity (values, goals, interests, tastes) | Task Instrumentality<br>Accomplishment of tasks, Activities (physical, interactional, mental) | Growth<br>Physical qualities (diversity of stimulation, visibility, changeability), Social Interaction<br>Pleasure<br>Quality of setting, Past experiences, Person's internal state | | | |
| JON LANG (1994) Urban Design | Physiological<br>Survival, Health, Development, Comfort | Safety and Security<br>Physiological protection, Psychological protection (privacy, territories, boundaries, control, personalization) | Affiliation<br>Formal x communal organizations, Kinship systems | Esteem<br>Sense of place, Sense of importance (material goods, possessions), Non-material rewards (achievements, recognition) | | Self-Actualization<br>Fulfilling social relationships, Control over one's life, Intellectually rich behavior settings | | | |
| BARRETT (1998) Values-based Organization | Survival | | Relationship | Self-Esteem | | Transformation | Internal Cohesion | External Connection | Unity |
| GROAT (2000) Environmental Consciousness | Health and Safety | | Belonging | Goal-Oriented | | Transformation | Internal Connection | Contextual Connection | Societal Connection |

Table 2. Table sorting relevant literature on human motivations

## Human Needs and Urban Design: Environmental Affordances

In the field of architecture and urban design, some of the most significant work establishing the relationship between environmental design and behavioral sciences was performed by Jon Lang. He advocates a neo-functionalist approach to design in which the definition of function is based on both the whole set of human needs defined by Maslow and the related empirical findings as fundamental criteria for design (Lang, 1987, 1994). According to Lang, the goal of urban design is “to create the public realms of human settlements that afford the fulfillment of human needs to the extent that they can possibly be based on the evidence available to us” (Lang, 1994). Most of the Modernist designers, such as Le Corbusier and Hannes Meyer (Corbusier, 1987; Wingler, 1969), referred to a human needs model for theory and practice. However, their exclusive focus on one category of human needs, i.e., the need for shelter (light, hygiene, ventilation, access to open space, etc.), and their ignorance of other human needs account to a great extent for the failure of Modernism (Lang, 1994). Therefore, it is important to utilize a more comprehensive model of human needs as the basis for design theory and/or practice if the designed environment is to serve human purposes successfully.

Lang believes that the only way for designers to satisfy user needs is by understanding “the way physical structures afford behavior” and “how people perceive these affordances” (Lang, 1987). Although he does not introduce a specific method to study this relationship, Lang outlines a comprehensive framework based on Maslow’s theory that aims to help urban designers to understand the relationships between basic human needs, behavior and physical structures. Thus, conscientious designers can increase environmental affordances of designed environments to better support user needs. However, there is no guarantee that all the potential environmental affordances will be recognized and utilized, because the users will take advantage of the affordances depending on their levels of knowledge, perceptions and motivations.

According to Lang, the behavioral program and the physical environment should be designed to provide affordances as much as possible for certain behaviors and the satisfaction of all basic human needs, along with cognitive and aesthetic needs.

Accordingly, an urban designer should strive to provide specific environmental qualities in order to support basic needs, as described below (Lang, 1994):

To support *physiological needs*, the behavioral program must focus on the activities--the behavior-setting system--required for *survival* (e.g., clean water, shelter, and safe buildings)**,** *health* (e.g., sewage systems, clean water, services, sunshine, cross-ventilation, and air quality) and *development* (e.g., access to open spaces like playgrounds and parks). The goal of design is to enhance the quality of the milieu *as an overall settlement pattern, as a set of places, and as a set of links between places.*

To support *safety and security needs*, the behavioral program must focus on both *physiological safety* (e.g., bodily protection from natural disasters, traffic, etc.) and *psychological security* (e.g., having a sense of place, being geographically and socially in a society). Designers need to pay attention to several aspects: 1) *segregation of incompatible uses,* such as industrial and residential uses, to provide physical protection from the harmful effects of industry; 2) *surveillance* of everyday life by increased accessibility and visibility of public spaces; 3) *appropriate level of privacy*; 4) provision of a *sense of orientation in place and time* via legible and easy-to-navigate design; and 5) a *sense of place*—social and geographical—where individuals feel part of a geographical location and/or society.

Just as *affiliation needs* depend on *belonging* to a family/kinship system and/or a non-kinship organization (formal and/or communal), the behavioral program of neighborhoods must pay attention to the nature of *links to the outside world***,** the *links between subcomponent organizations*, and the nature of the *relationships between their inhabitants.* Accordingly, the design issues affecting a social environment are *identifiable units* with which people can identify and affiliate, the *sets and locations of the institutions and facilities*, the design of *links and places,* and the way the milieu and the objects it contains provide *symbols of affiliation.*

To fulfill *esteem needs*, the behavioral program must cover three areas: the provision of learning opportunities for development of abilities, the provision of opportunities to display skills, and the display of the symbols of success to oneself and others. Accordingly, the three basic concerns of urban designers in helping people fulfill their

need for esteem are the need of those who are going to use places to be participate in the design process**,** the need to ensure that the behavioral opportunities for exploration and learning are provided in future designs, and the need for the symbolic aesthetics of the future environments to fulfill people's need for self-esteem in their own terms.

As *self-actualized people* are inner-directed in their behavior, there is little unique in the layout of the environment that is required to meet their needs. If an existing milieu or a new urban design provides for people's cognitive and aesthetic needs as well as the lower-order basic needs, self-actualizing people will find their own rewards. Self-actualizing and self-actualized people will be the ones pushing for civic reforms and for the betterment of conditions for others.

Although Lang's adaptation of the human needs model as a guideline for design decision making is important, this model might not adequately address all of the issues involved at the scale of community design. Good communities are the settlements that encourage the growth of their members and the development of whatever potential they possess (Grant, 2006; Lynch, 1981). If communities play a significant role in encouraging the self-actualization of residents and fostering civic engagement, then community design features should respond not only to the deficit needs but also to the growth needs. However, Lang does not tackle growth needs; therefore, his model does not provide design goals for growth needs.

## Organizational and Environmental Consciousness

In the field of environment and behavior, Linda Groat's work on "environmental consciousness" expands Lang's model while establishing the link between organizational theories and environmental design (Groat, 2000a). Groat builds on Richard Barrett's organizational consciousness model, which extends Maslow's five-level basic needs model into a seven-level model. The first four levels—which represent physical and emotional needs—largely coincide with Maslow's, and the higher levels correspond to mental needs (intellectual development and personal growth) and spiritual needs (the need to bring meaning to our lives and others, and the need to serve the public good) (Barrett, 1998). Barrett argues that successful organizations are those with the best alignment between individual and organizational personality. Therefore,

assessing the match between employee consciousness and organizational culture is vital to promoting productivity and creativity.

Similarly, Groat argues that different types of physical design features and designers' goals are relevant to different levels of the environmental consciousness. A fundamental understanding of an organization and its culture and an alignment between the designer's and client's values and goals are likely to affect the success of a design project, either enhancing or inhibiting growth of individuals and hence the organization as a whole (Groat, 2000b).

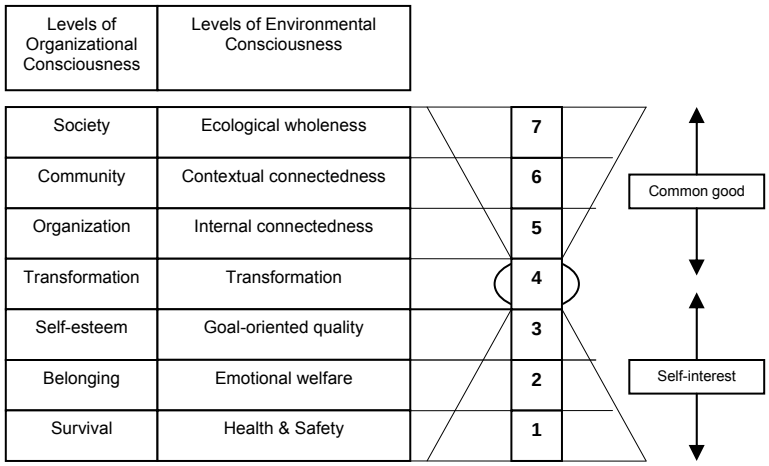



Figure 7. The relationship between organizational consciousness and environmental consciousness, adapted from Barrett (1998) and Groat (2000a)

Groat defines seven levels of environmental consciousness and corresponding design values and features as follows (Groat, 2000b):

1. *Health and safety: providing healthy and safe environments.* Depending on the scale on which the designer is working, his or her basic responsibility is to provide shelter, safe and stable buildings, water and sewage systems, utility systems, etc.

*2. Belonging: supporting harmonious interpersonal relationships and enhancing organizational solidarity.* The design of a project can be influential in fostering these relationships via specific arrangement of spaces (streets, squares, parks, rooms, etc.) and their well-thought-out relationships.

*3. Goal-oriented quality: supporting an organization's fitness and conveying a competitive and respected image of it.* If the designer's and client's values are aligned, the goal of organization can be reflected in its physical embodiment. For example, a

community's desire for a traditional neighborhood can be embodied in design principles guided by this concept. Similarly, a gated community designed with defensive design principles and their elements (like gates, walls, fences, alarm systems) may reflect the goals of its residents.

*4. Transformation: enabling the move from self-interest to the common good.* The organization of a physical environment (home, office, neighborhood, city, etc.) can promote common interest rather than self-interest. Neighborhoods and cities can be designed to develop an understanding of the whole from its local parts, and parts of design like parks and squares can help transform a place by enhancing the common good.

*5. Meaning and internal connectedness: supporting internal connectedness of an organization (a neighborhood or a community) via fulfillment of meaning for the members of that organization.* Within the neighborhood scale, this can be achieved by providing gathering places and increasing the possibility of interpersonal encounters through ease of access both within and between neighborhoods. This aspect would enhance residents' feelings of psychological connection to each other and to the neighborhood itself. Therefore it is likely to increase the internal connectedness of a neighborhood.

*6. Community connectedness: designing physical environments in harmonious relationship with the context and enhancing the relationship between neighboring organizations.* Establishing well-defined visual and physical linkages between communities via street layouts and transportation lines might satisfy connectedness at the neighborhood as well as regional scale.

*7. Societal and global connectedness*: *supporting the recognition of integrity at a global scale.* The principal goal of sustainable and ecological design is to promote consciousness about the interconnectedness of all facets of life.

Within this framework, designers who want to create supportive environments and satisfy the widest possible range of needs have a responsibility to understand the values of the organization for which the project is designed. For example, in community settings, satisfying all levels of needs (particularly higher levels) helps to foster *civic meaning*. Civic meaning, defined as *civic engagement, sense of citizenship, and community cohesion,* is a fundamental component of successful community environments (Groat, 2000b). Successful urban design projects that can promote civic

meaning and respond, at least to some extent, to all levels of environmental consciousness levels are vital for the health of the community and society at large.

Several studies in the field of environment and behavior have analyzed the relationship between certain design characteristics and environmental consciousness levels. One such study is Kim's comparative analysis of a New Urbanist and a conventional suburban neighborhood (Kentlands and Orchard Village, respectively). Kim investigated sense of community, which New Urbanist communities claim as an asset (Kim & Kaplan, 2004). In a review of the literature on this topic, he identified four elements hypothesized to support residents' sense of community: *pedestrianism, community attachment, social interaction, and community identity*. Using interviews and structured surveys, Kim examined the relationship between each element and 17 distinct aspects of the physical environment in each neighborhood. His findings suggest that New Urbanist community residents perceived a substantially greater sense of community. The overall layout of the community, its traditional architectural style, and other physical factors played a vital role in achieving sense of community. Although Kim's framework for sense of community does not refer to all levels of environmental consciousness, it does give valuable insight into several levels. While the four domains identified by Kim are likely to influence multiple levels, their major contribution to certain levels can be identified as follows: *emotional welfare (community attachment), goal-oriented quality (community identity), pedestrianism (physical health), and internal connectedness (social interaction)*.

The environmental consciousness model would be a useful tool at two different stages of environmental design. First, throughout the design process, it would provide an empirical ground for identifying people's needs and the appropriate physical elements to respond to those needs. Second, after occupancy, the success of any design outcome can be assessed according to how well these environments foster or inhibit satisfaction of the needs defined by the model. As a result, a comprehensive human needs model would not only help facilitate the design process but also bridge the gap between theory and practice. It would provide a framework for obtaining feedback from the design outcome and aligning the theoretical assumptions accordingly.

## Summary

In order to examine which values and meanings are associated with New Urbanist neighborhoods, this study aims to identify the preferences and goals of residents. Learning about residents' motivations in choosing specific neighborhoods is particularly important, as these motivations play a significant role in shaping residents' perceptions of the neighborhood. In addition, utilizing the environmental consciousness levels as a categorical framework, this study intends to inquire into how successful New Urbanist case study communities are in satisfying residents' needs, in other words, to determine the residents' perceived satisfaction with their neighborhoods. Finally, the role of physical design features in supporting the fulfillment of residents' needs is also examined.

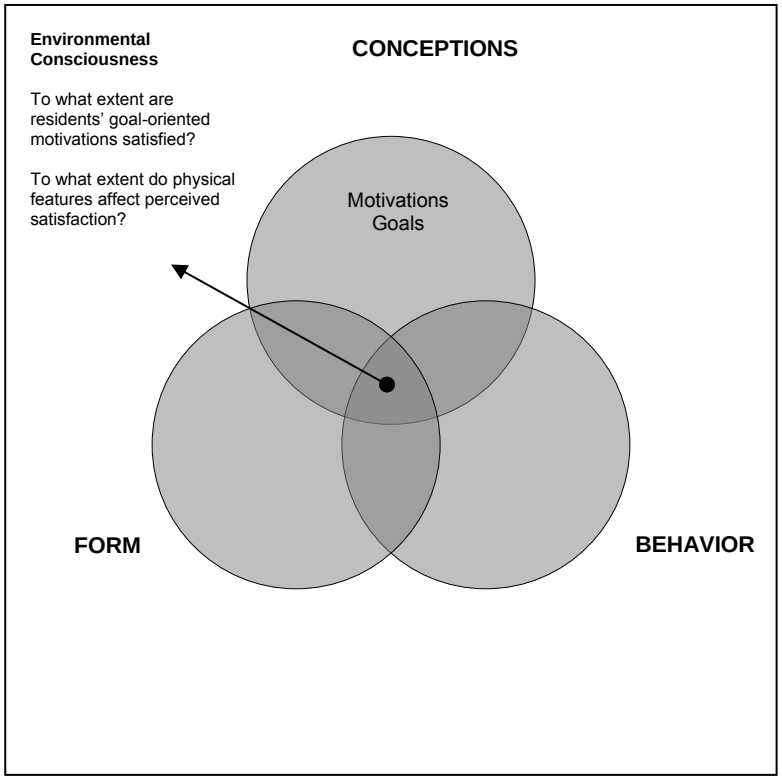


Figure 8. Perceptual understanding through the lens of place model

### 3.3 Life in the Neighborhood: Public Space Use and Social Capital

The behavioral approach to understanding New Urbanist communities broadly intends to uncover the dynamics of neighborhood life in the public sphere. We can gauge the vitality of a neighborhood by assessing the diversity of the activities residents perform there, whether individual or social, casual or organized. In addition, the level of trust and social engagement amongst the residents reveals the cohesiveness of a community—a quality that is vital for civic engagement.

This section discusses the possible effects of residents' perceptions of the neighborhood and its physical design features on elements of neighborhood life, such as physical activity, social interaction, neighboring patterns, and formation of social capital. Two bodies of literature are reviewed in this section. The first group focuses not only on the interrelation between physical features of public space and the types of activities performed within it, but also on their fundamental role in creating a vital public life, which is the essence of place. The second group of literature explores the social life of neighborhoods, particularly the residents' perceptions of their community and their level of social engagement, in order to shed light on the satisfaction of the residents' higher-level needs, which are especially pertinent to the common good.

#### Public Space Use

Public spaces afford a variety of activities—social, cultural, and economic—that affect behavioral patterns and thus reveal the cyclical rhythm of life within an environment. The active use of public space is likely to contribute to the experience of place. Integration of place and community is vital for urban quality; good urban places have a structure and an underlying dynamic of activities (Montgomery, 1998). Therefore, the variety of activities performed within neighborhood public space, such as sidewalks, parks, and greens, is a reflection of the quality of place.

In her pioneering work *The Death and Life of Great American Cities*, Jane Jacobs outlined the qualities of successful urban places based on her meticulous observations of public space use in New York City neighborhoods (Jacobs, 1961). The active use of sidewalks by both adults and children enhances sense of safety and casual social

interaction, which in time builds trust amongst the residents of a neighborhood or a street. In addition, design features play a significant role in fostering or inhibiting the use of public space; for example, front porches contribute to the perception of safety as they provide “eyes on the street.” Therefore, the design of public places is likely to affect the quality of a neighborhood’s civic life.

Another significant work concerned with the life of public spaces belongs to William Whyte, who conducted a series of observations of activity patterns such as movement, pedestrian flow, seating arrangements and social interaction using time-lapse photography and video-taping (Whyte, 1980). His aim was to understand the peculiarities of several public squares in New York City that improve urban civic and social life. According to his findings, people perceive public urban spaces as places both to see and to be seen, where they can satisfy primary human needs such as co-presence, co-awareness and social contact. People’s static and dynamic activities such as walking, sitting and standing are significant attractors, which invite and increase the potential to support these primary needs.

Having performed extensive analyses of people’s behavior in public space in relation to each other and the design features of urban space, Jan Gehl argues that the aim of environmental design is to make activity visible to reinforce the conduct and mood of action (Gehl, 1987). The relationship between different kinds of activities and physical features plays a significant role in stimulating vital social life in urban space. People need to meet, see and hear others to satisfy the basic need for social contact. Urban places can house social contact either casually or with the help of planned activities such as cultural events, festivals and meetings. However, special organizations can only produce vitality only for a limited time. Continuous active public life in open urban spaces depends on the existence of a diversity of functions.

Consequently, if neighborhoods are to satisfy residents’ basic needs, such as feeling safe and secure and having minimum social contact with neighbors, then fostering active use of public space should be one of the goals of successful neighborhood design. Understanding the patterns of public space use—the types of activities performed as

well as their locations—is likely to provide significant insight not only into the life within a neighborhood but also into residents' satisfaction.

## Social Capital

An increasing number of researchers agree that there is a relationship between social capital, built environment and health (Araya et al., 2006; Leyden, 2003; Wood & Giles-Corti, 2008; Ziersch et al., 2005). Similar to the physical and human capital—i.e., tools and training that enhance productivity—social capital is defined as "features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit" (Putnam, 1993). Individuals with high levels of social capital are more likely to trust or think kindly of others, to volunteer in their communities, to get together more frequently with friends and neighbors, and to be politically involved (Putnam, 2000).

Although social capital is not limited to geographical boundaries, research findings suggest that environmental variables affect the frequency and quality of social contacts, which in turn affect group formation and social support. Passive social contact, proximity and the availability of appropriate space enhance group formation (Festinger, 1972; Festinger et al., 1950; Fleming et al., 1985). This mutual interaction between the qualities of environmental design and social capital is also likely to influence residents' perceptions of social support and the feeling of safety and friendliness in a neighborhood setting. Environmental design can play a significant role in fostering social involvement by creating settings supportive of passive social contact, facilitating proximity by arranging spaces in appropriate closeness, and designing and arranging shared spaces appropriately (Talen, 2005). Consequently, such a careful design is likely to increase environmental affordances that contribute to the satisfaction of affiliation, self-esteem, transformation and internal connectedness needs (Groat, 2000a; Lang, 1987, 1994).

There is an increasing research interest in understanding the way which social capital is influenced by the characteristics of neighborhood design. In one such study, Leyden examines whether pedestrian-oriented, mixed-use neighborhoods encourage enhanced levels of social and community engagement (i.e., social capital) (Leyden, 2003). Leyden collects data from a variety of neighborhood developments ranging from car-oriented

suburbs to pedestrian-friendly, mixed-use developments in Ireland. The findings suggest that people living in walkable, mixed-use neighborhoods have higher levels of social capital and are more likely to know their neighbors, participate politically, trust others, and be socially engaged than people who live in car-oriented settlements.

In a similar comparative study of traditional and conventional neighborhoods, Lund tested whether placing amenities such as parks and shopping areas within walking distance of homes increases pedestrian travel and social interaction within neighborhoods (Lund, 2003). Analyzing both subjective and objective variables, Lund concludes that when combined with pedestrian-friendly streetscapes, the location of everyday amenities such as parks and retail shops within a neighborhood can increase pedestrian travel and neighborhood interaction within a community. Lund also finds that people who walk around their neighborhood are more likely to interact with and form relationships with their neighbors.

These two studies reveal the association between pedestrian activity and the likelihood of social interaction and level of social capital. In addition, Kim's analyses of four domains of sense of community—community/place attachment, community identity, social interaction, and pedestrianism—provide further detail (Kim & Kaplan, 2004). Comparing a traditional neighborhood (Kentlands) and a conventional suburban settlement (Orchard Village), the authors find that physical design features (such as architectural style and overall design quality) significantly affect residents' perceptions of community attachment, identity and pedestrian activity. However, these design features were less important for perceived social interaction in both neighborhoods. These findings might mean that social interaction is more closely related to behavioral and perceptual factors than to physical aspects of neighborhoods.

In addition to increased pedestrian activity, one factor enhancing the level of social interaction in traditional neighborhoods might be self-selection. As Kim's study finds, people who are more likely to interact with others and be more socially active might choose to live in traditional neighborhoods (Kim, 2001). Therefore, they are likely to experience higher levels of social interaction and feel more satisfied with their neighborhood due to their purposive evaluation (Canter, 1983).

Finally, in the field of public health, empirical findings suggest that people who are socially engaged and actively involved in their communities are likely to live longer lives and to be physically and mentally healthier (Kawachi & Berkman, 2001; Kawachi, et al., 1999; Yen & Kaplan, 1999). In a study examining the relationship between neighborhood life, social capital and health, Zierch and colleagues collected data related to neighborhood perceptions and the physical and mental health of residents of Australian suburbs. Their findings reveal several significant associations: 1) residents who perceive their neighborhood as a safe place have better physical and mental health; 2) people who have high levels of social contact within their neighborhood (neighborhood connection) have better mental health; and 3) people who perceive their neighborhood negatively (e.g., as polluted) take part in fewer civic activities (Ziersch et al., 2005).

As a result, one can conclude that both the physical design and the perceptual qualities of a neighborhood influence individual social capital and civic engagement as a whole. While physical design features such as pedestrian-friendly environments, accessibility of neighborhood amenities (parks, greens, retail, etc.), and proximity of buildings enhance pedestrian activity, group formation and social interaction, residents' attitudes are significant factors defining not only the level of social capital but also the physical and mental health of communities.

## Summary

One of the objectives of this study is to understand the similarities and differences of New Urbanist neighborhood developments in different cultural contexts. One cannot comprehend these differences without understanding the peculiarities of neighborhood life and people's perceptions of it in different contexts. Therefore, it is particularly important to uncover the behavioral qualities of New Urbanist neighborhoods: what types of activities are performed (social vs. individual and casual vs. organized), and to what extent does neighborhood design support these activities? In addition, understanding residents' perceptions of their community and their level of social engagement (and hence social capital) will shed light on the overall quality of neighborhood life and the potential to create civic places.

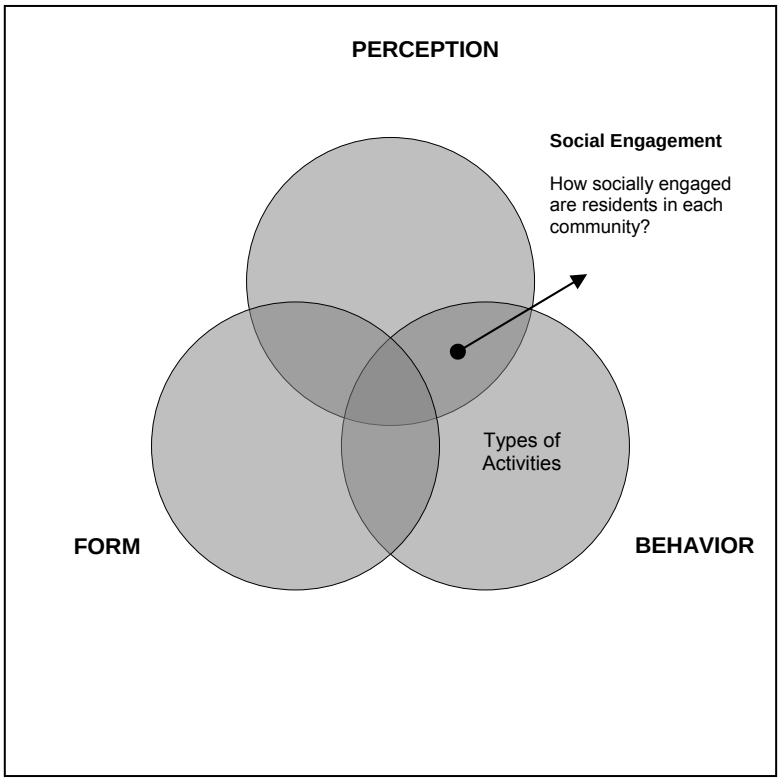


Figure 9. Behavioral understanding through the lens of the place model

### 3.4 Neighborhood Form: Spatial Configuration and Morphology

The physical setting of a place is composed of both built (man-made) and open space (landscape) elements. The arrangement of these elements both shapes and is shaped by patterns of activities such as movement and social interaction, as well as people's associations and conceptions of that place, such as perceived safety, privacy and identity. On one hand, most theories of urban design have promoted the use of certain morphological properties to create environments that would reflect a certain vision. Thus people were expected to experience the environment in a manner consistent with that vision.

On the other hand, when people appropriate environments, they either utilize or adjust physical properties according to their needs because they want to maintain a certain level of self-efficacy. Self-efficacy[3] can be defined as "a person's perception of his/her ability to be effective in achieving his/her goals," and it is regarded as significant for well-

[3] Self-efficacy is one of the four principles people use when they evaluate both social and built environments (the other three are distinctiveness, continuity and self-esteem) (Breakwell, 1992).

being (Breakwell, 1992; Leibkind, 1992; Twigger-Ross & Uzzel, 1996; Winkel, 1981). Self-efficacy is high when individuals believe they can perform preferred activities and/or complete preferred tasks. Therefore environments that can help individuals perform their daily activities are likely to enhance the feeling of self-efficacy (Winkel, 1981). However, environments that hinder people's preferred activities are likely to be less appropriated and/or poorly utilized.

In other words, if the physical properties of an environment do not meet a variety of the inhabitants' needs, the behavioral outcome of design projects might be quite different from the initial vision. Moreover, when applied in different cultural contexts, similar physical features are likely to be conceptualized in different ways and to carry different meanings. Therefore they are likely to be adjusted according to the contextual requirements or to be less actively used.

In line with the broad goal of this research, which aims to understand the similarities and differences between New Urbanist applications in the US and Turkey, this section explores morphological and configurational aspects of places by reviewing the relevant literature. First, origins and characteristics of the form-based regulations of the theory of New Urbanism will be discussed. However, for the purpose of this research this discussion will focus on the neighborhood scale, particularly greenfield developments. Second, the relationship between spatial configuration, natural movement and co-presence will be introduced. Finally, the analysis of morphological properties as a way to understand local and cultural characteristics will be discussed. The summary section will outline the significant concepts and measures to consider in the formal analysis of the neighborhoods in this research.

## Spatial and Social Doctrine of New Urbanism

Modern planning principles were laid out in the fourth CIAM Congress held in Athens in 1933 by pioneers of the modern movement such as Le Corbusier. This manifesto of the "Functional City" suggested that old cities needed to be revolutionized with regard to the needs of modern society such as hygiene, sunlight, vegetation, and open space. Modernists believed that machinery and geometry would shape the new understanding of urbanism and architecture. Highly influential after the Second World War, this utopian

model of planning led the proliferation of car-oriented environments with segregated modes of circulation, vast open spaces rather than well-defined streets and squares, and cities with functionally separated zones. As a result, since the 1950s urban spaces have been gradually losing traditional characteristics like enclosure, human scale, and identity. Such urban spaces have therefore been criticized as *antispace;* that is, an agglomeration of undesirable urban areas with no positive contribution to the context or users and no spatial or public quality (Trancik, 1986).

Amongst critics of modern planning, Robert Krier is one of the most influential. His theoretical work and practice are guided by a highly historicist attitude. In his book *Urban Space*, Krier presents a typology of urban forms and their geometrical relations and variations, defining them as the principal elements of architecture and urbanism. According to Krier:

> *[I]t is more useful to imitate something "old" but proven, rather than to turn out something new which risks causing people suffering. The logical and attractive building types and spatial structures left to us by anonymous architects have been improved upon by countless succeeding generations.* (Krier, 1979)

Krier's approach to examining and designing urban forms has been widely criticized as nostalgic and myopic in the sense that it focuses exclusively on formal qualities of space without considering their relationship with the larger context or the socio-economic and historic processes that generate these forms. Nevertheless, Krier's criticism of modern planning in Europe became an inspiration for New Urbanism in the US in the early 1990s. New Urbanists argue against the ever-increasing car-oriented suburbanization of the US and the consequent loss of place, and they promote pedestrian-oriented, mixed-use, compact developments with a distinct identity and a well-defined center and edges. Inspired by Krier, most New Urbanist Traditional Neighborhood Developments (TND) borrow extensively from the "old but proven" formal vocabulary of traditional towns and buildings of the late 19$^{th}$ and early 20$^{th}$ centuries. New Urbanists developed several tools such as Transect and the Smart Code to guide their practices and to ensure the unity of formal features.

While Transect defines the general principles of New Urbanist developments such as density and scale in a variety of contexts ranging from rural to urban, the Smart Code

provides a more detailed prescription at the scale of block and building design. The guidelines set forth in the Smart Code are based on the idea that traditional neighborhoods are successful, safe and sustainable urban places; hence, the morphology of New Urbanist developments should follow similar rules. The Smart Code is form-based rather than land-use zoning, and it prescribes specific standards for planning and designing new neighborhoods based on the following principles (DPZ, 2009b):

1) *Density* of neighborhoods (housing units/acre) must be defined according to the transect zones, which favor relatively higher densities in urban centers with smaller lots and narrower streets, and lower densities in rural areas.
2) *Size* of new neighborhoods must be defined according to pedestrian zones—¼-mile (1320 feet or 402 meters) radius or 5 minutes' walking distance. New neighborhoods are often centered on an important traffic intersection associated with a commercial or civic institution or a mixed-use attraction point to enable the residents to walk rather than drive to carry out their daily activities.
3) *Civic spaces* (outdoor areas designed for public use) *and civic buildings* (operated by non-profit organizations dedicated to the arts, culture, education, recreation, government, and transit) must be incorporated within the neighborhood plan (and must occupy a minimum of 5% of the urbanized area) to support community functions, to enhance the liveliness of the area, and to decrease car-dependency.
4) *The thoroughfare network* (streets serving pedestrian and vehicular traffic) must be well-connected to ensure access to lots and open spaces and must provide space for cars and pedestrians via well-designed public frontages with sidewalks, curbs, planters, and trees.
5) *Human scale* must be maintained following the transect zone rules. Streetscape_must be designed carefully using specific guidelines for public and private frontages and building configurations. Public frontage is defined as the area between the curb of the vehicular traffic and the private frontage line. Private frontage is defined as the area between the private frontage line and the private building façade, which includes setback, fences porches, etc.

6) *Street-level activity and neighborhood surveillance* must be supported by building exposition. For example, most first-story building facades must be glazed no less than 30%.

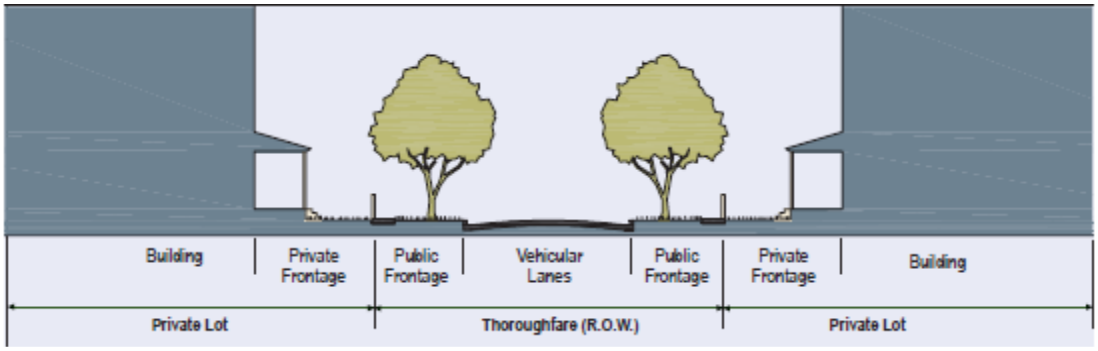


Figure 10. Illustrated definitions of thoroughfare and frontages from the Smart Code (DPZ, 2009b)

These guidelines are practical at the micro scale design of neighborhoods; they provide unity and continuity of forms, control of scale and density, and careful design of public spaces. However, they largely ignore the macro scale design of the neighborhood. For example, a quick review of the traditional neighborhood projects designed by DPZ reveal that particular attention is paid to architecture, landscape design and the street network of the neighborhood, but the relationship of these features to the surrounding context is overlooked (DPZ, 2009a). The overall focus of New Urbanist guidelines is on the parts rather than the whole. The overall spatial configuration of the neighborhood—street network and arrangement of civic spaces—and the relationship of this configuration with the larger context are not thoroughly addressed. Therefore, both the theory and practice of New Urbanism leave unanswered questions such as, “How do these pieces arrange themselves to form a successful network of places?” and “How does this network relate to the larger context?”

### Spatial Configuration, Natural Movement and Co-presence

If we define built space as a field of structured co-presence, co-awareness, and encounter, then built space can organize the way people behave, come together or remain apart via its boundaries—creating relationships of enclosure, contiguity, containment, subdivision, accessibility, and visibility (Peponis & Wineman, 2002). In order to understand this pattern of social and spatial relationships (in other words, to reveal the underlying social logic of space), Hillier and his colleagues at the Bartlett School of Architecture and Planning, UCL developed a set of analytical tools called

Space Syntax. Although this quantitative analysis of built form is a relatively new field of study, its empirical findings are quite informative about the relationship between the form and function of spaces.

Space syntax is an analytical approach that investigates the probabilistic relationship between the social and spatial structure of inhabited space. The theory's main assumption is that societies use space to organize themselves; in other words, space is a reflection of social organization (Hillier & Hanson, 1984). Inhabited space is configured—that is, composed of interconnected discrete units—with an inherent social logic. However, this relationship between society and space is dynamic: each modifies and structures the other. One example of this mutual modification is the creation of boundaries to configure space, which defines the rules of visibility and/or access, which in turn shapes patterns of movement and encounter in the configured space accordingly (Bafna, 2003).

The analytical perspective of Hillier and colleagues, who aim to reveal the relational patterns underlying spatial form that can separate or unite movement, co-presence, and co-awareness, is explicitly based on structuralism. Structuralism has also been implicitly adopted by scholars who investigate relationships between different components of place such form and activities, perceptions and activities, or form and perceptions of place (Canter, 1985; Canter & Thorne, 1972; Hillier, 1996, 2005; Hillier, Burdet, Peponis, & Penn, 1987; Hillier & Hanson, 1984; Montgomery, 1998; Moore, Allen, & Lyndon, 2001; Relph, 1976).

### *Syntactic Representations and Significant Measures*

The syntactic tools help to represent, analyze and quantify the configuration of space based on topological relationships of discrete units (Hillier & Hanson, 1984). The two basic units used for representation and quantification of spatial structures are *axial lines* and *convex spaces*. An *axial line* is the longest possible line passing through a space; it represents people's possible movement and the extension of space in one dimension. *Convex space* is the fattest possible space defined by boundaries within which people can see each other; it represents the extension of space in two dimensions (Hillier & Hanson, 1984).

These basic units are used to form representational maps of configured spaces. An *axial map* represents the least set of axial lines passing through each convex space in a configured system. A *convex map* represents the least set of fattest spaces that covers the system (Hillier & Hanson, 1984). Each axial line or convex space represents a node in the system that has quantifiable (syntactic) properties with respect to its topological relationships within the system.

One of the most important syntactic properties is *integration,* which is the mean *depth*[4] of a node (axial line or convex space) from all other lines in the system. In other words, integration is the degree of accessibility of part(s) relating to all other parts in the morphological system in every direction (Hillier, 1996; Hillier & Hanson, 1984). Another significant syntactic property is *intelligibility,*[5] which represents the relationship between properties of parts (local) and all other parts (global) within a morphological system. Intelligibility reflects the predictability of a spatial system (Hillier, 1996). The higher the intelligibility of a system, the higher is the probability of pedestrian encounter along the integrated lines.

The relationship between local spatial properties which is defined as relations with immediate neighbors and global spatial properties—the level of integration or accessibility to and from every space within the whole system—plays a significant role in influencing overall encounter rate of urban areas (Hillier et al., 1987; Hillier & Hanson, 1984). The degree to which encounter is predictable from the spatial pattern is a function of intelligibility of the layout, which is also defined by the relationship between global and local spatial properties.

*Principle of natural movement and virtual community*

Previous findings suggest that several syntactic properties are closely related to certain types of human behavior, such as movement and co-presence. These behaviors are closely related to pedestrian activity and social interaction, which New Urbanists claim to enhance via neighborhood design. To evaluate how successful New Urbanist designs

[4] Depth of one space from another is the number of spaces intervening between two spaces, in other words, the number of spaces one has to pass through to go to another space (Bafna, 2003; Hillier & Hanson, 1984).

[5] Intelligibility is the correlation between connectivity and integration values. Connectivity is the number of spaces directly accessible from (or connected to) a space (Hillier, 1996; Hillier & Hanson, 1984).

are in achieving their goal of increased pedestrian activity and social interaction, one has to assess the configurational properties of these settlements. Using empirical findings, Hillier introduces two concepts that are significant for the purposes of this research: natural movement and virtual community.

The principle of natural movement suggests that there is a strong relationship between the structure of any configured system and the movement densities along the lines (Hillier, 1996). The integration values of each axial line (that is, how the line is positioned with respect to the spatial system as a whole) strongly influence natural movement[6] passes through the line. In other words, the axial lines with higher integration values—those more integrated into the spatial system—are likely to attract more natural movement and more people. This principle is supported by empirical findings replicated in different cultural contexts and at different scales and types of environments (Bafna, 2003; Min, 1993; Peponis et al., 1989; Peponis & Wineman, 2002).

The concept of virtual community is based on the argument that spatial configuration influences patterns of space use through its effects on natural movement, which in turn defines patterns of co-presence and co-awareness amongst individuals who live in or pass through an area (Hillier, 1996). Hillier argues that although co-present people are not a community, they are raw material for community that could be converted into interaction. "[P]atterns of co-presence are a psychological resource, precisely because co-presence is the primitive form of our awareness of others" (Hillier, 1996). Therefore, patterns of co-presence and co-awareness are constituents of 'virtual community' in a given area influenced by the relationship between spatial configuration, movement and other related aspects of space use.

If spatial structure of a neighborhood influences the use of space, then it is likely to affect the neighborhood's overall character. Therefore, the two concepts defined above form the basis for analytical assessment of the potential of New Urbanist neighborhood design in creating an active public realm and supporting pedestrian activity. Whether the spatial configurations of the case study neighborhoods are structured to inhibit or foster natural movement and chances of encounter is likely to affect public space use and thus

[6] "Natural movement is the proportion of movement on each line that is determined by the structure of the urban grid itself rather than by the presence of specific attractors or magnets" (Hillier, 1996).

neighborhood life. For this assessment, configurational analyses of both case study neighborhoods are conducted at both global and local levels. At the global level, the relationship of case study neighborhoods to their surrounding context is explored. At the local level, the focus is on the neighborhood configuration itself.

In addition to the configurational structure of neighborhoods, several factors, such as land use, density, building entrances, and socio-economics factors, are likely to affect patterns of movement and co-presence in space. In this research, the number of building entrances is also used to assess the likelihood of public spaces to afford co-presence. Because building entrances create movement between interior and exterior spaces, the level of movement and co-presence of a space is likely to be affected by the number of direct entrances connecting to that space.

## Morphology

In addition to global spatial qualities like the accessibility of the whole system, other key aspects of residential environments are the morphological characteristics that reflect local qualities such as conceptions, meanings and tradition. Developed by French architects to study the relationship between built form and social action, typomorphology aims to develop a comprehensive understanding of the city by exploring the typological and morphological aspects of both buildings and open spaces (Mangin & Panerai, 1988; Moudon, 1994). Morphological studies provide a rich ground for observing local peculiarities of space. This approach serves the broad goal of this study: understanding similarities and differences between cross-cultural practices of New Urbanist neighborhoods.

One of the significant typomorphological studies conducted in the US is Anne Vernez-Moudon's detailed analysis of the morphological transformation of Alamo Square and its surrounding neighborhood in San Franciso (Moudon). Moudon mapped the historical, physical and socio-economic transformation of the neighborhood by tracking the historical data of blocks, lot size, the arrangement of buildings on the lots, architecture of the buildings, layout of buildings, density, vertical grain and land use. These analyses revealed that hidden rules govern morphological arrangements such as land subdivision, form and arrangement of buildings, and land uses. As people's conceptions and

traditions change over time, these hidden rules also transform formal characteristics of the neighborhood as well as the use and form of buildings and open spaces. Therefore, morphological qualities of the built environment help us understand local characteristics such as social conceptions, traditions and meanings.

In a similar study examining a series of urban transformations in selected inner city neighborhoods of three major English cities, Hanson and Zako combined both morphological and configurational analysis methods to understand spatial factors that may contribute to the abuse of public space or antisocial behavior (Hanson & Zako, 2007). The morphological analysis revealed quantitative measures of key properties such as land use, figure/ground ratios (for built space and public open space), and the boundaries between interior and exterior space (building frontages, facades and landscape elements). The configurational analysis examined interconnectedness and accessibility of neighborhoods.

The findings uncovered the association between locations of antisocial behavior and a group of spatial factors that might be conductive to poor liveability. Similar to Moudon's findings, Hanson and Zako's study suggests that morphological properties of housing from different historical periods are quite different with respect to arrangement of open and built spaces, boundaries between public and private spaces, and integration of the neighborhood to the larger urban context. These different morphological properties may contribute to different patterns of pedestrian activity, co-presence and surveillance within each neighborhood.

The two studies mentioned above underline the significance of morphological properties, particularly the boundaries between public and private and building typologies, for understanding the local characteristics of a place. Since this research seeks to understand the differences and similarities of New Urbanist practices in different cultural contexts, the morphological properties of the neighborhoods must be examined to reveal local properties of space and space use.

## Summary

Similar physical features are likely to be conceptualized in different ways, to carry different meanings and therefore be adjusted according to the contextual requirements of different cultural contexts. Inquiring into the similarities and differences between New Urbanist applications in the US and Turkey requires particular attention to the adaptation of New Urbanist spatial doctrine in different cultural contexts. While global spatial properties like accessibility help us to understand the use of public space, local properties such as land use, types, densities and boundaries between public and private spaces will provide information about cultural meaning and the culture-specific needs of residents.

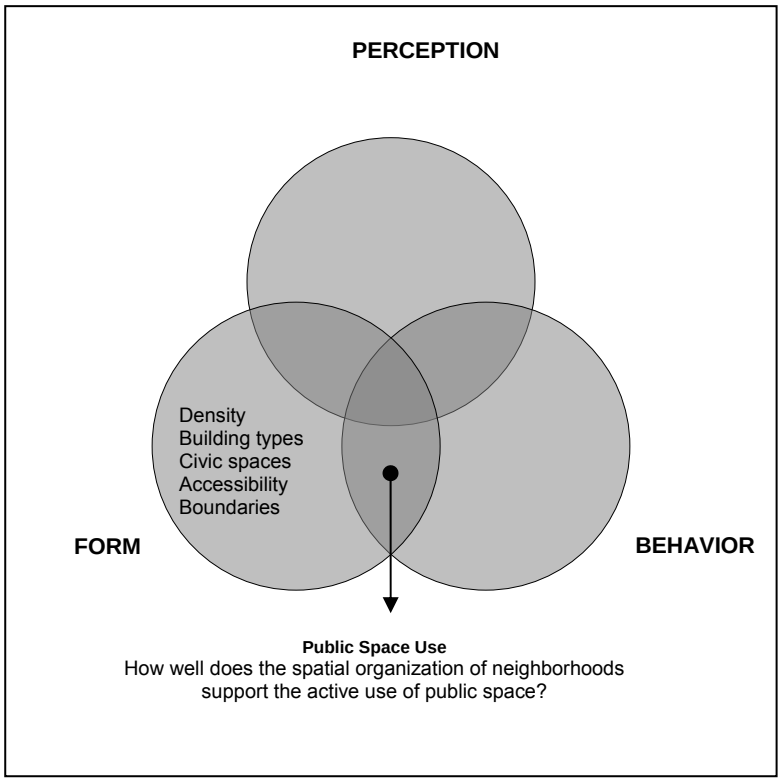



Figure 11. Formal understanding through the lens of place model

### 3.5 Theoretical and Methodological Framework Summary

The broad goal of this research is to expand knowledge of global practices of urban design models via a cross-cultural comparison of New Urbanist developments. The research question is as follows: What are the similarities and differences of New Urbanist neighborhood developments in different cultural contexts with reference to their physical and spatial qualities, the residents' motivations, behaviors and attitudes, and perceived meaning?

In order to address this broad research question, this study utilizes the place model as a framework to understand the phenomenon holistically. The place model suggests that there are three principle components of place: *form*, *activities* and *conceptions* (Canter, 1977; Montgomery, 1998). Formal and spatial qualities of place—both built (man-made) and un-built (natural or landscape) elements—influence not only patterns of social life but also associations and conceptions related to that place. Activities and behaviors related to a place define the underlying structure of social practices and public life. Finally, conceptions related to a place—one's psychological and mental associations—affect perceived satisfaction levels.

Accordingly, the three-part place model described above will serve as the general theoretical and methodological framework of this study. The holistic approach provided by the place model is essential to unfolding the relationships between formal, conceptual and behavioral aspects of the selected New Urbanist neighborhoods. Therefore, the research employs three different approaches to examining the relationships between three principal components of place.

First is the physical approach, which examines morphological properties (built and un-built spaces, density, building types, and public spaces) and configurational properties (relationship to the surrounding context, street network, arrangement of civic spaces, and building accessibility) within each case study neighborhood. The aim is to understand the following:

- How similar/different are the morphological features and the spatial organization of selected communities as a reflection of local characteristics?

- How likely are the configurational properties of each neighborhood to support the active use of public space?

Second is the behavioral approach, which intends to comprehend the life within the case study neighborhoods. This approach inquires into both individual and social activities performed within the neighborhood, as well as the relationship between spatial features and behavioral patterns. Accordingly, the research questions are:

- What are the types of activities performed by residents within the neighborhoods?
- How socially engaged are residents in each community?
- What is the relationship between patterns of public space use and spatial configuration?

Third is the perceptual approach, which focuses mainly on residents' aspirations and the satisfaction of their goal-oriented needs. The specific research questions addressed within this perspective are:

- What are the motivations/goals affecting the residents' decision to move to the case study sites? How do these differ in different cultural contexts?
- How successful are these communities in satisfying the goal-oriented needs of residents?
- Which physical design features of New Urbanist communities support resident needs such as social interaction, physical activity levels, sense of community and identity?

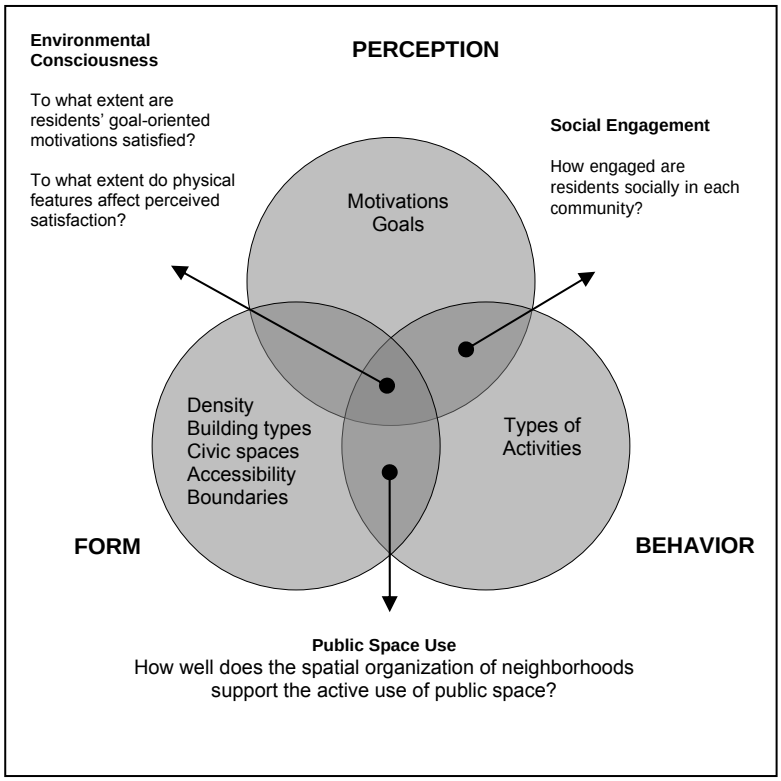


Figure 12. Research questions in relation to theoretical framework

# CHAPTER 4

# RESEARCH METHODOLOGY

## 4.1 Research Design: Case Study as Methodology

This research adopts the case study as the primary research method, combining it with several different research tactics. This section defines the case study and its main components, explains the rationale for choosing this method, and outlines the major characteristics of the case study method as employed in this research.

Case study research has been increasingly utilized by a wide range of disciplines like education, political science, business administration, psychology, sociology, public health, medicine and planning. As a research method, it offers significant advantages in dealing with complex phenomena with unclear boundaries; therefore it is often used in fields such as urban planning (Campbell, 2003).

On one hand, many seminal studies have stimulated much debate and have become path-breaking within their fields. These include Jane Jacobs's *The Death and Life of American Cities* (Jacobs, 1961) and Saskia Sassen's *Global Cities* (Sassen, 1991). On the other hand, scholars who believe that the primary purpose of social science research is theory testing have widely criticized the validity of case study research and favor quantitative methods using large samples to test hypotheses.

This debate on the case study method seems to reflect a deep divide between quantitative and qualitative research in the social sciences. However, the increasing use of this strategy even in traditionally quantitatively oriented fields like economics and political science shows that the case study method has already built a bridge between

the two sides. There are many reasons for this, among them the method's flexibility in accommodating both quantitative and qualitative tactics, its usefulness in both theory building/elaboration and theory testing, and its ability to capture complex phenomena such as social behavior.

## Definition

Robert Yin brings a broad framework to the definition of case study by focusing not on the topic of study but the method itself. In the third edition of his book *Case Study Research Design and Methods*, he defines the method in three ways: first, as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not very clearly evident" (Yin, 2003); second, as a way to develop or test theory; and third, as a research strategy with the following major technical characteristics:

> *The case study inquiry copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result relies on multiple sources of evidence, with data needing to converge in a triangulation fashion, and as another result benefits from the prior development of theoretical propositions to guide data collection and analysis*. (Yin, 2003)

A common criticism against the case study research method is that it provides little basis for scientific generalization: "How can you generalize from a single case?" Yin argues against this criticism strongly: "scientific facts are rarely based on single experiments; they are usually based on multiple sets of experiments, which have replicated the same phenomenon under different conditions" (Yin, 2003). According to Yin, "case studies, like experiments, are generalizable to theoretical propositions and not to populations or the universe. In this sense, the case study, like the experiment, does not represent a "sample," and the investigator's goal is to expand and generalize theories (analytic generalization) and not to enumerate frequencies (statistical generalization)" (Yin, 2003).

A scholarly consensus on the definition of case study has yet to emerge. Several scholars do agree on the definition of a *case*, which is "a spatially delimited phenomenon and an integrated system composed of parts (and maybe a purpose depending on the case) which can be observed at a single point in time or over some period of time*"*

(Gerring, 2007; Stake, 1995). However, they disagree on the definition of case *study*, in particular its purpose.

John Gerring, a scholar of political science, defines case study as “an intensive study of a single case where the purpose of that study is—at least in part—to shed light on a larger class of cases (a population)” (Gerring, 2007). On the other hand, Robert Stake, in the field of education, emphasizes that “case study research is not sampling research and that a case is not studied primarily to understand other cases but to understand one case*”* (Stake, 1995).

According to these definitions, the purpose of case study is either to generalize inferences about the case to a wider population, or to identify the particularities of the case rather than its typical or generalizable aspects. This significant difference in the definitions of case study reflects the implicit assumptions about the utility of case study in diverse disciplines. However, case study has been utilized in different disciplines (both traditionally quantitatively and qualitatively oriented), has served different research purposes (both theory testing and theory building), and has accommodated different research tactics (e.g., surveys, observations and interviews).

## Characteristics

Considering the theoretical framework and research questions discussed in Chapters 2 and 3, this research adopts case study as the primary research methodology. In accordance with Yin’s definition, case study is utilized as a comprehensive research methodology that addresses the logic of research design, data collection techniques, and specific approaches to data analysis. This helps the researcher not only to escape the pitfalls of a narrow understanding of case study as a mere data collection tactic, but also to combine multiple tactics at different levels of research. The case study methodology allows for a more integrative approach to research, which is significant both for disciplines like architecture and planning in general, and for this research in particular, as it inquires into complex contemporary phenomena.

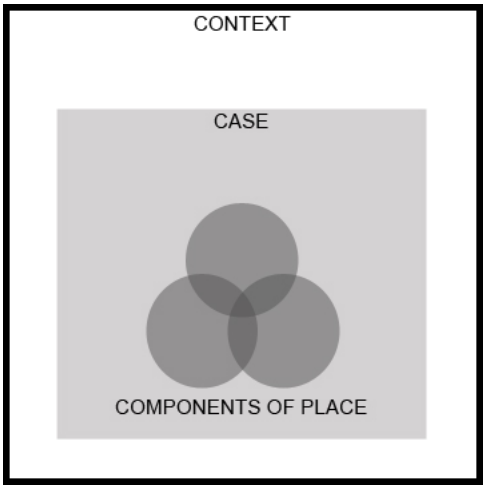


Figure 13. Case study approach in this study, adapted from (Yin, 2003)

Yin defines the three purposes of case study as descriptive, explanatory, and exploratory (Groat & Wang, 2002; Yin, 2003). He also identifies literal and theoretical replications of case study. A *theoretical replication* "produces contrasting results for predictable reasons" (Groat & Wang, 2002; Yin, 2003). A *literal replication* "tests precisely the same outcome, principles, or predictions established by previous case study" (Groat & Wang, 2002; Yin, 2003).

This study is exploratory in nature. It explores in depth the theoretical replications of the New Urbanist community model in the USA and Turkey, as contrasting results are expected. Using multiple research tactics for data collection, the research methodology is designed to examine three embedded units following Canter's three-fold Theory of Place model: the physical features of the locale, the residents' perceptions of the locale, and the activities linked to this locale.

According to Groat and Wang, the strengths of case study that contribute to its robustness as research design are: 1) a focus on case(s) in their real-life contexts, 2) capacity to explain relationships, 3) theory development, 4) use of multiple sources of evidence/data sources, and 5) the potential to generalize to theory (Groat & Wang, 2002; Yin, 2003). This research takes advantage of the preceding strengths of the case study methodology in the following specific ways: 1) it examines contemporary suburban neighborhoods in Turkey and the USA in their real-life contexts, over which the researcher has no control; 2) it evaluates the relationship amongst physical characteristics, resident attitudes and resident activities within these neighborhoods; 3) it

tests the extent to which New Urbanist theory manifests a place experience; 4) it utilizes multiple research tactics to examine the phenomena holistically; and 5) it expands the knowledge of international practices of New Urbanism and hence contributes to the theory and practice of New Urbanism.

### Case Selection

The two case study sites selected for this study are Cherry Hill Village (CHV) in Canton, Michigan and Ispartakule in Bahcesehir, Istanbul. CHV was included in a list of walkable neighborhoods in the South East Michigan area prepared by the South East Michigan Council of Governments. Ispartakule was chosen as one of the two neighborhood developments designed by US-based New Urbanist practitioners in Istanbul. The main criteria for selecting these cases study sites were as follows:

1) Neighborhood location and type: CHV and Ispartakule are both suburban greenfield developments within the metro area of a major city (Detroit and Istanbul, respectively).
2) Year of occupation: both of the neighborhoods were first occupied in 2001.
3) Ease of access: neither of the neighborhoods has gates or walls restricting access.
4) Overall design principles of the neighborhood development: both neighborhoods incorporate New Urbanist features such as a pedestrian-friendly environment, mixed use, a variety of housing typologies, and amenities such as public parks and greens into their overall design.

## 4.2 Multiple Research Tactics

This study employs multiple research tactics at different levels. It uses both qualitative and quantitative tools at the tactical level, with an emphasis on qualitative tools to address specific research questions. Combining multiple tactics provides the researcher with a better understanding of the cases than either approach alone; it also provides appropriate checks against the weaknesses of each strategy, as the strengths of each method complement each other (Creswell & Plano Clark, 2007; Groat & Wang, 2002).
Creswell suggests three models that combine different strategies: two-phase design, dominant-less dominant design, and mixed methodology design (Creswell, 1994). Two-

phase design is “combining two or more research strategies in a sequence of distinct phases of research.” The dominant-less dominant model involves inserting “one type of research design within the framework of a distinctly different research design.” The mixed methodology design conducts “aspects of both research strategies in roughly comparable sequences and with approximately equal degrees of emphasis” (Creswell, 1994; Groat & Wang, 2002).

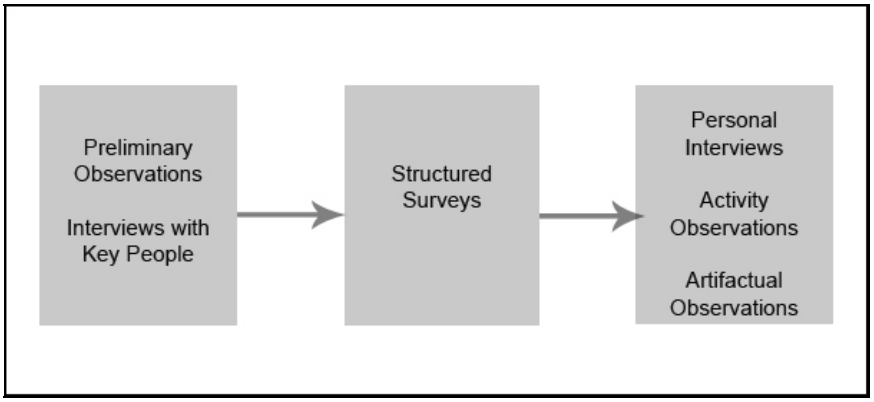



Figure 14. Research phases

This study employs different research tactics at distinct phases of the research, adopting Creswell’s phased design model to combine mixed methods. The multiple data collection tactics utilized in this study are artifactual observations, personal interviews, surveys and non-participant activity observations. The study implemented these tactics at three phases: 1) preliminary observations and interviews with key people are conducted both to gain familiarity with the case study sites and to develop required contacts; 2) surveys are distributed and collected, and then the resulting in-depth interview contacts are determined; and 3) in-depth interviews and observations of activities and artifacts are conducted simultaneously at case study sites.

The research tactics were designed to gather both close-ended (quantitative) and open-ended (qualitative) data to comprehend the case study communities from multiple perspectives as defined in Chapter 3. After the collected data is coded and categorized, they are interpreted concurrently at the analysis stage. By examining and comparing the results of analyses, this study aims to uncover some underlying principles related to the experience of the case study communities in different cultural contexts, and to develop an argument relating the issue to a broader theoretical context.

## Qualitative Research Tactics

The goal of this study is to understand the complex socio-physical phenomena of New Urbanist neighborhood practices in different cultural contexts, as well as to interpret the associated meanings and experiences of residents within these settings.

At the tactical level, the qualitative tools employed are artifactual observations and personal interviews that inquire into the three components of case study neighborhoods—qualities of physical environment, activities, and experience of place. Artifactual observations examine the physical attributes of each neighborhood, such as street structure, building qualities, public space artifacts, and landscape features. Personal interviews are conducted with two groups of people. First are the key contacts: members of local governments and professionals such as sales people and/or architects from builder/developers' offices who provided background information about neighborhood development. Second are the actual residents of the neighborhoods, who provided information about their attitudes and experiences.

These qualitative tactics provide an in-depth understanding of each neighborhood and support the validity of survey and experimental measurements; however, we must acknowledge the interpretive role of the researcher in gathering and evaluating data (Babbie, 2001). To address the problem of reliability (i.e., to minimize subjectivity and maximize credibility), qualitative research tactics must be supplemented with quantitative tools (Creswell & Plano Clark, 2007).

## Quantitative Research Tactics

The quantitative research tactics employed in this study are structured surveys, non-participant activity observations and configurational analysis. These quantitative methods enable the researcher to observe naturally occurring patterns without controlling circumstances, measure specific variables via quantitative methods, and analyze relations between two or more variables comparatively (Groat & Wang, 2002). Providing measurable and quantifiable results, these tactics minimize the role of the researcher and her interpretation and supplement the qualitative approach by increasing the credibility and transferability of the research outcome.

The survey instrument draws on the relevant literature presented in Chapter 2 and 3 to define significant measures that provide precise and quantifiable data. Non-participant activity observations are designed to understand types and patterns of activities within each case study neighborhood with regard to their specific location within the neighborhood. Finally, morphological analysis aims to reveal the physical characteristics. In addition, the spatial configuration of each neighborhood is examined by using space syntax tools that quantify the spatial structure of settlements based on topological relationships of every space with all other spaces within the system (Hillier & Hanson, 1984).

The combination of research strategies and tactics described briefly above provides a robust research design that can address all three components of place as discussed by Canter. Using this methodology, a researcher can evaluate a wide range of data, derive probabilistic relationships, and objectively compare these results with others in the field. The next section explains in further detail how each tactic is implemented in the data collection and interpretation phases of this research.

### 4.3 Data Collection and Interpretation

During the case selection process and after deciding on which neighborhoods would be studied in this research, the researcher visited both case study sites for preliminary observations. During these visits, visual information such as photos, marketing materials and development concepts were collected. In addition, contacts with key people were made in both communities, and open-ended interviews were conducted in CHV with sales managers and the property manager, and in Ispartakule with an architect working for the developer, with planners and with public relations people working in the municipality. These preliminary observations and interviews informed the design of the research questions and data collection tactics. The following sections summarize the data collection processes implemented in this study.

| Research Questions | Tactic | Procedure | Theoretical Concept and Measurement |
|---|---|---|---|
| How similar or different are the morphological features and the spatial organization of selected communities in different cultural contexts? | **Artifactual Observations** | Figure-ground | Spatial component of place:<br><br>Density<br>Building types<br>Boundaries<br>Accessibility |
| What are the configurational properties of each neighborhood that are available to support residents' goal-oriented needs? | **Artifactual Observations** | Space syntax | Spatial component of place:<br><br>Integration (global and local)<br>Connectivity |
| What are the types of activities performed by residents within the neighborhoods? | **Personal Interviews**<br><br>**Activity Observations** | Transcribing<br>Thematic coding<br>Coding data<br>Figure-ground | Behavioral component of place:<br><br>Activity types<br>Activity locations |
| What are the possible relationships between public space use and spatial configuration? | **Activity Observations**<br><br>**Artifactual Observations** | Space syntax | Behavioral and spatial components of place:<br><br>Activity locations<br>Constitutedness |
| What is the potential to create social capital in each community? | **Survey**<br><br>**Personal Interviews** | Coding data<br>Descriptive statistics<br>Transcribing<br>Thematic coding | Conceptual and behavioral components of place:<br><br>Social engagement |
| What are the aspirations and motivations underlying the decision to move to the case study sites? How do these differ in different cultural contexts? | **Survey**<br><br>**Personal Interviews** | Coding data<br>Descriptive statistics<br>Transcribing<br>Thematic coding | Conceptual component of place:<br><br>Motivations |
| How successful are these communities in satisfying the goal-oriented needs of residents? | **Survey**<br><br>**Personal Interviews** | Coding data<br>Descriptive statistics<br>Transcribing | Formal, conceptual and behavioral components of place:<br><br>Perceived satisfaction |
| Which physical design features of New Urbanist communities are perceived by the residents as supporting social interaction, physical activity levels, sense of community and identity? | **Survey**<br><br>**Personal Interviews** | Coding data<br>Descriptive statistics<br>Transcribing<br>Thematic coding | Formal and Conceptual components of place:<br><br>Perceived satisfaction<br>Physical features |

Table 3. Table summarizing research tactics, collected data, procedures, theoretical concepts and measurements

## Surveys

### *Preparation*

The survey instrument was prepared in several stages. First, the variables to measure were identified based on the preliminary site visits and the review of relevant literature discussed in Chapter 2 and 3. Second, different survey instruments implemented by relevant research studies were reviewed. Amongst these, four survey instruments were used in the development of the actual survey instrument for this study. These were the

survey instrument Kim implemented to measure and compare sense of community in a New Urbanist and a conventional neighborhood (Kim, 2001), the Detroit Area Study survey instrument measuring quality of life in the Detroit metro area, a short version of Putnam's survey instrument measuring levels of social capital, and a short version of the World Values Survey instrument. The final survey instrument has six sections: the first gathers information about people's decision to move, length of stay and previous neighborhoods; the second inquires about the levels of value satisfaction, design features and their contribution to this satisfaction, and walkability; the third maps the social network within the community; the fourth measures the level of community participation; the fifth analyzes people's general values; and the sixth collects data about the residents' socio-demographic backgrounds.[7]

The survey instrument was first prepared in English and pre-tested in Ann Arbor (mostly by friends and the CVH property manager in CHV). Then the survey instrument was translated into Turkish and pre-tested both in Ann Arbor (mostly by Turkish friends) and in Turkey (by a couple of Ispartakule residents as well as family and friends). After revisions, the Turkish version was reviewed by a faculty member[8] at METU School of Architecture in order to ensure consistency of wording and meaning of specific terms and concepts. Finally, the Turkish survey instrument was double-translated from Turkish to English and then from English to Turkish by two research assistants at METU to double-check the consistency.

*Distribution*

The distribution of surveys was executed in different ways in each case study neighborhood. In CHV, before the distribution of surveys, information about the research study and surveys was published in a community newsletter distributed to every household in the neighborhood. A community manager warned that residents might react negatively to seeing someone other than the mail person putting something into their or their neighbors' mailbox. Thus the surveys were mailed rather than personally delivered to each household.[9] A follow-up reminder subsequently appeared in the community newsletter.

[7] Due to low participation and frequent misunderstanding of this part (particularly in the Turkish case), the sections pertinent to social networks and values are excluded from the final analysis.
[8] Prof. Vacit İmamoğlu at the Department of Architecture, Middle East Technical University.
[9] This suspicion of strangers in the neighborhood might stem from reactions to 9/11 in the US.

In the case of Ispartakule, the municipality did not allow the researcher to distribute surveys personally, and it took over the responsibility of survey distribution. As a result, municipality workers, who explained the aim of the study and how to return the surveys during delivery, distributed the surveys to every household in the neighborhood except for one block of apartments. The residents of this apartment block did not receive the surveys because the block manager did not allow them to be distributed, claiming that he did not want his block to take part in a research study designed at an American university.[10]

As an incentive for residents in both countries to participate, drawings were held for gift cards from major department stores. People who returned surveys and chose to enter the lottery provided their contact information.

### *Return Rates*

The overall return rates of the distributed surveys are 18% in CHV and 15% in Ispartakule. When the distribution of survey return rates according to housing types are examined, it is striking that only 1% of single family (both attached and detached) households in Ispartakule returned the surveys, while 35% of the surveys distributed to the apartments were returned. In light of this very low return rate in single family homes, surveys were distributed to both detached and attached single family houses for the second time, but none of these surveys was returned. In contrast, single family households in CHV displayed the highest return rate (22%, whereas apartment residents had a return rate of 10%). This phenomenon underlines the significant difference between the attitudes of apartment and single family households in different cultural contexts. (Please refer to Chapter 7 and 8 for further analysis on this issue.)

[10] The relationship between the US and Turkey has been quite strong since 1950s, so the perception of the US by the Turkish people has been positive in general. However, the relationships between the two countries weakened with the Turkish parliament's refusal to give permission for American military jets to use Turkish air space for the war in Iraq in 2003. Also, in recent years the Turkish public has developed a negative attitude about the war and the US in general. The block manager's negative reaction to the distribution of my survey instrument might have its roots in the latest developments between the two countries.

| INFORMATION ABOUT SURVEY DISTRIBUTION AND RETURN RATES | | | Community | |
|---|---|---|---|---|
| | | | **Ispartakule** | **CHV** |
| **Number of Occupied Houses** | *Single family house* | | 316 | 264 |
| | *Apartment / Condominium / Townhomes* | | 465 | 154 |
| | **TOTAL** | | **781** | **418** |
| **Survey Distribution and Return Rates** | *Single family house* | distributed | 316 | 259 |
| | | returned | 4 | 57 |
| | | return rate | 1% | 22% |
| | *Apartment / Condominium / Townhomes* | distributed | 235 | 149 |
| | | returned | 81 | 15 |
| | | return rate | 34% | 10% |
| | **TOTAL** | **distributed** | **551** | **408** |
| | | **returned** | **85** | **74** |
| | | **return rate** | **15%** | **18%** |

Table 4. Survey return rates

## Personal Interviews

Personal interviews were conducted with residents who returned surveys and consented to be interviewed by providing their contact information. In CHV, 28 of the 74 respondents expressed interest in being interviewed; however, 3 of them could not be contacted and 5 of them did not want to be interviewed. As a result, face-to-face interviews were conducted with 20 CHV residents. In Ispartakule, only 7 of the 85 survey respondents consented to an interview. When contacted, 2 of these were not available; hence, the snowballing technique was utilized to recruit more residents for interviews. In the end, only 14 residents in Ispartakule were interviewed face-to-face. The interviews employed both close-ended and open-ended questions inquiring into residents' perceptions of their community, motivations, activities and social involvement. Interviews took place at the most convenient location for interviewees, such as their home or workplace or a café or restaurant. Each interview took 30-50 minutes.

## Non-participant Activity Observations

Non-participant activity observations were conducted in both a structured and an unstructured manner. During preliminary visits at the case study neighborhoods, unstructured observations were conducted on foot and recorded with thick descriptions (Guba & Lincoln, 1998). Then structured activity observations were conducted, recording different types of activities performed, their locations and the number of people present

in the public space on both weekdays and weekends during three time periods: 9 am-12 pm, 12-3 pm, and 3-6 pm. These observations were performed while driving every street of the neighborhoods and coded on community layout at every street junction. This method was chosen because walking every street of Ispartakule would draw the attention of the residents and security guards more than driving. These observations were particularly helpful in comparing and contrasting public space use in case study neighborhoods.

## Artifactual Observations

### *Morphological Analysis*

Neighborhood plans were obtained in digital format, and this information was quantified and represented by figure ground maps. This is a common technique used to comprehend the relationship between built and un-built spaces (figure and ground) where the street pattern and open spaces constitute *the ground,* and buildings form *the figure*. The aim is to investigate key morphological characteristics of each neighborhood such as land use, density (amount of built and open spaces and number of households per acre), type of buildings, type of open spaces, the relationship between built and un-built spaces, and the boundaries between public and private spaces—how they are shaped by building frontages and landscape elements. This method enables the researcher to analyze the elements of urban form and their relationship to each other in terms of size, scale and composition. As a result of these analyses, one can relate the morphological properties of space to local social and behavioral phenomena.

### *Configurational Analysis*

For the configurational analysis, the axial maps of each neighborhood and its larger context were drawn. These maps were analyzed using two different software programs—Depthmap and Mindwalk—which are specifically used for syntactic analyses. Significant syntactic properties (integration, intelligibility and constitutedness) were calculated and analyzed (this process is discussed further in Chapter 6). This method helps the researcher uncover spatial patterns in each neighborhood and assess how likely they are to support active use of public spaces.

### 4.4 Challenges and Limitations

The challenges of this study are mainly in the data collection process, which was quite smooth in the case of CHV but uniquely challenging in Ispartakule. One of the challenges was the distribution and collection of surveys in Ispartakule. In order to get the permission of local municipality for survey distribution, the survey instrument went through the review of public relations personnel within the municipality. After the review, the municipality requested that one more variable (on municipal services) be added into the section of the survey investigating perceptions. The municipality also wanted to distribute the surveys to every household via in-person delivery by municipality personnel. The survey instrument was adapted accordingly, which delayed the whole process. In addition, since municipality personnel were responsible for distributing and collecting the surveys, it was very difficult to follow their progress, and it took longer than planned to collect the surveys.

One significant challenge faced during field work in Ispartakule was the negative reaction of residents. Before distributing the surveys, the municipality personnel had to obtain the permission of apartment block managers. However, one of the block managers did not allow the distribution of surveys, claiming that he would not support a research study planned in the US. Therefore, the residents of this block did not receive the surveys. Another incident took place during the second distribution of surveys: one of the residents was disturbed and called a gendarme complaining about the research study and calling for action. The resident believed that the research had a missionary purpose; therefore he was upset by the distribution of surveys for the second time. After a meeting with gendarme personnel, the situation was settled. These challenges were particularly disappointing.

Another challenge of data collection in Ispartakule was experienced during observations conducted within the community. Since Ispartakule has security personnel, the municipality had to inform them about the data collection procedure, and the researcher had to introduce herself. Also, to avoid attracting residents' attention, most of the observations were conducted while driving instead of walking.

The limitations of this study are related to the challenges faced during data collection and to the study's methodology. Both survey return rates and the number of residents interviewed are low, particularly in the case of Ispartakule. Furthermore, the data collected via unstructured observations are open to the researcher's interpretation, which is a potential weakness.

However, in order to evaluate the quality of research, one has to consider the following characteristics of the naturalistic research paradigm: recognition of multiple realities and the assumption that generalizations are not necessarily possible in all instances (Groat & Wang, 2002; Guba & Lincoln, 1998). A study's credibility can be strengthened via triangulation of both data collection tactics and data sources (Groat & Wang, 2002). The concept of *triangulation* is based on the assumption that any bias inherent in particular data sources, investigator, and method would be neutralized when used in conjunction with other data sources, investigators, and methods" (Creswell, 1994; Jick, 1979).

Although this study could employ only one investigator, it does triangulate by mixing different tactics. First, the data collection tactics employ both quantitative and qualitative tactics such as observations, surveys and interviews. Second, data is obtained from different sources (both the researcher's observations and the residents' own interpretations of their neighborhoods). Finally, "transferability" is sought via use of structured data collection tactics that minimize the researcher's interpretations (Guba & Lincoln, 1998).

# CHAPTER 5

# INTRODUCTION TO CASE STUDY NEIGHBORHOODS

This chapter introduces the characteristics of the case study neighborhoods, Michigan's "first Traditional Neighborhood Development," Cherry Hill Village of Canton Township, located in the metropolitan Detroit area, and Ispartakule of Bahcesehir, located in the metropolitan area of Istanbul. First, the primary features of the local urban contexts are outlined to provide a comprehensive understanding of the mutual relationship between the local urban dynamics and the case study neighborhoods. Second, the design and development processes of each neighborhood project are presented to unfold not only the underlying principles of design but also the contextual differences in project implementation and physical features. Fourth, the socio-demographic backgrounds of the survey respondents living in each study neighborhood are described. Finally, different characteristics of each case study site with respect to New Urbanist principles, that is how successful they are in achieving specific goals defined by New Urbanism is assessed.

## 5.1 Cherry Hill Village, USA

### The Urban Context

Canton Township was established in 1834 within the boundaries of Wayne County in Southeast Michigan. It is approximately 35 miles west of Detroit and is surrounded by the city of Dearborn Heights on the east, the city of Ann Arbor on the west, and the city of Plymouth on the north (CantonTownship, 2009). Canton is one of the fastest-growing communities in Michigan; its population, which was 5,313 in 1960, had increased to 84,716 by 2009 (SEMCOG, 2009). The Canton downtown district is mostly composed of

properties along both the north and south sides of Ford Road east of I-275 and a short distance west of Canton Center Road. It includes over 400 commercial entities such as a wide range of retail establishments, department stores, health and other professional services, financial institutions, auto suppliers and services, a variety of restaurants, sports and entertainment venues, motels, and apartment and condominium complexes (CDDA, 2009).

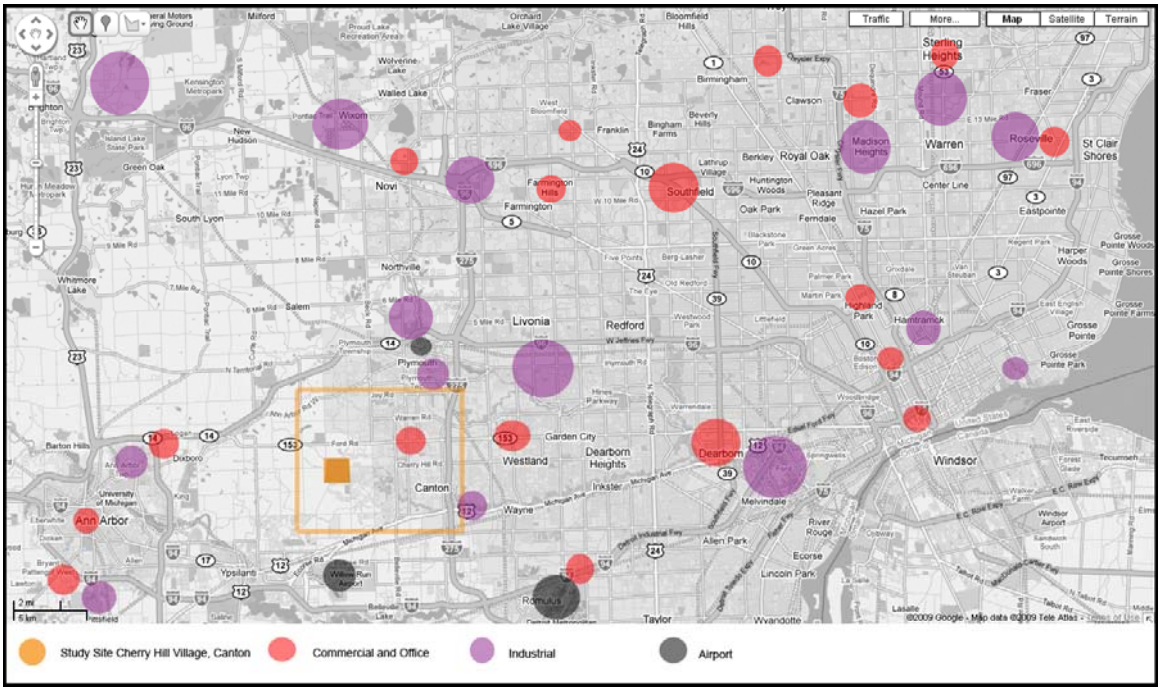



Figure 15. Detroit Metropolitan Area Land Use Map, drawn with reference to (SEMCOG, 2000)

Before 1960, Canton was primarily an agricultural community; however, it experienced phenomenal growth in the 1970s when suburban living became popular and out-migration from the central city increased, leading to the growth of the Detroit metropolitan area (CDDA, 2008). According to Census data and Southeast Michigan Council of Governments (SEMCOG) estimates, Canton's population is gradually aging, and the average size of households is also getting smaller, consistent with national trends. While only 13% of Canton households included senior citizens over 65 in 2000, this number is expected to increase to 36% by 2035 (SEMCOG, 2009). In addition, Canton's average household size is expected to decrease from 2.77 in 2000 to 2.55 in 2035 (SEMCOG, 2009). These population trends have pushed Canton Township to plan for future growth. Accommodating the needs of the changing population will be

challenging, since 60% of the existing housing stock in Canton consists of single family detached houses.

The two major challenges of planning for the future of Canton can be summarized as follows: 1) responding to the needs of the changing population, which will require providing a variety of home sizes; and 2) shaping the growth towards the western boundaries of the township, where the natural features are located, to ensure the preservation of both the rural and natural character of the area. In response to these challenges, in late 1990s, Canton Township implemented a Planned Development District (PDD) option for residential areas that will "provide a variety of housing types, maintenance of open space, and creative design solutions for new and infill development" (CDDA, 2008). One major PDD in Canton is the Cherry Hill Village Development Area, located on Canton's western edge, where the primary goal is to *promote high quality mixed-use development which will create a unique and identifiable community*[11] (CDDA, 2008).

Cherry Hill Village, located at the crossroads of Ridge Road and Cherry Hill Road, was one of the two village communities where the core population of Canton was centered before the 20th century. The area housed a one-room school house and an inn for travelers stopping over on their journeys between Ann Arbor and Detroit (CDDA, 2008). In 1944, Cherry Hill Village became the last one of Henry Ford's 19 "village industries," which were designed as small-scale pastoral alternatives to the Rouge Plant in Dearborn. Village industries employed modest numbers of workers to produce component parts for Ford vehicles manufactured in the Rouge Plant (Segal, 2005). Today, Cherry Hill still hosts the first church of the area, built in 1934 on Ridge Road, and the Cherry Hill school, built in 1876, which are designated as both local and state historic sites and are open for community use (CHS, 2009).

The Cherry Hill Village Development district plan is anchored by historic sites: the school, the church, several other properties located in the Cherry Hill Area, and the junction of Ridge Road and Cherry Hill Road. Due to the area's historic land use

[11] The name of the Planned District Development is "Cherry Hill Village Development Area," which is composed of four different neighborhood units (Cherry Hill Village and Uptown Apartments are two of them) surrounding the retail center on Cherry Hill Road. The neighborhood chosen for this study is Cherry Hill Village, which is part of a Planned Development District.

(farming), the junction has been surrounded by large lots of farmland. As a result of the pressure for growth, these farmlands became part of the Cherry Hill Village Development district plan, which is essentially composed of several greenfield developments surrounding the historic junction and historic properties of the Cherry Hill Area.

Figure 16. Southwest Canton Land Use Map, drawn with reference to (CCPS, 2008)

As a part of the westward expansion of the Canton community, Cherry Hill Village Planned Development is projected to create a new town, with a cultural center and village center providing a traditional form of development offering a variety of living and working options for more than 10,000 Canton residents in 5-10 years (CDDA, 2008). The three main objectives of this PDD are to: 1) *provide opportunities for a variety of residential building types utilizing traditional design concepts*; 2) *provide opportunities for "hamlet scale" shopping and special events which will assist the community in becoming a destination*; and 3) *provide pedestrian and bicycle amenities to create active links between residential, shopping, and park and special event areas* (CDDA, 2008). Fulfilling Canton Township's objectives, the Cherry Hill Village area was designed by Biltmore featuring New Urbanist principles. It has been under development since 2000.

## Design and Development of Cherry Hill Village

| | |
|---|---|
| Project type | Traditional Neighborhood Development<br>Suburban<br>Mixed use (residential, retail and cultural center) |
| Building types | Single family homes<br>Condominiums |
| Location | Canton Township, Michigan |
| Developer | Stollman, David Biltmore Properties Corporation |
| Designers | Looney Rick Kiss Architects<br>Gibbs Planning Group<br>Zimmerman Volk Associates |
| Builders | Bruce Building Company<br>Curtis Building Company<br>Ivanhoe-Huntley Companies<br>Mill Creek Building Company |
| Project Size | 338 acres (concept plan/all phases)<br>163 acres (phases 1 + 2+ 3+ 4) |
| Number of Units | 1400 single family homes and condominiums (concept plan/all phases) |
| Unit size | 1,200 s.f. (110m2) / 3,000 s.f. (278m2) |
| Real Estate Values | $ 350,000 - $600,000 |

Table 5. Cherry Hill Village project overview (source: CHV marketing documents)

Cherry Hill Village (CHV) is a 338-acre greenfield neighborhood project developed by Biltmore Properties Corporation—one of the biggest developers of the region. It won an Outstanding Planning Project Award from the Michigan Society of Planning in 2000. The project is composed of several phases that accommodate different types of residential neighborhoods, and it is centered on a civic center with a performing arts theater, retail and civic buildings, which three of the leading New Urbanist design offices either designed or served as consultants on. Homes are built by four different building companies; although their design portfolios differ, they share the same concept of a traditional neighborhood.

As of 2008, the construction of the first two phases of CHV is complete and homes are completely occupied, while the construction of phases three and four are half-complete and most of the completed homes are occupied. The four phases that constitute the

study area of this research are surrounded by the adjacent neighborhood of Uptown, a complex of apartment buildings completely developed as of 2008, and phases five and six, which are still under construction.

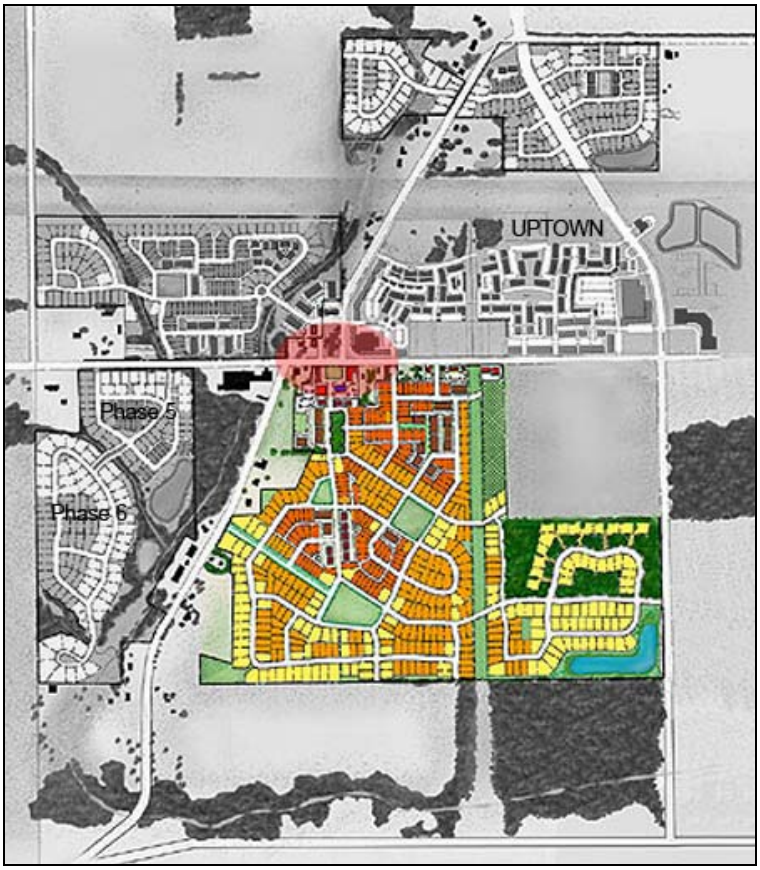



Figure 17. Concept Plan of Cherry Hill Village development, showing the location of the study area (colored), surrounding neighborhoods (black and white) and the civic center (circled in red)

Cherry Hill Village Planned Development District is designed to be a small town with diverse uses in its commercial core (such as office, retail, cultural and residential) and various housing types in five different neighborhoods. The plan envisioned a traditional town centered on a lively urban center within walking distance that could meet area residents' daily needs, such as shopping and dining. In contrast to this planned vision, the actual outcome as of 2009 is quite different. The global credit crisis in the financial markets and the resulting recession of the US economy deeply affected the US real estate market. In particular, the state of Michigan was amongst the hardest hit real estate markets as real estate prices had started falling even before the 2008financial crisis. Consequently, the construction progress of the Cherry Hill Development District has been negatively affected. Construction of two of the five neighborhoods has not yet

even begun. The three neighborhoods under construction have been progressing slowly; for example, in Cherry Hill Village the fourth phase of the development has not started at all, while the third phase is only half complete. Perhaps the most significant negative effect of the financial crisis on the Cherry Hill Village Planned Development District is the difficulty of attracting businesses to the town center. As of 2008, the actual number and variety of businesses in the commercial center were quite limited. Unfortunately, this creates a vicious cycle for the development: the fewer houses developed, the fewer businesses come to the town center. In the case of CHV, economic factors have inhibited the creation of an active commercial center, a New Urbanist goal. Therefore, residents are still dependent on shopping malls and thus their cars for their daily needs.

**Design Intentions of Cherry Hill Village**

Figure 18. Images from marketing materials of Cherry Hill Village, showing a view of the Village Square (left) and a streetscape (right)

This section assesses how CHV was marketed to prospective residents. For this assessment, marketing materials prepared by the developer and builders are examined. These materials reflect how developers and builders interpret New Urbanism and which of the design intentions they highlight conform to New Urbanist principles. The marketing materials particularly stress the fact that the overall CHV project is designed to be a Traditional Neighborhood Development (TND) (Biltmore, 1999). The design features promoted by marketing materials can be categorized as follows:

*Traditional town concept*: Overall, CHV was marketed as a place promising to be similar to traditional towns in the US where people could walk, shop and be close to their neighbors, which would create a sense of community.

*Walkability*: The CHV design employs an interconnected hierarchical organization of streets with pedestrian-friendly sidewalks, pathways, and bicycle trails to promote pedestrian activity. Each house within the community is designed to be within five minutes' walking distance to the village center. Both the placement of parks at central locations and the arrangement of several neighborhoods around the commercial and civic center are meant to encourage walking. Also, hidden garage entrances in the rear and side alleys enhance the streetscape and emphasize walkability.

Figure 19. CHV's pedestrian-friendly environment: sidewalks, pathways, and trails

*Variety of home styles*: CHV incorporates five different residential unit types. These are defined with respect to their lot size and the relationship between dwelling, building, lot, garage and street. They are Estate Homes, the largest lot type (min. 7,500 sq.ft.); Village Homes (lot size 5000 sq.ft.); Cottage Homes (lot size 3,000 sq.ft.); Townhouses with one-level living plans (lot size 1800sq.ft.); and Manor Homes, which are ranch-style condominium homes. Smaller homes are located closer to the civic center, while larger homes are placed farther from the center. The townhomes and manor homes are spread throughout phase one and two of the community. The visual diversity provided by different home styles enhances the streetscape.

Figure 20. Variety of home styles in Cherry Hill Village: Estate Home, Townhomes, and Village Home

*Civic Center*: The civic center, situated at the junction of Cherry Hill Road and Ridge Road where the neighborhood units meet, accommodates a variety of commercial facilities such as cafés, a bar, a gift shop, a convenience store, beauty and wellness salons, a cultural center (the Cherry Hill Village Theatre), and professional services such as a bank and healthcare service providers. The village square, designed with reference to the old school house, connects the CHV community to the civic center and acts as a hub of social, civic, and special events. In addition, the parks placed at central locations within the CHV community provide a continuity of civic spaces that accommodate much of the activity. Finally, the trail that runs through the community offers space for a variety of recreational activities such as biking, running, and walking.

Figure 21. Civic spaces of Cherry Hill Village: Village Theatre, retail and Village Square (top row); community parks (bottom row)

S*treetscape*: The different types of home styles in different colors provide streetscape variety, which prevents the monotony of the typical suburban community. In addition, the use of front porches and rear/side entries for garages reinforces the continuity of the streetscape and creates pleasing environments for pedestrian activity and social interaction, evoking the image of a small traditional American town.

Figure 22. Streetscape in Cherry Hill Village showing front porches and an alley for car parking separated from the streetscape.

**Evaluation of CHV Physical Design in Relation to New Urbanist Principles**

While the previous section presented the design features of CHV that were promoted via marketing materials, this section assesses physical design features of CHV in relation to New Urbanist principles. In other words, this section utilizes New Urbanist principles stated in the Charter of New Urbanism as a framework for understanding to what extent the current physical characteristics of CHV correspond to these principles.

The New Urbanist movement advocates the restructuring of public policy and development practices to support the following principles (CNU, 1996):

- Neighborhoods should be diverse in use and population.
- Communities should be designed for pedestrians and transit as well as the car.
- Cities and towns should be shaped by physically defined and universally accessible public spaces and community institutions.
- Urban places should be framed by architecture and landscape design that celebrate local history, climate, ecology, and building practices.

The table below compares the above-mentioned New Urbanist principles, the CHV design intentions/features, and the actual design outcomes in order to assess how well CHV has met these New Urbanist goals. This comparison reveals that neither the planned vision of CHV nor the actual project outcomes have fully met the New Urbanist goals.

| New Urbanist Principles | Design Intentions/Features |
|---|---|
| Diversity of use | Commercial center and CHV Theatre are likely to encourage diversity of uses. However, due to the negative effects of the recession, the commercial center has not attracted many businesses. |
| Diversity of population | Variety of housing types and sizes are likely to attract a variety of family types and backgrounds |
| Pedestrian friendly | Sidewalks, streetscapes with trees, hidden garages, proximity of sidewalks to buildings, porches, and destinations (commercial center and parks) within walking distance are supportive of pedestrian activity. |
| Transit oriented | There is no public transportation available. |
| Physically well-defined public spaces | The civic center has well-defined boundaries, but neighborhood parks are surrounded by homes and hence do not achieve a sense of enclosure. |
| Universally accessible public spaces | The civic center is universally accessible for the Canton community. However, neighborhood parks are less accessible from the larger urban context. |
| Architecture and landscape design that celebrate local history, climate, ecology, and building practices | Traditional architectural design features such as pitched roofs, porches, different colors, the proximity of houses to sidewalks and each other, etc. create a distinct identity. Therefore CHV is unique within its larger context, where low density subdivisions are the norm. |

Table 6. Comparison of New Urbanist principles, design intentions of CHV, and actual design outcomes.

"The diversity of uses" is achieved to a certain extent. The design vision of an active civic center hosting commercial and cultural activities and satisfying residents' daily needs was successful in addressing this goal. However, the actual outcome was not as planned. Due to the economic recession, the development of the remaining neighborhoods slowed down; this in turn made it harder to attract businesses to the civic center. As a result, the variety of retail stores and businesses is limited, and the existing establishments do not satisfy the daily needs of the residents.

The design features addressed the principle of "diversity of population" by providing different housing types and sizes. The intention is that the variety of housing types and sizes will attract families of different types and sizes and people of different backgrounds.

"Pedestrian friendly design" is one of the New Urbanist goals that CHV satisfies to a great extent. The design features supportive of walkability are well-designed sidewalks, streetscapes with trees, hidden garages, proximity between buildings and sidewalks,

porches facing sidewalks, and the availability of destinations such as retail stores and parks within 10 minutes' walking distance. In this case, the design intentions and actual outcomes align well, providing a pleasant environment for pedestrian activity.

"Transit oriented design" is one New Urbanist goal that the developer never intended to satisfy at all. CHV marketing materials do not refer to this principle, and the actual outcome—the lack of public transit—is consistent with this intention.

"Physically well-defined public spaces" is another New Urbanist principle that CHV partially satisfies. This principle was not amongst the design features mentioned in marketing materials. Only the civic center, where one side of the road is aligned with buildings, achieves a limited sense of enclosure. The edges of parks within CHV are not well defined by buildings as they are aligned with homes, which do not provide much enclosure.

The principle of "universally accessible public space" is another partially satisfied principle of New Urbanism. The design vision of CHV involved anchoring CHV to the larger Canton community via increased accessibility of the civic center with its commercial and cultural facilities. The actual design outcome is quite successful in locating the civic center on one of the most integrated streets of Canton and thus increasing accessibility.

"Architecture and landscape design that celebrate local history, climate, ecology, and building practice" is a principle upon which the CHV design vision rests heavily. The design features of CHV explicitly borrow from traditional forms of neighborhood development and architecture in the US, such as porches, pitched roofs, different colors of homes, etc. CHV was marketed as a Traditional Neighborhood Development, and these architectural features were vital to creating such an image. As a result, CHV has a distinct identity compared to its surrounding context, Canton, where low-density subdivisions are the norm.

**Cherry Hill Village Residents: Who are the survey respondents?**

The survey results for CVH are briefly summarized in the charts below (please refer to Appendix A for a detailed comparison of the CVH and Ispartakule survey results). This summary shows the socio-demographic characteristics of the CVH survey respondents (age, employment status, educational background, income, and home ownership). According to these results, CHV has been quite successful in hosting residents from a variety of ages, which are distributed as follows: 20-29 (4.1%), 30-39 (37%), 40-49 (21.9%), 50-59 (20.5%), 60-69 (12.3%), 70-79 (1.4%), and 80-89 (2.7%). The high percentage of residents in the 30-39 and 40-49 age groups, which roughly cover the middle-adulthood period of life when people form families and bring up their children, suggests that the majority of CHV residents are nuclear families. This is supported by both the high percentage of married respondents (83.6%) compared to singles (16.4%), and the high percentage of households with children (54.2%) compared to households without children (45.8%).

Another significant group of survey respondents is those belonging to the 50-59 and 60-69 age groups. Considering the percentages of single/divorced/widowed residents (16.4%), retired people (13.7%) and part-time workers (16.4%), one can conclude that this secondary group of respondents is composed mostly of empty nesters.

The findings regarding work status are as follows: full-time workers (53.4 %), part-time workers (16.4%), retired (13.7%), self-employed (4.1%), homemakers (9.6%), students (0%), and unemployed (1.4%). Respondents' levels of education are distributed as follows: advanced degree (34.2%), college degree (39.7%), some college without degree (19.2%), high school degree (2.7%), technical school degree (4.1%) and less than high school (0%). These results indicate that the majority of respondents are working full-time, mostly in nearby commercial and industrial centers such as Plymouth, Livonia, and Dearborn, and they have high education levels. These two findings are good indicators of income level in CHV, where the majority of respondents belong to the middle and upper-middle income groups. In addition, home ownership is significantly high, with 97.25% of survey respondents owning the house in which they live. From this data, we can conclude that CHV has been quite successful in accommodating a wide

range of age groups and family sizes; however, the community is less successful in hosting residents with a wide range of incomes.

| | | | |
|---|---|---|---|
| **Age** | **20-29** | Count<br>% within Community | 3<br>4.1% |
| | **30-39** | Count<br>% within Community | 27<br>37.0% |
| | **40-49** | Count<br>% within Community | 16<br>21.9% |
| | **50-59** | Count<br>% within Community | 15<br>20.5% |
| | **60-69** | Count<br>% within Community | 9<br>12.3% |
| | **70-79** | Count<br>% within Community | 1<br>1.4% |
| | **Above 80** | Count<br>% within Community | 2<br>2.7% |
| Total | | Count<br>% within Community | 73<br>100.0% |
| **Marital status** | **Married/living with a partner** | Count<br>% within Community | 61<br>83.6% |
| | **Single/divorced/widowed** | Count<br>% within Community | 12<br>16.4% |
| Total | | Count<br>% within Community | 73<br>100.0% |
| **Number of children living in household** | **no** | Count<br>% within Community | 39<br>54.2% |
| | **yes** | Count<br>% within Community | 33<br>45.8% |
| Total | | Count<br>% within Community | 72<br>100.0% |
| **Work status** | **Working full-time** | Count<br>% within Community | 39<br>53.4% |
| | **Working part-time** | Count<br>% within Community | 12<br>16.4% |
| | **Retired** | Count<br>% within Community | 10<br>13.7% |
| | **Self-employed** | Count<br>% within Community | 3<br>4.1% |
| | **Homemaker** | Count<br>% within Community | 7<br>9.6% |
| | **Student** | Count<br>% within Community | 0<br>0.0% |
| | **Unemployed** | Count<br>% within Community | 1<br>1.4% |
| | **Other** | Count<br>% within Community | 1<br>1.4% |
| Total | | Count<br>% within Community | 73<br>100.0% |

| | | | |
|---|---|---|---|
| **Income** | **Less than $50,000 or 20,000 YTL** | Count<br>% within Community | 6<br>9.1% |
| | **$50,000-$74,999 or 20,000-39,999 YTL** | Count<br>% within Community | 5<br>7.6% |
| | **$75,000-$99,999 or 40,000-59,999 YTL** | Count<br>% within Community | 13<br>19.7% |
| | **$100,000-$149,999 or 60,000-79,999 YTL** | Count<br>% within Community | 25<br>37.9% |
| | **$150,000-$199,999 or 80,000-99,999 YTL** | Count<br>% within Community | 13<br>19.7% |
| | **$200,000 or more OR 100,000 YTL or more** | Count<br>% within Community | 4<br>6.1% |
| Total | | Count<br>% within Community | 66<br>100.0% |
| **Level of education** | **Less than high school** | Count<br>% within Community | 0<br>0.0% |
| | **Technical school degree** | Count<br>% within Community | 3<br>4.1% |
| | **College degree** | Count<br>% within Community | 29<br>39.7% |
| | **High school degree** | Count<br>% within Community | 2<br>2.7% |
| | **Some college without degree** | Count<br>% within Community | 14<br>19.2% |
| | **Advanced degree** | Count<br>% within Community | 25<br>34.2% |
| Total | | Count<br>% within Community | 73<br>100.0% |

Table 7. Socio-demographic information about survey respondents living in Cherry Hill Village

## 5.2 Ispartakule, Turkey

### The Urban Context

*Istanbul, a Globalizing City*

Istanbul is the largest city of Turkey, with a population of 12.5 million and an urbanization rate of almost 90% in its metropolitan area at the end of 2007[12] (TURKSTAT, 2007). According to a 2003 report published by the State Planning Organization of Turkey, the city is the driving force of Turkey's economy, finance and industry, as it raises 21.3% of the country's gross domestic product and ranks first of all Turkish cities in socio-economical development (SPO, 2008). In addition, like other world cities in developing countries, Istanbul is strengthening its connections to the global economic and financial

[12] According to the latest census data provided by TURKSTAT (Turkish Statistical Institute) in 2007, the population of Turkey is 70.5 million. Approximately 70% of this population lives in urban areas. Istanbul hosts 18% of Turkey's population and has a 3.3% population growth rate.

systems. According to the inventory prepared in 1999 by the Globalization and World Cities Study Group and Network (GaWC) in an attempt to categorize world cities, Istanbul is defined as a minor world city based on the degree to which international corporations provide "advanced producer services" such as accountancy, advertising, finance and law there (Taylor, 2005).

The city has experienced constant pressures of growth and inadequate housing since the beginning of its industrialization in the 1950s, when the ongoing rural-to-urban migration started. After the 1980s, with the liberalization of the Turkish economy, Istanbul became not only a magnet for industry but also a center of the service economy. Host to financial institutions and multinational corporations, the city has also started attracting well-educated young professionals from the secondary urban centers of Turkey. As a result, Istanbul has expanded to a metropolitan scale due to the housing demands of the increasing population as well as the growing demands of the industry and service sectors.

This process has been exacerbated in the last six years by political stability, the developing economy, and hope for EU accession, which attracted a significant amount of foreign investment, particularly in the real estate development industry. Although Istanbul is not the political center of Turkey, it plays a significant role in national politics due to its large share of economic production. Since 2003, under the ruling single-party regime AKP, Istanbul has become a marketing tool used by the government to attract direct foreign investment. Thus it was subject to ambitious plans to raise its rank amongst other world cities.

Since the 1980s, the urban form of the city has changed significantly. Until the 1980s, the urban form was mostly composed of dense apartment blocks and illegal *gecekondu* (which literally means “landed at night”) developments at the periphery. This pattern resulted from a lack of available developable land at the urban edges. However, since the early 1980s when the Housing Development Administration (HDA)[13] was established to promote housing via the provision of land and financing, the urban form of newly developed areas has experienced a major shift. In collaboration with the private sector, the HDA initiated the planning and development of new towns and neighborhoods at the

[13] For more information please refer to http://www.toki.gov.tr/english/index.asp.

peripheries of Istanbul.[14] As a result, in the last two decades Istanbul has been stretching its boundaries via an increasing number of master-planned urban developments flourishing at the edges. These new developments are quite open to global influences as they employ international professional services such as urban and architectural design, financing, and marketing.

Like urban form, social structure and consumption preferences are also transforming in both Istanbul and Turkey as a whole. Under the inevitable influence of global economic trends, a new middle class has been rising, and consumer preferences have been changing (Keyder, 2000). These changes have been accompanied by local trends like a rising distaste for immigrants from rural areas and their peculiar culture (particularly in public spaces), and increasing complaints about the unbearable density of the city centers with their inadequate infrastructure, lack of green areas, and low-quality housing. With the availability of new neighborhood developments and proper financing, these factors contribute to the increasing movement to suburban neighborhoods and to suburbanization as a way of urbanization in Istanbul.

Ispartakule, the case study neighborhood under investigation, is one of the new master-planned developments located at the edge of Istanbul and is a part of the new-town development of Bahcesehir. Before introducing further details about Ispartakule, the following section will present background information about Bahcesehir and its

[14] There are three distinct motivations behind these developments:
1) *To provide safer environments for the urban population*. In 1999, two devastating earthquakes took place near Istanbul, in Kocaeli and Duzce, killing approximately 20,000 people. This disaster caused a major transformation in the mindset of both HDA and Istanbul residents. It was reported that Istanbul faces a great threat of natural disaster in the future and that more than half of the building stock of the city had been constructed illegally. Therefore, the urban environment, with its structurally unsound and unsafe buildings, posed a great danger to people's lives. In order to provide safer and better housing, the HDA initiated *gecekondu* transformation and urban renewal projects in 2003.
2) *To prevent illegal development on public and private property*. Since the 1980s, the HDA has been promoting the development of new-town settlements and master-planned neighborhoods, blocking the extensions of gecekondu areas at the edges of the city. In addition, the HDA partners with the private sector and subsidizes co-operative developments by providing land for their master-planned projects.
3) *To promote the economy*: Particularly in the last six years, the construction industry has become the leading economic power of the nation. This growth attracts the attention of global real estate investors and brings a significant amount of direct foreign investment, especially in the real estate industry.

development process to give a better sense of the case study neighborhood's local context.

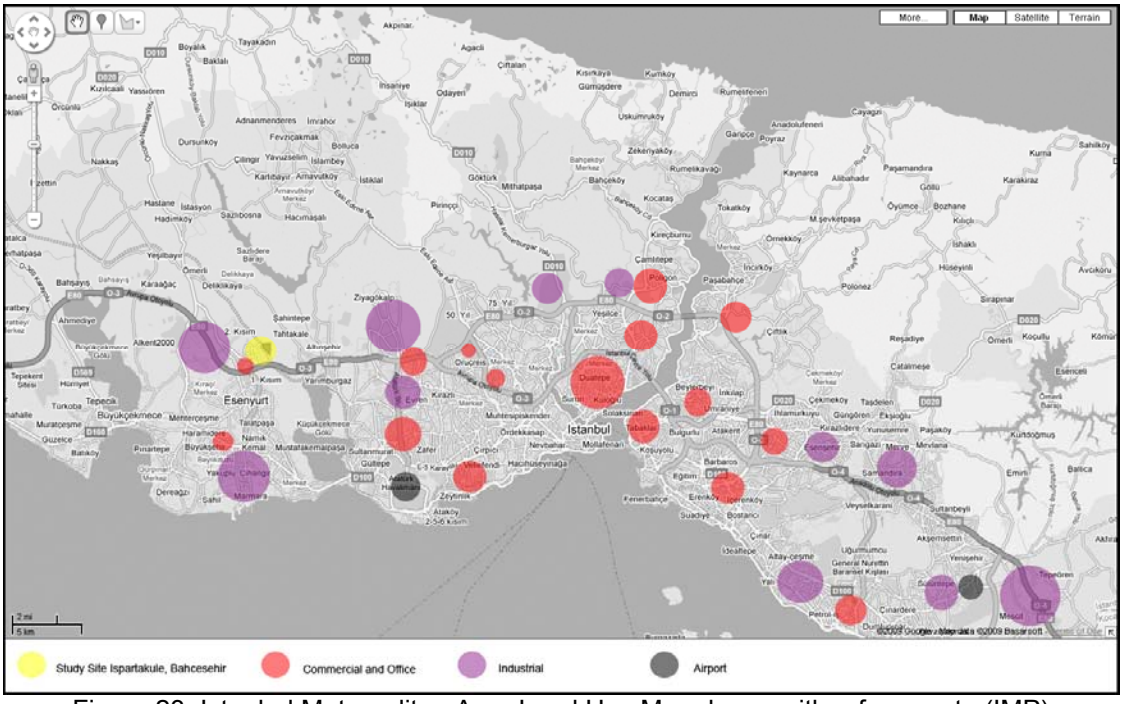



Figure 23. Istanbul Metropolitan Area Land Use Map drawn with reference to (IMP)

*Bahçesehir*

Bahcesehir, which literally means "Garden City," is a new-town development located on the European side of Istanbul. Bahcesehir is situated close to industrial zones along the TEM Highway where a railroad connecting Europe to Istanbul passes through. It is approximately 25 kilometers (40 minutes' driving distance) away from the CBD. Bahcesehir was developed by Bahcesehir Consortium, which consists of four corporations (three private and one public): Süzer Group, MESA Housing Industries Inc., Nurol Construction and Trading Inc., and Turkish Real Estate Bank Inc.[15]

[15] The shares of this consortium were distributed as follows: Emlak Bank Inc. (50%), Süzer Group (30%), MESA (10%) and Nurol (10%). Süzer Group owned a big piece of land in Küçükçekmece and made an agreement with Turkish Real Estate Bank Inc. for a mass housing development. MESA Housing Industries Inc. and Nurol Construction and Trading Inc. became the contractors for this project. In 1991, the Bahcesehir consortium transferred the responsibilities of project management and control, property management, pre- and post-sales maintenance and marketing services to Real Estate Marketing, Project Management and Services Inc., which was part of a public company.

4,701,420 square meters of land have been reserved for the Bahcesehir development. A creek and valley run through the property. After the land was incorporated into the zoning plan of Istanbul, a feasibility analysis and a master plan were completed in 1986.[16] This initial plan was designed to accommodate 90,000 people living in 20,000 residential units. Two million square meters of construction area were to be completed in five stages (Haksal, 1995). The first phase of Bahcesehir was completed in 1993, second phase, Ispartakule, was designed in 1996, and the first part of the second phase (the study area) was completed in 2000. The target population has since been reduced to 55,000 people living in 15,500 residential units.[17]

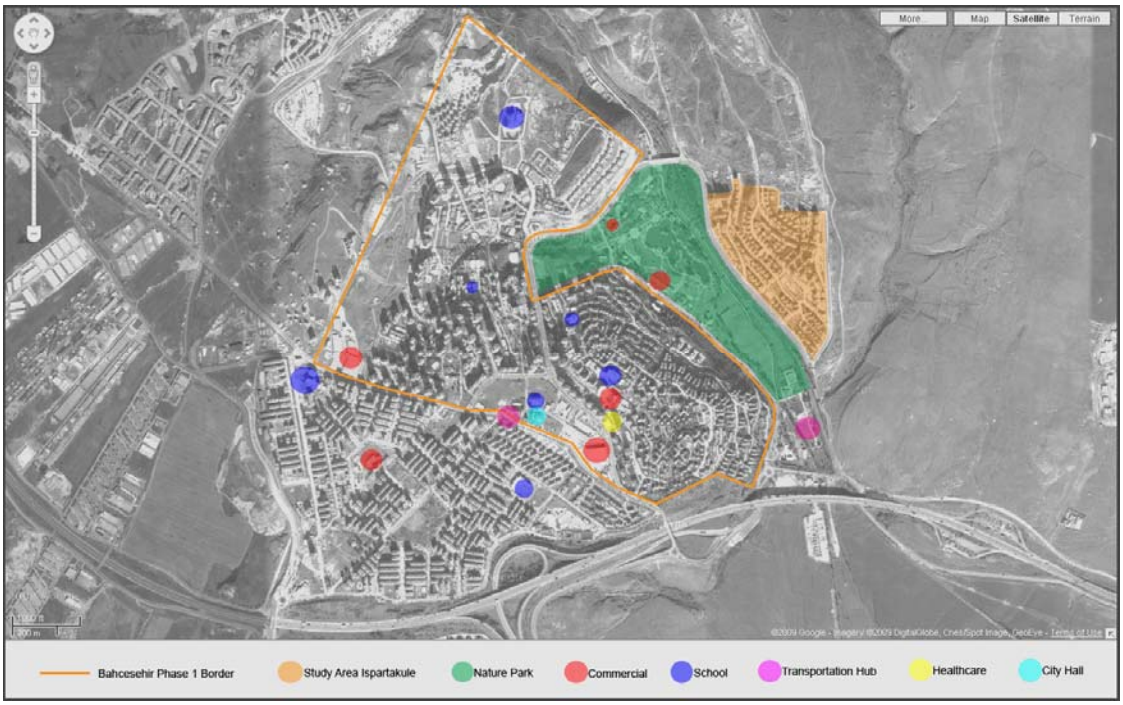


Figure 24. Bahcesehir (land use, phases and Ispartakule)

Bahcesehir was planned as a mixed-use center incorporating a variety of functions such as retail, housing, recreational, educational and healthcare. The residential buildings were designed to accommodate different building types such as high-rise blocks and attached and detached homes of a variety of designs and sizes ranging from one-

[16] The geological survey and economic feasibility analyses were conducted by GEOSAN Inc. in March 1986. COWIconsult SKAARUP & JESPERSEN and ATOLYE 70 worked on preliminary feasibility and master plan in October 1986. In December 1986, the group prepared final master plans and relevant reports related to the plans.

[17] This information was obtained during personal interviews with planners and architects at Bahçeşehir Municipality and Real Estate Marketing, Project Management and Services Inc.

bedroom to five-bedroom units. The master plan identifies the density and functions of buildings within the development area, paying particular attention to the characteristics of the topography and its geological quality. Accordingly, the housing area surrounding the lake would be low density to guarantee a better view for the rest of the project. The development was divided not into neighborhoods but rather into phases and their sub-regions, for the ease of construction and sales. Therefore there is no hierarchy in the distribution of social facilities within Bahcesehir. In addition to smaller shopping centers within walking distance, a retail center was planned which would serve not only Bahcesehir but also the neighboring developments. Because of the considerable distance to the city center of Istanbul, educational, cultural, and healthcare care facilities are incorporated into the plan of Bahcesehir, as well as retain and recreational facilities. As a result, Bahcesehir became a magnet for other housing projects built on adjacent plots by either co-operatives or private companies.

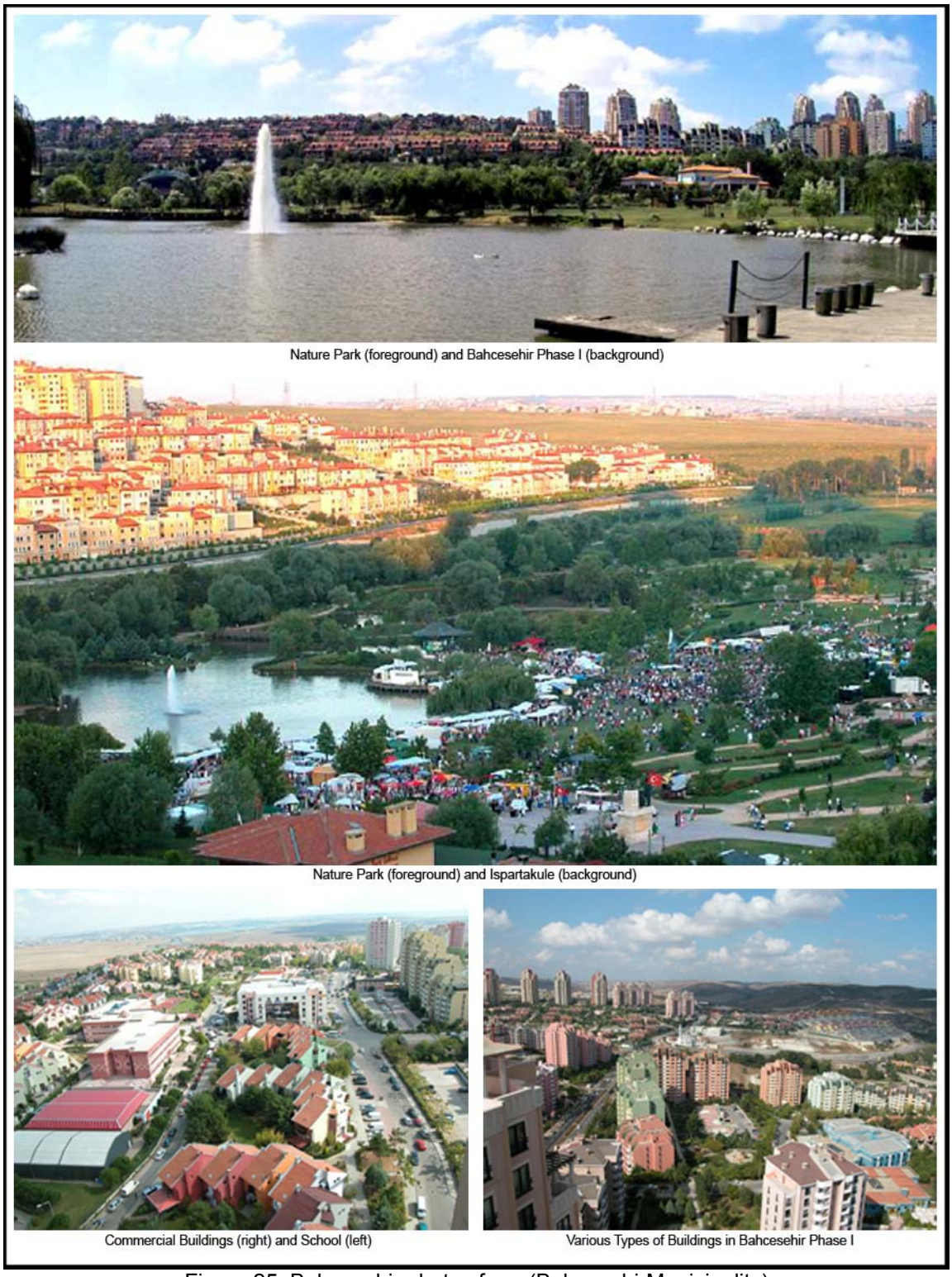



Figure 25. Bahcesehir photos from (BahcesehirMunicipality)

## Design and Development of Ispartakule

| | |
|---|---|
| Project type | New-town settlement<br>Suburban<br>Adjacent to mixed-use center of Bahcesehir (residential, retail, office and cultural center) |
| Building types | Villas (attached and detached)<br>Apartment blocks |
| Location | Bahcesehir, Istanbul (25 kilometers east of the city center) |
| Developer | Bahcesehir Consortium |
| Designers | CHK (Torti Gallas and Partners) |
| Builders | Nurol Construction and Trading, Inc.<br>MESA Housing Industries, Inc.<br>Zer Construction, Inc. |
| Project Size | 170 acres (Ispartakule initial plan) |
| Number of Units | 718 households (occupied) |
| Unit size | 948 sqf (90m2) / 4,400 sqf (409m2) |
| Real Estate Values | $ 150,000 - $900,000 |

Table 8. Ispartakule Project Overview

Ispartakule is a neighborhood within the borders of the second phase development of Bahcesehir. The second-phase master plan and architectural plans were designed by the American firm CHK in 1996 (and by Torti Gallas and Partners after 1998). This project won several awards including the 2000 Honor Award in Urban Design given by the American Institute of Architects, the Honor Award given by the Maryland Society of the American Institute of Architects, and the Honor Award given by the Potomac Valley, Maryland Chapter of the American Institute of Architects. However, Turkish Real Estate Bank Inc. could not finance the project as a whole and divided it into two parts to be developed.[18] Only one part—Ispartakule as it stands today—has been developed

[18] The contract with CHK was broken in the middle of the project. Turkish designers completed construction drawings. Ispartakule is the first part of this project; the second part was never developed. The land where the remaining half of the project was supposed to be built was either sold to other construction companies by the HDA or developed by partnering construction companies. HDA does not provide a master plan anymore; therefore, each construction company applies its own plan independently from the rest of the town (Bahcesehir). Most of the new projects are designed as housing complexes surrounded by walls or fences. Their entrances have controlled gates and surveillance cameras, mostly because consumers demand this feature, and it keeps the housing prices higher. However, this trend will lead the initial developments to

according to the initial plan. Today, Ispartakule is surrounded by Nature Park and the railroad line on the south, the land for future development of phase two on the west (where the second half of the Ispartakule project designed by CHK was supposed to be built), the TEM highway connection on the east, and vacant public land on the north.[19] According to CHK, the underlying principles of the Ispartakule project are as follows:

> *[T]he emphasis at Phase II of Bahçesehir [Ispartakule] is on well defined public sequences that capitalize on the dramatic topography of the site, a solution resulting after rigorous site analysis. A piazza at the base of the valley serves as the commercial and political center of the town. A pedestrian stair defined by parks and water sequences connects this plaza to the hilltop where an overlook park framed by towers serves as a symbolic gateway to Istanbul. Along the way, this sequence links a nursery school, a high school, playing fields, the source of the water sequence in a paradise garden, cascades, fountain courts, a water stair and plaza fountain. The housing, designed specifically for this dramatic terrain, captures the natural breezes created by the topography. Living units employ natural ventilation, while affording spectacular views of the town and countryside. The terrain has allowed for unique designs to accommodate parking including terraced and tuck under garages.*[20]

However, the piazza and the pedestrian stairs defined by parks and water sequences were never built since the project as originally planned was never finished. The only existing public spaces that were designed as a part of the initial project are parks, sports fields and half of the commercial center, which houses offices.

---

close themselves off, a process that has already begun. In addition, since the parcels and blocks are designed by different construction companies, they are individualistic and free standing. No attention is paid to how they come together and contribute to their context as a whole.

[19] After the nationalization of Turkish Real Estate Bank Inc. by the Turkish Banking Regulation and Supervision Agency in 2001, the rights to the land, which were owned by the bank, were transferred to the HDA, which decided to dissolve the Bahcesehir Consortium. Therefore, the land owned by this consortium was divided among the shareholders as follows: TOKI (50%), Suzer Group (30%), MESA (10%) and Nurol (10%). They are either being developed by the companies themselves or, as in the case of HDA, they are sold to other construction companies in exchange for a share of sales. As of 2007, there are many housing complexes under construction not only on the western border of Ispartakule, but also in Bahcesehir in general.

[20] http://www.tortigallas.com/project.asp?p=50181

Figure 26. Ispartakule initial project site plan from (TortiGallas, 2009a)

Figure 27. Ispartakule initial project images: train station as an anchor between public square in Ispartakule and Nature Park (left); series of civic spaces with cascades/fountains connecting Ispartakule to the station (middle); one of the detached villas (right) (TortiGallas, 2009a)

Figure 28. Ispartakule site plan (study area)

## Design Intentions of Ispartakule

This section presents the design intentions of Ispartakule's designer and developer. The general framework of the community design largely follows New Urbanist principles, with some modifications in response to the differences inherent in the cultural context. The designers were inspired by local typologies of buildings and public spaces, as well as the more European New Urbanist typologies. Overall, Ispartakule was designed for mixed use, recalling an older urban order. The plan included a plaza with a rail station, stores, institutions and parkland intended to serve to whole city, mixed-use quarters within walking distance to shops and schools, and low- and mid-rise buildings providing a variety of housing types for a variety of income levels (Schmitz, 2003).

Figure 29. Overall view of Ispartakule (BahcesehirMunicipality, 2008)

The marketing materials of Ispartakule emphasized mainly the quality of the buildings and environment along with several of the New Urbanist features such as mixed use, mixed typology, and a sense of place. They made no reference to New Urbanism itself. The design intentions can be summarized as follows:

*Transit Oriented Development*: Ispartakule is situated on important junctions of transportation lines such as highways, railways, and main bus routes, which easily connect the neighborhood to other parts of Bahcesehir as well as the city center.

Figure 30. Features supporting walkability: sidewalks, a bus stop and a convenience store

*Walkability*: The neighborhood layout utilizes a hierarchy of streets that connect important civic places to each other. The intention was to promote pedestrian activity by providing destinations such as the square, parks, shops and schools within walking distance from every housing unit.

Figure 31. Building types: detached homes, attached homes, and apartment blocks

*Mixed housing types*: Just as the Ispartakule project uses a hierarchical approach in the design of streets, it also incorporates a variety of building types and sizes. These include detached villas, attached villas, stacked apartments, and apartment blocks, as well as one- to four-bedroom apartment flats and two- to five-bedroom homes. Similar types of buildings are generally grouped together. At the top of the hill, apartment blocks (seven to nine stories high) are designed around courtyards with amenities like community pools, playgrounds and picnic areas at the top level, and underground garages at the lower level. Both attached and detached villas are arranged at the lower parts of the site, and the lower density there allows residents a good view of the lake area (the Nature Park). Attached villas have either small gardens or garage entrances in front of the houses. Villas are built with bigger gardens; most have private pools. This feature of Ispartakule is planned to enhance diversity within the neighborhood by providing a variety of housing types for a variety of income groups.

Figure 32. Civic spaces: common areas of apartment blocks, playfields, and parks

*Civic Spaces*: The significance of transit oriented design is also reflected in the arrangement of civic spaces. A central train station was designed to become an anchor point between Ispartakule and the rest of Bahcesehir. A public square would combine a series of civic spaces within Ispartakule and the adjacent Nature Park. In addition, civic buildings such as an elementary school and preschool were strategically located within the neighborhood to support the use of open spaces and to help connect the community. Within Ispartakule, parks and sports fields are placed at central locations. In addition, each apartment block group has a courtyard with playgrounds, pools, and seating arrangements. In the larger context, the adjacent Nature Park also provides amenities for leisure activities such as horseback riding and golf, as well as cafes and restaurants. Bahcesehir's commercial and civic buildings, such as schools, are located in close proximity to the neighborhoods.

Figure 33. Streetscapes and alleys

S*treetscape*: The aim of the designers was to align buildings to streets to create a sense of enclosure and continuity characteristic of traditional European and Turkish neighborhoods. The garages are pulled to the side or rear entrances of the lots or hidden under apartment buildings so as not to interrupt the continuity of streetscape.

### Evaluation of Ispartakule's Physical Design in Relation to New Urbanist Principles

This section evaluates how successfully Ispartakule has carried out New Urbanist principles. Like the CHV case discussed previously, Ispartakule also represents an interpretation of New Urbanism. As the summary in table below shows, Ispartakule partially satisfies the New Urbanist goals mentioned in the Charter of New Urbanism.

| New Urbanist Principles | Design Intentions/Features |
|---|---|
| Diversity of use | Although the original plan includes a series of civic spaces and a public square accommodating a variety of functions, only half of the project was developed; therefore these design features were not built at all. In its current state, Ispartakule does not accommodate a variety of uses. |
| Diversity of population | The variety of housing types and sizes is likely to attract a variety of family types, sizes, and backgrounds. |
| Pedestrian friendly | Sidewalks, streetscapes with trees, hidden garages, and destinations within walking distance (such as Nature Park and convenience stores) are likely to support walking. The topography, however, presents challenges to pedestrian activity. |
| Transit oriented | Two types of public transportation are available: bus and train. |
| Physically well-defined public spaces | Buildings lining the streets create a sense of enclosure and continuity, as in the European and Turkish tradition. While well-defined street edges and common spaces in between apartments provide a sense of enclosure, neighborhood parks do not exhibit this characteristic. |
| Universally accessible public spaces | In the original plan, the train station was intended as a transportation hub, and its adjacent public square was to connect the neighborhood to the rest of Bahcesehir. However, neither the train station nor the public square was built; therefore accessibility was reduced. |
| Architecture and landscape design that celebrate local history, climate, ecology, and building practices | Local architectural features and building types (low rise and high rise) are employed. Therefore, architectural and landscape features help the development blend into its context. |

Table 9. Comparison of New Urbanist principles, design intentions of Ispartakule, and actual design outcome.

Ispartakule definitely does not satisfy the principle of "diversity of uses." The initial design envisioned a series of active civic spaces all connected to the planned train station and the square in front, which would serve as a civic center hosting a variety of functions. However, the original vision did not materialize, as only one half of the project was developed and the train station and the public square were not built at all. As a

result, Ispartakule has very limited number of stores and offices which neither satisfy the residents' daily needs nor provide destinations for pedestrian activity.

Like CHV, Ispartakule provides different housing types and sizes and is likely to attract families of different sizes; hence, it satisfies the principle of "diversity of population." However, due to its high quality of construction, its amenities, and the availability of villas, Ispartakule is likely to project a more prestigious image than other suburban developments in the surrounding context. This is likely to result in high real estate prices that will be affordable primarily to those with high incomes. As a result, Ispartakule might attract different family sizes; however, the population is likely to be homogenous in terms of income.

"Pedestrian friendly design" is another New Urbanist goal that Ispartakule satisfies to only a limited extent. The initial design vision incorporates many features supportive of pedestrian activity, such as well-designed sidewalks, streetscapes with trees, hidden garages, and destinations such as civic buildings, retail stores, and parks within 10 minutes' walking distance. However, the actual design outcome lacks destinations such as retail stores and civic buildings within the neighborhood. Apart from parks, the only neighborhood destinations are convenience stores that are not sufficient to meet residents' needs such as weekly grocery shopping. Ispartakule residents depend on the Bahcesehir commercial center (where Migros, one of the big chain grocery stores, is located) and hence rely heavily on their cars. As a result, the biggest attractors of pedestrian activity are outside the neighborhood: 1) the Bahcesehir commercial center, within a 20- to 25-minute walking distance, where there is also a major bus station for public and private routes connecting Bahcesehir to the city center; and 2) Nature Park, within a 10- to 15-minute walking distance, where there are several restaurants and cafes within the greens, as well as a brand-new shopping mall. Finally, the topography of Ispartakule creates a challenge for pedestrian activity, as steep hills are likely to inhibit walking.

"Transit oriented design" is a goal to which the developer and the designers paid particular attention at design stage. Ispartakule is situated on important junctions of transportation lines such as highways, railways, and main bus routes, which easily connect the neighborhood to other parts of Bahcesehir as well as the city center.

Ispartakule is directly connected to the TEM highway (via a separate exit right before the Bahcesehir exit), easing transportation by private car. One public bus line also serves the neighborhood, with stops at other Bahcesehir neighborhoods, the main bus station in Bahcesehir, and urban centers of Istanbul along the E-5 highway. However, due to the traffic and the number of stops, a bus trip takes considerably longer than a trip via private car. In addition, the municipality and the main grocery store offer shuttle services to and from Ispartakule every hour. Finally, another transportation option is the major train line connecting Istanbul and Edirne, which passes through the edge of the neighborhood and has a station inside Nature Park.

"Physically well-defined public spaces" is one New Urbanist goal that Ispartakule satisfies to a great extent. The initial design paid particular attention to lining the streets of Ispartakule with buildings to create a sense of enclosure and continuity, as in the European and Turkish tradition. In particular, every common space for apartment blocks was lined with buildings, creating well-defined boundaries for these public spaces. In addition, garages were pulled to the rear or side entrances of the lots along the alleys or located under the apartment blocks, so as not to interrupt the continuity of streetscape. However, as in CHV, neighborhood parks were not surrounded by buildings that could provide a sense of enclosure.

The principle of "universally accessible public space" is the New Urbanist goal that Ispartakule least satisfies. The initial design envisioned a train station and the adjacent public square as the most accessible spaces of Ispartakule that would connect the whole neighborhood to the surrounding context. Because these were not built, Ispartakule remains quite isolated from its context.

"Architecture and landscape design that celebrate local history, climate, ecology, and building practice" is one of the principles to which the Ispartakule design vision paid particular attention. The design of Ispartakule included most commonly used building types such as apartment buildings and both attached and detached villas. As a result, Ispartakule blends into the local context, in particular Bahcesehir, with its mixture of housing typologies.

## Ispartakule Residents: Who are the Survey Respondents?

The survey results summarized in the charts below outline the demographic backgrounds of Ispartakule residents (please refer to Appendix A for details). The ages of the survey respondents are distributed as follows: 20-29 (10.98%), 30-39 (34.15%), 40-49 (37.8%), 50-59 (15.85), 60-69 (1.22%), 70-79 (0%) and 80-89 (0%). The high percentage of respondents in the 30-39 and 40-49 age groups indicates that the residents of Ispartakule are mostly nuclear families. Also supporting this conclusion are the high percentage of married respondents (84.34%) relative to singles (15.66%), and the high percentage of households with children younger than 18 (67.9%) relative to households without children (32.1%). Thus we can conclude that most Ispartakule households composed of families with children. The relatively low percentages of residents in the 50-59, 60-69 and older age groups might be explained by the common Turkish custom of elderly people living with their children.

The work status of Ispartakule residents is as follows: employed full-time (35.8 %), employed part-time (4.94 %), retired (11.11 %), self-employed (8.64 %), homemakers (37.04 %), and students (2.47 %). These findings show that there are two major groups living in the community: full-time employees and homemakers. According to survey data, full-time employees are both females and males who work outside Bahcesehir, mostly in urban centers close to Bahcesehir or in the suburban areas where industrial complexes are located. Homemakers are mostly stay-at-home mothers whose main duties are taking care of their children and managing the household. Full-time employees spend most of their time outside the community due to their work schedule, whereas homemakers spend most of their time in and around Ispartakule.

The survey findings regarding level of education are as follows: less than high school degree (12.2%), high school degree (30.49 %), technical school degree (9.76%), some college without degree (4.88 %), college degree (28.05%) and advanced degree (14.63%). The high numbers of those with high school and college degrees are consistent with the distribution of work status reported above. While most full-time employees hold college and advanced degrees, most homemakers have a lower level of education (high school degree and below). Both the survey findings and the personal interviews confirm a common cultural practice in Turkey: women, particularly those from

traditional families, tend not to continue their education after high school. Rather than working outside the home, they tend to marry at relatively early ages and become stay-at-home mothers.

According to the survey results, most of the Ispartakule households belong to middle- and upper-income groups. The level of home ownership is also high, which also reflects cultural norms. Finally, the neighborhood might be considered as inclusive to a certain extent, since it hosts a variety of income groups, particularly a considerable number of lower-middle income households.

| | | | |
|---|---|---|---|
| **Age** | **20-29** | Count<br>% within Community | 9<br>11.0% |
| | **30-39** | Count<br>% within Community | 28<br>34.1% |
| | **40-49** | Count<br>% within Community | 31<br>37.8% |
| | **50-59** | Count<br>% within Community | 13<br>15.9% |
| | **60-69** | Count<br>% within Community | 1<br>1.2% |
| | **70-79** | Count<br>% within Community | 0<br>0.0% |
| | **Above 80** | Count<br>% within Community | 0<br>0.0% |
| Total | | Count<br>% within Community | 82<br>100.0% |
| **Marital status** | **Married / living with a partner** | Count<br>% within Community | 70<br>84.3% |
| | **Single / divorced/widowed** | Count<br>% within Community | 13<br>15.7% |
| Total | | Count<br>% within Community | 83<br>100.0% |
| **Number of children living in household** | **no** | Count<br>% within Community | 26<br>32.1% |
| | **yes** | Count<br>% within Community | 55<br>67.9% |
| Total | | Count<br>% within Community | 81<br>100.0% |
| **Work status** | **Working full-time** | Count<br>% within Community | 29<br>35.8% |
| | **Working part-time** | Count<br>% within Community | 4<br>4.9% |
| | **Retired** | Count<br>% within Community | 9<br>11.1% |
| | **Self-employed** | Count<br>% within Community | 7<br>8.6% |
| | **Homemaker** | Count<br>% within Community | 30<br>37.0% |
| | **Student** | Count<br>% within Community | 2<br>2.5% |

| | | | |
|---|---|---|---|
| **Total** | | Count<br>% within Community | 81<br>100.0% |
| **Income** | **Less than $50,000 or 20,000 YTL** | Count<br>% within Community | 7<br>12.7% |
| | **$50,000-$74,999 or 20,000-39,999 YTL** | Count<br>% within Community | 10<br>18.2% |
| | **$75,000-$99,999 or 40,000-59,999 YTL** | Count<br>% within Community | 13<br>23.6% |
| | **$100,000-$149,999 or 60,000-79,999 YTL** | Count<br>% within Community | 8<br>14.5% |
| | **$150,000-$199,999 or 80,000-99,999 YTL** | Count<br>% within Community | 9<br>16.4% |
| | **$200,000 or more OR 100,000 YTL or more** | Count<br>% within Community | 8<br>14.5% |
| Total | | Count<br>% within Community | 55<br>100.0% |
| **Level of education** | **Less than high school** | Count<br>% within Community | 10<br>12.2% |
| | **Technical school degree** | Count<br>% within Community | 8<br>9.8% |
| | **College degree** | Count<br>% within Community | 23<br>28.0% |
| | **High school degree** | Count<br>% within Community | 25<br>30.5% |
| | **Some college without degree** | Count<br>% within Community | 4<br>4.9% |
| | **Advanced degree** | Count<br>% within Community | 12<br>14.6% |
| Total | | Count<br>% within Community | 82<br>100.0% |

Table 10. Socio-demographic information about survey respondents living in Ispartakule

### 5.3 Variations on New Urbanism

This chapter introduced the case study neighborhoods, the initial intentions behind their design, their development processes and their actual design outcomes. The intentions and outcomes were assessed with respect to the goals outlined in the Charter of New Urbanism to understand how successful each neighborhood is in addressing these goals.

This evaluation revealed that both case study sites are unique interpretations of New Urbanism and are quite different from each other. Although several physical characteristics such as small lots, a mixture of housing types, sidewalks and neighborhood parks are similar, the differences are more striking than the similarities. There are several reasons for this.

First, the initial design of each neighborhood emphasized different goals identified by advocates of New Urbanism. Even if one compares New Urbanist neighborhood developments in the US, one notices a variety of interpretations of New Urbanist principles. These differences tend to be even more pronounced in different cultural contexts. Furthermore, some of the goals are successfully addressed, while others are not addressed at all. For instance, the principle of transit oriented design was not addressed by CHV's initial design at all; therefore the outcome does not fulfill this principle of New Urbanism. Although Ispartakule's initial design did focus on this aspect, unrealized parts of the project led the actual outcome to focus less on public transit than originally intended; hence, Ispartakule only partially satisfies this goal.

Second, the challenges faced during the development process of each case study neighborhood are unique to the local context and led to different outcomes. For example, in the case of CHV, an economic recession greatly affected the success of development. On the other hand, the primary challenge in Ispartakule was the developer's decision to divide the initial project into two parts due to financial constraints. As a result, the actual outcomes of both projects departed from the original plans.

Third, the case study neighborhoods are parts of different cultural contexts with dissimilar physical and socio-demographic characteristics. For example, the perceived meanings of the architectural features of different housing types are unique to each local context. Therefore, different housing types are likely to accommodate people of different backgrounds and convey different meanings in their respective local contexts.

Fourth, developers interpret New Urbanism in different ways. In the US, the developer explicitly utilized the concept of Traditional Neighborhood Development to market the project. Recurring themes included the traditional town setting, availability of retail stores, unique architectural style, sense of community, and availability of neighborhood parks and sidewalks. With these features, the developer targeted people who were not satisfied with conventional suburban developments and were looking for something much closer to the traditional towns of the US.

On the other hand, in Turkey, New Urbanism was not mentioned in any of the marketing materials. The marketing themes for Ispartakule included the development's close

relationship with nature, availability of parks, safe construction, quality of housing design, lack of traffic problems and ease of access to downtown Istanbul via highway connections. The target group consisted of families looking for a place where they could be close to nature, live in safe apartments and distance themselves from the disturbances of city life such as pollution, crime and traffic.

Another significant variation emerges when the two case study neighborhoods are compared to their respective larger suburban contexts. This variation helps us understand how New Urbanist practice is positioned with respect to surrounding neighborhoods in each cultural context.

In the US case, CHV is mostly surrounded by conventional low density residential developments. These areas are limited to residential use and composed primarily of single family homes on large lots, with garages and driveways facing the street. Within this context, CHV displays a unique identity due to its smaller lots and relatively higher density, building colors and housing styles that are more diverse than in the surrounding conventional suburbs, its pedestrian friendly environment, its neighborhood parks, and a commercial center within walking distance. Therefore, CHV provides an alternative for people in the Canton area who do not want to live in conventional suburban developments. (Please refer to Chapter 8 for further discussion of why residents preferred to live CHV.)

As several CHV residents mentioned during the interviews, CHV also provides an alternative for people who want to live in historical towns such as the nearby Plymouth downtown area. People prefer CHV because it serves as a cheap proxy to downtown Plymouth. Houses in CHV are new and (unlike old houses) do not require repair, and real estate prices are lower than in downtown Plymouth. However, CHV residents can still benefit from a pedestrian friendly environment, the commercial center and the neighborhood parks.

In addition, CHV is attractive to people who are looking for an active social life. During personal interviews, several retired residents mentioned that they chose CHV because they did not want to live in retirement communities where they would be entirely

surrounded by people of the same age group; they preferred living in CHV where they could mingle with families with children and people of different ages.


Figure 34. Neighborhood developments in CHV's surrounding context. (Photos 1, 2, and 3 by author; photos 4, 5, and 6 from www.maps.google.com )

In contrast, Ispartakule is not much different from its immediate surroundings. Bahcesehir is planned to be a satellite town that exhibits core New Urbanist principles

such as transit oriented and compact development with a high density, mixed housing types, mixed use and neighborhood parks. However, compared to the larger suburban context, Bahcesehir and hence Ispartakule have quite different properties.

The surrounding suburban context accommodates different types of neighborhood developments. There are spontaneous developments such as squatters and apartment buildings converted from squatters, private gated communities, multifamily housing developed by the Housing Development Agency of Turkey (e.g., Halkali), neighborhoods developed by cooperatives (apartment buildings) and old suburban settlements that are now largely urbanized (e.g., Avcilar and Bakirkoy).

Compared to these settlements, Bahcesehir and Ispartakule provide a high quality living environment as they have better planned features such as parks, commercial and educational facilities, and a higher quality of construction. In addition, while the surrounding settlements accommodate only one building type (apartments in most cases and villas in the case of gated communities), Bahcesehir provides a mixture of these building types.

As a result, Bahcesehir attracts people who want to live in neighborhoods where both construction and environmental quality are high. These neighborhoods promise a safe environment away from pollution and traffic, with amenities such as parks, schools, and commercial and business facilities. Due to its relatively high real estate values, Bahcesehir is likely to attract mostly people from the upper middle income group. However, the variety of housing types, which range from villas to one bedroom apartment flats, creates an opportunity for families of different sizes and types to live together (e.g., retirees, young couples, single/divorced people, and families with children). In this respect, Bahcesehir is similar to CHV.

1. A Gated community, Ardicli Evler (foreground) and gecekondu apartments (background)

2. Gecekondu apartments along TEM highway

3. A government housing project, Halkali

4. Housing project

5. New housing project under construction

6. New housing project under construction

Figure 35. Neighborhood developments in Ispartakule's surrounding context. (photo 1, 2, and 3 source, author; photo 4 source, http://www.bahcesehir-bld.gov.tr/ , photo 5 source, http://www.bizimevler.com.tr/bizimevler2/resimler.html , photo 6 source, http://www.mesagrup.com/tr/proje/mn-bahcesehir-konut-projesi-i-etap )

# CHAPTER 6

# NEIGHBORHOOD FORM: MORPHOLOGICAL AND CONFIGURATIONAL PROPERTIES

This chapter examines physical and spatial qualities of the two case study neighborhoods, Ispartakule and CHV. One of the objectives is to understand how similar or different the morphological features and the spatial organization of selected communities are, and how this reflects their different cultural contexts. Another objective is to reveal the configurational properties of each neighborhood and to what degree they support the residents' goal-oriented needs.

The study uses both morphological and configurational analysis methods based on quantitative measures of the key environmental properties of each neighborhood. First, findings from the morphological analysis are presented. This section focuses on the characteristics of built (figure) and open space (ground) relationships such as built/un-built space ratio, density (number of households per acre), building types and their arrangement in the neighborhood layout, and types of open space and their arrangement. Second, the findings from the configurational analysis are presented. This section examines the relationship of each neighborhood to its surrounding urban context, the organization of most integrated public spaces within the neighborhood such as streets and civic spaces, and finally the characteristics of the boundaries between buildings and public spaces (that is, the relationship between primary streets and building entrances).

## 6.1 Morphological Analysis

## Figure-Ground

The overall neighborhood area of CHV[21] is approximately 129 acres, while that of Ispartakule is approximately 72 acres. Although Ispartakule is not quite half the area of CHV, the ratio of built space (figure) to un-built space (ground) is quite similar: 22.55% in CHV and 18.89% in Ispartakule. However, when CHV is completely developed through phase 4, the expected to figure ground ratio of CHV (25.78%) will be higher than that of Ispartakule.

| Project Area | | Acres | Figure | Ground | F/G ratio | Estimated |
|---|---|---|---|---|---|---|
| **CHV** | **Developed** | 129.28 | 23.79 | 105.49 | 22.55% | 25.78% |
| **ISP** | **Developed** | 71.66 | 11.39 | 60.27 | 18.89% | … |

Table 11. Area of built and un-built space

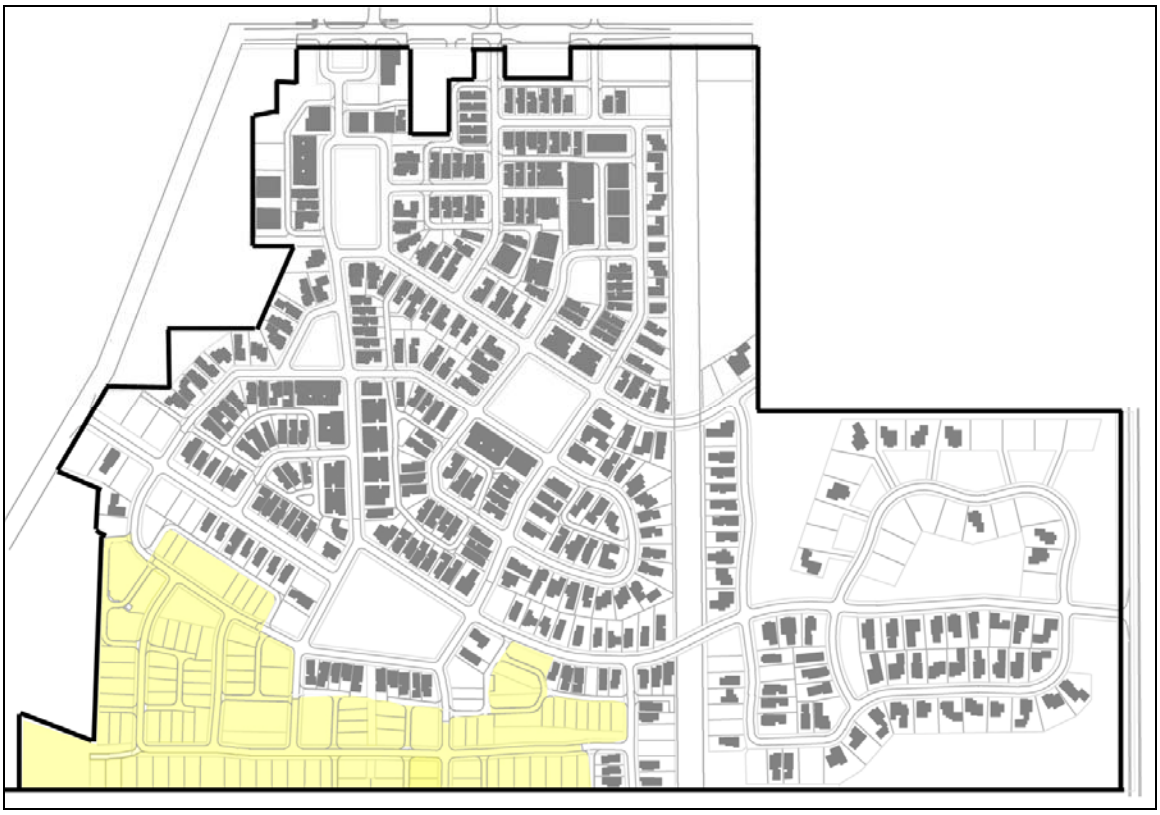


Figure 36. Figure-ground map of CHV

[21] CHV has four phases. Today, phases 1 and 2 are completely developed and phase 3 is mostly developed. The total project area (phases 1, 2, 3 and 4) is planned to be 161 acres. All calculations in this chapter are based on the developed parts of the neighborhood. The estimated figure ground ratio for CHV is calculated based on average building area (according to types of buildings) already developed in the neighborhood.

Figure 37. Figure-ground map of Ispartakule

**Building Types**

Building types in Ispartakule have greater variety than in CHV. There are two types of buildings in CHV: condominiums (19% of figure) and homes (81% of figure). Condominiums have two sub-types: Manor, which have larger units with small gardens, and Townhomes, which have smaller units with no gardens. There are three sub-groups of homes in CHV that vary in size. From largest to smallest, they are Estate homes, Village homes and Cottage homes.

In Ispartakule, there are four different building types: apartment blocks (22% of figure), row apartment blocks (5% of figure), attached villas (47% of figure) and detached villas (27% of figure). Apartment blocks accommodate units varying in size from 1 bedroom up to 4 bedrooms. Row apartment blocks are composed of stacked duplex apartment units; the units have their own entrances at different street levels, a design that makes use of the challenging topography. Therefore these building units are more like attached villas than apartment blocks, which have a single entrance.

The ratio of building types to the built area is comparable in both communities. In Ispartakule apartments occupy 22 percent of the built area, while villas, both detached

and attached, and row apartments occupy 78 percent of it. Similarly, in CHV 19 percent of the built area is condos and 81 percent is homes.

Like the ratio of building types to built area, the distribution of building types on the neighborhood plan shows similarities between the two neighborhoods. The images below showing the arrangement of building types reveal that in both Ispartakule and CHV condominiums/apartments are arranged in close proximity to each other.

In CHV, condominiums are organized as groups and clustered in four areas: 1) around the park at the entrance of the neighborhood, which is close to retail and civic buildings; 2) along the street that connects three neighborhood parks; 3) around the park located at the inner side of the neighborhood; and 4) close to retail and civic buildings surrounded by homes. Estate homes are clustered at the east side of CHV. Estate homes are quite isolated from the rest of neighborhood as they are surrounded by greens.

Similarly, in Ispartakule apartments are arranged in groups surrounding the common areas designed for apartment residents' use. There are four clusters of apartment buildings, which are located mostly in the northern part of the neighborhood. The villas are distributed evenly throughout the site. Most of the streets are lined by attached villas on at least one side.

| Built Area | | Acres | Mean (sqf) | Max (sqf) | Min (sqf) | % of figure |
|---|---|---|---|---|---|---|
| **CHV** | Homes | 19.16 | 2,404 | 4,624 | 1,386 | 81% |
| | Condos | 4.63 | 6,951 | 12,772 | 3,044 | 19% |
| | **TOTAL** | **23.79** | | | | |
| **ISP** | Apartment | 2.49 | 15,995 | 36,526 | 3,870 | 22% |
| | Row Apartment | 0.54 | 7,276 | 16,217 | 3,356 | 5% |
| | Attached Villa | 5.31 | 1,169 | 2,174 | 861 | 47% |
| | Detached Villa | 3.05 | 1,769 | 2,906 | 1,098 | 27% |
| | **TOTAL** | **11.39** | | | | |

Table 12. Built area distributed according to building types

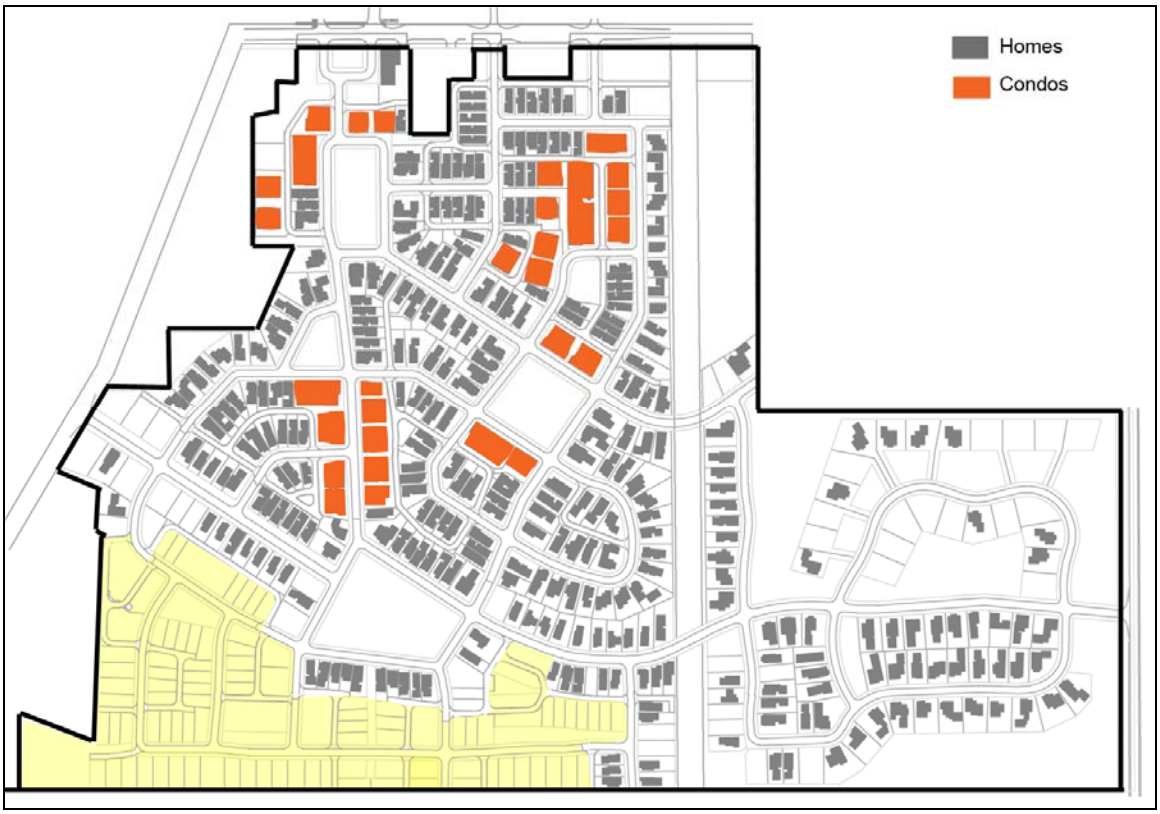



Figure 38. Distribution of buildings types in CHV


Figure 39. Distribution of building types in Ispartakule

## Density

The density of a neighborhood is defined as the number of households per acre. This measure also sheds light on the vertical grain of the settlements. In CHV, there are 4 households per acre. If we base our calculations on the number of households per acre in the *built* area rather than *total* area (which provides insights about the height of buildings), the number of households per acre is 22 in CHV.[22] In Ispartakule, the number of households per acre is 11 when the whole developed area is taken into account, and 69 when we consider only the built area.

Although both neighborhoods have comparable figure-ground ratios, Ispartakule and CHV have quite different densities. This is because of the building heights that are utilized in Ispartakule. While most of the apartment buildings are 8-9 storeys in Ispartakule, the highest building in CHV is 3 storeys. Therefore, Ispartakule is much denser than CHV with regard to both built area and overall developed area.

| Number of households per acre | | Count | Within built area | Within total area (including un-built) |
|---|---|---|---|---|
| **CHV** | Homes | 347 | 18 | |
| | Condos | 29 | 38 | |
| | **TOTAL** | 522 | 22 | 4 |
| **ISP** | Apartments | 28 | 187 | |
| | Row Apartments | 7 | 80 | |
| | Attached Villas | 198 | 37 | |
| | Detached Villas | 75 | 25 | |
| | **TOTAL** | 781 | 69 | 11 |

Table 13. Density distribution according to building types

| Number of building storeys | | Min | Max |
|---|---|---|---|
| **CHV** | Homes | 1 | 2 |
| | Condos | 2 | 3 |
| **ISP** | Apartments | 4 | 9 |
| | Row Apartments | … | … |
| | Attached Villas | 2 | 2 |
| | Detached Villas | 2 | 2 |

Table 14. Building heights according to building types

[22] This calculation is done excluding the undeveloped phase and un-built lots in CHV.

## Open Spaces

The assessment of open spaces reveals that the two case study communities have comparable characteristics. In Ispartakule open spaces occupy 84 percent of the total developed area. Similarly, in CHV 82 percent of the total area is composed of open spaces. Private gardens constitute 38 percent of total open spaces in Ispartakule, which is comparable to 36 percent in CHV. More space is allocated to roads and sidewalks (39 percent of open spaces) in Ispartakule than in CHV (33 percent of open spaces), as Ispartakule is surrounded by roads on two sides (north and south).

One difference between the communities is the arrangement of public greens, which are of two types: designed public greens such as parks and trails, and natural greens. In CHV civic spaces are designed as parks, which account for 17 percent of total greens in the neighborhood. In Ispartakule civic spaces are composed of parks (42 percent of total greens) and common areas surrounded by apartment blocks (18 percent of total greens). Therefore, CHV has more natural greens than Ispartakule, whereas in Ispartakule the majority of public greens are parks.

| **PUBLIC** | | **Acres** | **% of ground** | **% public green** |
|---|---|---|---|---|
| **CHV** | Roads + sidewalks | 34 | 33% | … |
| | Public greens | 33 | 32% | … |
| | *Parks* | 6 | 6% | 17% |
| | *Trail* | 6 | 5% | 17% |
| | **TOTAL** | **68** | **64%** | |
| **ISP** | Roads + sidewalks | 24 | 39% | … |
| | Public greens | 14 | 23% | … |
| | *Parks* | 6 | 9% | 42% |
| | *Apt Commons* | 2 | 4% | 18% |
| | **TOTAL** | **37** | **62%** | |
| **PRIVATE** | | **Acres** | **% of ground** | |
| **CHV TOTAL** | | **38** | **36%** | |
| **ISP TOTAL** | | **23** | **38%** | |
| **GROUND** | | **Acres** | **% of total** | |
| **CHV TOTAL** | | **105** | 82% | |
| **ISP TOTAL** | | **60** | 84% | |

Table 15. Distribution of open spaces according to type

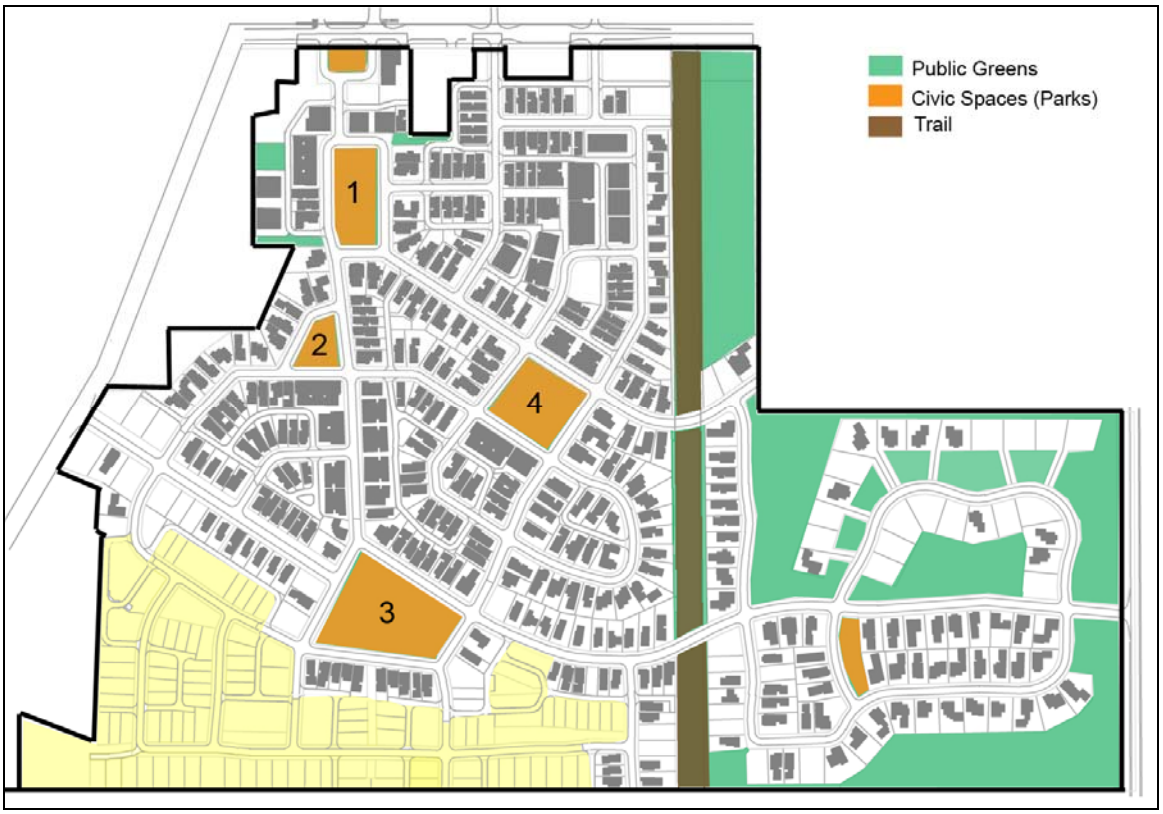


Figure 40. Public greens in CHV

Figure 41. Public greens in Ispartakule

## 6.2 Configurational Analysis

This section examines the spatial properties of each case study neighborhood. The aim is to assess the potential of New Urbanist neighborhood design to create environments supportive of residents' goal-oriented behaviors. Particular attention will be given to the claims that New Urbanist neighborhood design enhances 1) walkability via well-integrated street networks, 2) social interaction via well-connected civic spaces attracting movement, and 3) a feeling of safety via increased access from buildings and greater visibility of streets (DPZ, 2009b; Duany & Plater-Zyberk, 1993; Katz, 1993).

Hillier argues that the form and use of space are not independent and describes this relationship as follows: *"*[S]pace is given to us as a set of potentials, and … we exploit these potentials as individuals and collectivities in using space" (Hillier, 1996). Therefore the potential provided by spatial configuration (i.e., the environmental affordances) is likely to influence how people use spaces. In the case of neighborhoods, spatial configuration can support or inhibit active use of public space such as walkability, social interaction and surveillance, thus influencing the perceived satisfaction of residents' needs.

Previous research findings suggest that several syntactic properties are closely related to certain types of human behavior, such as movement and co-presence. These behaviors are closely related to pedestrian activity and social interaction, which New Urbanists claim to enhance via neighborhood design. To evaluate how successful New Urbanist designs are in achieving their goal of increased pedestrian activity and social interaction, one has to assess the configurational properties of these settlements. Using empirical findings, Hillier introduces two concepts that are significant for the purposes of this research: natural movement and virtual community.

The principle of natural movement suggests that there is a strong relationship between the structure of any configured system and the movement densities along the lines (Hillier, 1996; Hillier et al.,1993). The integration values of each axial line (that is, how the line is positioned with respect to the spatial system as a whole) strongly influence

natural movement[23] through the line. In other words, the axial lines with higher integration values—those more integrated into the spatial system—are likely to attract more natural movement and more people. This principle is supported by empirical findings that have been replicated in different cultural contexts and at different scales and types of environments (Bafna, 2003; Hillier et al., 1987; Min, 1993; Penn et al., 1998; Peponis et al., 1989; Peponis et al., 1997; Peponis & Wineman, 2002).

The concept of virtual community is based on the argument that spatial configuration influences patterns of space use through its effects on natural movement, which in turn defines patterns of co-presence and co-awareness amongst individuals who live in or pass through an area (Hillier, 1996). Hillier argues that although co-present people are not a community, they are raw material for community that could be converted into interaction. "[P]atterns of co-presence are a psychological resource, precisely because co-presence is the primitive form of our awareness of others" (Hillier, 1996). Therefore, patterns of co-presence and co-awareness are constituents of 'virtual community' in a given area influenced by the relationship between spatial configuration, movement and other related aspects of space use. Previous research supports this premise as findings reveal significant correlations between integration values of building layouts and interaction levels as a reflection of patterns of co-presence (Garajewski, 1993; Hillier & Penn, 1991; Peponis, 1985; Serrato & Wineman, 1999).

The two principles mentioned above, natural movement and co-presence, were widely applied in neighborhood research to explore the relationship between spatial form and space use. Prior research focused mainly on commercial activities and crime, as both are related to levels of movement and co-presence within neighborhoods. Research on spontaneous settlements revealed that commercial activity develops where there is a higher potential of natural movement (Hillier & Greene, 1999); (Hossain, 1999). Research on the relationship between crime and neighborhood layout showed that segregated spaces, i.e., those attracting less natural movement, are more vulnerable to crime than integrated spaces (Shu, 1999; Shu & Huang, 2003). In addition, empirical findings suggest that anti-social behavior (such as graffiti and vandalism) is negatively affected by both the co-presence of pedestrians on the streets and surveillance from

[23] "Natural movement is the proportion of movement on each line that is determined by the structure of the urban grid itself rather than by the presence of specific attractors or magnets" (Hillier, 1996).

residential entrances on the streets; i.e., the constitutedness of the street from the residential entrances (Friedrich et al., 2009). Permeable constituted neighborhoods are likely to encourage the co-existence of strangers and residents; therefore, they are likely to encourage active use of space and become 'socially effective' (Hillier, 1996; Hillier & Sahbaz, 2008).

Two recent studies utilized configurational analysis to assess the spatial configuration of New Urbanist neighborhoods and their potential to fulfill New Urbanist claims. Veras and Amorim examined layouts of three neighborhoods designed by Duany and Plater-Zyberk: Kentlands in Maryland, and Seaside and Windsor Village in Florida. They concluded that configurational properties of these neighborhoods are supportive of co-presence and co-awareness. However, alleys are vulnerable to crime unless they are well-integrated and constituted by building entrances (Veras & Amorim, 2005). In another study, Kim examined five New Urbanist neighborhoods in Atlanta to test the New Urbanist claim of "well-connected streets." The empirical findings revealed that although New Urbanist neighborhoods exhibit higher levels of connectivity than their surrounding contexts, variety amongst them is noteworthy. The level of connectivity varies widely according to how closely a neighborhood development adheres to New Urbanist guidelines (Kim, 2007a).

If the spatial structure of a neighborhood influences the use of space, then it is likely to affect the neighborhood's overall character. Therefore, the two concepts defined above form the basis for analytical assessment of the potential of New Urbanist neighborhood design to create an active public realm and support pedestrian activity. Whether the spatial configurations of the case study neighborhoods are structured to inhibit or foster natural movement and chances of encounter is likely to affect public space use and thus neighborhood life. For this assessment, configurational analyses of the case study neighborhoods are conducted at both global and local levels. At the global level, the relationship of case study neighborhoods to their surrounding context is explored. At the local level, the focus is on the neighborhood configuration itself.

In addition to the configurational structure of neighborhoods, several factors (such as land use, density, building entrances, and socio-economics factors) are likely to affect patterns of movement and co-presence in space. In this research, the number of building

entrances is also used to assess the likelihood of public spaces to afford co-presence. Because building entrances create movement between interior and exterior spaces, the level of movement and co-presence of a space is likely to be affected by the number of direct entrances connecting to that space.

The theory and tools of space syntax outline the analytical framework for assessing the potential of New Urbanist neighborhood design. The objective is to understand to what extent the spatial configuration of the case study neighborhoods supports active use of public space, which is a fundamental condition of neighborhood vitality and urbanity.

## Definitions and Measures

Space syntax provides rigorous analytical tools for understanding the relationship between the spatial structure of settlements and the observable functions that take place within this configuration. The analytical tools developed by Hillier and Hanson help to represent, analyze and quantify configuration of space based on topological relationships of discrete units (Hillier & Hanson, 1984).

The two basic units used for representation and quantification of spatial structures are *axial lines* and *convex spaces*. An axial line is the longest possible line passing through a space, and it represents extension of space in one dimension. Convex space is the fattest possible space defined by boundaries, and it represents extension of space in two dimensions (Hillier & Hanson, 1984). Each axial line or convex space represents a node in the system that has quantifiable (syntactic) properties with respect to its topological relationships within the system.

The objective representations of space extension are used to form representational maps of configured spaces. An *axial map* represents the least set of axial lines passing through each convex space in a configured system. A *convex map* represents the least set of fattest spaces that covers the system (Hillier & Hanson, 1984). These maps help quantify the topological relationships of discrete units and are therefore the basic tools of configurational analysis.

For the purposes of this research, each neighborhood configuration is represented via axial maps showing each case study neighborhood in relation to its surrounding context. Distances from each neighborhood center to its respective urban center in the larger context are taken into account to define the radiuses of axial maps in which the neighborhoods are embedded. The axial maps are analyzed using Depthmap and Mindwalk software. The outcomes of quantitative software analyses are color-coded maps representing different properties of the spatial structure of the neighborhoods. The syntactic properties that are significant for the purpose of this research are *integration, intelligibility* and *constitutedness*.

*Integration* is the mean *depth*[24] of a node (axial line or convex space) from other nodes in every direction in a configured system. The integration measure shows how accessible a node or group of nodes are within a configured system at either a global or local scale.

*Global integration (radius n)* is the degree of accessibility of part(s) from all other parts in the morphological system in every direction (Hillier, 1996; Hillier & Hanson, 1984). This measure is particularly helpful in understanding the relationship of neighborhoods with their surrounding urban contexts.

*Local integration (radius 3)* is the "integration only up to three lines away from each line in every direction" (Hillier, 1996), and it measures the local accessibility of a node taking into account up to three directional changes. This measure helps to reveal how integrated the streets and the civic spaces are within each neighborhood. The higher their integration value within the system, the more likely these public spaces are to draw natural movement and hence co-presence (Hillier, 1996; Hillier & Hanson, 1984; Peponis et al., 1989; Peponis & Wineman, 2002).

[24] Depth of one space from another is the number of spaces intervening between two spaces—in other words, the number of spaces one has to pass through to go to another space (Bafna, 2003; Hillier & Hanson, 1984).

*Integration core* is composed of 10 or 25 percent of the most integrated axial lines within a configured system.[25] As integration core corresponds to the syntactic core of system, it is likely to attract natural movement and become a destination of co-presence (Hillier & Hanson, 1984). The "strength" of the core is the relationship of mean integration of the core to mean integration of the system. It indicates efficiency of the core as a place of destination.

*Intelligibility*[26] represents the relationship between properties of parts (local) and all other parts (global) within a morphological system. Intelligibility is the predictability of a spatial system (Hillier, 1996). The relationship between local spatial properties (which is defined as relations with immediate neighbors and global spatial properties, or the level of integration or accessibility to and from every space within the whole system) plays a significant role in influencing overall encounter rate of urban areas (Hillier et al., 1987; Hillier & Hanson, 1984). The degree to which encounter is predictable from the spatial pattern is a function of the layout's intelligibility. The higher the intelligibility of a system, the higher is the probability of pedestrian encounter along the integrated lines.

*Constitutedness* measures direct accessibility of interior and exterior spaces via building entrances (Hanson & Hiller, 1984). When buildings are directly accessible to a node (an axial line or a convex space), the node is considered a constituted space. If buildings are adjacent to a node, but not directly accessible, then the node is unconstituted. This measure is important in revealing the relationships between buildings, public space and activity patterns within the neighborhoods.

### Relationship of Neighborhoods with the Surrounding Context

Figure 42 and Figure 43 display axial maps of CHV and Ispartakule embedded in their larger urban contexts, Canton and Bahcesehir respectively. In Canton, the most integrated axial lines (shown in red) are the longest lines on the grid system. Canton has a well-distributed integration core. The most integrated lines reach out to the peripheries

[25] For this research, 25 percent of the most integrated lines are chosen as the neighborhoods are analyzed embedded in their surrounding context, which forms a large system. The integration core calculations are based on local integration and are run using Mindwalk software.
[26] Intelligibility is the correlation between connectivity and integration values. Connectivity is the number of spaces directly accessible from (i.e., connected to) a space (Hillier, 1996; Hillier & Hanson, 1984).

of the system. This provides high levels of accessibility from the settlements at the peripheries to the urban core around Ford Road. As Canton shows characteristics of planning based on a grid system, it has high grid axiality. The closer a configured system is to a perfect grid, the higher its accessibility. Because a perfect grid has the longest possible axial lines and hence the most overall connected ones, it is the most integrated configurational system. This results in high integration values as a system. In contrast, Bahcesehir's configured system is a deformed grid; therefore a core (a concentration of red lines) with well-integrated axial lines is observable. This integration core coincides with the urban center of the area, which houses a variety of uses such as offices, retail and housing. However, the settlements at the peripheries (shown in blue) are quite isolated from the core of the whole system.

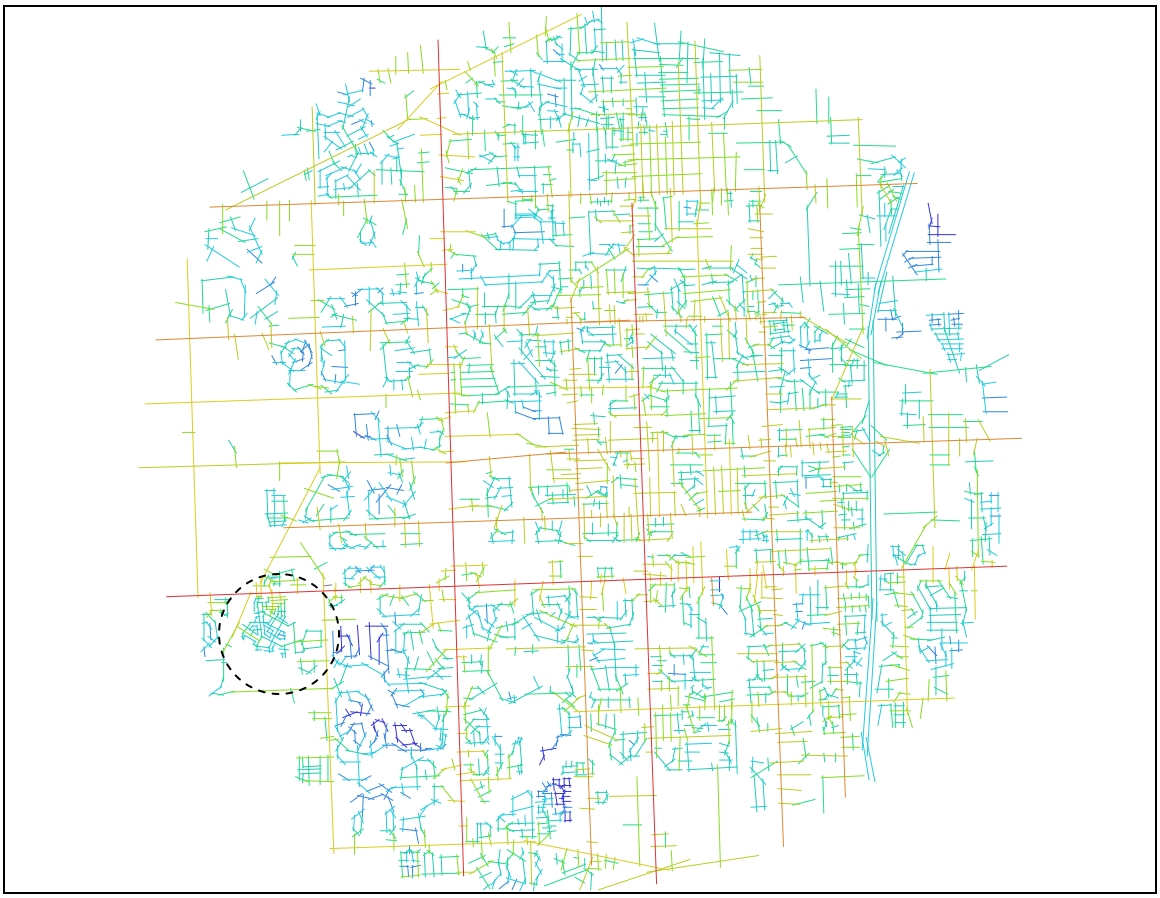


Figure 42. Axial map of Canton showing global integration

Figure 43. Axial map of Bahcesehir showing global integration

| | Total # of lines | Global integration | Connectivity |
|---|---|---|---|
| **CHV** | 89 | 1.29 | 3.22 |
| **Canton** | 3498 | 1.37 | 2.76 |
| **Ispartakule** | 76 | 0.56 | 3.28 |
| **Bahcesehir** | 1062 | 0.69 | 3.23 |

Table 16. Summary of syntactic properties

Table 16 summarizes syntactic properties of CHV, Ispartakule and their surrounding contexts. The connectivity values reveal that Canton has a lower level of connectivity (2.76) than CHV (3.22). In other words, this finding supports the claim that New Urbanist developments in the US feature a "well-connected street network." Although Ispartakule's level of connectivity (3.28) is similar to that of CHV, it is not much different from its that of its larger context (3.23).

Both CHV and Ispartakule are located at the edge of their larger urban context as isolated but compact settlements with highly connected streets. The mean global integration measures of CHV (1.29) and Ispartakule (0.56) are lower than the mean

global integration of their respective contexts, Canton (1.37) and Bahcesehir (0.69). This reveals that both Ispartakule and CHV are segregated from their larger contexts not only physically but also configurationally. As the axial maps show, these neighborhoods contain few integrated lines (shown in blue) relative to the system as a whole. The isolation of both neighborhoods means that generally, their configurations do not allow natural movement, which occurs within their surrounding contexts, to penetrate into the neighborhood systems. However, the retail and civic center designed as part of the CHV planned unit development lies on one of the most integrated lines of the larger system (Cherry Hill Road); therefore this adjacent retail center is likely to attract natural movement within the larger urban context. In contrast, Ispartakule is highly segregated from the larger context physically via Nature Park and configurationally via less integrated streets.

What does this tell us about the case study neighborhoods and their potential for supporting residents' needs? The potential to support the need to connect to the surrounding context (neighboring urban centers or neighboring communities) is low. It is quite unlikely that these neighborhoods will attract high levels of co-presence and natural movement within the larger context. However, the analyses of structures of traditional urban spaces reveal that a strong relationship of the parts to the whole is fundamental to creating high levels of co-presence and movement, and hence the active use of space (Hillier, 1996). Contrary to New Urbanist claims, the spatial structures of CHV and Ispartakule do not exhibit global configurational properties supportive of active urban settings that are well-integrated to the larger context.

### Integration Core and Arrangement of Public Spaces

In order to assess the potential for use of public space within each case study neighborhood, this section focuses on local configurational properties such as local integration[27], intelligibility, constitutedness and connectivity. First, configurational properties of neighborhood street networks are examined with respect to their potential for creating natural movement and hence supporting high levels of walking activity within

[27] The measure of local integration (r3) in urban systems is the best predictor of pedestrian movement as pedestrian trips tend to be shorter and use local information for navigation, while global integration is the best predictor of vehicular movement because these trips are longer and use global information about spatial configuration (Hillier, 1996).

the neighborhoods. Second, arrangements of civic spaces within the neighborhood layout are assessed with regard to their potential to foster high levels of co-presence and co-awareness, which are fundamental conditions of social interaction. Finally, the constitutedness of primary streets (the number of building entrances directly connected to each street segment) is measured as a multiplier effect of co-presence on each street. A high degree of constitutedness is likely to support activity and a feeling of safety.

| | Mean local integration | Mean integration of the core | Strength of the core | # of lines within core | Intelligibility |
|---|---|---|---|---|---|
| **CHV** | 1.65 | 2.43 | 0.68 | 24 | 0.28 |
| **Ispartakule** | 1.56 | 2.14 | 0.73 | 15 | 0.24 |

Table 17. Summary of local syntactic measures of CHV and Ispartakule

*Street Network*

Figures 40 and 41 show the integration cores of CHV and Ispartakule. In both figures, 25 percent of the most integrated lines are represented with darker lines. In CHV, the integration core is composed of 24 axial lines with a mean integration of 2.43 and a core strength of 0.68. There are two distinct groups of most integrated lines in CHV. The first group is clustered at the northern part connecting the neighborhood to one of the most integrated lines of the surrounding context (Cherry Hill Road). These highly integrated lines are aligned primarily with homes and do not serve a civic function within the neighborhood. However, they connect the neighborhood to the adjacent retail and civic center; therefore, they have high potential to generate pedestrian activity to and from CHV.

The second group of most integrated lines follows a radial pattern not only connecting different parts of the neighborhood to each other but also passing through each civic space within the neighborhood. For example, the most integrated line inside the neighborhood (Constitution St.) runs vertically, connecting three of the four neighborhood parks. It is aligned with mostly condos, allowing a higher rate of building permeability. Similarly, the second-most integrated line also passes through two parks in the neighborhood. Consequently, the integration core of CHV connects different parts of the neighborhood as well as civic spaces successfully. This suggests that the street configuration of CHV is likely to support well-distributed pedestrian movement around the neighborhood and the adjacent retail and cultural center.

Figure 44. Integration core of CHV (locations of parks are shown in numbers)

Figure 45. Integration core of Ispartakule (locations of parks are shown in numbers)

In Bahcesehir, the integration core is composed of 15 axial lines with a mean integration value of 2.14 and a strength of 0.73. Most integrated lines in Ispartakule are concentrated in the southern part of the neighborhood close to the highway connection. However, the northern part, where the neighborhood is connected to the urban core and Nature Park, is not well integrated. The most integrated line of the neighborhood lies at the morphological center and passes through only one of the neighborhood parks. It is aligned with different types of houses. The two other most integrated lines run along the edges of the neighborhood where the roads are wide and lined by buildings on only one side. These streets are designed not for pedestrian movement but for vehicular movement. Therefore, rather than the integrated lines at the periphery, the lines at the center of the neighborhood are more likely to draw pedestrian movement. However, there are significantly segregated zones within Ispartakule where none of the most integrated lines run through. These zones are likely to be isolated from the natural movement occurring within the neighborhood. Thus the spatial configuration of the street network in Ispartakule does not allow well-distributed pedestrian movement throughout the neighborhood and likely leads to islands of spaces deprived of natural movement.

*Civic Spaces*

One of the claims of New Urbanism is that well-designed civic spaces such as parks enhance neighborhood interaction as they become active community centers. However, active use of public spaces marked by movement and co-presence is influenced by the configurational properties of spatial structure. Therefore, civic spaces within the case study neighborhoods are assessed with regard to their potential to foster high levels of co-presence and co-awareness, the fundamental conditions of social interaction.

| Integration R3 | Mean integration of parks | Park 1 | Park 2 | Park 3 | Park 4 |
|---|---|---|---|---|---|
| **CHV** | 2.02 | 1.87 | 1.92 | 2.05 | 2.27 |
| **ISP** | 1.85 | 1.73 | 1.81 | 2.03 | 1.81 |

Table 18. Local integration values of parks as civic spaces of the neighborhoods

Civic spaces in both communities are composed of parks. In CHV, parks have high integration values with a mean of 2.02, as they tend to be surrounded by the most

integrated lines of the system.[28] Two of the four neighborhood parks (Park 1 and Park 2) have relatively lower integration values (1.87 and 1.92 respectively), as they are surrounded by fewer integrated lines and are therefore likely to attract less natural movement. However, Park 3 and Park 4 are highly integrated (2.05 and 2.27) and hence are more likely both to benefit from natural movement occurring within the neighborhood and to afford co-presence. In sum, civic spaces in CHV are well-designed and located within the neighborhood, increasing their potential to become actively used spaces.

On the other hand, civic spaces in Ispartakule are relatively less integrated into the neighborhood and therefore are not likely to support active use. Although the most integrated lines of the system pass through parks, the mean integration value of all the parks within neighborhood is relatively low (1.85). Three of the four neighborhood parks have particularly low levels of integration—Park 1 (1.73), Park 2 (1.81) and Park 4 (1.81)—as they are surrounded by only one or two of the most integrated lines in the system. Consequently, these parks are not likely to benefit from natural movement within the neighborhood or to afford high levels of co-presence, the primary condition of interaction. The design and placement of civic spaces in Ispartakule is quite poor with regard to their potential to support active use of space. Therefore the parks in Ispartakule are likely to be segregated and deserted rather than functioning as actively used community spaces.

*Constitutedness of Streets and Civic Spaces*

One of the design principles of New Urbanism is that each building must have a main entrance directly opening to the sidewalk on the front facade of the building facing the street (DPZ, 2009b). The claim is that a greater number of interior–exterior connections will increase street-level activity, thus promoting interaction amongst neighbors and increasing the level of surveillance on the street. Similarly, in space syntax, the number of direct connections between interior and exterior spaces via building entrances is considered to be a multiplier factor contributing to space use (Hillier & Hanson, 1984).

[28] The integration value of each park is calculated by taking the average integration value of the surrounding lines.

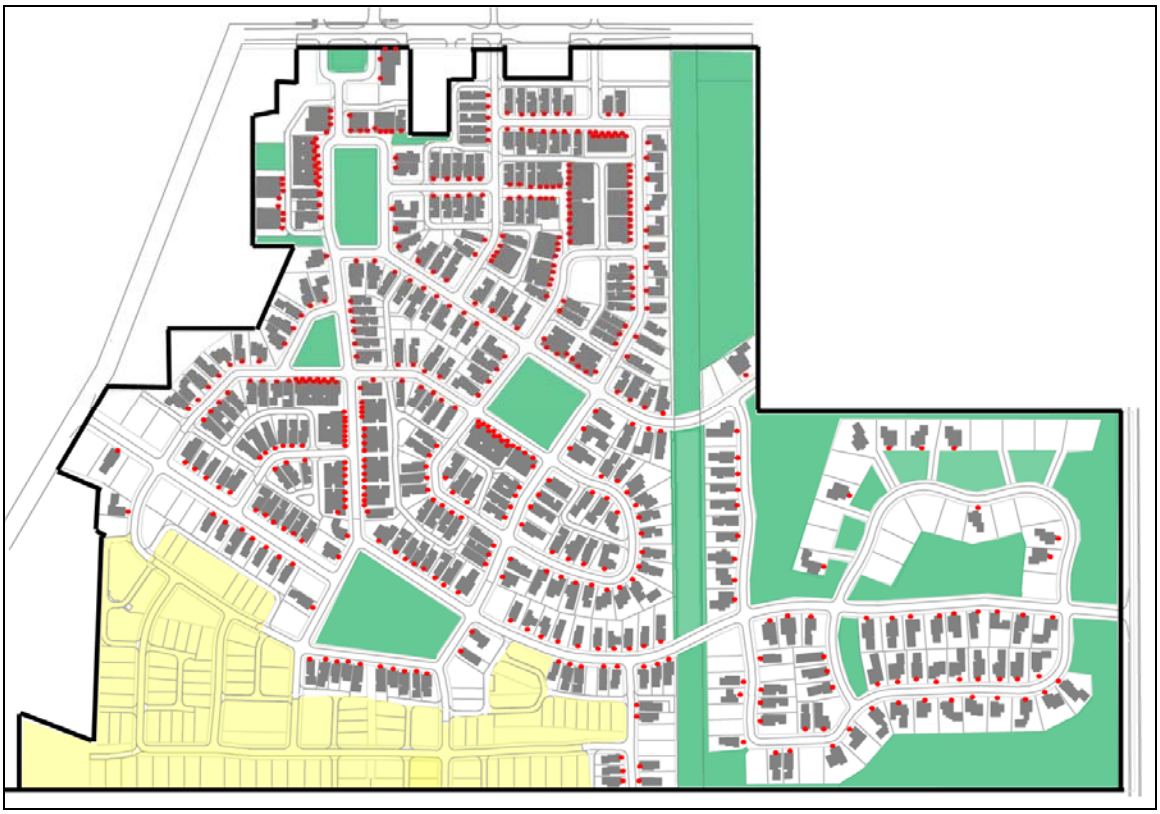


Figure 46. Primary building entrances in CHV

Figure 47. Primary building entrances in Ispartakule

Figure 48. The most constituted street segments (25 %) of CHV shown in yellow

Figure 49. The most constituted street segments (25 %) of Ispartakule shown in yellow

| | Constitutedness (streets) | N | Minimum | Maximum | Mean | SD |
|---|---|---|---|---|---|---|
| **CHV** | # of entrances per street segment | 38 | 1.00 | 35.00 | **10.89** | 7.63 |
| | integration per street segment | 38 | 1.37 | 2.84 | 2.09 | 0.32 |
| **Ispartakule** | # of entrances per street segment | 50 | 0.00 | 37.00 | **6.98** | 9.27 |
| | integration per street segment | 50 | 0.86 | 2.59 | 1.89 | 0.39 |
| | **Constitutedness (civic spaces)** | **N** | **Minimum** | **Maximum** | **Mean** | **SD** |
| **CHV** | # of entrances per civic space | 4 | 23.00 | 36.00 | **29.75** | 6.70 |
| | integration per civic space | 4 | 1.92 | 2.27 | 2.10 | 0.15 |
| **Ispartakule** | # of entrances per civic space | 4 | 2.00 | 10.00 | **5.50** | 3.42 |
| | integration per civic space | 4 | 1.89 | 2.13 | 1.98 | 0.11 |

Table 19. Constitutedness and integration of street segments and civic spaces[29]

Table 19 summarized the constitutedness properties of both CHV and Ispartakule. These findings reveal that both the street segments and the civic spaces are significantly more highly constituted in CHV than in Ispartakule. In CHV, the mean constitutedness of street segments—the average number of building entrances per street segment—is 10.89. However, in Ispartakule this measure is significantly lower; on average 6.98 building entrances directly connect to each street segment. Moreover, street segments are more integrated locally in CHV (2.09) than in Ispartakule (1.89).

One reason for this significant difference of constitutedness between the two case study communities is that all CHV households, even the condos, have entrance doors directly opening to the streets. However, in Ispartakule, apartment buildings have only one main entrance per 16-18 households residing within the building. Therefore, the number of entrances directly connected to street segments is much lower in Ispartakule than in CHV.

A closer look at the 25 percent of the most constituted street segments reveals significant differences between the two neighborhoods. In CHV, there are 10 street segments amongst the 25 percent of the most constituted streets which mainly overlap with the integration core of the neighborhood (25 percent of the most integrated streets within the neighborhood). In addition, half of the most constituted street segments in CHV are aligned with condominiums, and the other half are aligned with homes. The

[29] Constitutedness of a street segment is calculated as the number of building entrances per street segment. The integration value of each street segment is the mean integration of axial lines passing through the street segment. Constitutedness of civic spaces is calculated as the number of building entrances connecting to the street segments surrounding the civic space. The integration value of civic space is the mean integration of street segments surrounding the civic space.

most constituted and integrated streets are the ones aligned with condos. The less integrated but most constituted streets are aligned with homes. These findings suggest that 1) the high potential of most integrated street segments to attract natural movement in CHV is multiplied by high levels of constitutedness; therefore, these street segments are likely to accommodate high levels of both natural movement and co-presence; and 2) the low potential of the less integrated street segments to attract natural movement is complemented by high levels of constitutedness, which is more likely to foster high levels of co-presence than other less integrated street segments.

In Ispartakule, 13 street segments are amongst the top 25 percent of the most constituted street segments. Only 2 of the 13 most constituted street segments coincide with the integration core of Ispartakule. Twelve out of 13 are aligned with attached homes on either one side or both. The pattern of most constituted street segments suggests that some of the isolated parts of the neighborhood, where the integration core does not extend, are reinforced with high levels of constitutedness. Therefore, in these areas the less integrated street segments and neighborhood parts, which have a lower chance of attracting natural movement configurationally, are nonetheless likely to accommodate higher levels of co-presence. This is because they are more highly constituted than some other less integrated street segments of Ispartakule.

Similarly, the civic spaces of the two neighborhoods show significantly different patterns of constitutedness. While the mean constitutedness of civic spaces in CHV is 29.7, in Ispartakule it is only 5.50. This difference is quite striking. In Ispartakule some of the streets adjacent to civic spaces are unconstituted. In contrast, none of the street segments in CHV, let alone the ones adjacent to civic spaces, is unconstituted. In Ispartakule the combination of 1) low integration values and isolation from the integration core and 2) low levels of constitutedness of the civic spaces is likely to limit natural movement towards and co-presence in civic spaces. Therefore civic spaces in Ispartakule are less likely to serve their purpose of gathering people and becoming actively used community spaces. In contrast, in CHV the potential of civic spaces to support natural movement and accommodate a high level of co-presence is multiplied due to their high integration and constitutedness.

## 6.3 Summary of Findings

The findings of the morphological analysis reveal that while the figure ground ratios of CHV and Ispartakule are quite similar, the density (number of households per acre) and vertical grain are much higher in Ispartakule than in CHV. In addition, Ispartakule accommodates a wider range of building types than CHV. The arrangement of different building types on the neighborhood layout is similar in both communities: the condos/apartments are concentrated on certain parts of the neighborhood. In CHV, however, the condominiums are better connected to the civic spaces than are the apartment blocks in Ispartakule. Finally, CHV has more public greens than Ispartakule, but less area reserved for civic spaces.

The findings of the configurational analysis suggest that both Ispartakule and CHV are isolated from (i.e., not well integrated with) their larger urban contexts. However, both neighborhoods have internal street networks that are better connected than those of the larger urban context. Of the two developments, CHV is likely to be better integrated with its global context and to draw more natural movement within, as its retail and cultural center is located on one of Canton's most integrated streets (Cherry Hill Street). More integrated streets are likely to draw more natural movement from the surrounding area. In addition, the placement of the retail and cultural center on one of the most integrated streets of Canton is likely to create a multiplier effect for the level of movement. CHV is thus likely to benefit from the retail and cultural center as an anchor point drawing movement from the larger Canton area.

At the local scale, in CHV the design of the street network, the arrangement of civic spaces within the neighborhood, and the relationship between buildings and public spaces are well thought out and successfully designed to enhance natural movement and co-presence. This suggests that public spaces in CHV are likely to be actively used by residents. However, in Ispartakule the configuration of street network leaves isolated segments that are likely to be deprived of natural movement. In addition, civic spaces not only are segregated from the integration core but also have low levels of constitutedness. Unfortunately, the neighborhood design in Ispartakule has major disadvantages in channeling natural movement throughout the neighborhood and

particularly to civic spaces. The configurational properties of Ispartakule are not successfully designed to foster active use of streets and civic spaces.

# CHAPTER 7

# COMMUNITY LIFE: PUBLIC SPACE USE AND SOCIAL ENGAGEMENT

One of the aspirations of New Urbanism is to create actively used public spaces within neighborhoods. New Urbanist design guidelines pay particular attention to the design of sidewalks, parks, and civic spaces, which are intended to become the center of community life. This chapter examines the socio-behavioral characteristics of the case study neighborhoods. It not only inquires into both individual and social activities but also examines the relationship between spatial features and behavioral patterns. The objective is to answer the following questions: 1) What are the types of activities performed by residents within the neighborhoods? 2) What are the possible relationships between public space use and spatial configuration? 3) What is the potential for social capital in each community?

One stream of research explored social and psychological aspects of New Urbanist communities such as sense of community, social interaction and social capital. Contradictory results have emerged from studies testing the claim that traditional neighborhoods promote higher levels of sense of community than typical suburban developments. Nasar and Brown and Cropper found similar levels of sense of community in their comparative studies of traditional and conventional suburban neighborhoods in Ohio and Utah (Brown and Cropper, 2001; Nasar, 2003). In contrast, in their comparative research undertaken in Maryland and Oregon, Kim and Kaplan and Lund found significantly higher levels of sense of community in traditional neighborhoods than in conventional suburban neighborhoods (Kim & Kaplan, 2004; Lund, 2002). The differences might be due to two factors. First, Nasar administered his study in an “old” traditional neighborhood rather than a recently developed New Urbanist development, which might draw a different set of people than an “old” neighborhood. Second, the two

studies utilized different sets of questions to measure sense of community in their survey instruments; therefore, the contradictory results might well result from different definitions of sense of community in the scales.

Although Brown and Cropper's study results regarding sense of community do not parallel Lund's, both studies did find that residents of New Urbanist communities exhibit higher levels of social interaction among neighbors. According to Lund, residents of New Urbanist neighborhoods have higher levels of pedestrian activity, and people who walk around their neighborhood are more likely to interact and form relationships with their neighbors (Lund, 2002). Lund's study also reported a significant positive relationship between the number of walking trips and both the frequency of casual (unplanned) interactions with neighbors and local social ties (Lund, 2003). Similarly, Brown and Cropper reported that the residents of New Urbanist communities present higher levels of neighboring behaviors such as knowing and socializing with their neighbors (Brown & Cropper, 2001). Finally, in a study of Kentlands, a New Urbanist community development in Maryland, Kim and Kaplan found that design elements such as natural features and open spaces play a role in fostering pedestrianism and increasing the likelihood of social interactions (Kim, 2007; Kim & Kaplan, 2004).

### 7.1 Public Space Use

This section investigates similarities and differences in the use of public space in the case study neighborhoods. It examines what types of activities are performed in public spaces and which locations are preferred for these activities. Three different data collection tactics were utilized for this purpose. First, the survey instrument gathered data about the walking behavior of residents. Second, face-to-face interviews acquired information about types of activities, their frequencies and their locations within the neighborhood via open-ended questions. Finally, non-participant activity observations, performed at different times of the day throughout one week, helped to reveal the pattern of public space use within the neighborhoods.

## Walking Behavior

Several studies tested the claims of New Urbanist designers that neighborhood designs featuring compact, mixed-use, pedestrian-friendly environments affect households' travel behavior and reduce residents' auto-dependence (Joh et al., 2008; Khattak & Rodriguez, 2005; Khattak et al., 2005; Krizek, 2003; Nasar, 2003). Using data from interviews, surveys and travel diaries, these studies compared traditional neighborhood developments with New Urbanist features to conventional suburban developments in Ohio, North Carolina, California and Washington. Supporting New Urbanists' claims, the findings suggest that compared to households in conventional suburbs, households in traditional neighborhoods make about the same number of total trips but make significantly fewer automobile trips, make fewer external trips and travel fewer miles.

Another research stream analyzed physical activity levels, particularly residents' walking behavior, to test the claim that traditional neighborhoods can foster higher levels of pedestrian activity than conventional suburban settlements (Joh et al., 2008; Lund, 2003; Rodriguez et al., 2006). The findings reveal that although there is no statistically significant difference between the levels of physical activity of households in the two different types of neighborhoods, households in traditional neighborhoods exhibit higher levels of pedestrian activity because they walk more for utilitarian purposes. Traditional settlements that combine pedestrian-friendly streetscapes with accessible amenities such as parks and shops are likely to increase pedestrian activity within neighborhoods (Joh et al., 2008; Lund, 2003; Rodriguez et al., 2006).

Another stream of research focused on the relationship between environmental factors and walking behavior. The aim was to identify objective environmental measures that foster or inhibit walking behavior. Frank and his colleagues found that community design features such as land use mix, residential density, and intersection density were positively correlated with number of minutes of moderate physical activity per day (Frank et al., 2005). Similarly, Saelens and his colleagues found that neighborhood characteristics such as population density, connectivity (number of intersections), and land use mix are related to walking/cycling behavior. Residents of neighborhoods with higher density, greater connectivity, and more mixed land use reported higher rates of

walking/cycling for utilitarian purposes than residents of low-density, poorly connected and single land use neighborhoods (Saelens et al., 2003).

Another significant study is Cervero and Kocelman's, which provides a framework to assess the effects of neighborhood design on travel behavior. Using travel diaries and land use data from the San Francisco Bay Area, the study revealed that density, diversity and design (the 3 Ds of built environment) have an impact on travel behavior. In particular, the study tests the claims of New Urbanists and other proponents of compact neighborhoods that "*mixed land uses, and pedestrian-friendly designs 'degenerate' vehicle trips and encourage residents to walk, bike, or take transit as substitutes for automobile travel, particularly for non-work purposes.*" Their findings support New Urbanist claims that the synergy of the 3 Ds—more compact, diverse and pedestrian-oriented neighborhoods—is likely to encourage walking and use of public transportation and discourage use of automobile for non-work travel (Cervero & Kocelman, 1997).

Following up on Cervero and Kocelman's study, Lee and Moudon assess how objectively measured micro-scale environmental variables affect walking behavior. According to the findings, the variables strongly correlated with walking are destinations, distance, density and route. The distances between home and particular locations which are likely to attract pedestrians better capture the concept of street connectivity for walking than variables such as average block size or intersection density. In addition, walkability is increased by the presence of destinations that meet daily needs such as food and other basic domestic necessities (Lee & Moudon, 2006).

Based on previous research findings, this section explores the similarities and differences in the walking behavior of residents in different cultural contexts (in this case, Ispartakule in Turkey and CHV in the US). The survey question ("*How often do you typically walk in Ispartakule/CHV?")* asks residents to respond using a four-point scale (4=several times a day and 1=less than once a week) to indicate how often they walk for various purposes.

| | Ispartakule | | | CHV | | | t | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|
| | Valid N | Mean | SD | Valid N | Mean | SD | | |
| **For pleasure / exercise** | 60 | **1.70** | 0.646 | 73 | **2.29** | 0.825 | -4.608 | 0.000 |
| **To make a purchase** | 49 | **1.69** | 0.652 | 59 | **1.10** | 0.305 | 5.849 | 0.000 |
| **To go to public places** | 58 | **1.60** | 0.591 | 68 | **1.93** | 0.852 | -2.501 | 0.014 |
| **To visit someone** | 47 | **1.49** | 0.777 | 66 | **1.70** | 0.701 | -1.458 | 0.148 |
| **To go to public transit** | 36 | **1.89** | 0.854 | 11 | **1.36** | 0.809 | 1.860 | 0.080 |

Table 20. Walking behavior of survey respondents in CHV/Ispartakule

The findings, summarized in the table above, suggest that survey respondents living in CHV walk more to exercise, to go to public places, and to visit someone than do survey respondents living in Ispartakule. However, they walk less to use public transit and to make a purchase. This finding is not surprising if one considers the lack of available public transit in Canton and the variety of stores within walking distance.

On the other hand, survey respondents living in Ispartakule walk more for utilitarian purposes (that is, to make a purchase and to go to public transit) than CHV respondents do. The difference in walking behavior to go to public transit might be due to the more easily accessible public transit available in Ispartakule. However, the difference in walking behavior to make a purchase might be due to perceptual differences between two cultures. Both neighborhoods have convenience stores and cafes within walking distance; however, during interviews CHV respondents complained about the size and variety of local stores. They preferred to shop at chain grocery stores rather than convenience stores in their neighborhood, whereas Ispartakule residents utilize convenience stores within their neighborhood for their daily needs.

### Activity Types and Locations

During face-to-face interviews, respondents were asked the following open-ended question: "*Generally speaking what type of activities do you do in the neighborhood? Can you locate the locations of these activities on the map?"* This question explored types of activities performed by interviewees and their locations in the case study neighborhoods. Although interviewees described the activities and locations verbally, they did not feel comfortable showing activity locations on the map, claiming that they could not define a specific path for many of their activities as they take place all around the neighborhood. Thematic coding reveals that the variety of activity types is higher in

CHV than in Ispartakule and that CHV interviewees utilize public spaces within the neighborhood more than Ispartakule interviewees do. (Please refer to Appendix D for details on thematic coding.)

The most common activities practiced by CHV interviewees are 1) walking around the neighborhood for pleasure, to exercise, or to walk dogs (85%); 2) participating in community events, which take place mostly in parks (60%); 3) going to parks to play with children and/or dogs (45%); 4) shopping at local stores (40%); and 5) biking around the neighborhood (30%). Interviewees also mentioned going to the theater; getting involved in the homeowners' association; participating in alley parties; jogging around the neighborhood, in parks and on trails; sitting on the patio; and gardening. The interviews revealed that public spaces in CHV host a variety of activities and are used extensively. Following are several quotations from CHV interviewees describing their activities.

> *[We] walk with kids in the neighborhood for leisure, we go to the parks. Running and walking for exercise, I follow all the streets in the neighborhood and use the trails almost 5 times a week. There is a play group with my kids. With my friend we meet and take the kids to parks for play activity.* (CHV interview)

> *We walk on different paths, sometimes towards the retail area. I walk to Farmers Market and Cantonian [a convenience store]. We walk every day or sometimes twice a day. We have alley parties. Our neighbors are experts on alley parties. They put out flyers. They just open their garage, they grill. They might be a theme or something. The kids bike because the alley is blocked for traffic.* (CHV interview)

> *We walk our dogs and play with the dogs in the park almost every day in summer. We ride bikes in summer all around the neighborhood. I walk with my husband in the evenings in the neighborhood. We go to the theater regularly. We walk and jog for exercise wherever in the community.* (CHV interview)

> *The activities that we do as a family: we go to the parks; we play soccer and softball there; the kids play right in front [of the house]. We take bike rides throughout the sub. We support the village theater. We are seat owners. We go to the village café, the martini bar. My wife signed [up] for the HOA, and also the social committee.* (CVH interview)

In Ispartakule, interviewees mentioned the following activities: 1) walking, either around the neighborhood to exercise or to the adjacent Nature Park (71%); 2) shopping at

convenience stores (43%); 3) going to Nature Park either to play with children (36%) or to go to the cafes/restaurant in the park (36%); 4) going to Bahcesehir either to shop (29%) or to give ride to children/neighbors (14%); and 5) going to the neighborhood pools (21%). These findings suggest that the Ispartakule interviewees would rather go to Nature Park or Bahcesehir than spend time in the neighborhood common areas.

> *I walk around the neighborhood or sometimes go to Nature Park to walk. We meet with friends at the cafes in Nature Park and have breakfast together. I don't go to the pool; neither do my friends. Sometimes I give my kids a ride to Bahcesehir. My kids ride bicycles in the neighborhood or they play in the playfields. I go to convenience stores to buy bread. That's all I do.* (Ispartakule interview)

> *On weekdays we only go to convenience stores to buy bread. During the weekends we go to the Nature Park. We walk, fly kites, and have food in the restaurant, etc. I was planning to teach my daughter cycling but we decided to move out. Unfortunately, I won't be able to.* (Ispartakule interview)

> *I stay within Bahcesehir most of the time. I go shopping and go to the farmers' market in Bahcesehir. I also walk within Bahcesehir. I buy newspapers and bread from the convenience stores in Ispartakule. But my kids buy more stuff from them.* (Ispartakule interview)

## Activity Observations

This section presents findings from non-participant activity observations during which the number of people present in public spaces (streets, parks and common areas) and the types of activities performed are recorded. Observations were conducted at different times and days of the week in both case study neighborhoods (see table below for details). Data obtained from the observations was mapped on neighborhood site plans using a color scale to indicate the number of people in a public space (red=high and blue=low). The site plans appear in the figures below.

| Observation locations | Observation days and times | | | | | | |
|---|---|---|---|---|---|---|---|
| | **Monday** | **Tuesday** | **Wed** | **Thursday** | **Friday** | **Saturday** | **Sunday** |
| **CHV** | 3-4 pm | 6-7 pm | 12-1 pm | 6-7 pm | 9-10 am | 12-1 pm | NA |
| **Ispartakule** | 12-1 pm | 6-7 pm | 9-10 am | 3-4 pm | 6-7 pm | 3-4 pm | NA |

Table 21. Days and times of activity observations

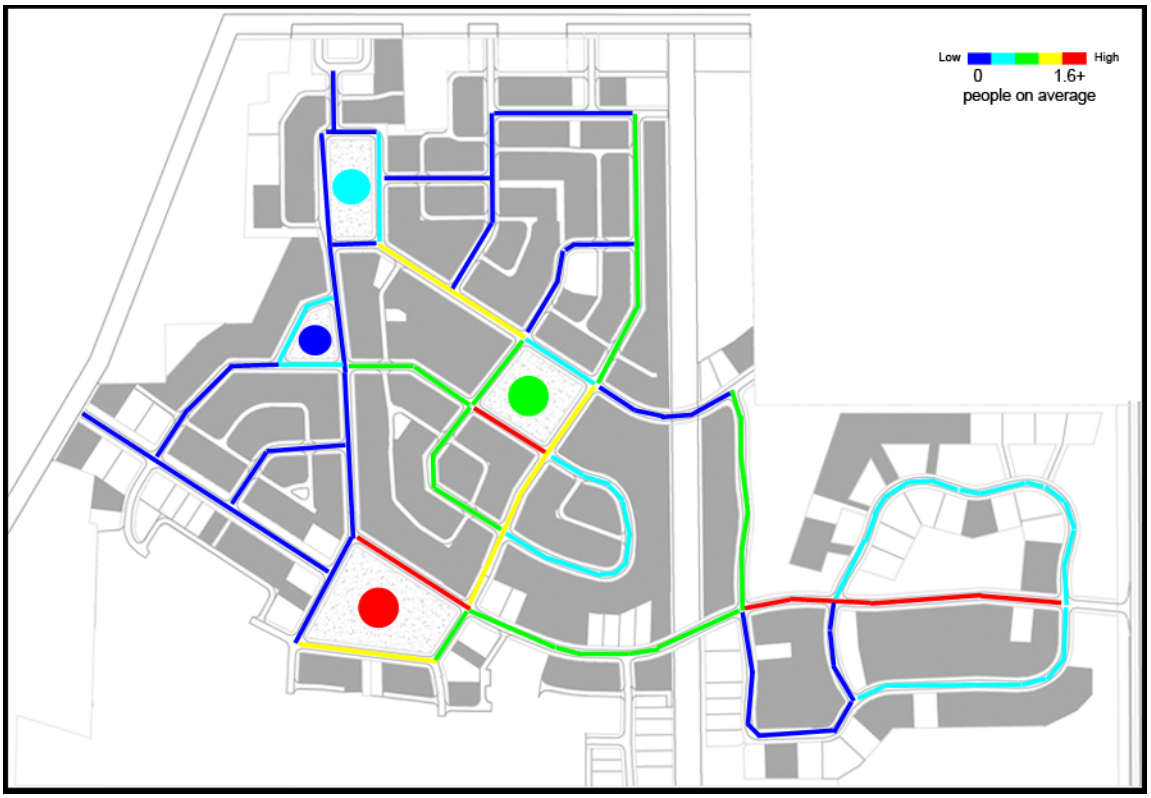


Figure 50. Distribution of observed activities in CHV

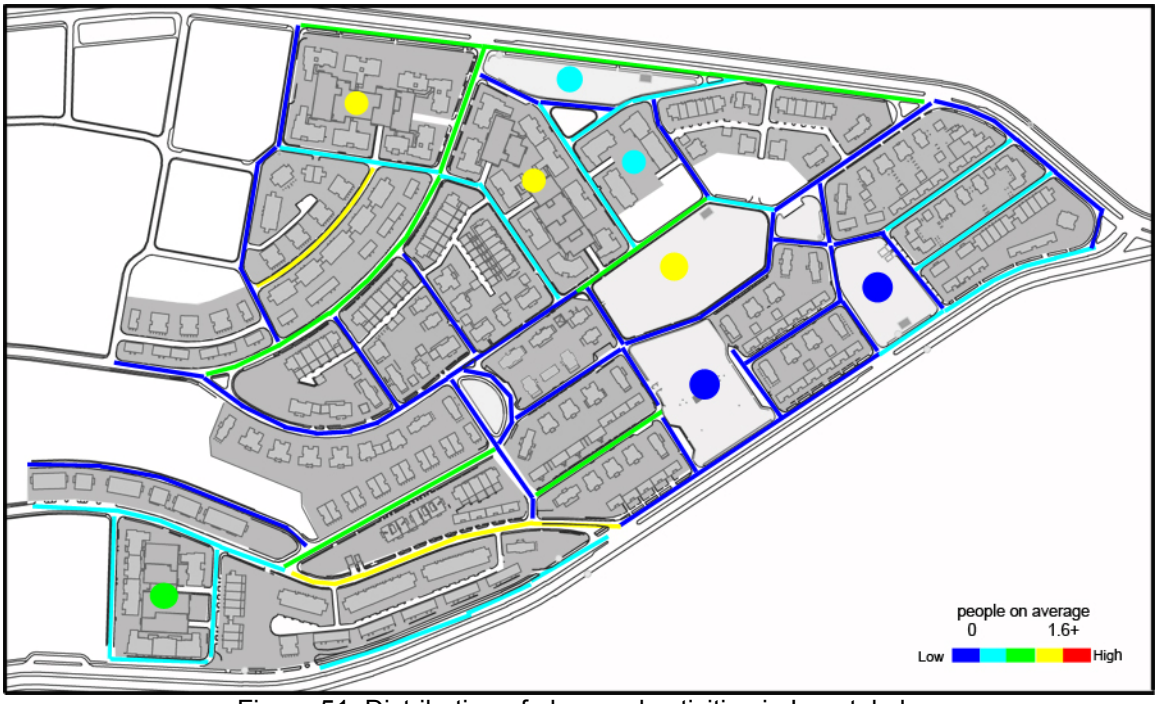


Figure 51. Distribution of observed activities in Ispartakule

The findings suggest that the patterns of public space use in Ispartakule and CHV are quite different. In CHV, the following types of activities were observed: walking, dog walking, walking with stroller, jogging, biking (both children and adults), playing (in playgrounds, parks, front lawns, porches and sidewalks), and gardening (in the front lawn). The activity patterns can be summarized as follows: 1) parks, particularly the ones close to the physical center of the neighborhood, were actively used by residents; 2) streets surrounding the parks were relatively active compared to the rest of neighborhood streets; 3) the streets where homes are located were more active than the streets with condos; and 4) the streets where condos are located were quite deserted.

As a result, one can conclude that 1) CHV residents, both adults and children, utilize parks often; 2) residents of homes use front lawns actively as a semi-public space and as an extension of street space; and 3) condo residents do not utilize public space in front, either because there are fewer children living in these buildings, or because the front lawns are quite small compared to those of homes.

On the other hand, Ispartakule revealed a different pattern of public space use. There was less variety of observed activity types, which were limited to walking, children playing (in playgrounds or playfields), children biking, swimming, and gardening. The observed activity patterns within the neighborhood can be summarized as follows: 1) parks within the neighborhood were almost empty most of the time; 2) playgrounds were utilized by children, particularly on Saturday and during the late afternoon on weekdays (i.e., after school hours); 3) common areas surrounded by apartment blocks were more active than parks, particularly on Saturday and during the late afternoon hours; and 4) the streets lined with attached homes and/or apartment blocks were more active than the streets lined with detached homes.

In addition, the distribution of activity locations was quite different from CHV. Ispartakule residents do not utilize parks within the neighborhood but prefer going to the adjacent Nature Park. In addition, detached homes do not contribute to public life, as they are surrounded by walls or other visual barriers such as opaque fences and/or greens, which isolate them from the public space. However, the streets with attached homes have a more active public life because the children living in these buildings play on the streets. Since the front lawns of attached homes are small, children prefer playing on the streets.

Finally, apartment blocks built around courtyards are isolated from the streets and the rest of the neighborhood both visually (by buildings surrounding courtyards) and physically (by elevated platforms). They are therefore introverted, with their isolated activities taking place in the courtyards.

### The Relationship Between Configurational Properties and Activity Patterns

This section explores the relationship between spatial configuration of neighborhoods and observed activity patterns. The correlations between average numbers of people observed on a street segment, constitutedness[30] and mean integration[31] values of the street segments are summarized in Table 3 for CHV and in Table 4 for Ispartakule. The findings reveal a noteworthy difference between the two neighborhoods with regard to how their spatial properties and public space use shape each other.

| CHV | | Number of people observed | Constitutedness | Integration Value |
|---|---|---|---|---|
| **Number of people observed** | Pearson Correlation | 1 | | |
| | Sig. (2-tailed) | | | |
| | N | 38 | | |
| **Constitutedness** | Pearson Correlation | 0.092 | 1 | |
| | Sig. (2-tailed) | 0.584 | | |
| | N | 38 | 38 | |
| **Integration Value** | Pearson Correlation | 0.220 | 0.086 | 1 |
| | Sig. (2-tailed) | 0.183 | 0.608 | |
| | N | 38 | 38 | 38 |

Table 22. Correlations between number of people observed in street segments(activity), constitutedness of street segment (entrances), and integration of street segment in CHV

In CHV, the correlation between the number of people present in public space (activity) and the number of entrances directly connected to that public space (entrances) is not

[30] *Constitutedness* measures direct accessibility of interior and exterior spaces via building entrances (Hillier and Hanson, 1984). When buildings are directly accessible to a node (an axial line or a convex space), the node is considered a constituted space. If buildings are adjacent to a node, but not directly accessible, then the node is unconstituted. This measure is important in revealing the relationships among buildings, public space and activity patterns within the neighborhoods.

[31] *Local integration (radius 3)* is the "integration only up to three lines away from each line in every direction" (Hillier, 1996). It measures the local accessibility of a node, taking into account up to three directional changes. This measure helps to reveal how integrated the streets and the civic spaces are within each neighborhood. The higher the integration value within the system, the more likely these public spaces are to draw natural movement and hence co-presence (Hillier, 1996; Hillier and Hanson, 1984; Peponis et al., 1989; Peponis and Wineman, 2002).

significant. Therefore, constitutedness is not likely to have a significant role as a multiplier factor to integration in attracting co-presence and movement within public space.

As the configurational analysis revealed, the integration core of CHV successfully integrates different parts of the neighborhood with each other and the immediate surroundings. In addition, the civic spaces form a well-integrated and well-distributed system within the neighborhood. As a result of this well-designed spatial system, CHV is able to support natural movement and co-presence in public spaces. Therefore, integration is the major spatial property of the configured system, and it has the greatest impact on public space use in CHV.

As mentioned earlier in Chapter 6, constitutedness is a multiplier effect to integration, the likelihood of a space to attract natural movement and co-presence. In the case of CHV, the relationship between how constituted a street segment is and how much activity it accommodates is less significant than the relationship between integration and activity level of a street segment. This is because several of the most integrated streets are also the most constituted streets (Constitution St. and the streets surrounding Park 1 and Park 2); however, they do not collect much of the activity occurring within the neighborhood. In addition, 4 out of the 10 most constituted streets coincide with less integrated street segments within the system. Three out of these 4 most constituted but less integrated streets accommodate low levels of co-presence.

| Ispartakule | | Number of People Observed | Constitutedness | Integration Value |
|---|---|---|---|---|
| **Number of People Observed** | Pearson Correlation | 1 | | |
| | Sig. (2-tailed) | | | |
| | N | 50 | | |
| **Constitutedness** | Pearson Correlation | .574(**) | 1 | |
| | Sig. (2-tailed) | 0.000 | | |
| | N | 50 | 50 | |
| **Integration Value** | Pearson Correlation | 0.001 | -0.269 | 1 |
| | Sig. (2-tailed) | 0.994 | 0.059 | |
| | N | 50 | 50 | 50 |

**. Correlation is significant at the 0.01 level (2-tailed).

Table 23. Correlations between number of people observed in street segments, constitutedness of street segment, and integration of street segment in Ispartakule

Unlike in CHV, in Ispartakule the best predictor of activity levels on a street segment is constitutedness, the number of entrances directly connecting to that street segment. The correlation between the number of people within a street segment and its degree of constitutedness is 0.574, which is significant at the 0.01 level. However, the correlation between the integration values of a street segment and the number of people that segment accommodates is quite low (0.001).

This finding reinforces the configurational analysis findings discussed in Chapter 6. Ispartakule's spatial arrangement is not well-designed to foster pedestrian movement and co-presence in the streets and in civic spaces. In other words, the integration core of the street network does not connect parts of the neighborhood well. Neither does it integrate civic spaces to the whole neighborhood; rather, it keeps them quite segregated.

Activity observations strongly support these findings. The most actively used street segments are not the most integrated ones but the most constituted ones. In the case of Ispartakule, because the integration core of the street network of the neighborhood is not successfully designed to support movement and co-presence, the constitutedness of a space plays a significant role in determining how likely it is that the space will be used.

Although the negative correlation (-0.269) between the number of building entrances directly connecting to the street segment and integration values of the segment is not significant, it is informative. It suggests that the most integrated streets are likely to be the least constituted, but the least integrated streets are likely to be the most constituted. Less integrated but more constituted streets attract movement and co-presence. As a result, public space use in Ispartakule is focused at the local level (on the less integrated street segments within the neighborhood), rather than being well-distributed and well-connected throughout the whole neighborhood.

### 7.2 Social Capital

This section inquires into social capital in each of the case study neighborhoods as a reflection of residents' perceptions of their community and their social behavior both within and outside their community. A short version of Putnam's survey instrument

measuring levels of social capital at community level was utilized as a part of the survey instrument. The intention is to comprehend several factors contributing to social capital: 1) level of trust of others in general and of neighbors; 2) informal socializing (knowing neighbors, reciprocal favors amongst neighbors, and home visits); 3) community participation; and 4) organizational engagement. In addition to the survey, personal interviews provide rich data about community life and residents' perceptions of it in each neighborhood.

## Social Engagement

### *Trust*

The residents were provided with two questions measuring the level of trust. The first is: "*Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?*" The second is: "*Generally speaking, how much would you say that you can trust people in your neighborhood?*" Residents were asked to answer using a four-point scale (4=trust them a lot and 1=trust them not at all). The charts below summarize and compare the answers to these questions in each neighborhood.

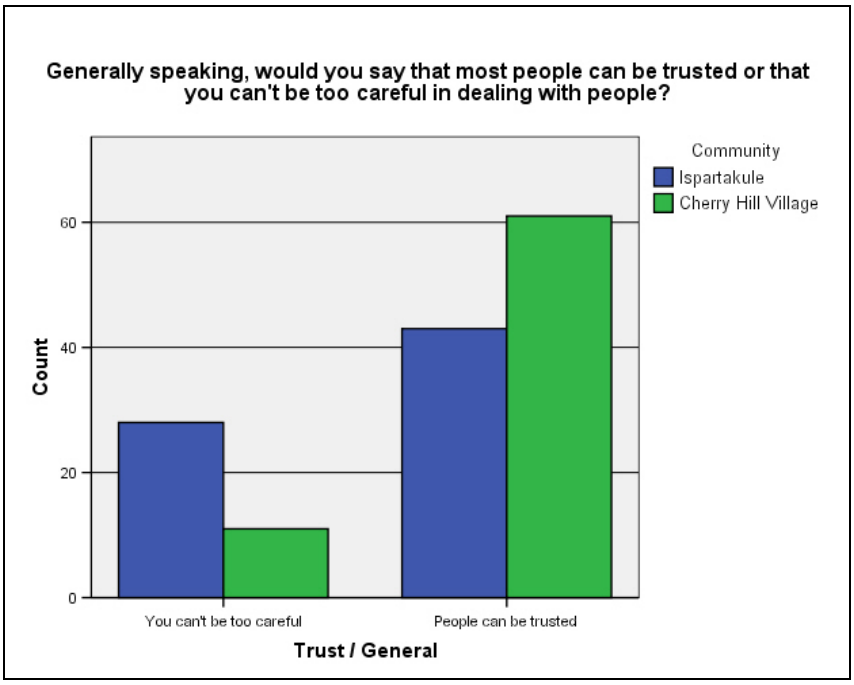



Figure 52. Trust of others in general

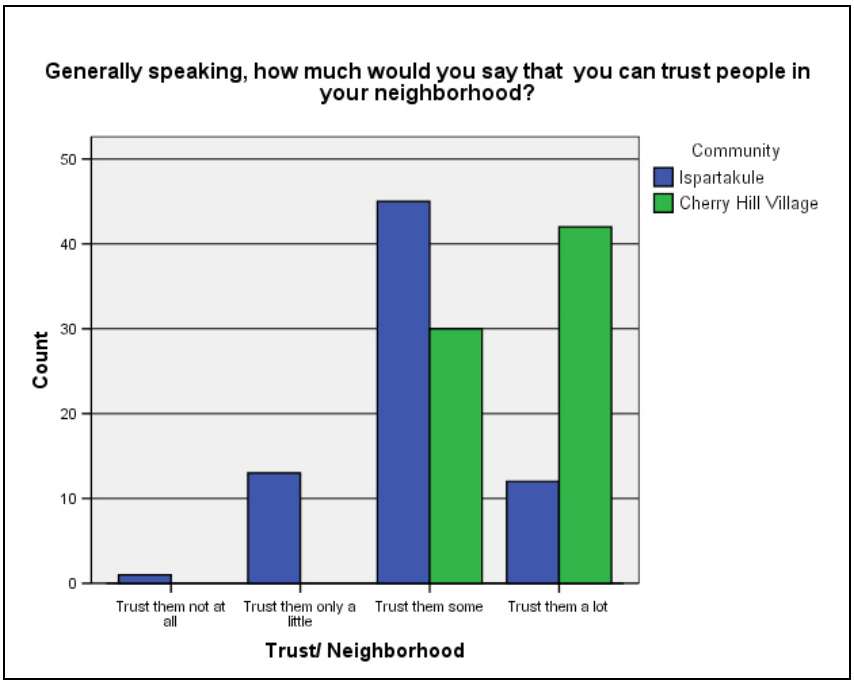


Figure 53. Trust of neighbors

| | Ispartakule | | | | | | CHV | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | Min | Max | Mean | Med | SD | N | Min | Max | Mean | Med | SD | t | Sig. (2-tailed) |
| **Trust General** | 71 | 0 | 1 | **0.61** | 1.00 | 0.492 | 72 | 0 | 1 | **0.85** | 1.00 | 0.362 | -3.346 | 0.001 |
| **Trust Neighborhood** | 71 | 1 | 4 | **2.96** | 3.00 | 0.642 | 72 | 3 | 4 | **3.58** | 4.00 | 0.496 | -6.511 | 0.000 |

Table 24. Mean values of trust of others in general and of neighbors

While the majority of survey respondents in both neighborhoods believe that people can be trusted in general, a significantly higher percentage of survey respondents in CHV (85 percent) experience trust of people in general compared to survey respondents in Ispartakule (61 percent). Consequently, a significantly higher percentage of survey respondents in Ispartakule experience lower levels of trust of others (39 percent) compared to survey respondents in CHV (15 percent).

A similar pattern exists regarding trust of neighbors. While the majority of survey respondents in both communities trust their neighbors either “a lot” or to “some” extent, a relatively higher percentage of the survey respondents in CHV (58 percent) trust their neighbors “a lot” compared to survey respondents in Ispartakule (17 percent). Moreover, none of the survey respondents in CHV trust their neighbors either “not at all” or only “a little”; however, 14 percent of the survey respondents in Ispartakule belong to this group.

These findings suggest that survey respondents in Ispartakule are experiencing significantly lower levels of trust—of both others in general and of neighbors—relative to survey respondents in CHV. Because trust is fundamental for developing social networks and reciprocity of social relations, relatively lower levels of trust in Ispartakule might indicate lower levels of social engagement in both formal and informal social networks within the neighborhood. On the other hand, survey respondents in CHV are likely to have higher levels of social engagement, as their level of trust is relatively high. However, one cannot assume causality between trust and social engagement, as there might be other contributing factors.

*Neighboring Behavior*

To discover the pattern of neighboring behavior amongst the residents in CHV and Ispartakule, the survey asked two questions: 1) "*Of the 10-15 neighbors living nearest to you, how many of the adults do you know by name?*" Residents were asked to respond using a five-point scale (5=all or almost all and 1=none or almost none). 2) "*How often do you and your neighbors do favors for each other, for example, watching each others' children, lending tools, helping with shopping, etc.?*" Again, residents were asked to respond using a five-point scale (5=daily or almost daily and 1=never). The charts below summarize and compare the answers to these questions in each neighborhood.

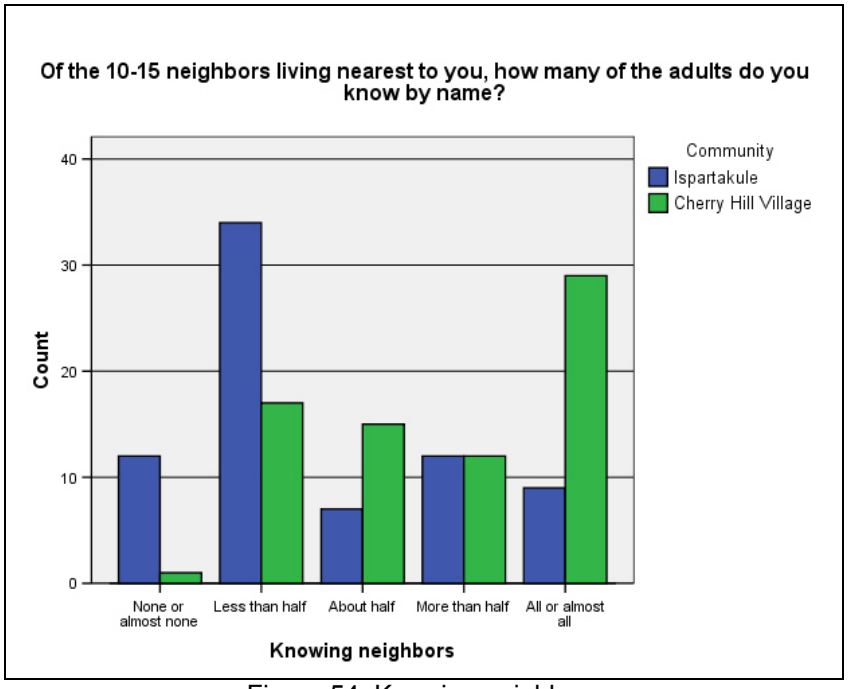



Figure 54. Knowing neighbors

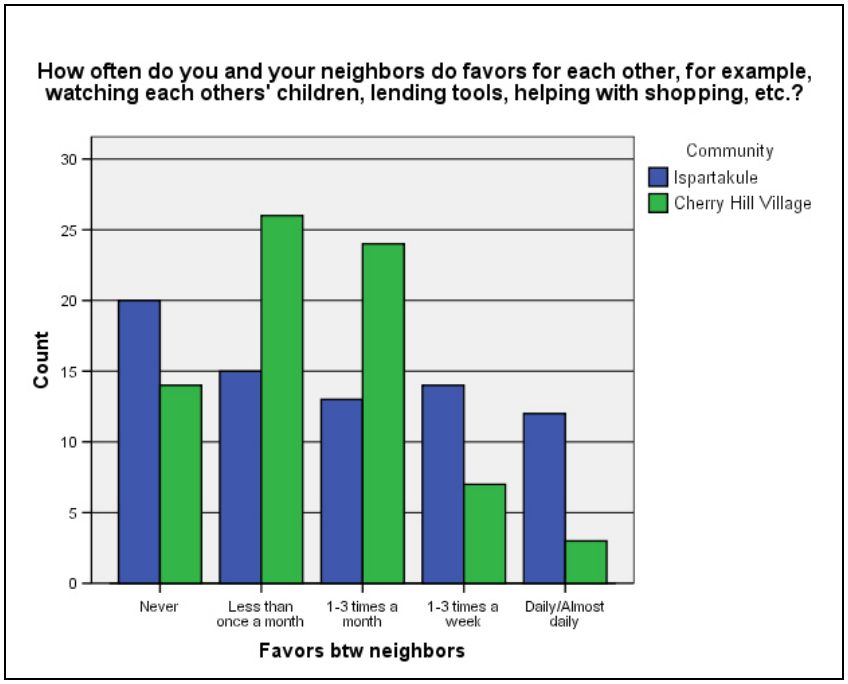


Figure 55. Mutual favors amongst neighbors

| | Ispartakule | | | | | | CHV | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | Min | Max | Mean | Med | SD | N | Min | Max | Mean | Med | SD | t | Sig. (2-tailed) |
| **Knowing neighbors** | 74 | 1 | 5 | **2.62** | 2.00 | 1.279 | 74 | 1 | 5 | **3.69** | 4.00 | 1.249 | -5.138 | 0.000 |
| **Favors btw neighbors** | 74 | 1 | 5 | **2.77** | 3.00 | 1.448 | 74 | 1 | 5 | **2.45** | 2.00 | 1.036 | 1.567 | 0.119 |

Table 25. Mean values of number of neighbors known by name and frequency of mutual favors amongst neighbors

The findings reveal that the patterns of informal relations between neighbors in CHV and Ispartakule are quite different. The majority of the survey respondents in Ispartakule reported that they know less than half of the neighbors living closest to them by name (16 percent know “none or almost none,” and 46 percent know “less than half”). In contrast, the majority of survey respondents in CHV know more than half of the neighbors living closest to them by name (39 percent know “all or almost all” and 16 percent know “more than half”).

Considering Ispartakule’s high density of settlement in Ispartakule relative to CHV, this difference is significant. Most of the survey respondents in Ispartakule live in apartment flats that increase physical proximity. However, they know only less than half of their closest neighbors by name. In contrast, the majority of survey respondents in CHV live in single family homes, yet they know more than half of their closest neighbors by name.

Three factors might be contributing to this difference. The first is a possible cultural difference between socialization patterns in the US and Turkey: Turkish people may not be as outgoing as American people. The second possible factor is a difference between the attitudes of the residents living in apartment flats in Ispartakule and the attitudes of the residents living in single family homes in CHV. The third possible factor is the difference in the number of building entrances directly connected to the adjacent public space (constitutedness). In Ispartakule, 16-18 households in each apartment building are connected to the adjacent public space via only one entrance. As discussed in the previous section, this low level of constitutedness affects the level of activity within the public space negatively and therefore decreases the chances of encounter between the residents of apartment buildings. On the other hand, all single family homes and households living in condominiums in CHV have main entrances directly connecting to the adjacent public space. Because highly constituted public spaces are likely to accommodate more activities, they are also likely to increase chance encounters amongst the households residing on the same street.

The findings about mutual favors between neighbors (reciprocal neighboring relationships) reveal another difference between CHV and Ispartakule. The frequency of mutual favors amongst neighbors in CHV has a notable pattern; the majority of survey respondents and their neighbors do reciprocal favors for each other 1-3 times a month or less (32 percent “1-3 times per month,” 35 percent “less than one a month,” and 19 percent “never”). However, in Ispartakule this pattern is not so significant. Reported frequencies of mutual favors amongst the neighbors are almost evenly distributed on the five-point scale, with “never” being the most common (16 percent “daily or almost daily,” 19 percent “1-3 times a week,” 18 percent “1-3 times a month,” 20 percent “less than once a month,” and 27 percent “never”).

Comparing the findings about mutual favors amongst neighbors and the number of neighbors known by name in Ispartakule, one can suggest that although most of the survey respondents do not know more than half of their neighbors by name (in other words, their social network is smaller), they have higher frequencies of mutual favors amongst neighbors (i.e., reciprocity), relative to survey respondents in CHV.

*Home visits*

Another indicator of informal interaction amongst neighbors is frequency of home visits, which is explored via two questions in the survey instrument. The first question ("*How many times in the past twelve months have you been in the home of someone living in CHV/Ispartakule or had them in your home?"*) inquires into the level of informal social interaction within the case study neighborhoods. The second question ("*How many times in the past twelve months have you been in the home of someone outside CHV/Ispartakule or had them in your home?")* inquires into survey respondents' overall interaction level outside their neighborhoods. Both questions asked residents to answer using an eight-point scale (8=more than once a week and 1=never did this). The charts below summarize and compare the answers to these questions in each neighborhood.

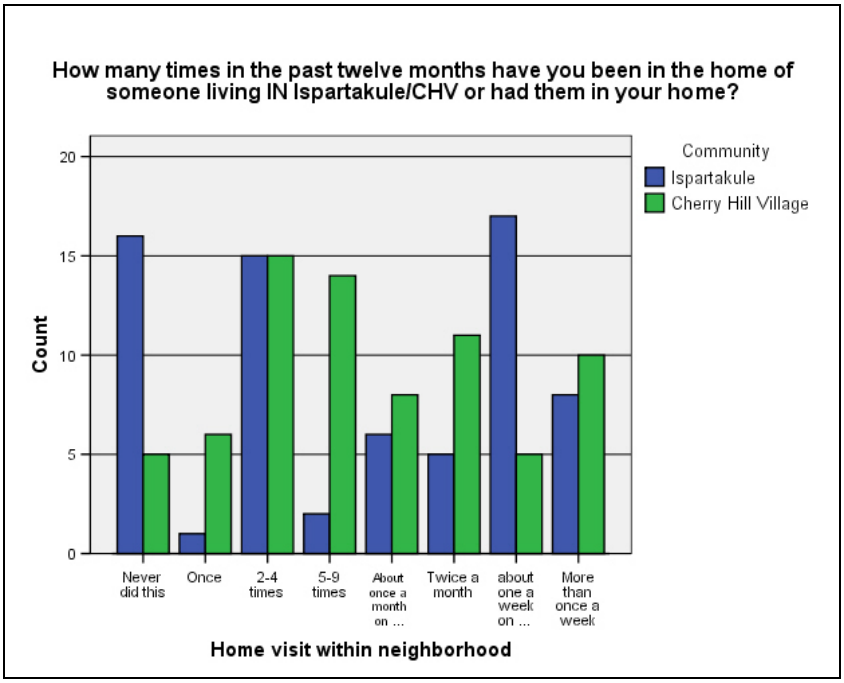



Figure 56. Home visits within neighborhood

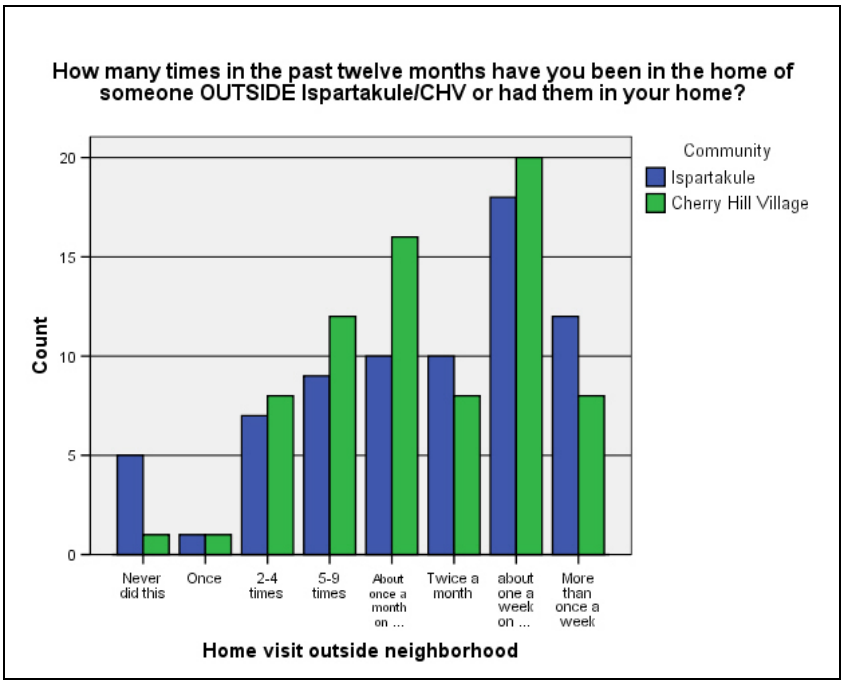



Figure 57. Home visits outside neighborhood

| | Ispartakule | | | | | | CHV | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | Min | Max | Mean | Med | SD | N | Min | Max | Mean | Med | SD | t | Sig. (2-tailed) |
| **Home visit in neigh.** | 70 | 1 | 8 | 4.49 | 5.00 | 2.564 | 74 | 1 | 8 | 4.58 | 4.00 | 2.081 | -0.246 | 0.806 |
| **Home visit outside neigh.** | 72 | 1 | 8 | 5.50 | 6.00 | 2.049 | 74 | 1 | 8 | 5.50 | 5.00 | 1.698 | 0.000 | 1.000 |

Table 26. Mean values of frequency of home visits in neighborhood and outside neighborhood

The findings reveal that there the two communities are not significantly different with regard to home visits. Amongst survey respondents in Ispartakule, there are two groups. Those in the first group visit their neighbors' homes or host neighbors in their home quite frequently (11 percent "more than once a week" and 24 percent "about once a week"). Those in the second group either never conduct these visits (23 percent "never did this") or conduct them quite infrequently (21 percent "2-4 times a year"). The different patterns of home visits amongst neighbors might be a reflection of the two major groups of survey respondents mentioned in Chapter 5 (homemakers/retirees and full-time employees).

In the case of CHV, the majority of survey respondents visit neighbors' homes or host them 5-9 times a year or less (19 percent "5-9 times a year," 20 percent "2-4 time a year," 8 percent "once a year" and 7 percent "never did this"). The rest of the survey respondents in CHV practice home visits about once a month and more often (11

percent “once a month,” 15 percent “twice a month,” 7 percent “once a week,” and 14 percent “more than once a week”).

When compared, the average numbers of home visits practiced by respondents within each neighborhood are quite similar: 4.49 in Ispartakule and 4.58 in CHV (more than 5-9 times a year but less than once a month). Similarly, the average number of home visits outside the neighborhood is 5.50 per year in both communities (more than once but less than twice a month on average).

These findings reveal that survey respondents in both CHV and Ispartakule pay less frequent home visits to their neighbors than to people living outside their neighborhoods. This might be because both of these neighborhoods are relatively young (7-8 years old); therefore, survey respondents might be relying more on their pre-existing social networks outside the neighborhood than on social networks inside the neighborhood.

*Community Participation*

One survey question (“*In the past 12 months, have you done anything with others in your neighborhood to try to deal with a community issue or problem?”)* explored level of participation in community issues. The findings, summarized in the chart below, reveal the significant difference between Ispartakule and CHV in survey respondents’ level of community participation. While in Ispartakule only 28 percent of the survey respondents took action with others in their neighborhood to deal with a community problem within the past 12 months, in CHV this percentage goes up to 59 percent.

This significant outcome might be due to the different management styles of the two communities. CHV has homeowners’ association, which creates a collaborative environment in the community by bringing residents together to discuss and vote on neighborhood issues. This also encourages volunteerism, as CHV residents can take on executive responsibilities within the association. However, the homeowners’ association in Ispartakule is not active; decisions about major community issues are made by a professional firm hired for community management. This method of community management does not encourage a participatory environment for Ispartakule residents.

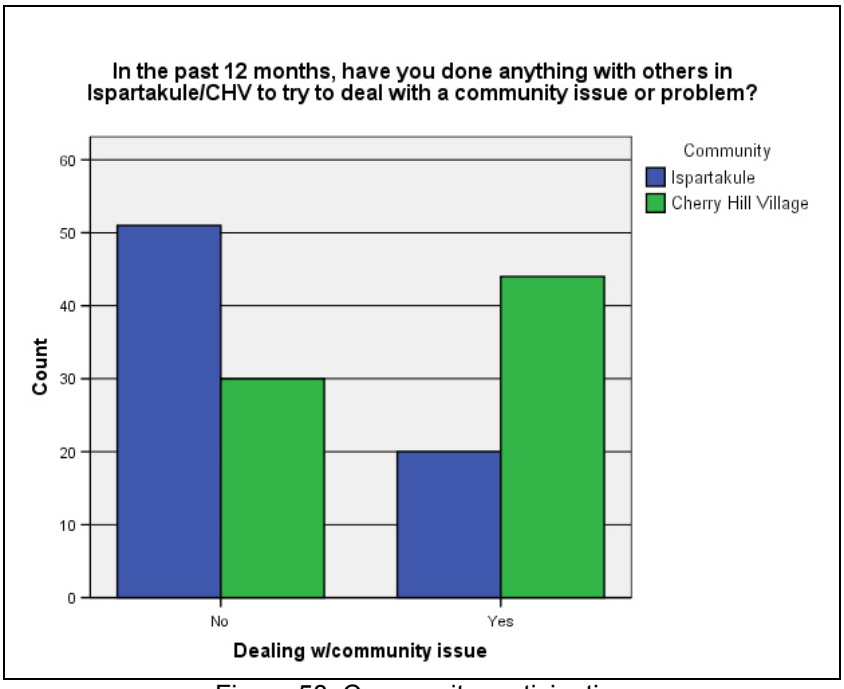


Figure 58. Community participation

| | Ispartakule | | | | | | CHV | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | Min | Max | Mean | Med | SD | N | Min | Max | Mean | Med | SD | t | Sig. (2-tailed) |
| **Dealing with community issue** | 71 | 0 | 1 | **0.28** | 0.00 | 0.453 | 74 | 0 | 1 | **0.59** | 1.00 | 0.494 | -3.969 | 0.000 |

Table 27. Mean values of dealing with community issue

*Engagement in Organizational Activities*

Finally, the survey explored another dimension of social capital, formal social interaction (that is, engagement in organizations or clubs). One question ("*How many times in the past twelve months have you attended club or organizational meetings* within *CHV/Ispartakule?"*) inquires into the level of formal engagement within the case study communities. Another question ("*How many times in the past twelve months have you attended club or organizational meetings outside Cherry Hill Village, not including meetings for work?")* examines residents' overall tendency to engage in formal organizations or clubs. Both questions use an eight-point scale (8="more than once a week" and 1="never did this"). The charts below summarize and compare the answers to these questions for each neighborhood.

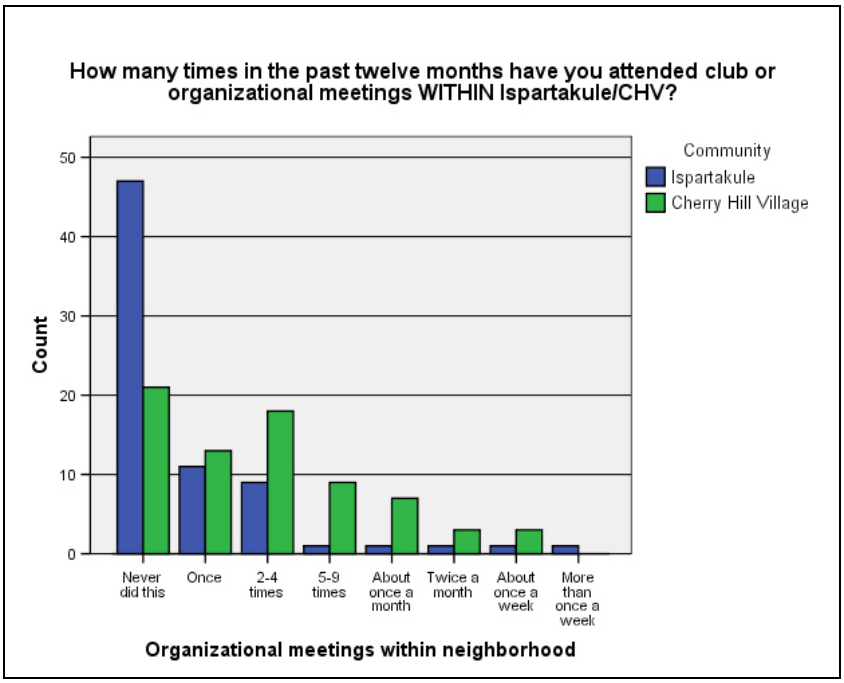



Figure 59. Organizational engagement within community

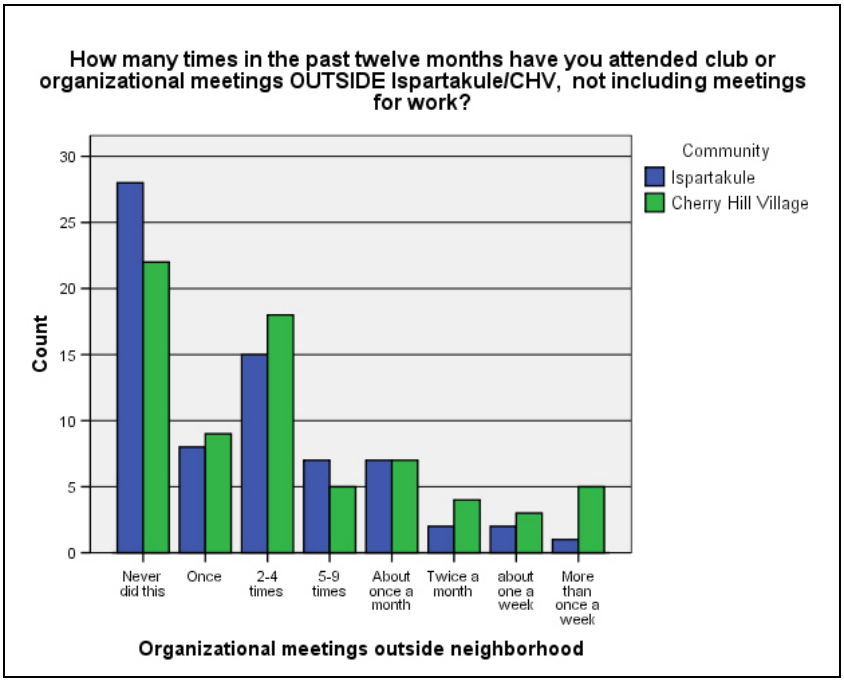



Figure 60. Organizational engagement outside community

| | Ispartakule | | | | | | CHV | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | Min | Max | Mean | Med | SD | N | Min | Max | Mean | Med | SD | t | Sig. (2-tailed) |
| **Org. meetings in neigh.** | 72 | 1 | 8 | 1.75 | 1.00 | 1.412 | 74 | 1 | 7 | 2.85 | 3.00 | 1.685 | -4.274 | 0.000 |
| **Org. meetings outside neigh.** | 70 | 1 | 8 | 2.66 | 2.00 | 1.793 | 73 | 1 | 8 | 3.21 | 3.00 | 2.160 | -1.655 | 0.100 |

Table 28. Mean values of engagement in organizational activities in neighborhood and outside neighborhood

The findings suggest that there is significant difference between two communities. Survey respondents in CVH and Ispartakule are not very active in organizational or club meetings, either within or outside their communities. However, CHV survey respondents have higher participation rates (2.85 on average in neighborhood and 3.21 on average outside neighborhood, approximately "2-4 times a year") relative to survey respondents in Ispartakule (1.75 on average in neighborhood, approximately "once a year," and 2.66 on average outside neighborhood, approximately "2-4 times a year"). In particular, 65 percent of survey respondents in Ispartakule reported that they have never attended any club or organizational meetings in their community, while this number is 28 percent in CHV.

### Characteristics of Social Life in Ispartakule/CHV

In addition to the survey instrument, face-to-face interviews also explored the level of social engagement in the case study neighborhoods. In order to understand the effect of the neighborhood on residents' levels of social engagement, two questions asked interviewees to rate their answers on a ten-point scale *(10=socially very interactive or involved, 1=not socially interactive or involved, and 5=moderately socially interactive or involved).* The first question is "*Generally speaking were you a socially active/involved person? Would you describe yourself as a person who interacts frequently with neighbors?" The second question is "Has this changed since you moved to CHV? How would you rate yourself now in terms of how much you interact with neighbors?"* According to the findings summarized below, interviewees in both neighborhoods believe that their level of social participation has increased after moving to Ispartakule or CHV. This increase is higher in CHV than in Ispartakule (from 5 to 7 in CHV and from 6.14 to 7 in Ispartakule).

| | **Ispartakule** | | | | | **CHV** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | N | Min | Max | Mean | SD | N | Min | Max | Mean | SD |
| **Socially active before moving** | 14 | 3 | 9 | **6.14** | 2.033 | 20 | 1 | 10 | **5.00** | 3.009 |
| **Socially active after moving** | 14 | 4 | 10 | **7.00** | 2.353 | 20 | 2 | 10 | **7.00** | 2.616 |

Table 29. Perceived social participation before and after moving to CHV/Ispartakule

The responses given to the question "*What kinds of things do you often do now in Ispartakule that you didn't do before moving here?"* shed light on the differences between interviewees' behavior in their previous and current neighborhoods. The findings of thematic coding suggest that interviewees living in CHV believe that they interact more with their neighbors (60%), get more involved in organized activities such as community picnic or book club (50%), walk more (30%) and go to local businesses (20%) than they did in their previous neighborhoods. (Please refer to Appendix C for thematic coding details.) The following quotations are typical of the responses provided by CHV residents.

> *[What we do differently than in our previous neighborhood is] watching and talking to people. We get to know people, kids and animals. We never had this opportunity before. We watch the kids play baseball and Frisbee in the park, even adults.* (CHV interview)

> *It is the interaction with the neighbors. In the old neighborhood it was simple "hello" and "goodbye" when you drive down the street. Everybody kind of knew who you were but here we are in neighbors' homes and eating meals together. It is much more personal.* (CHV interview)

> *We didn't have common areas like parks in the previous neighborhood. We didn't have a dog then to walk and to take to the park. Also we didn't have any shops and retail area close to us. Now we can go to the common areas and shops.* (CHV interview)

> *I feel better just walking the dog anytime of the day or night. There is always somebody else walking their dogs, jogging or talking, even in the winter…. The activities that the social community does, such as the dinner club, [are] a lot of fun. There are more activities for kids, like Bunny Day, Spooky Saturday, etc.—just the whole calendar of events I couldn't have done elsewhere. I actually lived in my previous neighborhood for 40 years.* (CHV interview)

Ispartakule residents responded quite differently to this question. They reported that they walk for exercise more often (36%) and that their children can play in common areas more freely and safely (29%) in Ispartakule than in their previous neighborhoods. In contrast to CHV interviewees, who frequently mentioned social interaction, Ispartakule interviewees stressed changes in personal or family activities due to availability of amenities (29%) and a feeling of safety (29%) more often than social relationships. The following quotations are examples of this perception.

> *I can exercise and walk here. I didn't have any chance to do this in my previous neighborhood. Also, my kids can enjoy amenities and common areas. My youngest son goes to the pool and my elder son goes to the closest sports facilities in the neighborhood. I am very happy about it.* (Ispartakule interview)

> *I have more freedom here. I can go wherever I want at the time I want. I can walk even at night. More importantly, my kids are relaxed and free here. My kids can go out, go to the pools. Basically, we have the feeling of being free for 12 months a year, similar to what you would feel at a vacation place.* (Ispartakule interview)

> *I retired after I moved in. My kids were small then; now they are grown-ups. Now I have more time to socialize with people and I do socialize. But I believe this doesn't have anything to do with Ispartakule but [rather with] me, my stage of life.* (Ispartakule interview)

Finally, one open-ended question ("*How would you describe the social life in your community?")* explored residents' overall perceptions of social life within their neighborhoods. Thematic coding suggests that more than half of the interviewees in CHV agree that their neighborhood has a very active social life (60%). Interviewees mention two types of activities as examples of active community life. The first type consists of organized social events open to all community members and their guests, such as the annual community picnic, Spooky Saturday, Christmas in the Village, and movie nights on the green, which take place in civic areas within the neighborhood. The second type consists of smaller-scale, informal and more private gatherings amongst neighbors facing same alley or street; these events are called "alley parties."

Most of the interviewees think that organized social events are family friendly. However, interviewees living in households without children find these activities isolating, and therefore they are less involved. While children and pets are common interests for many neighbors and serve to enhance their interaction, this dynamic can also work to isolate people who do not have children or pets. This effect becomes more obvious when members of different types of households are interviewed. Interviewees from CHV, particularly the ones who live in condos, often complain about the difference between the social lives of those living in condos (mostly empty-nesters and single professionals) and those living in homes (mostly families with children). According to interviewees, the interaction between people living in condos and homes is quite low. Interestingly, the interaction amongst condo-dwellers themselves is also quite low—probably because

they lack common interests (such as children), or because they are in different life stages (such as full-time employment versus retirement). The following quotations show how CHV interviewees perceive social life in their neighborhood.

> *Pretty active and social community. Everybody knows everybody. People are interconnected. You might not know people personally but you know who they are. I know a couple of couples in condos who have children with whom we interact. My sister is single and lives in one of the condos. I don't think she interacts as we do. Single or married couples don't have the opportunity to walk around and meet with people. Kids are the connection. I have another sister here who lives in one of the single family homes; she has two kids and dogs. She is even more social than I am.* (CHV interviewee living in a home)

> *[W]e have alley parties. We barbeque at the backyards, we have drinks, etc. It is a community thing. We were snow bowing. We help each other. We don't have that feeling in subdivisions. We have a big picnic here, Christmas in the Village, Halloween, Easter egg party, they show movies in the parks, and kids bring a tent to the park and sleep in it. It is a very active community. Very kid oriented. If you want to be isolated, this is not the place to live. If you like privacy, you won't like this place. When [my wife] sits in front of the window she talks with people over the window for half an hour.* (CHV interviewee living in homes)

> *It is terrible. Because I don't have children and I live in condo, I don't have the social interaction that some of the young families do. We don't have people sitting in the porch, talking. My complex [has single people]. They are busy, they don't have children, and they are professionals. There is no "How are you doing? How was your day at work?" I believe [that] in the streets where they have homes, they have more interaction compared to us.* (CHV interviewee living in a condo)

In Ispartakule, 79 percent of the interviewees agree that the social lives of stay-at-home mothers and retirees are quite different than those of full-time working people as they pursue different types of activities within the neighborhood. On one hand, professionals working full-time cannot spend much time in their neighborhoods, so they cannot invest time in developing social relationships. As a result, they barely know their closest neighbors. On the other hand, stay-at-home mothers and retired women spend more time within the neighborhood and have relatively active lives both socially and physically. They frequently organize informal gatherings, mostly at each other's homes, and they also attend formal activities organized by the municipality, such as workshops (handcrafts, computer use, etc.) or classes (language, music, history, etc).

Another significant difference that emerged during interviews is between the social lives of those living in villas versus apartments in Ispartakule. Forty-three percent of interviewees mentioned that villa residents socialize with each other. Similarly, apartment residents socialize with other apartment residents, but there is not much social interaction between these two groups. Although similar to the divide between condo- and home-dwellers in CHV, the divide between apartment- and villa-dwellers in Ispartakule probably stems from factors other than family type and/or life stage, since both the apartment and villa residents in Ispartakule are mostly families with children. The dividing factor in this case is likely to be wealth, as the prices of villas and apartment flats are quite different.

Finally, relative to CHV, Ispartakule lacks organized activities involving all residents. While such activities are at the center of social life in CHV, they are not available to Ispartakule residents. Therefore, residents in Ispartakule might have smaller social networks to connect and socialize with. The following quotations from interviewees living in Ispartakule elaborate further on the social life of the community.

> *Social life is very nice. Most of the women living in the neighborhood have their own small social circles and do different activities. For example, there is a group of residents who provide fellowships for the kids who are in financial need. With my friends we have regular gatherings such as breakfast once a week usually.* (Ispartakule interview)

> *We meet with people because of our daughter. We don't make a special effort to socialize with people. We talk to the neighbor who is living below our apartment. Mostly my wife talks to them. Our kids go to each others' house to play together. I don't need to have relationship with my neighbors because I am working a lot.* (Ispartakule interview)

> *I believe the organization of the buildings affect the sense of community. The apartments are on one side of the community which is isolated from the rest which is mostly composed of villas. There is a disconnection between the life of apartments and villas. I am not social. But the women in the apartment community are very active. They organize get-togethers very often. If you knock one their door you will always be welcome.* (Ispartakule interview)

> *Approximately 80% of the women who are living in Ispartakule don't work. They are educated but choose not to work. The social life in Ispartakule is very lively due to these people. The mayor arranges meetings and activities only with women where you have high rate of attendance. The*

*social life is well-developed and lively. People meet at cafes, restaurants, their houses or organize tea parties. Thirty percent of the time meetings are with husbands. Unfortunately there is no communication between villas and blocks. The villa residents don't go out of their villas; therefore they are isolated from the rest. But they socialize with each other. They have their own social circle which is as strong as the [apartment] blocks*'. (Ispartakule interview)

### 7.3 Summary of Findings

This chapter inquired into life in each case study neighborhood. The findings reveal the types of activities (social vs. individual and casual vs. organized) as well as patterns of public space use with respect to space organization. Finally, information about residents' perceptions of their community and level of social engagement sheds light on the overall quality of neighborhood life.

There are three major findings about public space use and activities: First, CHV respondents walk more to exercise, to go to public places, and to visit someone, whereas Ispartakule respondents walk more for utilitarian purposes (that is, to make a purchase or go to public transit). Second, the variety of activity types and the utilization of civic spaces are higher in CHV than in Ispartakule. While in Ispartakule public life is more active at the local level (that is, certain streets are more often used than parks), in CHV parks and the streets surrounding parks are active centers of public life. Third, the relationship between public space use and spatial configuration has quite different characteristics in the two neighborhoods. In Ispartakule, there is a significant correlation between the average number of people observed on street segments and the number of building entrances directly connected to that segment (constitutedness). In Ispartakule, the level of constitutedness of public space plays a larger role in shaping activity patterns than does the syntactic value of integration. Yet in CHV, constitutedness does not play such a significant role in determining the distribution of activities within the neighborhood.

The major findings about social engagement in each community can be summarized as follows. First, patterns of social engagement in Ispartakule and CHV are quite different. Survey respondents in Ispartakule trust their neighbors less and have smaller social networks within their neighborhoods than do respondents from CHV. However, they

exchange favors with their neighbors more often than CHV survey respondents do. Moreover, survey respondents in Ispartakule are not as actively involved in community issues as CHV respondents. This suggests that CHV residents are more likely than Ispartakule residents to be open to civic engagement.

Second, interviewees in both neighborhoods believe that their level of social participation has increased after moving. More than half of the interviewees in CHV perceive their neighborhood as a socially very active community. However, this perception varies greatly between different family types, such as singles/empty-nesters and families with children. CHV interviewees believe that they interact more with their neighbors, get more involved in organized activities, walk more and go to local businesses more than they did in their previous neighborhoods. Interviewees in Ispartakule believe that they walk for exercise more often and their kids can play in common areas more freely and safely than they could their previous neighborhoods. In Ispartakule, most of the interviewees agree that work status is an important factor shaping lifestyle. For example, stay-at-home mothers and retired women have relatively active social lives, as they spend more of their time within the neighborhood than full-time working residents do. Another notable finding is the difference in patterns of socialization with respect to building types. Villa residents socialize with each other, and apartment residents socialize with each other, but there is not much social interaction between these two groups.

# CHAPTER 8

# RESIDENT EXPERIENCES AND MOTIVATIONS

One of the objectives of this study is to understand the similarities and differences of perceptual qualities of New Urbanist neighborhoods in different cultural contexts. This chapter examines these qualities in two steps. First, the motivations of residents to choose the specific neighborhood they live in (in other words, their preferences) are analyzed as particularly important factors that play significant role in shaping residents' perceptions of the neighborhood. Second, utilizing the environmental consciousness levels as a categorical framework, this chapter inquires into how successful New Urbanist case study communities are in satisfying residents' goal-oriented needs (in other words, the perceived satisfaction of the residents with their neighborhood). In addition, the role of physical design features in supporting the fulfillment of residents' needs is also explored. Finally, the findings pertinent to each case study neighborhood are compared to outline the similarities and differences in residents' perceptions and motivations.

## 8.1 Residents' Motivations

One of the intriguing findings from empirical studies on New Urbanism is the role that motivations play for residents' moving into the neighborhood. For example, in his research, Kim explored the factors affecting residents' decisions to move to a New Urbanist community (Kentlands in Maryland) versus a conventional one (Orchard Village, Maryland). He found that of twelve different considerations, sense of community and traditional town concept were rated as the most important factors affecting Kentlands residents' decisions to move. In contrast, Orchard Village residents rated better housing as the most important (Kim, 2001). In other words, the Kentlands

residents might constitute a self-selected group of people who value New Urbanist principles such as a sense of community or social interaction.

Similarly, Handy drew attention to the self-selection factor amongst New Urbanist neighborhood residents in her study, which explored the relationship between urban form and pedestrian choices in Austin, Texas neighborhoods. Her findings suggest that residents of pedestrian oriented neighborhoods walk and stroll more. In addition, the residents of pedestrian oriented neighborhoods reported that having stores within walking distance was an important factor affecting their decisions to move. Handy suggests that residents of pedestrian oriented neighborhoods might be a self selected group with a common desire to walk to stores (Handy et al., Handy, 1996).

In light of previous research findings, this section analyzes the aspirations and motivations underlying the decision to move to the case study neighborhoods and how these differ in different cultural contexts. The first part of the analysis interprets the survey data for each community both separately and comparatively, while the second part focuses on the comparative analysis of the interview data.

### What Are The Factors Affecting The Survey Respondents' Decision To Move To Ispartakule / Cherry Hill Village?

*Survey Findings*

The survey provided residents with seventeen possible motivations and asked them to rate how important each of the factors was in their decision to move, using a five-point Likert scale (1=not important, 5=extremely important). The percentages of respondents who defined these seventeen factors as either extremely important (5) or very important (4) are summarized separately for CHV and Ispartakule in the two graphs below.

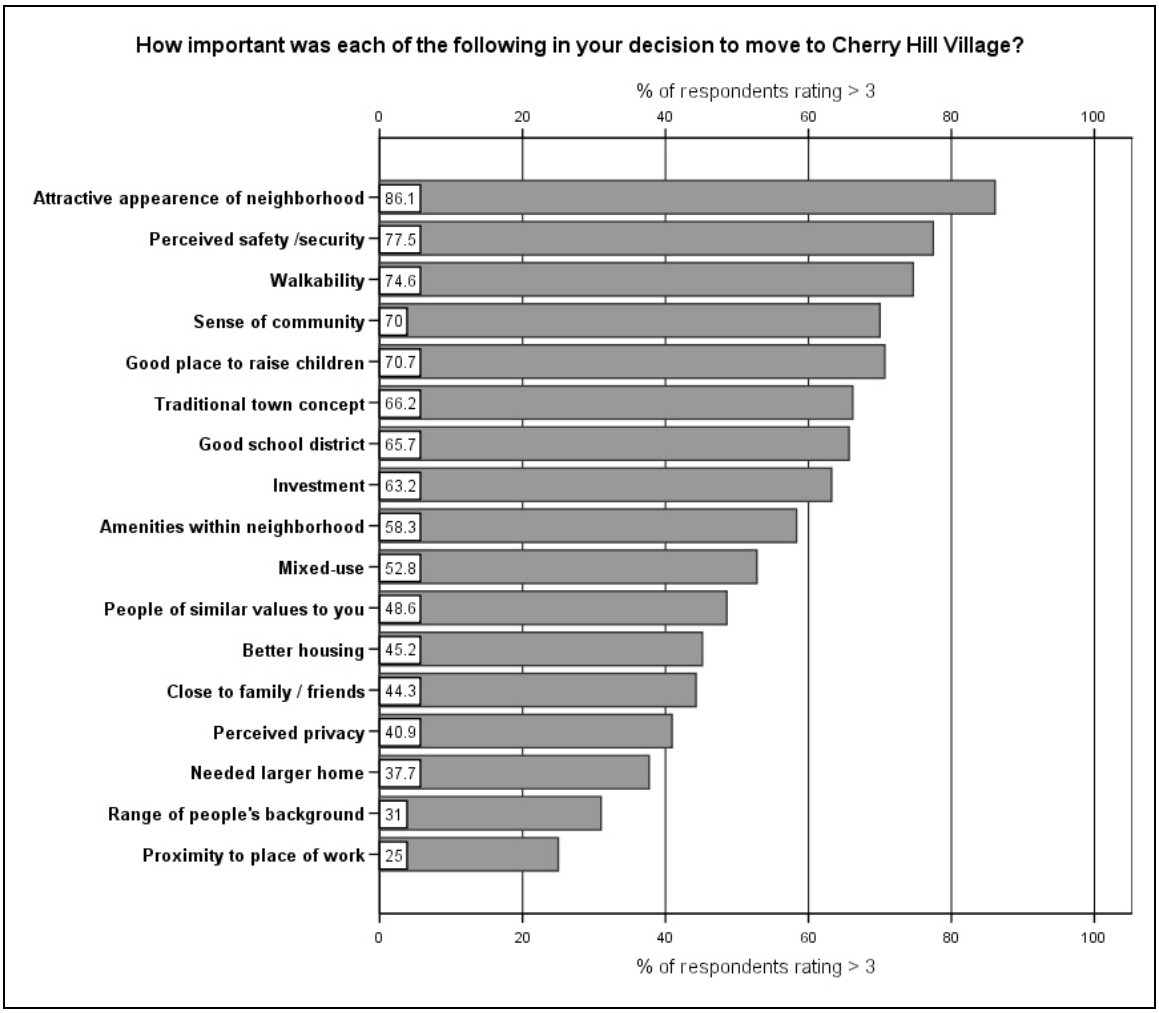



Figure 61. The percentage of survey respondents who ranked each possible motivation either as extremely important (5) or very important (4) in Cherry Hill Village.

According to the survey findings, more than 75 percent of the CHV survey respondents defined *attractive appearance of the neighborhood* (86.1%) and *perceived safety/security* (77.5%) as extremely important or very important factors affecting their decision to move to CHV.

In addition, 50-75 percent of the survey respondents living in CHV indicated that *walkability* (74.6%), *sense of community* (70%), *good place to raise children* (70.7%), *traditional town concept* (66.2%), *good school district* (65.7%), *investment* (63.2%), *amenities within neighborhood* (58.3%), and *mixed use* (52.8%) were either extremely important or very important factors that shaped their decision to move to CHV.

However, less than 50 percent of the survey respondents chose factors such as *people of similar values* (48.6%), *better housing* (45.2%), *being close to family and friends* (44.3%), *perceived privacy* (40.9%), *needed larger home* (37.7%), *range of people's background* (31%), and *proximity to place of work* (25%) as either extremely important or very important.

These survey findings suggest that factors which are closely related to New Urbanist features, particularly the architectural characteristics, availability of pedestrian-friendly environment, amenities (parks, trails, and squares), mixed use, and sense of community are the significantly important motivations for choosing CHV as a place to live for the survey respondents. In contrast, factors related to people's values and background proximity to place of work or family/friends, privacy and quality of housing were the least significant motivations for choosing CHV.

Using environmental consciousness levels as a categorical framework to understand the relationship amongst different motivations, one can conclude that the most important motivations for survey respondents to move to CHV pertain to levels of the following qualities:

1) G*oal-oriented qualities* of the neighborhood such as the traditional town concept and its respective architectural image, which convey the New Urbanist design ideals;

2) *Transformation*—the move from self-interest to concern for the common good, which is enhanced by the organization of the physical environment, such as pedestrian friendliness, availability of parks, and mixed-use;

3) *Internal connectedness,* such as a sense of community, which helps fulfill community members' need for meaning.

Clearly, except for perceived safety and security, the motivations pertinent to levels such as *health and safety* (housing quality and perceived privacy) and *belonging* (being close to family and friends, people of similar values to you and range of people's background) are less important than the factors mentioned above for survey respondents living in CHV.

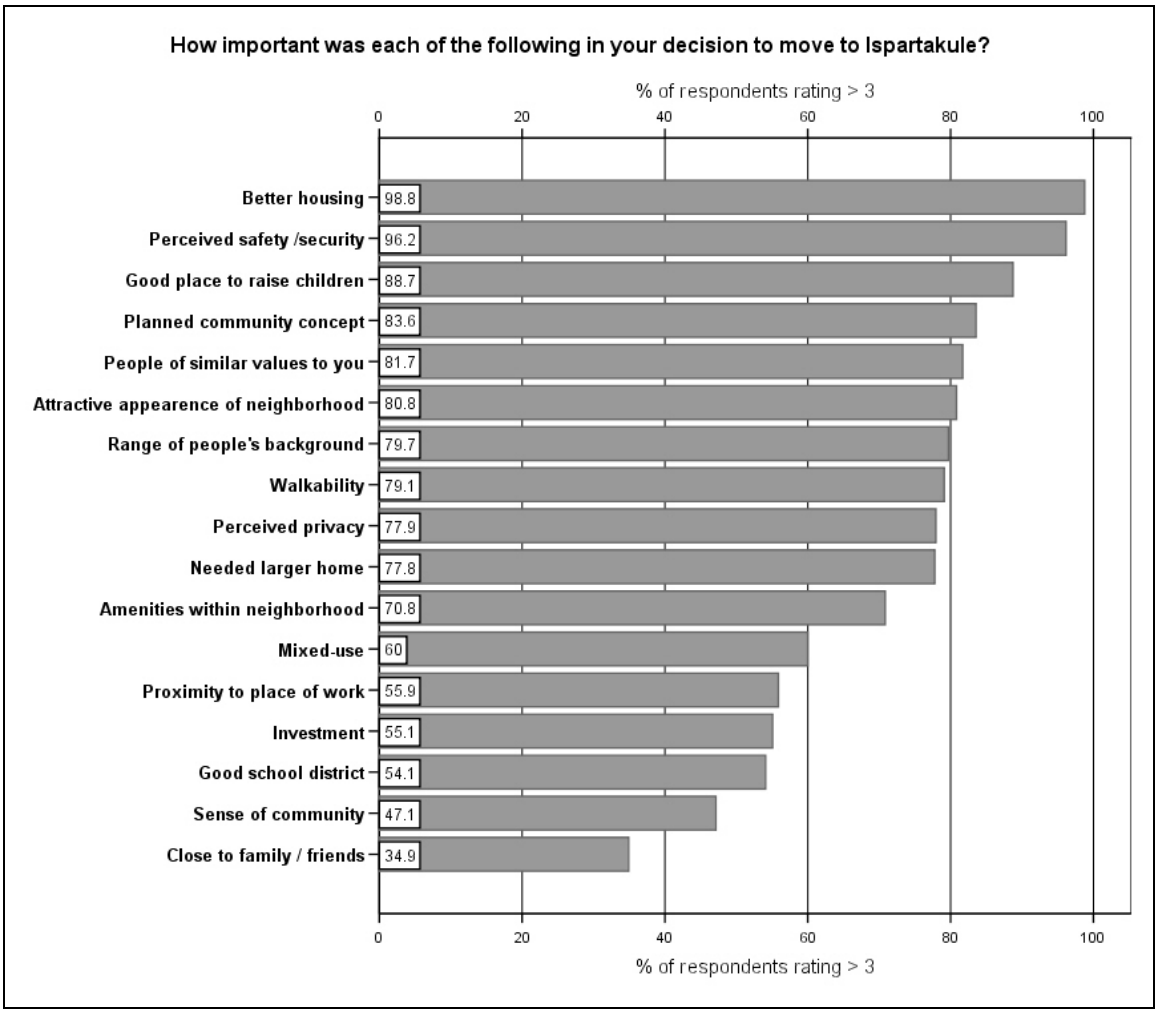



Figure 62. The percentage of survey respondents who ranked each possible motivation either as extremely important (5) or very important (4) in Ispartakule.[32]

In Ispartakule, more than 75 percent of the survey respondents identified *better housing* (98.8%), *perceived safety/security* (96.2%), *good place to raise children* (88.7%), *living in a planned housing complex* (83.6%), *people of similar values* (81.7%), *attractive appearance of the neighborhood* (80.8%), *range of people's background* (79.7%), *walkability* (79.1%), *perceived privacy* (77.9%), and *needed larger home* (77.8%) as significantly important factors in their decision to move to their current neighborhood.

In addition, 50-75% of the survey respondents chose *amenities within the neighborhood* (70.8%), *mixed use* (60%), *proximity to place of work* (55.9%), *investment* (55.1%), and

[32] In the Ispartakule surveys, the concept of "planned community" replaced the concept of "traditional town," because in the Turkish context "traditional town" does not have the same meaning as it does in the US.

*good school district* (54.1%) as either extremely important or very important factors to move to Ispartakule.

However, less than 50 percent of the survey respondents rated *sense of community* (47.1%) and *closeness to family and friends* (34.9%) as extremely important or very important factors affecting their decisions to move to Ispartakule.

These findings suggest that residents' major reasons for moving to Ispartakule are related to quality of housing (earthquake safety, better housing, larger home, and attractive appearance of housing) and quality of domestic life (good place to raise children) rather than connectedness to their community and living in close proximity to family/friends. Similarly, although most of the factors pertinent to New Urbanist ideals are rated as significantly important (attractive appearance of the neighborhood, walkability, amenities within the neighborhood and mixed use), sense of community[33] was rated as one of the least significant factors affecting the respondents' decision to move to Ispartakule. In contrast to CHV respondents, Ispartakule respondents highly ranked factors such as similarity of people's values and background and privacy.

Using environmental consciousness levels as a categorical framework to understand the relationship amongst different motivations, one can conclude that the most significant motivations for survey respondents to move to Ispartakule pertain to levels of the following qualities:

1) *Health and safety* factors that provide a safe and high-quality housing environment (quality of architecture, buildings complying with earthquake regulations, and privacy);

2) *Belonging,* which supports harmonious interpersonal relationships (e.g., among people of similar values and background)

3) *Goal-oriented qualities* of the neighborhood, such as planned neighborhood settings and the neighborhood's prestigious or attractive image;

4) *Transformation,* which enables the move from self-interest to concern for the common good with the help of the organization of the physical environment, such as pedestrian friendliness, availability of parks, and mixed-use.

[33] The concept of "sense of community" is translated into Turkish as "connectedness" or "togetherness" (*birliktelik*) because there is no other word perfectly corresponding to the meaning of "sense of community" in the US.

However, the factors pertaining to *internal connectedness* (such as a sense of community), which help fulfill community members' need for meaning, rank much lower than other factors. In addition, Ispartakule respondents rank these factors lower than CHV respondents do.

| Motivations | Community | N | Mean | St. Dev. | t | Sig. (2-tailed)* |
|---|---|---|---|---|---|---|
| **Better housing** | Ispartakule | 81 | 4.89 | 0.354 | 11.935 | 0.000 |
| | CHV | 62 | 3.15 | 1.252 | | |
| **Needed larger home** | Ispartakule | 72 | 4.14 | 1.066 | 6.294 | 0.000 |
| | CHV | 61 | 2.69 | 1.576 | | |
| **Traditional town concept** | Ispartakule | 73 | 4.30 | 0.877 | 3.098 | 0.002 |
| | CHV | 71 | 3.77 | 1.149 | | |
| **Sense of community** | Ispartakule | 70 | 3.30 | 1.081 | -3.624 | 0.000 |
| | CHV | 70 | 3.93 | 0.968 | | |
| **Attractive appearance of neighborhood** | Ispartakule | 73 | 3.95 | 0.864 | -2.395 | 0.018 |
| | CHV | 72 | 4.26 | 0.731 | | |
| **Amenities within neighborhood** | Ispartakule | 72 | 3.78 | 1.024 | 1.377 | 0.171 |
| | CHV | 72 | 3.54 | 1.034 | | |
| **Mixed-use** | Ispartakule | 65 | 3.46 | 1.032 | 0.625 | 0.533 |
| | CHV | 72 | 3.33 | 1.332 | | |
| **Good school district** | Ispartakule | 61 | 3.48 | 1.206 | -2.704 | 0.008 |
| | CHV | 67 | 4.01 | 1.052 | | |
| **Walkability** | Ispartakule | 67 | 4.27 | 0.994 | 1.564 | 0.120 |
| | CHV | 71 | 4.01 | 0.918 | | |
| **Proximity to place of work** | Ispartakule | 68 | 3.51 | 1.355 | 3.696 | 0.000 |
| | CHV | 64 | 2.69 | 1.207 | | |
| **Good place to raise children** | Ispartakule | 71 | 4.54 | 0.892 | 3.377 | 0.001 |
| | CHV | 58 | 3.90 | 1.252 | | |
| **Close to family / friends** | Ispartakule | 63 | 3.29 | 1.113 | 0.410 | 0.683 |
| | CHV | 61 | 3.20 | 1.302 | | |
| **Investment** | Ispartakule | 69 | 3.51 | 1.368 | -1.179 | 0.240 |
| | CHV | 68 | 3.75 | 1.013 | | |
| **Perceived safety /security** | Ispartakule | 78 | 4.78 | 0.501 | 6.406 | 0.000 |
| | CHV | 71 | 4.08 | 0.806 | | |
| **Perceived privacy** | Ispartakule | 68 | 4.22 | 0.912 | 6.523 | 0.000 |
| | CHV | 66 | 2.98 | 1.259 | | |
| **People of similar values to you** | Ispartakule | 71 | 4.25 | 0.840 | 6.007 | 0.000 |
| | CHV | 70 | 3.26 | 1.112 | | |
| **Range of people's background** | Ispartakule | 69 | 4.16 | 0.933 | 7.932 | 0.000 |
| | CHV | 71 | 2.62 | 1.324 | | |

* Level of significance 95%

Table 30. Comparison of feature affecting survey respondents' decision to move to case study neighborhoods

If one compares the survey findings of Ispartakule and CHV, the major similarities can be summarized as follows.

The first similarity is that the factors reflecting New Urbanist ideals such as mixed use, amenities within the neighborhood and walkability are ranked highly in both locations, and the differences between the two neighborhoods are not significant. However, due to contextual differences, survey respondents might have different reasons for prioritizing these factors in their decision to move. On one hand, in the case of Ispartakule, survey respondents' previous neighborhoods are mostly first-ring suburbs that have undergone extensive urbanization. This means that means survey respondents were used to living in walkable and mixed-use settings before moving to Ispartakule. In first-ring suburbs as well as many other parts of Istanbul, mixed-use and walkable environments are common. However, amenities such as parks, public greens, and public squares are not available in most of the city's urban settings, due to rapid, dense and unplanned urban development. Therefore, for survey respondents in Ispartakule, mixed-use and walkable environments are significantly important because they are parts of the cultural norm; amenities are also important as they are lacking in other parts of Istanbul. On the other hand, for survey respondents in CHV, the major reason to prioritize factors such as mixed use, a walkable environment, and amenities in their decision to move might be the lack of these features in many of the contemporary suburban neighborhoods in which they previously lived.

The second similarity between the survey findings of Ispartakule and CHV is that survey respondents ranked *good place to raise children* and *good school district* as significant motivations to move. While Ispartakule residents ranked *good place to raise children* significantly higher than CHV residents, CHV residents ranked *good school district* significantly higher than Ispartakule residents. This might be because most of the survey respondents belong to families with children (up to age 18). The lower ranking of *good school district* by Ispartakule respondents might be a reflection of the differences between the school and tax systems in Turkey and the USA.[34]

[34] In Turkey, all public schools are controlled and funded by the Ministry of Education at the national level. Although there are school districts in Turkey, they function quite differently from US school districts. In Turkey, school districts identify the geographic are from which a public school can accept students at primary and elementary level. However, this rule is not strictly enforced. In addition, these districts do not exist for high schools. Therefore the location of household is not

The third similarity is the high ranking of *perceived safety and security*, which is amongst the top 3 factors in both Ispartakule and CHV. However, Ispartakule residents ranked *perceived safety and security* significantly higher than CHV residents. This finding shows how concerned survey respondents are with the safety and security of their neighborhood; this is consistent with the global trend of gating. This factor is more highly ranked by survey respondents in Ispartakule than in CHV, which might be due to the fact that burglaries are common in Istanbul. While in Canton most of the communities are not gated, in Istanbul gating represents a growing trend, particularly in suburban neighborhoods. Both buyers and existing residents prefer their neighborhoods to have clearly marked boundaries with walls, fences and gates. According to interview findings, one of the older communities in Bahcesehir has already changed the status of all the roads serving their neighborhood from public to private; they have also installed controlled entry systems. There are still more applications for this type of conversion waiting to be approved by the municipality. In addition, almost all of the new community developments in Bahcesehir are built with gates, walls, fences and/or surveillance systems.

Finally, the high ranking of *attractive appearance of the neighborhood* as a factor affecting the decision to move is another similarity between Ispartakule and CHV survey respondents. CHV residents ranked *attractive appearance of the neighborhood* significantly higher than Ispartakule residents. Although the two case study communities have quite different architectural styles, this similarity indicates how successful both communities are in creating a unique and attractive identity that is sensitive to different local contexts.

On the other hand, there are several major differences amongst the factors affecting survey respondents' decisions to move in Ispartakule and CHV.

The first difference is the significantly higher ranking of the factors related to quality of housing (better housing, larger home and earthquake safety) by survey respondents in Ispartakule relative to survey respondents in CHV. This might be due to the low quality

---

very important for education purposes in Turkey. In the US, however, school districts are powerful bodies controlling the quality of education within defined geographical boundaries. Therefore, in the US the location of household is more important with regard to the quality of education than it is in Turkey.

of available housing in Istanbul, particularly regarding earthquake safety, which is of vital importance in a city located at major earthquake zone.

The second major difference is the significantly higher ranking of *perceived privacy* by Ispartakule residents relative to CHV residents. This finding reflects different cultural practices in different contexts. While privacy is an important factor shaping the way of life in Islamic societies (the majority of Turkey's population is Muslim), it might not hold similar meanings in other societies. In addition, the survey respondents in CHV probably realized that the privacy they enjoyed in their previous, conventional suburban neighborhoods would not be available to them in CHV, since it was designed according to New Urbanist principles (as marketing materials emphasized).

The third major difference is that Ispartakule residents rated factors related to the socio-demographic characteristics of people living within the community (*people's background and values*) significantly higher than did CHV residents. This finding suggests that the perceptions of social characteristics and groups are different in different cultural contexts. On one hand, in Turkey, new planned developments in the suburbs might be associated with the upper and upper-middle classes and their corresponding lifestyles; hence moving to such a neighborhood might be considered as "moving up the ladder." In addition, the growing distaste for the "other," which is due to the increasing number of rural-to-urban migrants in the city of Istanbul, increases Ispartakule residents' sensitivity to their neighbors' backgrounds and values. On the other hand, although CHV responds ranked *people of similar values* more highly than *people's background* (i.e., ethnicity and age), in general people's socio-demographic qualities were not significant for survey respondents.

In order to assess the variations between residents' responses in CHV and Ispartakule, a multivariate analysis is conducted. For this purpose, a Multi-Dimensional Scaling analysis within an SPSS suite was performed. MDS is a multivariate analytical method that helps us examine patterns of variations amongst responses. It "represents measurements of similarity (or dissimilarity) among pairs of objects as distances between points of multidimensional space" (Borg, 2005).

Below are MDS plots that represent relationships between CHV and Ispartakule residents' motivation rankings. As it was difficult to interpret the three-dimensional MDS analysis outcome, each pair of the three dimensions is plotted separately. Each dot represents a respondent. Red dots represent Ispartakule residents; black dots represent CHV residents. The closer the points (residents' rankings) on the plane, the more similar the rankings are. The two statistics for MDS analysis (Kruskal's stress value: 0.13801[35] and squared correlation: 0.80320[36]) support a good fit for the plot (Kruskal, 1966).

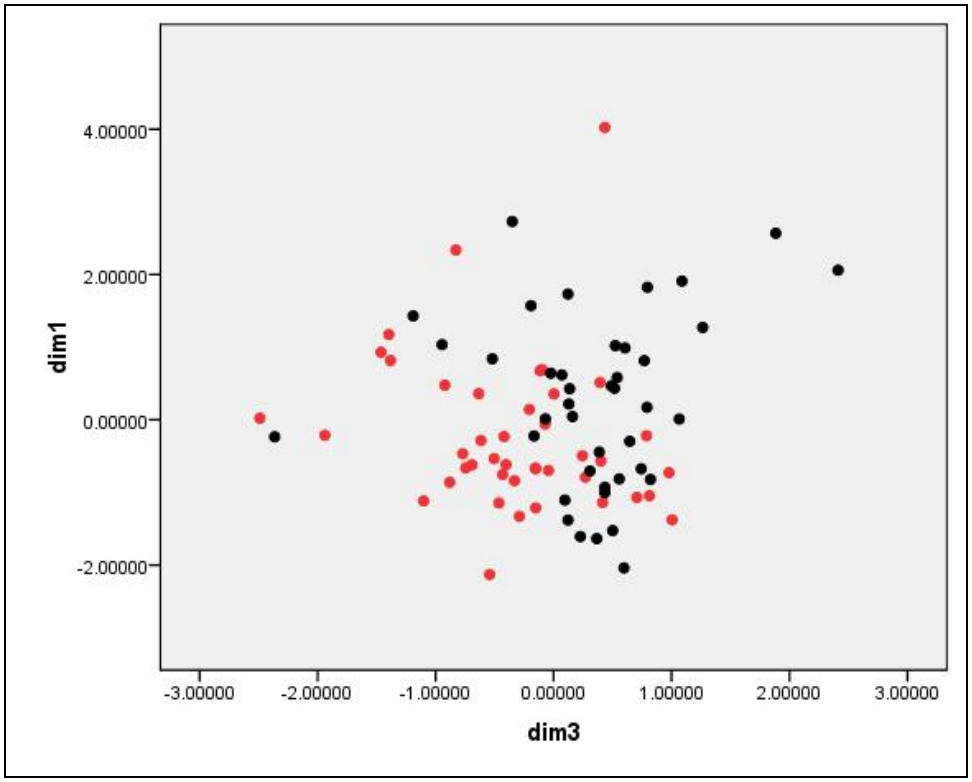



Figure 63. MDS plot of dimension 1 and dimension 3

[35] Stress value is a goodness of fit measure for MDS analysis. The smaller the stress, the better the fit. Kruskal suggests that stress values above 0.20 indicate a poor fit, and values equal to and above 0.05 indicate a good fit (Kruskal, 1966). The analysis for this research is computed by SPSS based on Kruskal's stress values and interactions of S-stress.

[36] Squared correlation (RSQ) values are the proportion of variance of the scaled data in the table, which is accounted for by their corresponding distances. The RSQ, also known as the Coefficient of Contiguity, can have a maximum possible value of 1.0. The higher the RSQ value is for an MDS, the better the fit of the plot. An RSQ value of 0.6 or more is considered a significant indicator of the goodness of fit (SPSS, 2008).

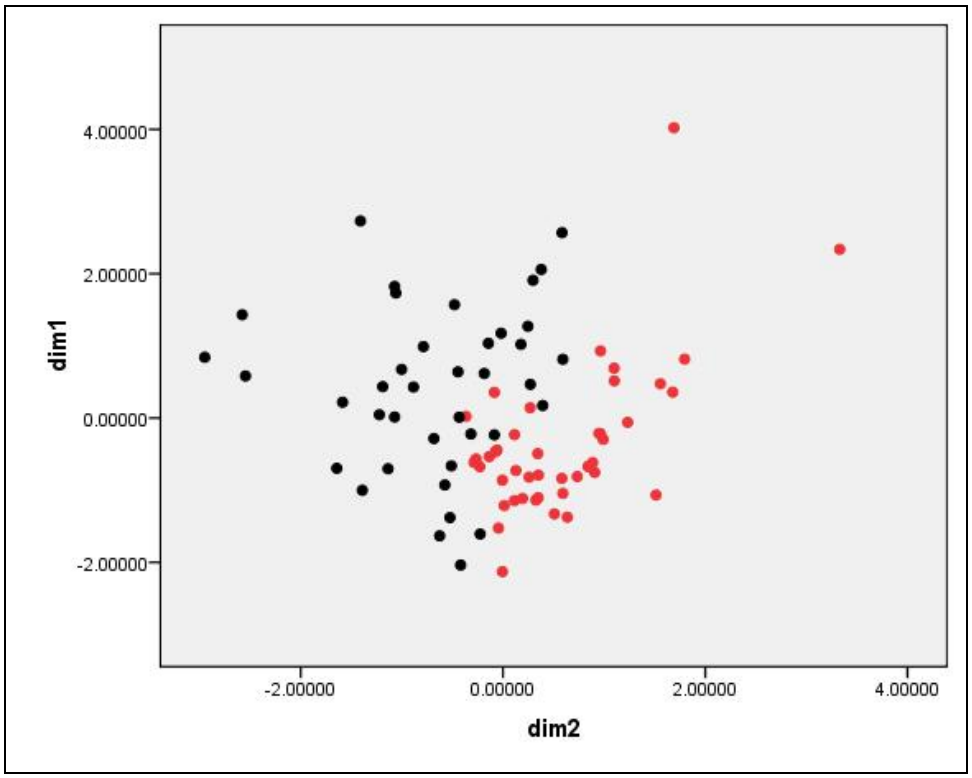


Figure 64. MDS plot of dimension 1 and dimension 2

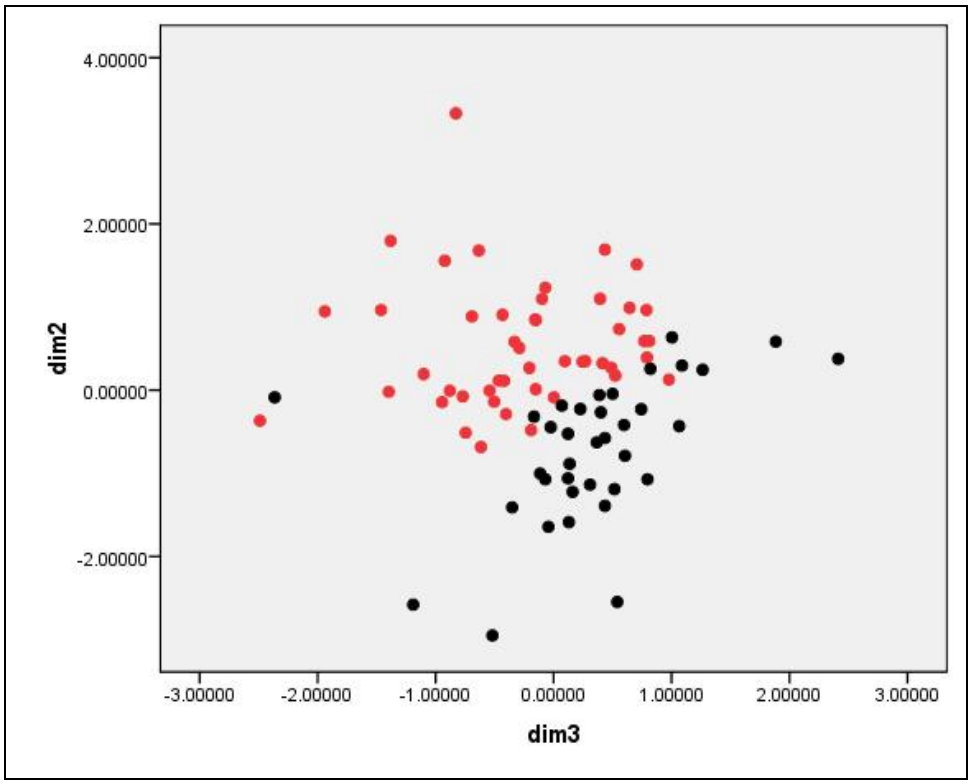


Figure 65. MDS plot of dimension 2 and dimension 3

The MDS plots of each pair of dimensions also reveal that respondents in CHV and Ispartakule have different patterns of ranking the possible motivations to move. Apart from the plot of dimension 1 and 3, CHV residents (black dots) and Ispartakule residents (red dots) clearly form two different clusters. This finding also supports previous findings discussed above. The motivations to move are clearly different for CHV residents than for Ispartakule residents.

*Interview Findings*

During face-to-face interviews, several open-ended questions inquired into the factors that affected the decision to move to the case study neighborhoods: 1) *Did anyone recommend this community to you? If so, who is this person?* 2) *Before you moved in did you know what type of people were living in the community?* and 3) *Why did you move to CHV? (Why did you choose CHV?)*

The results of thematic coding reveal that most of the interviewees did not receive a recommendation from anyone to move to either Ispartakule or CHV. (Please refer to Appendix B for details.) This might be due to the fact that both of the communities are relatively new developments, and most of the interviewees were amongst the first residents to settle in the neighborhoods.

However, compared to Ispartakule interviewees, CHV interviewees were much more knowledgeable about the design concept and were able to make assumptions about the type of people who would live in their prospective community before they moved. This knowledge affected their decision to move to the community. Most of the CHV interviewees gathered wide range of information about the community to which they were planning to move, by driving around, following the news published in local newspapers, reading news and/or watching documentaries about communities such as Seaside that were based on similar concepts, meeting with existing residents during visits to CHV, and/or meeting with prospective residents during sales events. In addition to the prospective buyers' personal efforts, sales and marketing presentations conducted by the developer were also effective in raising awareness about the Traditional Neighborhood Development concept. Therefore, most of the CHV interviewees were quite familiar with New Urbanist principles. As one interviewee says:

> *We had a good idea [of what the neighborhood would be like]. Before we saw the article in the newspaper, we [had] seen a special on PBS talking about traditional neighborhoods like Celebration, another one in North Carolina. When we came here, even before they put the homes on the sites there were just streets and it gave the impression of what we wanted. I think we just thought that kind people who want to live close to somebody must be nice and social. If you are buying a home that close, you are probably a person that would be easy to get along with.* (CHV interview)

In contrast, the interviewees in Ispartakule did not have any idea about either the design characteristics or the principles of the community, and most of them didn't know the type of people who would live there. This lack of awareness might be associated with two factors: first, there was no previous example of a New Urbanist community in Turkey; and second, the sales and marketing efforts were mostly focused on the quality and pricing of the houses rather than on educating the buyers about the overall community design concept. Therefore, one can conclude that the social quality of the community and/or the design concepts had less effect on residents' decision to move to Ispartakule than on the decision to move to CHV. As one of the Ispartakule interviewees explains, "I had no idea who was living here. The characteristics of the residents had nothing to do with my decision to move here. When I came to Ispartakule I couldn't even find my way. I got lost."

When the interviewees were asked to explain why they chose their community, the difference in their levels of awareness about the physical and social qualities of the neighborhoods is apparent. The major factors mentioned most during CHV interviews are the architecture, the appealing look of the neighborhood (which distinguishes it distinct from conventional subdivisions), and the traditional town concept (people living closer to each other, being able to walk to the commercial/cultural center, and having an active community life). The following quotes from CHV interviews elaborate on this point:

> *I was fascinated with the architecture. I am so tired of same beige color architecture and subdivisions. I love the colorful houses and the 19$^{th}$ century houses, the charm, the colors, etc.* (CHV interview)

> *We like how we grew up in Detroit, how neighbors knew each other. In other neighborhoods that we moved in, most people don't seem to be outside much.… People would drive into the garages and you wouldn't see them. Most people would be in their backyards in the woods. My wife*

> *didn't like that because we didn't see anybody. She wanted to see activity, neighbors.* (CHV interview)

> *I liked the small town setting, [the] availability of shops and parks. It is like a little village. Also it is in close proximity to everything like parks, stores, neighbors. Everything is walking distance.* (CHV interview)

The major factors mentioned most during Ispartakule interviews are significantly different from those of the CHV interviews. Ispartakule respondents emphasized factors related to either quality of housing (such as *quality of construction*, *earthquake safety*, *size and/or plan of apartments*) or quality of environment (*nice environment to raise children, close to green space* and *away from traffic*). The following quotations from Ispartakule interviews illustrate these points:

> *The earthquake scared us very much. Since Bahcesehir survived the earthquake safely, we thought this would be a good place to settle down.* (Ispartakule interview)

> *We chose Ispartakule for our kids. This is a very nice neighborhood for raising children. There is plenty of green space and playgrounds around for them to enjoy without the fear of traffic.* (Ispartakule interview)

> *Earthquake safety was the most important thing for us. We experienced the earthquake in 1999 in Atakoy [a suburban mass housing development in Istanbul]. It was one of the most affected neighborhoods. Also in Atakoy the buildings were old and the rents were high. We wanted to move to a safer place in terms of earthquake. The quality of buildings, the earthquake safety, size and plan of the apartments and price of the houses in Ispartakule were attractive for us.* (Ispartakule interview)

To summarize, CHV interviewees were quite aware of the Traditional Neighborhood concept before they moved in CHV. In addition, CHV interviewees chose their neighborhood because they wanted to live in a community with a unique identity and an active community life. In contrast, Ispartakule interviewees were unaware of New Urbanist design characteristics, both physical and social. They also had quite different motivations than CHV interviewees. The two major motivations were first, living in high-quality housing (which is defined by good quality of construction and design); and second, living in a high-quality environment, where families can enjoy green areas and available amenities (pool, playgrounds, sports fields, parks, etc.). These features are not available in most of the urban centers.

## 8.2 Perceived Satisfaction and Role of Physical Features

This section analyzes how successful case study communities are in satisfying the goal-oriented needs of residents in different cultural contexts. The conceptual framework defining the goal-oriented needs and their relation to environmental design features was discussed in Chapter 3. In addition, this section examines which physical design features of New Urbanist communities are supportive of four of the residents' needs: social interaction, physical activity levels, sense of community and identity. The analysis makes use of data collected via surveys and during face-to-face interviews.

### To What Extent Are Survey Respondents' Goal-oriented Needs Satisfied?

*Survey Findings*

The residents were provided with seven questions, each corresponding to a different category of the seven levels of environmental consciousness. They were asked to rate their perception of how well their neighborhood is satisfying the specific need mentioned using a five-point Likert scale (1=not at all, 5=very much). The seven categories were *feeling safe and secure*, *sense of belonging*, *distinctive character*, *sense of well-being and personal growth*, *sense of community* (with respect to physical characteristics and living experience), *connection to surrounding context*, and *being supportive of sustainability principles*. The chart below shows the percentages of respondents in both Ispartakule and CHV who believed their community was either very much (5) or somewhat (4) supportive of the categories mentioned above.

The findings suggest that most of the survey respondents in CHV perceived high levels of satisfaction with their neighborhood on all levels of environmental consciousness. More than 75 percent of the survey respondents thought that they are safe and secure in CHV, that CHV has a distinctive character, and that CHV has a sense of community supported by both its physical characteristics and the actual living experience there. Fifty to 75 percent of the survey respondents believe that they belong to CHV, that CHV enhances their overall sense of well-being and personal growth, that CHV is connected to the surrounding context, and that CHV is supportive of sustainability.

On the other hand, Ispartakule survey respondents perceived lower satisfaction at the upper levels of the environmental consciousness, which are essential to the common good and civic meaning. However, their perceived satisfaction was higher at the bottom levels of environmental consciousness, which pertain to basic needs. More than 75 percent of the survey respondents think that they are safe and secure in their neighborhood, that they belong to Ispartakule, and that Ispartakule has a distinctive character. Fifty to 75 percent of the survey respondents believe that Ispartakule is supportive of their personal well-being and growth, that the physical characteristics of Ispartakule give them a sense of community, that Ispartakule is connected to its surrounding context, and that Ispartakule is supportive of sustainability. However, less than 50 percent of the survey respondents agree that living in Ispartakule gives them a a sense of community.

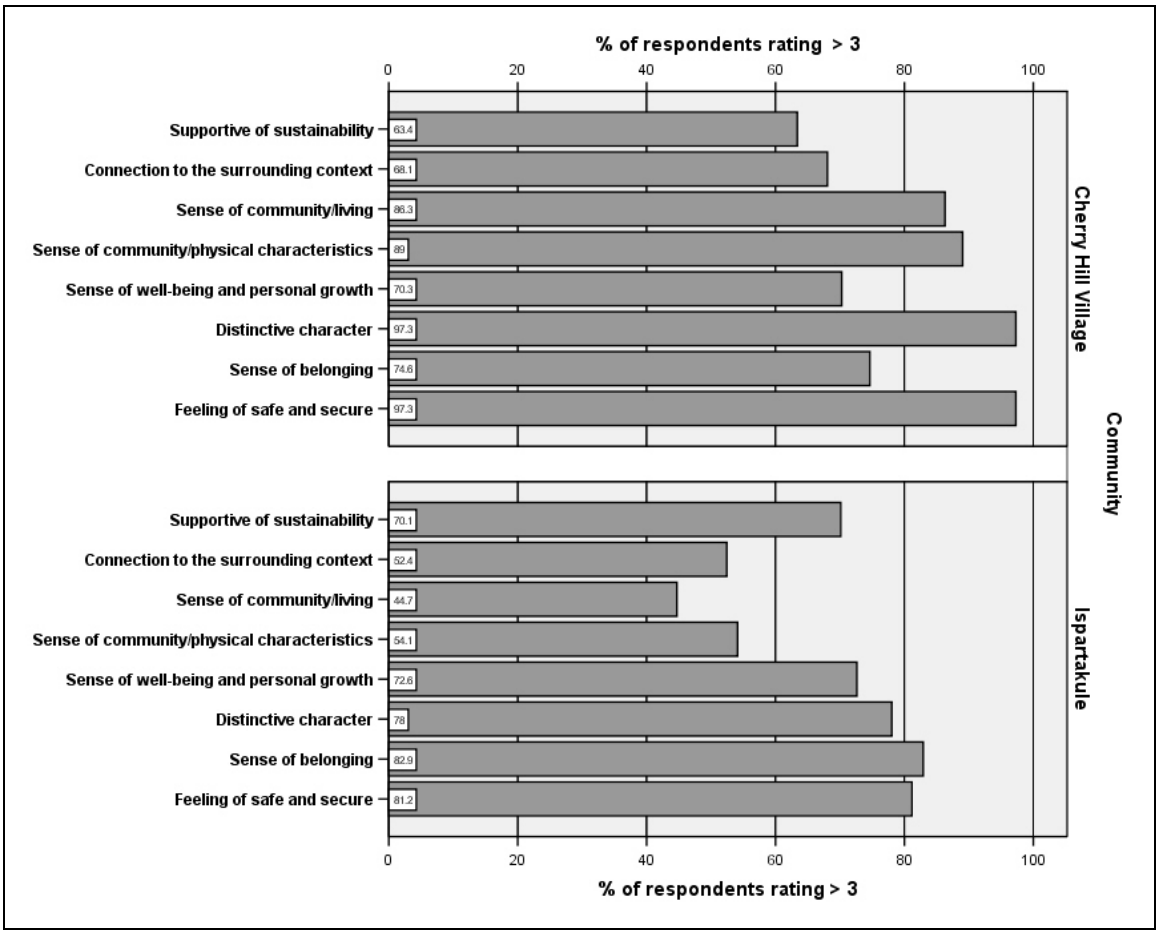



Figure 66. Charts comparing the percentages of survey respondents in each community who ranked the extent their community satisfies their goal-oriented needs either “very much” or “somewhat.”

These findings indicate that CHV is quite successful in supporting the survey respondents' needs at all levels, but Ispartakule is less successful in supporting survey respondents' needs at the upper levels of environmental consciousness. In particular, the difference between the ratings of sense of community in Ispartakule and CHV is striking, as it is the lowest-ranking category in Ispartakule but one of the highest-ranking in CHV.

One reason for this difference might be the purposive evaluation of environment. If people evaluate environments with respect to both the goals they intend to pursue in that environment and to what extent the environment helps them achieve these goals, then survey respondents evaluate their neighborhood with respect to their motivations and goals in choosing that particular community and to what extent the community satisfies these goals (Canter, 1983, 1991; Ittelson et al., 1974). In other words, if a survey respondent highly values a certain factor which becomes a goal, she or he would either choose the appropriate setting or try to improve a less-than-ideal setting so as to satisfy her or his goal. However, if a survey respondent places less importance on a certain factor, she or he would neither strongly consider the factor in his or her decision to choose the setting, nor attempt to improve the setting to make it satisfy the needs that pertain to that factor. Therefore, survey respondents would be more likely to experience higher satisfaction with regard to the factors they find highly important.

When we correlate the motivation variables for survey respondents in each community and their perceived satisfaction of each of the seven levels of environmental consciousness, the findings support the argument presented above. (The table below is a part of the correlations table corresponding to one motivation variable: sense of community and seven environmental consciousness variables. Please refer to Appendix C for all of the correlation values between motivation variables and perceived satisfaction of environmental consciousness levels.) For example, in the case of CHV, survey respondents ranked sense of community as one of the most important factors in their decision to move to CHV. In addition, the developer of CHV promoted sense of community as a part of the Traditional Neighborhood Development concept. The survey respondents were also relatively highly satisfied with the internal connectedness of their community, i.e. sense of community. The significant correlation between the motivation of sense of community and perceived satisfaction of sense of community in CHV

suggests that the survey respondents might have chosen CHV because they anticipated a high level of sense of community. They may also have acted in such a way as to enhance sense of community within the neighborhood. In either case, they would therefore feel more satisfied. (Please refer to Appendix C for correlations of other factors.)

| Environmental Consciousness | | | Sense of community | |
|---|---|---|---|---|
| | | | **Ispartakule** | **CHV** |
| **7** | **Supportive of sustainability** | Correlation Coefficient | 0.158 | 0.211 |
| | | Sig. (2-tailed) | 0.211 | 0.084 |
| | | N | 64 | 68 |
| **6** | **Connection to the surrounding context** | Correlation Coefficient | .264(*) | .345(**) |
| | | Sig. (2-tailed) | 0.028 | 0.004 |
| | | N | 69 | 68 |
| **5** | **Sense of community/living** | Correlation Coefficient | .260(*) | .477(**) |
| | | Sig. (2-tailed) | 0.030 | 0.000 |
| | | N | 70 | 69 |
| | **Sense of community/physical characteristics** | Correlation Coefficient | .332(**) | .377(**) |
| | | Sig. (2-tailed) | 0.005 | 0.001 |
| | | N | 70 | 69 |
| **4** | **Sense of well-being and personal growth** | Correlation Coefficient | 0.109 | .286(*) |
| | | Sig. (2-tailed) | 0.371 | 0.016 |
| | | N | 70 | 70 |
| **3** | **Distinctive character** | Correlation Coefficient | 0.211 | 0.231 |
| | | Sig. (2-tailed) | 0.084 | 0.054 |
| | | N | 68 | 70 |
| **2** | **Sense of belonging** | Correlation Coefficient | 0.120 | .395(**) |
| | | Sig. (2-tailed) | 0.332 | 0.001 |
| | | N | 67 | 67 |
| **1** | **Feeling of safe and secure** | Correlation Coefficient | .242(*) | 0.169 |
| | | Sig. (2-tailed) | 0.044 | 0.163 |
| | | N | 70 | 70 |

**. Correlation is significant at the 0.01 level (2-tailed)

*. Correlation is significant at the 0.05 level (2-tailed)

Table 31. Correlations between sense of community as motivation variable and perceived satisfaction of the seven environmental consciousness levels (Spearman's rho)

Unlike respondents in CHV, survey respondents in Ispartakule ranked sense of community as one of the relatively less important factors in their decision to move. Similarly, they similarly ranked their satisfaction with the internal connectedness of their neighborhood relatively low—the lowest amongst all consciousness levels. In Ispartakule, the positive correlation between motivation and perceived satisfaction suggests that the survey respondents did not choose Ispartakule with an expectation of a high level of internal connectedness, nor have they acted in such a way as to enhance

the sense of community. As a result, the survey respondents experience a relatively low level of satisfaction with respect to internal connectedness in their community.

| How important are the following features in promoting sense of community within CHV/Ispartakule? | Ispartakule | | | CHV | | | t-test | |
|---|---|---|---|---|---|---|---|---|
| | N | Mean | SD | N | Mean | SD | t | Sig. (2-tailed) |
| Feeling that Ispartakule/ICHV is your home | 81 | 4.42 | 0.986 | 72 | 4.22 | 0.843 | 1.324 | 0.188 |
| Walkability of the environment | 77 | 4.34 | 0.982 | 72 | 4.40 | 0.685 | -0.472 | 0.638 |
| Interaction with next-door neighbors | 79 | 4.20 | 1.079 | 72 | 4.14 | 0.909 | 0.393 | 0.695 |
| Feeling that good fit exists between you and your community | 77 | 4.06 | 1.004 | 72 | 4.00 | 0.949 | 0.406 | 0.686 |

5 = extremely important, 1= not important

Table 32. Rankings of features promoting sense of community

Finally, most of the survey respondents in both Ispartakule and CHV agree that the four domains of sense of community—walkability of the environment, feeling that Ispartakule/CHV is their home, interaction with next-door neighbors, and feeling that a good fit exists between the community and them—are extremely or very important factors contributing to their sense of community. The differences between the average rakings of the residents of two neighborhoods are not significantly different.

To conclude, survey respondents' perceptions of their neighborhood are extensively shaped by their specific goals and motivations. /survey respondents made conscious choices in line with their major motivations, and they also shape their perception of satisfaction with respect to the needs most pertinent to these goals and motivations.

*Interview Findings*

Interview findings help reveal another possible factor contributing to the difference between levels of perceived satisfaction, particularly sense of community, in Ispartakule and CHV. This factor is the cultural and social segregation in Ispartakule, which the interviewees mentioned in their responses to open-ended questions and in their additional comments on the specific questions related to their satisfaction. The interviewees complained many times about the social segregation between villa and apartment residents. The following quotations further explain this phenomenon:

> *I believe the organization of the buildings affects sense of community. The apartments are on one side of the community and isolated from the rest of the community. There is a disconnection between the life of*

> *apartments and villas. This is not supportive of sense of community.* (Ispartakule interview)

> *Unfortunately there is no communication between villas and apartment blocks. Villa residents don't go out of their villas. They isolate themselves from the rest, but socialize with each other. They have their own social circle, which is as strong as [that of] the apartment blocks. My apartment is on the first floor and looks at the villas across the street. Sometimes we see each other at front entrances or windows, but my villa neighbors never say "hi." It is obvious that they don't want to interact. Also, most of the villa owners are not here in summer. They go to their summer houses outside Istanbul.* (Ispartakule interview)

Another type of segregation defined by the interviewees is the cultural difference between the residents. The Ispartakule interviewees complained about people who have different values than theirs and described them as *money-oriented*, *high-nose*, *selfish*, *insensitive*, *individualistic*, and *nouveau-riche*. The interviewees stressed that these people do not appropriate the community, so they do not contribute to it. That creates a communication problem within the community. The following quotations elaborate on this issue:

> *People don't feel emotionally close to each other. They are hesitant to interact. That's why I don't find them sincere. Everybody has this mentality: As long as you don't touch me, you can do whatever you want. Women, especially, look down their noses at other women.* (Ispartakule interview)

> *The people in Ispartakule are weird. Most of them are nouveau-riche. They don't know how to behave within a community and are not open to interaction with others. They don't care much about the community. I cannot communicate with them.* (Ispartakule interview)

To summarize, physical and sociocultural variety have resulted from the availability of a wide range of sizes and types of houses, and from Ispartakule's success in attracting people from different backgrounds to the neighborhood. Unfortunately, this diversity led to segregation within the community and a division of people along physical and cultural borders. This is inconsistent with the New Urbanist ideal of a diverse civic environment.

## Which Physical Features Are Important in Promoting Satisfaction of Goal-oriented Needs?

*Survey findings*

In order to understand the role of physical features in perceived satisfaction of the residents in Ispartakule and CHV, the survey asked several questions adopted from Kim's survey measuring the importance of 17 physical features in promoting the hypothesized four domains of sense of community. For this research, only the most important 11 out of 17 physical features are included in the survey, which asked residents to rank how important these features are in promoting feeling of attachment, distinctive character, social interaction and pedestrianism within the case study communities. The results are summarized in the table below.

The consistently top-rated item in all domains and both communities is *parks and public greens*. For Ispartakule, it is the top-rated item with respect to all the domains. In CHV, it ranked first with respect to social interaction and pedestrianism, second for feeling of attachment, and third for distinctive character. This finding is consistent with Kim's survey findings from Kentlands and Orchard Village (which are, respectively, New Urbanist and conventional suburban neighborhoods in Maryland); it also confirms previous research findings about the importance of natural features in residential environments (Kaplan & Austin, 2004; Kaplan & Kaplan, 2003; Kim & Kaplan, 2004).

Another item that consistently ranks amongst the top 5 physical features with respect to both communities and domains is *overall layout of the neighborhood*. This finding is also consistent with Kim's research suggesting that site design is a significantly important physical feature in promoting attachment, distinctive character, social interaction and pedestrian activity across cultures. (Kim & Kaplan, 2004)

In contrast to the consistency in highly ranked features, none of the 11 physical features was ranked consistently low across domains and cases. However, for two domains—distinctive character and feeling of attachment—survey respondents in both communities ranked *residential density*, *overall size of the neighborhood*, *mixture of housing types* and *distance between sidewalks and houses* amongst the lowest-ranked 4 features. In addition, *architectural style* and *overall design quality of houses* are consistently rated amongst the lowest 5 features contributing to the social interaction and pedestrian

activity of the survey respondents in both communities. Finally, *overall design quality of houses* is amongst the lowest-ranked 5 features affecting social interaction, and *mixture of housing types* is amongst the lowest-ranked 5 features affecting pedestrian activity in both communities.

| **Distinctive Character** | | | | **Feeling of Attachment** | | | |
|---|---|---|---|---|---|---|---|
| **Ispartakule** | | **CHV** | | **Ispartakule** | | **CHV** | |
| **item#** | **mean** | **item#** | **mean** | **item#** | **mean** | **item#** | **mean** |
| 2 | 4.73 | 4* | 4.59 | 2 | 4.59 | 10 | 3.99 |
| 6 | 4.66 | 10* | 4.31 | 6 | 4.58 | 2 | 3.94 |
| 5 | 4.58 | 2 | 4.19 | 10 | 4.46 | 11 | 3.66 |
| 10* | 4.56 | 8 | 4.14 | 11 | 4.39 | 5 | 3.64 |
| 4* | 4.49 | 5 | 4.11 | 5 | 4.38 | 6 | 3.61 |
| 8 | 4.43 | 11 | 3.97 | 8 | 4.34 | 8 | 3.61 |
| 11 | 4.42 | 6 | 3.92 | 4 | 4.34 | 4 | 3.56 |
| 3 | 4.40 | 9 | 3.84 | 3 | 4.21 | 9 | 3.38 |
| 9 | 4.22 | 3 | 3.77 | 9 | 3.95 | 3 | 3.28 |
| 1 | 4.06 | 1 | 3.73 | 7 | 3.75 | 7 | 3.14 |
| 7 | 3.94 | 7 | 3.46 | 1* | 3.66 | 1* | 3.13 |
| **Social Interaction** | | | | **Pedestrianism** | | | |
| **Ispartakule** | | **CHV** | | **Ispartakule** | | **CHV** | |
| **item#** | **mean** | **item#** | **mean** | **item#** | **mean** | **item#** | **mean** |
| 2* | 4.19 | 2* | 3.97 | 2 | 4.61 | 2 | 4.01 |
| 8 | 3.99 | 1* | 3.77 | 6 | 4.38 | 5* | 3.73 |
| 5* | 3.94 | 3* | 3.70 | 11 | 4.29 | 11 | 3.38 |
| 6 | 3.93 | 5* | 3.64 | 3 | 4.28 | 6 | 3.25 |
| 9 | 3.84 | 8 | 3.61 | 5* | 4.03 | 7 | 3.04 |
| 11* | 3.78 | 11* | 3.44 | 8 | 3.90 | 1 | 2.89 |
| 3* | 3.72 | 7 | 3.24 | 4 | 3.87 | 8 | 2.88 |
| 10 | 3.68 | 4 | 2.81 | 7 | 3.86 | 3 | 2.86 |
| 7 | 3.66 | 9 | 2.75 | 1 | 3.41 | 4 | 2.69 |
| 4 | 3.59 | 10 | 2.68 | 9 | 3.40 | 10 | 2.46 |
| 1* | 3.59 | 6 | 2.64 | 10 | 3.34 | 9 | 2.19 |

Table 33. Summary of the rankings of 11 physical features by survey respondents
(*comparison of means is not significant at 0.05 level)

A comparison of the rankings of 11 features across the domains and within each community separately reveals the following. In Ispartakule, three features—*parks and public spaces, street trees and landscaping, and overall layout of Ispartakule*—consistently rank amongst the top 5, and three features—*residential density and overall size of Ispartakule*—consistently rank amongst the lowest 5 across domains. In CHV,

two features—*parks and public spaces* and *overall layout of CHV*—are consistently ranked amongst the top 5, whereas only one physical feature—*mixture of housing types*—is consistently rated amongst the lowest 5.

When we compare the rankings of 11 physical features for each domain across CHV and Ispartakule, there are several inconsistencies. In the domain of distinctive character, while *street trees and landscaping* is ranked as one of the most important features contributing to distinctive character in Ispartakule, it is ranked lower by CHV survey respondents. This might be explained by the contextual difference. In Istanbul, most of the unplanned developments in the suburbs and the densely developed urban centers lack street trees and landscaping, whereas in Canton this feature is a relatively common one in most of the surrounding neighborhoods.

In the domain of social interaction, there are several inconsistencies in the ratings of each community. First, while *residential density* is highly ranked in CHV, it is the lowest-ranked item in Ispartakule. This might be because Ispartakule is not much different than other neighborhoods in the city, and because it is almost as dense as most of the previous neighborhoods in which survey respondents have lived. However, in the case of CHV, the residential density is much higher than that of the respondents' previous neighborhoods. Therefore, residential density might be perceived as an important feature promoting social interaction in CHV, but not in Ispartakule. Second, *street trees and landscaping* is another physical feature on which survey respondents from the two communities tend to differ. While CHV respondents rank this feature lowest, Ispartakule respondents rank it higher with respect to social interaction. Finally, the *distance between sidewalks and houses* is ranked higher by the survey respondents in CHV but lower by respondents in Ispartakule. Considering that majority of the survey respondents in Ispartakule are apartment residents, this difference is not surprising, because the distance between the sidewalks and houses is likely to affect the level of social interaction of the apartment residents in Ispartakule the least.

Like Kentlands residents, CHV residents ranked parks and public greens, residential density and distance between sidewalks amongst the top four physical features contributing to their social interactions (Kim & Kaplan, 2004). Kentlands and CHV residents also ranked architectural style, parks and public greens and arrangement of

houses highest amongst the top four factors contributing to distinctive character of their neighborhood. However, the two groups differ in their perceptions of how physical factors contribute to a feeling of attachment and pedestrianism. Parks and public greens are ranked high by both Kentlands and CHV residents. However, the arrangement of houses, architectural style, and overall size of the neighborhood are more highly ranked by Kentlands residents than CHV residents with respect to both pedestrianism and feeling of attachment (Kim & Kaplan, 2004).

In the domains of feeling of attachment and pedestrianism, the 11 physical features are ranked fairly consistently by Ispartakule and CHV survey respondents.

To conclude, there are similarities with respect to high- and low-ranking physical features within each domain across the communities. In other words, although the survey respondents assign different levels of importance, their perception of the role of the physical features in enhancing distinctive character, attachment, social interaction and pedestrian activity is quite similar in both Ispartakule and CHV.

*Interview Findings*

The answers to the open ended question "What do you like best in your neighborhood?" support survey findings with regard to physical features. In CHV, the physical features that interviewees mentioned most often are parks and public greens and architectural style/identity. The following quotations reveal the significance of these physical features in shaping the perceptions of the interviewees.

> *I like the way it looks. It looks cool. When I tell people that I live in CHV, they say, "Oh, the funny-colored houses." So the people recognize where I live.* (CHV interview)

> *I like the close proximity to each other. Everybody is outside all the time, garage doors are open. I like the porches. And I like ease of walking. When kids are playing out, parents are talking or doing something together. I like the hometown feeling, the coziness. Also I like the look of the houses and Coldstone.* (CHV interview)

> *I like [that] it's social. When I go to the park, there is always somebody to talk to. You know when you are at home all day you need to check [in] with somebody.* (CHV interview)

Similarly, in Ispartakule the physical features that interviewees cited as the neighborhood's best-liked characteristics are also natural elements such as parks and public greens and streetscapes. The relatively high-quality living environment of Ispartakule is the most important feature for interviewees living there, as the following quotations from interviews illustrate:

> *I like the quietness here. The weather is clean and cool. The neighborhood is neat and well-organized. The quality of construction is good and trustworthy in terms of engineering project/application.* (Ispartakule interview)

> *I really like the nature, being close to parks and greens. I have seen the sunrise and rainbow for the first time in my life in Ispartakule.* (Ispartakule interview)

> *I love my house. It is very convenient and comfortable. I like the parks and gardens where my kids can play. I feel very happy here.* (Ispartakule interview)

### 8.3 Summary

The chapter examines cognitive qualities using both survey and interview data in two steps. First, the motivations of residents in choosing their neighborhoods are analyzed; these motivations also play a role in shaping residents' perceptions of their neighborhoods. Second, utilizing the environmental consciousness levels as a categorical framework, this chapter inquires into the perceived satisfaction of respondents with their neighborhoods. In addition, the perceived importance of physical design features is also explored.

The analyses of the aspirations and motivations underlying the decision to move to the New Urbanist community of Ispartakule or CHV provide valuable insight into how these motivations differ in different cultural contexts. The findings reveal that the major difference between the two case study communities was the level of awareness of New Urbanist principles.

The CHV respondents and interviewees were quite aware of the Traditional Neighborhood concept and its related physical features before they moved to CHV. They

chose CHV because they wanted to live in a community with a unique identity and an active community life. Therefore, the factors that are closely related to New Urbanist features, such as architectural characteristics, pedestrian-friendliness, amenities (parks, trails, and squares), mixed use, and sense of community are rated as the most important factors affecting the decision to move to CHV.

However, Ispartakule respondents and interviewees not only were unaware of the New Urbanist design characteristics but also had quite different motivations to move to than the CHV interviewees. Their major aspirations were living in high-quality housing (defined by good quality of construction and design) and living in a high-quality environment where families can enjoy green areas and available amenities (pool, playgrounds, sports fields, parks, etc.). Ispartakule respondents emphasized these physical elements over the quality of social life (sense of community and closeness to family/friends).

The analyses of perceived satisfaction in each community with respect to the seven levels of environmental consciousness help uncover another difference between the two case study communities. While CVH is quite successful in supporting the survey respondents' needs at all levels, Ispartakule is less successful in supporting the survey respondents' needs at the upper levels, which are more pertinent to civic meaning.

The difference between the ratings of perceived level of sense of community in Ispartakule and CHV is particularly significant, as it is the lowest-ranked category in Ispartakule and one of the highest ranked in CHV. This difference probably reflects the initial motivations to choose the specific neighborhood, in other words, the purposive evaluation of environment. Survey respondents evaluate their neighborhood with respect to their motivations and goals in choosing that particular community and to what extent the community satisfies these goals.

The parallel difference between the rankings of sense of community—the lowest in Ispartakule and one of the highest in CHV—amongst other motivations in choosing a community supports this argument. If a survey respondent highly values a certain factor, he or she would either choose the appropriate setting or attempt to improve a less-than-ideal setting so as to satisfy his or her goals. Therefore, survey respondents would be

more likely to experience higher satisfaction with regard to the factors they find highly important.

For example, in Ispartakule, the positive correlation between the motivation and perceived satisfaction of sense of community suggests that the survey respondents did not choose Ispartakule with an expectation of high levels of internal connectedness, nor have they acted to improve the sense of community in Ispartakule. As a result, the survey respondents experience a relatively low level of satisfaction with respect to internal connectedness in their community.

To conclude, survey respondents' perceptions of their neighborhood are shaped significantly by their specific goals and motivations. Survey respondents made conscious choices in line with their major motivations; these motivations also shape their perception of satisfaction with their neighborhoods.

The analysis of the perceived importance of physical features reveals the similarities and differences between the two case study communities. Across the communities, there is one consistently top rated item: *parks and public greens*. Another item consistently rated amongst the top 5 physical features in both communities and domains is *overall layout of the neighborhood*. These findings reveal the significance of natural features and site design across cultures.

In the rankings of 11 physical features in Ispartakule, three features—*parks and public spaces, street trees and landscaping, and overall layout of Ispartakule*—are consistently ranked amongst the top 5, and three features—*residential density and overall size of Ispartakule*—are consistently ranked amongst the lowest 5 across domains. On the other hand, in CHV, two features—*parks and public spaces* and *overall layout of CHV*—are consistently ranked amongst the top 5, whereas only one physical feature—*mixture of housing types*—is consistently rated amongst the lowest 5 physical features.

Within each domain of sense of community—identity, attachment, pedestrianism, and social interaction—there are similarities with respect to high- and low-ranked physical features across the communities. The survey respondents' perception of the role of

physical features in enhancing distinctive character, attachment, social interaction and pedestrian activity is quite similar in both Ispartakule and CHV.

The findings in this chapter provide valuable insights for designers about the similarities and differences of people's aspirations and needs in different cultural contexts, as well as their perceptions of New Urbanist design features.

# CHAPTER 9

# CONCLUSIONS

The broad goal of this research was to expand knowledge of global practices of urban design models via a cross-cultural assessment of New Urbanist developments. The aim was to understand how New Urbanist design practice is adapted and interpreted in different cultural contexts. Therefore, the research assessed the similarities and differences of New Urbanist neighborhood developments in different cultural contexts with reference to their physical and spatial qualities; the residents' behaviors; and motivations, attitudes and perceived meaning.

This research study used the case study as the primary method, incorporating several different tactics. The research examined two case study neighborhoods (CHV in the US and Ispartakule in Turkey) as different interpretations of New Urbanism in practice, rather than best examples of New Urbanist practice in Turkey and the US. The main objective was to uncover characteristics of each case study neighborhood holistically as individual cases as well as comparatively.

This chapter will discuss each case study neighborhood and relevant research findings separately in order to assess the varying interpretations of New Urbanist principles. Then, major findings and contributions to the literature will be presented. In addition, implications for urban design practice, limitations of the research study and suggestions for future work will be introduced.

## 9.1 Variations on New Urbanist Practice in Different Cultural Contexts

Like every Western urban design model applied in different cultural contexts, New Urbanist communities go through an adaptation process when applied internationally. This adaptation processes results in different interpretations of New Urbanism in different cultural contexts. Jill Grant, who explores New Urbanist theory and practice in the US, Canada, Europe and Japan, doubts the transferability of New Urbanist principles and argues that there is no single New Urbanism but rather many New Urbanisms (Grant, 2006). According to her, whatever their label, New Urbanist practices have several common principles such as mixed housing types, compact form, pedestrian-friendly streetscapes, and defined centers and edges. Other principles, however, are not universal; these include transportation options, traditional architectural and design patterns, open space networks, and connected street layouts.

Supporting Grant's argument, the research findings discussed in previous chapters revealed that although both case study neighborhoods were planned by proponents of New Urbanism in the US, they exhibit different physical, behavioral and conceptual characteristics in the US and Turkey. Both case study sites are unique interpretations of New Urbanism and are quite different from each other. The following sections will discuss actual design outcomes of each case study neighborhood separately with reference to their cultural context. They will be assessed with respect to the goals outlined in the Charter of New Urbanism to understand how successful each neighborhood is in addressing these goals in its particular cultural context.

### Cherry Hill Village, US

*Architectural Style and Public Spaces*

Like most New Urbanist developments in the US, CHV largely succeeds in embodying the New Urbanist principles of architectural and landscape design, that celebrate local history, climate, ecology, and building practice and physically well-defined public spaces. The neighborhood has a different character from that of its surrounding context by virtue of its architectural style, front porches, variety of housing types, density (ratio of built to un-built area), smaller lots, proximity of houses to each other and to sidewalks, availability of retail within walking distance, and well designed neighborhood parks.

*Diversity of Use, Public Transportation and Pedestrian Activity*

The initial design vision of CHV included an active civic center hosting commercial and cultural activities and satisfying residents' daily needs. However, the actual outcome was not as planned. Due to the recent economic recession, the development of the remaining phases of the neighborhood slowed, which in turn made it harder to attract businesses to the civic center. As a result, the existing retail stores and businesses are limited in variety and do not satisfy the daily needs of residents. CHV residents still depend on chain grocery stores in shopping malls that require car trips.

One of the main principles of New Urbanism is transit oriented development; however, CHV lacks access to any public transit option. Located in South East Michigan, where the public transit system is not well-developed, CHV does not satisfy this New Urbanist principle. Due to the lack of public transportation, CHV residents are not likely to reduce their car trips.

CHV does, however, largely satisfy another goal of New Urbanism: a pedestrian friendly environment. Pedestrian behavior is supported by the neighborhood's design features, such as well-designed sidewalks, streetscapes with trees, hidden garages, proximity between buildings and sidewalks, porches facing sidewalks, and availability of destinations such as retail stores and parks within 10 minutes' walking distance.

The findings revealed that CHV residents walk more to exercise, to go to public places, and to visit someone than they do to use public transit or to make a purchase. However, pedestrian activity is limited within the neighborhood borders. This finding is not surprising if one considers the lack of available public transit in Canton and the variety of stores within walking distance. Due to the only partially successful implementation of the New Urbanist principles of diversity of use and transit oriented development, CHV does not provide enough destinations. Availability of destinations is one of the strongest correlates of walking behavior (Cervero & Kocelman, 1997; Lee & Moudon, 2006).

Previous research findings support the claims of New Urbanist designers that neighborhood designs featuring compact, mixed-use, and pedestrian-friendly environments affect households' travel behavior and reduce residents' auto-dependence (Joh et al., 2008; Khattak & Rodriguez, 2005; Khattak et al., 2005; Krizek, 2003; Nasar,

2003). However, this research has found that due to lack of destinations and public transit, CHV residents are still dependent on their cars and are not likely to reduce their car trips.

On the other hand, the research findings revealed that CHV residents walk more for leisure or exercise than for utilitarian purposes. This finding supports previous empirical results suggesting that traditional settlements that combine pedestrian-friendly streetscapes with accessible amenities such as parks and shops are likely to increase pedestrian activity within neighborhoods (Cervero & Kocelman, 1997; Joh et al., 2008; Lund, 2003; Rodriguez et al., 2006).

In addition, space syntax analyses revealed that the spatial configuration of CHV is likely to enhance pedestrian movement and active use of civic spaces within the neighborhood. In other words, CHV's street network is successfully designed not only to enhance the integration of civic spaces with each other and the neighborhood as a whole, but also to connect different parts of the neighborhood without leaving any segregated areas.

This research has found supporting evidence for the argument that the most integrated spaces in a system are more likely to attract natural movement (pedestrian movement in this case) and co-presence, which are the vital components of active use of public space (Hillier, 1996; Hillier et al., 1993; Peponis et al., 1989; Peponis & Wineman, 2002). The activity observations revealed that in CHV, where the spatial configuration is successfully designed, residents use civic spaces and the most integrated streets more actively than less integrated parts of the neighborhood.

*Accessibility*

Although CHV's configurational network is composed of well-connected streets and public spaces inside the neighborhood, CHV as a whole is quite isolated from the larger urban context. This is due to the (sub)urban growth pattern in South East Michigan. CHV is a part of a grid system with long and uninterrupted streets that successfully connect the whole area, but the system does not have a clear core and is mostly composed of conventional low density suburban neighborhood developments. In addition, CHV is located at the edge of Canton Township at the border between farmland and more

developed areas of the township. Therefore, CHV is like an island of internally well-connected streets and public spaces, with limited integration to the larger (sub)urban context. However, CHV's retail/cultural center is positioned right on one of the most integrated streets of Canton, Cherry Hill Road. This increases the potential of this center to draw movement from the surrounding context, as Cherry Hill Road is better integrated to the whole system.

*Diversity of Population and Self-selection*

CHV has only partially achieved "diversity of population." Its design features address this goal by providing different housing types to attract families of different types and people of different backgrounds. The survey results revealed that CHV was indeed successful in attracting different family types, such as empty-nesters, families with children, young couples, and single/divorced people.

However, research results also revealed that residents of CHV made a conscious decision to live in a traditional neighborhood development. The CHV respondents and interviewees were quite aware of the Traditional Neighborhood concept and its related physical features before they moved to CHV. They chose CHV because they wanted to live in a community with a unique identity and an active community life. Therefore, the factors that are closely related to New Urbanist features, such as architectural characteristics, pedestrian friendliness, amenities (parks, trails, and squares), mixed use, and sense of community are rated as the most important factors affecting the decision to move to CHV. The self-selection bias was noteworthy in CHV, and that may have limited the development's ability to achieve the goal of diversity of population.

This finding is similar to previous research findings. For example, Kim has also found that of twelve criteria, sense of community and a traditional town concept most affected the decision of Kentlands residents to move there (Kim, 2001). In other words, the Kentlands residents might have constituted a self-selected group of people who value New Urbanist principles such as a sense of community or social interaction. Handy's findings also drew attention to the self-selection factor amongst New Urbanist neighborhood residents. Handy suggested that residents of pedestrian oriented neighborhoods might be a self selected group with a common desire to walk to stores ( Handy et al., 2006; Handy, 1996).

In summarize, survey respondents' perceptions of their neighborhood are shaped significantly by their specific goals and motivations (Canter, 1983; Ittelson et al., 1974). CHV residents made conscious choices in line with their major motivations, and their choices defined their environmental roles (Barrett, 1998; Groat, 2000a). These motivations and the resulting environmental roles also shape residents' behavior and their perceived satisfaction with their neighborhoods. As CHV residents chose their neighborhood for its New Urbanist characteristics, they might be willing to walk more, to interact with neighbors more often, and to value a traditional neighborhood and its architectural style highly. Therefore, their perceived satisfaction with CHV is likely to be higher.

## Ispartakule, Turkey

### *Architectural Style and Public Spaces*

The building typologies utilized in Ispartakule differ from the New Urbanist examples in the USA. Ispartakule adapted the most commonly used local buildings types in Turkey, apartment buildings and villas. In addition, the density of Ispartakule is not different from that of its surrounding context. However, Ispartakule conveys a prestigious image due to its well-designed public spaces, availability of public greens, quality of construction and quality of architectural design, which are not common in Turkey. Therefore, although Ispartakule complies with the New Urbanist principle of using architectural and landscape design that celebrate local building practices, its high level of environmental quality differentiates it from its surrounding context.

### *Diversity of Use, Public Transportation and Pedestrian Activity*

Ispartakule's initial design included a series of active civic spaces all connected to the planned train station and the square in front, which would serve as a civic center hosting a variety of functions. However, the actual outcome is not as planned. This vision did not materialize, as only one half of the project was developed and the train station and the public square were not built at all. Therefore, Ispartakule has very limited number of stores and offices, which neither satisfy the daily needs of residents nor serve as destinations for pedestrian activity.

Ispartakule incorporates many features supportive of pedestrian activity such as well-designed sidewalks, streetscapes with trees and hidden garages, and parks within 10 minutes' walking distance. However, the actual design outcome lacks destinations such as retail stores and civic buildings within the neighborhood. Apart from parks, the only destinations are convenience stores that are not sufficient to meet needs such as weekly grocery shopping. Although these destinations foster pedestrian activity within the neighborhood, Ispartakule residents still depend upon the Bahcesehir commercial center, which necessitates automobile trips. Finally, the topography of Ispartakule creates a challenge for pedestrian activity, as steep hills are likely to inhibit walking.

Furthermore, the configuration of Ispartakule's street network leaves isolated segments that are likely to be deprived of natural movement. In addition, civic spaces not only are segregated from the neighborhood's integration core but also have low levels of constitutedness (that is, the number of building entrances directly connected to the streets). Activity observations revealed that neighborhood design in Ispartakule has major disadvantages in channeling natural movement throughout the neighborhood and particularly to civic spaces. The Turkish residents make minimal use of their neighborhood's civic spaces, which are located at the most segregated parts of the configurational system. The configurational properties of Ispartakule are not successfully designed to foster active use of streets and civic spaces. This finding confirms previous research findings, which suggested that segregated spaces within a configured system are not likely to attract pedestrian movement and co-presence; therefore, they are less likely to become actively used public spaces (Bafna, 2003; Hillier, 1996; Hillier et al., 1987; Hillier et al., 1993; Min, 1993; Penn et al., 1998; Peponis et al., 1989; Peponis et al., 1997; Peponis & Wineman, 2002).

Finally, the initial aim of Ispartakule's developer was to create a transit oriented development; however, the actual outcome is not as planned. Ispartakule is located right on important junctions of transportation lines such as highways, railways, and main bus routes, which easily connect the neighborhood to other parts of Bahcesehir as well as the city center. Bus lines run though the neighborhood, connecting it to Bahcesehir and other parts of Istanbul. However, due to the traffic and the number of stops, a bus trip takes considerably longer than a trip via private car. Another transportation option is the train line connecting Istanbul and Edirne, which passes through the edge of the

neighborhood and has a station inside Nature Park. However, interviews revealed that the train is not well utilized by Ispartakule residents, as it is not perceived to be a fast and effective means of public transportation.

*Accessibility*

Ispartakule is isolated from its larger context. The neighborhood lies at the edge of Bahcesehir, which is separated from the core by Nature Park and the railway passing though. In addition, on one side Ispartakule is adjacent to vacant land. Although Ispartakule is part of a satellite town (Bahcesehir), which has a core and grows towards the edges via additions of master-planned communities following a pattern close to radial, it remains quite segregated from the surrounding context. Therefore, Ispartakule des not draw movement from its larger context.

*Diversity of Population and Self-selection*

Ispartakule has only partially achieved the goal of "diversity of population." According to survey results, provision of different housing types did indeed attract families of different sizes. However, most residents belong to the middle or high income group. Although residents did not choose Ispartakule for its New Urbanist characteristics, as they had no idea about New Urbanism itself, they chose the neighborhood for its high quality environment and life. Thus Ispartakule projects a more prestigious image than other suburban developments in the immediate vicinity. In addition, relatively higher real estate prices in Bahcesehir mean that only residents of a certain income level are likely to afford living in Ispartakule. Ispartakule's attractiveness to a particular social class limits its ability to achieve the New Urbanist goal of diversity of population.

Different building types also carry different meanings and associations in different cultural contexts. In Turkey, living in a villa is commonly associated with having significant wealth; thus owning a villa is perceived as more prestigious than owning an apartment flat.

This research found a notable lack of social interaction amongst residents who live in different building types in the Turkish neighborhood. While apartment dwellers interact with other apartment dwellers, and villa residents interact with other villa residents, interaction between these two groups is not common. This social segregation by housing

type might have two possible causes: first, the attitudes of villa residents (that is, their desire for privacy and exclusivity, mentioned above); and second, the demographic differences (particularly income differences) between the two groups.

Finally, this research revealed that Ispartakule respondents and interviewees were unaware of New Urbanist design characteristics. Their major aspirations were to live in housing with high-quality construction and design, and to live in a high-quality environment where families can enjoy green areas and amenities such as pools, playgrounds, sports fields, parks, etc. Ispartakule respondents emphasized these physical elements over the quality of social life (sense of community and closeness to family/friends).

This finding confirms Grant's prior findings from an East Asian context, which suggest that the strong identity of New Urbanist settlements might have some appeal as a status symbol and attract a significant number of people who aspire to a better quality of life (Grant, 2006). Like New Urbanism in the East Asian context, New Urbanism in the Turkish context plays an active role in facilitating suburbanization, although the movement originally defined itself as against sprawl in the US context.

## 9.2 Major Findings

This section summarizes the major findings of this research under four headings: building typology and meaning, neighborhood configuration and public space use, resident motivations and perceived satisfaction, and patterns of social engagement.

### Building Typology and Meaning

This research revealed that the building typologies of New Urbanist neighborhoods differ in Turkey and the USA in that they adapt the most commonly used local types (single family homes and condos in the USA and apartment buildings and villas in Turkey). However, the building types are preferred by different demographic groups in the two cultural contexts. For example, in the US, the single family home is the most common building type, and it accommodates mostly families with children and empty nesters; condos are preferred primarily by single/divorced/widowed people or young couples. On

the other hand, in Turkey, the most common building type is the apartment block, which accommodates all types of families (single/divorced/widowed people, young couples, empty nesters and/or families with children). It also houses people from a variety of demographic backgrounds, due to the variety of apartment sizes and quality of construction available. However, villas, which are the most similar to single family homes in the USA and to the Estate Homes in CHV specifically, are more likely to accommodate families with children and/or empty nesters.

Different building types also carry different meanings and associations in different cultural contexts. In Turkey, living in a villa is commonly associated with having significant wealth, for three main reasons. First, building costs are much higher in Turkey than in the US, as the two countries use different construction types and materials.[37] Second, the scarcity of developable land both in urban and suburban settings in Turkey drives land prices up and greatly increases the cost of villas. Finally, the maintenance of villas (landscape, building materials, and utilities) is likely to cost much more than the maintenance of apartment flats, which reduces the affordability of villas for most of the middle and even upper-middle income group. Thus villa owners are generally perceived as wealthier than apartment flat owners.

In contrast, the single family home is not as directly associated with affluence in the US as in Turkey. The majority of the US population prefers single family homes, because this building type can accommodate the household needs of those with a variety of incomes. The wide range of prices, sizes and quality of construction means that single family homes are available in both affordable and exclusive options. On the other hand, condos are perceived as less family friendly in the US and are therefore preferred only by households without children.

Resident attitudes also reflect the above-mentioned differences between building types and their meanings in different cultural contexts. The survey participation rates of this study reveal this remarkable difference. In the US, the survey respondents are mostly single family home residents (the participation rate was 22% for single family homes and 10% for condos). In Turkey, on the other hand, most of the respondents were apartment

[37] In Turkey, concrete is the most commonly used construction material, whereas wood is the most common in the US. Due to this difference, construction costs and times vary greatly, and a villa in Turkey costs more than its counterpart in the US.

residents (the participation rate was 34% for apartments and 1% for villas). The low participation rate of villa residents in Turkey is striking. It suggests that Ispartakule's villa residents are more concerned with maintaining their privacy and exclusivity than apartment dwellers or CHV's single family home residents.

This difference is also observable in the physical features that define the boundaries between public and private spaces in Ispartakule. All the villas have clearly defined boundaries between the sidewalk and the front lawn. Whether the boundaries are transparent (e.g., fences and low walls permitting visibility) or opaque (e.g., high bushes not permitting visibility), they all prohibit access to the private space from the public space. In the US, however, almost all of the single family homes have permeable boundaries between private and public spaces on the street side, except for houses that have low fences (providing visibility) or high fences/bushes (not permitting visibility) to define their private lot lines. Therefore, in the US the front lawn becomes a part of the streetscape and functions as semi-public space, whereas in Turkey the front lawn is strictly separated from the public.

### Neighborhood Configuration and Public Space Use

This research has found that the spatial configurations of neighborhoods also differ significantly. Space syntax analyses revealed that the spatial configuration of the US neighborhood has greater potential to enhance pedestrian movement and active use of civic spaces than that of the Turkish neighborhood. In the US, the street network is successfully designed not only to enhance the integration of civic spaces with each other and the neighborhood as a whole, but also to connect different parts of the neighborhood successfully without leaving any segregated parts. In contrast, in the Turkish case, the arrangement of the street network is not well thought out or carefully designed to integrate civic spaces and neighborhood parts, leaving certain parts of the neighborhood quite isolated.

As previous research findings suggest, the most integrated spaces in a system are more likely to attract natural movement (pedestrian movement in this case) and co-presence, which are the vital components of active use of public space (Hillier, 1996; Hillier et al., 1993; Peponis et al., 1989; Peponis & Wineman, 2002). Consequently, the spatial

configurations that are not successfully designed to integrate public spaces are less likely to attract pedestrian movement and co-presence, which are fundamental to one of New Urbanism's principles: creating actively used public spaces within neighborhoods.

This research has found supporting evidence for the argument that less integrated spaces lack movement and co-presence and hence active use. The activity observations revealed that in the US case, where the spatial configuration is successfully designed, residents use civic spaces and the most integrated streets more actively than in the Turkish case. The Turkish residents make minimal use of their neighborhood's civic spaces, which are located at the most segregated parts of the configurational system.

In addition, in the Turkish case the most integrated streets coincide not with the most actively used streets but rather with the most highly constituted street segments (i.e., those with the most building entrances directly connected to the street). This does not make sense intuitively, because constitutedness is defined as a secondary factor (a multiplier) affecting natural movement, but it is not considered the primary factor (Hillier, 1996; Hillier & Hanson, 1984). However, because of the unsuccessful design of the Turkish street network with regard to its potential to channel pedestrian movement and co-presence throughout the neighborhood, constitutedness replaces integration as the primary factor defining the characteristics of public space use, particularly at the local level. In sum, the number of building entrances directly connecting to the sidewalk is significantly more important in determining the level of public space use in the Turkish case, because the overall street arrangement is not well thought out. In contrast, in the US case, constitutedness plays a secondary role, as the whole street network is well designed to foster active use of space.

Another difference between the configurational characteristics of the two cases is at the global level, which defines the relationship of the neighborhood with the surrounding context. The research findings suggest that although both of the neighborhoods are located at the edges of their respective suburban contexts, the Turkish neighborhood is more isolated from its surroundings than the US neighborhood. This is due to the difference in (sub)urban growth patterns in the two cultural contexts. In Turkey the case study neighborhood is a part of a satellite town (Bahcesehir), which has a core and grows towards the edges via additions of master-planned communities following a

pattern close to radial. However, in the US the case study neighborhood is a part of a grid system with long and uninterrupted streets that successfully connect the area, but the system does not have a clear core. The US case study site is adjacent to one of the most integrated streets of Canton, and its retail/cultural center is positioned right on this street. This increases the potential of the US case to draw movement from the surrounding context, as it is better integrated to the whole system than the Turkish case, which is highly segregated and hence likely to inhibit movement from the surrounding context.

### Resident Motivations and Perceived Satisfaction

The research findings suggest that residents have different motivations and goals in choosing New Urbanist neighborhoods in different cultural contexts. Amongst the seventeen different factors provided in the survey[38], the Turkish respondents prioritized those related to quality of housing (such as earthquake safety, better housing, larger home, and attractive appearance of housing) and quality of domestic life (such as good place to raise children). US respondents, on the other hand, most highly rated the factors reflecting New Urbanist features (such as architectural style, pedestrian-friendly environment, amenities, mixed use, and sense of community). These findings reveal that US residents consciously chose the New Urbanist neighborhood for its New Urbanist features. However, the Turkish residents were not aware of New Urbanism and its principles; hence their motivations were quite different from those of the US residents.

People evaluate their environments with respect to their goals (Canter, 1983; Ittelson et al., 1974). Since the residents in different cultural contexts have different goals, they are likely to evaluate their environments differently and are therefore likely to experience different levels of perceived satisfaction of the goal-oriented motivations. In order to evaluate goal-oriented motivations and their perceived satisfaction, this study utilized the

[38] The motivation factors provided in the survey are better housing, needed larger home, traditional neighborhood concept (for US) / planned community concept (for Turkey), sense of community, attractive appearance, amenities, mixed-use, good school district, walkability, proximity to place of work, good place to raise children, close to family/friends, investment, sense of safety and security, privacy, people of similar values, background of people (age, ethnicity, family type, income, etc.).

seven-level environmental consciousness model as a categorical framework[39] (Barrett, 1998; Groat, 2000a). This study has found supporting evidence for the argument presented above. The levels of perceived satisfaction in different cultural contexts vary as an outcome of the residents' different motivations and goals.

Amongst the seven levels of environmental consciousness representing the goal-oriented motivations, sense of community was ranked the lowest in the Turkish case. It was also amongst the lowest-rated factors defining residents' motivations to choose the New Urbanist neighborhood in Turkey. In contrast, sense of community was amongst the most important motivations for US residents in US, and the perceived satisfaction of the need for sense of community was amongst the highest ranked in the US case. The positive correlations between the motivation of and perceived satisfaction of sense of community in the two case study communities suggest a strong relationship between goals and evaluation of the environment.

### Patterns of Social Engagement

This research has found that characteristics and patterns of social engagement show notable differences between the Turkish and US New Urbanist communities. Residents in Turkey trust their neighbors less and know fewer of their closest neighbors by name than residents in the US case. However, the Turkish residents do more mutual favors for their neighbors than the US residents. In addition, the Turkish residents attend organizational meetings within and outside their neighborhood less than the US residents do. Finally, residents in Turkey are less involved in community issues (that is, they took action with other neighbors to deal with community issue less often) than residents in the US. All of these findings suggest that residents in Turkey are less likely to be open to civic engagement than residents in the US.

[39] It is hypothesized that environmental consciousness levels correspond to the five basic human needs as defined by Maslow which is expanded to include organizational needs as well. Therefore, lower-level needs are more pertinent to individual needs, whereas higher-level needs correspond to the common good (Maslow, 1954; Lang, 1987, 1994; Barret, 1998; Groat, 2000). Environmental consciousness levels are identified as follows: 1) feeling of safety and security, 2) sense of belonging, 3) distinctive character, 4) sense of well-being and personal growth, 5a) sense of community via living experience, 5b) sense of community via physical characteristics, 6) connection to the surrounding context, and 7) supportiveness of sustainability.

Residents in both communities reported that they became more socially active after they moved to a New Urbanist community. However, the patterns of social engagement show some differences. In the US neighborhood there are organized events such as Christmas in the Village, Spooky Saturday, Easter Bunny, Movie Nights, etc. These events are organized by the social Events Committee of the Homeowners' Association and are open to everybody in the neighborhood. In addition, close neighbors who share a street or an alley often engage in casual, spontaneous social activities. Finally, there are clubs voluntarily initiated and run by the residents, such as Book Club, Dinner Club, Quilt Club, etc. These groups sponsor regular activities year-round. In contrast, the Turkish neighborhood does not have a neighborhood organization for social activities, so there is no collective effort to organize community-wide events. The only formally organized events are undertaken by the municipality; these include arts-and-crafts workshops, foreign language classes and computer courses, which target mostly women. In sum, residents of the US neighborhood are more socially active and engaged than residents in Turkey.

In addition to a lack of organized activities, this research has found a notable lack of social interaction amongst residents who live in different building types in the Turkish neighborhood. While the residents of apartment buildings interact with each other and villa residents interact with other villa residents, interaction between these two groups is not common. This social segregation between residents of the two housing types might have two possible causes: first, the attitudes of villa residents (that is, their desire for privacy and exclusivity, mentioned above); and second, the demographic differences (particularly income differences) between the two groups.

In the US neighborhood, although the lack of interaction amongst condo residents was mentioned, the cross interaction between different housing types did not emerge as a major issue. However, this research found that one major factor affecting the pattern of social engagement amongst the residents was having children or pets. Residents of the US neighborhood reported that people who have children interact more often with neighbors than childless residents. In addition, they reported that having pets increases the chance of social interaction amongst neighbors, as it becomes a common interest.

## 9.4 Contributions to the Literature

This study has contributed to the existing body of knowledge in several ways. The most significant contribution is the cross-cultural comparative understanding of New Urbanist practice, since there is a considerable research gap in this area. Although several studies have assessed New Urbanist practices in the UK and Canada, none of them have compared those practices to the New Urbanist practice in the US (Grant & Bohdanow, 2008; Hess, 2008; Thompson-Fawcett, 2003b). This research directly compares and contrasts New Urbanist practice in the US and in another cultural context, and it expands the understanding of their similarities and differences.

In addition, as this study is exploratory in nature, it assesses New Urbanist neighborhoods by adapting different perspectives (formal, socio-behavioral and cognitive) and methodologies (survey, interviews and observations). The existing literature has not utilized such a variety of tactics and perspectives at the same time. Therefore this research helps to broaden and deepen the existing understanding of international practices of New Urbanism.

Another contribution of this research is its assessment of the spatial configuration of neighborhoods and its relationship with behavioral phenomena using space syntax tools. Space syntax provides robust analytical tools to compare the spatial properties of neighborhoods objectively. Exploration of New Urbanist projects via space syntax tools is relatively new. Although several scholars have explored spatial configurations of New Urbanist neighborhoods, only Baran and colleagues, who studied Southern Village in North Carolina, explored the relationship between these properties and empirical data of behavioral patterns (Baran et al., 2008; Dalton, 2007; Kim, 2007a; Veras & Amorim, 2005). The previous research also did not utilize space syntax tools to compare neighborhoods in different cultural contexts.

In addition, this research also contributes to the environmental psychology literature through its use of the environmental consciousness model as a categorical framework for assessing the purposive evaluation of New Urbanist neighborhoods by residents in different cultural contexts. Several studies have theoretically explored the relationship between basic human needs and environmental affordances to meet these users' needs

(Groat, 2000a; Lang, 1987, 1994; Maslow, 1954; Steele, 1973); however, none of them have adopted this framework to empirically assess the level of environmental affordances.

### 9.3 Implications for Design Practice

These research findings have three major implications for neighborhood design practice in general and for New Urbanist practice in particular. The first concerns the spatial characteristics of the neighborhood at the local scale, within the neighborhood itself, such as street network and arrangement of civic spaces. The second is related to the cultural differences in meanings and attitudes, of which designers must be aware to increase the neighborhood's potential for optimal use by its residents. The third focuses on the relationship of neighborhoods with their surroundings at the global scale.

As one of the major findings of this research suggests, the quality of spatial design can vary with respect to how well it supports the active use of public space. If the active use of public spaces such as streets, parks, squares, etc. is the aim of neighborhood design (as in the case of New Urbanism), then designers must pay special attention to the spatial configuration of public spaces within the neighborhood. This research found that successfully designed neighborhoods have a well-integrated neighborhood core, in which the most integrated streets connect all parts of the neighborhood to each other and civic spaces are placed adjacent to the most integrated streets. Such neighborhoods are more likely to attract pedestrian movement and co-presence, and therefore are more likely to be utilized actively by residents.

New Urbanists pay particular attention to and provide specific guidelines for the design of physical features such as streetscape, sidewalks, lot size, building height, building entrances directly connecting to streets, hidden garages in alleys, design of public spaces, landscape, etc. (DPZ, 2009b). However, they do not pay attention to the overall spatial configuration of the neighborhoods. In other words, they focus mostly on smaller-scale issues rather than paying attention to how designers can design and arrange public spaces to increase their potential for active use.

The syntax analysis of neighborhoods provides valuable tools to for pre-testing the design before it is built. Designers, not only New Urbanist but also others, could utilize Space Syntax tools at the design stage to see how likely the neighborhood design is to enhance public space use. Using this information, they could adjust the disadvantageous parts of their design immediately. This would both help designers to meet their objectives (in the case of New Urbanism, the objective of actively used neighborhood spaces) and help residents to better utilize public spaces within their neighborhood.

This research has another major implication for international design practice: awareness of cultural differences. When designers practice in a culture other than their own, they either adapt local physical features or import non-local features without extensive comprehension of what those features mean within the specific cultural context. For example, as this research has found, the mixture of apartment buildings and villas in the Turkish case produced a result contrary to New Urbanist expectations in the US context. Rather than creating an inclusive neighborhood environment by bringing people from a variety of backgrounds together, the combination of apartments and villas created a highly segregated neighborhood. This finding is similar to other research findings from the UK (Thompson-Fawcett, 2003b). Clearly, the attitudes of residents of similar building types vary from one cultural context to another. Hence this affects how New Urbanist neighborhoods are perceived within different cultural contexts.

Designing inclusive neighborhoods is not an easy task. Scholars have been criticizing New Urbanism widely for claiming too much on this issue. However, New Urbanists can avoid this pitfall by designing neighborhoods that are likely to support inclusiveness rather than exclusiveness, without claiming that New Urbanists can create inclusive neighborhoods. This task is even harder in the international context, as attitudes and meanings are quite different. Therefore, designers must make a special effort to learn as much as they can about the peculiarities of the cultural context for which they are designing. One way to do this is by collaborating with local design offices and learning from their experiences. Unless international New Urbanist practitioners thoroughly understand the cultures for which they are designing, the implemented design outcomes are likely to be misinterpreted and function in opposition to New Urbanist principles and expectations.

The third major implication of this research for design practice relates specifically to New Urbanist principles and how they can be distorted in different cultural contexts. New Urbanists in the US vehemently criticize suburban sprawl and suggest that urban centers should be created with defined boundaries and edges, increased densities and mixed uses. However, in different cultural contexts, New Urbanist projects themselves can achieve contradictory results, such as contributing to fast suburban growth and functioning as gated enclaves. This research also proved that New Urbanist neighborhoods in different cultural contexts can be quite disconnected from their surroundings, reducing the possibility of active public life. Yet active urban life is one of the ideals for which New Urbanists are striving in the US. If New Urbanism wants to be consistent with its claims and principles internationally, then designers must pay particular attention to where these neighborhoods are located in different cultural contexts and how they are connected to their surrounding contexts.

## 9.5 Limitations

This research has several limitations. Perhaps the most significant one is the limited number of cases examined. Due to financial, geographical and time limitations, this study could examine only two cases: one in the US, and one in Turkey. However, studying more cases in cultural contexts other than the US would help us better understand, compare and contrast the similarities and differences of international practices of New Urbanism. Another significant limitation of the study is the low survey return rates, which limited the type and depth of statistical analyses employed to analyze the survey data. Finally, due to the unexpected reactions of Turkish villa residents to the second distribution of the survey, non-participant activity observations were conducted to a limited extent (only number of people and types of activities were recorded.) In addition, initially planned artifactual observations focusing on the qualities of boundaries between public and private spaces could not be conducted, since they require a through recording that would probably have disturbed the residents even further.

## 9.6 Suggestions for Future Work

This research has presented the first attempt to assess New Urbanist practices cross-culturally. Although assessment of neighborhood design models within the same culture is quite common, cross-cultural assessment of these models remains an unexplored field. However, this field of study is very important for the design profession, which has increasingly been practicing globally. Therefore, filling the significant research gap with respect to cross-cultural assessment of neighborhood design models in a variety of different cultural contexts is one possible area for future work.

Conducting similar studies in different cultures would enhance the understanding of international New Urbanist practice. Re-designing the survey instrument to shorten it, to exclude the parts that were not utilized for this study, and to fine-tune the questions that were not clearly understood by respondents would help increase survey participation and provide better data. In addition, questions could be included to better measure the relationship between level of social engagement and residents' goals. Finally, conducting activity observations using GPS tools to record data (e.g., the exact location of people) would increase the precision and ease of the data-collection process.

# APPENDICES

## Appendix A. Survey instrument

Living in Cherry Hill Village

Survey of Residents' Opinions

**The University of Michigan**

**A. TAUBMAN COLLEGE OF ARCHITECTURE + URBAN PLANNING**

1

Dear Cherry Hill Village Resident,

This survey is a part of a Ph.D. dissertation conducted by K. Füsun Erkul at the Taubman College of Architecture and Urban Planning, at the University of Michigan. The objective of this research is to understand to what extent different neighborhood design features affect the residents' experiences. The results of this survey will help to identify the strengths of your neighborhood and the needs of its residents. By participating in this survey, you will be providing important feedback to the improvement of neighborhood design and planning in general and your neighborhood in particular.

You will not be identified in any reports on this study. Records will be kept confidential to the extent provided by federal, state, and local law. However, the Institutional Review Board or university and government officials responsible for monitoring this study may inspect these records. Your participation in this survey is voluntary. You may skip or refuse to answer any survey question and move to the next one or withdraw without penalty. The results of this survey can be shared with interested residents upon request. If you have any questions, please contact K. Füsun Erkul at 734-383 6388 and kerkul@umich.edu.You may also contact faculty advisor, Professor Linda Groat at lngroat@umich.edu, or 734-936-0218.

Should you have questions regarding your rights as a research participant, please contact the Institutional Review Board, 540 E. Liberty Street, Suite 202, Ann Arbor, MI 48104-2210, (734) 936-0933, email: irbhsbs@umich.edu

**INSTRUCTIONS FOR TAKING THE SURVEY**: The survey package contains a survey booklet, a layout of your neighborhood, an information sheet, and two envelopes. Please follow the instructions and answer the questions as accurately as possible. The average length of time to complete this survey is about 20 minutes. After completing the survey please put the survey booklet and the layout of your neighborhood in the larger envelope provided. As an appreciation for your participation in this survey, you are elligible to participate a lottery to win a $50 gift card from a department store. If you would like to be considered for this lottery, please put your contact information on the information sheet and return it in the smaller envelope provided. **Please complete the survey in two weeks and drop the envelopes in the CHV Homeowners Association mailbox no later than October 30th.** The researcher will collect the envelopes from this mailbox.

If you would like participate further in this research project and be interviewed by the researcher, please check related box in the pink sheet and provide you contact information. Your contribution will be greatly appreciated! Thank you for your participation!

## ABOUT YOUR MOVING

**1. How long have you been living in Cherry Hill Village?**

Since_____ (month) _____ (year)

**2. Do you live in a (check one)**

☐ Single family house ☐ Condominium

**3. Do you own or rent the house in which you are living? (check one)**

☐ Own ☐ Rent ☐ Other (Please specify).....

**4. What type of housing were you living in before moving to Cherry Hill Village?**

**(Please check all that apply)**

☐ Single family house ☐ Urban ☐ Gated community

☐ Attached house ☐ Suburban ☐ Traditional neighborhood

☐ Condominium/Apartment ☐ Rural area

☐ Other (please specify).....

**5. How important was each of the following in <u>your decision to move to Cherry Hill Village</u>?**

| | extremely important | very important | important | somewhat important | not important | not applicaple |
|---|---|---|---|---|---|---|
| Better housing | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Needed larger home | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Traditional town concept | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Sense of community | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Attractive appearance of neighborhood | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Amenities within neighborhood | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Mixed-use (housing, retail, offices) | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Good school district | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Walkability | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Proximity to place of work | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Good place to raise children | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Close to family / friends | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Investment | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Perceived safety and security | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Perceived privacy | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| People of similar values to you | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Range of people's background (age, ethnicity, income, etc.) | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Other (please specify) | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |

## ABOUT YOUR COMMUNITY



**1. To what extent do you feel a sense of belonging to your community?**

☐ Very much ☐ Some what ☐ Neutral ☐ Not much ☐Not at all

**2. How important are these features to fostering a feeling of attachment to your community?**

| | extremely important | very important | important | somewhat important | not important | not applicaple |
|---|---|---|---|---|---|---|
| Residential density | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Parks and public greens | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Distance between sidewalks and houses | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Architectural style | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Overall layout of Cherry Hill Village | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Street trees and landscaping | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Overal size of your Cherry Hill Village | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Arrangement of houses | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Mixture of housing types | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Overall design quality of houses | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Street layout | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |

**3. How much do you agree or disagree with the statements below?**

**A. Living in Cherry Hill Village give me a sense of community.**

☐ Very much ☐ Some what ☐ Neutral ☐ Not much ☐Not at all

**B. The physical characteristics of Cherry Hill Village give me a sense of community.**

☐ Very much ☐ Some what ☐ Neutral ☐ Not much ☐Not at all

**4. How important are the following features in promoting sense of community within Cherry Hill Village?**

| | extremely important | very important | important | somewhat important | not important | not applicaple |
|---|---|---|---|---|---|---|
| Walkability of the environment | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Feeling that Cherry Hill Village is your home | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Interaction with next-door neighbors | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Feeling that a good fit exists between you and Cherry Hill Village | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |

**5. To what extent do you feel Cherry Hill Village has a distinctive character?**

☐ Very much ☐ Some what ☐ Neutral ☐ Not much ☐Not at all

**6. How important are these features in promoting a distinctive character of Cherry Hill Village?**

| | extremely important | very important | important | somewhat important | not important | not applicaple |
|---|---|---|---|---|---|---|
| Residential density | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Parks and public greens | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Distance between sidewalks and houses | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Architectural style | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Overall layout of Cherry Hill Village | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Street trees and landscaping | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Overal size of your Cherry Hill Village | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Arrangement of houses | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Mixture of housing types | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Overall design quality of houses | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Street layout | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |

**7. To what extent do you feel safe and secure in your community?**

☐ Very much ☐ Some what ☐ Neutral ☐ Not much ☐Not at all

**8. How important are the following features in supporting your social interaction with your neighbors?**

| | extremely important | very important | important | somewhat important | not important | not applicaple |
|---|---|---|---|---|---|---|
| Residential density | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Parks and public greens | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Distance between sidewalks and houses | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Architectural style | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Overall layout of Cherry Hill Village | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Street trees and landscaping | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Overal size of your Cherry Hill Village | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Arrangement of houses | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Mixture of housing types | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Overall design quality of houses | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Street layout | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |

**9. To what extent do you feel Cherry Hill Village enhances your overall sense of well-being and personal growth?**

☐ Very much ☐ Some what ☐ Neutral ☐ Not much ☐Not at all

**10. To what extent do you feel Cherry Hill Village is connected to its surrounding context?**

☐ Very much ☐ Some what ☐ Neutral ☐ Not much ☐Not at all

**11. To what extent do you feel Cherry Hill Village is supportive of sustainability and ecological principles?**

☐ Very much ☐ Some what ☐ Neutral ☐ Not much ☐Not at all

**12. How often do you typically walk in Cherry Hill Village?**

| | less than once a week | few times a week | daily | several times a day | not applicable |
|---|---|---|---|---|---|
| For pleasure/exercise | 1☐ | 2☐ | 3☐ | 4☐ | ☐ |
| To make a purchase | 1☐ | 2☐ | 3☐ | 4☐ | ☐ |
| To go to public places (parks, squares, clubhouse etc) | 1☐ | 2☐ | 3☐ | 4☐ | ☐ |
| To visit someone | 1☐ | 2☐ | 3☐ | 4☐ | ☐ |
| To go to public transit | 1☐ | 2☐ | 3☐ | 4☐ | ☐ |
| Other (specify) | 1☐ | 2☐ | 3☐ | 4☐ | ☐ |

**13. How important is each of the features in your deciding to walk in Cherry Hill Village?**

| | extremely important | very important | important | somewhat important | not important | not applicaple |
|---|---|---|---|---|---|---|
| Residential density | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Parks and public greens | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Distance between sidewalks and houses | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Architectural style | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Overall layout of Cherry Hill Village | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Street trees and landscaping | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Overal size of your Cherry Hill Village | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Arrangement of houses | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Mixture of housing types | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Overall design quality of houses | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |
| Street layout | 5☐ | 4☐ | 3☐ | 2☐ | 1☐ | ☐ |

## YOUR SOCIAL NETWORK

***Please find your home on the given layout of Cherry Hill Village and put the red sticker on it. Please find homes of up to 5 people you know best and/or interacted with over the last six months and put the yellow stickers on them on the given layout of Cherry Hill Village. Please pay attention*** **to the numbers on yellow sticker when your repy the following questions.**

**1. How many friends do you have who live in your neighborhood?**

☐ None ☐ 1-2 ☐ 3-5 ☐ 6-9 ☐ 10 or more

**2. Please check as many as appropriate categories of the ways you are connected to the people you specified on the given layout.**

| | # 1 | # 2 | # 3 | # 4 | # 5 |
|---|---|---|---|---|---|
| Family | ☐ | ☐ | ☐ | ☐ | ☐ |
| Coworker | ☐ | ☐ | ☐ | ☐ | ☐ |
| Friend | ☐ | ☐ | ☐ | ☐ | ☐ |
| Other | ☐ | ☐ | ☐ | ☐ | ☐ |

**3. How long have you known the people you specified?**

| | # 1 | # 2 | # 3 | # 4 | # 5 |
|---|---|---|---|---|---|
| Less than a month | ☐ | ☐ | ☐ | ☐ | ☐ |
| 1-3 months | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3-6 months | ☐ | ☐ | ☐ | ☐ | ☐ |
| 7-12 months | ☐ | ☐ | ☐ | ☐ | ☐ |
| 1-3 years | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3-10 years | ☐ | ☐ | ☐ | ☐ | ☐ |
| More than 10 years | ☐ | ☐ | ☐ | ☐ | ☐ |

**4. How often normally do you or anybody from your household have face to face interaction with these people in person?**

| | # 1 | # 2 | # 3 | # 4 | # 5 |
|---|---|---|---|---|---|
| Several times a day | ☐ | ☐ | ☐ | ☐ | ☐ |
| Once everyday | ☐ | ☐ | ☐ | ☐ | ☐ |
| Few times a week | ☐ | ☐ | ☐ | ☐ | ☐ |
| Once a week | ☐ | ☐ | ☐ | ☐ | ☐ |
| Several times a month | ☐ | ☐ | ☐ | ☐ | ☐ |
| Once a month | ☐ | ☐ | ☐ | ☐ | ☐ |
| Less than once a month | ☐ | ☐ | ☐ | ☐ | ☐ |
| Not applicable | ☐ | ☐ | ☐ | ☐ | ☐ |

**5. How close emotionally do you feel to these people?**

| | # 1 | # 2 | # 3 | # 4 | # 5 |
|---|---|---|---|---|---|
| Very close | ☐ | ☐ | ☐ | ☐ | ☐ |
| Close | ☐ | ☐ | ☐ | ☐ | ☐ |
| Somewhat close | ☐ | ☐ | ☐ | ☐ | ☐ |
| Not at all | ☐ | ☐ | ☐ | ☐ | ☐ |

## COMMUNITY PARTICIPATION



***Here are some questions about how you view other people and your relationship with them.***

**1. <u>Generally speaking</u>, would you say that most people can be trusted or that you can't be too careful in dealing with people?**

☐ People can be trusted ☐ You can't be too careful

**2. <u>Generally speaking</u>, how much would you say that you can trust people in your neighborhood?**

☐ Trust them a lot ☐ Trust them some ☐ Trust them only a little ☐ Trust them not at all

***Here are some questions about how many times you've done certain things <u>in the past 12 months</u>. For all of these, please provide your best guess.***

**3. How many times <u>in the past twelve months</u> have you attended <u>club or organizational meetings WITHIN Cherry Hill Village</u>?**

☐ Never did this ☐ Once ☐ 2-4 times ☐ 5-9 times ☐ About once a month on average
☐ Twice a month ☐ About once a week on average ☐ More than once a week

**4. How many times <u>in the past twelve months</u> have you attended <u>club or organizational meetings OUTSIDE Cherry Hill Village,</u> not including meetings for work?**

☐ Never did this ☐ Once ☐ 2-4 times ☐ 5-9 times ☐ About once a month on average
☐ Twice a month ☐ About once a week on average ☐ More than once a week

**5. How many times <u>in the past twelve months</u> have you <u>been in the home of someone OUTSIDE Cherry Hill Village</u> or had them in your home?**

☐ Never did this ☐ Once ☐ 2-4 times ☐ 5-9 times ☐ About once a month on average
☐ Twice a month ☐ About once a week on average ☐ More than once a week

**6. How many times <u>in the past twelve months</u> have you <u>been in the home of someone living IN Cherry Hill Village</u> or had them in your home?**

☐ Never did this ☐ Once ☐ 2-4 times ☐ 5-9 times ☐ About once a month on average
☐ Twice a month ☐ About once a week on average ☐ More than once a week

**7. In the past 12 months, have you done anything with others in your community or neighborhood to try to deal with a community issue or problem?**

☐ Yes ☐ No

**8. Of the 10-15 neighbors living nearest to you, how many of the adults do you know by name?**

☐ All or almost all ☐ More than half ☐ About half
☐ Less than half ☐ None or almost none

**9. How often do you and your neighbors do favors for each other, for example, watching each others' children, lending tools, helping with shopping, etc.?**

☐ Daily / Almost daily ☐ 1-3 times a week ☐ 1-3 times a month
☐ Less than once a month ☐ Never

## VALUES

**1. Below is a list of values/behaviors. Which of the following best describe who you are (not what you desire to become)? Please check 7.**

☐ Control ☐ Financial security ☐ Safety conscious
☐ Courtesy ☐ Family ☐ Regard for tradition
☐ Being the best ☐ Orderliness ☐ Reputation
☐ Personal growth ☐ Responsibility ☐ Tolerance
☐ Commitment ☐ Creativity ☐ Sharing
☐ Community service ☐ Environmental awareness ☐ Quality of life
☐ Compassion ☐ Social responsibility ☐ Sustainability

*This section is drawn from World Values Survey which is a well-established study of basic beliefs applied in more than 80 societies. The intention is to understand the role of your basic values in your experience of the community.*

**2. People sometimes talk about what the aims of this country should be for the next ten years. Listed below are some of the goals which different people would give top priority. If you had to choose, which one of the things below would you say is most important ones? (check one for your 1st choice and one for your 2nd choice)**

| | 1st choice | 2nd choice |
|---|---|---|
| Maintaining order in the nation | 1☐ | 2☐ |
| Giving people more say in important government decisions | 1☐ | 2☐ |
| Fighting rising prices | 1☐ | 2☐ |
| Protecting freedom of speech | 1☐ | 2☐ |

**3. Using the 10 point scale below, please mark for each of the following whether you think it can always be justified, never be justified, or something in between. (1 means "can never be justified" and 10 means "can always be justified.")**

| | can never be justified | | | | | | | | | can always be justified |
|---|---|---|---|---|---|---|---|---|---|---|
| Homosexuality | ☐1 | ☐2 | ☐3 | ☐4 | ☐5 | ☐6 | ☐7 | ☐8 | ☐9 | ☐10 |
| Abortion | ☐1 | ☐2 | ☐3 | ☐4 | ☐5 | ☐6 | ☐7 | ☐8 | ☐9 | ☐10 |

**4. Here is a question about your life in general. Taking all things together, would you say you are**

☐ Very happy ☐ Happy ☐ Not very happy ☐ Not happy at all

**5. Below is a list of various changes in our way of life that might take place in the near future. If it were to happen, do you think it would be a good thing, a bad thing, or don't you mind?**

| | a good thing | a bad thing | don't mind |
|---|---|---|---|
| Less emphasis on money and material possessions | 1☐ | 2☐ | 3☐ |
| Less importance placed on work in our lives | 1☐ | 2☐ | 3☐ |
| More emphasis on the development of technology | 1☐ | 2☐ | 3☐ |
| Greater respect for authority | 1☐ | 2☐ | 3☐ |
| More emphasis on family life | 1☐ | 2☐ | 3☐ |

**6. How proud are you to be American?**

☐ Very proud ☐ Quite proud ☐ Not very proud ☐ Not at all proud

**7. Please indicate how you feel about each of the following statements.**

| | strongly agree | agree | neither agree nor disagree | disagree | strongly disagree |
|---|---|---|---|---|---|
| The United States is a land of equal opportunity | 1☐ | 2☐ | 3☐ | 4☐ | 5☐ |
| Income differences between countries are too large | 1☐ | 2☐ | 3☐ | 4☐ | 5☐ |
| Immigrants are generally good for the U.S. economy | 1☐ | 2☐ | 3☐ | 4☐ | 5☐ |
| Immigrants increase crime rates | 1☐ | 2☐ | 3☐ | 4☐ | 5☐ |
| Immigrants make America more open to new ideas and cultures | 1☐ | 2☐ | 3☐ | 4☐ | 5☐ |

**8. Which statement comes closer to your own point of view?**

**A.** The government should take more responsibility to ensure that everyone is provided for.

**B.** People should take more responsibility to provide for themselves.

☐ Statement A ☐ Statement B ☐ Disagree with both

**9. Below is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important? Please choose up to 5.**

☐ Good manners ☐ Imagination ☐ Religious faith

☐ Independence ☐ Tolerance and respect for other people ☐ Unselfishness

☐ Hard work ☐ Thrift, saving money and things ☐ Obedience

☐ Feeling of responsibility ☐ Determination and perseverance

## ABOUT YOUR BACKGROUND

**1. Are you**

☐ Male ☐ Female ☐ Other

**2. Are you**

☐ Married / living with a partner ☐ Single / divorced / widowed

**3. Are you**

☐ Under 20 ☐ 30 - 39 ☐ 50 - 59 ☐ 70 - 79

☐ 20 - 29 ☐ 40 - 49 ☐ 60 - 69 ☐ Above 80

**4. How many people live in your household?**.....

**5. Are there any children living in your household?**

☐ No ☐ Yes Number of children under age 5: .....

Number of children ages 5 - 18: .....

**6. What is your work status? (please mark as many as applies)**

☐ Working full-time ☐ Retired ☐ Homemaker ☐ Unemployed

☐ Working part-time ☐ Self-employed ☐ Student ☐ Other (specify).....

**7. What is the primary location for your daily work activities? (check one)**

☐ Your home ☐ Cherry Hill Village

☐ Other (specify) .....(city + state)

**8. Are you (check one)**

☐ White / Caucasian ☐ Asian ☐ African American ☐ Hispanic

☐ Other (specify) .....

**9. Which of the following categories describes your religion best? (check one)**

☐ Protestant ☐ Catholic ☐ Jewish ☐ Muslim

☐ Orthodox/Christian ☐ Atheist ☐ Other (specify) .....

**10. Which is the highest level of education you had?**

☐ Less than high school ☐ High school degree

☐ Technical school degree ☐ Some college without degree

☐ College degree ☐ Advanced degree

**11. What was your total household income before taxes last year? This figure should include your income from all sources, and the income of all family members living with you. It should include salaries, pensions, dividends, interest, and public assistance.**

☐ Less than $ 50,000 ☐ $ 50,000 - $ 74,999 ☐ $ 75,000 - $ 99,999

☐ $ 100,000 - $ 149,999 ☐ $ 150,000 - $ 199,999 ☐ $ 200,000 or more

## Appendix B. Thematic coding

| A2 Did anyone recommend CHV to you? Who is this person? | | | |
|---|---|---|---|
| 80% | 25% | 25% | 10% |
| No | Driving by | Newspaper | Previous neighbors / friends |
| CHVPI_01 | CHVPI_01 | CHVPI_04 | CHVPI_10 |
| CHVPI_02 | CHVPI_06 | CHVPI_07 | CHVPI_15 |
| CHVPI_04 | CHVPI_08 | CHVPI_12 | |
| CHVPI_05 | CHVPI_16 | CHVPI_17 | |
| CHVPI_07 | CHVPI_20 | CHVPI_20 | |
| CHVPI_08 | | | |
| CHVPI_09 | | | |
| CHVPI_11 | | | |
| CHVPI_12 | | | |
| CHVPI_13 | | | |
| CHVPI_14 | | | |
| CHVPI_16 | | | |
| CHVPI_17 | | | |
| CHVPI_18 | | | |
| CHVPI_19 | | | |
| CHVPI_20 | | | |

| A2. Did anyone recommend Ispartakule to you? Who is this person? | | | |
|---|---|---|---|
| 93% | 14% | 7% | 7% |
| No | Visiting friends in ISP | Lived in Bahcesehir before | Driving by |
| ISP_PI_01 | ISP_PI_01 | ISP_PI_05 | ISP_PI_13 |
| ISP_PI_02 | ISP_PI_05 | | |
| ISP_PI_03 | | | |
| ISP_PI_04 | | | |
| ISP_PI_06 | | | |
| ISP_PI_07 | | | |
| ISP_PI_08 | | | |
| ISP_PI_09 | | | |
| ISP_PI_10 | | | |
| ISP_PI_11 | | | |
| ISP_PI_12 | | | |
| ISP_PI_13 | | | |
| ISP_PI_14 | | | |

| A3. Before you moved in did you know what type of people were living in CHV? | | | | | | | |
|---|---|---|---|---|---|---|---|
| 75% | 25% | 15% | 15% | 10% | 10% | 5% | 5% |
| No | Yes | Assumed outgoing people | Assumed relatively affluent people | Assumed no children but mostly old people | Assumed child-friendly environment | Met with prospective neighbors during visits, sales events | Nice / outgoing people |
| CHVPI_01<br>CHVPI_02<br>CHVPI_03<br>CHVPI_04<br>CHVPI_06<br>CHVPI_07<br>CHVPI_08<br>CHVPI_09<br>CHVPI_10<br>CHVPI_13<br>CHVPI_14<br>CHVPI_17<br>CHVPI_18<br>CHVPI_19<br>CHVPI_20 | CHVPI_05<br>CHVPI_11<br>CHVPI_12<br>CHVPI_15<br>CHVPI_16 | CHVPI_10<br>CHVPI_12<br>CHVPI_18 | CHVPI_07<br>CHVPI_08<br>CHVPI_18 | CHVPI_01<br>CHVPI_03 | CHVPI_10<br>CHVPI_18 | CHVPI_12 | CHVPI_12 |

| A3. Before you moved in did you know what type of people were living in Ispartakule? | |
|---|---|
| 93% | 7% |
| No | yes |
| ISP_PI_01<br>ISP_PI_02<br>ISP_PI_03<br>ISP_PI_04<br>ISP_PI_06<br>ISP_PI_07<br>ISP_PI_08<br>ISP_PI_09<br>ISP_PI_10<br>ISP_PI_11<br>ISP_PI_12<br>ISP_PI_13<br>ISP_PI_14 | ISP_PI_05 |

| A4. Why did you move to CHV? (Why did you choose CHV?) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 60% | 35% | 35% | 20% | 15% | 15% | 10% | 10% | 10% | 10% | 10% |
| Liked architecture | Traditional town concept | Walkability | Similar to communities I grew up in | Mixed-use | Looking for active community life | Close to work | New construction | Affordable compared to Plymouth | Mixed types of houses | Resale value |
| CHVPI_01<br>CHVPI_02<br>CHVPI_03<br>CHVPI_04<br>CHVPI_06<br>CHVPI_09<br>CHVPI_11<br>CHVPI_13<br>CHVPI_14<br>CHVPI_16<br>CHVPI_17<br>CHVPI_19 | CHVPI_03<br>CHVPI_09<br>CHVPI_11<br>CHVPI_14<br>CHVPI_16<br>CHVPI_18<br>CHVPI_19 | CHVPI_02<br>CHVPI_03<br>CHVPI_05<br>CHVPI_09<br>CHVPI_11<br>CHVPI_13<br>CHVPI_19 | CHVPI_03<br>CHVPI_04<br>CHVPI_12<br>CHVPI_17 | CHVPI_02<br>CHVPI_09<br>CHVPI_19 | CHVPI_03<br>CHVPI_18<br>CHVPI_19 | CHVPI_05<br>CHVPI_06 | CHVPI_06<br>CHVPI_03 | CHVPI_04<br>CHVPI_07 | CHVPI_10<br>CHVPI_19 | CHVPI_15<br>CHVPI_18 |

| A4. Why did you move to Ispartakule? (Why did you choose Ispartakule?) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 43% | 36% | 29% | 29% | 14% | 21% | 21% | 14% | 14% | 14% | 14% |
| Earthquake safety | Quality of construction | Affordable price | Close to green areas | Nice env. for raising kids | Size/plan of apartments | To live with friends/family together | New construction | Good schools | Close to work | No traffic |
| ISP_PI_02<br>ISP_PI_03<br>ISP_PI_05<br>ISP_PI_06<br>ISP_PI_08<br>ISP_PI_10 | ISP_PI_02<br>ISP_PI_03<br>ISP_PI_06<br>ISP_PI_09<br>ISP_PI_10 | ISP_PI_02<br>ISP_PI_06<br>ISP_PI_09<br>ISP_PI_10 | ISP_PI_08<br>ISP_PI_09<br>ISP_PI_10<br>ISP_PI_14 | ISP_PI_01<br>ISP_PI_04<br>ISP_PI_11 | ISP_PI_02<br>ISP_PI_03<br>ISP_PI_06 | ISP_PI_05<br>ISP_PI_01<br>ISP_PI_02 | ISP_PI_04<br>ISP_PI_09 | ISP_PI_07<br>ISP_PI_14 | ISP_PI_03<br>ISP_PI_08 | ISP_PI_08<br>ISP_PI_09 |

| D3. What kinds of things do you often do now in CHV that you didn't do before moving here? | | | | | | |
|---|---|---|---|---|---|---|
| 60% | 50% | 30% | 20% | 10% | 10% | 5% |
| Socialize with neighbors | Involved in organized activities | Walking | Shopping from local businesses | Play in the park | Volunteering | Less interaction w/neighbors |
| CHVPI_01 | CHVPI_01 | CHVPI_01 | CHVPI_01 | CHVPI_06 | CHVPI_12 | CHVPI_08 |
| CHVPI_02 | CHVPI_02 | CHVPI_02 | CHVPI_13 | CHVPI_13 | CHVPI_17 | |
| CHVPI_03 | CHVPI_04 | CHVPI_05 | CHVPI_16 | | | |
| CHVPI_04 | CHVPI_10 | CHVPI_06 | CHVPI_18 | | | |
| CHVPI_07 | CHVPI_12 | CHVPI_13 | | | | |
| CHVPI_09 | CHVPI_15 | CHVPI_18 | | | | |
| CHVPI_10 | CHVPI_16 | CHVPI_20 | | | | |
| CHVPI_11 | CHVPI_17 | | | | | |
| CHVPI_12 | CHVPI_19 | | | | | |
| CHVPI_14 | CHVPI_20 | | | | | |
| CHVPI_16 | | | | | | |
| CHVPI_19 | | | | | | |

**D3. What kinds of things do you often do now in Ispartakule that you didn't do before moving here?**

| 36% | 29% | 29% | 29% | 29% | 14% | 14% | 7% |
|---|---|---|---|---|---|---|---|
| Walking | Using amenities | Nothing | Feeling of freedom and safety | Kids are free to play | Spend time with myself | Socialize with people | Can't socialize |
| ISP_PI_01 | ISP_PI_01 | ISP_PI_03 | ISP_PI_04 | ISP_PI_04 | ISP_PI_05 | ISP_PI_07 | ISP_PI_10 |
| ISP_PI_05 | ISP_PI_08 | ISP_PI_02 | ISP_PI_05 | ISP_PI_05 | ISP_PI_11 | ISP_PI_14 | |
| ISP_PI_08 | ISP_PI_12 | ISP_PI_09 | ISP_PI_08 | ISP_PI_12 | | | |
| ISP_PI_10 | ISP_PI_13 | ISP_PI_14 | ISP_PI_12 | ISP_PI_13 | | | |
| ISP_PI_13 | | | | | | | |

| D4. How would you describe the social life in the CHV community? | | | | |
|---|---|---|---|---|
| 60% | 30% | 15% | 10% | 10% |
| Very active | Children friendly | Not many activities for singles/empty nesters | Not much interaction btw condos and homes | Not so active |
| CHVPI_01 | CHVPI_01 | CHVPI_05 | CHVPI_06 | CHVPI_14 |
| CHVPI_02 | CHVPI_03 | CHVPI_06 | CHVPI_09 | CHVPI_15 |
| CHVPI_03 | CHVPI_05 | CHVPI_09 | | |
| CHVPI_04 | CHVPI_09 | | | |
| CHVPI_07 | CHVPI_14 | | | |
| CHVPI_09 | CHVPI_18 | | | |
| CHVPI_10 | | | | |
| CHVPI_11 | | | | |
| CHVPI_12 | | | | |
| CHVPI_16 | | | | |
| CHVPI_19 | | | | |
| CHVPI_20 | | | | |

| D4. How would you describe the social life in the Ispartakule community? | | | |
|---|---|---|---|
| 50% | 29% | 43% | 21% |
| Social active women group | Divide between apartments and villas | Not involved due to work | Availability of workshops |
| ISP_PI_01 | ISP_PI_06 | ISP_PI_02 | ISP_PI_05 |
| ISP_PI_05 | ISP_PI_04 | ISP_PI_03 | ISP_PI_07 |
| ISP_PI_06 | ISP_PI_07 | ISP_PI_09 | ISP_PI_12 |
| ISP_PI_07 | ISP_PI_08 | ISP_PI_10 | |
| ISP_PI_09 | ISP_PI_11 | | |
| ISP_PI_12 | ISP_PI_13 | | |
| ISP_PI_13 | | | |

| H1. Generally speaking what type of activities do you do in CHV? Can you locate the locations of these activities on the map? | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 85% | 60% | 45% | 40% | 30% | 20% | 20% | 20% | 15% | 5% | 5% |
| Walking | Participate in planned activities | Play with kids / dogs in parks | Shop from local businesses | Bike around | Go to theatre | Involved in HOA | Participate in alley parties | Jogging in parks / trails | Sitting at patio | Gardening |
| CHVPI_01 | CHVPI_01 | CHVPI_04 | CHVPI_01 | CHVPI_02 | CHVPI_01 | CHVPI_01 | CHVPI_11 | CHVPI_01 | CHVPI_11 | CHVPI_17 |
| CHVPI_02 | CHVPI_02 | CHVPI_06 | CHVPI_02 | CHVPI_04 | CHVPI_03 | CHVPI_03 | CHVPI_12 | CHVPI_02 | | |
| CHVPI_03 | CHVPI_03 | CHVPI_09 | CHVPI_06 | CHVPI_13 | CHVPI_13 | CHVPI_16 | CHVPI_14 | CHVPI_09 | | |
| CHVPI_04 | CHVPI_07 | CHVPI_11 | CHVPI_07 | CHVPI_14 | CHVPI_16 | CHVPI_20 | CHVPI_19 | | | |
| CHVPI_05 | CHVPI_09 | CHVPI_13 | CHVPI_10 | CHVPI_16 | | | | | | |
| CHVPI_06 | CHVPI_11 | CHVPI_15 | CHVPI_12 | CHVPI_19 | | | | | | |
| CHVPI_07 | CHVPI_15 | CHVPI_16 | CHVPI_13 | | | | | | | |
| CHVPI_09 | CHVPI_16 | CHVPI_17 | CHVPI_16 | | | | | | | |
| CHVPI_10 | CHVPI_17 | CHVPI_19 | | | | | | | | |
| CHVPI_11 | CHVPI_18 | | | | | | | | | |
| CHVPI_12 | CHVPI_19 | | | | | | | | | |
| CHVPI_13 | CHVPI_20 | | | | | | | | | |
| CHVPI_15 | | | | | | | | | | |
| CHVPI_17 | | | | | | | | | | |
| CHVPI_18 | | | | | | | | | | |
| CHVPI_19 | | | | | | | | | | |
| CHVPI_20 | | | | | | | | | | |

| H1. Generally speaking what type of activities do you do in Ispartakule? Can you locate the locations of these activities on the map? | | | | | | |
|---|---|---|---|---|---|---|
| 71% | 43% | 36% | 36% | 29% | 21% | 14% |
| Walking | Shop from convenience store | Go to Nature Park and play with kids | Go to restaurants in Nature Park | Go to shopping in Bahcesehir | Go to pool | Drive to Bahcesehir |
| ISP_PI_01 | ISP_PI_03 | ISP_PI_02 | ISP_PI_01 | ISP_PI_04 | ISP_PI_06 | ISP_PI_01 |
| ISP_PI_05 | ISP_PI_05 | ISP_PI_03 | ISP_PI_02 | ISP_PI_05 | ISP_PI_08 | ISP_PI_13 |
| ISP_PI_06 | ISP_PI_07 | ISP_PI_07 | ISP_PI_09 | ISP_PI_08 | ISP_PI_11 | |
| ISP_PI_07 | ISP_PI_11 | ISP_PI_09 | ISP_PI_10 | ISP_PI_12 | | |
| ISP_PI_08 | ISP_PI_12 | ISP_PI_10 | ISP_PI_14 | | | |
| ISP_PI_09 | ISP_PI_14 | | | | | |
| ISP_PI_10 | | | | | | |
| ISP_PI_12 | | | | | | |
| ISP_PI_13 | | | | | | |
| ISP_PI_14 | | | | | | |

## Appendix C. Correlations between survey respondents' motivations and their perceived satisfaction

| ISPARTAKULE (Spearman's rho) | | Better housing | Good place to raise children | Attractive appearance of neigh. | Range of people's backgr. | Walkability | Amenities within neigh. | Mixed-use | Good school district | Sense of community | Close to family / friends |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 Supportive of sustainability | Correlation | -0.108 | 0.071 | .281(*) | .267(*) | 0.058 | .306(*) | 0.249 | 0.097 | 0.158 | 0.096 |
| | Sig. (2-tailed) | 0.364 | 0.576 | 0.021 | 0.035 | 0.653 | 0.012 | 0.059 | 0.480 | 0.211 | 0.474 |
| | N | 73 | 65 | 67 | 63 | 62 | 66 | 58 | 55 | 64 | 58 |
| 6 Connection to the surrounding context | Correlation | -0.017 | -0.100 | -0.083 | 0.183 | -0.106 | 0.078 | 0.044 | 0.084 | .264(*) | -0.079 |
| | Sig. (2-tailed) | 0.885 | 0.410 | 0.489 | 0.141 | 0.396 | 0.518 | 0.727 | 0.521 | 0.028 | 0.543 |
| | N | 78 | 70 | 72 | 66 | 66 | 71 | 64 | 60 | 69 | 62 |
| 5 Sense of community/living | Correlation | 0.065 | 0.063 | .264(*) | 0.035 | 0.140 | .256(*) | .305(*) | .380(**) | .260(*) | 0.028 |
| | Sig. (2-tailed) | 0.567 | 0.599 | 0.024 | 0.772 | 0.260 | 0.030 | 0.013 | 0.003 | 0.030 | 0.825 |
| | N | 81 | 71 | 73 | 69 | 67 | 72 | 65 | 61 | 70 | 63 |
| Sense of community/physical characteristics | Correlation | 0.144 | -0.122 | .234(*) | 0.111 | 0.174 | 0.207 | 0.213 | 0.235 | .332(**) | -0.214 |
| | Sig. (2-tailed) | 0.201 | 0.309 | 0.047 | 0.363 | 0.160 | 0.081 | 0.089 | 0.069 | 0.005 | 0.091 |
| | N | 81 | 71 | 73 | 69 | 67 | 72 | 65 | 61 | 70 | 63 |
| 4 Sense of well-being and personal growth | Correlation | 0.064 | .259(*) | 0.045 | 0.101 | -0.031 | .234(*) | 0.076 | 0.185 | 0.109 | -0.096 |
| | Sig. (2-tailed) | 0.569 | 0.029 | 0.705 | 0.410 | 0.804 | 0.048 | 0.548 | 0.153 | 0.371 | 0.454 |
| | N | 81 | 71 | 73 | 69 | 67 | 72 | 65 | 61 | 70 | 63 |
| 3 Distinctive character | Correlation | 0.037 | -0.131 | .419(**) | .334(**) | .289(*) | 0.206 | .444(**) | 0.104 | 0.211 | 0.040 |
| | Sig. (2-tailed) | 0.745 | 0.286 | 0.000 | 0.006 | 0.020 | 0.087 | 0.000 | 0.431 | 0.084 | 0.757 |
| | N | 78 | 68 | 71 | 67 | 65 | 70 | 63 | 59 | 68 | 61 |
| 2 Sense of belonging | Correlation | .238(*) | -0.186 | 0.009 | 0.049 | -0.049 | 0.050 | -0.153 | 0.211 | 0.120 | -.273(*) |
| | Sig. (2-tailed) | 0.036 | 0.129 | 0.944 | 0.696 | 0.702 | 0.684 | 0.235 | 0.112 | 0.332 | 0.033 |
| | N | 78 | 68 | 70 | 66 | 64 | 69 | 62 | 58 | 67 | 61 |
| 1 Feeling of safe and secure | Correlation | -0.018 | -0.156 | 0.013 | 0.196 | 0.009 | -0.072 | 0.020 | -0.132 | .242(*) | 0.021 |
| | Sig. (2-tailed) | 0.877 | 0.193 | 0.915 | 0.105 | 0.940 | 0.546 | 0.872 | 0.312 | 0.044 | 0.868 |
| | N | 81 | 71 | 73 | 69 | 67 | 72 | 65 | 61 | 70 | 63 |

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

a. Community = Ispartakule

columns are survey respondents' motivations sorted from highest to lowest ranked.

rows are goal oriented needs sorted with reference to environmental consciousness levels

| CHERRY HILL VILLAGE (Spearman's rho) | | | Attractive appearence of neigh. | Walkability | Sense of community | Good place to raise children | Traditional town concept | Amenities within neigh. | Mixed-use | People of similar values | Better housing | Range of people's background |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | Supportive of sustainability | Correlation | 0.221 | 0.104 | 0.211 | 0.207 | 0.112 | 0.069 | 0.164 | **.249(*)** | **.289(*)** | **.298(*)** |
| | | Sig. (2-tailed) | 0.067 | 0.398 | 0.084 | 0.123 | 0.361 | 0.571 | 0.177 | 0.041 | 0.025 | 0.013 |
| | | N | 69 | 68 | 68 | 57 | 68 | 69 | 69 | 68 | 60 | 69 |
| 6 | Connection to the surrounding context | Correlation | **.372(**)** | 0.220 | **.345(**)** | -0.047 | 0.164 | 0.207 | **.236(*)** | 0.070 | 0.173 | **.300(*)** |
| | | Sig. (2-tailed) | 0.002 | 0.069 | 0.004 | 0.730 | 0.179 | 0.086 | 0.049 | 0.571 | 0.186 | 0.012 |
| | | N | 70 | 69 | 68 | 57 | 69 | 70 | 70 | 68 | 60 | 69 |
| 5 | Sense of community/living | Correlation | **.245(*)** | **.300(*)** | **.477(**)** | **.328(*)** | **.405(**)** | **.245(*)** | 0.183 | **.338(**)** | **.343(**)** | **.240(*)** |
| | | Sig. (2-tailed) | 0.040 | 0.012 | 0.000 | 0.013 | 0.001 | 0.040 | 0.127 | 0.005 | 0.007 | 0.045 |
| | | N | 71 | 70 | 69 | 57 | 70 | 71 | 71 | 69 | 61 | 70 |
| | Sense of community/physical characteristics | Correlation | **.317(**)** | **.275(*)** | **.377(**)** | -0.157 | **.345(**)** | 0.046 | .248(*) | **.267(*)** | 0.020 | **.266(*)** |
| | | Sig. (2-tailed) | 0.007 | 0.021 | 0.001 | 0.245 | 0.003 | 0.701 | 0.037 | 0.027 | 0.879 | 0.026 |
| | | N | 71 | 70 | 69 | 57 | 70 | 71 | 71 | 69 | 61 | 70 |
| 4 | Sense of well-being and personal growth | Correlation | **.374(**)** | **.271(*)** | **.286(*)** | 0.018 | **.267(*)** | 0.033 | 0.103 | **.307(**)** | 0.201 | **.275(*)** |
| | | Sig. (2-tailed) | 0.001 | 0.023 | 0.016 | 0.895 | 0.025 | 0.783 | 0.389 | 0.010 | 0.117 | 0.020 |
| | | N | 72 | 71 | 70 | 58 | 71 | 72 | 72 | 70 | 62 | 71 |
| 3 | Distinctive character | Correlation | **.260(*)** | 0.112 | 0.231 | 0.077 | 0.183 | 0.059 | 0.143 | -0.124 | **.365(**)** | 0.119 |
| | | Sig. (2-tailed) | 0.027 | 0.350 | 0.054 | 0.564 | 0.128 | 0.622 | 0.229 | 0.308 | 0.003 | 0.324 |
| | | N | 72 | 71 | 70 | 58 | 71 | 72 | 72 | 70 | 62 | 71 |
| 2 | Sense of belonging | Correlation | **.386(**)** | **.266(*)** | **.395(**)** | **.265(*)** | **.415(**)** | 0.171 | **.245(*)** | **.302(*)** | **.285(*)** | 0.230 |
| | | Sig. (2-tailed) | 0.001 | 0.028 | 0.001 | 0.047 | 0.000 | 0.160 | 0.042 | 0.013 | 0.027 | 0.059 |
| | | N | 69 | 68 | 67 | 57 | 68 | 69 | 69 | 67 | 60 | 68 |
| 1 | Feeling of safe and secure | Correlation | 0.183 | 0.014 | 0.169 | 0.184 | 0.025 | 0.111 | 0.130 | 0.072 | 0.079 | 0.025 |
| | | Sig. (2-tailed) | 0.125 | 0.910 | 0.163 | 0.166 | 0.834 | 0.354 | 0.278 | 0.552 | 0.539 | 0.835 |
| | | N | 72 | 71 | 70 | 58 | 71 | 72 | 72 | 70 | 62 | 71 |

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

a. Community = Cherry Hill Village

columns are survey respondents motivations' sorted from highest to lowest ranked.

rows are goal oriented needs sorted with reference to environmental consciousness levels

**BIBLIOGRAPHY**

Alderfer, C. P. (1969). An Empirical Test of A New Theory of Human Need. *Psychological Review, 4*, 142 - 175.

Alexander, C., Ishikana, S., Silverstein, M., Jacobsen, M., Fiksdahl-King, I., & Angel, S. (1977). *A Pattern Language*. New York: Oxford University Press.

Altman, I., & Haythorn, W. (1967). The Ecology of Isolated Groups. *Behavioral Science, 12*(3).

Araya, R., Dunstan, F., Playle, R., Thomas, H., Palmer, S., & Lewis, G. (2006). Perceptions of Social Capital and the Built Environment and Mental Health. *Social Science & Medicine, 62*(12).

Atkinson, R., & Blandy, S. (2005). International Perspectives on the Enclavism and the Rise of Gated Communities. *Housing Studies, 20*(2).

AVOE. (2008a). The Best New Urban Neighborhood in Europe. Retrieved April, 2009, from http://www.avoe.org/prixrotthier2008.html

Babbie, E. (2001). *The Practice of Social Research* (9th Edition ed.). Belmont, CA: Wadsworth.

Bafna, S. (2003). Space Syntax: A Brief Introduction to Its Logic and Analytical Techniques. *Environment and Behavior, 35*(1).

BahcesehirMunicipality. (2008). Photos from Bahcesehir. Retrieved January, 2008, from http://www.bahcesehir-bld.gov.tr/

Baran, P., Rodriguez, D. A., & Khattak, A. J. (2008). Space Syntax and Walking in a New Urbanist and Suburban Neighborhoods. *Journal of Urban Design, 13*(1), 5-28.

Barrett, R. (1998). *Liberating the Corporate Soul: Building a Visionary Organization*. Boston, MA: Butterworth Heinemann.

Biltmore. (1999). Cherry Hill Village Concept Plan.

Blakely, E., & Synder, M. (1997). *Fortress America: Gated Communities in the United States*. Massachusetts: The Brookings Institution Press

Bond, S., & Thompson-Fawcett, M. (2007). Public Participation and New Urbanism: A Conflicting Agenda? *Planning Theory & Practice, 8*(4), 449-472.

Bor, W. (1982). Planning and Development in Developing Countries. *Ekistics, 92*, 28-31.

Borg, I. (2005). *Modern Multidimensional Scaling*. New York, NY: Springer.

Borsdorf, A., Hoidalgo, R., & Sanchez, R. (2007). A New Model of Urban Development in Latin America: The Gated Communities and Fenced Cities in the Metropolitan Areas of Santiago de Chile and Valparaı´so. *Cities, 24*(5).

Brain, D. (2005). From Good Neighborhoods to Sustainable Cities: Social Science and the Social Agenda of the New Urbanism. *International Regional Science Review, 28*(2), 217-238.

Breakwell, G. M. (1992). Processes of Self-Evaluation: Efficacy and Estrangement. In G. M. Breakwell (Ed.), *Social Psychology of Identity and the Self-concept*. Surrey, UK: Surrey University Press.

Brown, B. B., Burton, J. R., & Sweaney, A. L. (1998). Neighbors, Households, and Front Porches: New Urbanist Community or Mere Nostalgia? *Environment and Behavior, 30*, 579.

Brown, B. B., & Cropper, V. L. (2001). New Urban and Standard Suburban Subdivisions: Evaluating Psychological and Social Goals. *Journal of the American Planning Association, 67*(4), 402 - 419.

Calthorpe, P. (1993). The Region. In P. Katz (Ed.), *The New Urbanism: Toward an Architecture of Community*. New York: McGraw-Hill, Inc.

Calthorpe, P. (2004). New Urbanism: Principles or Style? In R. Fishman (Ed.), *New Urbanism*. Ann Arbor, MI: The University of Michigan.

Calthorpe, P., & Fulton, W. (2001). *Regional City*. Washington: Island Press.

Campbell, S. (2003). Case Studies in Planning: Comparative Advantages and the Problem of Generalization. University of Michigan.

Canter, D. (1977). *The Psychology of Place*. New York: St Martin's Press.

Canter, D. (1983). The Purposive Evaluation of Places: A Facet Approach. *Environment and Behavior, 15*(6), 659-698.

Canter, D. (1991). Understanding, Assessing, and Acting in Places: Is an Integrative Framework Possible? In T. Garling & G. W. Evans (Eds.), *Environment, Cognition, and Action*: Oxford University Press US.

Canter, D. (1997). The Facets of Place. In G. T. Moore & R. W. Marans (Eds.), *Advances in Environment, Behavior, and Design* (Vol. 4). New York: Plenum Press.

Canter, D. (Ed.). (1985). *Facet Theory; Approaches to Social Research*. New York: Springer-Verlag.

Canter, D., & Thorne, R. (1972). Attitudes to Housing: A Cross-Cultural Comparison. *Environment and Behavior, 4*(1), 3-32.

CantonTownship. (2009). About Canton. Retrieved April, 2009, from http://www.canton-mi.org/living_in/about_canton.aspx

CCPS. (2008). *Canton Community Zoning Map*. Retrieved April 2009. from http://www.canton-mi.org/municipalservices/planning.aspx.

CDDA. (2008). *The Canton Comprehensive Master Plan*. Retrieved April 2009. from http://www.canton-mi.org/uploadedFiles/Comprehensive_Master_Plan_Feb08.pdf.

CDDA. (2009). Canton's DDA on Ford Road. Retrieved May, 2009, from http://dda.canton-mi.org/

Cervero, R., & Kocelman, K. (1997). Travel Demand and The 3Ds: Density, Diversity, and Design. *Transportation Research D, 3*, 199-219.

CHS. (2009). Discover Michigan's Historic Canton Township. Retrieved April, 2009, from http://www.cantonhistoricalsociety.org/

CNU. (1996). Charter of New Urbanism. Retrieved April, 2009, from http://www.cnu.org/charter

CNU. (2009a). Project Database. Retrieved April, 2009, from http://www.cnu.org/search/projects

CNU. (2009b). CNU History. Retrieved April, 2009, from http://www.cnu.org/history

Corbusier, L. (1987). *The City of Tomorrow and Its Planning*. New York: Dover Publications.

Coy, M., & Pöhler, M. (2002). Gated Communities in Latin American Megacities: Case Studies in Brazil and Argentina. *Environment and Planning B: Planning and Design, 29*.

Creswell, J. W. (1994). *Research Design: Qualitative and Quantitative Approaches*. Thousand Oaks, CA: Sage.

Creswell, J. W., & Plano Clark, V. L. (2007). *Designing and Conducting Mixed Methods Research*. Thousand Oaks: Sage Publications.

Dalton, N. S. (2007). *Is Neighborhood Measurable?* Paper presented at the 6th International Symposium of Space Syntax, Istanbul, Turkey.

Day, K. (2003). New Urbanism and the Challenges fo Designing For Diversity. *Journal of Planning Education and Research, 23*, 83-95.

DPZ. (2009a). DPZ Projects. Retrieved April, 2009, from http://www.dpz.com/projects.aspx

DPZ. (2009b). Smart Code Central. Retrieved April, 2009, from http://smartcodecentral.com/smartfilesv9_2.html

Duany, A., & Plater-Zyberk, E. (1993). The Neighborhood, the District and the Corridor. In P. Katz (Ed.), *The New Urbanism*. New York: McGraw-Hill

Duany, A., Plater-Zyberk, E., & Alminana, R. (2003). *The New Civic Art*. New York: Rizzoli.

Duany, A., Plater-Zyberk, E., & Speck, J. (2000). *Suburban Nation*. New York: North Point Press.

Duany, A., & Talen, E. (2002). Transect Planning. *Journal of the American Planning Association, 68*(3), 245 - 266.

Dunham-Jones, E. (2008). New Urbanism: A Forum, Not A Formula. In T. Haas (Ed.), *New Urbanism and Beyond*. New York: Rizzoli.

Evans, G. W., & Garling, T. (1991). Environment, Cognition, and Action: The Need for Integration. In T. Garling & G. W. Evans (Eds.), *Environment, Cognition, and Action*: Oxford University Press US.

Festinger, L. (1972). Architecture and Group Membership. In R. Gutman (Ed.), *People and Buildings*. New York: Basic Books Inc.

Festinger, L., Schachter, S., & Back, K. (1950). *Social Pressures in Informal Groups: A Study of Human Factors in Housing*. New York, NY: Harper&Row.

Fishman, R. (Ed.). (2005). *New Urbanism* (Vol. II). Ann Arbor, MI: The University of Michigan.

Fiske, D., & Maddi, S. (Eds.). (1961). *Functions of Varied Experience*. Homewood, IL: Dorsey Press.

Fleming, R., Baum, A., & Singer, J. (1985). Social Support and the Physical Environment. In S. Cohen & S. L. Syme (Eds.), *Social Support and Health*. Orlando, FL: Academic Press.

Frank, L. D., Schmid, T. L., Sallis, J. F., Chapman, J., & Saelens, B. E. (2005). Linking objectively measured physical activity with objectively measured urban form: Findings from SMARTRAQ. *American Journal of Preventive Medicine, 28*(2, Supplement 2), 117-125.

Friedrich, E., Hillier, B., & Chiaradia, A. (2009). *Anti-social Behavior and Urban Configuration Using Space Syntax to Understand Spatial Patterns of Socio-environmental Disorder.* Paper presented at the Seventh International Space Syntax Symposium, Stockholm, Sweden.

Frumkin, H. (2003). Healthy Places: Exploring the Evidence. *American Journal of Public Health, 93*(9).

Frumkin, H. (2006). The Measure of Place. *American Journal of Preventive Medicine, 31*(6), 530-532.

Gans, H. J. (1962). *The Urban Villagers: Group and Class in the Life of Italian Americans*. New York: The Free Press.

Garajewski, T. (1993). The SAS Head Office-Spatial Configuration and Interaction Patterns. *Nordic Journal of Architectural Research, 2*, 63-67.

Gehl, J. (1987). *Life Between Buildings: Using Public Space*. New York: Van Nostrand Reinhold.

Gerring, J. (2007). *Case Study Research: Principles and Practices*. New York: Cambridge University Press.

Glazse, G., & Alkhayyal, A. (2002). Gated Housing Estates in the Arab World: Case Studies in Lebanon and Riyadh, Saudi Arabia. *Environment and Planning B: Planning and Design, 29*.

Goffman, E. (1959). *The Presentation of the Self in Everyday Life*. Garden City, NY: Doubleday Anchor.

Gordon, D., & Vipond, S. (2005). Gross Density and New Urbanism: Comparing Conventional and New Urbanist Suburbs in Markham, Ontario. *Journal of the American Planning Association, 71*(1), 41 - 54.

Grant, J. (2005). Planning Responses to Gated Communities in Canada. *Housing Studies, 20*(2).

Grant, J. (2006). *Planning the Good Community: New Urbanism in Theory and Practice*. New York: Routledge.

Grant, J. (2007). Two Sides of a Coin? New Urbanism and Gated Communities. *Housing Policy Debate, 18*(3).

Grant, J., & Bohdanow, S. (2008). New Urbanism Developments in Canada: A Survey. *Journal of Urbanism: International Research on Placemaking and Urban Sustainability, 1*(2).

Groat, L. (1995). Introduction: Place, Aesthetic Evaluation and Home. In L. Groat (Ed.), *Giving Places Meaning*. London: Academic Press.

Groat, L. (2000a). Civic Meaning: The Role of Place, Typology and Design Values in Urbanism. *Carolina Planning*(Winter 2000).

Groat, L. (2000b). A Conceptual Framework for Understanding the Designer's Role: Technician, Artist or Cultivator? In P. Knox & P. Ozolins (Eds.), *Design Professionals and the Built Environment*. New York: Wiley.

Groat, L. N., & Wang, D. (2002). *Architectural Research Methods*. New York: John Wiley&Sons Inc.

Guba, E., & Lincoln, Y. S. (1998). Competing Paradigms in Qualitative Research. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Landscape of Qualitative Research*. Thousand Oak, CA: Sage Publications.

Hagerty, M. R. (1999). Testing Maslow's Hierarchy of Needs: National Quality-of-Life Across Time. *Social Indicators Research, 46*(3), 249.

Haksal, I. (1995). *Toplu Konut Yolu ile Oluşan Yeni Yerleşim Alanlarının Karşılaştırmalı İncelenmesi: Bahçeşehir, Halkalı, Ataköy Örneği.* Unpublished MSc Thesis, Istanbul Technical University, Istanbul.

Hall, E. (1966). *The Hidden Dimension*. Garden City, NY: Doubleday.

Hall, P. (2008). Urban Renaissance, Urban Villages, Smart Growth: Find the Differences. In T. Haas (Ed.), *New Urbanism and Beyond*. New York: Rizzoli.

Handy, S., Cao, X., & Mokhtarian, P. L. (2006). Self-Selection in the Relationship between the Built Environment and Walking: Empirical Evidence from Northern California. *Journal of the American Planning Association, 72*(1), 55 - 74.

Handy, S. L. (1996). Urban Form and Pedestrian Choices: Study of Austin Neighborhoods. *Transportation Research Record: Journal of the Transportation Research Board, 1552*, 135-144.

Hanson, J., & Hiller, B. (1984). *The Social Logic of Space*. Cambridge: Cambridge University Press.

Hanson, J., & Zako, R. (2007). *Communities of Co-presence and Surveillance: How Public Open Space Shapes Awareness and Behaviour in Residential Developments.* Paper presented at the Sixth International Symposium of Space Syntax, Istanbul, Turkey.

Hardie, G. J. (1997). Environment and Behavior Research for Developing Countries. In E. H. Zube (Ed.), *Advances in Environment Behavior and Design*: Springer.

Harvey, D. (1997). The New Urbanism and the Communitarian Trap. *Harvard Design Magazine, Winter/Spring*(1).

Hess, P. M. (2008). Fronts and Backs. *Journal of Planning Education and Research, 28*(2).

Hillier, B. (1996). *Space is the Machine*. Cambridge: Cambridge University Press.

Hillier, B. (2005). The Art of Place and the Science of Space. *World Architecture, 185*.

Hillier, B., Burdet, R., Peponis, J., & Penn, A. (1987). Creating Life: Or, Does Architecture Determine Anything? *Architecture and Behaviour, 3*(3).

Hillier, B., & Greene, M. (1999). *Self-Generated Neighborhoods.* Paper presented at the Second International Space Syntax Symposium, Brasilia, Brazil.

Hillier, B., & Hanson, J. (1984). *The Social Logic of Space*. Cambridge: Cambridge University Press.

Hillier, B., & Penn, A. (1991). Visible Colleges: Structure and Randomness in the Place of Discovery. *Science in the Context, 4*(1), 23-49.

Hillier, B., Penn, A., Hanson, J., Grajewski, t., & Xu, J. (1993). Natural Movement: Or, Configuration and Attraction in Urban Pedestrian Movement. . *Environment and Planning B: Planning and Design, 20*.

Hillier, B., & Sahbaz, O. (2008). An Evidence Based Approach to Crime and Urban Design: Or, Can We Have Vitality, Sustainability and Security All At Once? Bartlett School of Graduate Studies, University College London.

Hook, D., & Vrdoljak, M. (2002). Gated Communities, Heterotopia and a ‘‘Rights’’ of Privilege: a ‘Heterotopology’ of the South African Security-park. *Geoforum, 33*.

Hossain. (1999). *A Syntactic Approach to the Analysis of Spatial Patterns in Spontaneous Retail Development in Dhakka.* Paper presented at the Second international Space Syntax Symposium, Brasilia, Brazil.

IMP. Istanbul Metropolitan Area Land Use Map. Retrieved April, 2009, from http://sehirrehberi.ibb.gov.tr/MapForm.aspx?&rw=353&cl=570

Irazabal, C. (2006). Localizing Urban Design Traditions: Gated and Edge Cities in Curitiba. *Journal of Urban Design, 11*, 73.

Ittelson, W. H., Prohansky, H. M., Rivlin, L. G., & Winkel, G. H. (Eds.). (1974). *An Introduction to Environmental Psychology*: Holt, Rinehart and Winston.

Jacobs, J. (1961). *The Death and Life of Great American Cities*. New York: Random House.

Jick, T. D. (1979). Mixing Qualitative and Quantitative Methods: Triangulation in Action. *Administrative Science Quarterly, 24*(4), 602-611.

Joh, K., Boarnet, M. G., Nguyen, M. T., Fulton, W., Siembab, W., & Weaver, S. (2008). Accessibility, Travel Behavior, and New Urbanism: Case Study of Mixed-Use Centers and Auto-Oriented Corridors in the South Bay Region of Los Angeles, California. *Transportation Research Record: Journal of the Transportation Research Board, 2082*.

Kaplan, R., & Austin, M. E. (2004). Out in the Country: Sprawl and the Quest for Nature Nearby. *Landscape and Urban Planning, 69*.

Kaplan, S., & Kaplan, R. (2003). Health, Supportive Environments, and the Reasonable Person Model. *Am J Public Health, 93*(9), 1484-1489.

Katz, P. (1993). *The New Urbanism*. New York: McGraw-Hill.

Kawachi, I., & Berkman, L. (2001). Social ties and mental health. *Journal of Urban Health, 78*(3), 458-467.

Kawachi, I., Kennedy, B. P., & Glass, R. (1999). Social capital and self-rated health: a contextual analysis. *American Journal of Public Health, 89*(8), 1187-1193.

Kelbaugh, D., & Calthorpe, P. (1989). *The Pedestrian Pocket Book*: Princeton Architectural Press.

KemerCountry. (2003). *A Dream That Came True*: Kemer Yapi ve Turizm Anonim Sirketi.

Keyder, C. (Ed.). (2000). *Istanbul: Kuresel ile Yerel Arasinda*. Istanbul: Metis Yayinlari.

Khattak, A. J., & Rodriguez, D. (2005). Travel behavior in neo-traditional neighborhood developments: A case study in USA. *Transportation Research Part A: Policy and Practice, 39*(6), 481-500.

Khattak, A. J., Stone, J. R., Letchworth, W. E., Rasmussen, B. K., & Schroeder, B. J. (2005). *Traditional Neighborhood Trip Generation Study*: UNC Carolina Transportation Program

Kim, J. (2001). *Sense of Community in Neotraditional and Conventional Suburban Developments: A Comparative Case Study of Kentlands and Orchard Village.* Unpublished Ph.D., University of Michigan, United States -- Michigan.

Kim, J. (2007). Perceiving and Valuing Sense of Community in a New Urbanist Development: A Case Study of Kentlands. *Journal of Urban Design, 12*, 203.

Kim, J. (2007a). *Testing the Street Connectivity of New Urbanism Projects and Their Surroundings in Metro Atlanta Region.* Paper presented at the Sixth International Space Syntax Symposium, Istanbul, Turkey.

Kim, J., & Kaplan, R. (2004). Physical and Psychological Factors in Sense of Community: New Urbanist Kentlands and Nearby Orchard Village. *Environment and Behavior, 36*(3), 313.

Krier, R. (1979). *Urban Space*. New York: Rizzoli.

Krizek, K. J. (2003). Residential Relocation and Changes in Urban Travel: Does Neighborhood-Scale Urban Form Matter? *Journal of the American Planning Association, 69*(3), 265 - 281.

Kruskal, J. B. (1966). *Studies in applied mathematics* (Vol. Volume 4): Society for Industrial and Applied Mathematics.

Kurtz, S. (1969). From Grid to Growth. *Progressive Architecture*(November).

Lang, J. (1987). *Creating Architectural Theory: the Role of the Behavioral Sciences in Environmental Design*. New York: Van Nostrand Reinhold Co.

Lang, J. (1994). *Urban Design: The American Experience*. New York, NY: Van Nostrand Reinhold.

Lee, C., & Moudon, A. V. (2006). The 3Ds + R: Quantifying Land Use and Urban Form Correlates of Walking. *Transportation Research D, 11*, 204-215.

Leibkind, K. (1992). Ethnic Identity: Challenging the Boundaries of Social Psychology. In G. M. Breakwell (Ed.), *Social Psychology of Identity and Self Concept*. Surrey UK: Surrey University Press.

Leish, H. (2002). Gated Communities in Indonesia. *Cities, 19*(5), 341-350.

Leyden, K. M. (2003). Social Capital and the Built Environment: The Importance of Walkable Neighborhoods. *American Journal of Public Health, 93*(9), 1546-1551.

Low, S. (2003). *Behind the Gates*. New York: Routledge.

Lund, H. (2002). Pedestrian Environments and Sense of Community. *Journal of Planning Education and Research*(21), 301-312.

Lund, H. (2003). Testing the Claims of New Urbanism: Local Access, Pedestrian Travel, and Neighboring Behaviors. *Journal of American Planning Association, 69*(4).

Lynch, K. (1960). *The Image of the City*. Cambridge, MA: The MIT Press.

Lynch, K. (1981). *A Theory of Good City Form*. Cambridge, MA: The MIT Press.

Mangin, D., & Panerai, P. (1988). *Le Temps De La Vile*.

Manning, P. (1965). *Office Design: A Study of Environment* Liverpool, England: Pilkington Research Unit.

Marans, R. W. (1976). Perceived Quality of Residential Environments: Some Methodological Issues. In K. H. Craik & E. H. Zube (Eds.), *Perceiving Environmental Quality*. New York: Plenum Press.

Marans, R. W., & Spreckelmeyer, K. F. (1981). *Evaluating Built Environments: A Behavioral Approach*. Ann Arbor: The University of Michigan.

Maslow, A. (1954). *Motivation and Personality*. New York: Harper & Row, Publishers, Inc.

Maslow, A. (1968). *Toward A Psychology of Being*. New York: Van Nostrand Reinhold.

Michelson, W. H. (1970). *Man and His Urban Environment: A Sociological Approach*. Reading, MA: Addison-Wesley.

Min, Y. (1993). Housing Layout Design: Neighborhood Morphology, Pedestrian Movement, and Strategic Choices. *Nordic Journal of Architectural Research*.

Mogulescu, M. (1970). *Profit Through Design*. New York, NY: American Management Association.

Montgomery, J. (1998). Making a City: Urbanity, Vitality, and Urban Design. *Journal of Urban Design, 3*(1), 93-116.

Moore, C. W., Allen, G., & Lyndon, D. (2001). *The Place of Houses*: University of California Press.

Moudon, A. V. (1986). *Built for Change: Neighborhood Architecture in San Francisco*. Cambridge, Massachusetts: MIT Press.

Moudon, A. V. (1994). Getting to Know the Built Landscape: Typomorphology. In K. A. a. S. Franck, L.H. (Ed.), *Ordering Space*. New York: Van Nostrand Reinhold.

Munoz, F. (2003). Lock Living: Urban Sprawl in Mediterranean Cities. *Cities, 20*(6), 381-385.

Nasar, J. L. (2003). Does Neotraditional Development Build Community? *Journal of Planning Education and Research, 23*, 58-68.

Norberg-Schulz, C. (1980). *Genious Loci: Towards a Phenomenology of Architecture*. New York: Rizzoli.

Penn, A., Hillier, B., Bannister, D., & Xu, J. (1998). Configurational Modelling of Urban Movement Networks. *Environment and Planning B: Planning and Design, 25*(1), 59-84.

Peponis, J. (1985). The Spatial Culture of Factories. *Human Relation, 38*(357-390).

Peponis, J., Hajinikoloaou, E., Livieratos, C., & Fatouros, D. A. (1989). The Spatial Core of Urban Culture. *Ekistics*.

Peponis, J., Ross, C., & Rashid, M. (1997). The Structure of Urban Space, Movement and Co-presence: The Case of Atlanta. *Geoforum, 28*(3-4), 341-358.

Peponis, J., & Wineman, J. (2002). Spatial Structure of Environment and Behavior. In R. B. Bechtel & A. Churchman (Eds.), *Handbook of Environmental Psychology*. New York: John Wiley and Sons.

Prohansky, H. M., Fabian, A. K., & Kaminoff, R. D. (1983). Place Identity: Physical World Socialization of the Self. *Journal of Environmental Psychology, 3*, 57-83.

Putnam, R. D. (1993). The Prosperous Community. *American Prospect, 7*(Spring).

Putnam, R. D. (2000). *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon&Schuster.

Raven, J. (1967). Sociological Evidence on Housing 2: The Home Environment. *The Architectural Review*(September).

Relph, E. (1976). *Place and Placelessnes*. London: Pion Ltd.

Rodriguez, D. A., Khattak, A. J., & Evenson, K. R. (2006). Can New Urbanism Encourage Physical Activity? *Journal of the American Planning Association, 72*(1).

Roethlisberger, F., & Dickson, W. (1939). *Management and Worker*. Cambridge: Harvard University Press.

Ryan, R. M., & Deci, E. L. (2000). Self-determination Theory and The Facilitation of Intrinsic Motivation, Social Development and Well-being. *American Psychologist, 55*(1), 68-78.

Saelens, B. E., Sallis, J. F., & Lawrence, F. D. (2003). Environmental Correlates of Walking and Cycling: Findings From the Transportation, Urban Design, and Planning Literatures. *Annals of Behavioral Medicine, 25*(2), 80-91.

Sassen, S. (1991). *The Global City: New York, London, Tokyo*: Princeton University Press.

Schmitz, A. e. a. (2003). *The New Shape of Suburbia*. Washington, DC: ULI-the Urban Land Institute.

Segal, H. P. (2005). *Recasting the Machine Age*: University of Massachusetts Press.

SEMCOG. (2000). Southeast Michigan Land Use / Land Cover Map. Retrieved April, 2009, from http://www.semcog.org/EnvironmentAndLandUse.aspx

SEMCOG. (2009). Canton Township Community Profile. Retrieved May, 2009, from http://www.semcog.org/Data/Apps/comprof/people.cfm%20?cpid=1020

Serrato, M., & Wineman, J. (1999). *Spatial and Communication Patterns in Research and Development Facilities.* Paper presented at the Second International Symposium on Space Symtax, Brasilia, Brazil.

Shu, S. C.-F. (1999). *Housing Layout and Crime Vulnerability.* Paper presented at the Second International Space Syntax Symposium, Brasilia, Brazil.

Shu, S. C.-F., & Huang, J. N. H. (2003). *Spatial Configuration and Vulnerability of Residential Burglary:A Case Study of A City in Taiwan.* Paper presented at the Fourth International space Syntax Symposium, Istanbul, Turkey.

Sime, J. D. (1995). Creating Places or Design Spaces? In L. Groat (Ed.), *Giving Places Meaning*. London: Academic Press.

Sommer, R. (1967a). Classroom Ecology. *Journal of Applied Behavioral Science, 3*(4).

Sommer, R. (1967b). Small Group Ecology. *Psychology Bulletin, 67*(2).

Sommer, R. (1969). *Personal Space: The Behavioral Basis of Design*. Englewood Cliffs, NJ: Prentice-Hall.

SPO. (2008). *Economic Developments*. Ankara: Turkish Republic Prime Ministry State Planning Organization (SPO).

Stake, R. E. (1995). *The Art of Case Study Research*. Thousand Oaks, CA: Sage Publications.

Steele, F. I. (1973). *Physical Settings and Organization Development*. Menlo Park, CA: Addison-Wesley.

Steinzor, B. (1950). The Spatial Factor In Face-to-face Discussion Groups. *Journal of Abnormal Social Psychology, 45*.

Tagliaventi, G. (Ed.). (1996). *A Vision of Europe: Urban Renaissance*. Bologna: Grafis.

Talen, E. (1999). Sense of Community and Neighborhood Form: An Assessment of the Social Doctrine of New Urbanism. *Urban Studies, 36*(8).

Talen, E. (2003). A Matter of Priorities: New Urbanism and Community Life. *Places, 15*(3).

Talen, E. (2005). *New Urbanism and American Planning: The Conflict of Cultures*. New york: Routledge.

Talen, E. (2008). The Unbearable Lightness of New Urbanism. In T. Haas (Ed.), *New Urbanism and Beyond*. New York: Rizzoli.

Taylor, P. J. (2005). Leading World Cities: Empirical Evaluations of Urban Nodes in Multiple Networks. *Urban Studies, 42*(9).

Thompson-Fawcett, M. (2003a). A New Urbanist Diffusion Network: the Americo-European Connection. *Built Environment, 29*(3).

Thompson-Fawcett, M. (2003b). 'Urbanist' lived experience: resident observations on life in Poundbury. *Urban Design International, 8*(1/2), 67.

TortiGallas. (2009a). Bahcesehir. Retrieved April, 2009, from http://www.tortigallas.com/project.asp?p=50181

TortiGallas. (2009b). Kemer Country. Retrieved April, 2009, from http://www.tortigallas.com/project.asp?p=50166

Trancik, R. (1986). *Finding Lost Space*. New York: Van Nostrand Reinhold.

Trist, E., & Bamforth, K. (1951). Some Social and Psychological Consequences of the Longwall Method of Coal-Getting". *Human Relations, 4*.

TURKSTAT. (2007). Turkish Statistical Institution Database. Retrieved May, 2008, from http://www.tuik.gov.tr/jsp/duyuru/upload/vt/vt.htm

Twigger-Ross, C. L., & Uzzel, D. L. (1996). Place and Identity Processes. *Journal of Environmental Psychology, 16*, 205-220.

UN. (2000). *Human Development Report*: Unitede Nations Development Programme.

UN. (2008). *World Urbanization Prospects*: United Nations, Economic and Social Affairs.

Veras, A., & Amorim, L. (2005). *New Urbanism: Ideals and Urban Configuration.* Paper presented at the 5th International Space Syntax Symposium Delft , Holland.

Wahba, A., & Bridgewell, L. (1976). Maslow Reconsidered: A Review of Research on the Need Hierarchy Theory". *Organizational Behavior and Human Performance, 15*, 212–240.

Webber, M. (1963). Order in Diversity, Community Without Propinquity. In L. Wingo (Ed.), *Cities and Space: The Future Use of Urban Land*. Baltimore, MD: Johns Hopkins University Press.

Wellman, B., & Leighton, B. (1979). Networks, Neighborhoods, and Communities: Approaches to the Study of the Community Question. *Urban Affairs Quarterly, 14*.

Whyte, W. H. (1980). *The Social Life of Small Urban Spaces*. Washington, DC: Conservation Foundation.

Wingler, H. M. (1969). *The Bauhaus: Weimar, Dessau, Berlin, Chicago*. Cambridge, MA: MIT Press.

Winkel, G. (1981). The Perception of Neighborhood Change. In J. Harvey (Ed.), *Cognition and Social Behavior and the Environment*. New York: Erlbaum.

Wood, L., & Giles-Corti, B. (2008). Is there a place for social capital in the psychology of health and place? *Journal of Environmental Psychology, 28*(2), 154-163.

Wu, F., & Webber, K. (2004). The Rise of "Foreign Gated Communities" in Beijing: Between Economic Globalization and Local Institutions. *Cities, 21*(3), 203-213.

Yen, I. H., & Kaplan, G. A. (1999). Neighborhood Social Environment and Risk of Death: Multilevel Evidence from the Alameda County Study. *American Journal of Epidemiology, 149*(10), 898-907.

Yin, R. K. (2003). *Case Study Research: Design and Methods* (3rd edition ed.). Thousand Oaks, California: Sage Publications.

Ziersch, A. M., Baum, F. E., MacDougall, C., & Putland, C. (2005). Neighborhood Life and Social Capital: The Implications for Health. *Social Science & Medicine, 60*.