Department of Architecture and the

Built Environment

The University of Nottingham

UNITED KINGDOM · CHINA · MALAYSIA

IN-BETWEEN SPACE AND SOCIAL INTERACTION:

A CASE STUDY OF

THREE NEIGHBOURHOODS IN IZMIR

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BArch, MSc.

Thesis submitted to the University of Nottingham for

the degree of Doctor of Philosophy

July 2012

Dedicated to my dearest father,

İ. Gündüz Can

ABSTRACT

This research discusses the intermediate space that lies between private and public space, as well as its definition and importance in space configuration regarding urban morphology and social relations. It investigates how the organisation of in-between space affects social interaction in different urban patterns. As many researchers caution, terms such as semi-private and semi-public can be deceptive in attempting to define the relationship between the building and the street, because of the overlapping territory of this space. Therefore in this study the in-between space concept is used to portray this space and the interrelations that take place.

Modernist urban space has changed the spatial relations between the building and the street. Previous research (Gehl, 1996) has revealed that the organisation of space between buildings has an important impact in terms of social interaction. Through organising these *thresholds* and giving the possibility of forming social activities, people have the chance to encounter more frequently and develop friendships. Thus this study also examines whether modern environments can develop a sense of community and neighbouring compared to traditional neighbourhoods by their spatial configuration and broken relation between the building and the street.

This research adopts a mixed method approach to understand the complex relations and socio-spatial structure of the city. It utilises various methods through focusing on three dissimilar urban patterns in Izmir, Turkey, which developed in different periods. Two neighbourhoods with a traditional street pattern and one modern housing unit of middle- and high-income groups are compared through using space syntax analysis, snapshot observations, questionnaires, focus groups and interviews.

The results of the correlations between space syntax analysis and observations revealed that while movement is correlated with global and local streets in city

centres, it is more related to local streets and to the connectivity of the street pattern in sub-centres. Stationary activities are mostly related to highly connected streets in traditional neighbourhoods. Therefore connectivity is very important regarding in-between spaces as well as landuse. These features also support the frequency of social interaction outdoors. In modern settlements, long-duration activities and movements are less strongly correlated than in traditional neighbourhoods.

The results of this study support the arguments developed by those urban sociologists and environmental psychologists, who argue that physical space may provide for social interactions, but not yet for a sense of community. The results of the empirical analysis refuted the hypothesis that modernist housing estates would reveal lower sense of community. Although modern housing units support introverted lifestyles and lack of in-between spaces compared to traditional and mixed use neighbourhoods, the results of the survey proved a higher sense of community compared to that in the traditional ones.

The research therefore proved that developing sense of community and neighbouring are related with various factors other than mere organisation of space, which have to be taken into account both by urban design and space syntax analyses.

ACKNOWLEDGEMENT

Firstly, I would like to mention that this research was funded by Higher Education Council of Turkey and Izmir Institute of Technology, therefore I would like to thank to both of these institutes for supporting my study. I owe many thanks to my supervisors Prof. Taner Oc and Prof. Tim Heath for their guidance and excellence supervision all through my research. This research could never been successful without the supervision of Prof. Taner Oc as he helped me to broaden my knowledge. I am also grateful to the University of Nottingham for financing me to do an internship in Space Syntax. And I also appreciate the support of Claudia Czerkauer during my internship in London.

I would like to thank and acknowledge the following people who gave of their time to be interviewed and surveyed: Ayşe Mayda, Lilyan Epik, Ender Uyguç, Mihriban Yanık (Konak Municipality), Ali C. Yücelten (Mavişehir Management), Neighbourhood Leaders, all the respondents of the survey, most importantly focus groups of children from Namik Kemal, Gazi, and Mavisehir Primary Schools whom made my survey more fun. I show appreciation especially to my friends who helped me to conduct the survey in Izmir. And I would like to also thank to Anya Skatova for helping me using SPSS and statistical tools. I am also very thankful to Sophie N'jai for her proof reading. I would like to thank to my examiners Dr. Laura Hanks and Prof. Georgia Butina Watson for their contributions and for our discussions in the viva.

I owe many thanks to my friends both in Nottingham and in Izmir as well as my housemates for their great support and patience; especially Vojta Novotny, Bahar Durmaz, Marta Larraona Puy, Ipek Ek, Ela Çil, and many others whom I cannot fit into this paper.

Finally, I would like to thank to a very special mother *Nevin Can*, who encouraged me through all my studies with her love and this thesis is an outcome of all this process. Thanks to everybody...

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CHAPTER 1 INTRODUCTION

1.1 BACKGROUND OF THE STUDY AND PROBLEM DEFINITION

From the turn of the twentieth century, cities started to experience modernist planning approaches that emerged from the Fordist paradigms such as *mass production, specialisation, and standardisation*. In order to cope with the problem of industrialisation and crowded cities, planners and architects began to propose different schemes, which had not been implemented before. These approaches, mostly resulted in urban sprawl, zoning, and weak connectivity in the road infrastructure; roads for vehicles rather than pedestrians, and dominance of private cars over public transport. This modernist discourse was developed and overseen by Le Corbusier (1887- 1965) and his colleagues, as well as by institutions such as CIAM (Congres Internationaux d'Architecture Moderne), and the University of Chicago School. During this period, housing authorities triggered suburbanisation, and due to the rigid policies and the lack of community involvement, the same kind of neighbourhood units appeared. City authorities knocked down the traditional neighbourhoods because they were blighted and built new neighbourhood units, which had a uniform layout. Consequently, modernist planning brought with it issues related to homogenous neighbourhoods versus heterogeneous neighbourhoods; space versus place; zoned land use versus mixed land use; indirect communication versus direct communication, and most significantly segregation versus integration (Irving, 1993; Augé, 1995; Sandercock, 1998; Hanson, 2000; Natrasony and Alexander, 2005).

As Natrasony and Alexander (2005) stress, this modernist ideology has caused placeless urban environments. While many Western countries experienced these changes, in Turkey, cities were influenced by these imported planning approaches. Particularly by the 1950s and 1960s, nationalist discourse on planning and architecture adopted an internationalist style. Hence, today, every

city in Turkey looks the same with the identical organisation of space and building blocks through a plot-based approach of development plans.

The contemporary urban environment is completely different from the vernacular environment. While the former was directed by instructionism (written rules), the latter was formed by selectionism (unwritten rules). While the traditional pattern is evolving gradually, at the same time within this process it is becoming compatible with life styles and activities. On the other hand, due to mobility, heterogeneity, and rapid urbanisation, the contemporary environment had to be concerned about legalistic and codified forms with the involvement of professionals (Rapoport, 2001). Therefore increased mobility, population and immigration into cities, technology, and fast production systems encouraged the construction of high-rise buildings and apartment blocks. Consequently, the relationship between buildings and outdoor space was neglected in modern settlements. Anderson (1991) and Schittich (2004) emphasize this problem, the importance of in between space and removal of this space both in the design process as well as in new developments in their statements below.

> High density housing with apartment towers (of the kind that were built in 1970s) often create social problems due to the lack of social interaction, the anonymity of their inhospitable access environments and the failure to provide adequate connection to the outdoor space (Schittich, 2004, p. 10).

> Lack of attention to this important interface has created a situation in which public street space and the house have become separated, the public space being thought of as belonging to someone else. Public space has therefore gradually become anonymous and unsafe (Anderson, 1991, p.368).

Parallel to these concerns, Hanson (2000) places the emphasis on the transformation of street to estate, in her article “Urban Transformation: A history of Design Ideas”. What she points out is that we cannot separate architecture from politics. The way we think about cities, architecture and planning has impacts on the way we build our houses. Traditional urban morphology has changed into a modernist space with the break of buildings from the street. The integration and the connectivity of streets have been reduced. There appeared a lack of relationship among the inhabitants of the dwellings,

which also resulted in their alienation from society. Hanson defines this case as the “ruptured interfaces” between the dwelling and the street. With the physical disconnection of dwellings, urban layouts changed from ‘*all neighbours’* to ‘*no neighbours’,* and the street transformed into an estate (Hanson, 2000).

Consequently, modernism or the modern city exposed two issues: private space and non-space (Banz, 1970). These non-spaces are the left over spaces. They have no connections with the urban fabric due to their lack of urban link. Non-spaces are identified as residual spaces, isolated from their urban network system and they are not well defined and designed (Serdoura and Bento, 2005). Trancik (1943) defines them as lost spaces. Non-spaces caused disconnected streets and subsequently the concept of neighbourhood and community are destroyed. These non-spaces are the gaps in the urban web. Loukaitou-Sideris (1996) defines these gaps as cracks which are the residual, left-over spaces separating and dividing the urban form through discontinuity. Cracks can be found in the urban core and inner city, between suburb and centre, along freeways and railroads, on the periphery of cities and in new developments.

For instance, American cities have a great number of these gaps and a grid street network defines the urban block. This gridiron layout can be easily extended horizontally; hence post-industrial American landscape is multi-centred. Automobiles, grid layouts, and zoning ordinances designed to meet the interests of the economy and the private sector have all influenced the morphology of American cities. Private and signature buildings identify the townscape and disintegrate the space. For integration buildings should be in relation with the street and the surrounding buildings, building entrances have to be clear and the hierarchy between public and private has to be defined. At neighbourhood level, pedestrian connections, public spaces and access are important issues (Loukaitou-Sideris, 1996).

If buildings are aligned they solve the complexity of the urban web and no interaction can be possible between them. Edges and interfaces as an in-between space define a space and form the built structure of the urban system.

Entrance halls of houses, porches, front or back yards and covered paths all constitute the interfaces which couple with other urban elements. For instance, front entrances couple with the street. During the twentieth century, however, buildings lost the connection between inside and outside. They are often surrounded and isolated by lawn, which can be seen in a suburban house. Although glass facades are used in order to keep this connection with the outside, they have failed to maintain the relation physically and just become visually connected (Salingaros, 2000).

1.2 DEFINITION OF IN BETWEEN SPACE CONCEPT

The space between the street and building has an important role to play in terms of social interaction and behaviour (Gehl, 1996; Nooraddin, 1998, 2002). Organisation of this space embodies social relations or vice versa. It can be the extension of the interior with balconies, courtyards, or people sitting at cafes on sidewalks; this space forms the interface between the private and public. These spaces encourage social encounters and street life in cities, and they have different meanings according to different cultures. In-between space can be defined from many aspects. Nooraddin (1998, 2002) defines this concept as 'the relationship between the indoor and outdoor spaces'. In addition, this intermediate space is an important element of urban design, which gives the form of the cities. Its design, function, and use have to be considered by urban designers. It can be the indoor space directly attached to the street, for instance buildings' elevations; or it can be the part of the indoor space attached to the street such as courtyard connected to a street; or it can be the front open space between the street and building such as front yards (Nooraddin, 2002). The term was further adopted by many researchers such as Anderson (1991), Gehl (1996), Hajer and Reijndorp (2001), Hillier and Hanson (1984), Skjaeveland and Garling (1997), and Stevens (2007). They variously defined this in-between space as an interface, public/private boundary, betwixt, threshold, soft edge, liminal space, and buffer zone. The term is also related with the concepts such as appropriate space/urban appropriation (Jimenez-Dominguez, 2007), open-ended space

(Fernando, 2007), loose and tight space (Franck and Stevens, 2007), smooth and striated space / urban slippage (Dovey and Polakit, 2007).

These intermediate and liminal spaces encourage social behaviour and the vitality of urban life in cities. Stevens (2008) specifies three aspects of betweeness; *spatial, managerial, and temporal,* which have been recently considered by researchers and contributors. Firstly the spatial aspect describes *spaces between places* that are disregarded by policy and design. However, these left over spaces, intermediate zones, and their uncertain boundaries provide valuable opportunities for the street life and for different social uses. Secondly, as a managerial aspect, *between public and private institutions*, there is an overlap of different spatial control and access over the use of this in-between space. Hence there should be negotiation among the users. Lastly, as a temporal aspect, *between tenancies* implies the change of urban space in terms of its character and use between different tenants in different periods. Hence urban design should reconsider both the uncertainty and challenging opportunities related to this in-between space and avoid fixed long-term plans for these spaces (Stevens, 2008).

Urban designers should also avoid making fixed definitions of public and private space and the space between them. As Habraken (1998) mentions, classifications of space such as semi-public and semi-private may be deceptive, because territory can contain public, private, or both types of space. Here *territorial depth* is significant (Habraken, 1998). Nooraddin (1998, 2002) also emphasises this overlapping character and due to the complexity of a territory, which has a 'multifaceted nature`, he uses the term 'in-between'. For that reason in this study rather than using the terms semi-public or semi-private, in-between space is preferred.

1.3 AIM OF THE STUDY AND DEFINITION OF THE CASE STUDY

This research aims to define the term 'in-between space' and how the organisation of this space between the street and building affects the social

interactions in three different neighbourhoods in Izmir. There is a need in research to examine where residents encounter most and how they use their near home environment from back to front (Hess, 2008). Moreover, there is little study in literature using mix methods and it is very important to combine quantitative and qualitative methods (Perdikogianni, 2007) in order to understand complex relationships of the city. Therefore cities should be analysed by considering part-whole relations, micro and macro spatial relationships (Van Nes and Lopez, 2007).

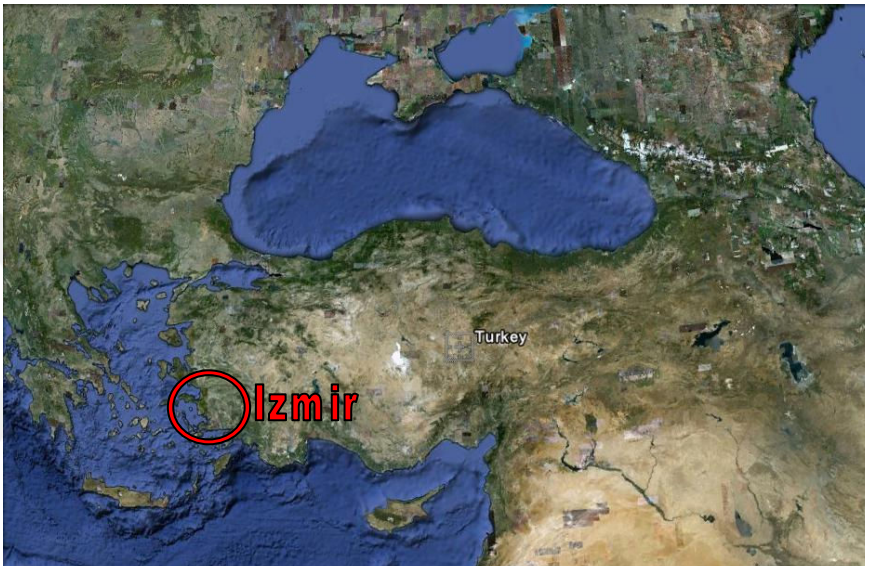


Figure 1.1 Izmir Turkey

Izmir, on the Aegean coast of Turkey, has evolved through time under various civilizations such as Hellenistic, Roman, Byzantine, Genovese, and Ottoman Empire. Between the seventeenth and nineteenth centuries, as a harbour city, it prospered economically by its Levantine culture and cosmopolitan structure. As a result of living side by side, every ethnic group contributed to the diversity of the urban morphology of the city. Therefore the city had various types of space organisations. With the new Turkish republic and modernisation efforts, the city's pattern has rapidly shifted to a hybrid structure defined by income level rather than its cosmopolite structure as it used to have (Bilsel, 2000).



Figure 1.2 Case Studies in Izmir

As a case study three different neighbourhood patterns, Kültür, Karantina, and Mavişehir, are analysed. These neighbourhoods are selected by the integration measures of space syntax: Kültür-Alsancak (city centre) from the most integrated part, Mavişehir (edge of city) from segregated part, and Karantina (sub centre) between the two. Each neighbourhood differs from the other in terms of their development periods and planning approaches. Kültür-Alsancak, the former European quarter of Izmir, was developed with the principles of Ecole-de Beaux Arts by Danger and Prost after the Great Fire of Izmir and the Independence War. Therefore it is an important district as very little of architectural heritage remain from 18th and 19th century and early republic period. As a second case study, former Jewish neighbourhood Karantina was chosen which started to develop in the nineteenth century with the extension of transportation systems. However, this region was considered in the development plans of the 1950s both by Le Corbusier and later by Aru, Ozdes, and Canpolat. Karantina also reveals the limited building typology of traditional bay window houses and the original street pattern. In the 1970s, however, rapid urbanisation, increase in population, and immigration into urban areas encouraged the Condominium Act (1965) and transformed the building typologies, in-between spaces and social life. In the 1990s, with the change in consumption culture and lifestyles, gated communities emerged. The third case study is the Mavişehir neighbourhood, where high-rise

housing units developed during this period. Although it is not a visible gated community, it triggered the gated community developments in its vicinity. In conclusion, while Kültür and Karantina are examples of traditional neighbourhood types, Mavişehir is an example of a modern neighbourhood.

1.4 RESEARCH METHODOLOGY AND DATA COLLECTION

This study derives from a pragmatist approach and uses various methods through focusing on three dissimilar urban patterns in Izmir, which developed in different periods. First of all, space syntax methodology is used in order to analyse the structure of the city. Through preparing the axial model of Izmir, this study examines space syntax measures such as integration, choice, and connectivity. After finding the results from the axial model, these integrated and segregated parts of the neighbourhood units are explored in depth with qualitative methods. Each neighbourhood unit is investigated based on historical development, space syntax analysis, quantitative, and qualitative tools. Observations, focus groups with children, focus groups and interviews with adults, interviews with neighbourhood leaders, and questionnaires with residents were conducted. Observations and space syntax analysis were correlated with statistical tools. In the comparison and discussion chapter all these results were integrated and discussed. Boundaries of the case studies were selected due to the walking distance of each case area. Kültür Alsancak's and Karantina's boundaries were defined by R1500m (40 min walk but by stopping and recording two hours walking). In Mavisehir only Mavisehir-1, the first stage of the housing unit, was chosen as a site.

Consequently, the main research questions, based on the above discussion, are to investigate, how the organisation of in-between space affects social interaction in neighbourhoods; how development plans and regulation laws have an impact on the organisation of in-between space; what kind of in-between spaces exist, or whether there are intermediate spaces in the segregated and integrated parts of the urban pattern. Do these in-between spaces have an influence on the social interaction among inhabitants? What are the street

functions in each neighbourhood and how do these affect the interaction and vitality within the environment? Are there any areas in which social interaction is strong despite the lack of integration?

1.5 STRUCTURE OF THE THESIS

Following this introduction chapter, in chapter two, the concept of urban morphology is introduced with definitions of urban form, morphology, historical development, different morphological approaches and the approach that this study uses within the scope of the research. In the third chapter, definitions of betweenness and in-between space are given together with a discussion of territoriality and personalisation, and their meanings in Western and non-Western settlements. The importance of in between space is set out, along with a sense of community and neighbouring issues. In chapter four, the research methodology (mixed methods) is introduced with the knowledge claim, strategy of inquiry, conceptual framework, research questions and study aims, mixed methods, pilot studies, analysis of the data, and limitations of the research. In chapter five, the Izmir case study is briefly located within the historical development of the city, planning approaches, and changes in housing typologies. The chapter concludes with the space syntax analysis of the city. Chapters six, seven, and eight are constructed in the same way. These chapters start with a discussion of the historical development of each neighbourhood, and space syntax analysis (connectivity, radii of choice and integration). They continue with observations (snapshots), and then questionnaires, as well as focus groups and interviews. In conclusion, chapter nine which is the comparison and discussion chapter compares the three case studies in terms of their urban structure, in-between space types, and social aspects.

CHAPTER 2 URBAN MORPHOLOGY AND URBAN FORM

Introduction

In modern cities some social and physical aspects of our urban environment have taken away. Both rapid economic development and urbanisation have triggered the process of fundamental change in cities. These modifications resulted in decomposed urban fabrics by the construction of motorways in order to facilitate the vehicle mobility, and infrastructure. Moreover there appeared an increase in the construction of multi-storey, freestanding buildings that have no relation with their plot and the surrounding buildings. Sub-centres, edge-cities, and pod developments emerged as defined by various researchers. Different kinds of spaces were formed as a response to changing human needs such as shopping malls and gated communities with the aim of feeling safer in the world of this modern city.

As a result of all these changes, however, cities are facing the problem of urban sprawl and segregation. Social problems are increasing as the patterns of cities are transformed and become increasingly fragmented. Hence urban design is very important in terms of creating solutions to all these issues. Despite its practical dimension urban design has to have an understanding of urban form; as Whitehand (2005) mentions, “understanding of urban form should contribute to both the theory and practice of designing that form” (p. 19). This chapter seeks to explore the meaning of urban morphology and its study area, and urban form through their definitions from various perspectives as well as by examining traditional and recent approaches.

2.1 DEFINITIONS

Before identifying urban morphology and urban form, it would be useful to look into the origin of the words. As stated in various dictionaries, *morphology* is constituted from the Latin words *morphe* (form) and *logos* (description); therefore morphology is concisely the description of form. The Oxford English Dictionary defines morphology as the particular shape, form, or external structure of an organism, or landform. It is also described as the history of variation in form. Form is characterised as the general system of arrangement, whereas figure is defined by lines and angles. Ching (1996) defines *form* as a three-dimensional mass, which also concerns figure and shape; it is the external outline, internal structure, and the unity of the whole.

Urban morphology is defined as "the organized body of knowledge" and "integral part of urban geography" (Fritz, 1899 in Whitehand, 1987, p. 1); it relates forms to their socio-economic context and historical development (Whitehand, 1987). Urban morphology is about shapes, forms, spaces and places; it is also associated with the nature and scale of physical places and the connections between them. It can be both descriptive and classificatory. It also focuses on the question of "how and why settlements took the shape they did" which includes analytical element of morphogenesis[1] (Peart, 2002). It is the study of the city as a human habitat (Moudon, 1997). Despite multiple definitions, briefly, urban morphology means the structure or the study of urban form (Kropf, 2005; Larkham, 2005; Whitehand, 2005).

In addition, urban form is described as the basic element that gives character to cities. Larkham (2005) mentions that it is how we conceptualise the complexity of physical form. Urban form is composed of buildings, streets, squares, roads,

[1] Morphogenesis is defined in the Oxford English Dictionary as the "origination and development of morphological characters" and "formation of landscapes".

and all the elements that comprise the city. It is the outcome of a process that is formed by specific determining forces. Morris (1994) classifies these forces under two groups; firstly, geographical factors such as climate, topography, and local construction materials, and secondly, man-made determinants such as socio-political and economical powers, culture, and religion. Parallel to the classification of Morris, Banz states "urban form is determined by simultaneous action of dynamic and constraining forces that result from the needs and demands of the moment" (1970, pg. 92). Lynch (1981) queries the concept of 'settlement form' and he considers whether settlement form is composed of physical things, living organisms, activities of people, social structures, and economic systems or some other phenomena. Consequently he states that the city is related to all these notions and defines the settlement form as "the spatial flows of persons doing things, the resulting spatial flows of persons, goods, and information, and the physical features which modify space in some way significant to those actions, including enclosures, surfaces, channels, ambiences, and objects" (Lynch, 1981, pg. 48).

Therefore urban morphology is related to the history of the city, spatial relations, social relations, economic relations, culture, traditions, various factors shaping that form, and its rural/urban landscape. It is about the people, institutions, regulations, and management. Therefore it is an important phenomenon and an analytic tool, which helps cities to understand their development processes, and the characteristics of each element in the city. During the formation process, space evolves and changes depending on these issues mentioned above; social activities also transform this space. Hence urban morphology is about everything in the city, whether physical aspect or a living organism. It concerns events, histories, interactions, happenings, and occurrences. Hence it gathers many disciplines under its umbrella; a diversity of subjects is related with urban morphology. Following these various definitions of urban morphology, morphological analysis, types, and approaches of different disciplines are explored in detail below.

2.2 MORPHOLOGICAL ANALYSIS AND THE THREE LEADING SCHOOLS OF URBAN MORPHOLOGY

In urban morphology, there are different scales of analysis. From the macro- to the micro-scale, morphological analysis examines buildings and their plots, blocks, and streets, and on a larger scale, the motorways and sub-centres. Moudon (1997) specifies three principles for urban morphological analysis. Firstly, definition of urban form is defined via three fundamental physical elements such as buildings and their open spaces, plots or lots, and streets. The second principle is the conception of the urban form from various levels of resolution such as building/lot, street/block, city, and region. Finally, she claims that urban form can only be understood historically. Hence three fundamental components of urban morphological research are *Form, Resolution, and Time.* In terms of resolution, the smallest cell of the city is recognised as the combination of two elements, whether a building and its plot - or let us say 'open spaces'. Over time there is transformation in this cell, and hence within the properties and sub-units of the cell; and the change both in its function and in its form is important. Kropf (1993) also suggests a useful conceptual tool for the hierarchy of morphology and complexity levels similar to Moudon's. These levels are as follows; *outline of the form (exterior shape), level of resolution, and level of specificity*. He explains this by giving an example based on buildings. Buildings' outlines represent a level of resolution in an urban form. In the high level of resolution and low level of specificity, houses can be seen, whether semi-detached or detached and so on. But in the low level of resolution and high level of specificity outline of the plots can be seen, cluster of houses start to form a row, so that streets and blocks can be perceived (Kropf, 1993 in Hall, 1997). For instance, when we are searching a place in the software Google Earth, as we zoom in we start to determine the differences and details, forms and shapes more clearly. Nevertheless as we zoom out for a larger scale, specificity of shapes becomes low but resolution increases as many more spaces are involved.

In the development of morphological analysis, especially in Europe, there were three forerunner schools, so it is useful to give a brief explanation about these schools and their theories before looking at urban morphological approaches. Moudon (1997) identifies three basic schools that have different theories; the Germano-British School, which recently is the Birmingham School, secondly Italian School, and thirdly French School. The Germano-British School, which is the oldest of the three, was established at the end of the nineteenth century. The geographer and planner Conzen was the founder of this School and its discourses. The School developed the theory of city building processes, and studies of urban landscape form with descriptive and explanatory purposes. The key subjects they covered were essentially the history of urban development, future planning efforts, and townscape management. They concentrated mostly on 'how' and 'why' questions regarding city building, such as 'how cities were built and why'; these are explored further below. On the other hand the Italian School, founded by the architect Saverio Muratori, flourished in the early 1950s. In addition to the study of urban landscape the target was also to develop the theory of architectural design. This study of urban form was for prescriptive purposes that rested on historical city building traditions. The key question the Italian School addressed was 'how cities should be built rather than how they were built'. The last school was the French School, also known as the Versailles School. It was influential in the late 1960s, and founded by pioneering architects Philippe Panerai and Jean Castex, as well as sociologist Charles DePaule. These scholars adopted a more critical approach to the field, and they developed both the theory of city building and design theory. So they differentiated between the theory of design as 'ideas' and the theory of design as 'practice', thus ensuring the interaction between social science and architecture. While studying the urban form they focused on the assessment of previous design theories of city building and investigated their impacts (Moudon, 1997; 1998).

2.3 URBAN MORPHOLOGICAL APPROACHES

Urban Morphology is mainly studied by five academic disciplines; geography, architecture, philosophy, urban design, and science. All these theories and methods are counterparts and complement each other. Urban morphology was firstly defined in the geography literature. Geography deals with the morphological processes of settlements; and the main pioneers of this discipline are Schlüter (1899), Conzen (1960), Whitehand (1981), Kropf (2001), Larkham (2005), and others. Secondly, architecture tackles the typological processes of the subject and here we can mention Caniggia (1963), Muratori (1960), Samuels (2004), Moudon (1997), and Malfroy (1986) as the forerunners. Thirdly, philosophy, which tackles the philosophical processes within urban morphology, differs from the other disciplines in that it questions more the social issue of space. The key proponents of this approach are Lefebvre (1901-1991), Harvey (1935), and Foucault (1977). Fourth, urban design deals with the public space network, space and place issues, and Sitte (1889), Zucker (1959), Koetter (1978), Krier (1979), Rossi (1982), Lynch (1960), Jacob (1961), and many others can be mentioned here. Finally, by the late twentieth century, in terms of science, Geographical Information Systems GIS, Space Syntax by Hillier and his colleagues (1970s), and other mathematical models by Alexander (1977), and Salingaros (2000) can be cited as recent quantitative approaches to urban morphology (Sima and Zhang, 2009). These five approaches and their theories are discussed below.

2.3.1 Geographical Approach and its Development

Morphological studies have held an important place in the German-speaking countries since the late 1800s, and slightly later in the English speaking world from the 1920s. The majority of the research takes place in Central Europe, Great Britain, and North America. Urban morphology was grounded in the German morphogenetic approach, which Whitehand terms as “the tracing of the evolution of forms in terms of their underlying processes” (1981). Schlüter and his student Geisler (1899), who examined the aspects of urban form, are the

predecessors of morphological tradition. Conzen was highly influenced by their approach. Schlüter emphasised two notions in his early work; cultural landscape (kulturlandshaft) and cultural geography (kulturgeographie); where the former is the research object of the latter. This geography concerns man-made forms embodied within the aims and actions of man, history and nature. In addition he predicted an explanatory morphology that is aware of its interdependence with geography in terms of three aspects; form, function, and development (history). Schlüter proposed three kinds of objects under cultural landscape; settlements, land utilisation, and lines of communication. In addition, he divided geography into three groups; settlement geography, economic geography, and transport geography. He defines urban geography as the "physical forms and appearance of the town, a distinct category of cultural landscape" (Whitehand, 1981, p.1; Whitehand, 1987).

Moreover Conzen, inspired by his German colleagues' works, developed two morphological studies. The first is "A survey of Whitby" (1958) which is a record of land and building utilisation as well as building types. This study was revealed as the basis for a townscape conservation strategy and the importance of community with a sense of continuity. Here, he mentions that a detailed explanation of morphological development of a town is crucial for the townscape conservation. Secondly, in the study of "Alnwick, Northumberland: a study in town plan analysis" (1960) he established basic frameworks for urban morphology and recognised the individual plot as the fundamental unit of the analysis with the help of cartographic examination. As Whitehand highlights in Conzenian tradition, synthesis is very important. Conzen derived concepts from the development of urban landscapes, which are related to the historical context. He divided the townscape into three parts; town plan (streets, plots and blocks, buildings), building forms, and land use (Whitehand, 1981; 1987).

Conzen employs a retrogressive method, which means working back from present day forms. He revealed how the physical configuration of cities developed over time. He used a method, which analyses parts of towns at

different scales from the individual to the whole settlement in the post war period (Whitehand, 1987; Whitehand, 2005). Moreover Conzen enumerated three aspects in terms of the importance of physical fabric; having practical utility that provides orientation, having intellectual value, which provides strong visual experience of the urban area's history, and having aesthetic value which is about orientation and variations in the width of streets. While subjects such as economics of location, innovation and economic fluctuations, which are related to urban morphology, are implicit in Conzen's work, they are explicit in Whitehand's (1987) work. Moudon states that, "Whitehand developed the ideas of Conzen and pushed the limits of urban morphology into urban economics" (Moudon, 1997, pg. 4).

In the mid inter-war years, major subjects developed in the field of urban morphology. First urban geographers recognised the work of urban historians, and form was identified from the point of forces that generate it. In the 1950s American researchers Burgess (sociologist) and Hoyt (land economist) created the Concentric Zone Model, which affected English-speaking countries. Hence, the Conzenian School and British urban morphology were attracted by American morphology during the 1960s and 1970s. American urban morphology was related to land-use patterns, which see town plan and building form as a land-use container. Hence, within this period, economic interest, use and exchange of property were involved in the development. In addition to urban history, economic theory started to influence urban morphology and draw the attention of the urban morphologists (Whitehand, 1981; 1987).

As do Conzen and Whitehand, Wharton also dwells upon the importance of landscape management. Wharton (2005) mentions that urban morphology analysis and methodology of landscape characterisation have much in common; for instance, both try to understand and define the meanings of urban form and urban landscape, the time dimensions within which they exist and change, their functions, and the forces that affect their form. In addition, both are interested in the evolution of rural or urban settlements and how they are shaped. These

constitute a base map for their current status and character; and they are crucial for future development strategies, plans, policies, and conservation and management principles. As Wharton (2005) highlights, it is the landscape which works as a catalyst for managing change and which gives character and uniqueness to a place; it directly affects human behaviour, values and movement, and gives character to a place, hence generating a sense of belonging.

Urban morphology and process typology are built on the "evolutionary conception of change" (Kropf, 2001, p.30) and as Kropf (2001) mentions the initiators of this concept are Conzen, Muratori, and Caniggia. They have different explanations for the change in urban morphology. With the help of geomorphology, Conzen identifies street systems, building and plot patterns, burgage cycle, and fringe belt, which he related to transformation and periodisation. Subsequently, Muratori and Caniggia identify building types, tissue, urban organisms and territories. Accordingly, various kinds of transformation of these elements is called *tabernization*. Burgage cycle (plot) can be given as an example of the transformation of a single object through a single non-repeating sequence. On the other hand, fringe belt (settlement) represents the transformation of a single complex object through a repeating sequence (Kropf, 2001, p.31).

Recent approaches are dealing with the processes that embody the form. The basic aim here is to find out which features are constant in an urban landscape. This usually depends on the structures and materials of the buildings and their finite life cycles. There will be urban change on some scale and at some time everywhere. The stages of urban change can be set in a hierarchy as follows: buildings are the elements that change fastest in terms of use; then plot patterns take place due to subdivision, amalgamation and changing ownerships; and lastly the street network, which is the most resistant to change among the others (Larkham, 2005).

2.3.2 Architectural Approach to Urban Morphology

The architectural approach to urban morphology predominantly looks at the typological process. Typology is defined in various dictionaries (Oxford, Webster) as 'the doctrine studies types', and 'systematic classification of types according to their common characteristics'. Here, type is the 'repetitive production of a particular form'. Kropf (2001) defines typological process as the 'transformation of types... in which generic process is repeated but the resulting sequence of specific transformations... is not' (p.31). This transformation is about the period change, from one period to the other. Hence in order to understand how the city evolved, and the current situation, we have to understand the formation process, from the past up to the present time (Kropf, 2001,). This typological process is related with human interaction with its environment, and it is about phylogenesis, which is the history and evolution of types.

Both the pioneers Caniggia and Muratori identified building types, tissues, urban organisms, and territories in terms of typology. They called the transformation of these 'tabernization', as mentioned above (Kropf, 2001). Cannigia adopted an organic approach, which starts with the elementary cell, and develops with a cumulative process (Levy, 1999). For Caniggia and his colleagues, a city is a unique and organic totality and both time and laws have an important influence on the city formation. Moreover the building type is a collective object derived from local traditions and cultural values of the society. Hence this building type has a deep relation with the urban morphology of the city (Marzot, 2005). Muratori undertook the first systematic survey of an internal structure of a historical building of a town. Caniggia then developed Muratori's ideas and simplified the architectural terms such as 'type', 'building fabric', and 'basic building' (Sima and Zhang, 2009).

When we compare urban morphologists and typologists we can say that urban morphologists study the characteristics of groups of cells, or how the urban landscape formed, whereas typologists study the parts and cells such as the

buildings and open spaces, individually. However they both agree with the idea that there is a direct relation between urban landscape and historical process, which is also referred to as diachronic (historical evolution) (Levy, 1999); hence the temporal dimension of urban morphology is very important (Moudon, 1998).

2.3.3 Philosophical Approach to Urban Morphology

Foucault, Lefebvre, Castells, Giddens, and Harvey are the forerunners of the social theorists of space. Compared to other approaches these philosophers stress the importance of urban space in terms of its production processes, power relations, regulations, institutions shaping that space, and the society. As Mugavin (1999) mentions in his article, 'A Philosophical Base for Urban Morphology', both Foucault and Lefebvre are the main resources for urban morphology. Their propositions are focused on how and why the society envisages producing its own space. For instance, Foucauldian urban morphology looks at the relation between physical space and social space within time, and binds them with historical, institutional, social, and cultural changes in the society. Foucault focuses on the knowledge of power, institutional sites as space of domination, 'isomorphic patterns' between urban space and regulations, owners, and inhabitants. Hence, a built environment is not just the buildings but also the gaps, or interstices, between them. These interstices have social and cultural content and meaning for Foucault, because space is not just a physical entity but also has a morphogenesis, and history (Mugavin, 1999).

Lefebvre, another important philosopher, is applauded by Gottdiener (1993) for making crucial contributions to the theory of state, sociology of the arts, poststructuralism, existentialism, modernity, and postmodernity. His concepts are the basis for 'new urban sociology' and his thoughts enlightened many later theorists like Harvey and Castells, and others. For Lefebvre, social relations are equal to the spatial relations, which have a reciprocal affiliation. Instead of reductionism he proposes the 'unitary theory of space', which is called the 'triple conjuncture of space'. This space encompasses, first, the physical (cosmos,

perceived spatial practice), second, the mental (logical, and abstract, conceived representations of space), and third, the lived space (social space, social practice and communication) (Gottdiener, 1993; Mugavin, 1999). Lefebvre criticises the capitalist and modernist space as converting the space into a commodity, which can be served under the hegemony of power, knowledge and technical expertise; therefore unitary theory is needed. He also argues that morphological research has the wrong idea of interpreting the space as 'Euclidean Materialist Space', which does not take into account the social and mental space. Space is not grasped outside of its physical boundaries. Lefebvre set out various definitions regarding space in regard to societies, and how spatial practices and capitalism influence space. Particularly, when we are talking about the externalised, material environment, he mentions space as either a 'representation of space' (conceptual model for practice) or 'a space of representation' (users' lived social relations with the environment). It is important to understand the way different societies specify space and attach meaning. Hence he differentiates abstract space from social space. Abstract space concerns the control of social organisations such as planners, politics and economics. It is the hierarchy of space created by power and knowledge. On the other hand, social space is formed by everyday social practices and lived experiences and externalised by the actions of the society. In the spatial practice of the human, space is conceptualised and projected for the purpose of physical construction. Lefebvre on the whole points out the material aspect of production of space. This space is the outcome of a capitalist production activity and it became homogenised and fragmented under capitalism. Space is either the 'material product of social relations' or 'manifestation of relations'. Initially, in the first circuit, space was produced as a result of industrial production, and in the second circuit it depended on capitalist relations, which include real estate and land speculations. In conclusion Lefebvre's main concept is related with the 'production of space due to its own nature'. Hence each society is producing its own, appropriate space, depending on its social organisations and relations. In essence, social change in society cannot be formed in a planned way because it is

related with the change in the space, which is formed by the relations and organisations that produce that space. In order to be able to talk about changes in society, there should be changes in the space. Transformation of social relations also means the transformation of socio-spatial relations which results in the production of new space (Gottdiener, 1993).

2.3.4 Urban Design Approach to Urban Morphology

As mentioned in the discussion on the architectural approach above, typomorphological analysis deals with buildings, cells, rooms, structures and materials - more individual elements. The geographical approach followed the historical development of urban forms and the evolution of those forms; on the other hand, the philosophical approach emphasised the social and mental dimension as well as the power relations affecting the city. After all, the urban design approach brought other dimensions such as the quality of the public realm, public space, place and people, and how to connect the each part with the whole by negotiating the relations between multiple actors and considering the socio-economical issues and regulations, while taking into account the building within its local and global context.

Urban space and *public space* rather than only the building itself were further discussed in the late nineteenth century, particularly by Camillo Sitte (1889) in his book 'City Planning According to Artistic Principles'; Zucker (1959) in 'Town and Square: From the Agora to the Village Green'; Aldo Rossi (1982) in 'The Architecture of the City'; Rob Krier (1979) in 'Urban Space', and Row and Koetter (1978) in their work 'Collage City'. These urbanist theorists and architects were the forerunners of urban design. Their main areas of interest were the typology of urban spaces, aesthetic dimension of urban space, form, coherence, and geometry, as they were inspired by ancient Greek and Roman cities. Above all, they also criticised the space being transformed in order to accommodate cars through the construction of straight roads and wide streets. In Collage City, in particular, Row and Koetter explain the modern city as a combination of

sculptural buildings, which can also be called objects, and the texture as the background (Carmona et al., 2003). This hypothetical city involves the traditional urban centre versus modern periphery, fragmented farmlands, territorial infrastructures and wastelands (Wharton, 2005).

The historical development of the ideas regarding the city, before the 1960s, were more 'prescriptive and utopian' (O'Sullivan, 2000), searching for 'ideal cities'; such as Howard's (1898) work 'Garden Cities' in England, Le Corbusier's (1929) 'Ville Radieuse' and Wright's (1945) 'Broadacre'. The Urban Renewal Movement started in cities, which includes the period between the second half of the nineteenth century and 1945. The intention was to cope with the unhealthy and inhuman places lacking in infrastructure that the industrial cities caused. This movement was followed by renewing the cities through opening large boulevards and streets; as Haussmann did in Paris between 1850 and the 1860s. Parallel to this movement the 'City Beautiful Movement' was flourishing in North America, and with the advent of the twentieth century, the 'Modernist Movement' emerged especially with CIAM (International Congress of Modern Architecture) that triggered the demolishment of some parts of cities; because according to the CIAM principles, a modern city should be beautiful, clean, green and healthy (Akkar, 2006).

By the 1960s discourses regarding the city turned into more analytical approaches. Lynch (1960), Jacobs (1961), Alexander (1964) and William H. Whyte (1980) made valuable contributions to the field of urban design both with their observations of places and people and also due to their humanistic approach (O'Sullivan, 2000). For instance, Lynch developed five elements in order to reveal the hierarchical character of a city structure: *paths, edges, districts, nodes, and landmarks* (Nowak, 2003). Above all it is important to mention that Alexander is considered as the godfather of the mathematical works and concepts. In 'A Pattern Language', Alexander and his colleagues deconstructed the urban system into smaller units in order to understand the whole. Pattern language has the structure of a network. This pattern system performs in an order, which follows a

sequence (Alexander et al., 1977). Moreover it is a kind of tool, which includes the design rules in order to cope with the design problems, besides revealing how to create semi-lattice structures. He compares the city to semi-lattice (as in organic cities) rather than a tree (less complex, planned and zoned cities formed by rational design methodology) in his favourite quote, 'A City is not a Tree'. According to Alexander, the city is formed of grouped sets of related elements, which are the meaningful intersection of elements (O'Sullivan, 2000). This arrangement starts from the largest pattern and comes down to the smallest one in a hierarchical way; such as in sequence from regions to cities, enclaves, neighbourhoods, and houses; even down to the rooms. This hierarchy of patterns is the summary of the language, which is the method of gathering words together meaningfully and constituting an index. As Alexander emphasises, if we read the sentences that connect one pattern group to another then we can have the idea of the whole language (Alexander et al., 1977). In order to understand the complex system, internal structures are being analysed. Patterns here indicate human activity and interaction. His main point was to form a method creating coherence in the built environment, as well as the organisation of connections for a unified whole (Salingaros, 2000). Salingaros (2000) was influenced by Alexander's thoughts specifically in comparing the structure of complex systems in biology, nature and geometry. As Alexander did, Salingaros also reflects that urban geometrical coherence is essential for the quality of life and the vitality of the city. Consequently, through examining complex systems, he puts forward eight rules for the geometrical coherence of urban form: couplings, diversity, boundaries, forces, organisation, hierarchy, interdependence, and decomposition. A coherent city form has to be plastic, which means that it has to have the possibility of being bent and extended. In order to be plastic this urban fabric has to be strongly tied at the small scale and weakly at the large scale. Large-scale coherence can be maintained by hierarchy, interacting sub-units, connectivity at all scales, and variety at small scales (Salingaros, 2000).

Another important analytical theorist is Hillier, who developed space syntax as a mathematical tool in order to analyse space. Similar to Alexander, Hillier et al. (1987) also points out pattern, which can be seen from multiple points of views for understanding how towns work. He gives an example to differentiate spatial order and geometrical order. For instance, a grid system can be understood to be geometrical when seen from above, however, when we move through this system, it may be difficult for someone to find their way and orientate themselves because every part looks as the other. On the other hand, irregular deformed grids of traditional towns can be seen as disordered from above, but while moving through, the town seems well ordered. Hence by exploring the local we can have an idea of overall, global pattern (Hillier et al., 1987, p. 218).

2.3.5 Recent Analytical Approaches, Space Syntax and Others

Analytical approaches developed rapidly by the 1960s and the Cambridge School was one of the pioneers in the UK for analytical planning. In 1973 the 'Centre for Land Use and Built Form Studies' was renamed as the 'Martin Centre for Architectural and Urban Studies'. March, Steadman, Martin, and Kruger were the leaders of this group; working on the geometry of the environment, urban space and structures. Kruger developed 'multiple graph representations of urban system' revealing the street network and built form units. This graph helped him to differentiate different regions of a settlement and at the same time specify various characteristics of these different settlements. Therefore the work of the Martin Centre involved the correlation of these measures of the urban structure with residential densities, employment rates, and service availability. These graphs also helped in the development of land use and transport models (O'Sullivan, 2000).

Space Syntax, which also developed in the 1970s, is another analytical representational graph analysis for urban structures. It looks at the mutual relation between spatial configuration and movement, besides socio-economical issues. As Hillier emphasises, 'It seeks the relation of relations', searching for the

way cities are structured as well as how they function. In Chapter 4 the space syntax method is discussed in greater depth, so here we will only scratch the surface of the subject. Before the twentieth century cities were recorded just as they are in reality. This was useful for historical research. In particular, Nolli Map (1748) was the ideal figure-ground image and basemap for representing urban fabric. Today, however, there are various image representations of cities. Space Syntax is a theory, which is applied to interpret the relation between the society and the space and built form. In other words, this descriptive theory of the spatial pattern carries information about the social content, processes and structures that shape that urban form (Sima and Zhang, 2009).

As O'Sullivan (2000) emphasises, Space Syntax is a tool being used more than either Q-Analysis (which is another analytical tool, using geometrical ideas) or Kruger's graph mentioned above (the Martin Centre's work). Space is represented by convex space or axial lines. This analysis illustrates how people are moving; how they pass through space, plus their stationary activities. Axial lines are used for movement, and axial analysis is used for analysing the street network of cities; on the other hand convex spaces are being used for mutual co-presence, and visibility graph analysis (VGA) is for analysing patterns of visual fields in public spaces (Hillier and Stutz, 2005; O'Sullivan, 2000). The principal measure in Space Syntax is *integration*, which calculates the centrality; however *choice* is being used more recently, and it calculates the betweeness centrality (these are explored further in the research methodology chapter). Consequently, space is decomposed into subunits as in Alexander's work. Space Syntax is different to the metric geographical approaches of space. These subunits or decomposed elements of space are measured independently from their size and shape; they are also treated similarly in the analysis (O'Sullivan, 2000). There are diverse advantages that space syntax brings for the analysis of cities. Hillier and Stutz (2005) enumerated these points; space syntax underlines the similarities and differences of cities, develops a general theory of a city, analyses the city both at the micro- and the macro-scale at the same time, and helps researchers

to see what effects of future planning and urban design decisions might cause on cities (Hillier and Stutz, 2005). On the other hand, however, O'Sullivan (2000) criticises space syntax as lacking in the exploration of the relation between axial lines, convex spaces, and buildings' entrances. Nevertheless Hanson (2000), Shu (2001) and Nes and Lopez (2007) further explored this issue in their research studies. For instance, Nes and Lopez (2007) examined the topological depth between private and public spaces in Dutch towns. Their results revealed that the type of relation between indoor and outdoor spaces have an influence on both the safety and liveability of streets.

Although Hillier asserts that spatial configuration is an independent casual factor and there is a relation between space configuration, movement and location of attractors such as shops, according to O'Sullivan, this can only be acceptable if the configuration is regarded as a fixed entity over the course of time. It is really difficult to accept space as a fixed, independent phenomenon, since many factors affect the organisation of that space; and also this organisation affects many other things. For instance, regulations and development plans can direct the spatial configuration. As a result of this process, formation of space might shape the relations in that environment. Conversely, this process can operate in the opposite way; such as with the use of that space, there can be various territories. These include the extension of a shop to the exterior and encouraging social interaction on the street, thus defining a kind of in-between space. This issue is explored further in the coming chapters as the main subject of the study. It will be seen in the conceptual framework of the research that 'the organisation of space' is located in the middle of variables, as an interface whether affected by some factors or affecting some other factors. Another important point made by O'Sullivan was that space syntax ignored land use and economics (Gatrell, 1985 in O'Sullivan, 2000). Since then there have been efforts to include land use correlations in space syntax (Hillier, 1996; Ozer and Kubat, 2007). On the other hand, it is a useful tool to observe the effects of interventions.

Recently various dynamic models of urban spatial process have been developed. O'Sullivan (2000) gives cellular automata (CA) (Ulam and Von Neumann, 1940s) and fractal geometry (father of fractal, Mandelbrot 1975, Batty and Longley 1980s) as mathematical tools, which reveal cellular or grid-based simulations of urban growth process. Cities are dynamic and not in equilibrium, hence CA is the most efficient approach for understanding spatial processes. However they are also criticised for placing too much emphasis on the 'geometry of emergent forms' and not giving enough consideration to the 'validity of transition rules'. In conclusion O'Sullivan criticises the fact that urban spatial structure and spatial processes are being studied separately; as well as the lack of exchange between the different disciplines researching urban morphology. In addition there is not enough study that correlates urban spatial structure with its social and economical processes. The Martin Centre models, Kruger's work, Q-analysis, and space syntax put the emphasis on understanding a static urban structure, whereas, processes and spatial form are interrelated elements and snapshots at different times of the urban space, which will be more useful not just to grasp the underlying processes but also in connecting with pedestrian movement and socio-economical activities (O'Sullivan, 2000). Recently space syntax analysis is more widely being correlated with the other qualitative and quantitative tools.

2.4 CONCLUSION

Change is important for adaptation. We cannot build exactly the same styles of buildings derived from past times in our era, as this would be nothing more than a nostalgic experience. However, we have to learn from the past through examining the formation process of settlements. As Lefebvre states, production process and product are two inseparable aspects. Moreover he criticises morphological research for misunderstanding physical space by operating in the materialist space rather than the social and mental space (Lefebvre, 1991 in Mugavin, 1999). In order to understand the urban form as a product, the processes and shaping forces - whether social, physical, cultural or political - should be properly comprehended. As Kropf (2005) underlines, understanding

internal structure is crucial for the successful management of urbanism and urban design. Since then all recent theories about urban form are related to functional theory which asks how and why cities take the shape they have as well as how cities function (Lynch, 1981). For example, space syntax emerged as a new method for analysing spatial configurations of settlements developed by Hillier and Hanson in the late 1970s. This method focuses on the social and economical processes that shape space and is also interested in the evolution of cities, which are self-organising mechanisms. It looks for the relationship between the structure and function of cities. It has the advantage of analysing the city at the micro- and macro-scale concurrently. It does not only establish a more general theory of city and reveal the similarities or differences between cities, but it is also concerned with future planning and urban design (Hillier and Stutz, 2005).

The modern city is facing various radical changes. Not only does transformation occur in the patterns of cities but also in the building types from unique to ordinary and universal; from dense compact and continuous cities; to diffuse, loose, and discontinuous cities. As Levy (1999) emphasises, zoning projects result in open, heterogeneous, fragmented, and disrupted fabrics. In addition to this, closed urban fabric is transformed into an open fragmented peri-urban fabric. Elements of the urban fabric have changed; plots to building areas, streets to transportation infrastructure, blocks to point blocks, and open space to lawn. Traditional urban fabric has changed with the superimposition of a major fabric on the existing one. Consequently mega structures have emerged and scale has changed. From now on buildings just have functional relationships between them. Within this vast territorial expansion cities came up against the problem of urban sprawl. Hence the problem is how to engage the new urban forms with the existing ones. As Larkham (2005) mentions “new urban and architectural forms have been developed at speed and to a large scale, but with little or no reference to existing urban form and context”. In order to understand the processes that caused the change in the urban fabric, morphological analysis is

very important and these new elements should be refined and developed (Larkham, 2005, p. 24).

Car-oriented settlements changed the physical and social aspects of cities. For inhabitants, where to park their car comfortably became one of the crucial subjects in terms of choosing their neighbourhoods. Public spaces and the role of the street lost meaning through wide transportation links, and streets have become spaces just for movement. Buildings have become autonomous with no respect and relation to the street and its dimension. Additionally the city turned into an entity with multiple centres, mega structures, and shopping malls out of the centre. Therefore many researchers highlight the problem of urban morphology as dealing with the contemporary urban fabric and its components through understanding the underlying factors that create these urban elements. Consequently, it is important to understand the urban morphology for future designs and plans, and to have an insight of how cities are functioning. I would like to conclude this chapter with Lynch's statement that "It is impossible to explain how a city should be without understanding how it is" (Lynch, 1981, pg. 39).

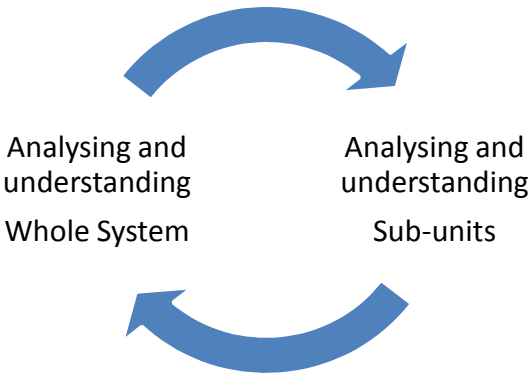


Figure 2.1 Circular Relation between Part and Whole

Therefore this study tries to understand how the street pattern of Izmir works through morphological analysis. As a morphological approach it combines the space syntax analytical approach with the urban design approach. Alexander

firstly decomposed the urban fabric into small pieces and analysed the parts in order to understand the whole language of the pattern. Hillier pursued a similar approach to Alexander through developing mathematical software in the analysis of street networks. This study firstly starts with a holistic approach using space syntax for exploring the complexity of the city. In addition, in order to understand the evolution of the form, a brief historical analysis was given for each case study explaining concisely under which planning approaches, regulations and circumstances the city transformed. Then case areas are further analysed through urban design parameters. Therefore, as a morphological approach, this research benefits from space syntax and urban design. The process works both as a deductive and inductive system; it starts to analyse the whole and moves into parts, and then from parts again back into the knowledge of global pattern. It is a circular process: on one hand, understanding how the whole urban system works helps to understand the parts, while on the other, to have a better idea about the sub-units is conducive to perceiving the urban system as a whole (see figure 2.1 above).

CHAPTER 3 IN-BETWEEN SPACE AND SENSE OF COMMUNITY

Introduction

Urban elements play a significant role in the structure of urban form. Neighbourhood squares, streets, building entrances, intersection points, arcades and many other elements are the connectors between the public and private. These in-between spaces join the indoor and outdoor spaces; but they also connect various activities. In addition to this, they ensure the coherence of the urban fabric through the hierarchy of space. They are the vital parts of cities where social life, integration and communication between residents, neighbours, and outsiders take place.



Figure 3.1 Arcades and balconies in Habana, Cuba

In our age, there is a strict demarcation between public and private space. Hence clear definition of the public and private spaces, and the resulting interfaces are of value for a safe and more integrated city. In-between space, a space neither inside nor outside, has been examined by various research fields. Because of the lack of hierarchy between public and private, social relations might be weak. Moreover mono functional and segregated spaces emerge. This might also result in the alienation of the community and increase in the fear of crime. Therefore concepts of neighbourhood and community are the key elements. As Lund

(2002) mentions, these concepts have been on the agenda of Neo-traditional Developments and New Urbanism for a long time. We have to keep in mind however that society is changing constantly with the developed technology and communication systems. Family structure, household, life styles, working conditions, women's status in employment, transportation, mobility, and population are some of the factors affecting the social relations in the city (Churchman, 2003; Gehl, 1986; Goist, 1971; Lund, 2002; McKenzie, 1921; Nasar and Julian, 1995; Park, 1915; Rapoport, 2001; Tylor, 1939; Wirth, 1938). Thus urban designers through shaping cities can just give the opportunity for people to interact. On the other hand they cannot ensure the extensive social ties among residents through their schemes. As mentioned by a number of researchers (Fischer and Jackson, 1976 in Abu Ghazzeh, 1999; Kupper, 1953; Nasar and Julian, 1995; Smith, 1975; Zehner and Marans, 1973), this is also related to common interests, life styles and the socio-economic backgrounds of the people. In conclusion, in-between spaces are important intersections between the family and community but are also related to other issues; for instance, how the recurring interactions will turn into friendships and become structured. One question that needs to be asked is whether people are happy to live in more isolated places or not. This question is addressed in detail below particularly in the case study section. Besides the sociological dimension, in-between spaces with their climatic and environmental features are essential for sustainable cities. Consequently, this chapter explores the definition of in-between space, and its importance in the organisation of space in terms of urban form, sustainability, and socio-economical aspects; but above all its effect on the social interaction.

3.1 DEFINITION OF IN-BETWEEN AND SOCIAL INTERACTION

3.1.1 In-between

What does in-between really mean? In dictionaries the term is defined as the person or the thing situated between two extremes, situations or categories, and contrasting conditions - briefly, an intermediate place. Drawing on Plato's

writings, Grosz (2001) says that it is a strange place, which is “choric”, as well as a “space of becoming and movement” as defined by Henri Bergson. Therefore it is the mediation space that has no space, form and identity of its own. It is the place between identities and it is the readjustment of relations. It does not have boundaries of its own and it is delineated from both sides. Thus its form is determined from the outside. While this space loosens up it gives possibilities to social, cultural and natural transformation, where various virtuality and potentials can emerge (Grosz, 2001; pp. 90-93).

Arnheim (1966) mentions that inside and outside are a “dichotomy” because the two of them cannot be seen at the same time. Although they exclude each other, one cannot exist without the other. This dualism constitutes the challenge for architecture and urban design to integrate the two. Interior and exterior of a building is perceived in a different way. When we are in the interior of a building we cannot have the ability to compare the indoor with outdoor space. The interior can only be compared with the previous seen things or the things that will be seen later. In contrast, when we are outside of the building, the size of the building can be evaluated against the surrounding buildings and spaces. Hence buildings should be designed within their surroundings. If they are designed from the inside out they can have a lack of external unity (Arnheim et al., 1966). This tension between inside and outside is appropriately seen in the example of a story Zucker (1966) emphasises. In this story, Jean Paul’s character inherits a piece of land but has not got enough money to build a house. He finds the solution in constructing a wooden wall with a window, which he puts on the middle of his land. Through placing a wall he can now enjoy the landscape view by defining the inside and outside. Hence shelter does not only have pragmatic function against physical forces but also aesthetic points (Arnheim et al., 1966).

3.1.1 Social Interaction

In-between space is the first step where the resident interacts with the other. Social interaction is defined by Rummel (1976) as “the acts, actions, practices of two or more people mutually oriented towards each other”. What he

emphasises is that it is not defined by the type of physical relation, physical distance, and behaviour. It is the outcome of a "mutual orientation" towards each other. Rummel's approach is close to Weber's. On the contrary, Turner criticises both Weber and Parsons in that they deal with "social action" (meaningful orientations of individuals) as the subject of sociology. For Turner these are the structured appearance of social action and this static typological analysis prevents the examining of the process. This process includes the impact of an individual's "overt movements", "covert thoughts", and "basic physiology" over the other. Turner defines social interaction as a timeless and invariant property; it is the "situation where the behaviours of one actor are consciously reorganized by, and influence the behaviours of another actor and vice versa" (Turner, 1988; p. 13). He classifies three elements of social interaction as follows: first motivational process, where the people are mobilised in interaction and movement; second, the interactional process is about the type of activity, what they do when they influence each other, and finally the structuring process is related with the physical space and the repetition. For instance, every morning we have the motive to move out of our home and we bump into people and we greet them; as a recurring cycle this interaction will become structured in a particular space such as in the front yard and be repeated every day. Like Turner, in Giddens' theory of structuration (1984), this is the process, which societies and communities constantly reproduce, repeat, and reinterpret their social relations within the space/time context. This recurring process and transformation is significantly related with the interrelation of organisation/use of space and the social life of the community. Through this process people, space and objects give meaning to each other, and as a result coherent social relations and social change can be sustained (Giddens, 1984; Pader, 1988).

In addition to the structuration theory, Gibson's affordance theory is very much related with the interaction and in-between space concepts. Gibson (1986) examines the interaction between the physical environment and the agent. Here it is the features, properties and the condition of the environment, which gives the possibility for the agent to interact with it. He mainly concentrates on how

the physical environment encourages the cognitive activity of the individual. While Gibson looks at the attributes of the environment and how it contributes to the interaction, Greeno (1994) emphasises the *ability* of the agent that plays a role in the type of the interaction. Hence both the *affordance* of the physical environment (Gibson, 1986) and the *ability* of the agent (Greeno, 1994) contribute to their interaction. In addition to the affordance, structuration, and space-time concepts, spatial features of the space for the social contact as well as purpose and type of interaction are also very important.

Marmot (2011) defines the purpose of social interaction as; to share *information, make decisions, generate ideas and solutions, resolve (personal) problems, and socializing*. Spaces for interaction are in general related with the concepts of *proximity, privacy, legitimacy, accessibility, and functionality.* Interaction can be whether by chance encounter or predetermined (Ferguson, 2007). Briefly, for interaction, we need a suitable space and distance and the opportunity to be able to contact with the others (Festinger et al., 1950; Fleming et al., 1985 in Skjaeveland and Garling, 1997). As Park (1915) emphasises, proximity and neighbourly contact are the basic and elementary issues for the association within the neighbourhood. A study by Skjaeveland and Garling (1997) showed that there are four basic spatial requirements for social contact. First and most important is the existence and extension of the suitable space for interaction; second, the purpose-built physical features such as street furniture; third, private-open space, in-between spaces such as front yards, porches, and verandas, and finally, the appearance of the place and visibility/surveillance. Briefly the main characteristics of the interactional spaces they found was the in-between spaces and their size, spaciousness, structured open space (with enclosure of space, edge, screen, shelter, and seating environment), visual appearance and surveillance (visibility/views of and from interactional spaces), dwelling density, and street/entrance level. Although it is important to be standing at the same level for interaction (Gehl, 1996), elevated gardens provide better privacy for residents (Alexander et al., 1977 in Skjaeveland and Garling,

1997). Extension of indoor spaces to outside also encourages interactional spaces and personalisation.



Figure 3.2 Territorial Extension of a House in Kemeralti Izmir

Interactional space, as defined by Lyman and Scott is the territory, which is temporarily controlled by groups of people. These can be the groups of people sitting and chatting in the cafe, or having a picnic in the park, or playing football in an open green space. It is not just related with the physical aspects like the appearance or functional factors but also with the social issues such as social actions and cognitions. As Lyman and Scott mention it is the "area where a social gathering may occur" (Lyman and Scott, 1967, p. 240; Lyman and Scott, 1967 in Skjaeveland and Garling, 1997; Gifford, 1996). Although physical design and social interaction is generally correlated, Kupper underlines that physical distance (from dwelling unit to unit) and functional distance (orientation of units and location of services) do not have a certain effect on social interaction. Moreover their effect on social interaction is literally related with social similarity, and time. Hence the development of social relations is reliant on residents' common life styles and like-mindedness (Kupper, 1953 in Abu-Ghazzeh, 1999).

3.2 "IN-BETWEEN SPACE" AS THE RELATION BETWEEN THE PUBLIC AND PRIVATE SPACE

Public space attracts broad concern and is defined by various authors (Akkar, 2005; Borja, 1998; Burte, 2003; Capron, 2002; Carmona et al., 2003; Carr et al., 1992; Dijkstra, 2000; Madanipour, 1999; 2003; 2004) as places accessible to all; used by all; activity nodes and gathering points; places where common or different beliefs are shared; where humans come across each other or with strangers. Madanipour (2003) defines public space in depth with plentiful explanations as "a site for display and performance", "an arena of recognition", an exploration of difference and identity", and "the in-between space that facilitates co-presence and regulates interpersonal relationships" (Madanipour, 2003, p. 235). It is the place of common world and shared experiences and where tolerance grows between citizens. It is a tool for managing pedestrian movement and it has a function for various purposes. He underlines one characteristic of a public space as a mediator between private spaces. In order for a space to be public, it should be managed by public authority (Madanipour, 2003).

Urban pattern consists of solids and voids. Through defining a space, buildings create open spaces for the residents. As Lewis (2005) asserts quality of public spaces are affected by buildings in two main ways: first of all, their use and how they relate with outdoor space, and secondly, their volumes in terms of enclosure are important for legibility. Fronts and backs of buildings should be defined and differentiated clearly. Fronts of buildings should face the public realm like streets, squares and so on. Activity and privacy issues are crucial for residents. Therefore defining public and private spaces of the city facilitate the mediation between these realms. Levels of penetration, permeability and visibility are the tools for this negotiation (Lewis, 2005).



Figure 3.3 In-between Space in a Commercial Street
Source: Richards (2007)

Various researchers such as Hillier and Hanson (1984), Gehl (1996), Skjaeveland and Garling (1997), Nooraddin (1998, 2002), Hajer and Reijndorp (2001), and Franck and Stevens (2007), Jimenez-Dominguez (2007), Fernando (2007), Dovey and Polakit (2007) name this intermediate space as; *in-between, betwixt, threshold, soft edge, smooth space, appropriate space ,open-ended space, loose space, liminal space, interface, and buffer between house and public space*. Appropriate, open-ended, smooth and loose spaces can be seen more in non-western cities where local authorities and regulations are less effective in controlling the local economy (Seabrook, 1996 in Dovey and Polakit, 2007).

Gehl (1996) defines this space as a *soft edge*, which controls the space and as a transition zone; a gentle transition between private and public. For instance, front yards have a role for the interaction of neighbours and Gehl asserts that adults usually prefer “edge zones” to sit and chat whereas children play on the street where they can see other people and what is going in the street (Gehl, 1986; 1996). Gehl and his colleagues found from their studies in Copenhagen that 35% more people use outdoors with front yards and forecourts. Seventy per cent of residents linger in these in-between spaces between the building and the street. Another important outcome of this study was that forecourts were used by residents twice as much as backyards. Therefore these soft edges, through

providing opportunities for the residents, increase the lifelines in streets and neighbourhoods. As people stay longer and participate in activities, they interact more. As Gehl (1986) points out, however, soft edge is just one of the factors affecting street life. There are numerous other factors, which have to be considered such as climate, density, buildings' height and type, street dimensions and furniture, as well as traffic. This in-between space is the first step where the resident prepares himself for the public world (Gehl, 1986). In contradiction with Gehl, Hess (2008) found that backyards and alleys are more frequently used for wider activities than front yards and main streets in the study of three new urbanist neighbourhoods in Toronto. He emphasises that alleys are important secondary spaces for various activities. However, heavily used alleys and backdoors might cause problems regarding informal social interaction among neighbours. Moreover more interaction at the front door might also contribute to the interaction and familiarity between neighbours at the backyard. Another important issue that Hess raises is that there is a tendency among residents to have backyards in terms of privacy issues. On the other hand he agrees with Gehl (1996) in the way that parking restrictions can inhibit social interaction, where hiding the parking area behind buildings or directly close to the near entrance might reduce some of the activities that follow parking (Gehl, 1996; Hess, 2008). Regarding the influence of the level of traffic on interaction, Donald Appleyard revealed that people who reside in streets where the traffic is lighter have better social interactions with their neighbours than the ones in the streets with higher traffic levels (Appleyard and Lintell, 1972; Alcantara De Vasconcellos, 2004).

"In-between" space is defined by Nooraddin as a term, which is formed by the relation between indoor and outdoor space (1996 in Nooraddin, 2002). Because of the overlapping territories of these two dialectical spaces, it is better to use in-between space rather than using semi-public or semi-private space. Consequently, due to the complexity of the territory which has a "multifaceted nature" (Nooraddin, 1998; 2002), and a "territorial depth" (Habraken, 1998) the term in-between is preferred. For instance, Habraken (1998) uses the example of

a hotel's foyer. This place can be more private for the outsiders whereas it can be more public for the insiders or residents of the hotel. The important thing is the territorial depth. Hence it might be misleading to use the concepts like semi-private or semi-public. Hajer and Reijindorp define in-between spaces as "liminal spaces" where the public confronts others, and exchanges ideas and experiences. These spaces are conducive for transitions, crossings, and connections. In short, they are the borders where inhabitants meet and connect (Hajer and Reijindorp, 2001). Stevens (2007) identifies this space as *betwixt*, 'A threshold is a point where the boundary between inside and outside can be opened; space loosens up, and a wide range of perceptions, movements and social encounters become possible' (p. 73). This gives possibility for the appropriation of space (Jimenez-Dominguez, 2007) and urban slippage (Dovey and Polakit, 2007). In one of the old city neighbourhoods in Bangkok that Dovey and Polakit (2007) researched, they came up with the dichotomy of public/private, smooth/striated, legal/illegal, day/night use differences in the urban morphology of the neighbourhood. As one goes deeper in the system, urban pattern is more diverse, less state controlled and slippery from private to public or striated to smooth. Side streets do not have proper sidewalks. Therefore they are marked with yellow stripes to reveal till what extent shops can appropriate[1] the space between the street and the shop. However, in the alleys and inner part of the urban structure, those indications disappear and negotiation takes place. In this part local tacit rules govern the place. Spaces are "enfolded into each other" (Deleuze and Guattari, 1987 in Dovey and Polakit, 2007). For instance, if a car parks on an inappropriate space, people might sometimes scratch it.

[1] "...the dialectical relationships between the person and the urban space. Appropriation, arising from spontaneous practices, is part of the struggle for the right to the city. It involves at the same time cognitive, affective, symbolic and aesthetic experiences, as well as explicit situations of power linked to the mode of property ownership and exclusion and the emergent social practices which confront it in the dual city, characterized by space fragmentation and social in equality" (Jimenez-Dominguez, 2007; p. 99).

3.3 ENTRANCES, THRESHOLDS, AND ENTRANCEWAYS AS IN-BETWEEN SPACE

In-between spaces have a form giving role in the organisation of space and settlements. Their quality and character are the determinants, which enhance the sense and identity of place. In addition, in-between spaces are the basic elements of the street design. They are the places, where activities emerge. As a connector between indoor and outdoor, in-between space connects the interior with the nature and community. In this way urban designers and architects have to comprehend how it functions between the two. In order to protect from the climate, physical conditions, and other arduous outdoor forces, humans invented shelter. This shelter was the first attempt to separate indoor and outdoor through architecture. Architectural elements such as window and door are the holes linking the human with nature and outside. Entrances or spaces near the shelter were being used for different activities and gathering points. Subsequently, these spaces developed regarding the culture of the society. Different design solutions and increased human activity result in the different patterns between shelters (Nooraddin, 2002).



Figure 3.4 Entrances of Traditional Houses in Karantina Izmir

Shelters - or in other words dwellings - ensure the social relations of inhabitants with the community. For instance, “the walled entrance door between dwelling and street” is the indicator of the inhabitant’s social life. It is the place where

outdoor activities are seen and some part of the family life follows. For this reason spatial organisation of the house impacts on how the residents unite with the outside and adjust the personal relations. Likewise, spatial arrangement of urban settlements attracts the relations and establishes sub-communities. These sub-communities are very important for urban community. As a result public space patterns appear within the interaction of the inhabitants and the community (Banz, 1970; p. 27).

As Gauvain and Altman (1982) mention, entranceways and thresholds have mythological, cosmological and religious significance in some cultures. As a sacred place of home, people show respect while they enter the house and do not step on the threshold (Raglan, 1964 in Gauvain and Altman, 1982). As an old belief in Turkish culture there are also sayings for not to sit or step on the threshold. Different cultures assign different meanings for this space and ornament in various ways with knobs, knockers, door handles, materials, flower pots along the path and so on. Therefore entrances and thresholds are the signs revealing to what extent the family is accessible or not. There can be sharp demarcations by fences, walls or shrubs, or a soft transition by other urban decorating elements. Besides depending on the materials and the quality of space these elements show the socio-economic status of the family. Imageability and good appearance are considered as important concepts by people in terms of their social status (Abu-Ghazzeh, 1996). As Gauvain and Altman (1982) emphasise there are two dialectic dimensions of homes: first, identity/communality and second openness/closedness. Thus depending on different cultures this space exposes the identity, uniqueness and the community ties between the inhabitants and their neighbours and friends. In addition to the psycho-environmental issues by landscaping this exterior space, residents indicate their individuality. MacDonald (2005) points out that ground floor direct entry units contribute street life and safety in cities through giving possibilities for social interaction. People linger on terraces and spend more time in their personalised gardens and they can observe the street through ‘eyes on the

street'. Besides, through landscaping them, they display their gardens and attract the visual interest of the passers-by.

3.4 CONCEPT OF PRIVACY

Human being built his shelter in order to prevent him from tough climates and other external forces. This attempt revealed his adaptability to his environment, a mechanism he constructed between his body and the nature. This basic need now transformed into a kind of shield that prevents him from the intrusion of his privacy in greater populations and increasing communication needs. Privacy concept, household, and family structure are different in each culture as well as period. Concept of privacy starts with the individual. Briefly, individual is the functional unit of the community and the community is formed of family units (Banz, 1970; p. 26). This family unit is a residential unit. Both family unit and the space arrangement of this unit changed through history. There are various types of families. These types can be classified as single member (one person), nuclear (parents and children), stem (parents, unmarried children and married child), extended (two or more generations), and other (households without kinship) (Tsui, 1989; p.737-738).

Until the beginning of the eighteenth century, in big mansions, people were living together and one space was functioning for various purposes. Various big houses were the important points of social activity. A person who prefers to be alone was regarded as somewhat abnormal. The entire traditional city was intertwined with the pattern of public spaces. In the eighteenth century, however, the phenomenon of modern family emerged and the traditional family concept was disrupted. Individuality took first place and face to face interaction was lost within the society. Subsequently, the concept of privacy was strengthened (Banz, 1970).

Family structure is not something static; it is subject to change and transition (Hareven, 1974). For instance, in the medieval period family was a conjugal cell. Moreover in rural areas extended families were stable. On the contrary, modern

family was formed within the change in the society but more specifically to ensure the individual's security and to rescue the individual from predetermined life cycles (Banz, 1970). In this regard as mentioned above gender role in society, household and family structure shape the organisation of space (Banz, 1970; Rapoport, 2001; Toker and Toker, 2003; Mills, 2007). For instance, in the late nineteenth century of Anatolian cities there was patriarchy in the family structure, therefore the family structure was more extended and single family house was the space organisation of this family unit. Together with the early and late 20th century, apartment blocks appeared which is related with urbanisation but as well as with the change in the family and the changing role of the woman in society (Toker and Toker, 2003).

Hareven (1974) showed that in the case study of Boston in 19th century there were nuclear families with a percentage of 80, and extended families were 12-15 percent. When we looked at the recent research in the family structure of Turkey, it can be seen that the nuclear families are 80.7% and extended families are 13% (Turkish Statistical Institute TUIK, 2006). With the changing needs and different roles of man and women in the society, spatial arrangements, family types and privacy concepts were also changed. Another important thing Hareven revealed in his study was that young people at the age of twenty leave the parental life and start to live as boarders and lodgers, which he calls as a surrogate familial arrangement (Hareven, 1974; p.324). All these changes which appeared to happen in Boston in 19th century started in Turkey one century later. These issues are discussed in the following part neighbourhoods and community. As mentioned above privacy concept is related with the individual.

Privacy is a difficult term to define. Briefly the concept of privacy means intimacy, being alone, isolation, anonymity, being out of communication, to be secluded, among other definitions (Mazumdar, 2000; Westin, 1967 in Carmona et al., 2003). Altman describes privacy as a "dialectic boundary regulation process" where the person is accessible or inaccessible. This is governed by two mediums; firstly, the behavioural mechanism which consists of verbal and

nonverbal communications and secondly, environmental behaviours such as personal space and territory (Altman, 1975; Gauvain and Altman, 1982 in Gifford, 1996). In its nature it has a "selective control of access" and "interaction" depending on the unwanted groups or individual. It is used as a design concept or determinant in order to organise a space in some urban settlements especially in eastern countries (Carmona et al., 2003). For instance, the courtyard of a house operates as a secure space for both women and children.

As a negotiating zone, in-between the private and public space, this intermediate space acts as a mediator to certify the active contacts with the closest public space, while at the same time it is protecting the privacy/territorial control through various spatial arrangements and processes. For instance, an elevated front yard can assure better privacy than a street level front yard, although, at the same time, it has to be visible enough for the outsiders to exchange greetings among neighbours and for bypassing acquaintances (Altman, 1975; Alexander et al., 1977 in Skjaeveland and Garling, 1997; MacDonald, 2005). Through analysing the design guidelines of Vancouver and conducting a study on street facing dwelling units, MacDonald (2005) emphasises that public private transition zones should include a garden. Entry has to be raised above the sidewalk by at least one metre (four to five steps), so that there will be fewer screens off the front terrace. Moreover minimum terrace width has to be six feet (183cm) with 60% softscaping. However these dimensions are also related to where the building is located. As Habraken (1998) mentions, when we move from suburban to city centre, front yards become smaller. While the front yard in the suburban environment is the mediating space between the street and house and the distance between them is close enough, in the urban environment, a façade is becoming a street wall as well as a building and the streets are closely adjacent. Habraken gives Victorian houses of Boston Back Bay, Amsterdam Canal Houses, and Georgian English Terraced Houses as examples of buildings in city cores with narrow urban front yards, which he calls 'a strip of nature' (Habraken, 1998, p. 167). These front yards are either at the same level with the street or a few steps higher as in Amsterdam's Canal Houses, or have gaps between the

street and the building in order to allow light in for the floors below the ground floor as in Georgian Terraced Houses. These features allow various activities and personalisation, as well as providing a balance between privacy and community. Along with Macdonald (2005), various researchers such as Altman (1975), Alexander et al. (1997), Bentley et al. (1985), Gehl (1996), Lewis (2005), and as well as various design guidelines such as The Urban Design Compendium (2007) and The Essex Design Guide (2005) point out the importance of the relationship between private and public space.

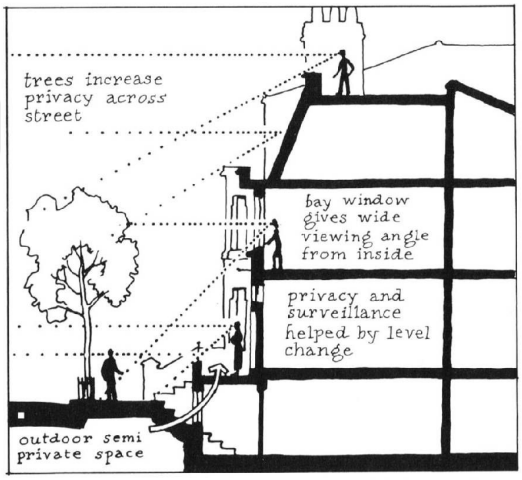


Figure 3.5 Public Private Relationship.
Source: Bentley et al. (1985)

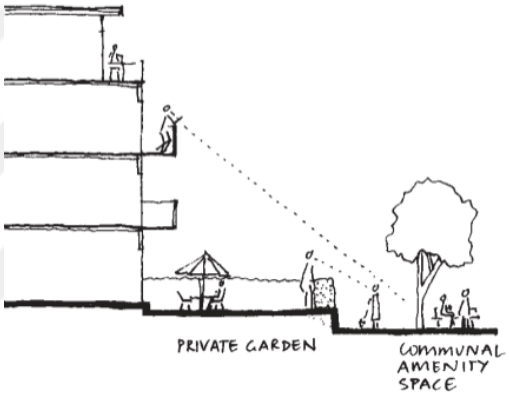


Figure 3.6 Front to Back Section
Source: Lewis (2005)

Carmona et al. (2003) mention that privacy can be discussed on the basis of visual and aural privacy. Visual privacy is described as the relation or border between private and public realms. This border should both offer interaction and permeability. Although the permeability between the private and public should be used gently it should not be too separated or too connected. It should protect the privacy and at the same time allow interaction with the outside. In addition to this, aural privacy is about the unwanted, disturbing noise and sounds, which annoy humans. In order to address this problem design strategies have to be developed. Privacy is closely related with the concepts such as personal space, personalisation and territoriality, which are explained in detail below.

3.5 TERRITORIALITY AND PERSONALISATION

Territory is defined by Heidegger (1971) as the "distinctively marked area by its owner", or in other words, by Altman (1975) as the "area characterised by its owner's personal means of identification" (Altman, 1975 and Heidegger, 1971 in Abu Ghazzeh, 2000; p. 98), which is briefly "acts of occupation" (Habraken, 1998, p. 128) and where the entry is controlled (Gifford, 1996). Territorial behaviour is the behaviour that refers to either the individual's or the group's declaration of control over a specific space (Becker and Mayo, 1971; Delong, 1970; Edney, 1976 in Abu-Ghazzeh, 2000). Habraken (1998) defines territory as spatial control. Public and private refers to space but not to territory, because territory may contain private, public, or both, as in gated communities. Territory is hierarchical which is asymmetrical; it is easy to move from private to public but not the opposite way. This hierarchy is based on inclusion. Territorial organisation as Habraken explains is related to inclusion within other territories. Private space refers to included territories, and public space is the residue of this inclusion. For instance occupied spaces such as housing units can be an included territory in a neighbourhood territory, and unoccupied spaces will be the public spaces (see figure 3.7 below) (Habraken, 1998).

> The fact that privateness and publicness are not static conditions causes much confusion. Architects and planners confronted with territorial depth tend to classify space as private, semiprivate, semipublic, and public. In fact, whether a given territorial space is private or public depends entirely on one's perspective: the same space is simultaneously private to those not yet admitted and public to those from included territories, who are free to enter at all times (Habraken, 1998, p. 138).

Personalisation is defined as the person's action to change that space due to his own preferences, which are distinguishable among others. Hence both territory and personalisation are dependent on these in-between spaces. In studies (e.g. Abu-Ghazzeh, 2000; Kallus and Dychtwald, 2010) it was found that owners have more tendency than tenants to personalise their exterior space. Furthermore single-family houses have better opportunities than multiple apartment blocks regarding the expression of their self-identity. Personalisation is also a tool,

which works as a mediator between self and the community by opening or closing itself to social contact.

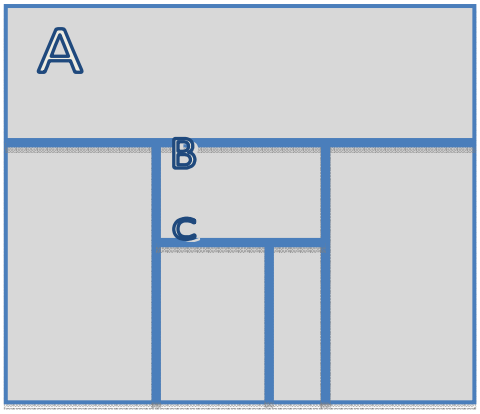


Figure 3.7 Territorial Depth of Habraken
Source: Habraken (1998)

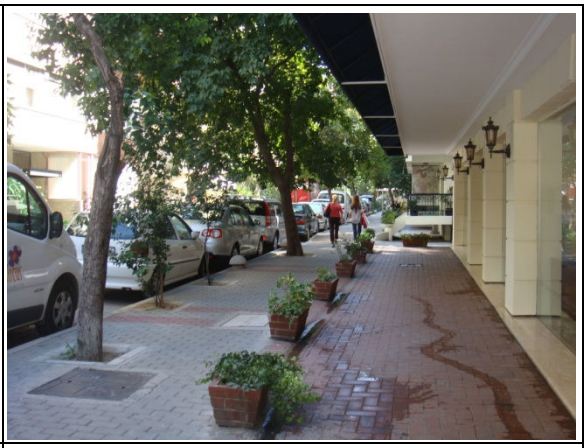


Figure 3.8 Territorial Markings
Kültür Neighbourhood Izmir

Abu-Ghazzeh (2000) lists factors that affect the territorial marking and personalisation as follows; household income level, affordance, and ownership, type of residential building, topography and accessibility of the area, signs of care and maintenance, concerns about privacy and the need to claim the territorial areas, possession and security, issues related with imageability and the perception of neighbours, socialising, and strong social relationships with friends and neighbours. There are various types of territorial markings and personalisation. Some are the constructed boundaries such as kerbs, walls and fences, and user-generated features such as hedges, landscaping of ground floor with planting beds, and flower pots as well as putting seating elements, and sidewalk personalisation.

Territoriality is a difficult term to define, as it is an extremely widespread concept. It has both psychological and physical aspects. We can see territorial patterns everywhere - in offices such as books on tables, in restaurants where coats are hung over the chair to reserve a place, in flower pots in front of the house. It can manifest in various types and signs (Gifford, 1996). Edney (1974) mentions that territoriality includes identity and personalisation, physical space and markings, possession, defence and exclusiveness of use. Gifford (1996) adds dominance, control, conflict, and security to this list, briefly describing it as the

behaviour, experience, and cognition related to a place for controlling the physical space. Moreover the arrangement of this space is important for the residents to have control and responsibility over the space. Hence the designers should consider their design concerning territorial space for people to increase their sense of belonging and express themselves besides safety issues (Abu-Ghazzeh, 2000 Gifford, 1996). For instance, Abu-Ghazzeh (2000) gives the example of housing clusters surrounding courtyard spaces, which have entrances that open into the courtyard. Through this arrangement a group territory is formed, which increases the local sense of security. As another example, in eighteenth-century London, perimeter terrace housing was formed to enclose a private garden including mews, stables, and servant houses. Then, by the nineteenth century, private gardens continued to be built behind buildings as can be seen in Notting Hill and Maida Vale. These were communal spaces of residents, which had controlled access (Freestone and Nichols, 2004). Habraken defines these front back relationships as 'dual orientation'; here, mews were providing access to carriage houses and servants' houses adjacent to stables that were built in the private backyards. Over time these mews became an intimate residential street and the buildings were regenerated as residential buildings (Habraken, 1998).

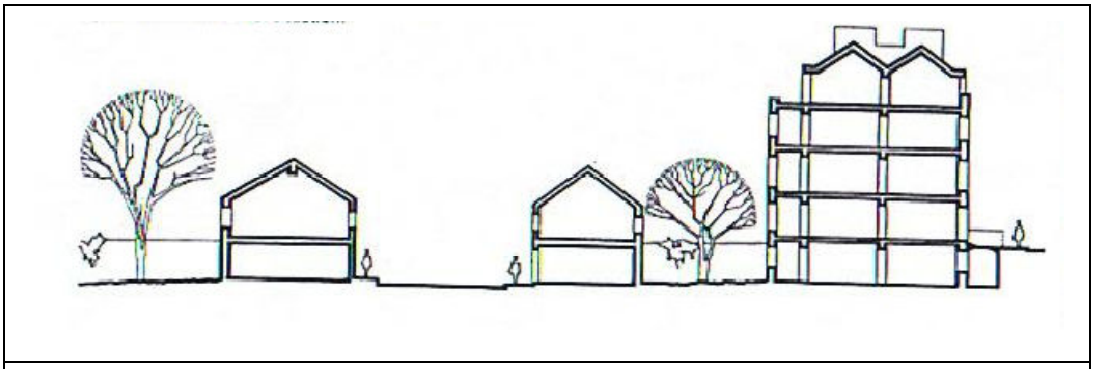


Figure 3.9 British Terraced Housing, Mews and Secondary Streets, Bath
Source: Habraken (1998)

Altman (1975) classifies territories under three groups as primary, secondary, and public territories. While the primary territory can be our bedroom in our house, secondary territory can be our desk space in the office, and the public territory opposite to the primary territory is the area open to all outsiders unless

they show antisocial behaviour or they have any age limit to access. These places are the beaches, sidewalks, hotel lobbies, bars, cafes and stores (Altman, 1975 in Gifford, 1996). Secondary spaces such as in-between spaces of clustered buildings are the places where expanded behaviours of people can be seen, "subsidiary networks" (Ward and Fyson, 1973 in Abu-Ghazzeh, 1996). On the other hand, these secondary spaces are open to conflicts as the rules regarding these spaces are unclear and vulnerable to infringement by users. Nevertheless as Abu-Ghazzeh (1996) mentions, this is the result of this multifaceted character of in-between space. Anderson (1991) stresses in the statement below that it is this multifaceted character, which is privately owned but also publicly used and responds to public needs.

> The interface between the public environment and the private domain is a significant artifact, mutually interactive and therefore important to both. This phenomenon is too often ignored in the design process…this zone could be analyzed and designed to produce a more structured public environment, not in the traditional sense of street grid as structure but rather in terms of a hierarchy of spaces, serving as a place and link, as transition from public to private, and as a container for a range of public uses. In such a conception, the street space is no longer simply the public open space of the street, but can be used freely by the pedestrian. The delineation of public/private boundary suggests also that space, which is under private ownership but is publicly, used (for example, lobby space) can be responsive to public needs. Further public design and control of all space, from the traffic channel to the public/private boundary, might ensure that the configuration of this space would provide for an enhanced public use (Anderson, 1991, p. 342).

For instance, in Turkey, as the regulations related to this territory are ambiguous, there is always a conflict in the control of this in-between space between the public and private. Extensions of the shops onto the sidewalk through displaying their business and products on the one hand encourages the interaction between the seller and the customer (Major et al., 1997; Mehta, 2009; Yatmo, 2008), where people stop and experience close encounters (Gehl, 1986; 1996; 2006) with the place. On the other, it creates controversy regarding the right of the public to use the sidewalk without any obstacles. Street vendors can be also covered under the same subject. Street vendors are seen usually by most of the residents and municipalities as 'things' that should be removed from the urban environment because of the aesthetic and hygienic problems they cause. As Yatmo (2008) argues in his article "Street Vendors as 'Out of Place' Urban

Elements", removal of street vendors might affect the locality's character. Douglas (1966) first applied the "theory of out of place" and she mentioned that dirt is regarded as an element contaminating the order and harmony of the place. In addition to this 'out of place' is discussed by various authors such as Forty (1986), Cousins (1994), Cresswell (1996) and Neyrey (1996). They mention that out of place is also related with ugliness, disorder, and pollution, as well as cleanliness, and perfection issues. Therefore these objects are usually seen as a danger for the environment as imperfect objects in unsuitable places (Cousins, 1994; Cresswell, 1996; Douglas, 1966; Forty, 1986; Neyrey, 1996 in Yatmo, 2008).

As Douglas and Cresswell discuss, however, out of place is something relative, depending on the socio-cultural context. While in some cultures and places it can be considered as proper, in another environment it can be considered as disordered and detrimental (Creswell, 1996; Douglas, 1966 in Yatmo, 2008; p. 396). As Cross (1998) emphasises, it is the conflict zone between the "ideal urban environment" and the "reality of the urban life" (Cross, 1998 in Yatmo, 2008; p. 397). Street vendors mainly occupy and operate illegally on sidewalks and streets. This then requires 'street cleaning' operations by local authorities where they evict those illegal trading activities. Hence there are two controversial debates, one of which is supporting their removal and the other their continuation (Bromley, 2000 in Yatmo, 2008). There can be guidelines and frameworks in order to manage the use of public spaces from more general into more detailed and place-based, specific ones (Madanipour, 2004 in Yatmo, 2008). However as Yatmo (2008) emphasises it is the challenge of urban planning to tackle the issue of street vendors whether as out of place objects or a potential for the local economy and interaction among people within the context. When certain activities are allocated to certain areas then publicness criteria of these public spaces should be questioned. Therefore all these issues have to be covered by urban design.

3.6 PUBLIC/PRIVATE AND IN-BETWEEN SPACE CONCEPT IN ANATOLIA AND NON-WESTERN CITIES

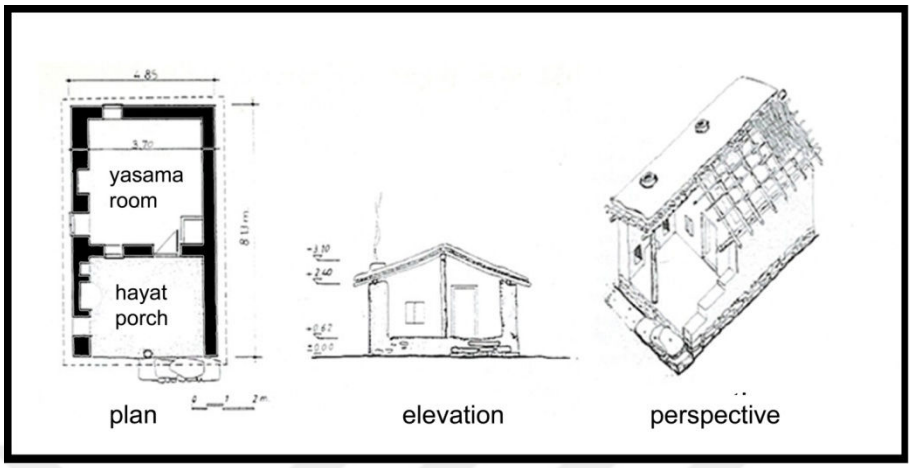


Figure 3.10 'Megaron' Type of House in Anatolia
Source: Erdim (1992)

This demarcation between in and out started when the human being formed a shelter in order to protect him from a harsh climate and other outside forces as mentioned before. Hence the area in front of this shelter started to be used for different activities. For instance, before settling in Anatolia, Turkish people inhabited the 'Turkish Tent', or 'Topak Ev' (Round house) with a circle plan. In front of the tent, the space between interior and exterior was defined as a communal area for many activities. In old Anatolia the first dwelling type was called a 'Megaron' which has a rectangular plan, with an entrance whether from its narrow facade or from the roof (Erzurun, 2003). Megaron had one space evolved with the articulation of other spaces for the purpose of different functions. In the late Hittite period this megaron became a composition of two, three, or four spaces. Spaces that formed adjacently with the configuration of each megaron unit were irregular, and spontaneous. Erdim (1992) states that in Anatolia, repetitions, which we come across at different periods, can be possibly seen in various cultural products. Therefore megaron with its porch (ön geçit) and room (arka oda) developed since the time of the old Anatolian settlements to become the traditional house types of today.

The traditional Anatolian House is usually composed of rectangular rooms, sofa (hall), and hayat on the upper floor. The hayat is the open gallery that is used especially during summer time. From the hayat, the space hierarchy flows to the sofa and then into the rooms. Inside-outside dichotomy is different in these houses. For instance, a courtyard can be outside when compared to the hayat, and the hayat can be an outdoor space when compared with the rooms (Arel, 1982; Asatekin, 2005; Cerasi, 1998). This hierarchical space organisation works in the same way as Habraken (1998) explains in the concept of territorial depth. The gradual arrangement starts from the smallest cell of a housing unit and grows out within the street network of the neighbourhood and the urban fabric. Housing units were composed of courtyards or gardens. This courtyard was the centre of the family life including kitchen and bath spaces. The ground floor of the house was formed through adjusting to the plot even if the plot and street were irregular shapes. In addition, houses were configured in a free pattern flow from the street towards indoor (Cerasi, 1998).

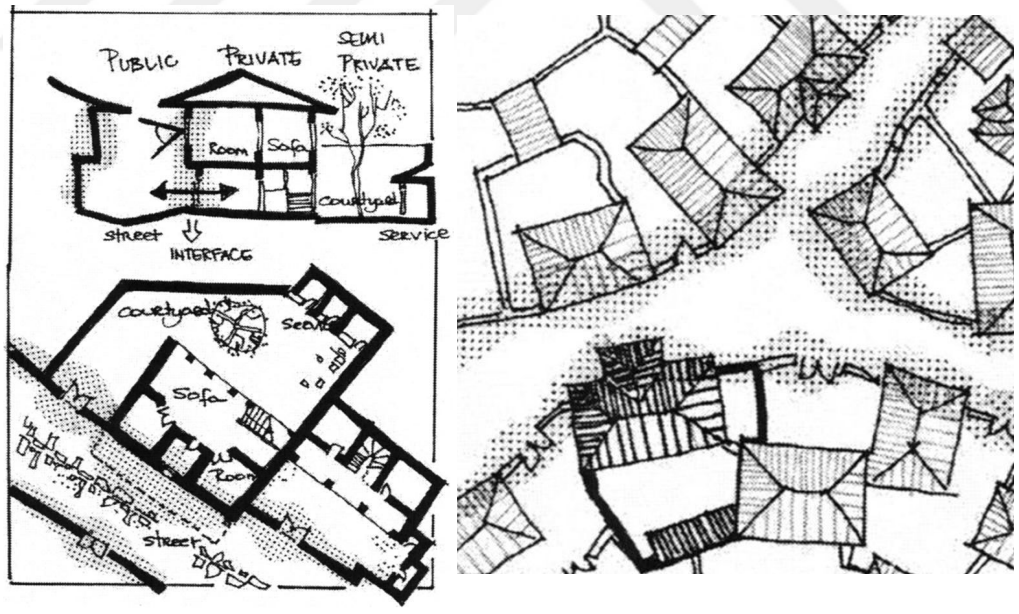


Figure 3.11 Public-Private Relationship in Traditional Anatolian Houses
Source: Asatekin (2005)

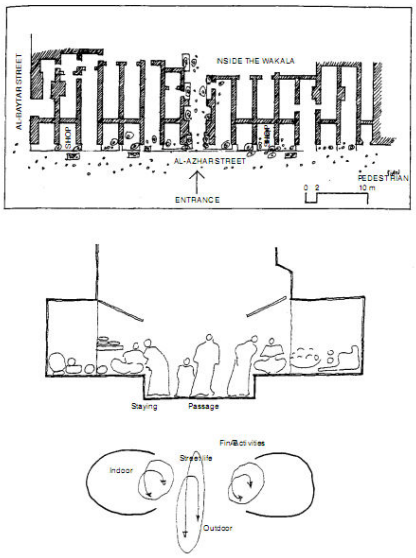
In non-western cities residents and community did not include the same concept of the public as in western cities. For instance, if the road segment was accessible from both directions it was for the use of all community. However if it

was a cul-de-sac, then it was only for the use of the residents of that street. In addition they had the privilege to build a door at the beginning of the street and to control the accessibility of the street. This system was based on 'benefits' and 'preventions', which were not defined by strict frameworks. Moreover every point on this urban pattern should not be evaluated equally. The residents and their neighbours had different rights over this space. The resident has greater priority over the use of the closest space in front of his house than his neighbour does. In this urban pattern it was really difficult to define a boundary between the public and private. Therefore there was not any demarcation or boundary as in western cities. Instead of a boundary there was the concept of 'fina'[2]. This 'fina' was giving the right for its resident to be able to use the space in front of his house temporarily. If he could prove that he would benefit from this situation and not prevent anybody's right or use within the community, over the years he could even have permanent occupation (Yerasimos, 1999).

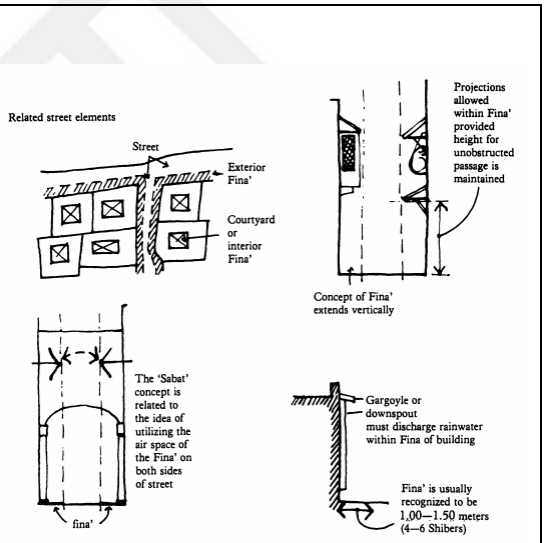
The types of 'fina' in commercial areas and residential areas differ; in residential areas with the extension of some units in the building, and in commercial areas through spilling out the goods, and displaying the products in front of the shop (Nooraddin, 1998). These extensions can be also explained by bottom-up and top-down processes. In western cities, the division between public and private is structural and clear; citizens do not usurp large areas of public space. This is a top-down process, as in the example of public housing units. As the cities develop this system uses its own spaces to subdivide into more spaces, to form

[2] The term al-fina' is an Arabic word, borrowed from the old Islamic literature, but it exists in different Islamic cultures as other terms according to the different languages. In Arabic, the word fina' means spaciousness and roominess. It was used in old Islamic cities to define two spaces, first the inner courtyard, and second the yard in front of or around buildings. Both had numerous applications in expressing threshold, staying, transition and reflection. In the old literature, the in-between space of al-fina' was considered an area bordered by the street and the buildings. But in design and use its influences extended from the inner space of buildings adjacent with the street to the border of the passage in the street. Therefore, the al-fina' territory had various functions, private, public, or both (Nooraddin, 1998; p. 67).

included spaces within an included space (private spaces within a private space). On the other hand, in bottom-up processes such as in non-western cities, included territories become together to usurp a part of the public space through extensions and occupied sidewalks (Habraken, 1998). For instance, Kallus and Dychtwald (2010) found in the study of Government-built housing units in Israel that user-initiated housing extensions might have both positive and negative outcomes. It might be positive because it will allow the residents to stay in the same neighbourhood by changing their personal environment. On the other hand it has negative effects on public space. Residents value more private open space than public space; hence, through extensions, there is degradation in the quality of public space and social activity. What they suggest is the necessity of the design control and better interface between public and private space for equilibrium.



'Fina' Concept in Traditional Commercial Street Cairo, Nooraddin (1998)



'Fina' Concept in Traditional Non-Western Streets, Çelik (1999)

Figure 3.12 'Fina' Concept in Non-Western Cities

Parallel to Yerasimos (1999), Tanyeli (2005) also emphasises that in this urban structure it was almost impossible to draw a border between the public and private; public life was as private as it was public (Tanyeli, 2005; p. 201). Rather than a border this zone was formed the sensitive balance, which includes various intervals and intersections of both spaces within its complex structure. Hence

the urban pattern was based on this conflict between privacy and community. Streets were seen as reserves for the extension of the houses either by bay windows or other units on the ground floor. The resident would not be uncomfortable due to two reasons. First, there was not the same perception of 'public' and 'public good' concepts as in the western context that he can understand. Second, he would only use the amount of space that he needs without causing any harm to his neighbours. As Tanyeli (2005) asserts, even this is a good indicator of why our cities were late in adopting the public/private dichotomy in Turkey. Until the establishment of the new republic, lands were mainly under the ownership of the empire. 'Private ownership' as a concept emerged in the eighteenth century and was formalised in the mid nineteenth century (Ertas, 2002). Capitulations by the Government of the Ottoman Empire required foreigners to shape the city within which they resided (Milton, 2009). In particular, the Empire had given to foreigners the right of trade in 1836 and the right to have a property in 1856 (Atay, 1998 in Yatağan et al., 2009). Before cadastral plans, with the initiative of English insurance companies, 'Goad Plans' were produced in some cities at the beginning of twentieth century. These maps were developed for the fire insurance companies, revealing the building plots, street pattern, and street width (Atay, 1998). Cadastral plans (land registry) came into use and were legalised in 1925-1930 with the modernisation efforts of the new Turkish Republic (Eser, 2006; Tanyeli, 2005). With the land speculations, capitalist system, reforms, and modernisation periods, community structure and *mahalle* started to be eliminated and opened up the possibility for the emancipation of the individual from kinship and customs of *mahalle*. These processes resulted in the immunity of private ownership and the polarisation of public-private space (Tanyeli, 2005).

Today there is still something missing in the definition of public space in Turkey. Firstly, there is a problem in drawing the border between private and public as a culture, which is based on the concept of 'fina'. Secondly, public referred to the government rather than to the community, and because of its undefined status it opens up possibilities for the authorities and mechanisms to build units within

that space. For instance, Tanyeli (2005) gives the example of public parks; he emphasises that in western cities most of the public parks preserve their publicness criteria. London Hyde Park has not changed the quality of green space since it was formed. On the other hand Kültür Park Izmir, which was built as a public park, lost its publicness and urban space quality through construction since the 1930s. In Turkey's parks, green spaces are always seen as reserves for future construction. Furthermore, there are regulatory problems in the planning system. As Oc and Tiesdell mention, "In Turkey, planning decisions are often transparently distorted or biased in favour of powerful individuals and business or are expedient populist measures to engineer political support" (1994, p. 109). Building regulations and development regulations are most of the time excluded in the planning process and plans are approved without considering the regulations. These issues resulted in the constraint of public good (Duyguluer, 2006). Further explanation is given in the case study chapter.

3.7 NEIGHBOURHOODS AND COMMUNITY

3.7.1 Neighbourhood

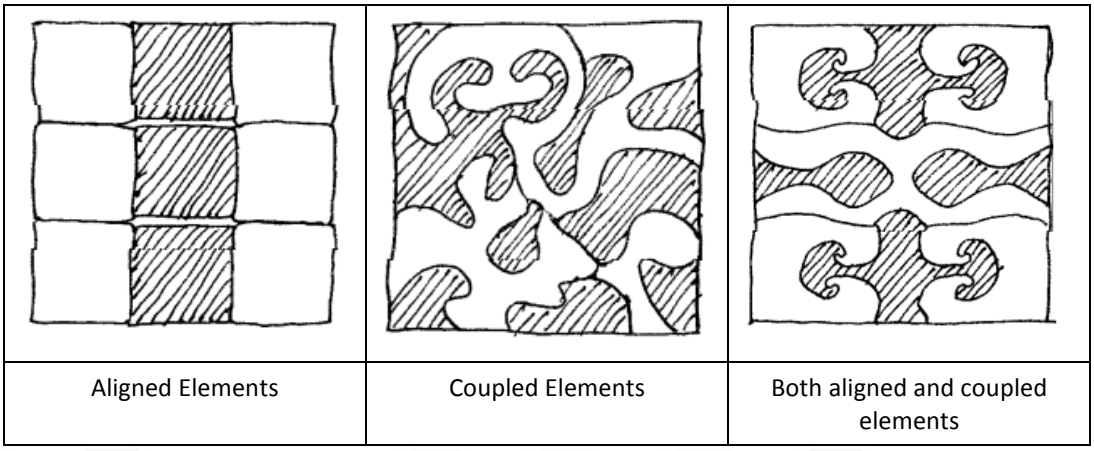
Neighbourhood as a physiological concept is related to both cognitive and spatial issues. The boundary of the neighbourhood depends on how its residents perceive its boundaries (Gifford, 1996). It is a basis for the political control and local sentiment can be expressed by neighbourhood organisations (Park, 1915). Gifford (1996) classifies neighbourhoods under three types; integral neighbourhood which involves face to face interaction, and participation in organisations; parochial neighbourhood, similar to the first but having less participation in outside organisations; and anomic neighbourhood which has little face to face contact, and little participation. Face to face contacts cause positive personal relationships between residents (Ebbesen et al., 1976 in Skjaeveland and Garling, 1997). Nevertheless, today, community perceptions and social relations are changing depending on the background, life styles and income of the people concerned. Gehl (1996) examined the "activities in outdoor spaces" and their relation with the physical environment in *Life Between*

Buildings. He states that life between buildings is a self-reinforcing process; as people meet they will bring more people. Additionally as activities develop more activities will exist in a place. This life primarily constitutes low intensity contacts or, in other words, passive contacts (see and hear contacts). Human activities develop by participation and experience. However for the development of social connection in neighbourhoods, residents should have common backgrounds or interests (Gehl, 1996).

The concept of neighbourhood has a crucial impact on community. Successful neighbourhoods are the tools for place making. Their design and form also have an impact on the coherence and continuum of the whole region. As an extension of the community, neighbourhoods also influence social and economical aspects of our cities. Vivid public spaces and neighbourhood centres are important for the healthy society and environments. Calthorpe (1995) specifies "the fundamental physical elements of a neighbourhood" as "walkable streets", "human scaled blocks", and "usable public spaces". All three are very necessary both for neighbourhoods and cities. In the loss of these elements, identity and sense of belonging vanish. Jacobs (1961) mentions four criteria about neighbourhood planning. First, urban designers and planners should "foster lively and interesting streets". Secondly, they should make continuous network of street fabrics. Thirdly, parks, squares and public buildings should be used in the street fabrics as interweaving elements not just as islands of specific use that differ from each other. Lastly in terms of functional identity they should work on a large enough scale such as in the context of districts (Jacobs, 1961, p. 129).

Urban web is a complex organising structure, a space between buildings (Gehl, 1987 in Salingaros, 1998). It has three structural principles: nodes (human activity nodes), connections (between nodes), and hierarchy (ordered hierarchy of connections on different levels of scale). Subsequently a neighbourhood can work if contrasting nodes are used as a link between the similar nodes. This feature is a key element in the formation of urban web. Suburban areas did not work because of the connection between similar nodes, which resulted in

disconnection. As Salingaros (1998) shows in the figure 3.13 below, the first image on the left is an example of modern settlements.



Aligned Elements	Coupled Elements	Both aligned and coupled elements

Figure 3.13 Different Combination of Urban Elements
Source: Salingaros (2000)

Additionally Madanipour (2003) emphasises that the establishment of neighbourhood can be obtained through in-between spaces. The private realm should be extended as an in-between space in order to join with the public. In this manner residents may have the chance to meet with their neighbours and they can be aware of each other. As Abu-Ghazzeh mentions, the spatial organisation of space is associated with the urban setting's culture. It is the source to be differentiated between the other settings and gives the place a sense of belonging and identity. Hence human behaviour and space organisation are closely related with each other. Organisation of space forces or prevents integration among people (Abu-Ghazzeh, 1995).

This acquaintance is also very important for safety. Besides, in between space as a mediator maintains the visual access to the public space, so that the sense of peace and voluntarily control of residents can be achieved (Jacobs, 1961). Both Jacobs' (1961) concept of "eyes on the street" and Hanson's et al. (1987) concept of "natural policing" are the inherent surveillance system of the community. They are the self control mechanism of the neighbourhood, and they occur under the probabilistic nature of a "virtual community". This is defined by Hanson and Hiller as the product of spatial pattern, which has in its structure both the feature of "co-presence" and "co-awareness". Therefore the

arrangement of space encourages the pedestrian movement and creates a virtual sphere for "probabilistic encounters". Here this group of people, or community, is virtual because they have not actually interacted yet, and they are just aware of each other's presence (Hanson, et al., 1987; Hillier, 1996; Hiller et al., 1987; Major et al., 1997).

Neighbourhood is the place where we feel whether we belong, and whether we are attached, satisfied, or not. Although it has certain boundaries on the map, perceptual boundaries for the residents might be different. In this regards, neighbourhood is related with the concepts of sense of place and community, place character and attachment, placelessness, neighbouring, neighbourhood satisfaction and quality of life, neighbourhood security, solidarity and neighbourhood cohesion, sense of belonging, community identity, community organising, local contiguity, and social interaction (Green, 1999; Lund, 2002; Nasar and Julian, 1995; Tylor, 1939). We are not going into detailed descriptions of these concepts as each of has profound meanings and merits a separate discussion on its own. However, it is important to be aware of these key issues affecting neighbourhood relations and sense of community. One can add space/place discussions into the list above. Briefly as a conventional explanation, space becomes place through experiences and meanings within the time process (For detailed discussions about space and place see Canter, 1977; Christian Norberg-Schultz, 1980; Gieryn, 2000; Merrifield, 1993; Sime, 1995). Therefore over time space becomes more meaningful for its residents and affects the sense of community. As Abu Ghazzeh (1999) mentions, social interaction is seen as the key element of the community by various researchers.

3.7.2 Sense of Community

Due to the socio-economic status of people, their requirements can change. Through comparing other studies one of the most important issues Lund (2002) emphasises is that of the differences in the way high and low income groups form their social relations. While the first group with high income and education develops larger social networks in their neighbourhood, the other as a minority,

with low income and low education, relies on social solidarity, support, and cohesion. As we know, there is a significant relation between intense social interaction and sense of community; however all the other factors that influence sense of community have to be covered. For instance, in addition to the spatial attributes of the neighbourhood, as mentioned above, socio-demographic structure, personal preferences and behaviours among neighbours, and level of involvement in neighbourhood organisations should be also included. In her comparative study between a traditional neighbourhood and modern suburb, Lund (2002) found that the former has a higher sense of community. In addition to the factors influencing sense of community, she adds the dimension of pedestrian-friendly environment, which is missing in the research. There are three crucial elements of a pedestrian environment, which have a significant relation with the psychological sense of community. These are firstly the features that can afford the opportunity for social interaction, the fact that it has to be an environment where we can safely walk, and finally it has to be an interesting walking environment. Therefore Lund asserts that people who prefer social interaction and causal contacts would consider walkable places and will choose traditional neighbourhoods. On the contrary, people who prefer more privacy and car mobility will choose modern suburbs (Lund, 2002).

Parallel with Lund, Nasar and Julian (1995) stress that mix-use neighbourhoods (Jacobs, 1961) have more social interaction and higher perception of walking and sense of community; hence they are more open to casual contacts. In addition to land use and the spatial layout of the neighbourhood, selectivity in the choice of neighbourhood plays another important role. As Macdonald (2005) mentions, selectivity is also related with the character and newness of the neighbourhood. Moreover married couples, especially those with children, are the other factors studied by researchers and found to be an essential predictor of sense of community (Michelson, 1976 in Nasar and Julian, 1995). In their study, Nasar and Julian (1995) examined apartment buildings of different designs; one with an outdoor courtyard and the other with an indoor double-loaded corridor. What

they found was that residents living in the typology of apartment with a courtyard have higher casual contacts and sense of community.

We mentioned above that proximity has an influence on social interaction; however if the physical distance is too close, it may cause neighbourhood annoyance among neighbours. This can be also explained by the "Environment Spoiling Hypothesis" of Ebbesen and colleagues, where dislike between the residents of a homogeneous neighbourhood is evoked (Ebbesen et al., 1976 in Skjaeveland and Garling, 1997). Additionally Altman asserts that for optimum privacy, achieved privacy (outcome) has to be equal to the desired (ideal) privacy. If the outcome is more than the ideal one, then there will be social isolation. On the contrary, if the ideal privacy is more than the outcome, then there is the problem of crowding (Altman, 1975 in Gifford, 1996; p. 185). In the study that Zehner and Marans (1973) conducted, they found that density and physical environment affect human behaviour. In line with other researchers, (Gans, 1967; Talen, 1999; Nasar, 2003) they reiterate that although proximity can be important for casual and passive contacts, it might not have the same importance for intense social relations. Through comparing a moderate density townhouse neighbourhood and conventional detached single family house, they determined a number of issues. In terms of social interaction, single family houses are more likely to know their neighbours by name, and interact. Skjaeveland and Garling (1997) argue that neighbouring is associated with spaciousness, dwelling density, semi-private space (in-between space), structured open space (well structured theory of Herzog, 1992), and building quality.

Green (1999) found out that town character is related with environmental features such as natural landscape and built features; as well as the meanings assigned by residents. Consequently, place character is closely associated with the place attachment. On the other hand, as people feel attached to their places, they interact more among themselves (Skjaeveland and Garling, 1997); hence it is a mutual relationship. However, this social integration and interaction is also

related with the degree of the society's ties. According to Granovetter (1973), "strength of weak ties" in the society increases the social integration, through allowing the social contacts between diverse groups (Granovetter, 1973 in Skjaeveland and Garling, 1997). Conversely, preferences change among people as they want to live within homogenous neighbourhoods which they share similar interests and backgrounds. Both shared access to residences (Fleming et al., 1985 in Skjaeveland and Garling, 1997) and paths/stairways (Festinger et al., 1950) have an impact on passive and casual contacts and within the recurring cycle of forming friendships.

In order to develop the sense of belonging to a neighbourhood or to a place, common interests might play a better role than the geographic features (Dunham, 1986 in Hargreaves, 2004). People do not only interact with people, but also with places and things around them. Through time and with structural processes, they give meaning to their experience, and the features around them become more significant. Hargreaves (2004) emphasises that movement can be either social by chance encounters, or habitual with regular routes and daily motives and necessities. Sense of belonging can be improved by the intersection of social movements and significance. Therefore Hargreaves suggests that more social interaction between residents and existing features can be sustained via integrating the local attributes and the central facilities of the layout.

Madanipour (2003) asserts that neighbourhood and community are returning as a concept on the agenda of city planning and urban design. Micro urbanism, sustainable settlements, and new urbanism are some of the indicators of this challenge. For instance micro urbanism emerged as a "small scale urban environment" in order to address the issues such as "social fragmentation", "spatial segregation", and "ecological degradation" (Madanipour, 2003). For sustainable settlements, urban form has to be understood by designers, as Hiller mentions, "to make cities sustainable we must base decisions about them on more secure understanding of them than we have now" (1996; p. 149). Jabareen (2006) asserts that with the emergence of sustainability, discussions about the

urban form recurred. He mentions the seven design concepts of sustainable urban form as compactness, sustainable transport, and density, mixed land uses, diversity, passive solar design, and greening. In addition to this, New Urbanism or Neo Traditional Planning emerged as a movement in the USA in the 1970s and 1980s. Similar to sustainability, new urbanism supports "compact development of cities" and "infill development" for sensitive environmental areas. Their argument is against "low density", "urban sprawl", and "auto-dependent land development". New Urbanist Theory concerns small town settlements as well as urban neighbourhoods, districts, and corridors (Ellis, 2002).

3.8 CHANGING NATURE OF THE NEIGHBOURHOOD AND NEIGHBOURLINESS

While questionnaires were conducted during the case study, some respondents could not understand when the term *Mahalle* "Neighbourhood" was uttered. It was because *mahalle* was an old definition and related with local solidarity, cohesion, and contiguity, which they used to have in the past. For them now, though, no such concept as Mahalle exists. Has there then been a loss in the concept of neighbourhood? Or is it because of different types of social ties and relations, which emerged under the arrival of various communication technologies and socio-structural shifts? Based on the important discourses of Park (1915), McKenzie (1921), Wirth (1938), Tylor (1939), Simmel (1964), and Goist (1971); the following part tries to understand the changes that have taken place in the structure of the city and social relations.

City is defined by Park (1915) as the accumulation of people, social arrangements, customs, organisations and institutions. All these actual and virtual conditions of the city affect its forming processes. Hence it is the "expression of the human nature" which generates the structure of the city. In this structure, due to economic status, personal interests and preferences, sub-communities locate themselves within the city. Therefore the size of the population is one of the most important factors in the organisation and segregation of the city (Park, 1915). A city as the product of urban growth becomes a place for divergent individuals. As it is larger and denser it becomes

more heterogeneous besides increasingly prosperous in terms of urban characteristics. Moreover it enables tolerance and discrepancy among individuals by its mingled cultures and races (Florida and Tinagli, 2004; Mellander and Florida, 2006; Wirth, 1938). While this growth allows variety and tolerance, on the other hand it might cause social disorganisation and "anomie" (Durkheim's (1932) term for the personal state of isolation). Moreover it might end up with anxiety in the society because of lack of social control (Goist, 1971). Hence why is neighbourliness missing? And why is new urbanism taking for granted the concept of community and neighbourhood again? It is back on the agenda -is this just for political reasons, for house values, or real estate properties? Or are there any other underlying issues? Before discussing the negative and positive parts of this change, we can start with the reasons or factors encouraging the transformations in the society.

McKenzie (1921) argues that a sudden change from agricultural society to industrial society, emergence of a capitalistic regime, and emergence of a wage-earning class, transportation, and communication systems caused the mobility. Park (1915) adds that with the increased education, interests, and economical development, a modern person's mobility also increased. How has this affected the family? Transformation took place from the multi family structure to nuclear family (whether with one or without children), and the city could no longer host traditional family life. Marriages were postponed by single-unattached people, decline started in urban reproduction rates, and the family was removed from the control of the local contiguity and kinship. New employment sectors appeared in various occupation types such as trade, clerical, and professional, and mothers started to work. Out of this mobility it was the family that was influenced first as the smallest social unit of the community together with the locality and neighbourhood group. Mass production and purchasability of services changed the social relations (Wirth, 1938). Furthermore, segregation of the urban population (Park, 1915) and the specialisation as well as the division of labour (Goist, 1971) are the other aspects that encouraged this transformation.

What were the pros and cons of this situation? Let me start with the negative issues discussed by urban sociologists. Then we can look at the flip side of the coin. First of all, and most importantly, primary, intimate contacts and relations were replaced with secondary indirect contacts as well as secondary relations and associations (Park, 1915; Wirth, 1938). Although the size and density of the population is higher and physical contacts increased, social contacts became more distant. Indeed, large numbers of interacting people resulted in lower levels of communication (Wirth, 1938), lack of personal mutual acquaintance (Weber, 1925 in Wirth, 1938), and induced casual relations rather than intimate and permanent associations (Park, 1915). Other negative issues are a lacking sense of belonging and participation, a lack in local attachment and sentiment (McKenzie, 1921; Park, 1915; Tylor, 1939; Wirth, 1938), isolation, loss of morale, complexity of social structures and interdependent fragile mutual interrelations, as well as increased income and status (Wirth, 1938). Loss of neighbourhood values and the disappearing of the neighbourhood that holds social and political values, lack of neighbourhood association and lack of social control, loss in the behaviour of circumspectness, socially disorganised areas and the problem of delinquency, lack of ownership and social distance (Tylor, 1939; McKenzie, 1921) are further factors, as are crime issues (Park, 1915), flux urban situations and mobile urban settings (Goist, 1971).

Adversely, positive aspects of this mobility are the intellectual movement, more opportunities for the individual in terms of contact and association (however, less stable and transitory), randomness of city life and divergent types of individuals, people dominating society through their interests, passions, and tastes; not dominated by outside forces (moral region concept), opportunities for abnormal and exceptional people, freedom of the individual and family from kinship and emotional controls (Park, 1915); diversifying of people and activities due to density, sense of toleration, adjacent variant personalities, potential differences out of greater number of people in interaction (Wirth, 1938); and developed intelligence and consciousness of the individual against the various conditions of city life (Simmel, 1964 in Goist, 1971).

What is replaced with what?

- Neighbours (intimate association) with Night-dwellers (residence with anonymity) (Tylor, 1939),
- Immobile person with mobile person,
- Face to face, intimate relation with indirect, casual relations and associations,
- Control based on mores with control based on positive law,
- Custom with fashion,
- Village gossip, mores with public opinion, press (Park, 1915),
- Solidarity, contiguity with membership (Wirth, 1938)
- Stability with rapid turnover,
- Security and recognition of the small groups with power and new experience of the wider social milieu (McKenzie, 1921)
- Small community nostalgia with new forms of association (Goist, 1971)

Therefore urban designers have to be aware of all these changes. As patterns are changing so does the family structure and sense of community parameters. As Goist (1971) stresses, urban sociologists such as Park and Simmel tried to understand the significance of community as modified by urbanisation (Goist, 1971; p. 59). In this regard, it is important to examine each society within its context.

3.9 CONCLUSION

As urban designers, architects, and researchers we should take into account the buffer zone between public and private. This zone or in-between space has an important role to play in shaping both physical and social space. The distinction or demarcation between the two should be neither strictly separate nor completely overlapping. On the contrary it should be permeable enough to connect the inside world with the outside. However this zone should also consider the privacy while connecting the two. Its existence is *sine qua non* for physical, environmental, economical, and social aspects of the city.

Firstly, as a physical issue, in-between space defines the settlement's identity and sense of belonging through giving a character to that urban form. This transition space functions as a connector, which strengthens the pattern. Salingaros (2000) indicates that in the lack of intermediate spaces, indoor and

outdoor relations will be abrupt. Indeed in-between spaces force the couplings within the other urban elements.

Secondly, as an environmental space, in-between spaces connect the modules and ensure the flow of movements. By means of avoiding the urban sprawl, more compact, dense, and diverse urban areas can be created or revitalised. The more the urban environment is coherent and sustainable, the more benefits provided. Owing to the compact transportation distances, energy consumption as well as costs can be reduced.

Thirdly, these spaces are vital for the economic development of cities. With the synergy of human activity and public spaces, public life will be more active. As a result of this, cities will derive benefits from their open spaces to counteract crowded city centres. Various land uses, mix use and diversity will produce economically and socially liveable towns and cities.

Finally and most significantly, as a social issue, in-between spaces are the places where social interaction takes place. The social life of the city is constituted by increasing the social integration, tolerance between the residents and decreasing the fragmentation of space. Moreover, via weaving a net within the society, in-between spaces support acquaintance and encourage safety. Hence its scope awaits much more attention from the point of urban designers.

CHAPTER 4 RESEARCH METHODOLOGY

Introduction

Writing the research methodology has always been challenging for students in their theses or research processes. Defining the approach that they are going to use requires knowledge about what has been done in previous works. Hence a literature review of research methods is crucial in order to determine the steps and compare the strength and weaknesses of one method over the other.

In this chapter, following the definition of research, and research strategies, the conceptual framework of the study, research questions, research design model, and methods that were used are explored. First of all it is useful to look at some issues and questions that relate to the research process, such as: What are research, theory and concept? What is the difference between methodology and method, and how do we start our research? We also need to know how our research question negotiates with us, and what a case study is. Then the knowledge claim of the study, strategy of inquiry, space syntax as a theory and method, and the way the snapshots, focus groups, interviews, and questionnaires conducted are explained in detail.

4.1 WHAT IS RESEARCH?

The Oxford English Dictionary defines research as the “careful study or investigation to discover facts or information”. Esterberg (2001) mentions that people do research because sometimes it is an obligatory aspect of their work, but generally they research in order to explore the things that they are interested in. Social research is an interpretation of the world and how we build social reality, and the way we understand and make things clear. In addition, social research is related with theoretical concerns. Esterberg emphasizes the term “sociological imagination” through reference to C. Wright Mills (1959). Here sociological imagination is a tool to understand our world, which facilitates us to

comprehend “individual issues within a larger social context” (Esterberg, 2002; p. 4).

All these theories are involved in the “social imagination”. In our daily life we usually theorise everything unconsciously. In order to understand why things happen in the way they do, we ask questions. Theories are not only the abstractions but are also the stories that people use as a tool to understand events and what is going on around them. It gives us the ability to question and comprehend the social world around us. The relationship between the empirical world (the world of senses, generally used in scientific world) and the social world with theories has to be taken into account before beginning a research study (Esterberg, 2002).

Blaikie (2000) defines four research strategies in order to construct the relation between the theory and the world. These approaches are: *inductive, deductive, retroductive, and abductive*. *Inductive strategy’s* aim is to establish a theory through observing the social world. In this way, explanations for phenomena can be generalised. This strategy is generally used in qualitative research. On the other hand, *deductive strategy* begins with a theory, and then develops and tests this theory through looking at the empirical world. Bryman (2004) defines empiricism as an approach which accepts reality if knowledge can be gained through senses and experiences. In this world ideas have to be tested before they are regarded as knowledge. *Deductive strategy* compares the data with the hypotheses by eliminating the false ones and supporting the others. This strategy is generally used in quantitative research. *Retroductive strategy* has some similarities with the deductive strategy. Both strategies involve empirical studies and tend to examine “what is thought to be known” and to extend “what is known by common observation” (Blaikie, 2000; p. 109). Therefore *retroductive strategy* constitutes a hypothetical model in order to clarify the covert mechanisms for the reason that these mechanisms are unavailable for observation. Finally, *abductive research strategy* “is grounded in everyday activities, and/or in the language and meaning of social actors” (Blaikie, 2000;

p.117). As in the retroductive strategy it has “the process of inventing a hypothesis to explain some observed phenomenon” (Blaikie, 2000; p.114). As Blaikie (2000) mentions, this strategy differs from the others in terms of how it looks at the nature of social reality, its origins and its approach to answer ‘why’ questions. In addition it has two stages; first, describing activities and meanings and secondly, in order to understand the problem, developing categories and concepts. Briefly, *abductive strategy* is developing and testing a theory through exploring the daily life, meanings and motives of social actors.

Paradigms are important in terms of the research process. They represent our beliefs about the knowledge that we create and the “nature of reality”. As a researcher we have to make our paradigms more overt rather than covert and we have to be more reflective. It is the paradigm which shapes the researcher’s methodological choices and affects the relation between the data and the theory (Esterberg, 2002). Creswell (2003) called these paradigms ‘knowledge claims’. This means that we will start a project with our particular assumptions and learn during the research process. At this point, we have to associate a framework to reveal our paradigms as a researcher. Paradigms can involve philosophical assumptions, epistemologies, ontologies, and methodologies. It is useful to define these terms briefly; The University of Nottingham Graduate School defines methodology as the philosophical background to our approach. This concerns epistemology and ontology. Ontology is described as “the philosophical study of being or existence”. Epistemology is the study of knowledge with its nature, scope, and origin. On the other hand, method is the system of gathering data, and how we analyse and present it. Bryman (2004) states that “the question of what is regarded as acceptable knowledge in a discipline” is the subject of epistemology. Nevertheless ontology deals with the issues of “the nature of social entities” (p 13).

Creswell emphasises that researchers have certain statements about knowledge. When we ask what is knowledge we are in the field of ontology; and when we ask how we know knowledge then we are in the scope of epistemology.

Consequently the process of studying this knowledge is our methodology (Creswell, 1994 in Creswell, 2003). In this study, in order to understand what in-between space means, its influence on inhabitants and its different uses in different patterns, comparative case studies were selected.

4.2 CASE STUDIES

Case studies are the type of research used within a "bounded system" in order to discover an event, programme, activity, process, or individuals. It is bounded by place and time and it needs detailed data with interviews, observations, documents, reports and so on. This case can be either a multi-site study or a within-site study. The context of the case can be a physical setting, or a social, historical, or economic setting. As Creswell (1997) mentions with reference to Stake (1995), the focal point of the case can be either an issue, issues related with the case or the case by itself with its own uniqueness. Creswell recommends researchers to first consider the type of case study that will be useful for them; this could be single or collective, multi-sited or within-site. Holistic analysis for the whole case or embedded analysis for the specific part of the case is used in terms of analysing the data. For multiple cases, however, the researcher has to first describe each case through case analysis and afterwards he/she has to examine across cases, in order to construct a cross-case analysis (Yin, 1989 in Creswell, 1997). Creswell suggested that researchers should first identify the case and the bounded system. Here the researcher has to specify the issue or the case, as it is important to reveal the cases that are chosen. Secondly, the important task of choosing a single case study or multiple case studies takes place. As the cases increase, the problem of lack of depth emerges. Thirdly, in order to study a case, the researcher should know about the sampling strategy and gathering data. Fourthly, to have a deep point of view about the case, the researcher needs information; however sometimes this can reduce the value of some cases. Finally, it is really difficult and challenging to define the boundaries of a case study. Hence some cases may not have starting and ending points, and researchers may have problems in dealing with this issue (Creswell, 1997).

4.3 CONCEPTUAL FRAMEWORK

This study explores how the arrangement of in-between spaces affects social interaction and relations in neighbourhoods. It hypothesises that social relations might deteriorate with the lack of hierarchy between public and private. The intermediate space is vital in order to define the transition zone between these two realms. In new urban areas, however, there is an ambiguity in this space in terms of its ownership and physical design. These “secondary spaces” between buildings within their territory should be defined more clearly (Abu-Ghazzeh, 1996).

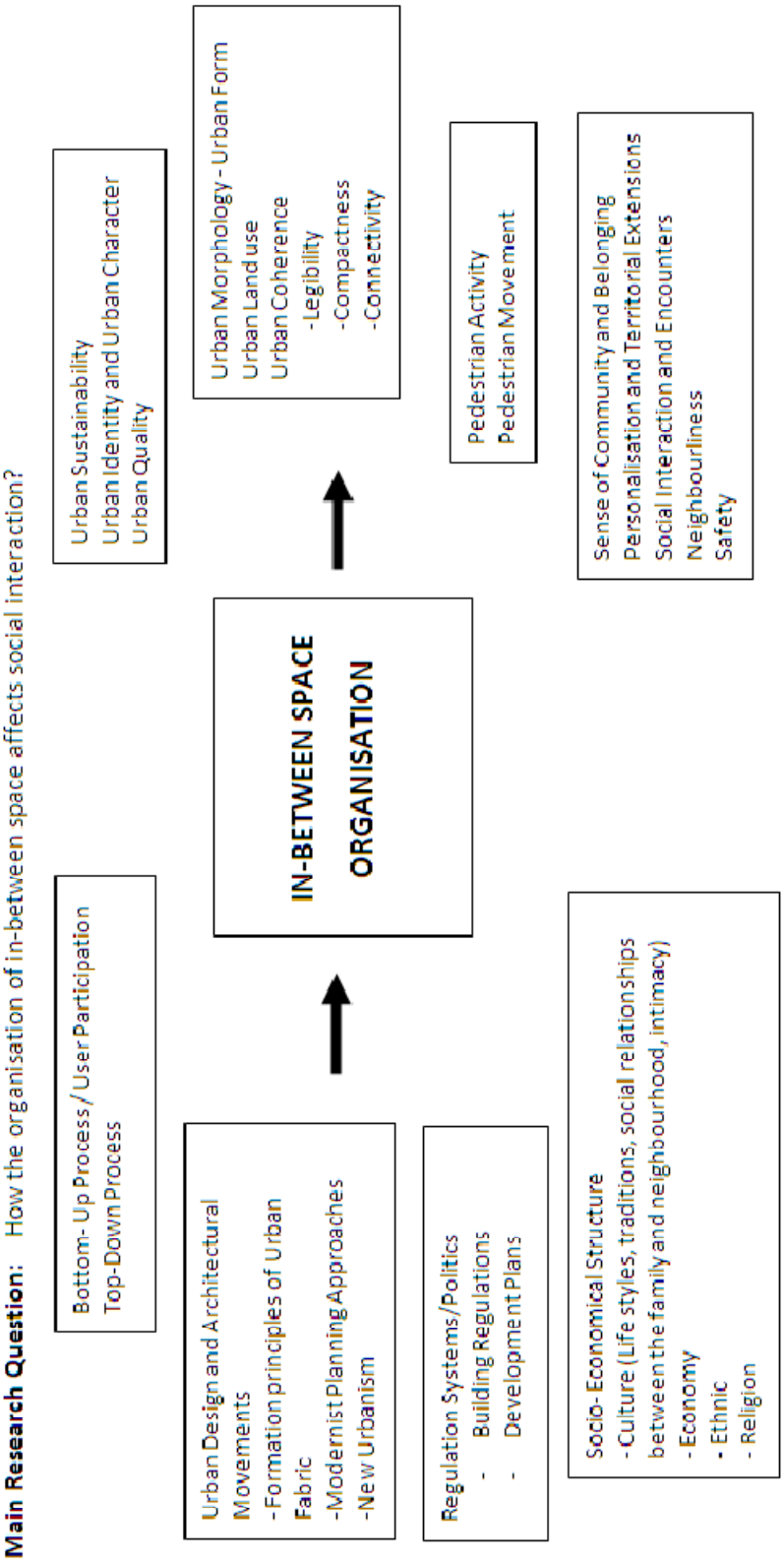
The difficulty lies in whether to keep this space totally public or private. As Madanipour (2003) mentions this buffer plays a role in separating the public and private realm through defining the boundary; but also it is the gathering point for the two as a node of social interaction. At the same time this differentiation gives the character of the place. Hence it is the challenge of this boundary not to be defined by fences, which reduce the communication and interaction, as well as not to be so vague to enable conflicts. The uncertainty of the concept starts with the definition by some researchers of the space as either semi-public or semi-private. Therefore in this study this space between public and private is defined as “in-between space”.

The hierarchy of space is important not only for the quality of urban environment and urban coherence, but also for urban sustainability and social interaction. These open space patterns have an important impact on the identity of cities. If these spaces are blurred both the urban form and social solidarity might be damaged. It is crucial though to be aware that social issues are more complicated and related with other various factors. As Talen (1999) mentions, contrary to the belief of new urbanism, urban form and social interaction are not the only predictors of sense of community. As an independent variable, organisation of the in-between space between buildings has impacts both on the morphology and land use of cities, and on issues such as safety, pedestrian

movement and activity, sense of community, and neighbourhood design. On the other hand, as a dependent variable, arrangement of in-between space is influenced by development plans, regulations, politics, control over space, movements such as industrial periods, modernism and post-modernism, and new urbanism. Culture, traditions, and habits of citizens are the other factors embodied in this intermediate space (see the conceptual framework in table 4.1 below). Hence, in addition to the main research question, the study also tries to answer and understand the questions below:

- What is in-between space and why is it important?
- How are neighbouring and sense of community affected in the lack of in-between spaces?
- Do new urban settlements lack these intermediate spaces; or what kind of in-between spaces exist in new urban patterns, and why?
- Why is it so important to keep this space as in-between among private and public?
- What are the characteristics of in-between spaces in different neighbourhoods? How have their roles changed?
- What contributions can in-between space configuration make to urban design in order to develop the environmental quality?
- How does its organisation affect the character of the city and urban morphology?
- What are the street functions in each neighbourhood and how do these affect the interaction and vitality of city life?
- Are there any parts in which social interaction is intense despite the lack of integration measures of the urban pattern? Or vice-versa?

Table 4.1 Conceptual Framework



4.4 RESEARCH DESIGN MODEL

Creswell (2003) developed a model for research design through conceptualising Crotty's (1998) model. He structures this model in three steps as follows. This study uses this model in order to construct the research design. Firstly, what knowledge claims the researcher will make concerning the theoretical perspective such as positivism, constructivism, and pragmatism. Second part includes strategies of inquiry such as quantitative, qualitative, and mixed method. Last step concerns methods of data collection (observation, interview, and etc.) and data analysis (text and document analysis, statistical analysis, and etc.).

4.4.1 Knowledge Claim

This research utilizes pragmatist knowledge, where its ideas come from Peirce, James, Mead, and Dewey (Cherryholmes, 1992 in Creswell, 2003). Recently Rotry, Murphy, Patton, and Cherryholmes have come further supporters of this approach. What they claim is pragmatic knowledge emerges from 'actions, situations, and consequences'. The important thing here is to focus on the problem and see 'what works', and derive solutions. Hence researchers struggle in order to understand the problem because the problem is the most important thing here rather than the methods adopted.

Creswell mentions that pragmatism is not attached to one reality and it takes advantage of both *quantitative and qualitative methods*. It starts with the research problem and then through taking a 'pluralistic approach' it creates knowledge. Researchers feel free in choosing the 'methods, techniques and procedures of research'. They are searching for many approaches while collecting and analysing data. Truth for them is something that works at that particular point in time. Both methods are used in order to understand and solve the research problem. What and how to research is important for pragmatist researchers. Hence they have to mention the reason they are using both quantitative and qualitative approaches. They believe that pragmatism

encourages different views, methods, data collecting and analysis (Creswell, 2003).

4.4.2 Strategy of Inquiry

This study uses a *mixed method approach*, both *qualitative and quantitative* methods, with a comparative case study. Mixed method was chosen in order to test the quantitative results with the qualitative results, as well as to understand how patterns work both qualitatively and quantitatively. The pragmatist approach closes the gap, which occurs when only a single method is used. Recently, research has become more interdisciplinary, dynamic and complex. Hence the weakness of one method can become its strength with the help of the other method (Johnson and Onwuegbuzie, 2004). On the one hand, *for the qualitative method*, research tools such as observations, focus groups, and interviews were used. On the other, *for the quantitative method,* space syntax analysis and questionnaires were used. Through using space syntax and other methods this research tries to examine the urban pattern both subjectively and objectively.

There are three strategies of mixed method design: sequential, concurrent, and transformative. In the *sequential procedure* one method's finding is expanded with the other method. For example, we can start by a qualitative method for exploration and then continue with a quantitative approach for a large sample, or vice versa. In a *concurrent procedure*, the researcher unites both the quantitative and qualitative methods at the same time in order to deal with the research problem extensively. Both sets of data are collected in parallel during the research process and the information is then combined for the interpretation of all results. The *transformative procedure* has a theoretical perspective that includes both quantitative and qualitative data in order to conduct the research. In this procedure the data collection method applies either the sequential or the concurrent (Creswell, 2003).

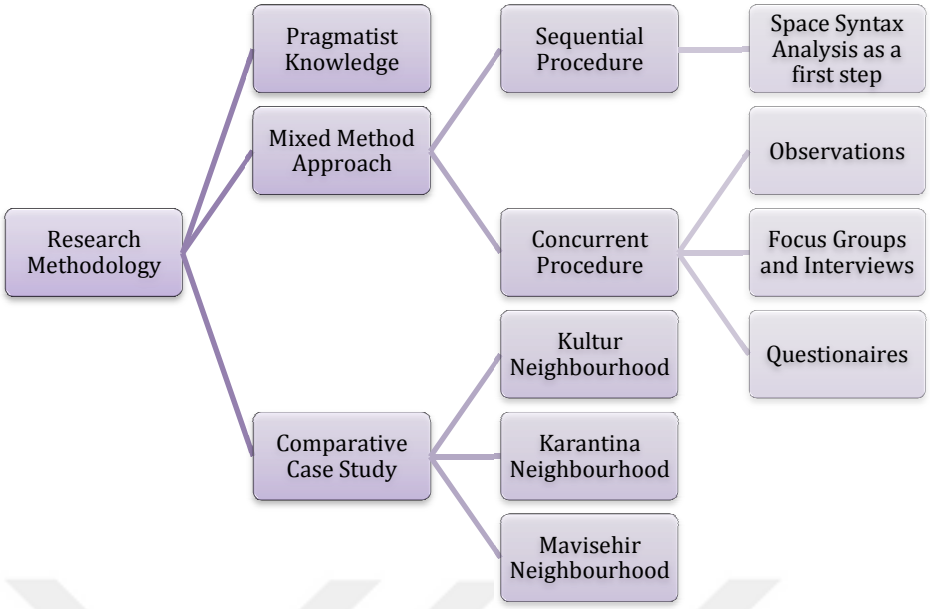


Figure 4.1 Research Design Model

As a mixed model strategy, this study firstly applies the sequential procedure followed by the concurrent procedure. Starting with the sequential procedure, space syntax analysis was first applied and then the findings were expanded concurrently with observations, focus groups, interviews, and questionnaires. Space syntax analysis was used to understand how the city structure of Izmir works. Then the study concentrated on three areas, which have different accessibility measures. Therefore the axial map was used to determine the three case study areas depending on their integration measures in the global analysis. Kültür Neighbourhood (Alsancak) was chosen from the most integrated part. Secondly, Karantina Neighbourhood was chosen as a neighbourhood, which is neither in the most integrated nor segregated part, but rather in-between them. Finally, Mavişehir Neighbourhood was selected from a more segregated area. All three case areas are along the coast; and they are differentiated in terms of their development periods, urban form, housing typology, and topography. These are explained in detail in the case section. The boundary of each case study was defined by the observation period of snapshots (two hours) and walking distance in the Karantina and Kültür neighbourhoods. In Mavişehir, the first stage of the housing development was chosen.

After the space syntax analysis, and the selection of the case areas, integrated and segregated street segments and in-between space characters of each case study area were examined in detail with a qualitative approach. Correlations were done between space syntax measures and observations. Furthermore, the three case studies were compared in terms of their accessibility measures and social interaction patterns. From this point, as a triangulation, qualitative tools helped the research to test the results that were gained from space syntax tools and to understand the part-whole relationship. Before explaining how the study was conducted with the subsequent qualitative and quantitative methods, space syntax theory is discussed below.

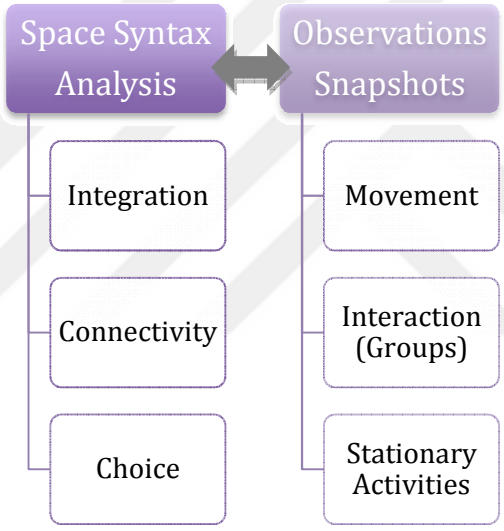


Figure 4.2 Correlations between Space Syntax Analysis and Observations

4.5 SPACE SYNTAX THEORY AND METHOD

Space Syntax, which was developed as a new theory and method after the 1970s by Hillier and Hanson, has been used frequently in a broad spectrum of research areas. It is a different way of interpreting buildings and urban settlements quantitatively. Nowadays the method has been improved through various computer models and software. Following its emergence the method caused many conflicts between researchers and academics. These criticisms can be classified as the method being two dimensioned and not considering the issues

like building heights and land use, and being too complicated, as well as difficulties of applying the technique for non-western houses.

Space syntax has an important theoretical background that has to be conceived profoundly. The theory questions the problem of space as Hillier and Hanson (1984) wrote in their book, “The Social Logic of Space”, where they try to emphasise the relation between the space and society, and how they mutually embody each other.

Consequently, this part aims to answer some questions such as: What is space syntax and how is it developed? Where is it being used, and what are the measurements and tools of the method? What are its strengths or missing aspects, and most important: What is the sense of its theory?

4.5.1 Definitions

Hillier et al. (1987) define space syntax as “a model for representation, analysis, and interpretation” (p. 217). They deal with the problem of urban form regarding how towns work, and the relation between patterns of use and movement. Urban settlements are referred to a “bi-polar system” between the buildings and outside. Buildings and public open spaces are the two opposite polars of this system. Building entrances play a role in shaping the relation between the inside and the outside, as well as the residents and the outsiders. The aim of the method is to understand how buildings gather together and define a continuous open system. Briefly its target is to comprehend the relation between the urban structure and its social aspects (Hillier et al., 1987), In addition to finding out whether each space is indirectly or directly connected with each other in the layout (Asami et al., 2001).

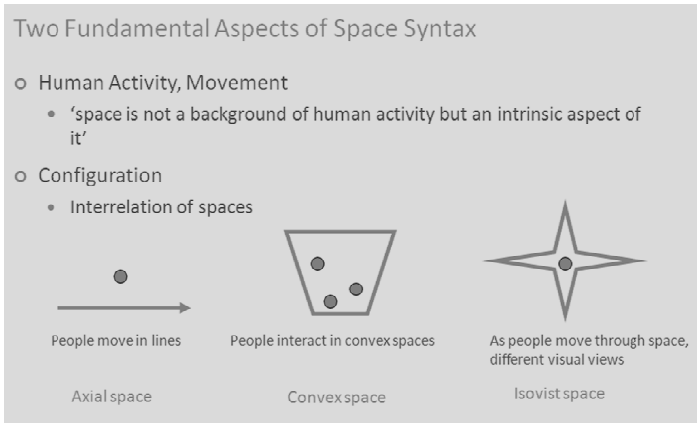


Figure 4.3 Fundamental Aspects of Space Syntax
Source: Technology Platform Report (2004)

Topçu and Sema-Kubat (2007) with reference to Hillier and his colleagues identify the technique, which gives quantitative descriptions about the built environment. It is the morphological analysis of settlements, architectural-urban plans, and buildings. Through this method we can have the idea of a settlement and its relationship pattern, which comprises culture, society, and behaviours. In space syntax, *spatial configuration* is defined by Hillier (Hillier et al., 1993; Hillier, 1996) as the relationship of relations; how spaces within the system relate to each other; interdependent relations. Consequently, there are two fundamental aspects of space syntax; one is configuration and the other is human activity and movement (see the figure 4.3 above). Moreover space syntax covers the concepts such as adjacency and permeability. As an independent variable it searches cultural, social, and behavioural issues of settlements. The main point here is to explore the relation of spatial patterns not only in terms of social relations but also functional aspects of the urban area. These functions cover crime, land use, pedestrian movement, social and economic aspects. Space syntax is the method, which considers mathematics and human factors (Jacoby, 2006).

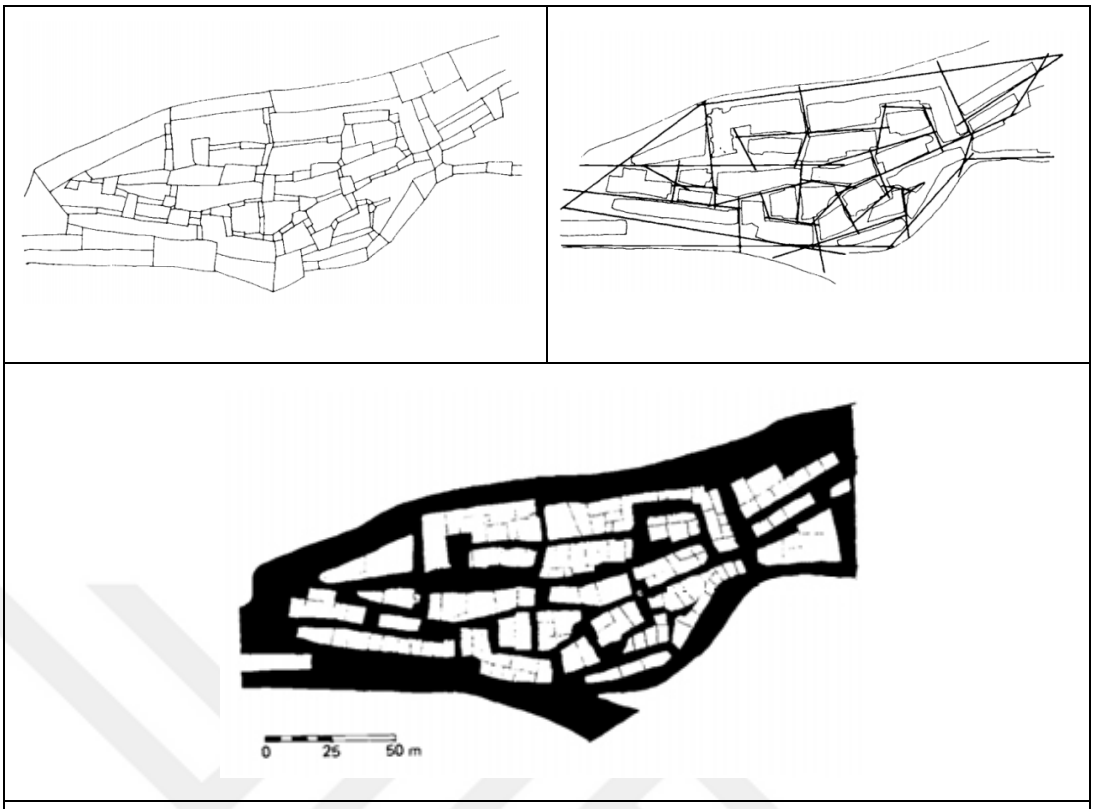


Figure 4.4 Convex Map, Axial Map, Figure-Ground Map
Source: Hillier and Hanson (1984)

As can be seen in the figure 4.3 above, there are three basic conceptions in space syntax: convex space, axial space, and isovist space. *Convex space* is described, as the polygon comprised of all the lines in its perimeter. Secondly, *axial line* is the longest line within the convex space that attaches the polygons together and which is related with visibility. Lastly, *isovist space* is the "total area that can be viewed from a point in three dimensions" and isovist maps represent "the areas that are visible from convex spaces or axial lines" (Jacoby, 2006). Briefly, *convex maps* are two dimensional; fattest and fewest spaces; most localised space; every point is visible and accessible to every other point; where you are in the system, and less associated with movement. On the contrary, *axial maps* are one dimensional; longest and fewest straight lines; most globalised; at least one point visible and accessible; reveals where you might be going, and presents patterns of movement. Hillier and Hanson (1984) revealed the different representations of these maps in the example of a French town in the figure 4.4 above.

Hillier et al. (1987) consider axial and convex maps from two points of view; first, how they relate to entrances of buildings that the residents come from and secondly, how they relate to the entrances of urban settlements where strangers come from. Hence the interface or the in-between space between the public space and the entrance of the building is very important (Hillier et al., 1987). Briefly, the relation between axiality and convexity conveys two sets of information. On the one hand, convex organisation is about complete local information, and on the other, axial organisation is about partial global information (Topçu and Kubat, 2007).

Cutini (2003) defines space syntax as a device, which grasps the urban environment through lines. At this point, line is the basic element of space syntax. However, convex space is the composition element of the urban grid. Convex space can be used successfully as a meeting or gathering point for an attractive open space. Eyüpoğlu et al. (2007) describe an axial map as a suitable analysis for urban settlements in order to find out pedestrian movement. In order to understand and define the space, firstly, an appropriate spatial representation is chosen. Secondly, to analyse this representation, we have to decide on which measures we are going to use (integration, choice, control, and connectivity). Nevertheless as Hillier mentions, the key issue here for the researcher is to choose the suitable representation and measures which suit the logic of the settlement or buildings (Hillier, 1999).

This study does not deal with formulae of the method but it is useful to define some of the terms, which are commonly used in space syntax. Space syntax is graph-theoretical and defined as the "topological connectivity among axial or convex spaces" (Asami et al., 2001; p.786). *Graph* is the "relationship of access between all the convex spaces or axial spaces in the area". *Syntactic step* reveals the direct connection or relation between spaces and their neighbours. It is the change of direction one has to move from one space to another in the system. *Depth* is described as a "topological distance in a graph that represent the "least number of syntactic steps" (Jacoby, 2006).

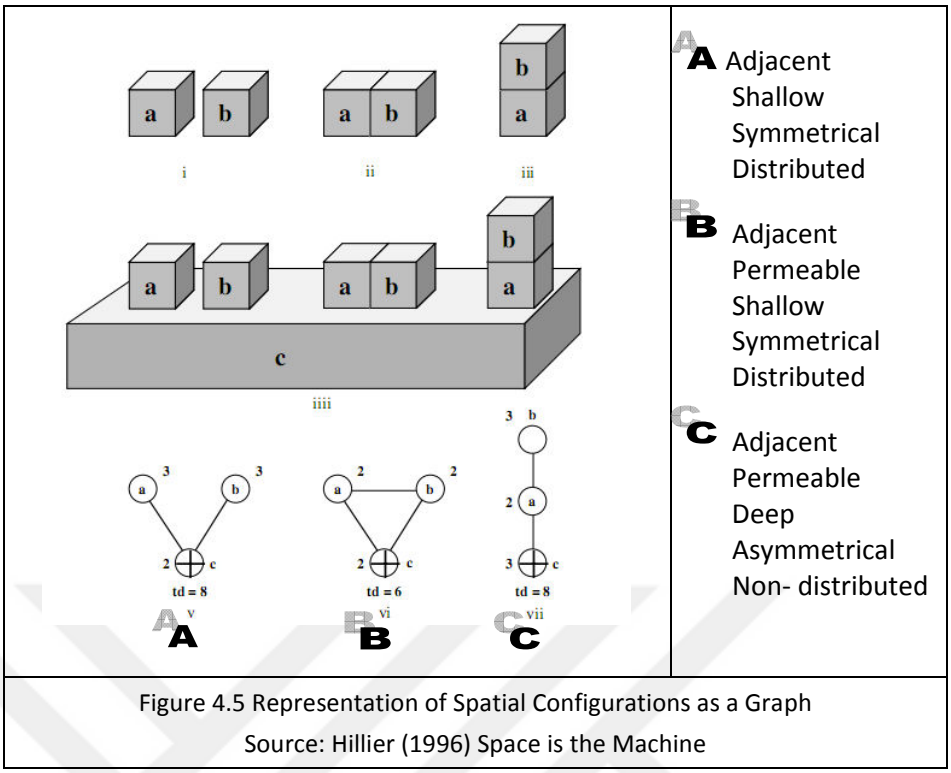


Figure 4.5 Representation of Spatial Configurations as a Graph
Source: Hillier (1996) Space is the Machine

If a space is directly accessible, which means that two lines are directly connected, distance between the two is valued as one. If we have to pass one space in order to access the other, the depth is two; if we have to pass two spaces then the depth is three and so on (see the figure 4.5 above). *Justified graph* is the permeability analysis; it is the further analysis for examining structures. It uncovers how one space is related with the other spaces and with the whole in the system. Firstly, as a starting point, a root is placed and the spaces are identified based on their distance or depth to the other spaces. Concisely it is used for analysing the amount of syntactic steps we have to take in the system (Bellal, 2004; Jacoby, 2006).

In addition to axial syntactic measurement, there is visibility graph analysis (VGA) which is mentioned before. VGA, through using the software depthmap, divides space into a uniform grid such as pixels or equal sized tiles. As in the axial map, boundary definition is important in VGA. Due to the processing difficulties and limitations in the depthmap, only small areas can be analysed with VGA, such as the layout of buildings, or less detailed small scale built environment projects. The graph represents the covisibility of the spaces within the whole system. Each

tile has an accessibility value from red to blue, from more integrated to more segregated. It has to be mentioned that not all the visible places are accessible as in the example of a glass wall. In the figure 4.6 below, dimensions of the three spaces are the same, but VGA is different in each one. This is related with the dissimilar permeability pattern of each square (Turner, 2001; 2003).

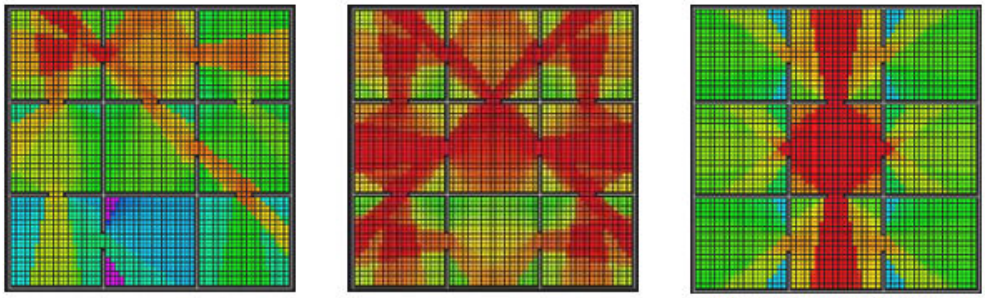


Figure 4.6 VGA Analysis, TPR 2004

Another important measure that has to be mentioned here is 'constitutedness' (see the figure 4.7 below). This shows the relation of the building with the street. As gradual relation between public and private space (topological depth) increases constitutedness degree also grows. If a building is directly attached to the street it has zero topological depth between the street and the building (Hanson, 2000; Hillier and Hanson, 1984; Van Nes, 2008; Van Nes and Lopez, 2007). Since Hillier and Hanson (1984) developed the interface map, it has been further examined by various researchers such as Shu (2000), and Van Nes and Lopez (2007).

Shu revealed that the street has to be 75% constituted to be intervisible and a safer place as well as lively. Constitutedness degree is calculated by dividing the number of buildings that are directly connected to street with the total number of the buildings on the street. This is repeated for each side of the street separately (Shu, 2000 in Van Nes and Lopez, 2007). For instance, if two buildings have zero topological steps between the street and the house out of four buildings, then the constitutedness degree is 2/4, which is 50%. Therefore constitutedness is an important element for the safer streets of the neighbourhoods (Hillier, 2004).

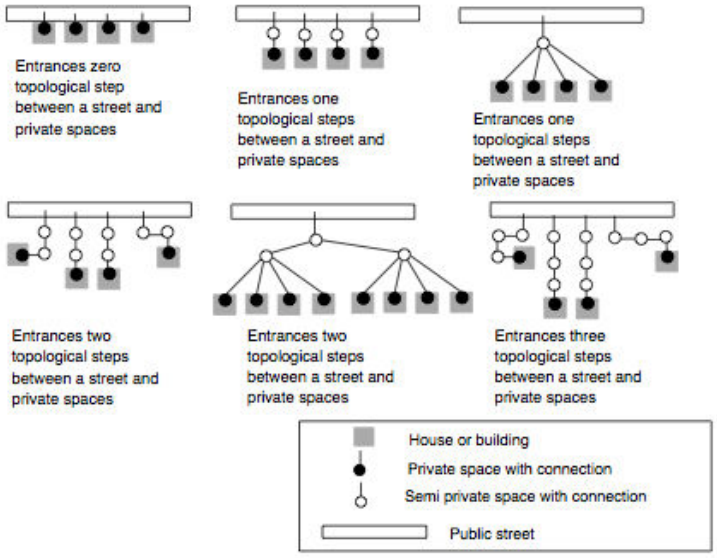


Figure 4.7 Constitutedness- Topological Depth between Private and Public Space
Source: Van Nes (2008, p. 87)

4.5.2 Syntactic Measures in Space Syntax

Syntactic measures are the crucial tools in space syntax. *Connectivity* is the number of lines or space that is joined to a line or space. Briefly as a local measure; it measures the depth between spaces, it is the "degree of intersection". *Integration*, a global measure, is seen as a central concept in space syntax. It measures how many turns and changes one has to make in order to access one space from another in the system. It reveals how related the part with the whole is in terms of integratedness or segregatedness. *Depth* and *syntactic accessibility* are the important notions of integration. The lower the number of axial lines and fewer changes in the system, the more accessible and integrated the system becomes. Here global integration means that the space can be accessed from all other lines or spaces and local integration indicates that the space can be accessed up to a number of spaces or lines away (Barran et al., 2008; Eyüpoğlu et al., 2007; Jacoby, 2006; Topçu and Kubat, 2007; Yang, 2004).

Accessibility and integration are also related with the terms *symmetry asymmetry* and *distributedness non-distributedness* (see the figure 4.5 above).

Dyke (1999) defines symmetrical arrangement as an easily accessible space; on the contrary, asymmetrical as a space is accessible only by passing through other spaces. In addition to this, while distributedness refers to multiple choices of routes, non-distributedness refers to lack of choice. Asymmetry and non-distributedness are related with spatial segregation where spaces are less accessible and movement is controlled in hierarchy. On the contrary, symmetry and distributedness are associated with spatial integration where spaces are accessible and movement is diffused (Dyke, 1999).

Intelligibility is one of the other important measures in space syntax. Topçu and Kubat (2007) explain intelligibility with reference to Hillier and his colleagues as a "degree of correlation between the connectivity and integration values in the system" (p.5). This description means that if the correlation is strong enough than it is easier to have an opinion about the global through looking at the local. Hence, by means of local we can comprehend the global. Intelligibility is the relationship between global and local analysis. Therefore the whole can be deduced through composing the parts in the system. With intelligibility the concept of *cognition* is on the agenda. Lynch (1960) provides visual cognition by urban images; however space syntax does this by movement. Additionally, cognition of space through local and global information is important for complex urban areas. In order to perceive our environment and to find our way around, intelligibility of an area is *sine qua non*. Consequently, intelligibility and integratedness play a key role in understanding the relationship between the morphological structure of settlements and their socio-cultural aspects (Çil, 2006).

4.5.3 Application Fields of Space Syntax

Space syntax has been developed for 40 years and is becoming more widely used in architectural and urban areas, for a number of purposes. It can be used to find out the relationship between urban form and socio-spatial segregation (Lima, 2001), the relationship between land use, density, and urban street configuration (Kim and Sohn, 2002), the relationship between physical

segregation and economic marginalisation (Vaughan et al., 2005), the relationship between spatial cognition and spatial configuration (Oak-Kim, 2001), and also the socio-spatial analysis of university campus areas (Greene and Penn, 1997).

Çil (2006) summarises the fields that space syntax is applied as follows: understanding the complex physical structure of cities; examining the relation between the pedestrian movement and urban pattern; examining the relation between way-finding and intelligibility, organisation and planning of movement in complex functional buildings; predicting about the location of a building and after it is located to find out how it affects the city in terms of movement; examining the relation between crime and space; examining accessibility to public spaces and common open spaces; cognition of social hierarchy, control, and intimacy, and examining the space in terms of introvertedness or extravertedness. In addition, space syntax is important to understand the different scales and their relations. It is also useful for regeneration, transformation and gentrification projects (Çil, 2006, p. 220).

4.5.4 Deficiencies of the Method and Discussion

Osman and Suliman (1995) criticise the space syntax method based on its interpretation process. The method itself has a simple and objective analytical procedure; but the interpretation process is not as simple as the former. Numerical results can be complex for the researcher and might be misinterpreted. Sometimes familiar and predicted results can be detected from the method. Further, researchers who are not familiar with the terminology and method of space syntax may find the results complicated (Peponis, 2001 in Çil, 2006). Çil (2006) emphasises that another argument of space syntax relates to non-western cities where, due to their urban structure, the visibility concept of space syntax is disregarded in the formation of non-western organic cities (see the figure 4.8 below).

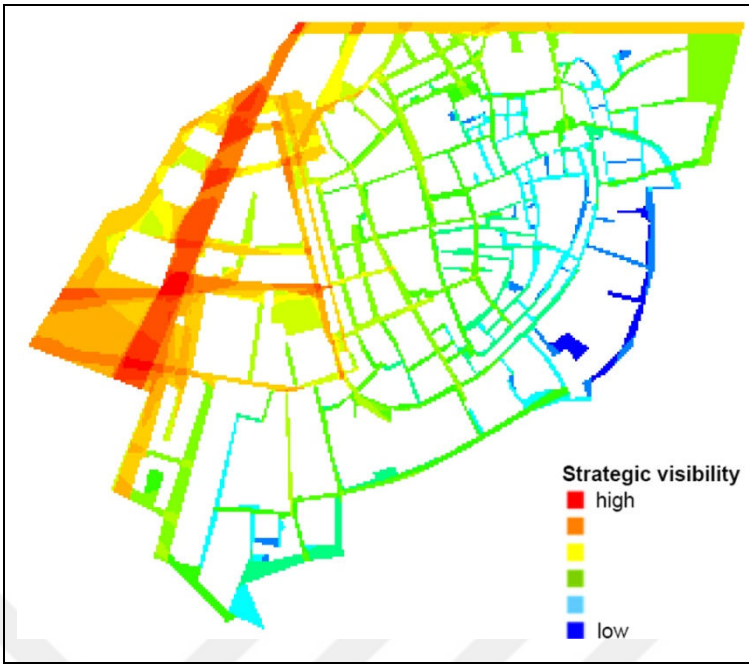


Figure 4.8 VGA Analysis of Kemeralti Historical Centre Izmir
Source: Space Syntax Workshop IYTE 2010

Subsequently, Osman and Suliman assert that in justified graphs the calculation of the shortest path between two nodes including the outside node is inappropriate for non-western houses for the reason that the outside node represents the public domain in non-western houses. Binary coding (zero and one) and shortest path concepts do not fit with non-western houses. As some spaces might link together through the help of a third common space, this approach of justified graphs equates to all types of connections. When the depth based on direct or indirect connection is calculated, the different connection types that subsist between spaces as “spatial, visual, auditory, and olfactory” might be disregarded (Osman and Suliman, 1995, p. 190). Osman and Suliman also discuss the difficulty in using the method to apply to “modern houses” where the barriers are the furniture instead of walls. Space syntax is the first research method to make possible objective judgements, and to develop concepts when compared with the methods of social science. However it has to be supplemented with the methods from the social sciences through analysis of socio-cultural variables (Osman and Suliman, 1995).

Çil (2006) reviews the missing points of space syntax as follows; every researcher may draw different axial maps from the same basemap; building heights, street width and landuse information cannot be digitised into space syntax analysis; pedestrian routes and high ways can be evaluated with the same value; metric length of axial lines can create difference in the evaluation; and sight of views can be prevented due to the differences in topography. Nonetheless, in space syntax although it is quantitative and objective, interpretation starts from the initial steps of the method.

Ratti (2004) claims that space syntax has some inconsistencies. The most common one is that the method ignores three dimensions - heights of buildings, dimension of streets and metric information. The axial map is topology-based rather than metric. He questions whether it is possible to make many judgements about complex urban textures through a simple two-dimensional method. Hillier and Penn (2004) answer these questions in their article "Rejoinder to Carlo Ratti". What they mention is, if other variables are added in the axial model, "the effects of spatial configuration" can be vague and shadowy. They prefer to cope with these variables in the regression analysis rather than within the spatial model. For instance, spatial configuration is the independent variable whereas land use is the dependent variable. Regarding the topography issue, Vaughan (1998) mentions that to put extra lines where the street is slightly hilly or not would not change the overall model (Vaughan, 1998 in TPR, 2004).

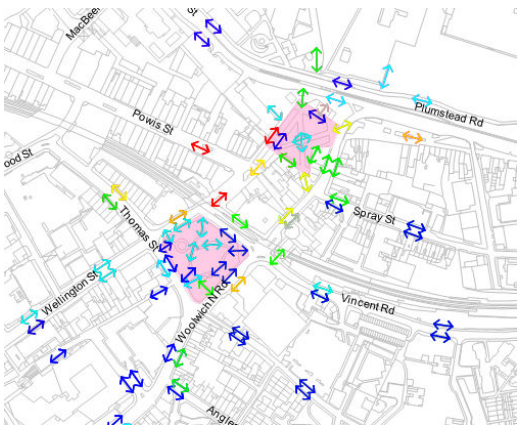
Although space syntax has been criticised by researchers in some points, we have to admit that it has opened a new page in the analysis of buildings and urban settlements. It gives possibilities to examine urban areas both quantitatively and more objectively. This analysis is based on the concept of space and socio-cultural aspects of the settlement. The main objective of the method is to find out how social relations and space embody one other. Another issue in the configuration of space is how to organise and plan the pedestrian movement.

Some formulae or results of the analysis as well as its terminology may appear unfamiliar at first; however all the concepts that space syntax covers have logic and meaning. It is important to comprehend such terms as integration and intelligibility in order to understand urban space/pattern and the theory behind it.

In addition to its quantitative dimension, space syntax has a structured background. This enables us to understand complex urban areas and buildings. Through this, the method produces new solutions for design problems. Nowadays an increasing number of architects is using the method in addition to researchers. The method is being developed on a day to day basis, through many software applications like GIS and this helps the method to close some of the gaps in its application to the field. Hillier et al. (1984) mention that if we examine the local we can better understand the global. Hillier shares common ground with Christopher Alexander in terms of theory. Words are important in order to constitute a meaningful sentence. Hence pattern/local is crucial for appreciating the whole language/global. From this point of view space syntax is an appropriate tool, both theoretically and quantitatively.

4.5.5 Snapshot Observations

Space syntax also has tools for observations such as gate counts, snapshots and movement traces, as well as frontages, entrances, and landuse. Gate counts are mostly for counting the number of people passing through space and specifying their category. Traces are for revealing people's movement patterns and the paths people take, and snapshots are for recording activities of people in a particular space. Through entrances, uncontrolled and controlled entrances can be mapped. Frontages reveal the type of facade or fence, such as blank wall, semi-transparent wall or opaque fence, see-through fence, low fence and so on (see the figure 4.9 below).



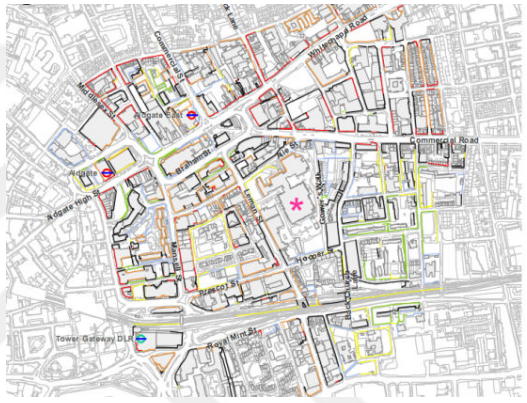
London Woolwich Pedestrian Movement
Weekend 5-6 pm SSX 2008



London Woolwich Traces
Weekend all pedestrians SSX 2008



Tower Hamlets Goodmans Fields SSX 2007
Entrances



Tower Hamlets Goodmans Fields SSX 2007
Frontages

Figure 4.9 Observation Methods in Space Syntax

Snapshot observation has some limitations and these are mentioned by Ferguson (2007) as follows; first of all because the observer is moving in order to picture the activity pattern of the whole area, this reduces the efficiency of observation. Secondly, this method might be biased in terms of quieter places, where the observer can easily observe the people and activity compared to the crowded places. Therefore Ferguson (2007) suggests extended observations at specific locations; however this study was constrained by time limitations and could not implement that.

In this study snapshots are chosen as the observational tool, in order to have an idea of the area in terms of activity types and to see who is using the space (see the figure 4.10 below), and how, as well as to identify where special activities are clustered. Therefore the snapshot is a useful tool to reveal patterns of space use.

Observations were done on one weekday and over one weekend. Each snapshot is done over a two hour period, between 10 am -12 pm morning, 14-16 pm afternoons, and 18-20 pm evening. The boundary of the area was defined depending on the length and busyness of the streets. First the route was chosen on the map. Here the observer is moving constantly rather than being static, and as if taking a photo, he/she records the activities and the categories of people by recording these on the map and excel sheet: How many people, where, and doing what? The observer is ignoring the rest of the people passing nearby while entering the data on the map. The main target here is to have a general idea of the activity type of the area.

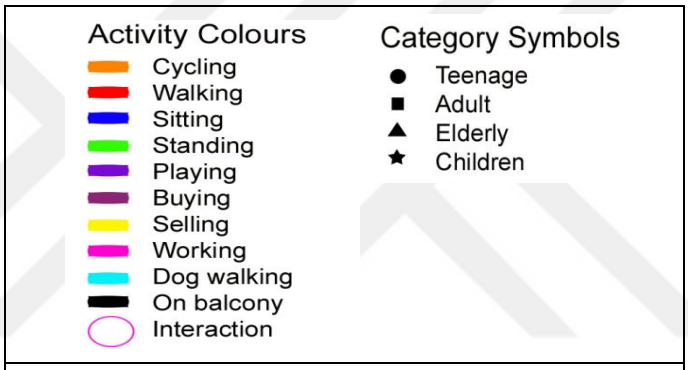


Figure 4.10 Activities and Categories used for the Study

The important issue is to give each space an equal observation period, in order that the data collected can be judged equivalent at the end. Hence on main streets both sidewalks are covered and the observer has to walk through both sides, while on narrow streets the observer passed through the street only once. This is also because of the visibility of the space.

4.6 Focus Groups, Interviews and Questionnaires

4.6.1 Focus Groups

There has been a growth in the use of focus groups in research; Morgan (1996) mentions the interest in focus groups, which especially started during the mid 1980s. He defines this as a method, which 'collects data through group interaction on a topic determined by the researcher'. Here there are three important components. First of all, it is dedicated to data collection. Secondly,

the source of the data is the interaction between the participants in a discussion. Finally, the researcher plays an active role in forming this discussion within the group (Morgan, 1996). What makes one focus group differ from other one to one interviews is the interaction between participants (Kitzinger, 1994) however it should not be used as the only source of data. Homogeneity of the group is important; typically a focus group usually consists of six, eight or ten people (Litosseliti, 2003).

In this study, the focus group is chosen as one of the data collection tools as it throws light on a subject rather than just making generalisations about it. Within a short time it gives the opportunity to collect data and helps to understand the subject more in detail. Although focus groups are quick to run, there are some difficulties encountered, such as convincing people to participate and informing them of the reasons for the study. Hence it has to be prepared, planned and organized carefully. In this study, focus groups were formed of children in each case, and of adults in Karantina and Mavişehir. While children's groups were formed of between seven and ten participants, adults' groups comprised between three and five people. It was easier to run focus groups with children as they are already in groups in primary schools. Focus groups were conducive to seeing whether residents have good social relations in their neighbourhood or not, and whether there is a relation between the spatial organisation of their housing layout and the interaction among neighbours and others.

4.6.2 Pilot Study of Focus Groups

The first pilot study was conducted in Izmir with 24 children in an elementary school on 13 April 2009. The purpose was to find out how they define their street and environment, their social interaction areas, and playgrounds, what they like and dislike about their neighbourhood and street, and what they would like to change. At the end they were asked to draw a street or a neighbourhood they visualise as ideal as can be seen in the example below in figure 4.11. Consequently, they complained about the lack of trees, dirty environment and lack of areas to play on their street especially because of the traffic. Most of

them are living in apartment blocks and they expressed a preference to live in two storey houses with front yards.

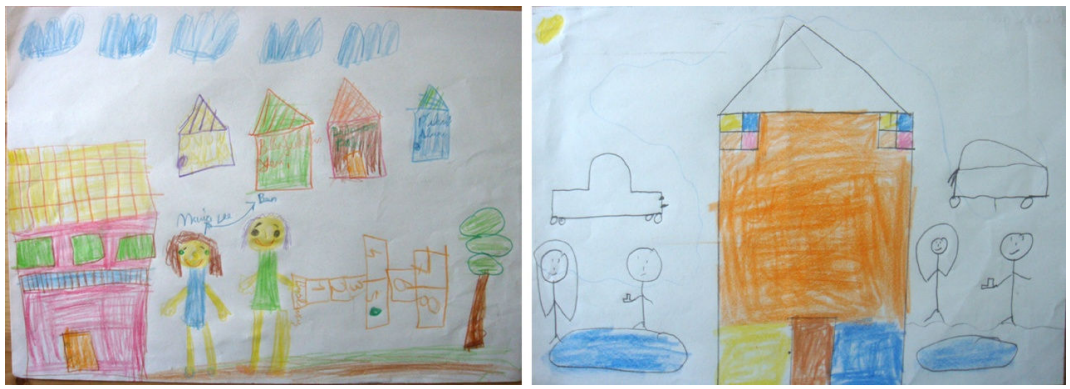


Figure 4.11 Drawings of Children Pilot Study

One of difficulties faced during this pilot study was the crowded class. Sometimes the children talked altogether and it was difficult to manage them. It would have been better if the class was divided into two or three groups. Secondly, there should be an observer in order to take notes; in addition to writing some of the answers on the wall and recording the session with a video camera. Using only a voice recorder was not really adequate. For instance, when you ask how many of them use the internet they will raise their hands. You cannot identify the numbers who responded in this manner from the voice recorder, so notes should be taken. It is difficult to take notes and moderate at the same time. Hence in addition to a moderator, an observer would be useful in this case.

4.6.3 Focus Groups and Interviews

After the pilot studies, actual focus groups were conducted. In each neighbourhood, focus groups were held with primary school children, ages between 10 and 11 in April 2010. Before doing the interviews, permission was sought from the Directorate of National Education of Konak Izmir. Each group was between seven and ten students. After giving some brief information about my background and myself, I asked the students to introduce themselves, and state where they live. Focus group questions were as follows:

Questions for Children

- Could you possibly describe the neighbourhood, the street that you live? What kind of Neighbourhood is it?
- What would you like to change in your neighbourhood?
- What are the problems?
- How many friends do you have in your neighbourhood?
- Where do you play with your friends in your neighbourhood? (Their social interaction areas)
- When do you play and why?
- Which street games do you know?
- Do your parents allow you to play on the street?
- How do you come to school? (By parents, alone…)
- How do you spend your spare time? What do you do?
- How many hours do you spend in front of the Internet and the TV?
- Could you possibly draw what kind of neighbourhood you would like to live in?

The difficulty in holding focus groups with children was to control the class. Even though there were only between seven and ten students, the moderator still had to keep the students quiet. Although they were reminded to talk one at a time after a point they lost their concentration. Hence it is a challenge for the moderator to maintain their interest all the time. In addition to a voice recorder it was useful to write the discussed issues on the board and take photos. In this study an observer was not used. Nevertheless, it would have been better to use an observer who took the notes, and to have formed a group of older students who are more stable and mature, rather than hyperactive.

Questions for Adults

In general for adults, questions involved neighbourhood relationships, social interaction places and activities, what they like and dislike about the neighbourhood, and the reason they chose to live there.

- Why do you choose Mavişehir/Karantina/Kültür as a neighbourhood to live in?
- What do you like/dislike about your neighbourhood?
- How long have you been in your neighbourhood?
- How was your neighbourhood before? How has it changed?
- How would you describe your street?
- Are there places to sit on the sidewalk/street? How do you spend your time in your street/neighbourhood, and with whom? How long do you stay?
- What kind of activities do you do in your neighbourhood?
- Where do you come across neighbours? How often do you meet them?

- How can you describe social relations in your neighbourhood? Why?
- What do you think about the safety in your neighbourhood? For instance, can you let your child/grandchild easily play on the street? Why?

Questions for Street Vendors

- Do people stop and talk with them? Do people ignore them?
- Who are their customers?
- What is their observation?
- Do they think people are friendly in that area; do people chat on the streets?

Questions for Bakkal or Local Shop

- How long have they been there?
- How do they feel things have changed?
- Are people friendly to them?
- What is their observation?

Questions for Konak Municipality

- Who is responsible for the regeneration projects of the streets in Kültür Neighbourhood?
- How does the regeneration project of streets emerge? And what is its scope?

Questions for Mavisehir Management

- How did you decide to encircle the neighbourhood with fence?
- Is there any safety problem in the neighbourhood?
- There are not many places that people can gather together except the private places; are there any projects on the agenda concerning social places like tea houses?
- What do you think about the car parking problem?
- Although some residents complained about the social relations among neighbours, they still prefer Mavisehir, why do you think so?
- Are there any activities or events organised by the management?

Table 4.2 Case Studies and Conducted Methods

Kültür Neighbourhood	**Karantina Neighbourhood**	**Mavişehir Neighbourhood**
Historical Development	Historical Development	Historical Development
SSX Analysis	SSX Analysis	SSX Analysis
102 Questionnaires (SPSS)	120 Questionnaires (SPSS)	110 Questionnaires (SPSS)
Snapshots	Snapshots	Snapshots
Sections and Photos	Sections and Photos	Sections and Photos
Interview with Muhtar	Interview with Muhtar	Interview with Muhtar
Interview with Konak Municipality	Interview with 2 Residents	Interview with the Management
Focus Group with Children (10)	Focus Group with Children (10)	Focus Group with Children (7)
Interview with a Levantine family	2 Focus Group with Adults (3)	Focus Group with Adults (3)

4.6.4 Questionnaires

In order to define the size of the sample, sample tables were used with a precision (e) of +/- 10%, and from the population of 7000-9000, 100 was determined as an adequate sample size, with a confidence level of 95% (see the table in the appendix 1). Mithatpaşa Street of Karantina was chosen as a pilot study area. Although a decision was made to use a random sampling technique, during the pilot study it was understood that doing N^{th} sample was very difficult in terms of safety issues. In both case studies, people refused to open their doors, or there were notices on the entrance doors that warned away outsiders. In many apartment blocks concierges refused to open the entrance door, because of the strict rules set by the management committee of the block, another issue was that people were scared of burglary and crooks. In addition, they expressed that they were fed up with filling in questionnaires distributed by various companies.

Hence the methodology was changed; concierges were used as a mediator between the residents and the surveyor. A covering letter was enclosed with the questionnaires explaining the background of the research, and introducing the researcher. Four surveyors assisted the researcher in the cases of Kültür and Karantina. They were trained in terms of their approach to people, and the way they conducted the questionnaire by the researcher. Two surveyors worked in Kültür Alsancak and the other two worked in Karantina, while the researcher worked in all three case areas.

For instance, the area was divided into two in Kültür Neighbourhood. At least 500 questionnaires were distributed and 102 were returned. In each block surveyors distributed three questionnaires. However, in terms of safety issues, some blocks refused to take the questionnaire; and some concierges were helpful but in general they did not show interest in the research. Surveyors had to follow up on numerous occasions in order to collect the completed questionnaires. Distributing the questionnaires was easier than collecting them.

Surveyors' impressions and experiences were noted. One surveyor working in Kültür Alsancak case area said that;

> Working with high-income groups was very difficult, in terms of reaching them. Especially on the streets and apartments where foreigners are living, safety protections are extremely high. People answered the questionnaires by thinking about their streets rather than the district. That's why they think that the area is safe. Elderly people living in the area think that no matter what the circumstance is in the neighbourhood, they will continue to stay there. Questionnaires are distributed with the help of concierges for the ones we could not deliver to apartments, and the rest are done face to face. On the other hand one to one questionnaires are done mainly with retired people and housewives.

For the waterfront in Karantina Çankaya Neighbourhood, attempts were made to deliver three questionnaires to each apartment block, depending on the accessibility of the residents as determined by the concierges. In the inner parts where a greater proportion of the middle income groups live face to face questionnaires were distributed. At the end, with 20 pilots in total 120 questionnaires were gathered out of 500.

In Mavişehir, the issue was different. Because it is a kind of gated community, with its own management office and private security office, permission had to be obtained before conducting the observations and distributing the questionnaires. Four hundred questionnaires were distributed by the management via concierges; however 30 questionnaires were returned. Hence the researcher had to develop another strategy, but the management only allowed her to conduct the survey in the public spaces of the neighbourhood.

4.6.5 Structure of the Questionnaires

Table 4.3 Correlation Model between Space and Social Interaction

SPACE	**SOCIAL INTERACTION**
Near Home Environment (NHE)	*Sense of Community (SC)*
Spatial Characteristics	*Frequency of Social Interaction*
Management and Maintenance	*Frequency of Visits*
Managerial Characteristics	*Friends and Acquaintances*
Activity in Front of the Building	*Interaction in and around the Building*
	Interaction around the Neighbourhood
	Perception of Walking
	NP Known in the Building and Neighbourhood
	Social Characteristics

Questionnaires are formed of three fundamental parts. First, it covers socio-demographic variables that include age, gender, and length of residence, ownership, education, and occupation. Secondly, it covers spatial variables such as the spatial configuration of the near home environment, which activities are afforded in front of the building, and spatial characteristics of the neighbourhood. Thirdly, it relates to social aspects such as number of people known (NP) in the neighbourhood, friendship, frequency of social interaction, and so on. For detailed information about the questions and how they are decoded see appendix 2. Consequently, when the correlations were calculated each variable more or less correlated with each other; however, the focus was on the relation between space and social interaction. In order to understand how the organisation of in-between space affects interaction, basically, variables under each group, as can be seen from the table 4.3 above, were associated through the help of statistical analysis tool SPSS.

Table 4.4 Correlations from the Literature

Near Home & Frequency of Interaction	Neighbourhood Newness & Selectivity
Near Home & Interaction around Neighbourhood	Place character & Place attachment
Attractive & Greenery open space	Neighbourhood Prestige & Place attachment
Attractive & Age	Resident satisfaction & Neighbour relation
Attractive & Education	Resident Satisfaction & Open space near by
Attractive & Spacious	
Spaciousness & Neighbouring, SC, Friends	Duration & Attachment
Sense of community & Women	Duration & Neighbour Relations
Sense of community & Length of residence	Duration & Resident Satisfaction (Moving)
Sense of community & Owners	Ownership & Attachment
Sense of community & Age	Ownership & Moving
Sense of community & Land use diversity	
Sense of community & Selectivity	Gender & Security
Sense of community & Pedestrian environment	Gender & Walk
Sense of community & Household with children	Gender & Relation with People
Perception of walking & Interaction	Population size, density & Interaction
Walking on foot & Number of people known	Crowded & Frequency of social interaction
Walking on foot & Gender	Social heterogeneity & Interaction
Car Use& Gender	Interaction & Gender
	Interaction & Number of People Known
	Interaction & Walking on Foot

Moreover, the study investigated the correlations undertaken by various researchers, both for forming the questions as well as for the correlations. In the table 4.4 above, some of them can be found. Most of the correlations are developed by Zehner and Marans (1973), Nasar and Julian (1995), Skjaeveland and Garling (1997), Abu-Ghazzeh (1996; 1999; 2000), Talen (1999), Green (1999), Lund (2002), and Hargreaves (2004).

In the questionnaire, open ended questions, and multiple choices, 5-point scale questions (from strongly agree to strongly disagree) were used. Variables were grouped under three measures in SPSS; nominal (yes, no), ordinal (never, sometimes, a lot), scale (continuous variables). 5-point scale questions were developed from the works of Nasar and Julian (1995), Skjaeveland and Garling (1997), and Lund (2002). Another factor worthy of note is the scale reliability analysis in SPSS. Rather than correlating each question with each other, scale reliability allows researchers to correlate sets of variables with others. Therefore Cronbach's alpha (α) is first obtained for the five groups of variables. For a high internal consistency, (which means that the results are consistent with the overall questionnaire), alpha (α) has to be equal to or greater than 0.700. In this study, the questionnaire consists of three 5-point scale groups; perception of walking, sense of community, and near home environment. However, these variables were rearranged under five groups. In addition to the former, maintenance and management, as well as friendships and acquaintance, were added through recomposing some of the relative questions. High correlations should be double checked as they might have same questions. In the appendix 3 below variables under five-point scale groups and their reliability analysis can be seen for each of the case study.

Furthermore, place of encounters were grouped under two categories. The First concerns the interaction in and around the building, and the second one interaction around the neighbourhood. Indices were formed of five variables under each group. Hence, in the analysis, the mean of these indices revealed

how many places were chosen out of five as an interactional place in/around the building, and around the neighbourhood (see the table 4.5 below).

Table 4.5 Index Table for Places of Interaction

Interaction in around the Building	Interaction around the Neighbourhood
Interaction at the Entrance of the Building	*Interaction on Street and Sidewalks*
Interaction at Staircase and Hall	*Interaction in Parking Lot*
Interaction on Balconies	*Interaction in Open Spaces*
Interaction at Windows	*Interaction at Cafes and Local Shops*
Interaction in the Lift	*Interaction at Other Places*

4.6.6 Neighbourhood Characteristics (NC)

Green (1999) explored the relationship between "town character" and community attachment in a study he undertook on an Australian coast community. He considers the landscape features and the meanings attached to them by the residents. In order to specify the bi-polar adjective rating scales, questionnaires with open ended questions, and the content analysis of a sample of residents' letters, were conducted. At the end both from the analysis and with the correlation of lexicons of landscape descriptors developed by Craik (1972) and Kasmar (1988), Green (1999) concluded with 21 rating scales. In this study 15 of Green's rating scales were used, with the others added by the researcher. Those bipolar adjectives are grouped under three groups as in the table 4.6 below; positive and negative spatial characteristics, positive and negative social characteristics, and positive and negative management-maintenance characteristics.

Table 4.6 Three Groups for Perceived Neighbourhood Characteristics

Spatial Characteristics	Social Character	Management & Maintenance
Central/Outer	Interesting/Boring	Comfortable/Uncomfortable
Ornate/Plain	Pleasant/Unpleasant	Well kept /Unkept
Varied/ Monotonous	Lively/Lifeless	Safe/Unsafe
Spacious/Narrow	Peaceful/Anxious	Clean/Dirty
Distinctive/Ordinary	Friendly/Unfriendly	
Natural/ Manmade	Familiar/Unfamiliar	
Simple/Complex	Exciting/Depressed	
Not crowded/Crowded	Relaxed/Stressed	
	Quiet/Noisy	

4.7 LIMITATIONS OF THE STUDY AND CONCLUSION

Using the mixed method approach was useful to form the triangulation; on the other hand, however, it was difficult to go into detail for each method. For instance, while questionnaires were analysed in detail with statistical tools, interviews were used as a quote to support the results. Another handicap was that using a mixed method takes longer; therefore some issues could not be explored further. Social interaction types (whether encountered by chance or by predetermined meeting) could be observed with longer observations at specific locations with in-between space types. However it was also difficult to manage larger data and information in terms of collecting, analysing and combining them together. The sampling number was chosen through statistical tables but random sampling could not be implemented due to safety issues.

Questionnaires could be correlated with space syntax measures statistically. Firstly the results of the questionnaires from each street could be associated with space syntax analysis. Hence the mean of socio-demographic analysis, neighbourhood characteristics, and 5-point scale questions of each street could be produced and added into the space syntax table. Indeed to do this, the boundary of the case study could be narrowed or only one case could be chosen. Secondly, through segment analysis, each street segment could be correlated with the qualitative issues. Parameters could be developed such as door number, entrance type, and encounter number and type within the observation period, as well as the mean of questionnaire results from the street segment. In addition, there could be detailed VGA analysis for specific locations with street furniture.

Another issue about space syntax was that of comparing traditional and modern neighbourhoods. As some researchers criticise space syntax for evaluating spaces equally, it can be discussed whether it would be right to compare an axial model of a modern pattern neighbourhood with a traditional one. However, the important thing here is movement, which is the dependent variable of spatial relations.

In conclusion, space syntax is chosen as a preliminary method because it is evidence-based but also because it gives a better understanding in order to understand complex spatial relationships and make comparisons between different urban patterns. However it is not adequate enough on its own to analyse cities from multiple perspectives. Therefore it has to be correlated and overlapped with other methods. Recently there have been more tendencies to use mixed methods, as one method can make up for the deficiencies of the other. Space syntax helped this study to reveal inter spatial relations and the social background of three different urban patterns. Moreover through correlating observations (snapshots) such as pedestrian movement, stationary activities, and groups with the configuration of the street pattern, this study exposed where long duration activities and movement locate themselves depending on the accessibility measures.

While the space syntax method tried to deal with the physical characteristic of the pattern and activity maps, questionnaires were used to understand the residents' perception of space and their interactional places and frequency of interaction, besides sense of community and neighbouring issues. At the beginning of the research, it is hypothesised that in the settlements demonstrating lack of in-between spaces there might be less interaction and as a result less neighbouring. However it is more implicit within the questionnaires that there might be other factors and urban form might not be the only predictor for social relations and neighbouring. For that reason this study contributed to the knowledge both in terms of theory and methodology.

CHAPTER 5 IZMIR AND ITS DEVELOPMENT

Introduction

Before analysing three different neighbourhoods, this chapter starts from a bigger picture to reveal how the planning system works in Turkey and which planning discourses had an impact on the layout of Izmir. The discussion therefore starts with the planning system and urban design in Turkey, and continues with the historical development of the city. Then it gives brief information about the evolution of the housing typologies of Izmir. Finally it presents a space syntax analysis of the city pattern; each case study is introduced in detail in the next chapters.

5.1 PLANNING AND URBAN DESIGN IN TURKEY

In the 1960s comprehensive planning was criticised due to its lack of flexibility and the fact that it lagged behind the rapid change and development. Hence in the 1980s there was a move towards a project-based approach. With the 1990s, the strategic planning approach became popular and started to be influential in the western planning systems. Strategic planning is related with the action and vision of the city. It is more adaptable, participatory, action and target-oriented, which involves organised effort and management technique (Ozgur, 2008; Sanoff, 2006). Nevertheless, in Turkey the planning system is still a long way behind the strategic planning approach (Ercan, 2007; Yildirim, 2006). It is based on development plans, which do not unify with urban and strategic plans of the region; in addition,there is little relation between large-scale and small-scale plans (Ercan, 2007). Development plans focus on the end-state plan rather than the process. Hence these plans are of a static nature, which is inflexible and prevents the possibility of urban change (Unlu, 2006).

The planning system is related to three main contexts: regulatory, procedural, and socio-political contexts. In Turkey these contexts operate differently. Firstly,

the regulatory context includes a plot- based approach, which should be replaced with design frameworks leading to character areas. Secondly, the procedural context is more about the bureaucratisation of control mechanisms, which should be changed with the active interaction of stages and the revision processes. Finally, in the socio-political context we come across individual actions instead of coordinated ones (Unlu, 2006).

In addition to context, urban planning comprises many processes. In Turkey the most important process is the implementation of development plans. The main purpose here is to form building parcels and implement urban rent sharing. This causes a variety of spatial problems concerning the distribution of property rights equally and fairly (Meshur, 2008). There are three methods in the implementation process of development plans: 1) expropriation (kamulastirma), 2) separation and join (ifraz-tevhid), and 3) the most common one, Land Readjustment (Arazi ve Arsa Duzenleme) (Meshur, 2002). However, land readjustment operates just as a production of building plots rather than to form an urban space. Consequently it removes the design opportunities and flexibility, which results in the randomly formed in-between spaces between buildings. This method is understood as an engineering problem that includes geodesy and cartography, whereas architects and planners are excluded from the process (Meshur, 2008).

Development planning is unsuccessful in terms of creating an integrated urban form; it generates monotonous, built environments without identity and character due to its economical and practical features. It can also be implemented without design; it encourages the build-sell system (yap-sat) and small capital investors to build apartment blocks in small construction plots. Additionally, as Sayar and Suer (2004) stress, from the end of the Second World War to the 1980s, the production and representation system of dwellings in

Turkey was squatter *Gecekondu*[1] and 'build-sell' system *Yap-sat*[2]. Through the production of yap-sat, at the end, development plans turned into a tool for setbacks, as well as building heights and plot ratios. In a sense this approach takes the design responsibility away from architects and planners (Bas, 2006).

As a consequence, Turkish Cities have lost the quality of urban space and public realm through development plans, regulation and the planning system (Unlu, 2006). Moreover, urban development legislation does not define the regional and local differences that depend upon climate, topography and orientation. Municipalities had the possibility to change these issues according to the region, but they did not. Hence urban environments cannot be formed depending on the local context (Aydemir, 1989). Consequently, laws regarding urban development were not capable of dealing with urban issues in Turkey.

In addition to regulatory problems, in Turkey there are also institutional problems, such as the lack of cooperation between institutions. Since the 1980s there has been an increase in the number of institutions commissioned with planning which has caused governance chaos between multi actors. For instance, local government does not consider the planning decisions of the large-scale plans of central government. Besides this, district municipalities are preparing small-scale plans without respecting the master plans of metropolitan municipalities. There is an ambiguity regarding development and planning authorities between central and local governments (Ercan, 2007). In 1985, although there was not enough knowledge and technical support, municipalities fell within the planning sector and commissioned by developing plans. This

[1] *Gecekondu* is a kind of indigenous urban vernacular but not a slum, an urban housing solution for low income groups (Pamir, 1982, p.16).

[2] *Yapsatçılık* (build-sell) is a system emerged after the condominium act. The small contractor agrees with the land owner and obtains building permission. He starts building with a small capital outlay and during the construction sells flats and increases his capital. Thus by this system the small contractor can sustain the building of apartment blocks in various empty lots (Tekeli, 2008).

however resulted in the degradation of waterfront settlements. As Keles (1994) emphasises, the numbers of municipalities were increased despite a lack of resources. This caused the decrease in the quality of public services. In addition, in some cities there is a lack of communication between planners and mayors.

In terms of planning problems, as mentioned before, in Turkey, incremental rather than strategic planning is prominent. Due to the project-based approach, some of the urban transformation projects create gentrification problems and the privatisation of the public realm. In Turkey urban design should be an integral part of the strategic plan rather than focusing on the special project areas, with big private investors encouraging the urban rent and speculation. Ruptured urban patterns, such as giant shopping areas, business centres and gated communities, increased with urban transformation projects (Bas, 2006; Ercan, 2007; Keles, 1994; Ozgur, 2008; Vardar, 2005).

In Turkish Cities, gecekondu settlements are usually referred as urban transformation projects (Akkar, 2006; Yildirim, 2006). As Keles (1994) states, development remissions and reclamation plans have become tools for privatisation and give legitimacy to geekondu areas. It is important that urban transformation is not just a physical issue; it has an economical, social, and environmental frame as well (Akkar, 2006). Reclamation plans are not considered within the framework of urban design, and those areas are not ameliorated due to the needs of gecekondu residents (Gunay, 1997). Large-scale plans do not include the settlement's regional development tendencies; social, cultural, natural and economical sources, ethnological structure, and identity. Development plans should be developed and referenced due to master plan decisions, but urban rent and speculations force urban transformation to be used under different land uses and density decisions. Hence the macro form diminishes (Ercan, 2007).

5.2 PLANNING AND BRIEF HISTORICAL DEVELOPMENT OF IZMIR

Izmir (Smyrna) is roughly an 8500-year-old city, which has been announced with the recent excavations (Yeşilova Höyük, 2011; Alper, 2009). It was thought that the city was named as Smyrna by Amazons around 14th century B.C. (Atay, 1993). Additionally, Smyrna has hosted various cultures and civilisations since the Neolithic period such as Hittites, Phrygians, Lydian, Ionians, Aeolians, Caria, as well as Hellene, Roman, Byzantine, Seljuk and Ottoman (Atay, 1993; Aksoy, 2002). Before the excavations of Yeşilova hill, it was considered that Izmir was first founded around Tepekule (Bayrakli Hill 3000 B.C.). Moreover by 344 B.C. Alexander the Great re-established the city on Kadifekale 'Pagos' Mountain and the city developed between the inner harbour and the Pagos Mountain (Beyru, 2000).

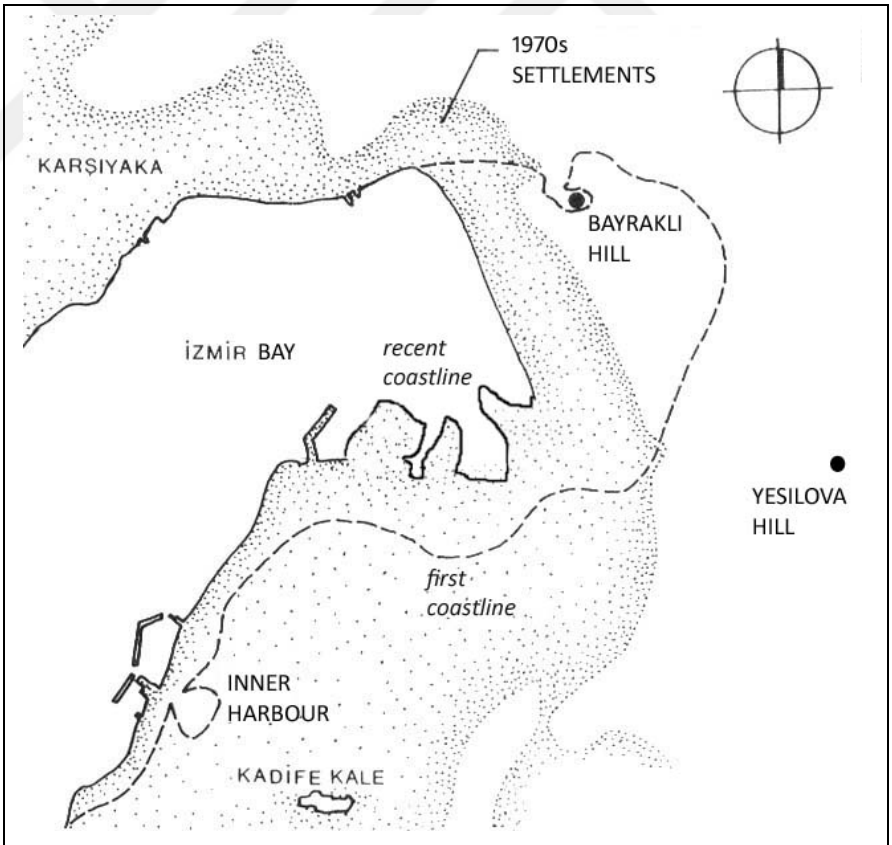


Figure 5.1 Antique and Recent Coastlines of Izmir
Source: Izmir City Archive (ICA)

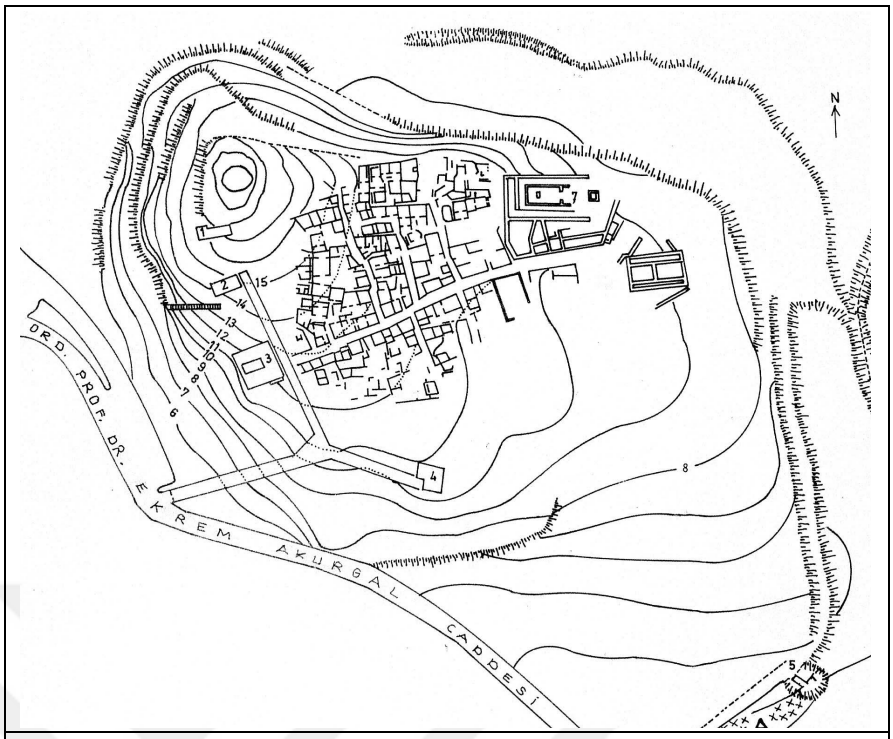


Figure 5.2 First Settlements of Izmir, Bayrakli Hill 3000 B.C. – 300 B.C.
Source: ICA

As in B.C. between 11th and 15th centuries Izmir was ruled by different civilisations such as Genoese, Mongol, Turks, Arabs and Crusaders. In that period there was a castle located by the inner harbour in addition to the castle on Pagos Mountain. It was the sign that the city was prospering as a harbour city. Turks entered into Izmir in 11th century but could not conquer the castle that was located along the inner harbour till 15th century (Atay, 1993; Çiçek, 2006). In 16th century the name Smir, Smür, Ismir, Ismür was transformed into Izmir by Turks (Atay, 1993). Since that period inner harbour along the foothill of Pagos Mountain developed as a commercial area. Together with this change, both Anafartalar Street and Frenk Street started to develop as a trade axis, and Izmir became an important trade centre between east and west under the rule of Ottoman (Bilsel, 2000; Çiçek, 2006; Alper, 2009; Yatağan et al., 2009).

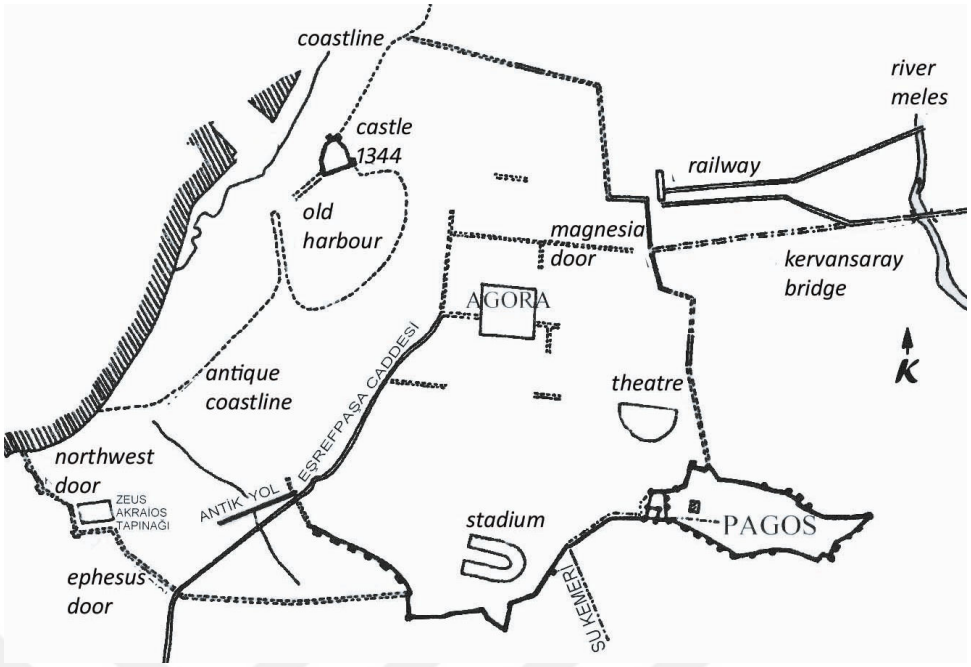


Figure 5.3 Izmir in Roman Period
Source: ICA

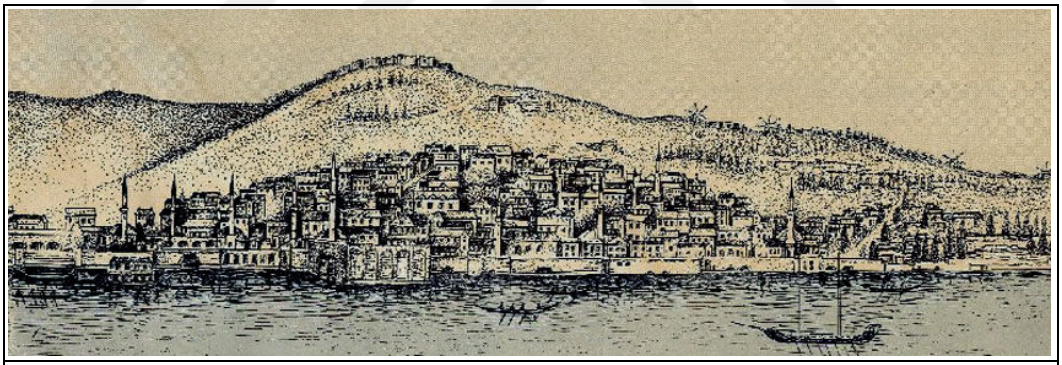


Figure 5.4 View of Smyrna Harbour, Etching by Henri Abraham Chatelain (1684- 1743)
Source: Levantine Heritage, http://www.levantineheritage.com/

By the seventeenth century when the inner harbour of Izmir was revitalised by Ottoman, the city flourished in terms of trade activities. With the extension of the trade in the centre towards the north, Alsancak (European Quarter) became a residential and business area for high-income groups of Levantines. Alsancak has a specific character with its streets, open spaces and Levantine buildings. It is important in terms of being a residential area for the merchants since the inner port (Kemeralti) was the city centre. Then, with the increasing lack of housing areas for the Levantine inhabitants, towards the end of the eighteenth century

suburban and summer housing areas emerged in Buca, Bornova, Karsiyaka, Karantina, Goztepe, and Guzelyali. At the end of the nineteenth century with the expanded transportation systems, these districts connected more with the city centre and became the residential areas for the bourgeoisie (Ballice, 2005; Bilsel, 2009; Eyuce, 2005; Guner, 2005; Kaya, 2002).



Figure 5.5 Inner Harbour of Izmir Model
Source: Çiçek, 2006

As Bilsel (2000) emphasizes, Izmir's morphological structure can be read through the maps that were developed by map engineers with the beginning of 1830. When these maps are analysed it can be seen that the morphological structure of Izmir was formed of four areas. First one was at the foothill of Kadifekale Mountain at the southeast, and Degirmendere at the south with an organic structure and dead ends. These regions were mostly resided by Turkish and Jewish people. Second one was the flat area with rectangular parcels, located at the north and northeast, where Greek Neighbourhood was settled. And the third one was Kemeralti and its environment (old harbour), with khans and their courtyards. As a commercial centre urban pattern was compact with smaller parcels divided by narrow streets. Fourth one was the Frenk District area with long and narrow parcels along the bay. Opposite to the Turkish neighbourhood

in here, there was residential use in addition to the commercial use. Thus, there were differences in the organisation of space and indoor and outdoor arrangements as well as private/public space relations related to the cultural differences in the city. Consequently, Izmir's urban pattern was formed by its cosmopolite structure, culture, and landuse, moreover by the topographical features with slopes and flat areas in the city (Bilsel, 2000).

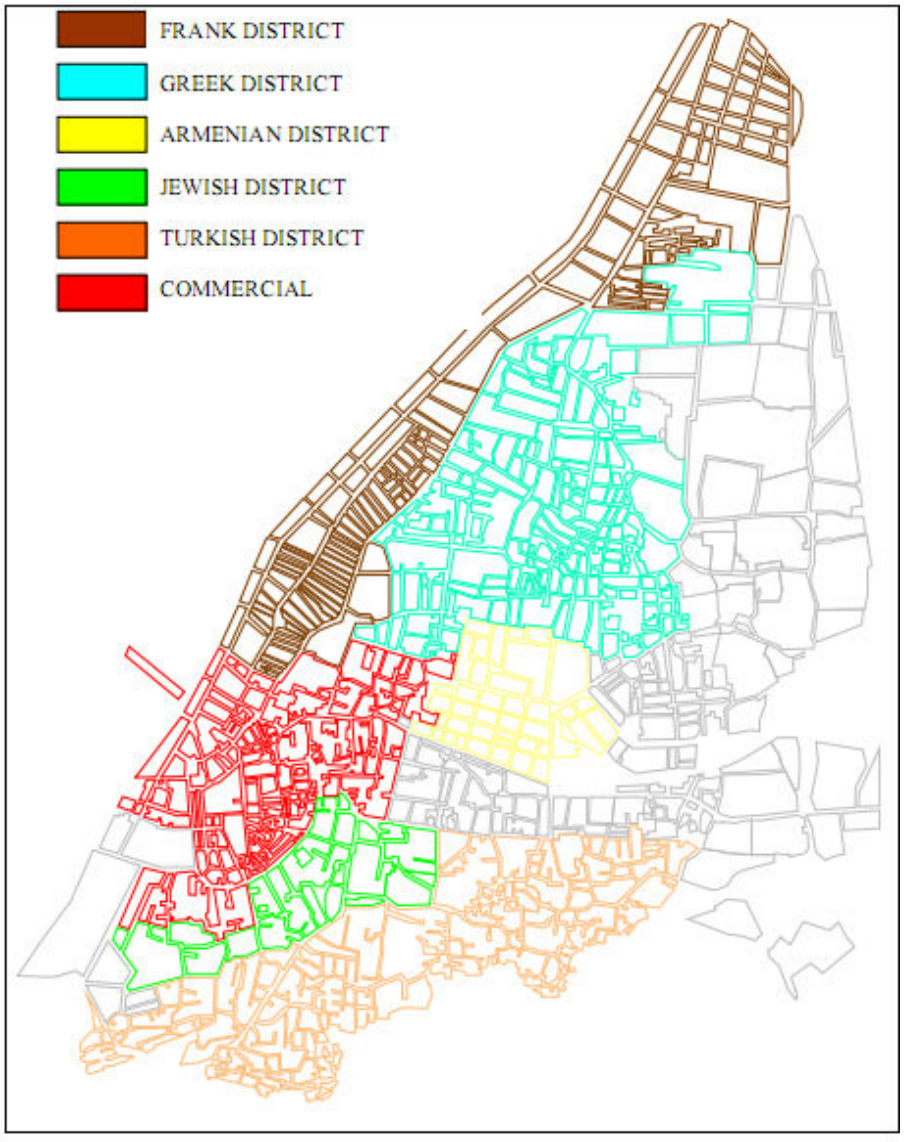


Figure 5.6 Morphological Structure of Izmir in 1905
Source: Alper, 2009;p. 106

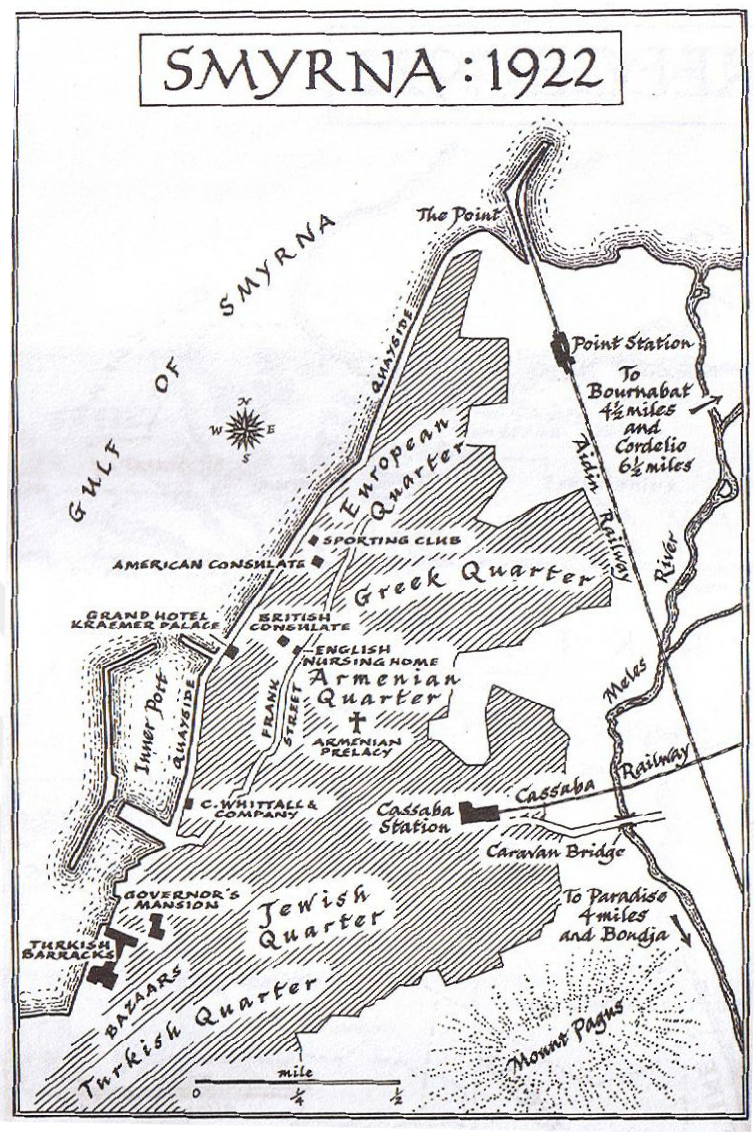


Figure 5.7 Five Different Quarters of Smyrna in 1922
Source: Milton, 2009

With the establishment of the New Turkish Republic, Izmir started to modernise its structure via the influence of western planning approaches and ideas. Danger and Prost (1925) Plan was the first attempt at citywide planning approaches in Izmir. Under the consultancy of French planners Henri Prost and Rene and Raymond Danger, the master plan for Izmir was developed. It was approved by the Izmir Municipality in 1925 and revised in 1933. Basically, it was based on the principles of Ecole-de Beaux Arts with radial roads, boulevards, and public squares at their intersection points. It was implemented partially for the areas of Alsancak that had been destroyed by war and fire. Investment decisions could

not be implemented due to the existing financial problems. However, this plan is important for two reasons: firstly, because the municipality established a commission of citizen architects, engineers and doctors defining the planning targets for Izmir, and secondly, because the recent urban pattern of the city centre, Alsancak, was defined by this plan, which can be easily seen from aerial views (Bilsel, 2009; Kaya, 2002).



Figure 5.8 1925 Danger and Prost Plan Izmir
Source: Izmir City Archive (ICA)

Secondly, Le Corbusier developed his plan with a modernist space design approach and using CIAM principles, and submitted it in 1949. As a functionalist plan it provided commercial, business and residential zones, with a comprehensive land use plan. It proposed to renew the whole city, with the separation of motor and pedestrian traffic, new residential areas in Hatay, and administrative and cultural buildings in Konak. Here planner and municipality did not work together, and the plan did not include any joint participation. However, Le Corbusier's proposal had come into existence indirectly and affected some of the decisions of the master plans later developed. Along with this, it is important in terms of being the exemplar for the urbanism framework of CIAM (Bilsel, 2003; 2009; Kaya, 2002).



Figure 5.9 Le Corbusier's Master Plan for Izmir
Source: Öcal, 2009, http://v3.arkitera.com/news.php?action=displayNewsItem&ID=41436

Afterwards, the 1950s was the period of Aru, Ozdes, and Canpolat's Plan, which was a competition project launched by the Bank of Provinces for municipal services. Their approach was defined by the authorities as a functional approach, dividing the city into functional regions as Le Corbusier had done. However it was more practical and applicable than Corbusier's, as well as illustrating the future development areas of the city depending on the survey method and analysis. It became operative in 1953. The most important decision of this plan was its approach to conserve the traditional shopping centre in Kemeralti. Regarding the public demands and the influence of the authorities, initial decisions were changed. Therefore the plan was exposed to alterations and action area plans for

the preparation of the final master plan. This was a sign of a participatory process to a certain extent (Bilsel, 2003, 2009; Kaya, 2002). Furthermore, for the waterfront development, this plan effectuated the extension of transportation system and construction of multi-storey buildings (Yuksel, 2006).



Figure 5.10 Air View of Alsancak Kültür Park
Source: http://www.skyscrapercity.com/showthread.php?t=220251

In the 1950s and 1960s planning and architectural approaches in Izmir transformed from a nationalist movement to an international style. By the 1960s Izmir was faced with the problem of rural/urban migration, and the city grew rapidly towards its periphery. In this period Izmir started to experience the *gecekondu* phenomenon due to rapid urbanisation. This time the city invited Albert Bodmer to construct the revision plan. He identified the need for regional and comprehensive planning that included the city and its surroundings. Along with a comprehensive analysis he emphasised the social aspects of the city regarding squatter areas. However, the municipality did not adopt comprehensive planning and instead they chose to revise the previous plan (Kaya, 2002). Another important attempt was the 1965 Condominium Act enabling the conversion of four storey apartments to high storey apartment

blocks. As Guner (2006) emphasises, in this period, planning regulations were the most effective tools transforming the urban morphology of Izmir.

In 1973 the Master Planning Office of Izmir was established and it proposed a rational comprehensive approach that considered the city from different scales, with detailed analysis and projections. It covered new development and industrial areas of the city. The Mavişehir housing area was indicated first in this plan. It was the first metropolitan master plan of Izmir produced in 1/25000 scale with a coordinative and participatory process. It proposed a linear macro form for Izmir; nevertheless it could not provide the strong control mechanism that is needed for a linear form (Arkon and Gulerman, 1995). The plan had many defects; for instance, it encountered financial problems and it had a problem in the finalisation of the analytical work as well as in the population projections (Kaya, 2002). There were also problems in its implementation process. Public investments could not be realised due to the disregard of land ownership. Cadastral maps for the proposed development areas remained unfinished, and delays in preparing 1/5000 and 1/1000 scale implementation plans resulted in the impromptu use of previous plans (Arkon and Gulerman, 1995).

In 1984, with the Metropolitan Law, the Izmir Metropolitan Planning Bureaux was closed. In 1985, with the new Development Law, municipalities commissioned for the preparation of a 1/5000 master development plan and a 1/1000 implementation development plan. Consequently, Izmir Metropolitan Municipality (IMM) developed the master plan through revisions and a combination of the previous 1/5000 and 1/1000 scale plans, besides infilling some of the sections with new plan decisions (Arkon and Gulerman, 1995). Consequently, this plan did not use any theoretical background or method. It was not under pressure to actually form and design, so the plans it produces only concentrated on emerging developments. In addition, with the influence of private investors and public investments, the city structure was developed with incremental decisions (Kaya, 2002).

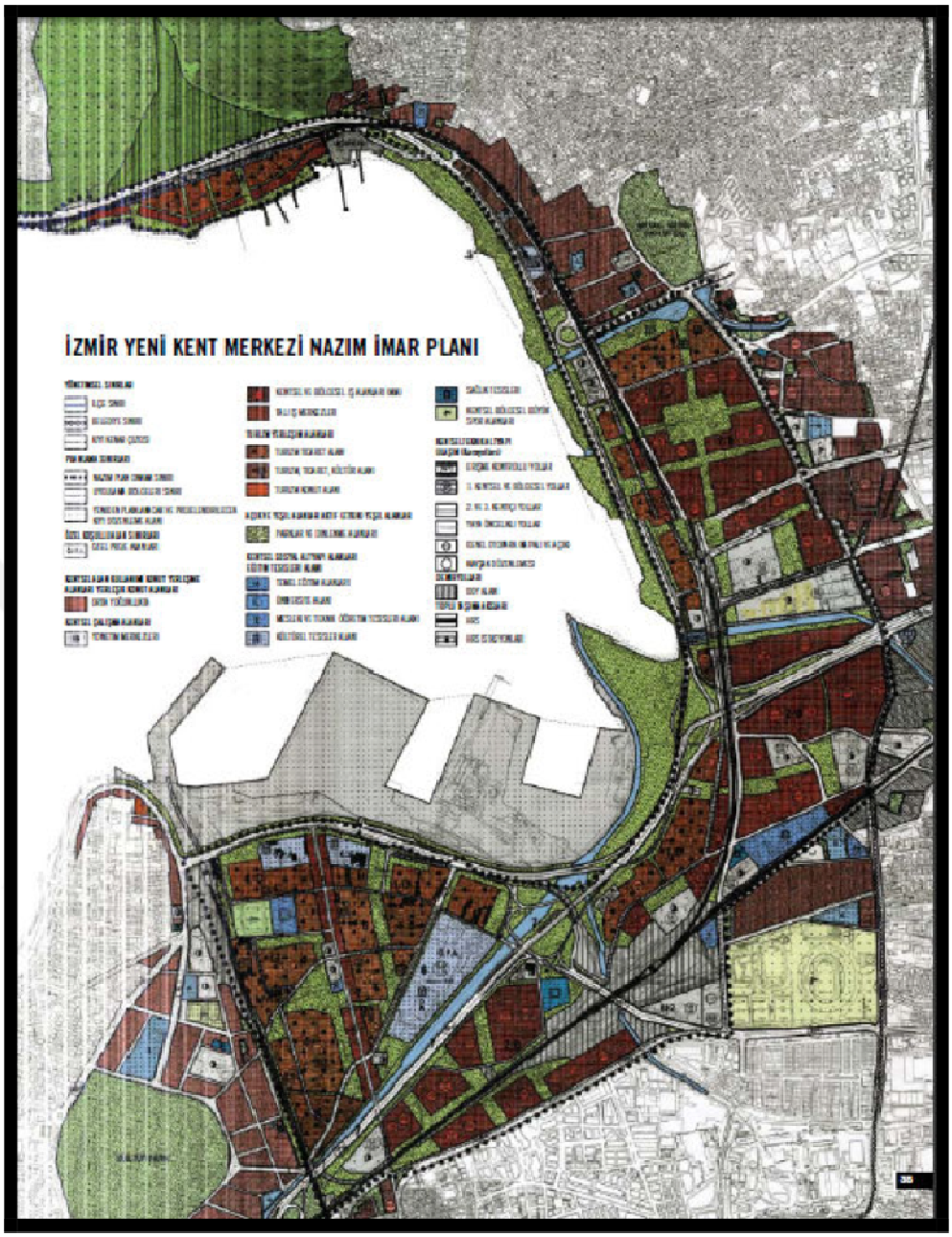


Figure 5.11 Izmir New City Centre Master Development Plan
Source: Bal et al., 2005

In the 1980s Izmir struggled with urban sprawl, and mass housing projects came into existence. Private entrepreneurs took the place of the public sector in the 1990s and, with the change in consumption culture; gated communities appeared (Sayar and Suer, 2004). At that time, in order to cope with the problem of housing shortage, the government facilitated the development through loans, and 'housing credit bank'. This bank funded Mavişehir and its location was

chosen according to the Master Plan of Izmir in 1973 (Aydogan, 2005; Ballice, 2005; Eyuce, 2005; Guner, 2005; Kaya, 2002). Consequently, by the twenty first century Izmir had developed regeneration and conservation projects on a small scale for the historical part of the city, which were run by the municipality and the private sector. Additionally, in 2003, the 'New City Centre Master Development Plan' was prepared by Izmir Metropolitan Municipality (IMM) for the harbour area, and finally in 2007 the city achieved its 1/25.000 scale Urban-Region Development Plan (IKNIP) which allows participation and discussions (Can, 2010).

In addition to the planning discourses, it is also important to briefly describe the transformation in the housing typology of Izmir since the country became a republic. This is also necessary to see how the changes in the regulations and socio-economic structure shift the layout of buildings as well as entrances and in-between spaces.

5.3 HOUSING TYPE SINCE THE EARLY REPUBLIC PERIOD (1923-2000S)

In the early Republic period there were two types of houses; one was the detached house with a garden and the second was the apartment block. Up until the 1960s, as Bozdoğan mentions, the term "apartment" differs to how we view it today. Then, the 'apartment' was called a "Kira Evi", or renting house. This type emerged in the 1930s through the transformation of detached houses into four- to five-storey family apartment blocks (Terim, 2006). Those family apartments were designed by famous Turkish architects for the owner of the house as a prestigious project. In terms of architecture they reflected the impression of the "Modernist House" with rectangular shapes and simplicity (Bozdoğan, 2008).

There are a couple of reasons for the increase in multi-storey apartment blocks. Firstly, there was a demand for housing in city centres. Because of the land speculation in city centres, (which had already begun since Punta started to develop) land rent increased; this resulted in multi-storey houses instead of detached houses with gardens in the centre of the city. The second impact was

the introduction of the Condominium Act in 1965. As emphasised above, this issue triggered the construction of high rise buildings and multi-storey apartment blocks. Before, the ownership of the building belonged to only one person, and that person could rent the other units of the house for an extra income. After the Act, the ownership of the apartment was split into the number of the flat owners. Due to the transformation of the parcels with gardens into apartments (an apartment block is occupying the parcel of the single house and its garden area as well); a high density urban pattern emerged. Furthermore, as a result of the plot-based approach, the city lacked parking areas, playgrounds, and green areas. There was not any attempt to adopt an integrated urban design approach. Concrete technology and production methods also affected this period (Güner, 2006; Terim, 2006; Bozdoğan, 2008).

Terim (2006) briefly summarises the evolution of apartment blocks from the 1950s to the 2000s. This summary is important regarding the in-between space organisation and its change in parcel lots, apartment entrances and facades. For instance, in the 1950s and 1960s, apartments were bigger with four rooms, wide balconies and terraces, plus entrances of the house and the flat. This started to change by the end of the 1960s, and at the beginning of the 1970s. Apartments included more flats in each storey with three rooms. In this period adjacent apartments were constructed. Those building types can both be seen in I. Kordon and along the shoreline, where there are eight-storey high buildings. From the end of the 1970s as the nuclear family concept expanded, flats became smaller (100-120 m^2), and the target was to build the maximum number of flats on to the small parcels. Apartment entrances and stairwells turned into narrower spaces. This continued into the 1980s with the similarity of plan types. By the 1990s and 2000s, with economic development, and increasing demand, small flats no longer satisfied the user requirements. Therefore there was a return to the bigger-scale flats. However this type of house differed from those that were constructed in the 1950s, as they were classed as a “luxury apartment” for high income groups. This time, luxury free-standing “point blocks” emerged on the edge of the cities; the reason for this was that the city centre was not providing

many empty parcels and houses for knocking down. So there were no empty urban plots in the centre that could push the constructions of new housing settlements towards large urban areas at the periphery of the city. Recently, another type of housing in city centres, the "Residence", has become popular. Those housing types are over 20 stories high and located at specific locations of Alsancak (Terim, 2006). However these locations can be criticised as they are not determined depending on location parameters of high rise buildings in the city, as well as they do not consider the development plan (Topal, 2008).

5.4 SPACE SYNTAX ANALYSIS OF IZMIR

5.4.1 Drawing Axial Lines

In order to draw a proper axial map, firstly a base-map of Izmir was obtained from the Municipality of Izmir. It has to be taken into account however that if the map is not updated it has to be checked through Google earth and then missing parts have to be inserted on the map. In the Izmir map most of the areas were updated through Google earth. Before drawing the model, the boundary of the area has to be determined. If an adequate buffer zone is not achieved, the problem of edge effect appears (TPR, 2004), which may result in inaccurate results. Hence in this study a 3.5 km buffer zone is created in order to prevent this problem.

While drawing the axial lines, the most important thing is to draw the longest and the fewest lines, and the possibility of the direct links should be checked. Vaughan (1998) mentions some important points deduced from experiences of researchers. Firstly, smooth changes depending on the topography of the street and whether it is slightly hilly or not should not be drawn as additional lines. These level changes affecting the visibility will not affect the whole model; here the important thing is the movement. Another issue she states is whether to include the landscaping in the model or not. This can be decided depending on the research's main target. If it is more about the urban structure it is better to use a 'low resolution' model. This model includes direct lines, kept as simple as

possible, revealing the potential movement. Second, if it is a smaller area, like one neighbourhood, then it can be modelled with 'high resolution' revealing all the cross-roads, railings and plants that prevent direct linear movement, as well as separating vehicular and pedestrian roads (Vaughan, 1998 in TPR, 2004). In the Izmir model, in order to have an idea of overall urban structure, a low-resolution model is selected.

Another issue is to be consistent, applying the same approach to the entire model, especially while drawing parks, open spaces and real estates, and to decide whether to include the paths of open spaces or not. It has to be remembered that lines drawn for open spaces are not lined with buildings, so they have to be simplified rather than making a curvilinear model and over-modelling. Special attention should be paid to roundabouts as well. The most difficult part of the model was to draw the housing estate, Mavisehir, and the updated parts of the map, because of the open spaces and parks with curves in that area.

5.4.2 Global and Local Integration

After drawing the axial lines, thematic maps were produced by using the space syntax tool in MapInfo 8.5 software. The researcher learned how to use the tool and the software by undergoing a two-month internship in Space Syntax. Hence the theory and the method behind the space syntax developed within the internship experience. Configuration is one of the main subjects of space in architectural and urban studies (Hiller, 1996 in TPR, 2004). Hence space syntax theory looks for the relation of relationships in a quantitative way on the graphical map. On the other hand it uses qualitative techniques to correlate all the outcomes.

Configuration is the main driver, which underpins all analysis. How is one street segment related with the other street segments in the whole system as well as within its neighbours? Here, 'to movement' or 'accessibility', and 'through movement' are also important. These concepts are explained in more detail

below. These relations in the network of the city can be measured metrically, topologically, or geometrically. *Metric distance* in space syntax means the physical property of a space; it measures the 'shortest paths' within the road system; it can be 'the length of the axial lines' or 'the area covered by a convex space'. *Topological distance* refers to 'fewest turn paths'; it is about the change of direction, how many steps one has to take from one space to the another, and it gives the topological depth of the space; and finally *geometrical distance* measures the 'least angle change paths' (Penn, 2002c in TPR, 2004; Van Nes, 2008, p. viii).

Space syntax gives the flexibility to compare cities both globally and locally. Global measures indicate most central and accessible streets, where shops are located. Conversely, local measures reveal the sub-centres and locally integrated streets, usually residential areas and neighbourhoods (Van Nes, 2008). In thematic maps red and orange colours indicate the more integrated street patterns, while the lower ones are bluish. Hence the city centre is red, whereas the edges of the city are blue, and more segregated.

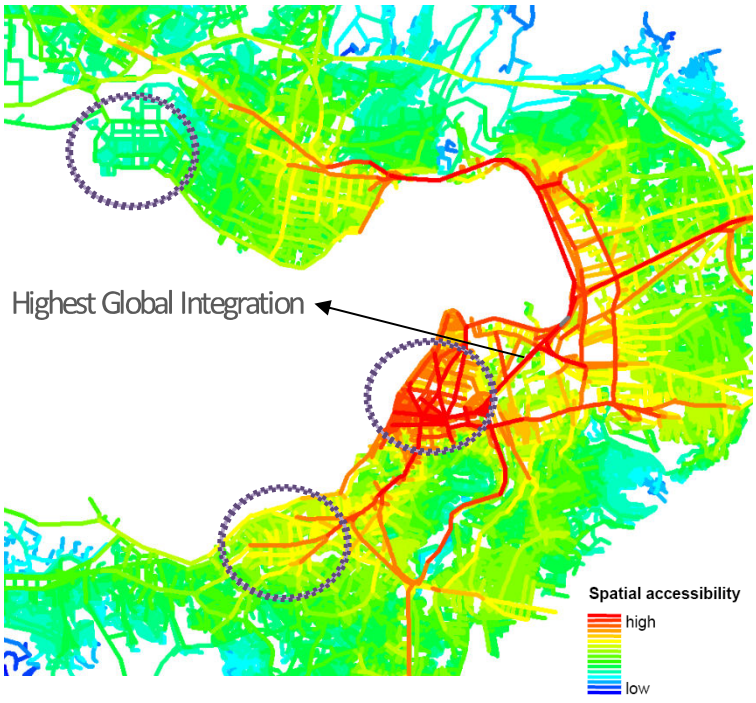


Figure 5.12 Global Integration Analysis of Izmir, INT RN

Global integration analysis INT RN reveals the most accessible part of the city, and shows its centrality and the most integrated streets in terms of topological depth, and relation of the street to all other streets in the system. Izmir is a linear city expanding along the bay and also in north, south, and east directions as the topographical structure of the city allows. As can be seen from the axial model in figure 5.12 above, the most integrated streets are on the main routes and ring roads through the city. This area is the centre of the city where the shopping, commerce, leisure and business functions are located. The harbour area is in the most accessible part, which has been developed as the new central area. This part of the city is the new business district of Izmir. There have been recent plans to develop this area as the city is expanding, and also to reduce the pressure of speculation on the historical part of the city.

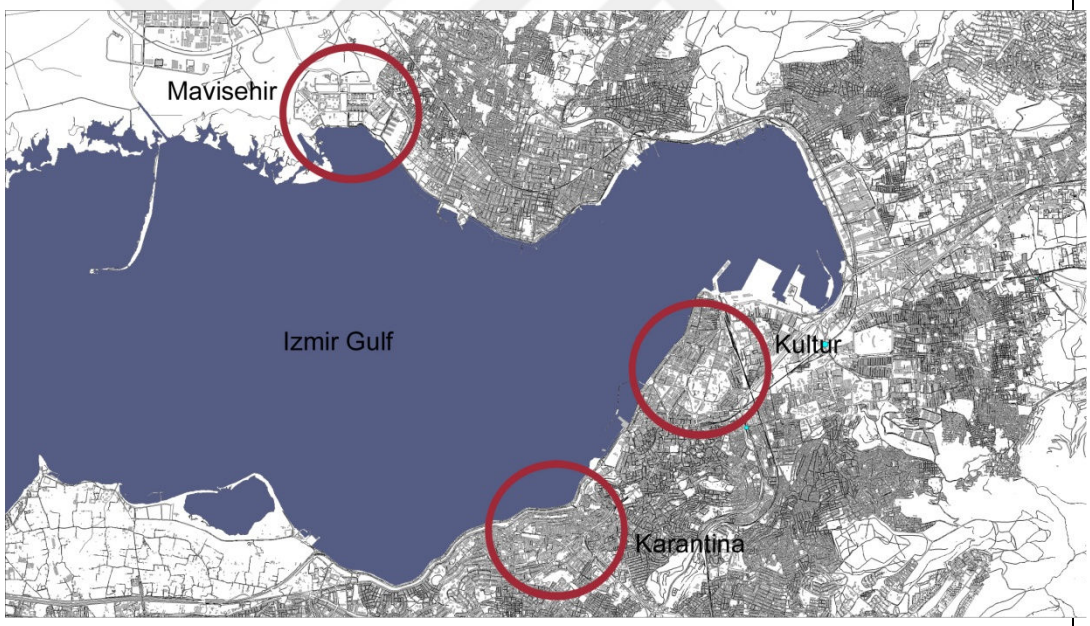


Figure 5.13 Three Neighbourhoods of Case Study Areas in Izmir

Three case studies are selected from different parts of the city. The first one is chosen from the most integrated core of Izmir, which is Alsancak. The second case is chosen from the yellow area, Karantina, more in-between the centre and periphery, and the third one is selected from the greenish blue more segregated part, which is a housing estate, Mavişehir. It is important to mention here that

global analysis just indicates one centre and it does not show the sub-centres. As Van Nes (2008) emphasises, in this sense, local integration is very important, because a street can have low global integration value but a high local integration value.

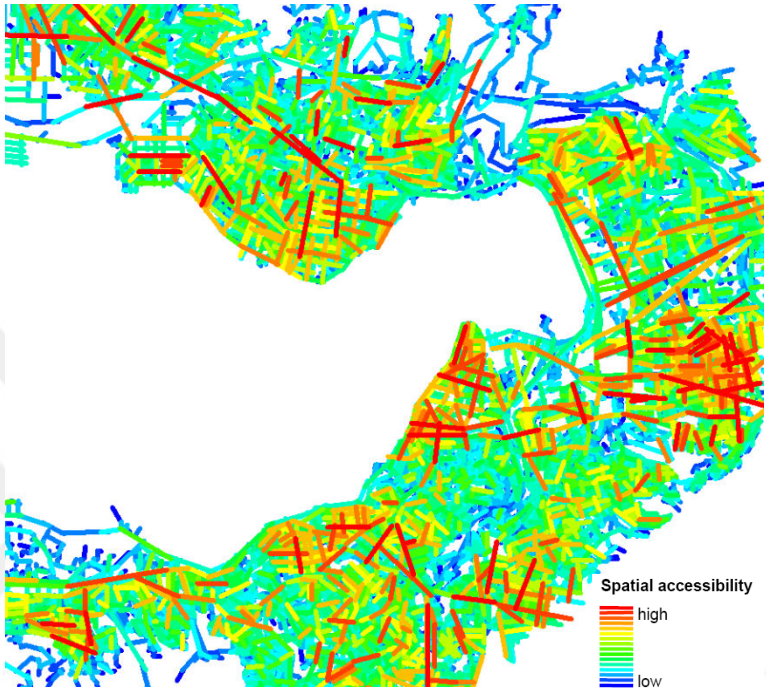


Figure 5.14 Local Integration Analysis of Izmir, INT R3

There are two ways to analyse local integration. Whether the model can be analysed with topological analysis, step logic; here if we want to analyse three steps, r3 is used. It runs up to three steps and it does not break up the line into segments. The system considers three turns from one space to another and then it stops. This can be increased, like r5, r8, etc., depending on the case study and aim. Secondly, angular segment analysis, which analyses the street through segmentation of the street into multiple segments, calculates the angular closeness up to 400m (five minute walk) or 800m (10 minute walk) and so on. For instance, if we are measuring integration R400m, system analyses the street segments up to 400m and then stops. Hence we can measure integration whether through angular segment analysis or topological analysis. Briefly, segment analysis searches for the relationship between spaces as it breaks the line into segments (Turner, 2001 in Van Nes, 2008, p.44). The difference between

the segment analysis and topological analysis is that the former is the weighted graph when the latter is the non-weighted graph (Czerkauer, 2007). The weighted graph is the graph composed of 'nodes' and 'edges', where edges are the lines connecting the nodes. In a weighted graph each edge or arc has a numerical label specifying the relation between two nodes. For instance, towns can be represented as nodes, and the connections between them can represent the distances or travel costs.

When we talk about integration we know that we are referring to mean depth, the topological depth of space, which is the hierarchy between spaces. This hierarchy emphasises the centrality, which reveals the hierarchical accessibility of the system; the higher the mean depth the lower the integration value (Czerkauer, 2007; Van Nes, 2008). This means whether the system is deep in terms of accessibility or shallow and more accessible. For instance, research shows that European cities have an average topological value of three, USA cities have a value of two, and Arabic cities have a value of five (Van Nes, 2008, p. 29). Organic patterns are topologically deeper than grid cities. The mean of INT of Izmir is 5,077.12; thus it can be classified as a topologically deep system. Izmir has a hybrid system. In the centre and surroundings there are more grids and radials, where the modern planning influence can be seen, whereas on the periphery, where the city stretches towards its outskirts we come across slum areas with an organic pattern, and dead ends. In addition, the historical centre of the city, the Konak-Kemeralti traditional bazaar and surroundings covering the Agora also have the organic pattern.

When we look at the difference of global and local integration analysis in the Izmir model, although Alsancak is integrated in the global map of integration analysis, it is not highlighted as much in choice analysis. Choice is the recently developed measurement of space syntax. It is the geometrical distance; the 'least angle of path changes'; the angular relationship between axial lines (Van Nes, 2008). It is also defined as 'betweeness centrality'; it is the 'potential through movement', revealing 'how likely the selected space is part of the trip

for all other possible combinations of origin and destination' (Czerkauer, 2007, p. 158). Hence 'each axial line is weighted by the angle of their connections to other axial lines' indicating whether the line has a sharp or shallow angle of incidence (Conroy Dalton, 2001 in Van Nes, 2008; p.42). Angular choice shows the total angular turn from one segment to another segment, and points out how integrated the street system is in terms of the total number of angular degrees that we have in total when we move from one point to the other in the system (Van Nes, 2008).

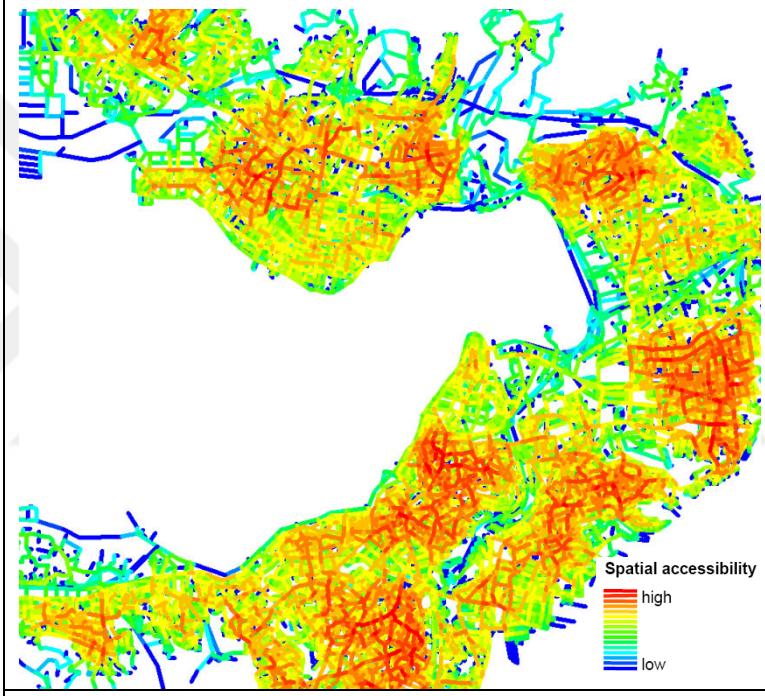


Figure 5.15 Local Angular Analysis of Izmir, Choice R800

Compared with other forms of analysis, as mentioned above, *metric analysis* looks at the relation of lines and spaces metrically, *topological analysis* calculates the step logic and fewest turns, and *angular analysis* which measures the angular closeness, is preferred in terms of indicating the through movement, prediction of the movement and showing the main routes passing through cities. Analyses have shown that edge effect is reduced with angular measurement. Ring roads are highlighted in here pulling the integration values by encircling the centres; they have high angular integration values. Consequently, angular analysis considers the 'minimum angular deviation', 'linearity', 'shortest route' and 'least

angle change'. As Dalton states, people prefer taking angles like 90 degrees and over 90 degrees when they want to choose a route or change direction (Conroy Dalton, 2001; Hillier, 2005; Turner, 2005 in Van Nes, 2008).

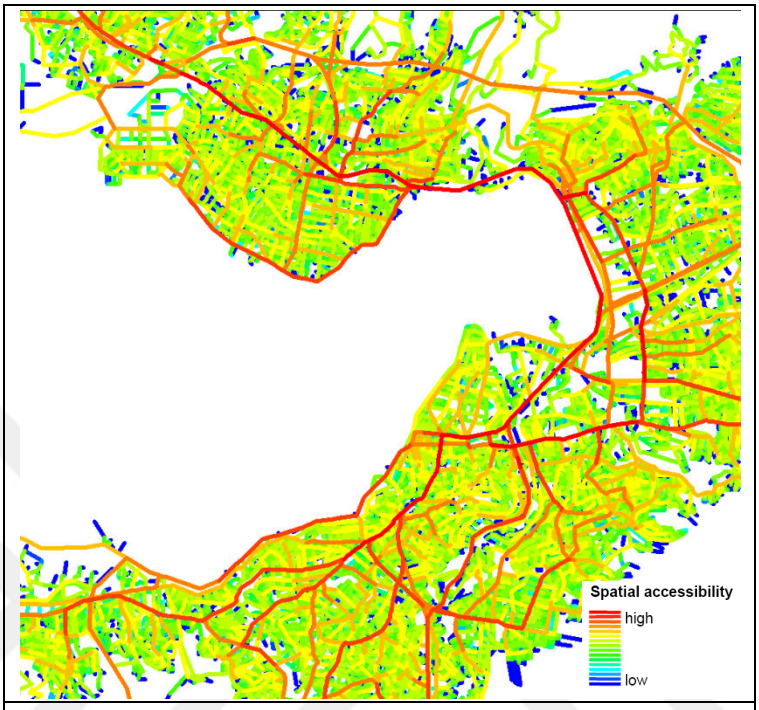


Figure 5.16 Global Angular Analysis of Izmir, Choice RN

The figure 5.16 above shows the main route system of Izmir, the potential movement-through movement. It highlights the ring roads that enclose the neighbourhoods. Red lines are the most linear routes with a least angle change. Main routes are the ones that pass along the seashore, through the city centre and connect the north and south parts of the city. These are mostly for vehicular movement. In this study, the emphasis is on the local analysis rather than the global; however global and local relations have to be considered. In the figure 5.17-18 below, it is clear that from the regression analysis of the global and local relation of Izmir, that R^2 is not strong enough to understand the city pattern from its local dimensions. It might be because Izmir has a mixture of different patterns gridial, radial and organic.

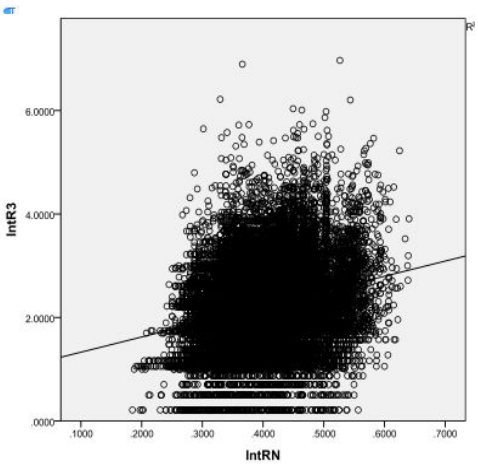


Figure 5.17 Izmir Synergy R^2 0.058

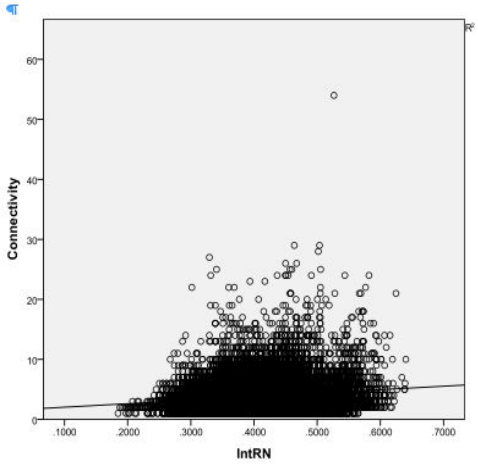


Figure 5.18 Izmir Intelligibility R^2 0.026

Table 5.1 Attribute Summary of Space Syntax Measures of Izmir

Space Syntax (SSX) Measures	Average
Connectivity	3.87926
INT R3	2.26064
INT RN	0.410014
Control	8.79871e-017

5.5 CONCLUSION

The discussion in this chapter has shown that there are institutional, regulatory, and socio-political problems in the planning system of Turkey, which affect both the preparation and implementation of small/large-scale plans. There is little connection between large- and small-scale plans, and strategic planning is not properly involved at every stage. Plans are end-state-focussed rather than concerned with analysing the process. Moreover, the planning system is mainly based on development plans, which involves a plot-based approach rather than a design approach. It does not allow for designing gradual spaces between public and private, and as a result, monotonous randomly formed spaces appear. Most of the urban design projects are project-based and incremental. Parallel with this planning approach, changes in population and socio-economic structure housing

typologies transformed from two- to three-storey detached houses with gardens into eight-storey apartment blocks covering two thirds or the whole of the building lot. Therefore transformation started with the street pattern, and then changed the parcel lots and buildings.

In conclusion, three case studies were developed under different planning approaches of the era. While Alsancak's Kültür neighbourhood was developed by the first modernist planning approach following Danger and Prost's plan in the 1930s, the Karantina area evolved by functionalist discourse of Aru's Plan after the 1950s especially the coastal area. Thirdly, Mavisehir was proposed by the first metropolitan plan of Izmir in the 1970s. The first two were produced by small entrepreneurs' yap-sat system, plot by plot; whereas Mavisehir's high-rise mass housing units were produced by the cooperation of government through bank credits and large private entrepreneurs. Each district has a different urban pattern; while Alsancak has Parisian boulevards and radial roads, Karantina is more linear and grid, as well as sloped. On the other hand, Mavişehir is a product of standardisation and repetition composed of freestanding blocks. These issues are expanded in the following case study section.

All three case studies were constructed based on the same structure formed of historical development of the neighbourhood, and the morphological analysis. Morphological analysis covers space syntax analysis, observations (snapshots), questionnaires, focus groups, and interviews.

CHAPTER 6 CASE STUDY: ALSANCAK KÜLTÜR

Introduction

In this chapter, first the historical development of Alsancak is explored in terms of its social life and socio-economic structure. Alsancak was mostly shaped by the Levantine community, particularly in the nineteenth century due to the social changes overseen by this community. The reason why Smyrna was referred to as a European city was related with its consulates, shops and cafes, as well as the intermingled cultures within its context. Hence through this brief historical analysis, the recent form of Alsancak can be evaluated against its earlier morphology. Following the historical discussion, a morphological analysis of Kültür Neighbourhood is undertaken.

6.1 THE LEVANTINES AND THE HISTORICAL DEVELOPMENT OF ALSANCAK

As a word with its roots in French history, (Şenocak, 2008) "Levantine" is a term used for the citizens who came from Europe, and settled in the East mostly in harbour cities.

> Most of the Levantines here are either from Italian culture or French culture. English-background Levantines are usually settled in Bornova. Although our families did not have any relation with France, both my family and Gilbert's family are related with French culture. Hence we speak French at home... as you know in French "du Levant" refers to the people coming to the East rather than going to the West and they did not reside just in Turkey but also in Syria (Lilyan Epik).

Izmir comprised a very cosmopolitan population, formed of Greeks, Turks, Jewish, Armenian, and Levantines. In the eighteenth century the Turkish population was higher compared to the other communities. By the mid nineteenth century, however, there was an increase in both Jewish and Greek people, but particularly in the Levantine population because of the trade activities in the city (Beyru, 2000). Levantines were involved in industry, commerce, and the financial sector. They established large foreign-run companies, and held senior management positions. They participated in mining, import-export business, in tram companies and new dock construction; as well as in the establishment of Izmir's

Municipality. They were involved in shipping, insurance, banks, and consulates. They had an influence in forming the “Punta Neighbourhood”. All these factors made the Levantines the richest community in the city (Baltazzi, 2009; Milton, 2009).

6.1.1 Urban Form and Housing Typology in the Frank Neighbourhood

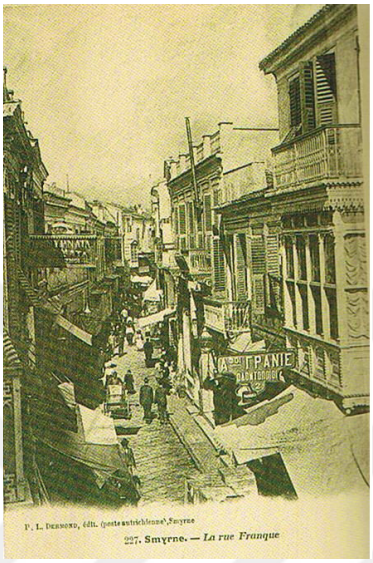


Figure 6.1 Frank Street Köker (2009)

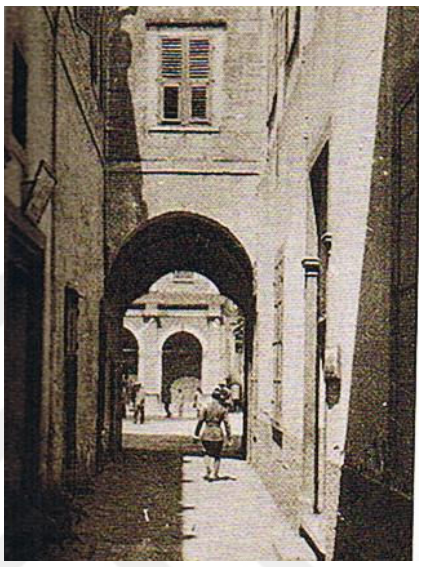


Figure 6.2 Frank District Atay (1993)

Frank Street emerged as a result of the trade activity in Izmir. When Ottoman rehabilitated the harbour, the city became the trade centre of West Anatolia in the seventeenth century (Baltazzi, 2009) with various consulates (Atay, 1993; Yatağan et al., 2009). Alongside with these improvements Anafartalar and Frank Street formed a trade axis. Frank Street was the main artery passing through the European Quarter (Milton, 2009). It was named ‘Frank’ because of the French shopkeepers and shops. In addition to shops, there were three-storey houses, offices, and depots of the Levantines (Atay, 1993; Cadoux, 2003 in Yatağan et al., 2009; Çakıcıoğlu-Oban). Frank Street was the best maintained and widest avenue of the eighteenth century (Çakıcıoğlu-Oban n.d.) which was approximately one kilometre long and eight metres wide (Gökdemir, 2009; Moralı, 2005).

Nevertheless, the coastal line of Frank Street started to change in the eighteenth century with construction works, land fill and the formation of the English Quay (Atay, 1998 in Yatağan et al., 2009). In the nineteenth century, with the

development of commerce, it extended further to the area of Bella Vista, which is known as Gündoğdu today. In that century Frank Street was famous, with shops selling high quality items with expensive prices, in response to the high purchasing capacity of high income groups (Yatağan et al., 2009).

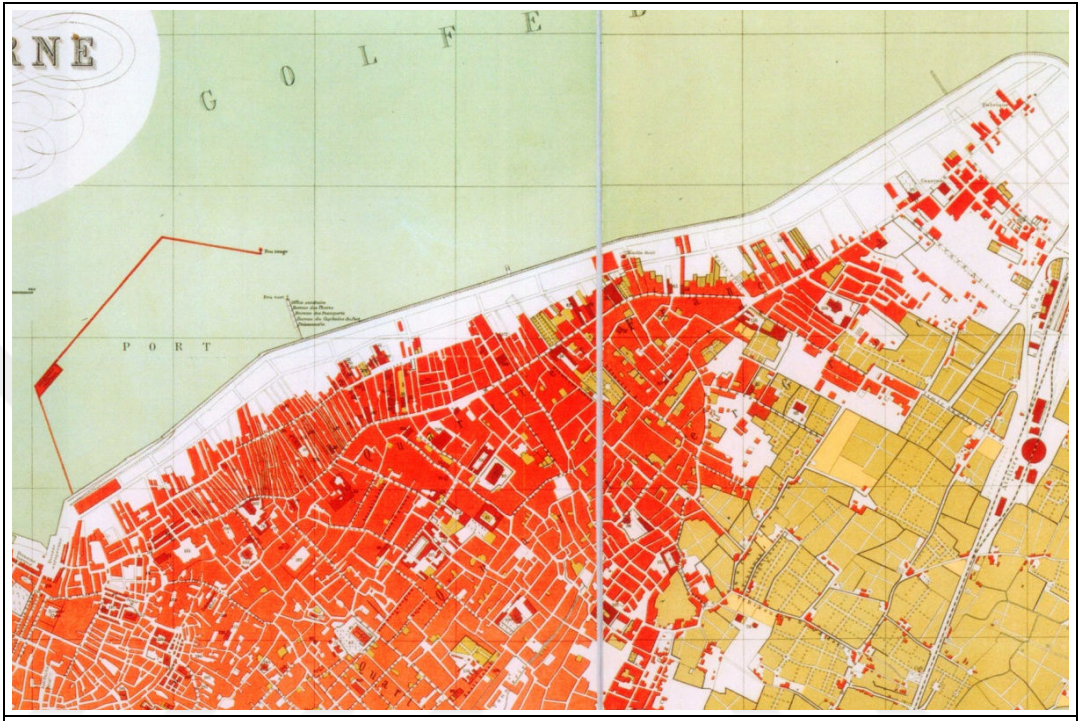


Figure 6.3 1876 Izmir Map (Izmir City Archive, ICA)

In the nineteenth century narrow parcels of land between the French Customhouse and the English Bay lined up along the seashore before the new quay was constructed. Those parcels were long and narrow because of the extensions and landfill. This was also related with the popularity of the seashore and the demand by Levantines to settle their homes or businesses here. After the British Consulate and Fasula Square towards the North, there was more residential use and less commercial activity; also, parcels were larger with gardens (Atay, 1993). The narrow parcels close to the seashore were mainly for office use (Cadoux, 2003 in Yatağan et al., 2009). English Bay was the only spacious open space between the customhouse and the bay, so it was the most active place on the shore. Until the construction of the new quay, the houses were adjacent to the sea and covering all the seashore (Atay, 1993).

Together with the railway and station constructions of both English and French companies, the city became able to carry the goods from its hinterland. Both the construction of the quay and the railway at the end of the nineteenth century triggered the development in Punta[1]. Consequently the region developed with the first attempts at land speculation (Moralı, 2005).

6.1.2 Nineteenth Century Levantine Houses

Housing typology in Izmir was homogenous and influenced by the architectural discourse of Chios and Aegean Islands, especially the facade elements and arrangements. These houses were mostly built in Alsancak between 1876 and 1911 when Punta started to develop through development plans and land speculation. Hence this type of house became a prototype, and was subsequently implemented in other neighbourhoods such as Greek, Armenian, Jewish, and Levantine. We can still see the examples of these houses in Punta area (Çıkış, 2009).

> Each of the Levantine Houses had a Florentine-style loggia situated just outside the gates. This was where the elderly members of the family would gather in late afternoon in order to share gossip and pass on news (Milton, 2009: 24).

> In old Levantine bay window houses there used to be a guest room close to the entrance. This room was usually closed and would be open when there were guests. Even the shutters were closed and the room was ventilated and cleaned once a week. The dining room was located at the back. Some houses used to have a mezzanine floor or another room close to the kitchen. Hence residents used to live there and the front living room was just for the guests (Lilyan Epik).

Neoclassical houses[2] around the quay were whitewashed and organised within a landscaped courtyard (Özsoy, 2009; Pınar, 2001 in Çakıcıoğlu-Oban). Entrances of

[1] The name "Punta" is defined as a "point" or an "end" in Greek (Moralı, 2005; Özsoy, 2009). It is also named as a "sharp edge" in Italian, foreland towards the gulf (Umar in Moralı, 2005).

[2] A typical Izmir House is a two-storey wooden carcass-row house, mostly with an asymmetrical facade arrangement and a wooden bay window. This is principally in the middle axis of the facade. Both the plan and the facade are in orthogonal arrangement, one is narrow and the other is large. While the ground floor of the facade is asymmetrical, the first floor is symmetrical. Entrance is on the narrow axis, whereas living is on the larger axis of the ground floor. The upper floor consists of bedrooms, one looking into the courtyard, and the other facing the street. It has three elements in terms of space organisation; courtyard, service units and living. Small courtyards, like backyards, are located at the back of the house and surrounded with high walls. Next to the courtyards, service units are attached. And the passage to the courtyard is mostly through

the buildings were the places of stationary activities, such as sitting and watching the passers-by. There were canopies above the doors and windows, and a car could barely pass through these narrow streets as the canopies were very close to each other. All the doors were open and mostly elderly people were sitting at the back whereas young people were sitting at the front to take a glimpse of the citizens walking on the street (Atay, 1993).

> Alfred Simes says "In the evening, the maids would sweep the dust from the street and place armchairs outside the houses. Of course there were very few cars in those days. Everyone came out into the street after their supper and offered cakes and sweets to their neighbours and friends" (Milton, 2009: 11).

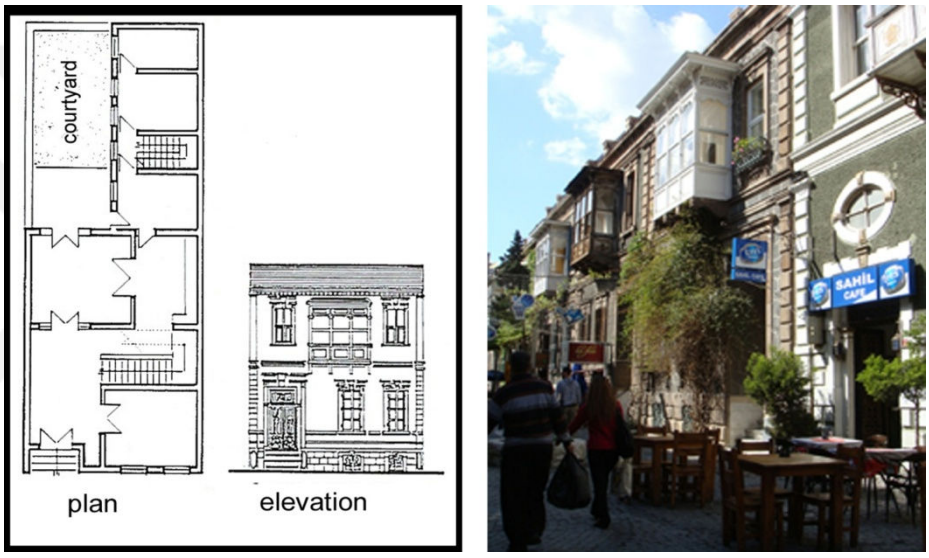


Figure 6.4 Traditional Alsancak House, Erdim (1992)

6.1.3 Social life and Social relations in the Nineteenth Century

When the first Cordon was constructed, Izmir's social life changed substantially. With the new quay, the seashore opened out for the use of everybody. Between Konak and Pasaport, harbour functions were located, and from Pasaport to Punta, social activities took place. Around the Punta area you could see "Italian style" houses and experience a European atmosphere. There were small trams

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the house. The plinth wall, and basement floor is for air ventilation protecting the house from humidity (Çıkış, 2009).

carrying the citizens along the waterfront. The quay was one of the most popular places of street vendors and shoe dippers (Atay, 1993). It was 18 metres wide and the largest street of the nineteenth century (Gökdemir, 2009). People were dressing up for evening walks along the waterfront when *imbat, a type of Mediterranean wind*, started. The sporting club, the Grand Hotel Kraemer Palace with its massive foyer and the Théâtre de Symrne embellished the quayside, and became major symbols of the city (Milton, 2009).

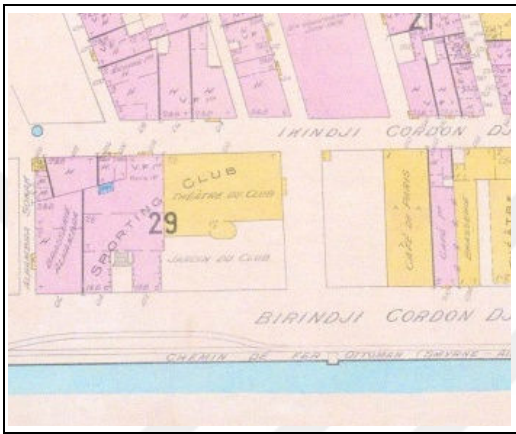


Figure 6.5 1905 Goad Plan, (ICA)

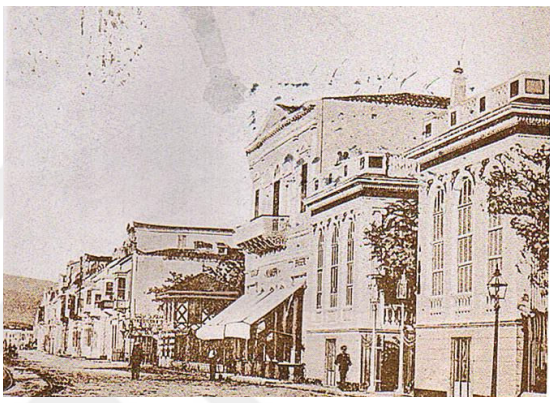


Figure 6.6 Sporting Club, Atay (1993)

Oriental coffeehouses, nightclubs, beer houses, and clubs around the quay were the social interaction places. In addition, at the end of the nineteenth century, theatre activities increased in the city. Both cinemas and theatres were very important in Izmir's social life (Atay, 1993). The first cinema activities started in 1896 (Beyru, 2000) and Izmir citizens were watching Italian operas in a garden around the Italian quay. In addition, "Theatre-coffee" culture emerged in small, narrow huts in Izmir (Atay, 1993).

> There were afternoon tea dances in the salons of the clubhouses and a season of Italian operettas in the Alhambra garden theatre (Milton, 2009: 48).

Social clubs were very effective in the social life of Izmir citizens. These clubs held many activities such as balls, musical concerts, plays, and trips to nearby towns and villages. Club culture was brought to the city with the Levantines, but initially these clubs requested membership and as a result were not accessible to everybody. As was written in one of the newspapers of the time, "Europe Club" or "Frank Club" was the first example of a specific social club concept amongst

Ottoman Cities in the first half of the nineteenth century. This was followed by other clubs (Beyru, 2000).

By the end of the nineteenth century and beginning of the twentieth century, Izmir's architecture and urban form was flourishing with various space organisations depending on the culture and the topography. Frank district and Punta were full of shaded cafes, clubs and theatres with gardens at the front, Levantine houses with bay windows, passages, squares such as Fasula and Bella Vista (today's Gündoğdu), and important public buildings. Moreover, the newly built quay and the waterfront were the most important places for citizens to integrate and chat.

6.1.4 Development Works After the Fire (1930s and onwards)

With the fire in 1922, 2.600.000 m² land were erased with 25.000 buildings, and three quarters of the city was burnt down except the Turkish Neighbourhoods (Atay in Moralı, 2005). The urban structure of Izmir changed dramatically following the fire. After the fire there were numerous problems, such as how to recreate the city, which had been totally destroyed. A further question was how to deal with the hygiene problems, since the burnt areas became run down and neglected. Many high-income residents and Levantines left the city, because it did not offer the previous economic benefits. Hence Izmir's population decreased. The cosmopolitan structure of the city also changed with the deportation of the Greeks and Levantines after the "Independence War".

After the exchange with the immigration of Turks from Crete, Salonika, and the relocation of Turkish Izmir citizens from other neighbourhoods into Punta (Alsancak), new republic governors changed the name of the district to Alsancak. It was a symbol for the newly formed neighbourhood and urban structure with modern planning principles (Moralı, 2005). Rene and Danger's Plan was not be implemented till 1933 because of the inadequate resources of the municipality.

> Our relatives were living in an apartment block on the third floor across Gazi Primary School and behind that building there were empty and burnt areas. Development started in here by the 1940s-50s. It was a big change for Izmir in terms of lifestyles

because a person who lived in a house with garden started to reside in the apartment flats. Moreover through the construction of these apartment blocks immigration started towards Alsancak from Karsiyaka and Bayrakli. Everybody wanted to move here. Particularly, Jewish people who lived in Karatas moved in Alsancak with this development. As a result the population of Alsancak increased. Then as you know 40 years ago there was not anything in Turkey in terms of ready-made clothing or big shops. We had to do everything by ourselves. We used to have maybe a simpler, slower but a healthier life. For instance, as restaurants there used to be some kebab and traditional Turkish food places. Nevertheless in those years there was not any decent and proper restaurant or patisserie except Sevinc Patisserie. Later on people started to demand more things with the influence of Istanbul and Europe (Lilyan Epik).



Figure 6.7 Kültür Park (Old Greek Neighbourhood) 1930s (ICA)

In 1931 Behçet Uz (1931-1942), the 15th Mayor of Izmir, was charged by the Municipality Assembly. By that time, Izmir Municipality had debts and lacked in budget. Behçet Uz, with effort and hard work, transformed the demolished city from ashes into a modern city through various developments, and projects. These changes included construction of boulevards, open-market places, Kültür Park International Fair, playgrounds for children, and landscaping along the I. Kordon (Sakar, 2007). Hence Alsancak completed its development in three stages; Kültür Neighbourhood, Kültür Park, and Kahramanlar (Ürük, 2009). Another important achievement by Behçet Uz was encouraging citizens to have gardens in front of their houses. Hence when Kültür Neighbourhood was formed, the urban fabric was interwoven with these gardens between the pedestrian road and the house (Moralı, 2005, p. 20; Ürük, 2009).

6.1.5 Kültür Park and its Environment

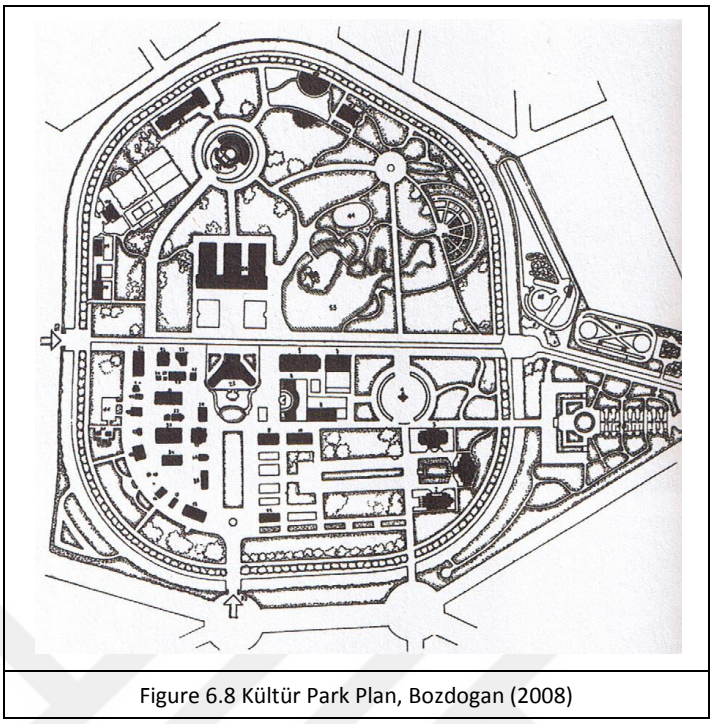


Figure 6.8 Kültür Park Plan, Bozdogan (2008)

A Greek Neighbourhood originally occupied the site where the Kültür Park was built. It became a dilapidated empty area in ruins after the fire and war. For a long time the municipality did not know how to rearrange this space and it became a problem. Local authorities were impressed with the example of Moscow Park in Russia in 1933. Afterwards under the leadership of Behcet Uz, the Kültür Park Project came into existence in 1936 (Özgünel, 2000), despite the financial difficulties and lack of qualified architects and construction labourers. Indeed, today, it is an important heritage feature revealing the modernist approaches of the new republic (Kayin, 2006).

> It became the fashion to live in apartments; it is good that they did not ruin Kültür Park. Once Ozfatura (mayor of Izmir in the 1990s) wanted to sell this land and build a mosque at the corner. However my friend, the daughter of Behçet Uz formed a group in order to protest this decision. They encircled the park with lots of people against this proposal (Lilyan Epik).

The fair included modern-style pavilions, exhibition stands and temporary units, which were mainly designed by various well-known architects. It is also worth mentioning that this period was the epoch of “New Architecture”. All the European compositions resembled simple boxes, and thus the “cubism” discourse was adopted. This was the rejection of “Ottoman Revitalisation” also known as

"National Architectural Renaissance", by the discarding of the Ottoman Forms. By 1939 grid-planned Kültür Park was completed with an area of 360.000m². The Park covers various facilities from a botanic garden, Luna Park, zoo, playground, tennis club, cafes, and casinos to pavilions, exhibitions, and an open theatre (Bozdoğan, 2008).



Figure 6.9 Plevne Street 1950s (ICA)



Figure 6.10 Two Storey Houses 1930s-1940s

Alsancak has had different building typologies over a diversity of periods. This can be summarised from the eighteenth century with classical forms and neo-Greek character to the modernist examples of the early Turkish Republic period and post-modern examples (see appendix 7). Two- to three-storey detached houses with gardens in Kültür Neighbourhood were the first public housing projects of cooperatives, which started after the 1925s around the Kültür Park area. Through the incentives of the municipality and the loans of "Emlak Bankasi", cooperatives would able to construct these housing units on low cost land (Akayoglu, 2008). Then this type of house was transformed into "Kira Evi", family apartments with four to five storeys and terraced rooftops (penthouses). Furthermore, in the 1970s, adjacent and high-rise apartment blocks were built, particularly along the waterfront. The taxonomy of these buildings can be seen in appendix 7. In 1952 as Turkey became a member of Nato, the American influence was seen in life styles and architecture. By the 1960s Alsancak was an attractive place for residential, commercial and service business activities of high income groups (Guner, 2006) as it used to be in the nineteenth century.

> With the arrival of Nato, Izmir was Americanised. People who had close relations with the members of Nato or Americans started to go out in the afternoon for a drink. We

> rearranged our houses as in their style. My husband used to work in the American Consulate. We learned many things from Americans, both good and bad (Lilyan Epik).

6.1.6 Social Interaction Places of the early and post-Republic Periods and Alsancak's Transformation

Places to socialise in Alsancak in the early and post-republic periods were *deniz banyolari*[3], cinemas, pubs (Sirena and Eko Pub) and *gazino* (clubs), patisseries, *lokanta* (traditional restaurants) and Kültür Park. There were even more cinemas than today (Moralı, 2005). As mentioned earlier instead of the Chamber of Commerce there was the "Sporting Club" and in the place of the Military House (Former Nato Building) there was the "City Gazino" (see appendix 6).

> We were familiar with most of the people who go to Elhamra and Teyyare. They were the residents of this neighbourhood, not just Levantines (Lilyan Epik).

> The relation between the youth was different 40 years ago. We used to meet in our houses with our female-male friends. It was because we were very close among Levantines. And also there were not enough social places to go. When I was young there was Gol Gazino in the fair and clubs in some other places. On Sundays there were dancing activities with orchestras. Young people were not as independent as today. Moreover the concept of family was more important. Now everybody is a bit segregated and individual (Lilyan Epik).

Unfortunately recently neither the historical buildings nor the early modernist republican buildings are well preserved. As Kayin (2006) emphasises, Alsancak is undergoing a transformation process. Unless the regeneration strategies develop, the city centre will become a dilapidated space. Hence first, it is imperative that its potential and character have to be grasped as Alsancak has been a prestigious place since the nineteenth century. It has mixed landuse with residential, commercial, business, cultural, and leisure facilities. Alsancak had a cosmopolitan structure before and today it remains the meeting place for various groups. In this regard Kayin (2006) suggests that tolerance between different social groups can be increased through detailed plans and approaches in order to prevent

[3] Deniz Banyosu is a small wooden hut with terraces built over the pier. Izmir citizens used to use these places for gathering and swimming. The first deniz banyosu was built in Punta by the French Company in the late nineteenth century. A detailed explanation is in chapter 7.

exclusion and segregation issues. Therefore, first of all, the culture and leisure activities of Alsancak should be regenerated. Secondly, due to the deterioration of space, both historical-new spaces and urban voids have to be reconsidered and revitalised, with reference to the old "Frank Street" and historical places. Architectural heritage of the pre- and post- republic periods are very important for the image of the city. It is possible to enhance their readability through regeneration projects of the buildings and public spaces around them (Kayin, 2006).

> Only two of those old houses stand by the harbour with the Ataturk Museum. All the rest of the two-storey houses were demolished. This is very sad. There are still some houses in the inner parts of Punta but they are not very well maintained. There is one house which is refurbished in Gazi Kadinlar Street but people can hardly live there because all the adjacent houses are functioning as bar-cafes. In addition different types of people are going there. Unfortunately we could not preserve that street. In this part after the fire there were houses built in the 1940s. For instance our building was building land but after this corner there used to be two- and three-storey buildings with gardens. Those buildings were also knocked down and seven-storey buildings were built (Lilyan Epik).

Consequently, Alsancak, with its waterfront Kordon, Kültür Park, pre/post architectural and historical heritage, mixed land-use pattern, and activities, is an important centre for Izmir citizens.

6.2 MORPHOLOGICAL ANALYSIS OF ALSANCAK KÜLTÜR NEIGHBOURHOOD

The first case area lies within the boundaries of Kültür Neighbourhood. It is roughly surrounded by Vasıf Çınar Boulevard to the south, Ali Çetinkaya Boulevard to the north, Şair Eşref Boulevard to the east, and I. and II. Kordon to the west. Firstly, the site is analysed in terms of its street pattern with space syntax. Secondly, observations are conducted including the type of activities, and type of people. Thirdly, questionnaire analysis and focus groups of children revealing residents' views is undertaken, and fourthly types of in-between spaces are shown in detail with sections and photos. Finally all these different layers of information are evaluated in the conclusion of this chapter.

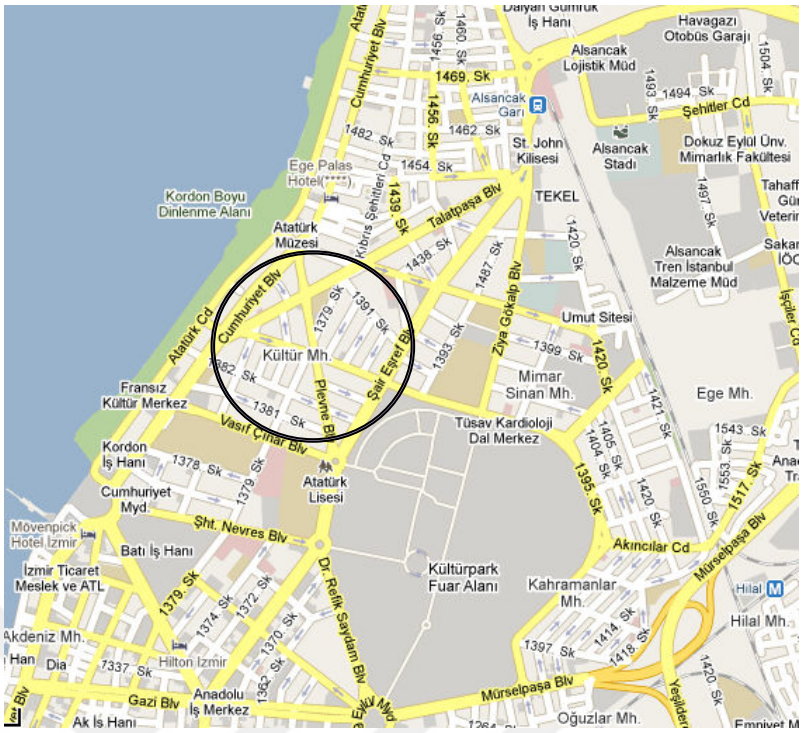


Figure 6.11 Location of Alsancak, Kültür Neighbourhood



Figure 6.12 Kültür Neighbourhood Boundary of the Case Study

Space Syntax Analysis and Observations

As explained in the methodology and previous chapter, both local integration and segment analysis are dynamic measures. Hence 'before' and 'after' interventions can be revealed and analysed easily. Before going into detail with local analysis, first, the global integration analysis and global choice analysis of Alsancak is carried out. Consequently, outcomes can be compared with the local measures.

In the global integration analysis of Izmir, it can be seen that Alsancak is in the most integrated and accessible part of the city. Gazi Boulevard connects the sea to Basmane, 9 Eylül Square and from there to the motorway and towards Karşıyaka (north), and Bornova (east part of the city). In Kültür Neighbourhood integration RN shows that Plevne Boulevard, Şair Eşref Boulevard, Dominik Street and Dr. Mustafa Enver Bey Street are the most integrated streets. In the VGA Analysis (see figure 6.32 below), Plevne Boulevard is analysed as the most visible and integrated street in the case area. This street also connects Talatpaşa Boulevard, Cumhuriyet Boulevard and Gündoğdu with Lozan and Montrö Squares. Because of the railway there is an enormous disconnection between Alsancak and the old industrial part of the city as can be seen in figure 6.13 below. Hence integration analysis helps us to read the urban pattern, as coloured in red from most integrated to blue most segregated streets such as dead ends. Particularly at the bottom of the map, this historical urban pattern can be seen in the green range, which shows the old traditional part of the city around Kemeralti and Agora.

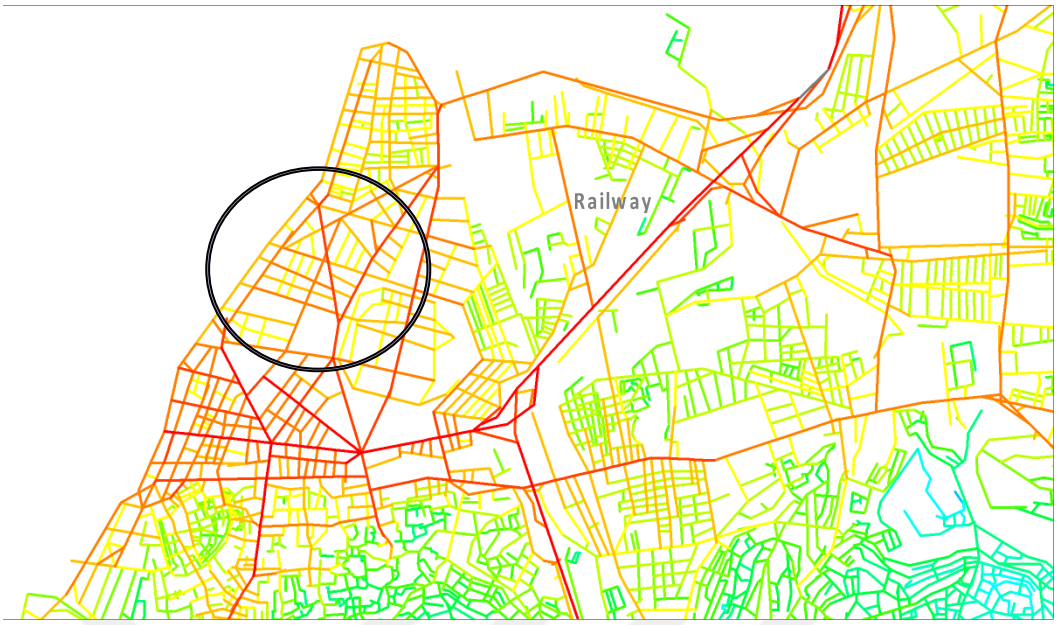


Figure 6.13 Alsancak Global Integration RN

Figure 6.14 below depicts the choice RN map showing the main routes in terms of vehicular movement; whereas local analysis reveals pedestrian movement. Both in the global integration and choice analysis, it is clear that Alsancak connects to south, north and east with the routes, which are coloured in red. These are also the routes, which are linked to the ring road. In the global choice analysis, Gazi Boulevard, which goes northeast, is one of the most chosen routes in the red range. In terms of through movement in the global map, Alsancak Kültür Neighbourhood stands at the north edge of the main chosen route. As the radii get smaller in through-movement analysis, north-south directions through Kültür neighbourhood become more chosen pedestrian routes. From the figures 6.15 and 6.16 below, it can be seen that Kültür Neighbourhood has a strong relation between the parts and the whole system. Thus its pattern is understandable for pedestrians, and co-existence of residents and outsiders is high.

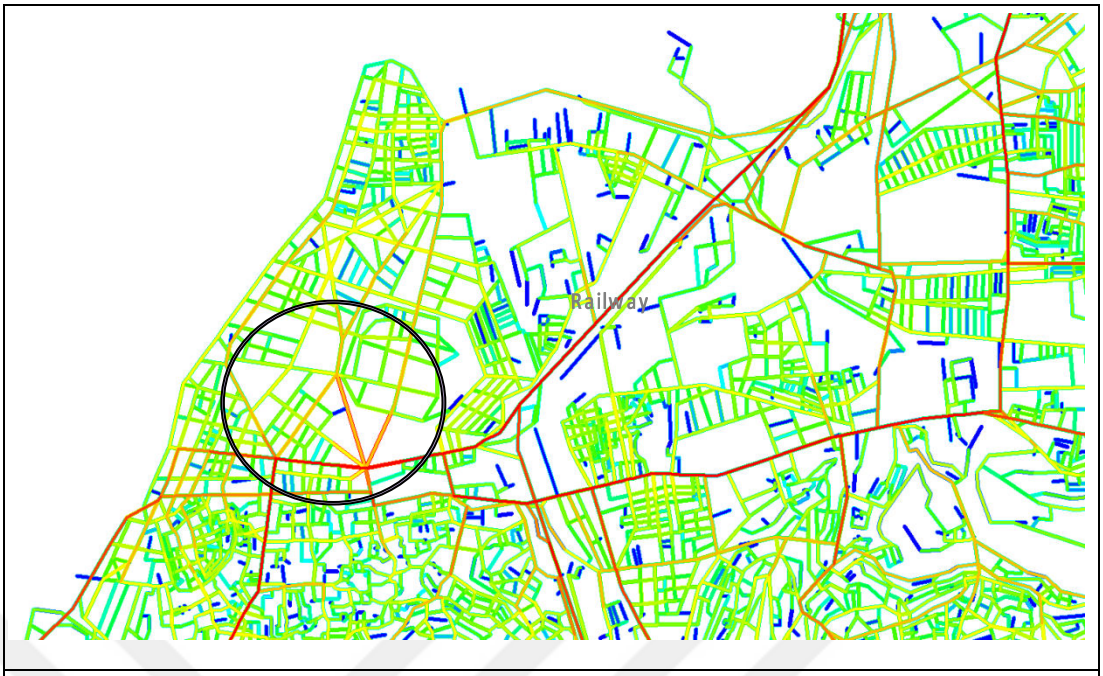


Figure 6.14 Alsancak Global Choice RN

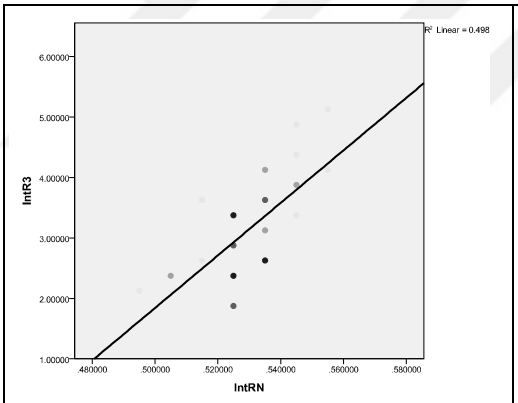


Figure 6.15 Synergy Kültür R^2 0.498

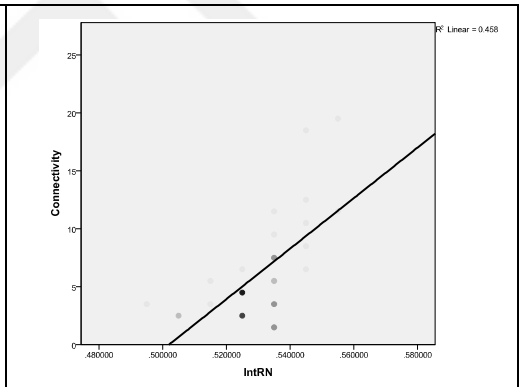


Figure 6.16 Intelligibility Kültür R^2 0.458



Figure 6.17 Alsancak ChoiceR800



Figure 6.18 Alsancak ChoiceR3200

In space syntax terminology, when we refer to the local analysis and radius this corresponds to walking time. For instance, in the analysis, R400 means a five minute walk, and it increases relatively as the radius increases, for instance, R800, 10 minute walk; R1200, 15 minute walk; R1600, 20 minute walk, and so on. In figure 6.17 above the thematic map reveals the 10 minute walk with a radius of 800. In this regard, local routes in terms of segment analysis are taken into account. Kıbrıs Şehitleri Street is one of the most chosen routes; as this route is pedestrianised it attracts more pedestrians with the shops and cafes located across from each other. By the increase in the radius, main streets are becoming more attractive in terms of "through movement". It is important to note that this route is the last remnent of the famous "Frank Street", and in a way it maintains its previous function. Alper (2009) examined the twentieth century city pattern of Izmir from 1905 digital maps. In the axial model that he developed, it can be seen that Frank Street was the most integrated street. Kibris Sehitleri which is an extension of this street still preserves its accesibility. It connects Kemeralti and Alsancak, following slightly behind the old trace of Frank Street (see figure 6.19 below).

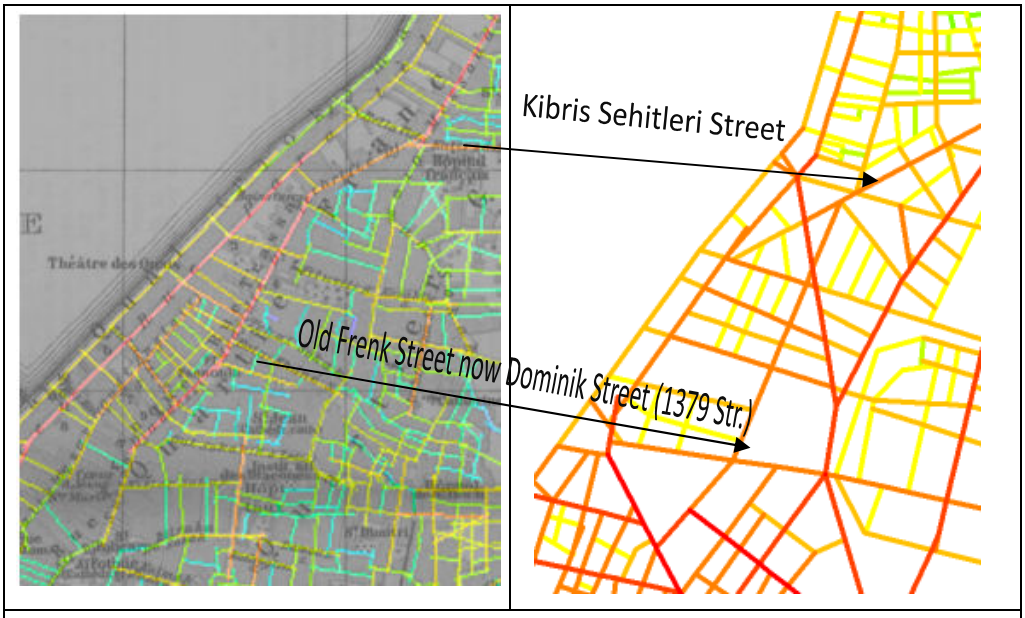


Figure 6.19 Comparison of axial models of 20th and 21st century left figure source: Alper (2009)



Figure 6.20 Kıbrıs Şehitleri Street

As noted earlier, the local analysis shows the pedestrian movement, besides emphasising the local shops. Nevertheless these local shops might not be covered within global analysis. In this sense local integration analysis is important for the local features of the neighbourhood and its relation to its surroundings. In the figure 6.22 below, integration R3 shows that it takes within three steps to go from A to B, which streets are most accesible, and integrated. It is clear that as the radius increases as in R5, accessibility criteria is incresing in five steps, and it includes more streets. In Kültür Neighbourhood, Dr. Mustafa Enver Bey Street has a Int_R3 value of 5.13951 and RN 0.556384 (see table 6.1 below). Then it follows with Plevne Boulevard and Dominik Street in terms of integration values within the case study area.



Figure 6.21 Alsancak Integration R5

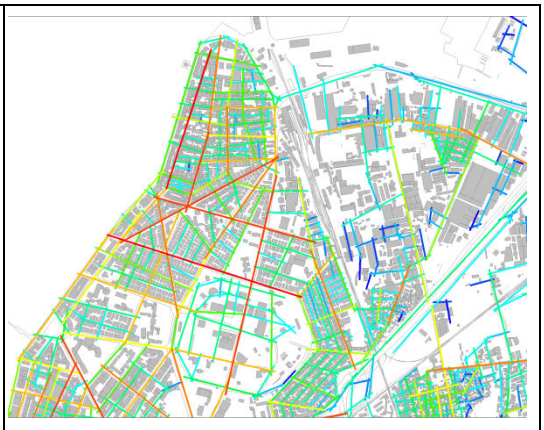


Figure 6.22 Alsancak Integration R3

Table 6.1 Attribute Summary of Space Syntax (SSX) Analysis

Street Names	Connectivity	Control	IntR3	IntRN
Talatpaşa	18	2.31929	4.95734	0.546992
Plevne	13	0.990152	4.40890	0.546482
Mustafa Enver	20	3.077090	5.13951	0.556384
1386 Str. North	3	-0.561111	2.99539	0.53134
1382 Street	8	0.262277	3.58766	0.531754
Vasıf Çınar	11	0.771800	4.09709	0.531804
1381 Street	5	-0.282168	2.93911	0.528521
1383 Street	5	-0.478535	3.35695	0.53136
Şair Eşref	9	0.590451	3.89018	0.546371
Dominik	11	0.491245	4.23238	0.553378
1388 Street	2	-0.807143	2.41773	0.531209
1389 Street	2	-0.807143	2.41773	0.531209
1390 Street	2	-0.807143	2.41773	0.531209
1387 Street	4	-0.534091	2.87017	0.531227
1386 Str. South	3	-0.491667	2.50000	0.531208
1398 Street	2	-0.811966	2.09074	0.522178

Connectivity is a static measure. As Van Nes (2008) says “It accounts for all the direct connections each street has to other streets in their immediate vicinity” (p. 63). Hence as the street is connected to other streets high in numbers, it is well connected and will be red on the map. In the table 6.1 above, and figures 6.23 and 6.24 below, Dr. Mustafa Enver Bey Street has the highest connectivity (in Kültür Neighbourhood) with a value of 20, which means that it has 20 connections to other streets in its surroundings. Then this is followed by Plevne Boulevard with a value of 13 and Dominik Street with a value of 11. Commercial use is located especially on Mustafa Enver Bey Street.

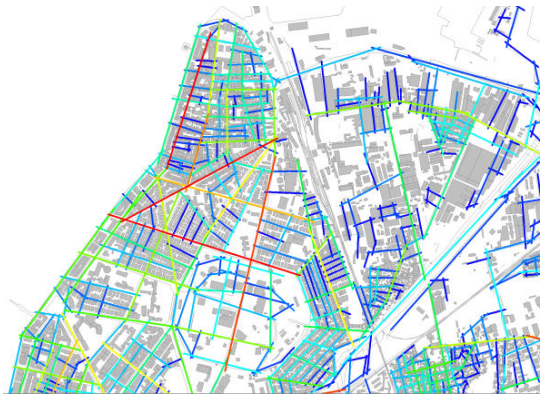


Figure 6.23 Alsancak Connectivity

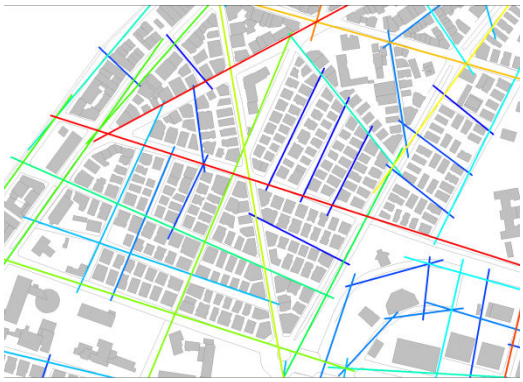


Figure 6.24 Kültür Connectivity

As can be seen from the correlation in figure 6.27 below, retail uses have a strong correlation between connectivity with a R^2 of 0.839. In the corelation graph, connectivity values of each street is corelated with the number of shops in the street. Most of the cafes, patisseries and shops are located on this route. There is a hierachy between the public and private, and all the shops have their extensions over the sidewalks. Two different types of space use can be seen in the section below. While the frontages of bigger retail shops are clear, cafes and restaurants are more flexible in terms of using the outdoor space. In addition to the space in front of the cafe, they also use the kerb for tables and chairs and leave the in-between for pedestrians (see the section in figure 6.25 below).



Figure 6.25 Section of Mustafa Enver Bey Street d
Source: Drawn by the Researcher, Işın Can

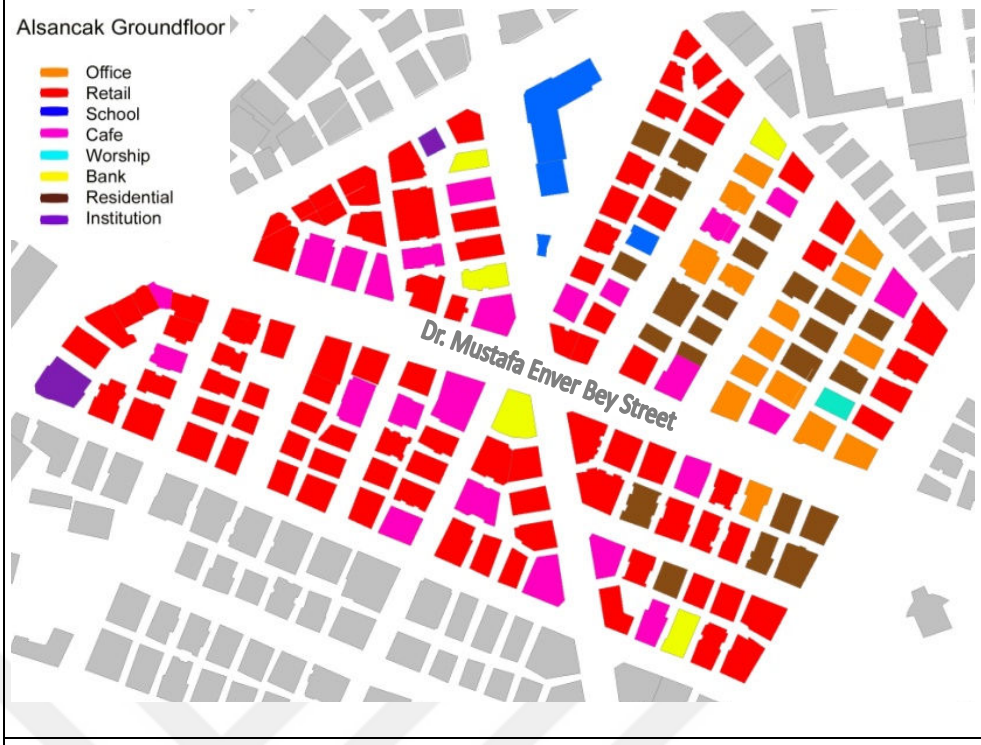
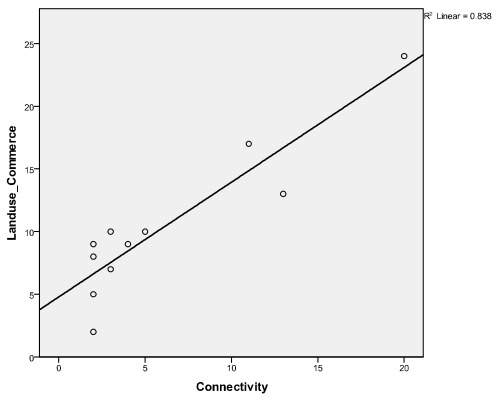


Figure 6.26 Kültür Ground Floor Landuse

There is a variety in groundfloor landuse; such as bank, grocery, hairdresser, and beauty centres, restaurant, cafe and bars, office units, local and global stores, pharmacy, and jewellery. Moreover, Gazi Primary School's garden is used after 5pm and over the weekends for car parking. This has caused problems in the traffic of Talatpaşa Street; but most importantly children cannot use the garden out of school periods.







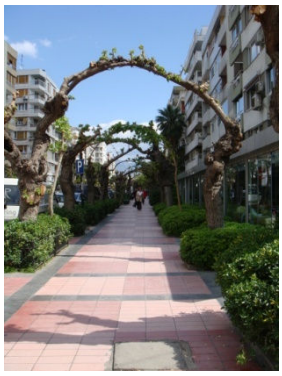
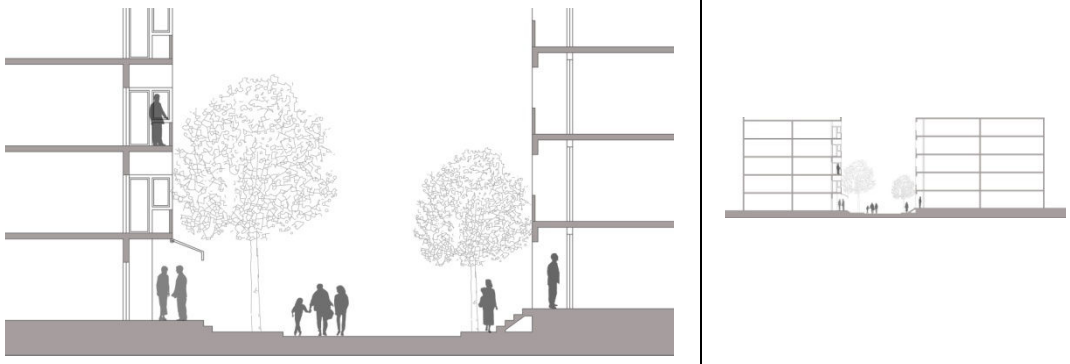
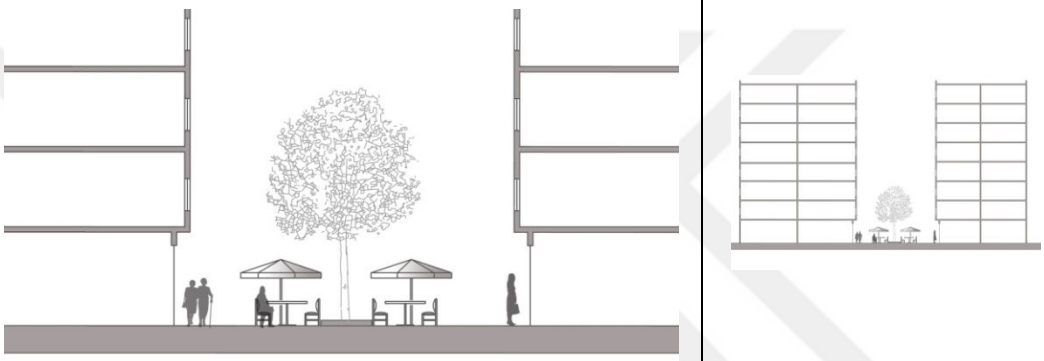
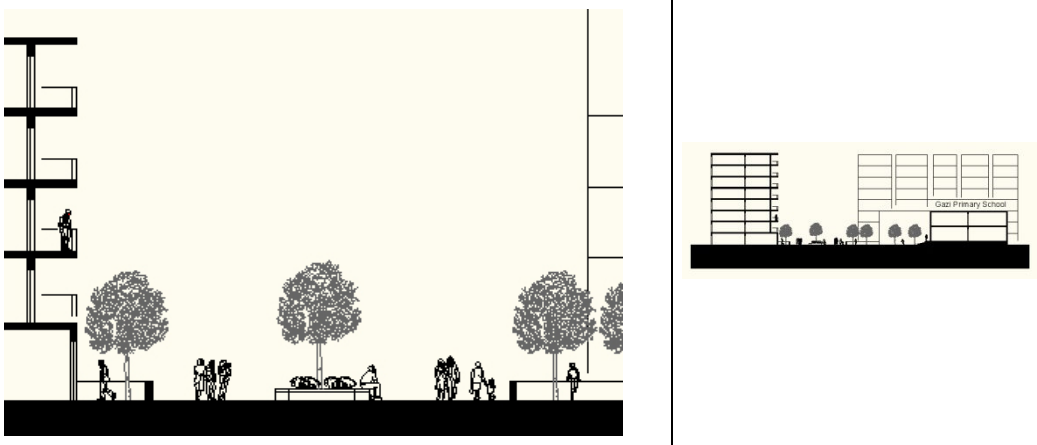


Figure 6.27 Correlation between Connectivity and Commerce in Kültür

Table 6.2 In-between Space Types of Kültür Neighbourhood

<table>
<tr><td colspan="2">  </td></tr>
<tr><td colspan="2">1398 Street, Level Differences between the Public and Private</td></tr>
<tr><td colspan="2">  </td></tr>
<tr><td colspan="2">1386 Street , Transparent Facades of Ground Floor, and Seating Areas of Local Shopkeepers</td></tr>
<tr><td colspan="2"> 
</td></tr>
<tr><td colspan="2">Dominik Street and Street Furnitures</td></tr>
</table>

Constitutedness as mentioned before is the degree to which the buildings and the street are directly or indirectly correlated. In the Kultur neighbourhood all the streets are constituted with buildings. However, as can be seen in the map in figure 6.28 below, the constitutedness degree (approximatedly 25%) is not very high as most of the buildings are indirectly related with the street. Territorial extensions can be seen in three different types; on Mustafa Enver Bey Street (most connected street) there are more spill-out extensions, while on Dominik Street, one of the most integrated streets and extension of Kibris Sehitleri Street, there are more effused spaces of local shops displaying their goods. On the shorter side streets (pedestrianised), there are seating areas of the local shops, which can be defined as scattered territories on the street.

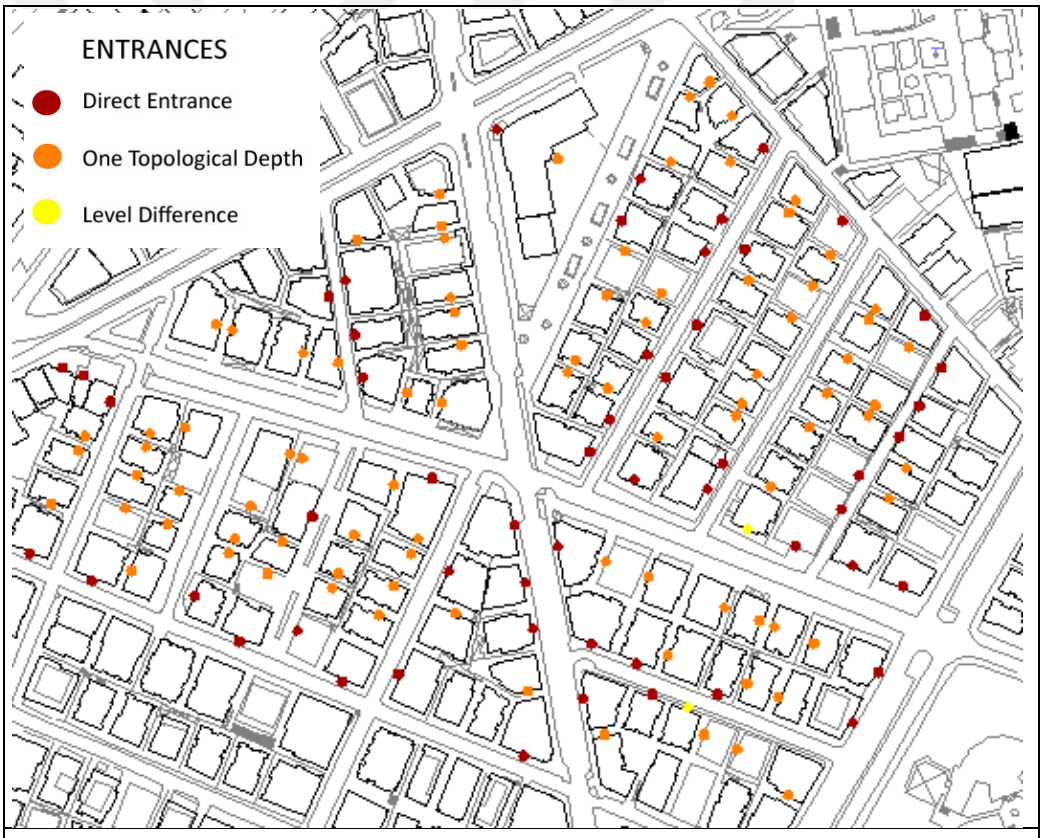


Figure 6.28 Direct-Indirect Entrances of Buildings in Kültür Neighbourhood

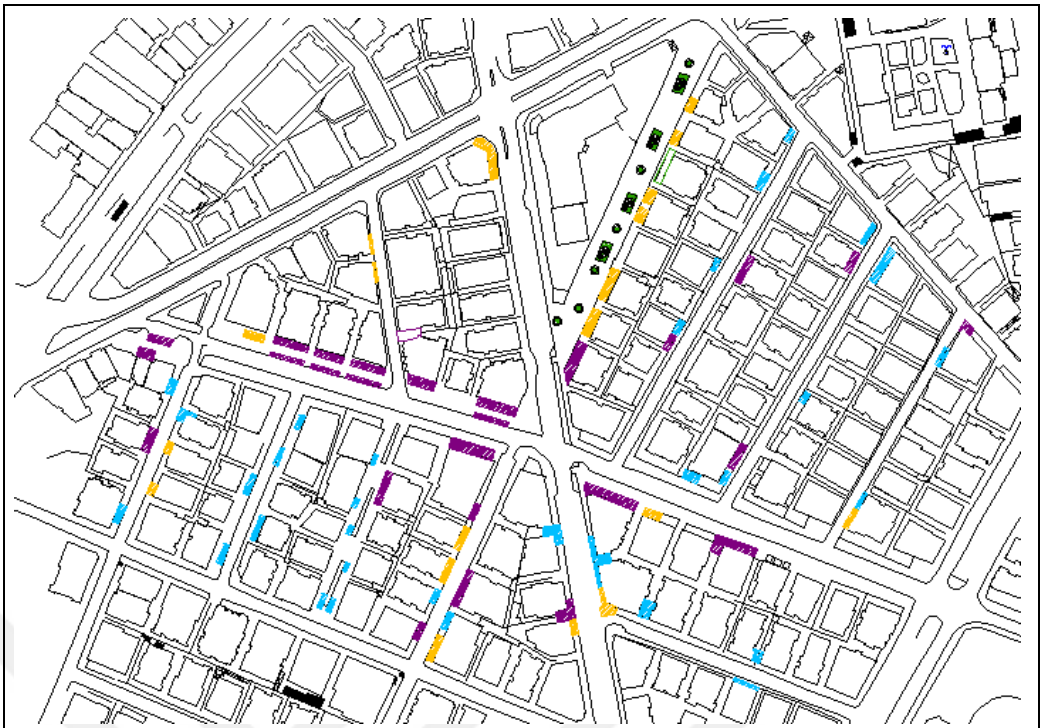


Figure 6.29 Territorial Extensions of Buildings in Kültür Neighbourhood

There is also another connectivity measure which is called "Segment Connectivity". This is generally used for defining possible escape routes of criminals and useful for crime studies. Segment connectivity calculates the connectivity of the route through considering each segment of the route and its connection with other surrounding streets. Van Nes (2008) defines the unit of a segment connectivity as the street between junctions. Most connected segments are shown in figure 6.30 below.

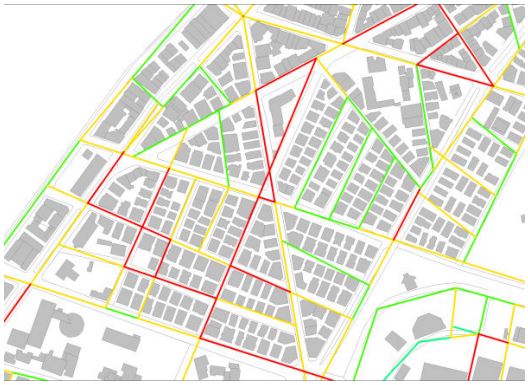


Figure 6.30 Kültür Segment Connectivity

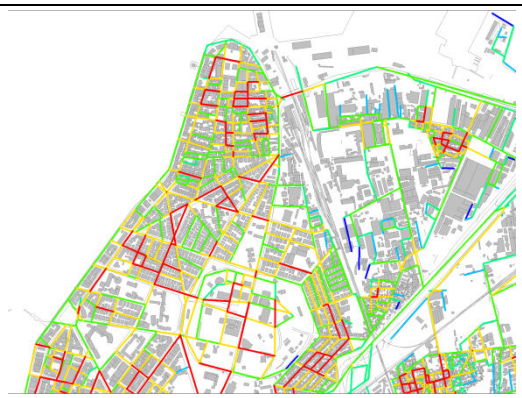


Figure 6.31 Alsancak Segment Connectivity



Figure 6.32 VGA Analysis of Kültür Neighbourhood and views from Plevne Boulevard

In the VGA Analysis of Kultur Neighbourhood on the left, Plevne Boulevard is showing a higher visibility and accessibility according to other streets. VGA Analysis is taking into account the pixels rather than the axial line in the axial map. Hence it searches for the relation of each (pixel) space to the other spaces. VGA analysis could have done with street furniture and landscape on a smaller scale. However, due to time limitations, it could not be analysed in detail. In the blocksize analysis in figure 6.33 below, it can be seen that Alsancak has a small grain compared to the old industrial part of the city with a bigger grain in blue colour. Hospitals, schools, hotels, empty plots, and Kultur Park are also shown in the blue-green range.

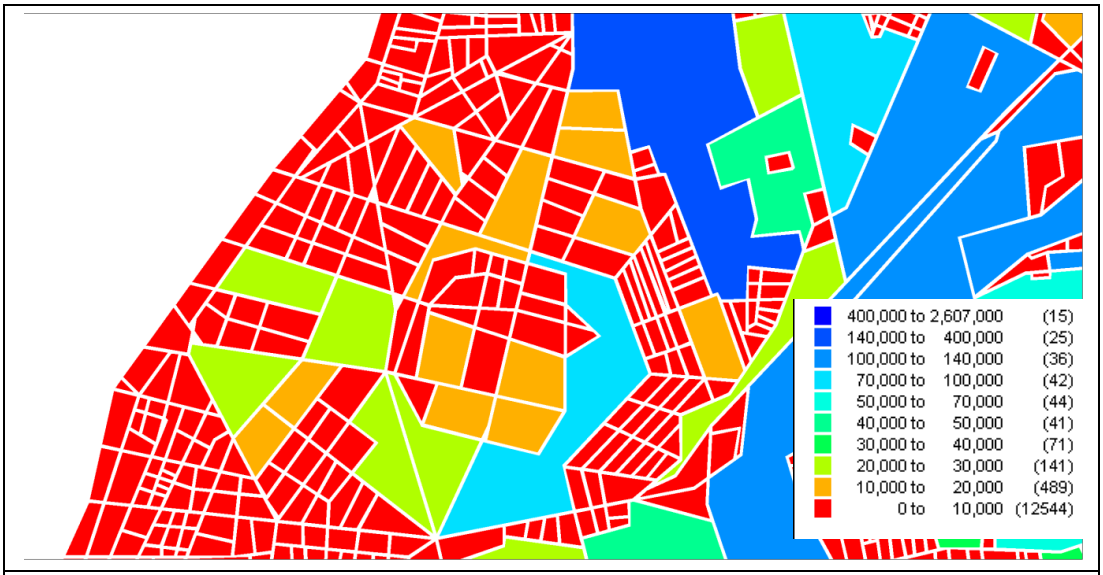


Figure 6.33 Blocksize of Kültür Neighbourhood Alsancak

As explained in the research methodology section, structured observations were conducted; one on a weekday and the other on Sunday during October 2009. The weather conditions were good, and the temperature was approximately 20-25°C. Each snapshot was done in two hours, between 10-12 pm in the morning, 14-16 pm in the afternoon, and 18-20 pm in the evening. The boundary of the area was defined depending on the length and busy-ness of the streets. If it is a wider and busier road, two sidewalks were observed separately. Firstly, the route was chosen on the map as shown in figure 6.34 below.

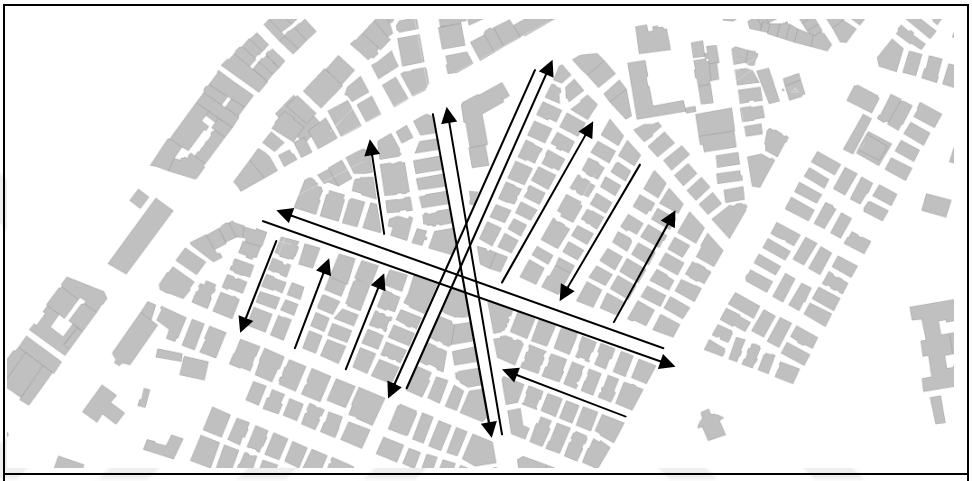


Figure 6.34 Observation Route of Case Area Kültür Neighbourhood, Alsancak

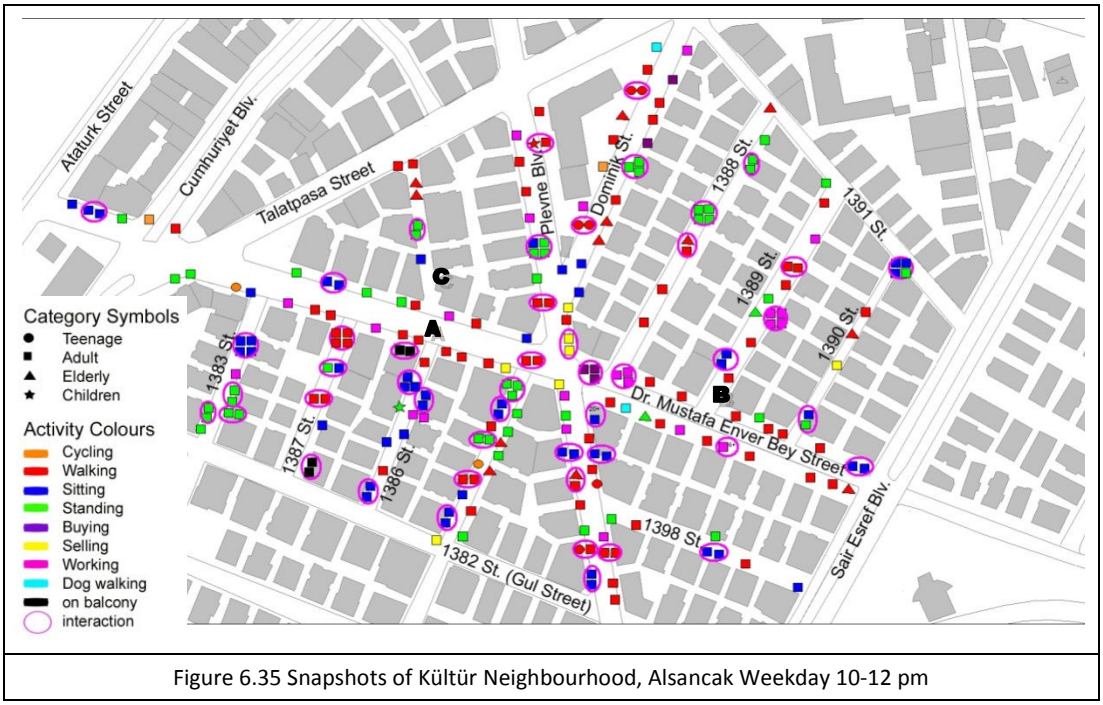


Figure 6.35 Snapshots of Kültür Neighbourhood, Alsancak Weekday 10-12 pm



A. Local Shops



B. Balconies



C. Cafes and Restaurants

Figure 6.36 Daily Life of Kültür Snapshots from A, B, C

In the figure 6.35 above, on a weekday (15.10.09) in the morning, there were more individuals than groups, which shifted at midday and in the evening. Hence the interaction was less in the morning. People were usually opening their shops, or going to work. There were also more males than females in the morning, with a ratio of nearly 1/2. There were not many children, teenagers, or elderly. Walking was distributed over the whole area; however it was mostly on the main routes; such as Dr. Mustafa Enver Bey Street, Dominik Street (1379 St.), and Plevne Boulevard. Activity percentages can be seen in table 6.12 such as walking (39%), standing (25%), and sitting (36%). Therefore approximately 61% of the activities are long duration or static activities. Gehl (1986) emphasises that 70% of all long-duration activities are seen in front yards, in the in-between spaces, and these spaces ensure the liveliness of the neighbourhood and street. He adds that 52% of activities are pedestrian traffic-related activities such as coming from and going into a house. The rest of them are longer-duration activities such as talking, staying, and playing.

Franchised and favourite cafes and patisseries like Starbucks, Sir Winston, Bonjour, and Efes were not crowded yet except Reyhan Patisserie. Yellows are the street-vendors; they are usually located at the intersection of the three streets mentioned above. Sitting and standing are mostly on the south part of Dr. Mustafa Enver Bey Street. People as well as concierges, security guards, and shopkeepers are standing either in front of shops, or cash machines, if they are interested in something or watching passers-by.



D. Dominik Street View



E. Active Frontages



F. Groceries

Figure 6.37 Daily Life of Kültür Snapshots from D, E, F

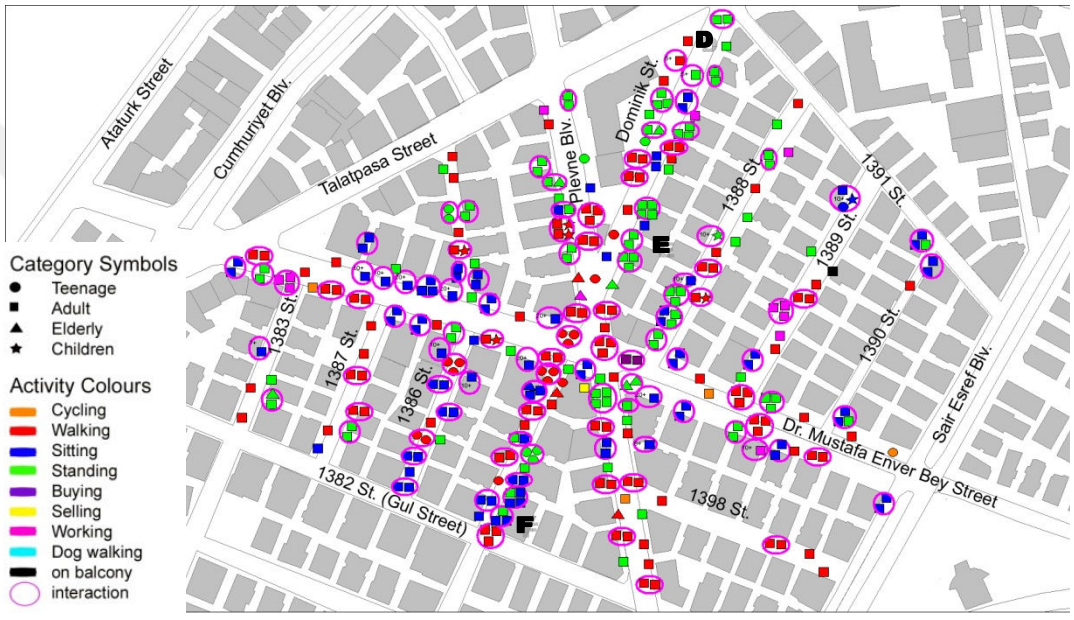


Figure 6.38 Snapshots of Kültür Neighbourhood, Alsancak Weekday 14-16 pm

In figure 6.38 above relating to the midday observation, there is a significant change in the number of people, activities and interactions. Again walking is mostly on the main three roads, especially on the long streets of Plevne Boulevard and Dominik Street. All the cafes are open; the west end of Dr. Mustafa Enver Bey Street is full of sitting activities. Most of the restaurants and cafes are located in this part. In that sense, this street is the most crowded street of the case area, which also connects the Fair and the sea. In addition as it is examined in space syntax analysis it is one of the highest locally integrated streets. Another crucial change is that at midday, the number of females and males are almost equalised, which can also be seen in the table 6.3 below. Teenagers increase in number by the evening. However there is not any

particular change in the number of elderly people. There are not many children either, except in the play garden of a private nursery or school garden.

In figure 6.39 below evening observation is more or less the same as the midday one. Dominik Street is full of moving pedestrians, as it connects the south part with Kıbrıs Şehitleri Street, a pedestrianised street with various cafes and bars. Numbers of people are slightly higher than at midday. This can be because both the school and the working hours are finished in the evening; in addition, many places are open until late at night between 10pm-12am. In the evening, in particular, 1388, 1389, and 1390, 1398 Streets are quieter than other side streets and the main roads, as there are more residential uses on these streets.

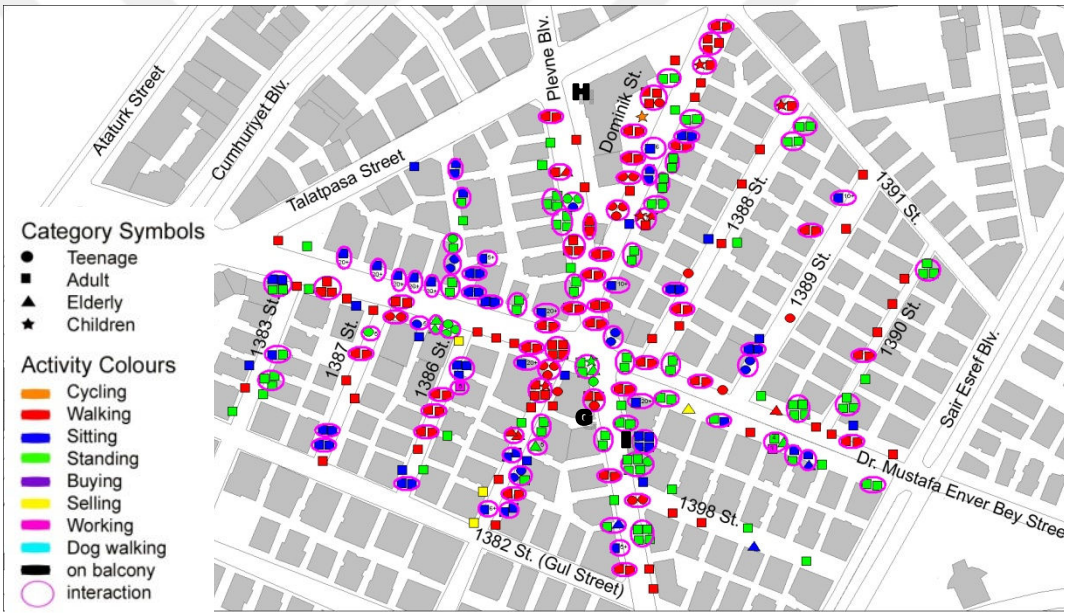


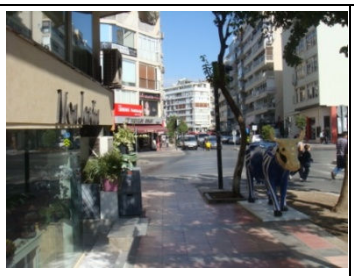
Figure 6.39 Snapshots of Kültür Neighbourhood, Alsancak Weekday 18-20 pm

In the table 6.3 below, there are more adults than other categories. Female and male ratios are relatively the same except in the morning snapshot. As can be seen in the table 6.3 below, the number of observed females is half that of the males in the morning. The number of elderly people remains stable, whereas there is an increase in other categories by the evening. It is also important to mention that these are just the people observed at that time, as a snapshot, so some people may have been ignored. This is not a one hundred per cent accurate calculation by satellite or video. This just gives the general picture of the place.

For instance, at crowded cafes, people were recorded roughly as whether over 20 or 10.



G. Street Vendors



H. Cow parade



I. In-between Shops

Figure 6.40 Daily Life of Kültür Snapshots from G, H, I

Table 6.3 Snapshots of Kültür Neighbourhood Weekday Observed People

	Children	Teenage F	Teenage M	Adult F	Adult M	Elderly F	Elderly M
Morning 10-12 pm	2	2	6	79	155	8	10
Midday 14-16 pm	25	13	15	224	256	6	7
Evening 18-20 pm	8	24	24	230	276	10	8

Table 6.4 Snapshots Kültür Neighbourhood Weekday Observed Activities

	Sitting	Standing	Walking	Talking	Other	Balcony	Entrance
Morning 10-12 pm	82	56	88	128	79	4	103
Midday 14-16 pm	264	113	134	416	63	2	310
Evening 18-20 pm	269	132	165	479	53	0	320

Table 6.5 Snapshots Kültür Neighbourhood Weekday Group vs. Individual

	Group	Individual	Total
Morning 10-12 pm	46	131	177
Midday 14-16 pm	114	98	212
Evening 18-20 pm	124	95	219

Sitting and talking are the most frequent activities by the entrances or in-between spaces. As the case area covers many important junctions and pedestrian routes; between 23- 48% of the activities is walking. Sitting, standing and walking increase through midday and the evening. Other activities, beside the first three above, are cycling, playing, talking on phone, watching, selling and buying, working, reading, and others. The table 6.5 above gives the numbers of people, whether groups or individual, as well as the observed group or individual in total. Here it is interesting that there are fewer groups than individuals in the morning, but that by midday this ratio changes, there is an increase in groups while the number of individuals decreases. In conclusion, whether predetermined or by chance encounter, the possibility of interaction increases by groups.

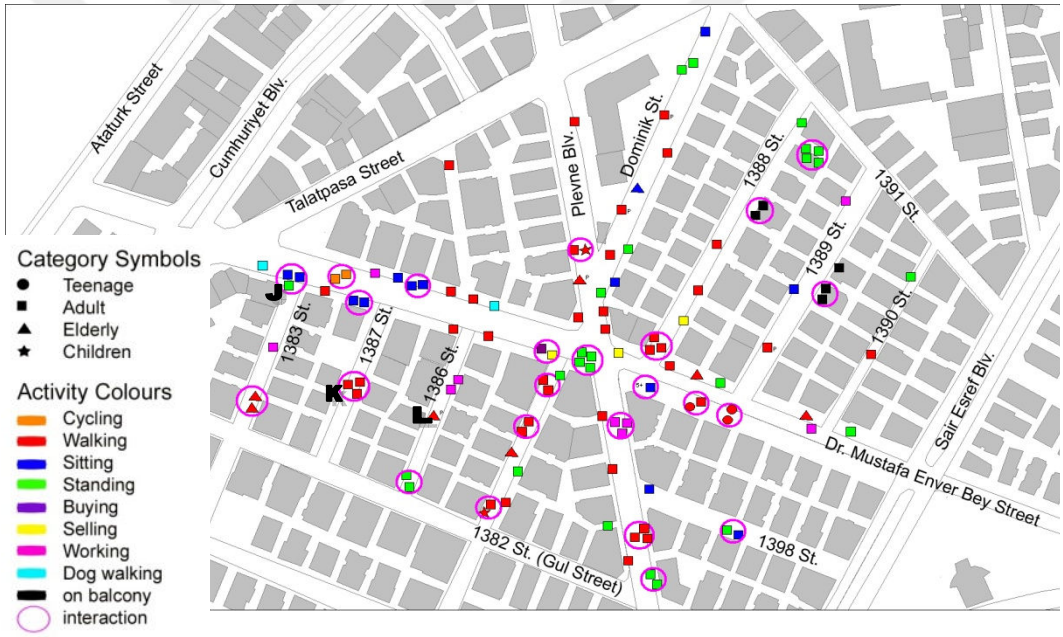


Figure 6.41 Snapshots of Kültür Neighbourhood, Alsancak Sunday 10-12 pm



J. 1383 Street



K. 1387 Street



L. 1386 Street South

Figure 6.42 Daily Life of Kültür Snapshots from J, K, L

On Sunday, there is a sharp drop both in the number of people and activities. When this map (figure 6.41 above) is compared with the weekday morning, this is nearly the half of the recorded map of the weekday. As it is Sunday almost all the shops are closed. Most of the people are either going or coming from an open market, or bazaar, especially walking on Dominik Street. Walking is more than the other activities with a percentage of 48%. There are fewer groups than individuals, and more males than females (see the table 6.12 below for percentages).

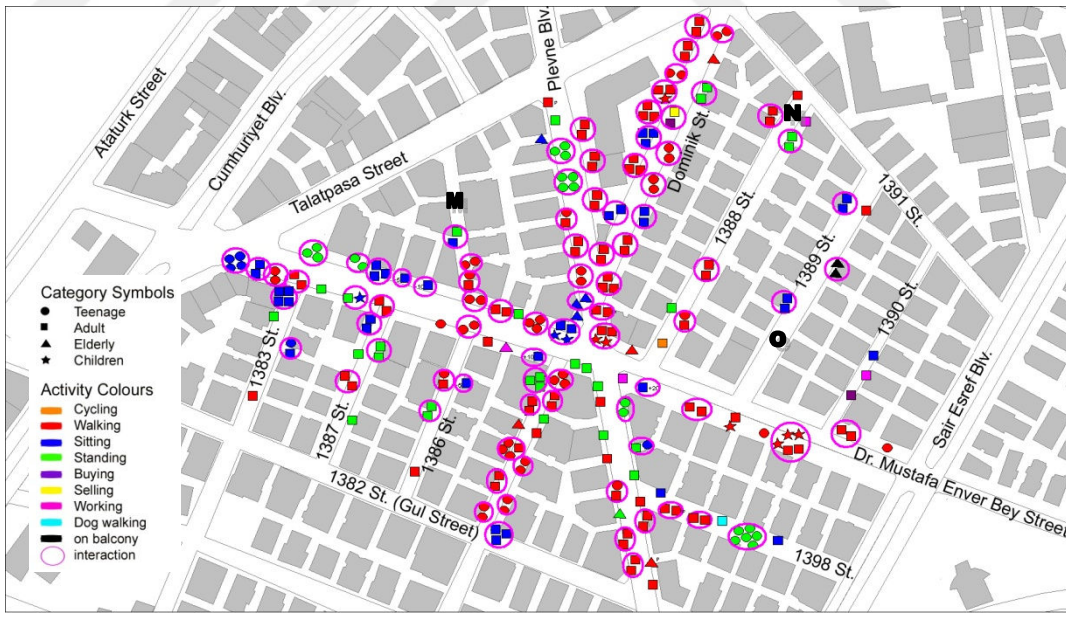


Figure 6.43 Snapshots of Kültür Neighbourhood, Alsancak Sunday 14-16 pm



M. 1386 Street North



N. 1388 Street



O. 1389 Street

Figure 6.44 Daily Life of Kültür Snapshots from M, N, O

At midday, it can be seen that the main routes are also very vibrant in terms of movement. People sitting increase in numbers and are mostly located on Dominik Street and Dr. Mustafa Enver Bey Street. Teenagers, and children, are doubled compared to the number in the weekday midday observation. Elderly people are less in number than on the weekday, and distributed equally over different times of the day. There are more people in groups than the groups in the morning. Still, walking is higher than the other activities. We can observe more people close by the entrance (see tables 6.6 and 6.7 below).

Table 6.6 Snapshots of Kültür Neighbourhood Sunday Observed People

	Children	Teenage F	Teenage M	Adult F	Adult M	Elderly F	Elderly M
Morning 10-12 pm	2	2	1	27	74	6	4
Midday 14-16 pm	10	33	34	88	112	6	6
Evening 18-20 pm	3	15	8	130	183	5	4

Table 6.7 Snapshots Kültür Neighbourhood Sunday Observed Activities

	Sitting	Standing	Walking	Talking	Other	Balcony	Entrance
Morning 10-12 pm	21	37	54	54	39	5	29
Midday 14-16 pm	97	57	138	232	37	2	124
Evening 18-20 pm	156	53	138	313	47	0	178

Table 6.8 Snapshots Kültür Neighbourhood Sunday Group vs. Individual

	Group	Individual	Total
Morning 10-12 pm	20	58	78
Midday 14-16 pm	82	51	133
Evening 18-20 pm	84	34	118

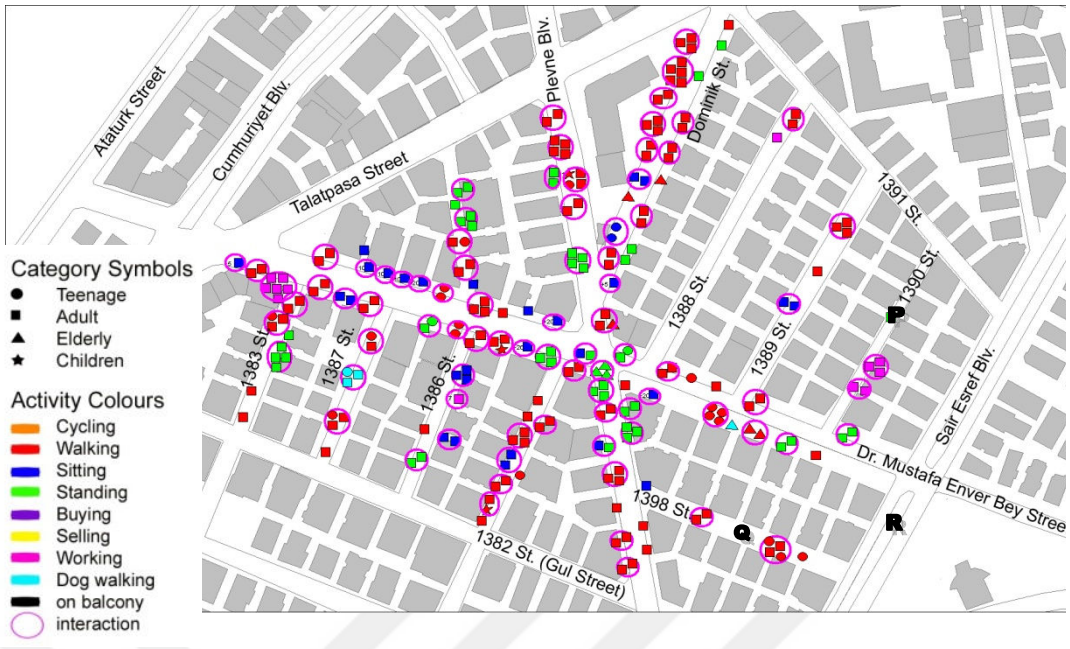


Figure 6.45 Snapshots of Kültür Neighbourhood, Alsancak Sunday 18-20 pm



P. 1390 Street



Q. 1398 Street



R. Şair Eşref Boulevard

Figure 6.46 Daily Life of Kültür Snapshots from P, Q, R

In the evening, activities are comparatively similar to those in the midday observations. While there is an increase in the number of the adults, there is a decrease both in the number of children and teenagers. In table 6.6 above, briefly there are more males than females. By the midday and evening it is getting slightly closer. There are more teenagers and children during midday than in the morning and in the evening. This is also explained in the maps above, in figures 6.41, 6.43, and 6.45.

Table 6.9 Snapshots of Kültür Neighbourhood Weekday and Sunday Observed People Total

	Children	Teenage F	Teenage M	Adult F	Adult M	Elderly F	Elderly M
Weekday Total	35	39	45	533	687	24	25
Sunday Total	15	50	43	245	369	17	14

Table 6.10 Snapshots Kültür Neighbourhood Weekday and Sunday Observed Activities Total

	Sitting	Standing	Walking	Talking	Other	Balcony	Entrance
Weekday Total	615	301	387	1023	195	6	733
Sunday Total	274	147	330	599	116	7	331

Table 6.11 Snapshots Kültür Neighbourhood Weekday and Sunday Group vs. Individual Total

	Group	Individual	Total
Weekday Total	284	324	608
Sunday Total	186	143	329

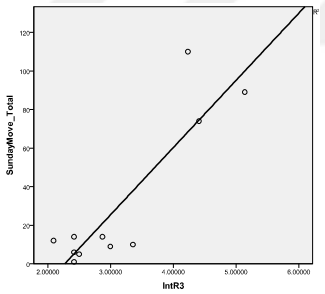
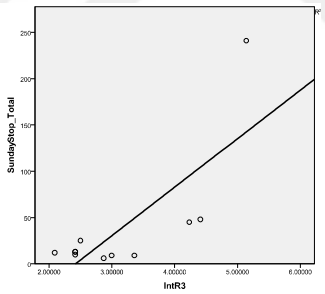
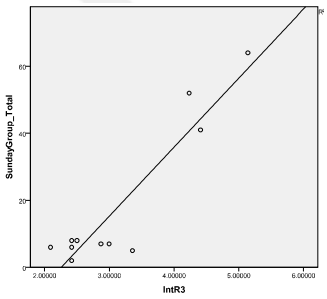
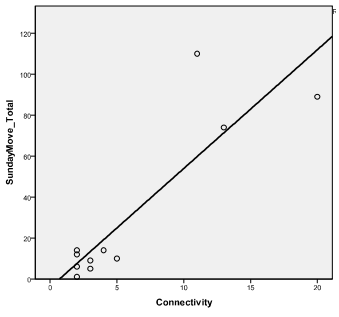
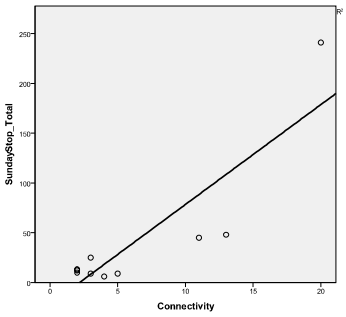
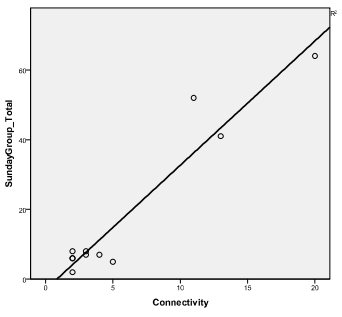
In conclusion there are more adults than other categories both during the weekday and on Sunday; however there is a decrease on Sunday both in adult numbers and other categories except the teenage groups. In particular, sitting and standing, and talking activities are reduced by half. People recorded at the entrance of buildings decreased by almost half of the number of weekday observations (see table 6.9, 6.10, and 6.11 above). On Sunday in total there are more groups. Moreover there are more males than females. Stationary activities are more than walking, especially on the weekday, at 70%.

In order to see the effect of pattern regardless of landuse of the urban structure, correlations were conducted only between Sunday observations and local measures such as integration R3 and connectivity. Consequently it can be seen that group is strongly correlated with connectivity and R3 more than movement and stationary activities are.

Table 6.12 Observations Snapshots Output Kültür

Snapshots	*WD_Mor*	*WD_Mid*	*WD_Eve*	*WD_Total*	*Sun_Mor*	*Sun_Mid*	*Sun_Eve*	*Sun_Total*
Male	66 %	53 %	54 %	56 %	69 %	54 %	57 %	58 %
Female	34 %	47 %	46 %	44 %	31 %	46 %	43 %	42 %
Group	26 %	54 %	57 %	47 %	26 %	62 %	71 %	57 %
Individual	74 %	46 %	43 %	53 %	74 %	38 %	29 %	43 %
Children	1 %	5 %	2 %	2 %	2 %	4 %	1 %	2 %
Teenage	3 %	5 %	8 %	6 %	2 %	23 %	7 %	12 %
Adult	89 %	88 %	87 %	88 %	87 %	69 %	90 %	82 %
Elderly	7 %	2 %	3 %	4 %	9 %	4 %	2 %	4 %
Sitting	36 %	52 %	48 %	47 %	19 %	33 %	45 %	36 %
Standing	25 %	22 %	23 %	23 %	33 %	20 %	15 %	20 %
Walking	39 %	26 %	29 %	30 %	48 %	47 %	40 %	44 %

Table 6.13 Correlations between Activities and Local Measures of Space Syntax

		
R^2=.782 r=.884** p< 0.001 Movement & Int_R3	R^2=.585 r=.765** p=.006 Stationary & Int_R3	R^2=.859 r=.927** p< 0.001 Groups & Int_R3
		
R^2=.774 r=.880** p< 0.001 Movement & Connectivity	R^2=.766 r=.875** p< 0.001 Stationary & Connectivity	R^2=.916 r=.957** p< 0.001 Groups & Connectivity

"People to people analysis" in space syntax reveals the "virtual community", and possibility of interaction as mentioned earlier in chapter 3. Depending on the spatial configuration, movement, and landuse, co-presence emerges between various categories of people. Space Syntax defines these two social structures as "multiple interface" and "L-shaped" structures. In the multiple interface structure there is co-awareness and high possibility of interaction among different types of people, whereas in an L-shaped graphic one group may dominate over the other in use of space. Therefore this type of structure indicates the segregation between different age groups and gender (Hillier, 1996; Major et al., 1997; TPR, 2004).

Due to time limitations this study only examined Kültür Neighbourhood weekday snapshots in terms of people-to-people analysis. It can be seen from the table 6.14 and figures 6.46 and 6.47 below that "virtual community" can also change at different times of the day. However, the graphic shape is more L-shaped, and adults are much higher in number, as explained above. Hence it does not offer an intermingled social pattern.

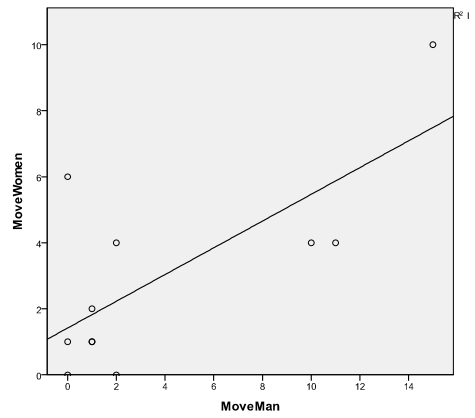


Figure 6.47 Man and Women (A) WD Morning

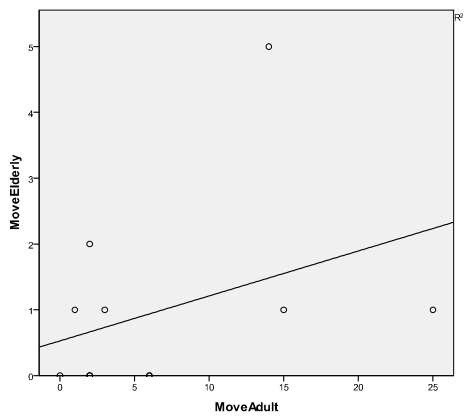


Figure 6.48 Elderly and Adult WD Morning

Table 6.14 Kültür Neighbourhood Correlation of People to People Analysis

WD Movement (R^2)	Morning	Midday	Evening
Teenage & Adult	.327	.342	.761
Teenage & Elderly	.752	.070	.920
Elderly & Adult	.130	.347	.908
Man & Women	.515	-	-

Questionnaires and Focus Groups

Both the results of the questionnaires and the interview with the Muhtar[4] revealed a close similarity in terms of socio-economic structure of Kültür Neighbourhood. In total, 102 questionnaires were conducted with mostly adult and female respondents. The neighbourhood leader mentioned that there are not many children and teenagers, and that most of the population is elderly; however, there were not many elderly people observed on streets. In terms of ownership, 20% of the population are tenants, and in the questionnaires the figure was 30%. The majority is originally from Izmir and its surroundings. Just 10% of the population are the immigrants who came to Izmir from different regions.

> There are only a few changes on the street, they change the flowers. One period they plant violet, another period something different, which is like a makeover. Other than these I don't see anything permanent. Buildings are 20-30 years old, people are also the same, and I don't think they have changed. Maybe age is becoming an issue. Gradually Alsancak is aging. Young people and crowded families moved into larger places, and spaces. Here residents are mainly retired couples. This is the only change that I can see (Local Shopkeeper 1379 Street).

> Compared to the past, relationships are worse but Alsancak is different, here people have distinctive characteristics, there are doctors, lawyers, and from every culture and there are also foreign people living here. Due to economical constraints neighbourhood relations are more distant than in the past (Local Shopkeeper 1387 Street)

[4] Muhtar: Elected neighbourhood Alderman

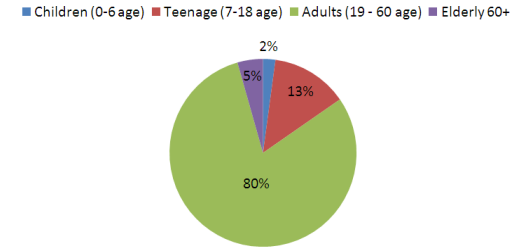


Figure 6.49 Age Groups due to Sunday Observations

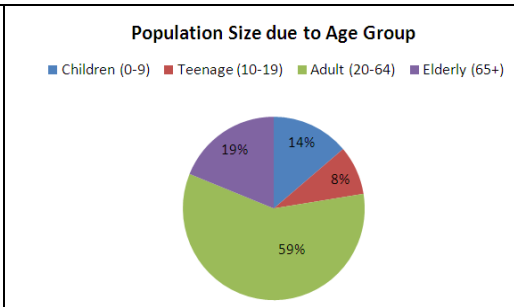


Figure 6.50 Population- Age Group (TUIK[5] 2009)

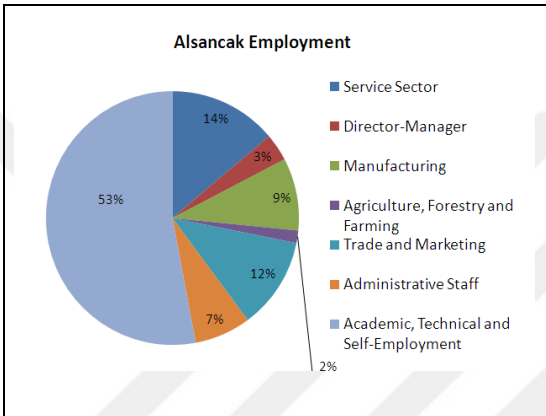


Figure 6.51 Employment Rates (TUIK 2000)

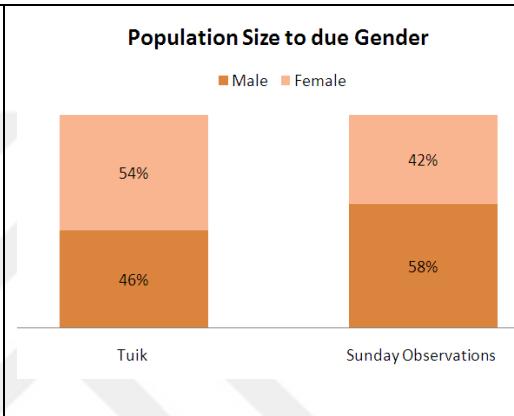


Figure 6.52 Population Size due to Gender

Alsancak is a popular district in terms of land speculation and urban rents. Depending on the area, or street and proximity to the sea, rents start from 1000TL (400£), and flats are on sale for between 150.000 TL - 300.000TL, or higher. As Aksoy (2000) says, in 1995 there was more residential use than commercial use (70% residential, 30% commercial). However, by the 2000s, this rate shifted to 65% commercial and 35% residential. It is really difficult to see housing use on Talatpaşa Street and Kıbrıs Şehitleri Street. In particular, the Punta area is mostly dominated by cafes-bars, and night clubs (Aksoy, 2000).

[5] TUIK: Turkish Statistical Institute

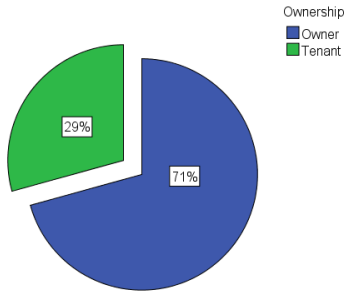


Figure 6.53 Ownership in Kültür

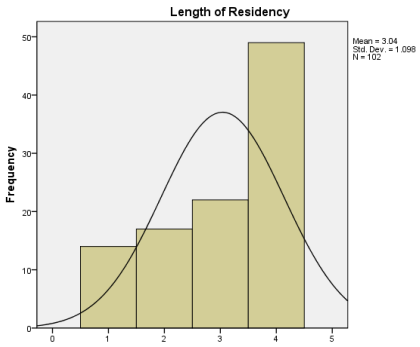


Figure 6.54 Length of Residency in Kültür

Length of residency in Kültür Neighbourhood is high: 48% of the respondents have lived in this neighbourhood for more than 20 years, and 21.6% of them have lived there for 10-20 years. Hence, most of the families are well known and rooted in Alsancak. Ownership is greater than tenancy. Muhtar asserts that 70% of the residents are university graduates, and from the questionnaires it can be seen that 68% of respondents are graduates and postgraduates. There are mainly high-income groups living in the neighbourhood, mostly working in the tourism, commerce, industry, and service sectors. In addition, Muhtar emphasises that there are approximately 500 registered doctors. From the questionnaires it can be seen that occupation types are classified as mainly service sector, marketing and business, housewife, and retirement. Above all, well-educated and high-income people dwell in the neighbourhood. Another outcome, which overlaps with the interview, is the average household, which is 2.7 people per flat with 1.07 children. It can be concluded that nuclear families live in Kültür Neighbourhood (see the table 6.15 below).

> There haven't been many changes for six years. They are very friendly to me; I did not experience anything bad. Whether they are high income or not it does not matter, they are friendly. There is not any bad person in Alsancak (Local Shopkeeper 1386 Street).

Table 6.15 Descriptive Statistics Kültür Neighbourhood Socio Demographic Structure

	N	Minimum	Maximum	Mean	Std. Deviation
Age	81	17	90	48.88	17.989
Gender	83	1	2	1.57	.499
Length of Residency LR	102	1	4	3.04	1.098
Ownership	99	1	2	1.29	.457
Household	100	1	5	2.71	1.038
Number of Children	95	0	3	1.07	.890
Education Degree	94	1	4	1.43	.740
Occupation Kültür	93	1	9	4.01	2.229

(Gender 1= male 2= female / Ownership 1=owner 2=tenant
LR 1= less than 5 years 2= 5-10 years 3= 10-20 years 4= more than 20 years
Education 1= graduate and postgraduate 2= high school and institution 3= middle school 4= primary school
Occupation 1= retired 2= house wife 3= student 4= service sector 5= trade marketing business
6= manager director 7= self employed 8= science academic and education 9= art and music)

In Kültür neighbourhood 16% respondents in 31% indicated that they do not know many neighbours because they are very busy. They know on average 66 people in their neighbourhood and 15 people in the building. They sometimes visit 11 people in the neighbourhood and their frequency of interaction is greater outdoors. Regarding the perception of walking they quite agree that they feel safe when they walk within the neighbourhood. They feel neutral about sense of community, friendship and acquaintance, and about the maintenance and management of their neighbourhood. However they disagree in terms of near home environment, and issues about adequate space for seating, landscaping, and playing for children (see table 6.17 below). For the details of decoding see appendix 2.

Table 6.16 Descriptive Statistics Kültür Neighbourhood People Known in the Neighbourhood

	N	Min	Max	Mean	Std. Dev.
I don't have many neighbours	102	0	3	.59	1.018
Number of people known by name in the Neigh.	97	0	1000	66.44	125.683
Number of people known by name in your Building	101	0	50	15.45	12.112
Number of neighbours you visit in your Neigh.	98	0	100	11.32	16.495
Frequency of visits to people living in your Neigh.	98	1	3	1.95	.679
Frequency of social interaction in outdoors	100	1	3	2.60	.550

Frequency 1= Never 2=Sometimes 3= A lot

Table 6.17 Descriptive Statistics Kültür Neighbourhood 5 Point Scale Variables

	N	Min	Max	Mean	Std. Dev.
Perception of Walking and Safety	94	1	5	3.75	.913
Sense of Community Neighbourhood Scale	51	1	5	3.06	.776
Friends, Acquaintance and Knowing People	52	1	5	2.91	.971
Maintenance and Management (Safety & Comfort)	95	1	5	3.36	.642
Near Home Environment	99	1	5	2.15	.895

1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree

Table 6.18 Descriptive Statistics Kültür Neighbourhood Indices

	N	Min	Max	Mean	Std. Deviation
Interaction in and around the Building	102	0	5	1.80	1.117
Interaction around the Neighbourhood	101	0	4	1.87	1.016
Planting, Playground, Seating, and Chatting	102	0	3	.42	.636

Interaction in and around the building includes entrance, staircase and hall, lift, balconies, and windows. Interaction around the neighbourhood has streets and sidewalks, parking lots, neighbourhood open spaces, cafes and local shops, and other places. In the Kültür case area, on average, two out of five places were chosen as interaction places both in the building and in the neighbourhood. Among these, streets and sidewalks with 81%, entrances of the buildings with 80%, and cafes and local shops with 45% are in the majority compared to the others. Moreover generally there are not planting, seating, chatting, and playing activities around the residential building of the Kültür residents. Regarding the interactional places and frequency of interactions, 54% of respondents indicated that they interact at the entrance of the building a lot, 56% a lot on street and sidewalks, 33% a lot at cafes and local shops, and 21% a lot in neighbourhood open spaces (see figure 6.57 below). As they walk they interact more in front of the building as can be seen in the figure 6.55. The space between the building and the street is not suitable for seating, resting, planting, and playground. Twenty per cent of residents indicate that their front yard is used as a cafe, bar, shop, or cab stop, and especially for car parking and as a sidewalk (see figure 6.56 below).

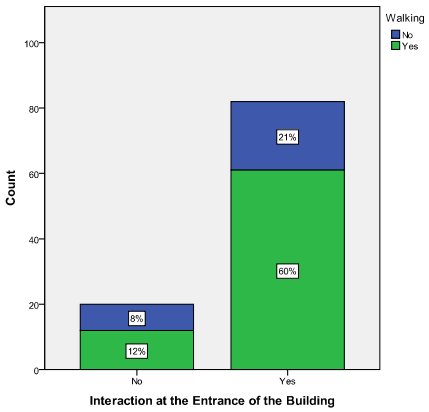


Figure 6.55 Interaction at the Entrance & Walking

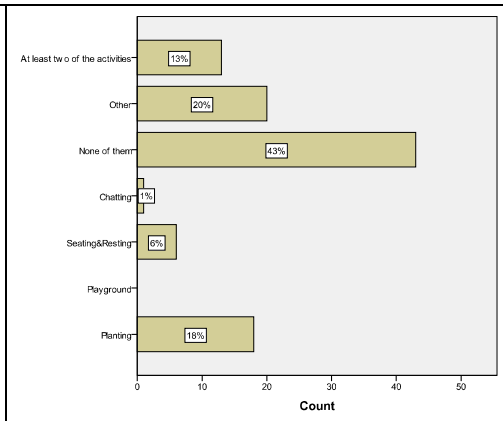


Figure 6.56 Activity Types in front of the Building

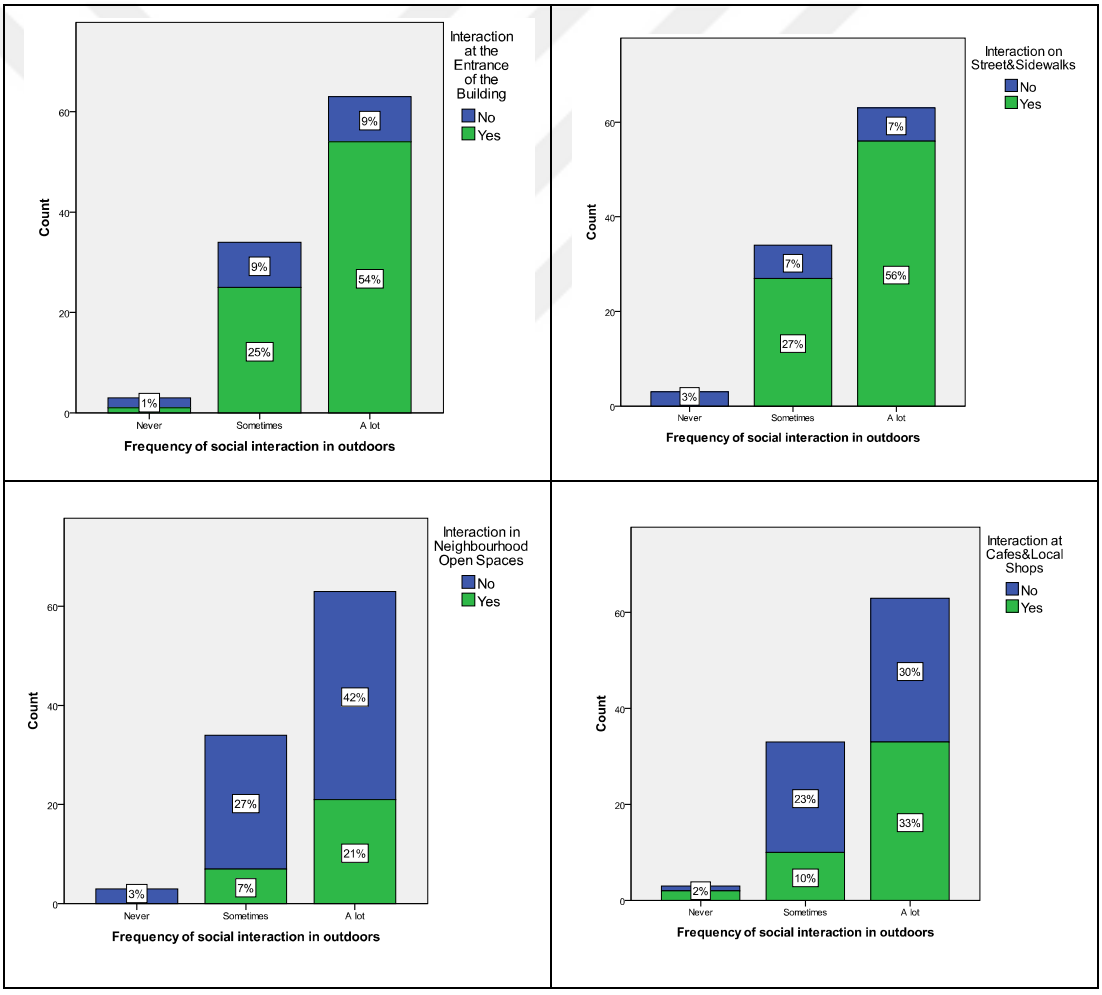


Figure 6.57 Interactional Places and Frequency of Interaction in Kültür

Length of Residency (LR)

Table 6.19 Correlations with Length of Residency

Correlations with Length of Residency	Correlation coefficient _ *r*	Sig (2-tailed) _ *p*
Sense of Community	**.286***	**.042**
Number of People Known by name in the Building	**.319****	**.001**
Number of People Known by name in the Neigh.	**.215***	.035
Number of Neighbours you visit in your Neigh.	.107	.296
Friends and Acquaintance	**.308***	**.026**
Planning to move to another Neighbourhood	.032	.772
Interaction around the Neighbourhood	.058	.564
Interaction in and around the Building	-.018	.858

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

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

Length of residency has a correlation with sense of community, number of people known by name in the neighbourhood and in the residential block, as well as with friends and acquaintances. The odds ratio per increasing year of residency is 0.603, i.e. interaction at the entrance decreases by 40% per additional year of residency (see the table 6.20 below). This is not a significant effect because the p=0.069. When length of residency and interaction on balconies are analysed through logistic regression, it can be seen that interaction on balconies increases by 78% per additional year of residency.

Table 6.20 Logistic Regression Analysis of LR with Interaction at the Entrance

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	LengthResidency	-.506	.279	3.300	1	.069	.603
	Constant	3.038	.975	9.702	1	.002	20.869

a. Variable(s) entered on step 1: LengthResidency.

Table 6.21 Logistic Regression Analysis of LR with Interaction on Balconies

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	LengthResidency	.575	.304	3.580	1	.058	1.777
	Constant	-3.408	1.078	10.003	1	.002	.033

a. Variable(s) entered on step 1: LengthResidency.

As various researchers mention, (Lund, 2002; Nasar and Julian, 1995) married couples and couples with children have a higher sense of community and they know more people in the neighbourhood. Although the p value is not that significant, in the Kültür neighbourhood, respondents with children reveal a stronger relation compared to the ones without children (see the table 6.22 below). Moreover, as the below graphic in figure 6.57 shows, when the age increases, mean of sense of community scale increases. A further factor that the researchers (Lund, 2002; Nasar and Julian, 1995) mentioned is that attractiveness of the neighbourhood varies among different age groups. In the Kültür Neighbourhood, while teenage and adults find the neighbourhood more interesting, elderly do not.

Table 6.22 Regression Analysis of NP known by name in the Building and Household with/without Children

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.369	4.750		1.762	.083
	Household with Children	2.695	1.489	.226	1.810	.075

a. Dependent Variable: Number of people known by name in your Building?

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12.605	2.164		5.824	.000
	Household without Children	-.003	.012	-.040	-.215	.831

a. Dependent Variable: Number of people known by name in your Building?

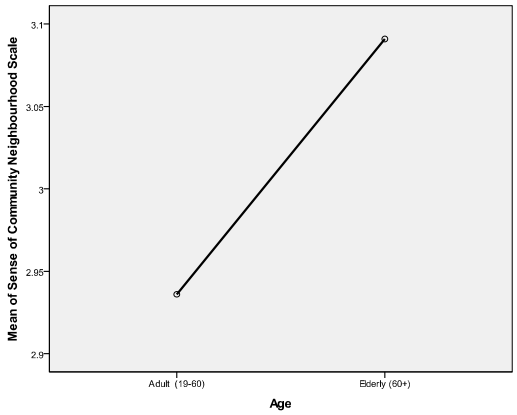


Figure 6.58 Age and Sense of Community

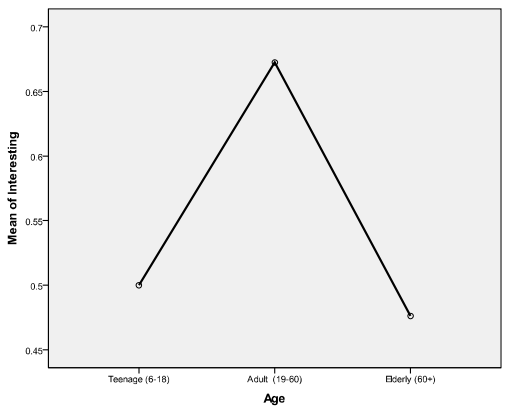


Figure 6.59 Age and NC Interesting

Sense of Community (SC)

Sense of community has strong relations firstly with maintenance, and frequency of social interaction in outdoors, and then less strong with other variables such as; people known by name in the apartment and neighbourhood, visits to neighbours and frequency of visits. In the multiple regression analysis in table 6.24 below, it is clear that sense of community is affected by the number of people known in the neighbourhood and the frequency of social interaction in the outdoors. R^2= 0.534 or 53.4% of variation in sense of community can be explained by the variables in the first model of multiple regression analysis below; maintenance and management, positive social and positive spatial characteristics of the neighbourhood. Additionally 35.2% can be predicted from number of people known in the neighbourhood and frequency of social interaction (see the table 6.24 below).

Table 6.23 Correlations with Sense of Community

Correlations with Sense of Community	**Correlation coefficient _ *r***	**Sig (2-tailed) _ *p***
Interaction around the Neighbourhood	.169	.240
Interaction in around the Building	.062	.666
Positive Spatial Characteristics of the Neighbourhood	.145	.308
Number of People Known by name in the Building	**.442****	**.001**
Number of People Known by name in the Neighbourhood	**.367****	**.010**
Number of Neighbours you visit in your Neighbourhood	**.328***	**.020**
Frequency of Visits to People in the Neighbourhood	**.309***	**.029**
Frequency of Social Interaction in Outdoors	**.519****	**.000**
Adequate Space for Landscaping and Planting Near Home	.141	.323
Maintenance and Management	**.699****	**.000**
Planning to Move	.078	.614
Near Home Environment	.216	.178

Table 6.24 Multiple Regression Analysis of Sense of Community

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.204	.401		.510	.613
	Maintenance and Management (Safety & Comfort)	.871	.121	.752	7.199	.000
	Positive Social Characteristics of the Neighbourhood	-.089	.043	-.313	-2.045	.047
	Positive Spatial Characteristics of the Neighbourhood	.117	.060	.287	1.938	.059

a. Dependent Variable: Sense of Community Neighbourhood Scale

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.330	.412		3.227	.002
	Number of people known by name in the Neighbourhood?	.001	.001	.251	2.049	.046
	Frequency of social interaction in outdoors	.623	.159	.481	3.929	.000

a. Dependent Variable: Sense of Community Neighbourhood Scale

Groups Statistics and T-tests

As explained in the research methodology section, sense of community, friends and acquaintance, and perception of walking are 5-point scale variables from 'strongly disagree' to 'strongly agree'. Frequency questions are 3-point scale variables from 'never' to 'a lot', and interaction questions are formed of five indices. There is no significant difference between the groups of ownership, gender, and the variables numerated above. However, owners and males have slightly higher values than tenants and females in most cases. Both owners-tenants and males-females are neutral in terms of sense of community as well as acquaintance issues. On the other hand they feel safe when they are walking in the neighbourhood. Furthermore in the table 6.26 below, safety variables do not reveal substantial differences among different genders. As interactional spaces around the building and the neighbourhood, both chose on average two places out of five indices. Although the number of people that they know in their residential building does not change across the different categories, males and owners know more people in the neighbourhood than the other groups.

Table 6.25 T-tests for Kültür Neighbourhood

	Sense of Community			Interaction in around Building			Interaction around Neighbourhood			People Known in Building			People Known in Neighbourhood		
	N	Mean	Sig	N	Mean	Sig	N	Mean	Sig	N	Mean	Sig	N	Mean	Sig
Owner	36	3.07	.521	70	1.84	.540	69	1.90	.505	69	16.2	.077	67	73.8	.277
Tenant	13	2.91		29	1.69		29	1.72		29	11.7		27	42.3	
Male	21	2.99	.446	36	1.78	.433	35	2.00	.922	35	16.1	.528	33	89.2	.216
Female	20	3.16		47	1.98		47	2.02		47	14.4		45	48.3	

	Frequency of Interaction			Frequency of Visits			Friends and Acquaintance			To go Somewhere on Foot			Perception of Walking		
	N	Mean	Sig	N	Mean	Sig	N	Mean	Sig	N	Mean	Sig	N	Mean	Sig
Owner	70	2.64	.249	70	1.97	.424	36	2.94	.358	70	.73	.470	64	3.79	.526
Tenant	27	2.48		26	1.85		14	2.66		29	.66		27	3.66	
Male	36	2.56	.309	35	1.91	.566	21	2.87	.638	34	.75	.468	36	3.78	.693
Female	47	2.68		46	2.00		20	3.01		45	.79		47	3.92	

N= Number of Respondents

Table 6.26 Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
I feel safe walking in my neighbourhood during the day (1-5 scale)	male	36	4.11	1.008	.168
	female	45	4.13	.991	.148
I feel safe walking in my neighbourhood during the evening (1-5 scale)	male	36	3.72	1.162	.194
	female	45	3.56	1.139	.170
I feel safe and comfortable in this neighbourhood (1-5 scale)	male	35	3.74	1.067	.180
	female	46	4.00	.966	.142
Neighbourhood Character Safe 0= no 1= yes	male	36	.56	.504	.084
	female	47	.60	.496	.072

Neighbourhood Characteristics (NC) in Kültür

Table 6.27 Characteristics of Kültür Neighbourhood

Distinctive	*32.4%*	*Simple*	*17.6%*	***Clean***	***46.1%***
Ordinary	*21.6%*	*Complex*	*22.5%*	*Dirty*	*23.5%*
Plain	*29.4%*	***Peaceful***	***48%***	***Central***	***87.3%***
Ornate	***45.1%***	*Anxious*	*10.8%*	*Not Central*	*0*
Interesting	***57.8%***	***Safe***	***55.9%***	*Spacious*	*41.2%*
Boring	*4.9%*	*Unsafe*	*11.8%*	*Narrow*	*17.6%*
Not Crowded	*4.9%*	***Pleasant***	***60.8%***	***Comfortable***	***50%***
Crowded	***72.5%***	*Unpleasant*	*3.9%*	*Uncomfortable*	*7.8%*
Natural	*29.4%*	*Quiet*	*17.6%*	***Varied***	***52%***
Manmade	*21.6%*	*Noisy*	*48%*	*Monotonous*	*5.9%*
Familiar	***58.8%***	***Living***	***65.7%***	*Well Kept*	*44.1%*
Unfamiliar	*6.9%*	*Lifeless*	*2.9%*	*Un Kept*	*20.6%*
Excited	*31.4%*	***Friendly***	***45.1%***	***Relaxed***	***56.9%***
Depressed	*6.9%*	*Unfriendly*	*5.9%*	*Stressful*	*8.8%*

Table 6.27 above shows that residents mostly define their neighbourhood as central (87.3%), crowded (72.5%), living (65.7%), pleasant (60.8%), familiar (58.8%), interesting (57.8%), relaxed (56.9%), safe (55.9%), varied (52%), comfortable (50%), noisy (48%), peaceful (48%), clean (46.1%), friendly (45.1%), and well kept (44.1%). It can be also seen from the global integration map (figure 6.13 in page 147) that Alsancak is really central and accessible and since its development, the neighbourhood is the place for different types of boutiques, cafes, patisseries, pubs, and many other shops. It does not have the cosmopolitan structure that it used to have in the nineteenth century, but many Levantine families continue to live here. Hence it has always been the place not only for its residents but also for Izmir citizens to meet.

Table 6.28 Neighbourhood Characteristics Indices

Neighbourhood Characteristics Kültür	**N**	**Min**	**Max**	**Mean**	**Std. Dev.**
Positive Spatial Characteristics of the Neigh.	102	0	7	3.11	1.834
Negative Spatial Characteristics of the Neigh.	102	0	7	1.92	1.369
Positive Social Characteristics of the Neigh.	102	0	9	4.43	2.799
Negative Social Characteristics of the Neigh.	102	0	7	1.00	1.386
Positive Management and Maintenance	102	0	4	1.68	1.299
Negative Management and Maintenance	102	0	4	.64	1.032

In the table 6.28 above, on average, respondents chose three positive spatial characteristics out of eight and four positive social characteristics of the neighbourhood out of nine, and 1.68 positive management characteristics out of four. Negatives features are less chosen ones. In total approximately nine positive characteristics are chosen out of 21 adjectives. As Skjaeveland and Garling (1997) emphasise, neighbouring is strongly correlated with spaciousness. In Kültür, spaciousness is strongly associated with positive social characteristics of the neighbourhood and then interactional places around the Neighbourhood, as well as around the building (see table 6.30 below).

Table 6.29 Correlations of Neighbourhood Characteristics

Correlations

		Positive Spatial Characteristics of the Neighbourhood	Negative Spatial Characteristics of the Neighbourhood	Positive Social Characteristics of the Neighbourhood	Negative Social Characteristics of the Neighbourhood	Positive Management and Maintenance Characteristics of the Neighbourhood	Negative Management and Maintenance Characteristics of the Neighbourhood
Positive Spatial Characteristics of the Neighbourhood	Pearson Correlation	1	.051	.768**	-.047	.572**	.016
	Sig. (2-tailed)		.613	.000	.641	.000	.876
	N	102	102	102	102	102	102
Negative Spatial Characteristics of the Neighbourhood	Pearson Correlation	.051	1	.120	.595**	-.081	.568**
	Sig. (2-tailed)	.613		.230	.000	.417	.000
	N	102	102	102	102	102	102
Positive Social Characteristics of the Neighbourhood	Pearson Correlation	.768**	.120	1	-.191	.720**	-.089
	Sig. (2-tailed)	.000	.230		.054	.000	.372
	N	102	102	102	102	102	102
Negative Social Characteristics of the Neighbourhood	Pearson Correlation	-.047	.595**	-.191	1	-.259**	.678**
	Sig. (2-tailed)	.641	.000	.054		.009	.000
	N	102	102	102	102	102	102
Positive Management and Maintenance Characteristics of the Neighbourhood	Pearson Correlation	.572**	-.081	.720**	-.259**	1	-.384**
	Sig. (2-tailed)	.000	.417	.000	.009		.000
	N	102	102	102	102	102	102
Negative Management and Maintenance Characteristics of the Neighbourhood	Pearson Correlation	.016	.568**	-.089	.678**	-.384**	1
	Sig. (2-tailed)	.876	.000	.372	.000	.000	
	N	102	102	102	102	102	102

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

Table 6.30 Correlations with Spacious

Correlations with Neighbourhood Character Spacious	**Correlation coefficient _ *r***	**Sig (2-tailed) _ *p***
Interaction around the Neighbourhood	**.286****	**.004**
Positive Social Characteristics of the Neighbourhood	**.614****	**.000**
Interaction in and around the Building	**.237***	**.016**

Near Home Environment (NHE)/ Interaction/ Friends and Neighbouring

Arrangement of space in the near home environment is related with the activities going on around the building and the maintenance and management of the neighbourhood in the Kültür case study. There is no relation between the near home environment and knowing people, or acquaintances (see table 6.31 below). This might be due to the lack of residential in-between spaces in the neighbourhood. There are various private uses in the ground floor of the apartments in Kültür; however these uses encourage the interaction between the buyer and the seller (Major et al., 1997; Yatmo, 2008), but not so much between the residents. Although residents might see other people sitting in the café and greet them, affordable (Gibson, 1986) in-between space is crucial for the neighbouring issues. A further issue is personalisation (Abu Ghazzeh, 2000), as the dwellers cannot territorialise their ground floors, they do not own the control of space, and they do not feel attached.

Table 6.31 Correlations with Near Home Environment

Correlations with Near Home Environment	**Correlation coefficient _ *r***	**Sig (2-tailed) _ *p***
Frequency of Social Interaction	-.007	.946
Friends Acquaintance	.122	.389
Number of People Known by name in the Neighbourhood	-.004	.967
Number of People Known by name in the Building	-.002	.987
Number of Neighbours you visit in your Neighbourhood	.093	.372
Planting, Playground, Seating, and Chatting	**.370****	**.000**
Perception of Walking	.087	.403
Maintenance and Management	**.238***	**.020**

Table 6.32 Multiple Regression Analysis for Friends and Acquaintance in Kültür

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.655	.338		7.860	.000
	Near Home Environment	.125	.174	.113	.717	.477
	Planting, Playground, Seating, and Chatting	.038	.271	.022	.141	.888

a. Dependent Variable: Friends, Acquintance and Knowing People

Table 6.33 Correlations with the Interaction at the Entrance of the Building

Correlations with Interaction at the Entrance	**Correlation coefficient _ r**	**Sig (2-tailed) _ p**
Number of People Known by name in the Building	.082	.413
Ownership	.158	.118
Frequency of Social Interaction (HL5)	**.228***	.022
Near Home Environment	-.093	.362

Table 6.34 Logistic Regression Analysis of Interaction at the Entrance of the Building

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	NPResident	.003	.024	.019	1	.890	1.003
	HL5	.960	.473	4.124	1	.042	2.613
	Constant	-1.097	1.105	.985	1	.321	.334

a. Variable(s) entered on step 1: NPResident, HL5.

Referring to table 6.33 above, interaction at the entrance of the building is not associated with either the number of people known by name in the building and spatial organization around the building, or with the ownership. Nevertheless, frequency of social interaction and the interaction at the entrance of the building is fairly related within each other. The table 6.35 below shows that - in order - maintenance and management, frequency of social interaction in the outdoors, and frequency of visits to neighbours are strongly related with acquaintance and friendship. It is interesting that management and maintenance of a place has a strong affect on friendship. As local authorities organise social events, people meet with more people, and in addition, well maintained and kept urban environments attract more people on the streets.

Table 6.35 Correlations with Friends and Acquaintance

Correlations with Friends and Acquaintance	**Correlation coefficient _ *r***	**Sig (2-tailed) _ *p***
Planning to Move to another Neighbourhood	.110	.465
Maintenance and Management	**.575****	**.000**
Planting, Playground, Seating, and Chatting	.070	.620
Frequency of Visits	**.401****	**.004**
Frequency of Social Interaction in Outdoors	**.555****	**.000**

In fact here is a small place, everybody knows each other. Therefore it is like a small town, village. Here although people don't visit each other very often, they know each other very well. However, I don't think that these relations are very sincere. When they bump into each other, they chat because they have to. If possible many of them would prefer not to see each other and not to talk (Local Shopkeeper 1379 Street).

It is a nice street. Social relations are formal, people are not saucy, they are respectful to each other. We are glad to have a shop on this street, people are very good (Local Shopkeeper 1386 Street).

Neighbouring has finished, it was in the past (Bakkal 1390 Street).

I don't think they are sincere to each other (Street Vendor).

Social relations are good and the district is also nice (Dominik Flower Shop).

Table 6.36 Correlations with Walking and Safety

Correlations with Perception of Walking and Safety	**Correlation coefficient _ *r***	**Sig (2-tailed) _ *p***
Interaction around the Neighbourhood	.448**	.000

Correlations with To go somewhere on Foot	**Correlation coefficient _ *r***	**Sig (2-tailed) _ *p***
Interaction around the Neighbourhood	.222*	.026
Interaction in and around the Building	.299**	.002

Seating in front of the building does not have any correlation with either interaction in around the building or around the neighbourhood. It might be because there are not seating areas for residents except in Dominik Street. To go somewhere by car is not associated with the interaction in or around the building and neighbourhood; however to go somewhere by bus is correlated with the interaction around the neighbourhood. Perceptions of walking and safety are

correlated with the interaction around the neighbourhood. As people walk comfortably and safely they interact more in neighbourhood public spaces. Walking is also related with interaction around the building.

Problems in Kültür Neighbourhood

Problems mentioned in the neighbourhood in terms of importance are firstly car parking, secondly noise, and thirdly maintenance and management. Although they do not plan to move to another neighbourhood, if there were no financial constraints, only 58% would like to live in the Kültür Neighbourhood.

> This neighbourhood is very beautiful but there are some problems. The traffic problem, as well as there is no interest in local shopkeepers, in fact if there are local shopkeepers in a neighbourhood, streets will be more vivid and beautiful (Local Shopkeeper 1387 Street).
>
> The Municipality does not do anything; I don't like the pavements or the streets. They have to rearrange the curbs and paving stones. For instance, one day a woman with a baby and buggy could not walk on the sidewalk. Moreover, elderly people might fall on these roads. It is not nice (Local Shopkeeper 1386 Street).
>
> The Municipality organises some activities and events (Dominik Flower Shop).
>
> I like to work in here because it is a clean street (Street Vendor).

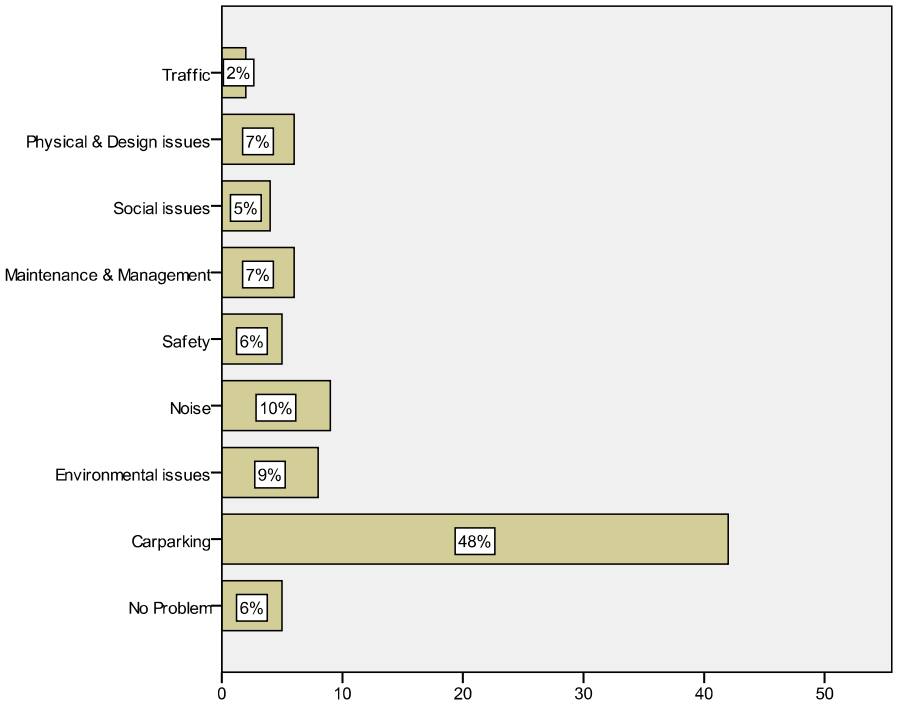


Figure 6.60 First Main Problem in the Neighbourhood

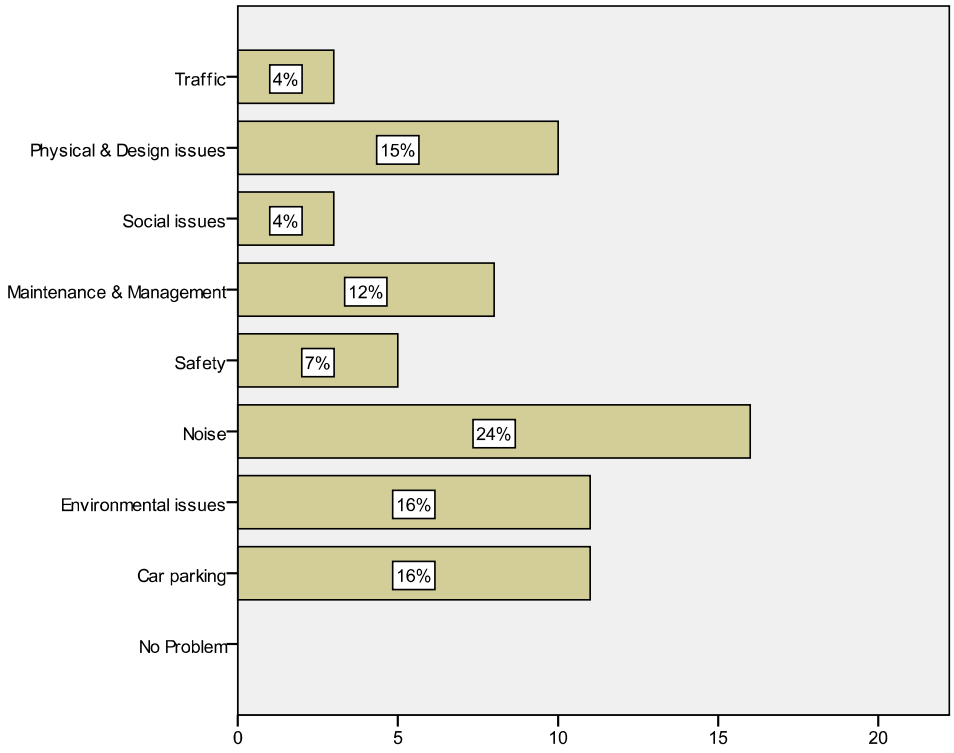


Figure 6.61 Second Main Problem in the Neighbourhood

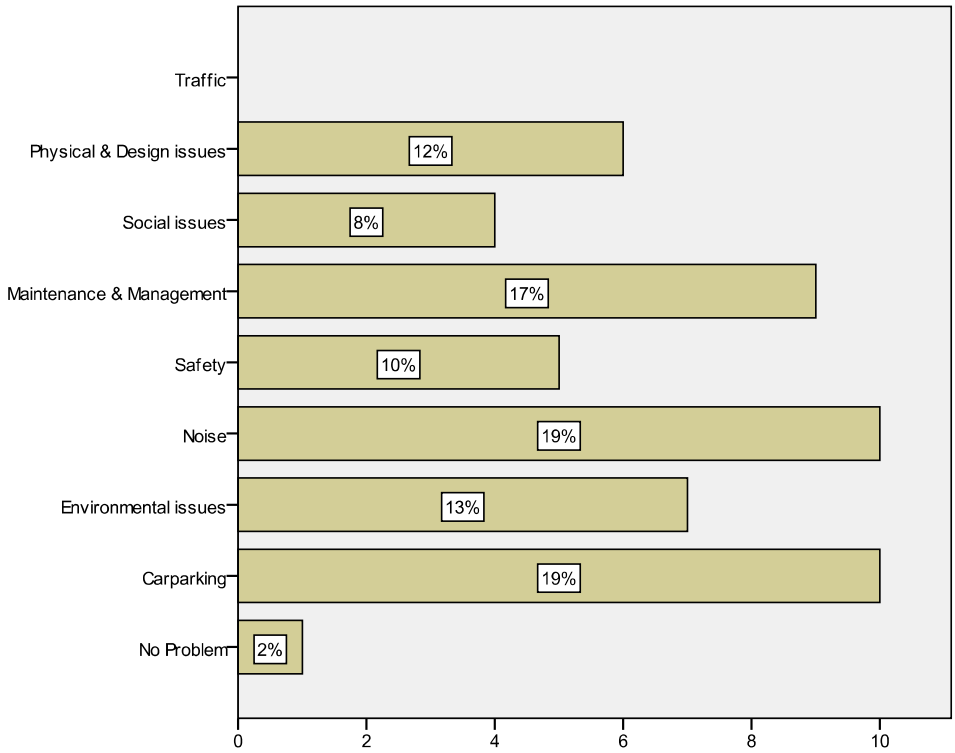


Figure 6.62 Third Main Problem in the Neighbourhood

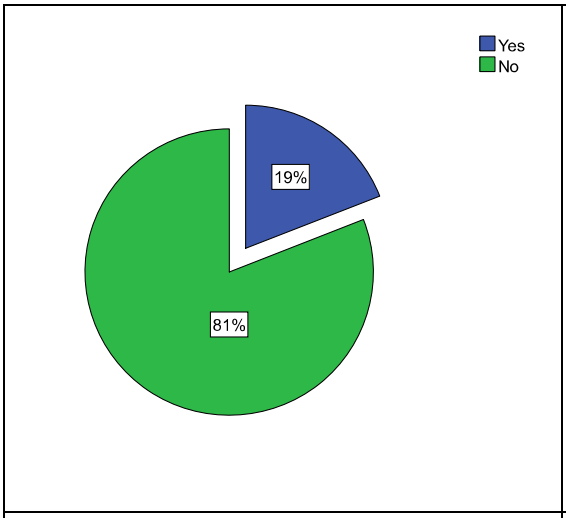


Figure 6.63 Planning to Move

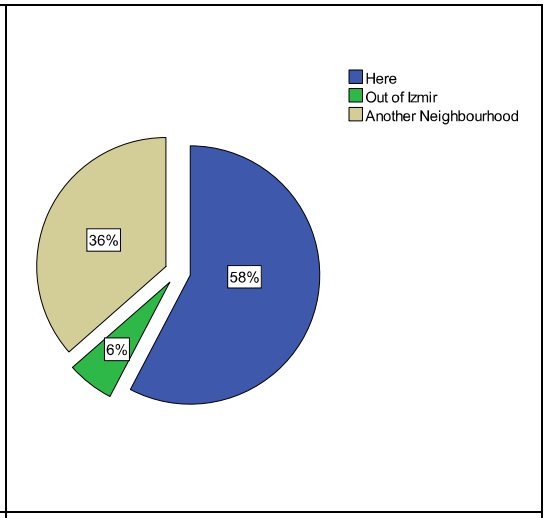


Figure 6.64 Where would you like to live?

Definition and problems of the neighbourhood can be also evaluated with the results of focus group with children. Ten children aged between 10 and 11 from *Gazi Primary School* were interviewed: five students were from 5/B Class and five students were from 4/A Class. It was a very heterogeneous group; some children were from the middle-income group while others were from the low-income group. Low-income groups were mainly the children of concierges in Alsancak. According to the manager of the school, students from the high-income group go to private colleges around Izmir. Most of them have approximately four to five friends from their neighbourhood. They usually play on the street of their neighbourhood every day or at least two to three hours per weekday. In their spare time they spent time on the computer or watching TV, or on the play station, reading book, music, drawing, and cycling and other activities.

Their drawings showed houses with front yards, and playgrounds. They want clean and enjoyable environments, ordered and quiet streets, and, as one student mentioned, recycling. Another student mentioned that he wants people to be able to live in beautiful places, and he does not want people to have to stay at home, but would like to see them playing outside.

Definition of their Environment and Neighbourhood by Children

It is green but dirty, noisy, especially the noise that occurs when some people play football with cans.

Problems of the Area as perceived by Children

- Dirtiness, especially cigarette butts around their neighbourhood,
- Pollution because of the cars, rubbish thrown into the sea,
- Bad treatment of animals,
- Playgrounds are far and when you go there they are messy and not well maintained
- In Kordon gipsies are hassling people to pay for fortune telling, and are selling flowers,
- Noise, dog mess in the parks, and people are dog walking on cycling routes,
- Adults are using children's places and areas

Playgrounds, where they play

- Fair site, Kültür Park
- Kordon Seaside
- In front of their Apartment Block



Figure 6.65 Drawings of Gazi Primary School Children

6.3 CONCLUSION

The Kültür neighbourhood has a completely different urban structure to what it had before the Republic period. The pattern of Frank district (former Alsancak) evolved organically especially as a result of Levantine culture and harbour activities until the end of the nineteenth century and the beginning of twentieth century through bottom-up processes. With the establishment of the new Republic and top-down processes Alsancak's urban pattern and social structure shifted as a result of modern approaches and different space production. The first development plan of the city was produced for this neighbourhood. Therefore it has a more structured hierarchy between public and private spaces with a plot-based approach.

It is located in the most integrated area of the city and very close to the most chosen and accessible main routes on the global scale. Its connectivity has better relations with the landuse as well as with stationary activities. On the other hand movement patterns and groups of people are better correlated with the global measures RN. Stationary activities are more than walking especially on weekdays. Its intelligibility and synergy is high enough to be understood clearly by pedestrians and for the possibility of interaction between Kültür residents and outsiders.

More people were observed on the weekday than on Sunday; in addition, there were more males than females. Groups were higher than individuals on Sunday. There were more adults than other categories. Kültür neighbourhood cannot offer different places for various age groups. The results from the focus groups, the questionnaires and observations reveal there is lack of places for children to play in their near home environment because of the issues mentioned above. In addition to the few front yards of residential buildings, Kültür has a variety of in-between spaces in mixed use areas. Therefore in addition to street and sidewalks and entrance of buildings, residents mentioned cafes and shops as their interactional places. There is a high frequency of social interaction between residents, which might be also due to the territorial extensions of private spaces

onto streets, and street vendors. These in-between space types can be classified as spilled out and effused, slithery, temporary and mobile, intermingled spaces. Frequency of visits is lower than the interaction in the outdoors. Respondents have a high perception of walking and safety but they are neutral about sense of community, maintenance and management, as well as friendship and neighbouring. Moreover they are not very satisfied with their near home environment as most of the sidewalks are occupied by cars. As a traditional neighbourhood, there is a linear relationship between length of residence and sense of community, knowing people and acquaintance. Sense of community has a relation with the number of people known, frequency of interaction and visits rather than with the spatial features of the neighbourhood. There is no significant difference between these variables and male-female, owners-tenants groups. They defined their neighbourhood mostly as central, crowded, living, pleasant, familiar, and interesting. Positive spatial and social characteristics are chosen more than the negative ones. Friends and acquaintances have significant correlation with the frequency of interaction, and visits, and particularly strongly with maintenance and management. As people walk on foot their interaction places also increase, besides it affects the sense of community.

CHAPTER 7 CASE STUDY: KARANTINA

Introduction

In the previous chapter we have seen that Alsancak underwent two important changes which transformed the urban pattern; one with the fire and the other with the new Development and Condominium Act. In Karantina, the biggest change was after 1950s with the construction of apartment blocks and the increase in building density. Therefore, here, we come across dissimilar types of in-between spaces to those in Alsancak due to the different topography. In this chapter, after giving brief information about the history of Karantina, the urban pattern of the district is analysed from its whole, down into its parts, and in-between spaces.

7.1 HISTORICAL DEVELOPMENT OF KARANTINA

Today Karantina[1] neighbourhood is divided into three regions, Çankaya Neighbourhood, Mithat Paşa Neighbourhood, and Murat Reis Neighbourhood. Throughout the history it has held different names. The first residents of the district were Greeks, Jews, and Turks. It was called "Karantina Islam" and "Karantina Greek" in 1911 and 1919 respectively. After the establishment of the Republic in 1924 the name changed into Karantina 1, which involves the lower part between Göztepe and Karataş, and Karantina 2, which is the upper part between Nokta and Hakimevleri (Özsüphandağ, 2001; Atay, 1993). By the 1920s

[1] Karantina, (Quarantine) as a word means isolation of man and products from an unwanted disease in a protected area. Hence in the seventeenth and eighteenth centuries when Izmir had an inner port in the Konak historical centre, the Ottoman Government took some precautions against epidemics spread by sea transport. Before the boats anchored in the inner port, there used to be a "Tahaffuzhane" (Administrational Building of Quarantine) where the crew of the boat and the products were checked and if necessary quarantined (Özsüphandağ, 2001). With the construction of this health institution, this part of Izmir started to develop little by little in the late eighteenth century (Atay, 1993).

there were no longer any Greek and Armenian residents and it became mainly a Jewish neighbourhood till the immigration of the Jews to Israel (Tekeli, 2002).

> From Konak till Güzelyalı this street was known as Tramway Street. Sadık Uşakizade, grandfather of Latife Uşakizade, was a merchant living in here... Uşakizade mansion had a huge garden, known as Sadık Bey Garden. All the entertainment and balls were taking place in that garden (Ayşe Mayda).
>
> In here the Armenian and Jewish were both living together and among themselves they were teaching whatever they had cooked. That's why Aegean Cuisine is so rich (Resident).



Figure 7.1 Karatas 1880 Rubelin (ICA)

Karataş (Melantia) and Karantina started to develop chronologically in the 1860s and 1880s with the trigger in the construction works of the city. In parallel with the development of Punta, the Kordon waterfront construction, and train stations, there were infrastructural works such as widening of the road between Göztepe and Karataş in 1881, tramline construction in 1883, and the opening of the Halil Rıfat Paşa Street in 1891 (Özkut, 2005d in IAG). Consequently, this region offered an alternative residential area because of the lower urban rent than in Alsancak, as the city centre was already crowded.

7.1.1 Urban Form and Housing Typology

Most of the elderly residents of Karantina would say "I was born in a house with a garden in Karantina". Literally all the houses were built with gardens during

that period. In addition to their asymmetrical facade organisation, all the materials and architectural elements were in harmony. Whitewashed facades with wooden shutters and bougainvilleas were the typical Mediterranean characteristics of these houses and contributed to the aura of the neighbourhood. Neighbours held barbeques or tea ceremonies on their balconies, and within their bay windows (Dalçam, 2004).

From Karataş to Güzelyalı the topography offers different visual views and different possibilities of space organisation. Particularly with the steep slopes in the Karataş and Asansör regions, there is a “three-dimensional relationship between the houses and the topography” (Ozkut, 2005a in IAG: 73). Then the slope becomes gently flattened in Güzelyalı. Until the 1960s along the seashore there were piers, gardens, *deniz banyosu*, and boathouses, which integrated the citizens with the sea and each other. In addition, mansions, two-storey houses with gardens or courtyards, “Jewish houses” with common inner courtyard in Karataş, “stair streets”, and “houses with elevated entrances" facing Mithat Paşa Street were the characteristics of urban form and housing typologies in this region. These urban elements are described in detail below. Other remarkable landmarks were the “English Garden” and “Asansör” (Street Elevator), schools, synagogues, churches, mosques, and Turkish baths.



Figure 7.2 Karatas and Asansor (ICA)



Figure 7.3 Asansor (Nalbantgil, 2006a)

After Asansör, and before the Mithat Paşa Technical School, on the left side of the street, there are “seven houses” reflecting a row house typology. They have the similar characteristics of typical Izmir houses with a simple exterior and richly

ornamented interior. Due to the narrow parcels there is a glass skylight above the stairs in order to solve the daylight problem in the interior. Service units and kitchens are at the back as in Levantine houses in Alsancak, facing the back courtyard. While some have direct access from the street and gardens at the back, some have elevated entrances, which protect the privacy (Özkut, 2005c in IAG). This type of house can be also found around Karantina along the main street.

> There were stairs in front of two storey houses that you could climb up to the first floor. The owner of the house was living in this floor and the ground floor was being let to lower income tenants (Dalçam, 2004: 46).

Moreover three metre raised houses allowed the commercial activities to take place on the ground floor. In Karantina-Köprü these elevated houses are even higher than three metres. The relation between the street and the house is ensured by elevated in-between spaces with stairs, which are also important for environmental issues. While protecting the house from the noise and the dust, this type of space arrangement allows the wind to flow through the house and affords a nice sea view (Özkut, 2005a in IAG).

> İmbat wind, which gives life to Karantina 2 in summer has disappeared. Unplanned, attached, and interlocked buildings without gardens ruined all the beauty of Karantina 2 (Dinler, 1984: 41).



Figure 7.4 Mansions with Gardens
Source: (Nalbantgil 2006b)



Figure 7.5 Row Houses Mithatpaşa
Source: (Nalbantgil 2006b)

> The Socio-economical structure of İkiçeşmelik started to change in the 1960s and my father said that 'we cannot live in here anymore now this district has started to change'...We left our garden house in İkiçeşmelik and moved into these boxes. Mainly Jews were living in here. Our building was not located by the sea, it was across the

> street. However we were able to see Karsiyaka, Alsancak, and Inciraltı from the balcony. Now it is impossible (Resident).

Today, however, it is not possible for the wind to circulate inside the houses because of the 8 storeys buildings aligned in front of these platform houses. Regrettably most of them have been abandoned, while some of the more 'fortunate' ones have been converted for other functions like nurseries, community centres or neighbourhood art centres and offices. Some have changed ownership while others have tried to survive with their elderly residents. These buildings need refurbishment and maintenance; but the municipality does not have enough financial funds for the regeneration projects. Besides the municipality mainly concentrates on Alsancak and the Kemeralti Traditional Centre, which are the important images of the city for the authorities.



Figure 7.6 Houses on Platform Mithatpaşa



Figure 7.7 Contemporary Types in Hatay

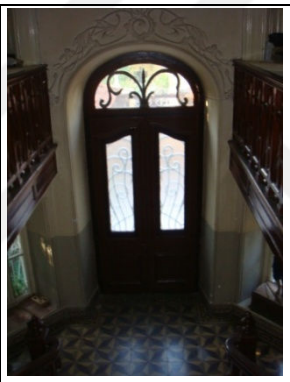
Contemporary forms of these elevated houses can be seen in Hatay, in the upper parts of Karantina. Together with this type of house the slope is used efficiently for commercial activities on ground floor of residential building rather than creating retaining walls. However after knocking down these houses, eight-storey buildings were faced with the problem of high retaining walls. In order to gain more flats in the building, developers carved out the earth and formed deep holes, shafts, and meaningless voids around the buildings. Hence all the in-between spaces, gardens, and courtyards have been destroyed with these new apartment blocks.

> There is not any empty space left in the city. Over here all the buildings are adjacent. There is not any open space to put up a tent in a possible earthquake, everywhere is covered by buildings. Now another transformation has started. People who came here in the 50s and 60s are now moving into Urla, Narlidere, and Güzelbahçe (Resident).

Between Karataş and Karantina there were narrow parcels with adjacent two-storey houses. Houses were organised with small gardens at the front and larger ones at the back or close to the seashore. The street and the sea were connected with short alleys. Close to Karantina due to the difference in levels, this connection ensured by stairs. Furthermore from Karantina till Güzelyalı there were larger plots with mansions surrounded by gardens along the coast (Nalbantgil, 2006b). By 1920s Karantina became a neighbourhood mainly for high-income groups (Atay, 1993).



Ayşe Mayda House 126 Street





Entrance and Taşlık

Figure 7.8 Ayşe Mayda House

> There were not any apartments at that time; there were mansions with gardens decorated with flowers such as roses and jasmines. In spring when we left the school (American College) we would walk back to our homes. On the way we used to know everyone in the houses. We were greeting and talking with them. In winter we used the tram to go back and forth from school (Ayşe Mayda).

The late nineteenth century and early twentieth century was also an important period regarding the progress in transportation systems. In addition to the infrastructure and road constructions, there was development in the transportation both with ferries and trams. Those trams formed another interaction place in the neighbourhood, where everybody would greet one another, and knew each other; they would travel to work together and pass on news. The interior of the tram was organised in different colours differentiating

first and second classes. Nalbantgil (2006c) says that Izmir was too small and people were too familiar, so acquaintances could develop easily among residents, and events were monotonous.

> There was something different in that period, either in the form of the house or in the life style. Today buildings are organised with living rooms at the front and bedrooms at the back; at that time there was a "Taşlık", stone paving entrance yard. On the left a nice room for visitors, across the entrance there was a living room. When you climb up the stairs bedrooms was located. There was a big door at the marble stairs. For instance, on summer nights, we used to take mattresses and lay out in front of the door. Everyone, neighbours, were coming, drinking sherbet, and coffee. Journalists of the neighbourhood came as well. In short there was a very sincere atmosphere (Muberra Akimsar in Yilmaz, 2000:69).

Bay windows and the balconies, as the extension of the interior were the indispensable part of life in the neighbourhood. Karantina houses had balconies both on the street side and on the sea side. Those were the places for visual contact and interaction with the outside. As Nalbantgil (2006b) mentions there was a very interesting mansion located at the waterfront. The front garden of the house was separated with a high wall from the main street. In addition, there was a bay window attached on the entrance wall, which cannot be found in other houses in the neighbourhood. Recently, in the apartment blocks, most of the balconies have been closed and absorbed into the interior of the house due to the lack of space in flats. Some however are enclosed by *en fer forgé*, wrought iron, like a cage against the thieves. It was not just the gardens that were demolished by the building of the apartments but also the bay windows, balconies, and "*deniz banyosu*".

> Gardens are knocked out, apartments are built. Where are you going to socialise? On Mithat Pasa Street, there used to be a bay window on top of one of the mansions' garden wall. They built it to watch the people walking and passing by the street. We destroyed all of these features and thought that we will socialise through residing in these boxes (Resident).



177 Street



138 Street

Figure 7.9 Closed Balconies with *en fer forge,* 2011



Figure 7.10 *Deniz Banyosu* between Karatas and Asansor
Source: Nalbantgil, 2006a



Figure 7.11 Deniz Banyosu

"*Deniz Banyosu*" was the other unique urban element for meeting and socialising. Beyru says that swimming activity except for the swimming races was not very popular until the "*deniz banyosu*" and public beaches were built in Izmir (Beyru in Atilla, 2002). The first "*deniz banyosu*" was built in 1890 in the Punta area, where the viaducts were located. This swimming facility functioned like a Turkish bath (Atilla, 2002). "*Deniz Banyosu*" has four main parts. First, there was the pier, which connects the garden of the house or the seashore with the bath place and the sea. Second, there was the main wooden space with inner rooms,

lockers, and terraces. Thirdly, below the main unit, there was a semi-transparent framed section for the women, especially before the 1930s. Fourthly, there were stair units opening onto the sea (Nalbantgil, 2006a). When the "*Deniz Banyosu*" of the French Company in Punta became popular, a Greek Company built another sea bath in Karantina in front of Mithat Paşa Technical School (Atilla, 2002).

> The closest swimming place was our friend's house at the seashore. In those periods, seawater was very clean. You could swim everywhere along the bay. There were hundreds of people fishing every day. All the children of Karantina 2 were swimming from the piers in front of the mansions along the sea (Dinler, 1984: 95).

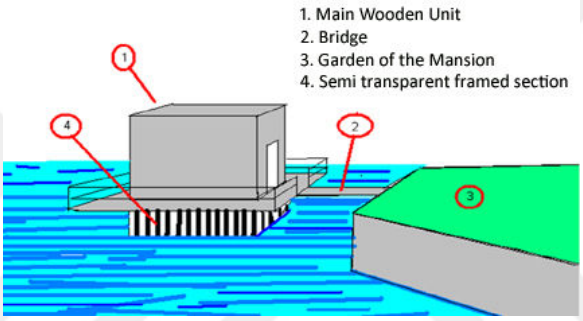


Figure 7.12 Units of *Deniz Banyosu*
Source: Nalbantgil (2006a)



Mithatpaşa Street 20th century (Source: Uyguç)



Mithatpaşa Street 21st century

Figure 7.13 Mithatpaşa Street 20th and 21st century

Until the 1960s those sea baths and boathouses were flourishing along the seashore. Then, with the construction of apartment blocks followed by the construction of the motorway along the coast, "Mustafa Kemal Sahil Boulevard" erased the "*Deniz Banyosu*", gardens and the mansions. In fact the decision to

construct this road was in the development plan of Kemal Ahmet Aru. Hence it was decided in the 1950s in the plan but not implemented until the 1980s (Kaya, 2002; Guner 2006).

> Mithat Paşa Street was built due to the infrastructure system and building dimensions of the 19th century. When two-storey houses were knocked down and eight-storey buildings built, Mithat Paşa Street could not carry the population. Ihsan Alyanak (mayor) decided to make this coastal road and he started in 1979. We were able to go from Konak to Karantina faster than on the tram; there was a really bad traffic jam in Mithat Paşa (Resident).

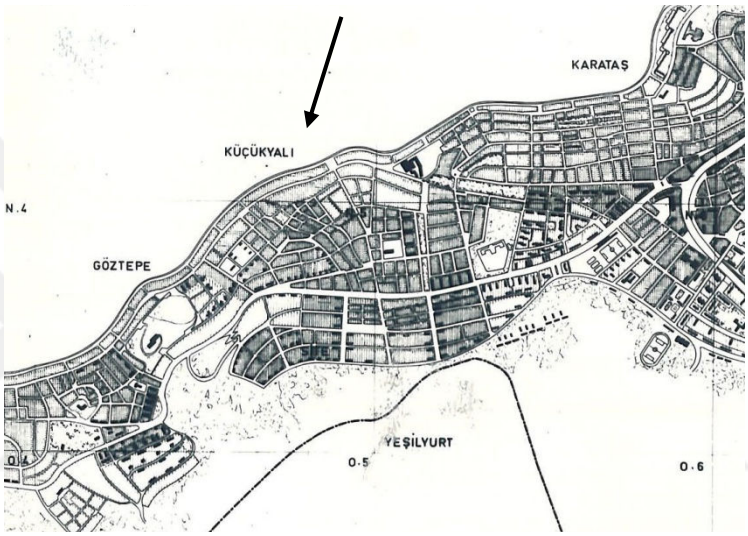


Figure 7.14 Kemal Ahmet Aru Development Plan (ICA)

Hence, regarding the congested traffic and dense population, the coastal road was constructed according to the development plan. In conclusion the sea lost the connection with the people and the urban fabric. Therefore apartment blocks and high density triggered the construction of the road. At the moment there is a recreational area along the sea, which is segregated from the buildings with a motorway, and there is a car parking area by the road in front of the eight-storey buildings. These building blocks work as a barrier preventing the wind from circulating inside.

7.1.2 Social Life in Karantina

The entrance of the house was the place for the residents to interact with their neighbours and outsiders, as indicated below. Most of these mansions were

knocked down and now once *well-known family*[2] names remain on the entrances to apartment blocks.

> Rich, well known people of Izmir and rich Jewish people were living in here. Köprü raised and educated many artists and writers. Most of the families had pianos in their houses. Rakım Erkutlu, Rüştü Şardağ, Italian Rozatti Family, Cevat Şakir (Halikarnas Fisherman), Necati Cumalı, Sezen Aksu, Haluk Bilginer, Pakize Suda are some of them. At night people were gathering at the houses and playing music. Women were having *gün*[3]. Mostly they were serving marmalade, mastic, and cherry sherbet with their special silver sets. When you buy something from outside it was a disgrace. Hence we were meeting at home and preparing things for our guests. In front of the houses by the sea baths, people were swimming. There were sounds of music coming from houses, people singing together. They were talking from balcony to balcony. There was a very nice and sincere life here (Ayşe Mayda).

> Here is one of the elite places of Izmir. Most of the elite families of Izmir, lawyers, doctors, high status people, and wealthy families reside in this neighbourhood. I don't see that they visit each other. We don't know anybody in the same apartment. If we see each other in the lift we say 'good morning', that's all. House visits, old neighbourliness are disappeared. In the past we used to visit each other in our private detached houses. We chatted in our gardens. There were gardens, detached houses, and *deniz banyolari* (Yildiz Bakkaliye).

> On Fridays there was an elderly man who would appear and yells out 'your grandpa came'. Whichever door of the house he went to, he would be given food. Women of the house would bring two courses of meals into the "Kuzuluk" glass entrance. The elderly man would have his lunch there and then he would leave silently (Resident in Kılcıoğlu, 2009: 40).

Karantina was a neighbourhood with a population of 500-600 in the 1940s. Before the construction of the apartment blocks, children were able to play in the open green spaces (Dinler, 1984). Now they can only play in Behçet Uz Park or on the streets if they can find space in between the cars. Behçet Uz Park was developed during the 1930s with the initiative of the Mayor Behçet Uz. As he encouraged the building of open spaces, playgrounds, parks, and open market places around the city, Karantina citizens applied to the Town Council for the

[2] Prestigious families that migrated from Anatolia to Izmir settled in Köprü- Karantina and built big mansions for their big families. These well known families were the Uşakizade Family (family of Latife Uşakizade, Ataturk's wife), Osmanzade, Şerif Remzi, Eczacıbaşı, Fettah, Şamlı, Şenocak, Kardıçalı, and Mayda Family. They lived with their children and grandchildren, and ran family jobs. It was important to share their dinner table with their friends, neighbours and with the poor (Kılcıoğlu, 2009).

[3] Women's special day for hosting their friends and neighbours at home.

park to be named after him (Sakar, 2007). The park had an important impact on its residents but especially on the children. With its gardener, gatekeeper, shopkeepers, children and parents, it was a place where people owned and possessed its maintenance. Moreover it was a meeting place for the young people, and a place to survive in the hot weather of Izmir (Kılcıoğlu, 2009). Today, however, not many families allow their children to play there unless a parent is there to look after them. Some residents complain that there can be drug users and other undesirable people at night (Focus Groups Adults, 2011).

> Social relations were very different. Once we had an Elser radio, it was a big innovation. We were taking the news from there. Neighbours were coming to us...For instance; there was a new movie every Wednesday in Elhamra Cinema. I used to know approximately one third of the hall (Akımsar in Yılmaz, 2000:70).
>
> When the coloured screen TV was in use for the first time, not many people were able to have it at their home due to financial constraints. Hence they created a new type of guest, which is called the 'Tele-safir' TV Guest (Dalçam, 2004:16).
>
> People of those days were very respectful to each other, cheerful, vivid; and those people were enjoying life. Apartment life makes people less happy today, despite all its blessings (Dinler, 1984: 7).

Other places to socialise were the Coffeehouses, Yıldız Grocery, Karantina Sports Club, Cennet Tavern, Köşk and Venüs Summer Cinema. Today there were no longer outdoor cinemas. The Venüs Summer Cinema was different to the others because it was like an amphitheatre. Due to the topography and the level difference of the street from the sea, seats were located with their backs to the street facing the sea. Youths would meet in the cinema, and had the chance of seeing and smiling to each other (Nalbantgil, 2006b).

> Izmir was like a small town. There was not any comfort or luxury. Both the rich and the poor were living in the same way, because even if you had the money you did not have anything to buy. However there was one thing, there was a good atmosphere, and compatibility. There were gardens. We used to have a big garden and a cascade pool (Resident Müberra Akımsar in Yılmaz, 2000:70).

The coffeehouse was also referred to as the "pit" because it was below the street level, in addition to acting as a kind of shelter for its visitors. Across from the coffeehouse there was Köşk Cinema and the clubhouse of Karantina Sports Club. The tavern place was located next to the coffeehouse along the sea. All these

places were organised with gardens adjacent to them for facilitating relaxation during the hot summers of Izmir. However, in the 1980s, with the land fill work taking place along the seashore, these gardens were replaced by the coastal road (Dalçam, 2004). At the present time, there are neither cinemas nor other places for the teenagers and young people to go and socialise. With the motorway all the previous gardens, *deniz banyosu*, and piers were overwritten by the motorways and car parking.

> Even when there is not a coastal road, this neighbourhood was better. Before there were less social spaces compared to now. However the social relations were better. As the people get rich they close themselves in. They shut themselves down instead of opening up - it is really interesting (Resident).



Coastal Road and Seashore



Eight-Storey Buildings

Figure 7.15 Coastal Road and Buildings

7.2 MORPHOLOGICAL ANALYSIS OF KARANTINA NEIGHBOURHOOD

As mentioned above, Karantina is now divided into three neighbourhoods; Çankaya Neighbourhood with a population of 11,058, Mithatpaşa Neighbourhood with a population of 8,292, and Murat Reis Neighbourhood with a population of 12,692. However all these population figures are from TUIK (Turkish Statistical Institute) 2008 figures, and they might be slightly different now.

This case study covers mainly the Çankaya Neighbourhood but also some parts of Mithatpaşa and Murat Reis. It can be concluded that there are almost 10,000 people living in the site. This area is selected because firstly it is a sub-centre that

developed after Alsancak and it is in the yellow-green range in terms of space syntax analysis. So it is not the most accessible but not the segregated either in the global analysis. Secondly, the boundary of the site is selected according to the topography. As Karantina has a steep slope, it has different characteristics of in-between spaces. Basically, traditional buildings and the street have a three dimensional communication see figure 7.17 below.



Figure 7.16 Three Neighbourhoods in Karantina



210 Street



178 Street



141 Street

Figure 7.17 Traditional Houses in Karantina



Figure 7.18 Boundary of Karantina Case Study

The second case study is located roughly between Mustafa Kemal Sahil Boulevard to the north, 207 Street[4] to the south, 179 Street to the east and 135 Street to the west. Regarding the landuse, as explained earlier in the historical discussion, there were mainly residential uses here; mansions with gardens, and some of houses' ground floors were being used for commercial activities like local groceries. There were cinemas, coffeehouses, and clubs. However it was more residential than it is now and less crowded.

Recently, as can be seen from the ground floor landuse plan (figure 7.20 below), on Mithatpaşa Street there are mainly commercial uses shown in red such as grocery market, hairdresser, installation systems (electric, plumping), sundries, locksmith, bakery, and pharmacies. Pharmacies are especially close to Ayşe Mayda Health Centre on the right. On the other hand, only a few buildings are used for commercial activities on the ground floor due to the level difference at

[4] In Izmir in the 1930s street names were switched with numbers. Unfortunately this change resulted in the lost of memories of citizens and also had a negative impact on sense of belonging. Halit Ziya Uşaklıgil explains this in his novel, 'Izmir Stories'. As he comes back to Izmir in the 1930s he could not find the old streets where he spent 12 years of his teenage period. Although he is impressed by the development works after the fire, he was surprised that he could not find 'neither the old environment nor his old individuality in this new environment' (Uşaklıgil, 1991, p.16).

the north part of Mithatpaşa Street (see the figure 7.21 below). There are also some empty shops. Shopkeepers say that due to the metro works in the city, they changed the two-way road into one way only, which affected the income of the local shopkeepers.



Figure 7.19 'Yıldız Bakkal' Local Grocery for 80 years

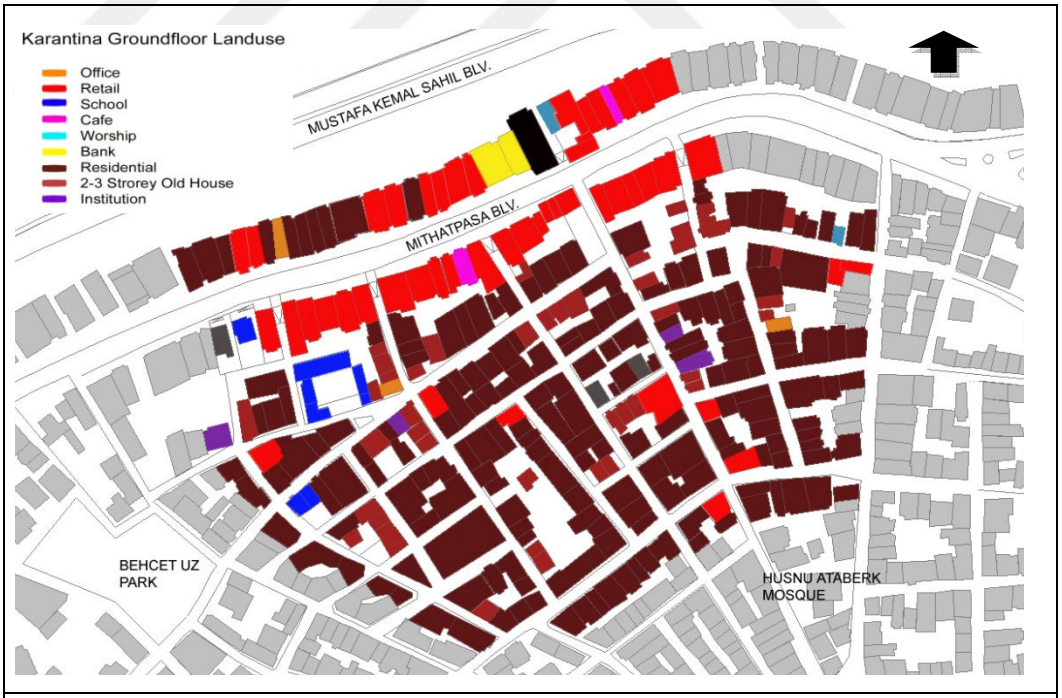


Figure 7.20 Karantina Landuse



Figure 7.21 Level Difference on Mithatpaşa Street

At the south part there are not many commercial activities on the ground floor (see figure 7.20 above). Most of the red buildings are the local groceries, or '*bakkal*', which are very common in traditional neighbourhoods where the shopkeeper knows almost everyone, and which forms another interaction point for the residents to take in and pass on news. The lighter brown buildings are the old houses, which were built at the end of the 19th century and into the beginning of the 20th century. There are a few examples of Izmir Houses with bay windows, window frames and elevated entrances, and courtyards, as well as early modern buildings from the 1930s and 1950s such as the Suat Erdeniz Building (see the figure 7.22 below).



Figure 7.22 Karantina 135 Street Suat Erdeniz Building
(Source: Citysurf Izmir)

Space Syntax Analysis and Observations

In the global integration analysis (figure 7.23 below) of Karantina Neighbourhood, Hatay İnönü Street, which is red, is more accessible than Mithatpaşa Street and Mustafa Kemal Sahil Boulevard. As can be seen in the global picture, İnönü Street is more connected to other neighbourhoods and to the whole system than the main roads in Karantina. After these main roads, 177 Street, 131 Street, and the side streets that connect Mithatpaşa and the coastal road, are accessible compared to the inner short streets. 177 Street is the street, which connects Hatay and Mithatpaşa. Hence the longer the road and the more streets and neighbourhoods it reaches, the more accessible it is in terms of space syntax analysis. In the overall morphological structure of Karantina, it can be concluded that the street pattern is not well integrated. This is because of the topography. The site has lots of steep slopes, as well as different types of parcels, which were developed in different periods and with different production systems.

In the global choice analysis, the main routes in the neighbourhood are highlighted as in figure 7.24 below. Mustafa Kemal Sahil Boulevard and Hatay İnönü Street are the main routes, followed by Mithatpaşa, and as side streets, 177 Street (Şehit Ceylansu Street) and 131 Street. Hence on most chosen routes between A and B locations, the betweenness can be seen in the degree from red as the most chosen to dark blue as the least chosen. In addition, when the global integration and choice analysis are compared, it can be concluded that Mithatpaşa and Mustafa Kemal Sahil Boulevard become more dominant in terms of through movement rather than in the integratedness of the whole city.



Figure 7.23 Karantina Global Integration RN

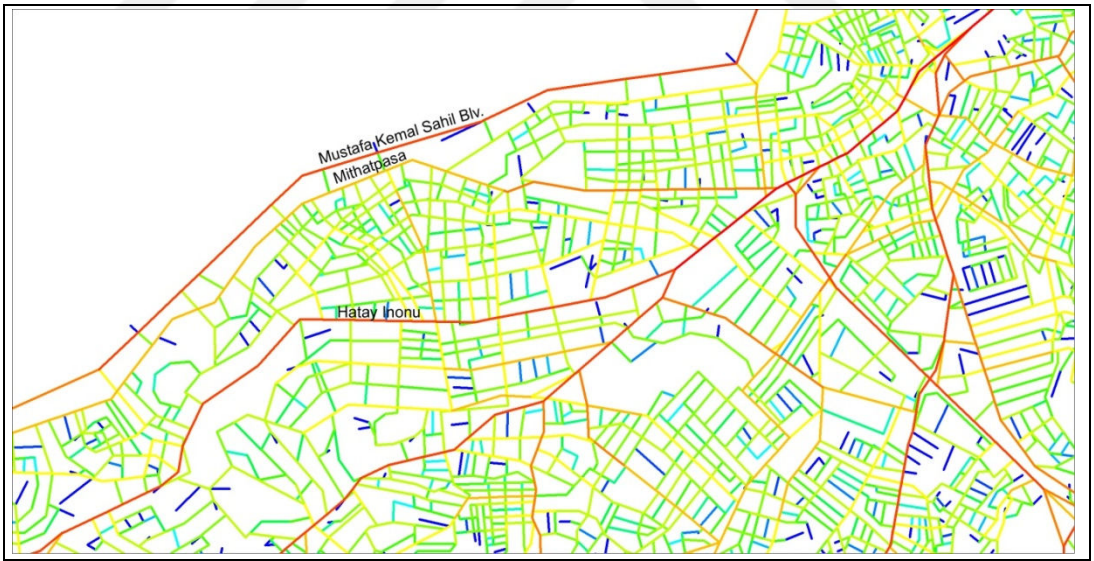


Figure 7.24 Karantina Global Choice RN

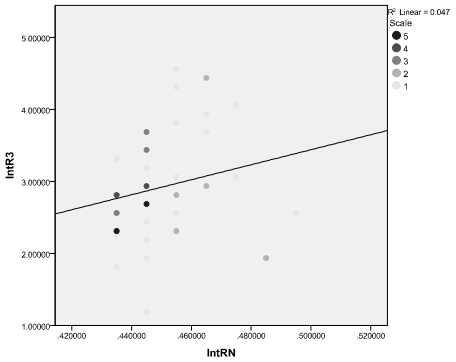


Figure 7.25 Synergy Karantina R^2 0.047

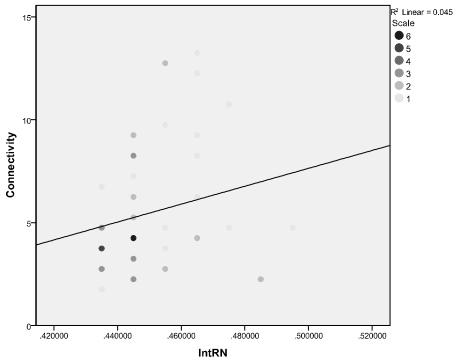


Figure 7.26 Intelligibility Karantina R^2 0.045

In terms of part-whole relation, the synergy of Karantina is R^2= 0.047 and the intelligibility is R^2=0.045. Therefore the part-whole relation is not strong enough to predict the whole system from parts, or local areas. In Karantina the relation between the part and the whole is not very well structured; the closer R^2 to 1, the better the relation will be of sub-neighbourhoods with the city. Moreover it will be better for its residents to find their way and understand the urban pattern within the whole urban structure.



Figure 7.27 Karantina Choice R400

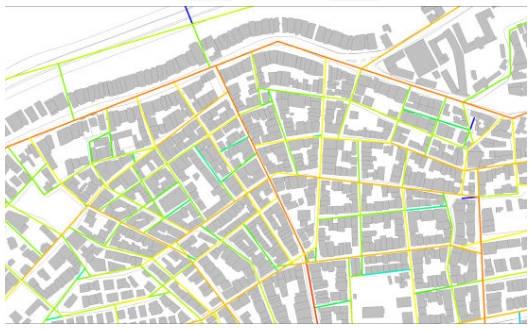


Figure 7.28 Karantina Choice R3200

In the local analysis choice R400 (five minute walk); 131 Street, 207 Street, and 141 Street are in the red range, are the streets chosen more in terms of movement within a 5 min walk. However in the choice R3200 (20 minute walk), main routes such as 177 Street and Mithatpaşa Street turn into the red range. The coastal road is still not in the red range; this also shows the degree of the traffic, and how busy the road is in terms of the vehicular movement. Moreover there is a steep slope on 177 Street especially between Husnu Ataberk Mosque

and Mithatpaşa. Below, this analysis is overlapped with observations to see how space syntax works or does not work with the topography.

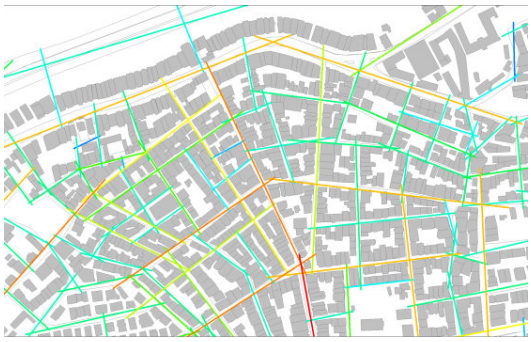


Figure 7.29 Karantina Integration R3

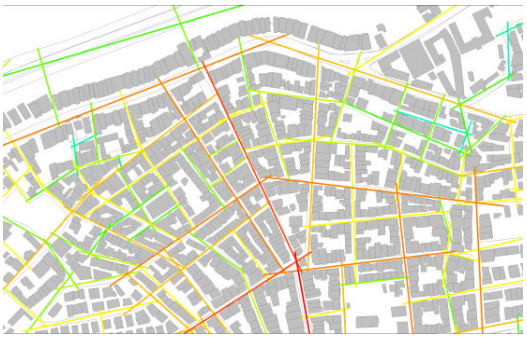


Figure 7.30 Karantina Integration R5

In the axial analysis above, as a topological measurement it takes into account how many steps one has to take from one location to the other. In the integration R3 analysis, it is clear that 177 and 207 Streets are more accessible than the others. Hence one has to change direction three times to reach those streets. Furthermore in the integration R5 analysis, more streets become accessible within five steps, such as the extension of 207 Street to the east, 140 Street, 176, and Mithatpaşa Street.

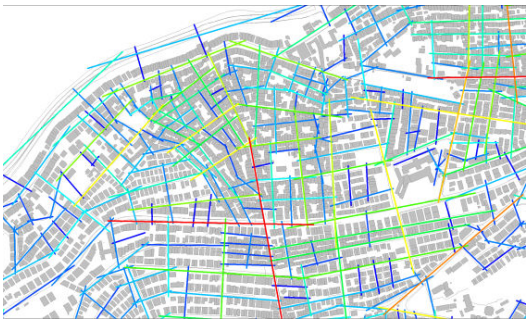




Figure 7.31 Karantina Neighbourhood Connectivity

In the first figure 7.31 from a bigger scale the connectivity analysis reveals that Hatay İnönu Street (connectivity: 17) and 177 Street (connectivity: 24) at the south part are the most connected streets regarding their proximity to the surrounding environment. Then 207 and 141 Streets come with a connectivity of 13, and Mithatpaşa Street with a connectivity of 11. Regarding the local shops and accessibility, although there are commercial activities on Mithatpaşa Street,

these are not as active as the ones on Inonu Street in Hatay. These red connected street segments are where all the shops are located and the most central part of the district or the most vivid part. After the metro becomes operational, it will be more accessible as one of the main lines passing underneath this main road.



Figure 7.32 Karantina Segment Connectivity

As explained in the previous chapter, segment connectivity analyses the possible escape streets for crime studies. Hence it shows the connected street segment between intersections of streets junctions. If the street segment has a junction at both sides, it will be shown in red, as on the map. In addition, this analysis highlights the side streets in the neighbourhood.

As an old neighbourhood from the eighteenth century, Karantina has an old urban pattern. When the English Waterworks Map of Izmir is analysed going back to the 19th century it can be seen to have a small grain urban structure. The difference between the seashore area and the existing pattern can be clearly recognised. Since the coastal road was constructed in the 1980s, and the eight-storey buildings were built along the seashore, bulky urban grain is segregating the neighbourhood from the sea (see figure 7.34 below). When the old English Water (infrastructure) Network Map of Izmir is analysed, it can be seen that this case area is the oldest part of urban structure; older than any other parts of Karantina since the late nineteenth century (see the figure 7.33 below).



Figure 7.33 Late 19th century Karantina English Infrastructure Network Map
Source: Çınar Atay (ICA)

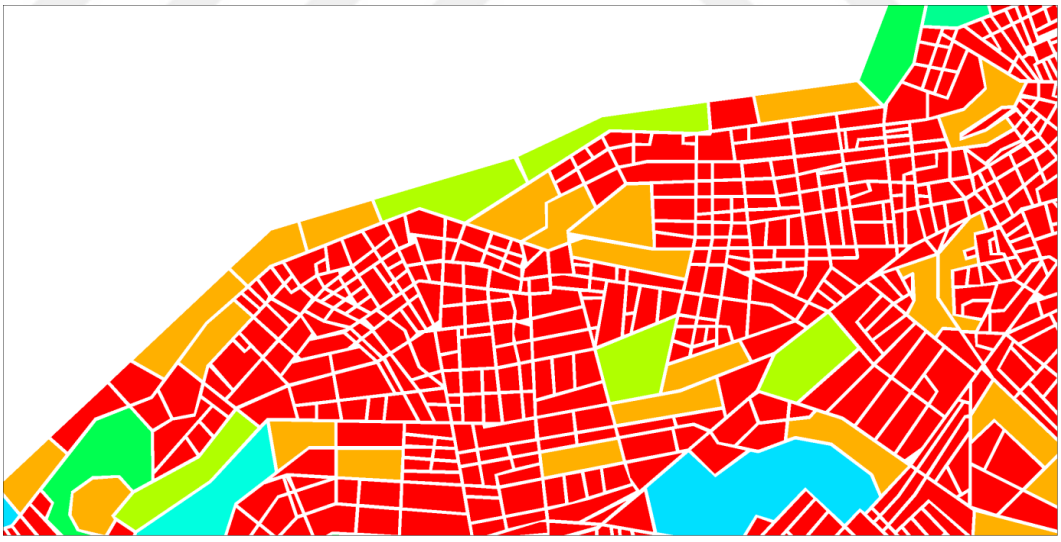


Figure 7.34 Karantina Neighbourhood Blocksize



Figure 7.35 VGA Analysis of Karantina

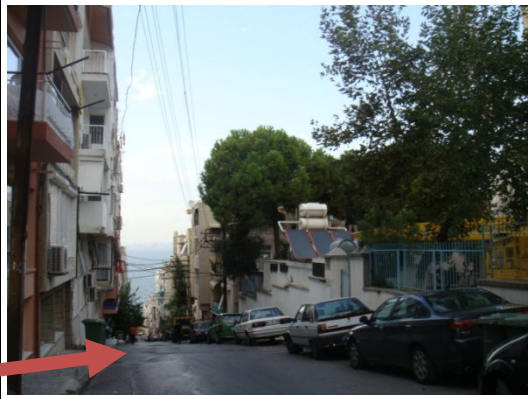


Figure 7.36 View from the top of 177 Street

In the visibility graph analysis of Karantina, as in the local integration and choice analysis, 177 Street, 176 Street, and Mithatpaşa Street represent the highest visibility and accessibility. Remarkably, the intersection of 176 and 177 with Mithatpaşa is in red. Visibility graph analysis examines the convex spaces and their relation to the close spaces. Nevertheless it does not consider the topography as the visibility decreases from the top of 177 Street down to Mithatpaşa Street. Consequently, space syntax can be a tool for graphical representation and it can give evidence in terms of pedestrian and vehicle movement. However it is difficult to conclude results in terms of three dimensions as well as the environmental psychology and design. These are discussed in the comparison and discussion chapter later on.



Figure 7.37 Constituted Street and Topological depth between Street and Building



Figure 7.38 Territorial Extensions of Indoor Space on Mithatpaşa Street

In Karantina, constitutedness degree (approximately 60%) is high as most of the buildings are directly connected to the street. There are also buildings, particularly the old ones, which are connected to the street with higher or lower levels due to the topography and steep slope. For instance, traditional bay windows and early Republic houses have elevated entrances with steps, while the apartment blocks along the seashore have lower entrances.

Table 7.1 In-between Space Types of Karantina

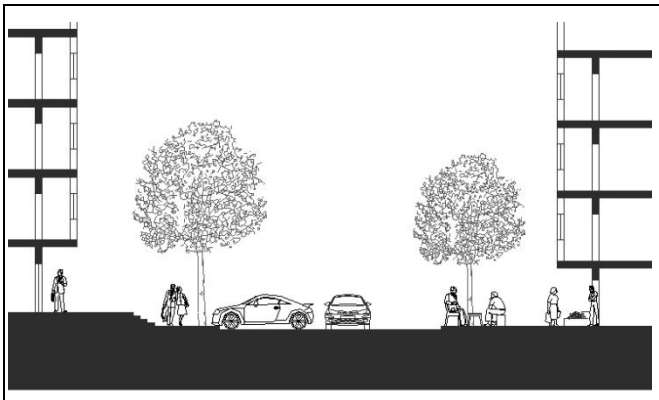
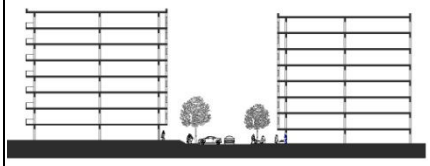
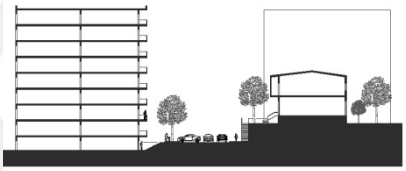
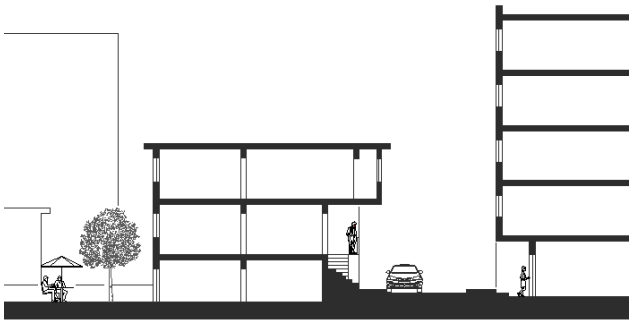
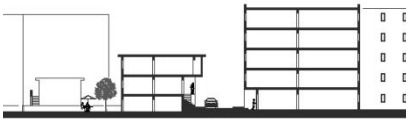
	
Mithatpaşa Street Territorial Extensions	
	
Mithatpaşa Street Level Differences	
	
134 Street, Topological Relation between the House and the Street	

Table 7.2 Axial Model Indices of Karantina Case Study

Street Names	Connectivity	Control	IntR3	IntRN
207 Street (east)	10	1.026166	4.00752	0.455016
Mithatpaşa Street	11	1.844880	4.08824	0.477766
178 Street	3	-0.459091	2.35598	0.459102
211 Street	5	0.051191	2.78071	0.458004
177 Street	12	1.046780	4.45999	0.466048
176 Street	9	0.505109	3.91935	0.463776
208 Street	3	-0.464744	2.30467	0.435597
133 Street (south)	7	0.126923	3.33869	0.447330
133 Street (north)	4	-0.541234	2.79915	0.459172
141 Street	10	0.780891	3.88139	0.450631
140 Street (west)	8	0.356746	3.49767	0.449362
212 Street	4	-0.200000	2.56596	0.449190
207 Street (west)	13	1.325790	4.37523	0.452379
140 Street (east)	4	-0.208333	2.68636	0.448284
142 Street	8	0.909524	3.45390	0.445083
135 Street (north)	4	-0.041667	2.35375	0.430036
135 Street (middle)	6	-0.156410	3.21843	0.445717
135 Street (south)	8	0.195513	3.60415	0.448562
134 Street	5	-0.200000	2.71844	0.434005
138 Street	4	-0.421032	2.43920	0.432154
139 Street	5	-0.171032	2.71844	0.432156
209 Street	3	-0.472222	2.13977	0.448254
210 Street	2	-0.805556	1.89187	0.448252
135 Street (east)	2	-0.416667	1.27368	0.441874
Alley 1	2	-0.709091	2.02765	0.485980
Alley 2	2	-0.709091	2.02765	0.485980
132 Street	3	-0.284091	2.40559	0.459099

Snapshot observations were conducted in Karantina on a Weekday (17.09.2010) and over a Weekend (19.09.2010) during September 2010. The weather was sunny, bright, and the temperature was approximately 28-29°C. The same technique used in Alsancak was also implemented in this case study. Below, the map is showing the observation routes of the observer. As Mithatpaşa Street is busier than the other streets, two sidewalks of the street were included.

Snapshots were taken firstly in the morning between 10-12 pm, secondly at midday between 14-16 pm, and thirdly in the evening between 18-20 pm.

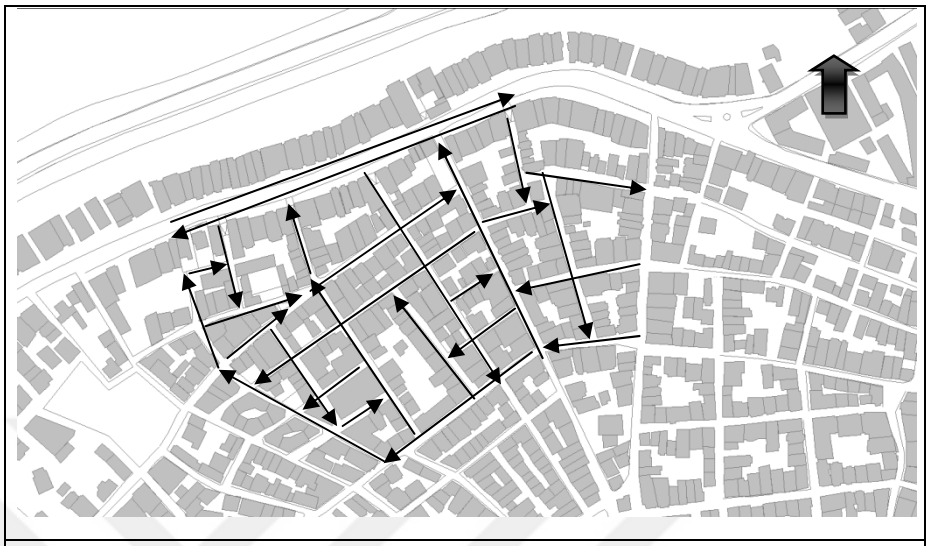


Figure 7.39 Observation Route of Karantina Neighbourhood

In the morning Weekday (17.09.2010) snapshot below, shows that there are more sitting activities on Mithatpaşa Street than in the rest of the neighbourhood. This is because all the shops are located on this street, and shopkeepers are putting tables and chairs out, either in front of their shops or on the edge of the street pavement in order to watch people passing by. There are more adults and mostly males as it can be seen in table 7.3 below. Most of the children and teenagers, aged around 7+ and their parents, are gathered around the school in the first week of the primary school. Hence in addition to Behçet Uz Park, Namık Kemal Primary School is one of the other meeting points. In terms of movement after Mithatpaşa Street, 207, 135, 177, 178, and 211 Streets are busier in the weekday mornings. Another attractor for residents is Ayşe Mayda Health Centre on 211 Street.

Table 7.3 Snapshots of Karantina Neighbourhood Weekday Observed People

	Children	Teenage F	Teenage M	Adult F	Adult M	Elderly F	Elderly M
Morning 10-12pm	9	12	14	51	81	18	11
Midday 14-16pm	25	10	13	43	74	11	14
Evening 18-20pm	9	26	24	59	88	12	4

Table 7.4 Snapshots Karantina Neighbourhood Weekday Observed Activities

	Sitting	Standing	Walking	Talking	Other	Balcony	Entrance
Morning 10-12pm	31	85	77	124	40	9	88
Midday 14-16pm	42	42	92	104	51	8	50
Evening 18-20 pm	47	70	95	145	54	20	69

Table 7.5 Snapshots Karantina Neighbourhood Weekday Group vs. Individual

	Group	Individual	Total
Morning 10-12pm	37	73	110
Midday 14-16pm	41	87	128
Evening 18-20 pm	57	73	130

The number of groups is less in the morning than the number of individuals, which can be seen in table 7.5 above. There is less interaction in the morning. This increases in the evening and comes closer to the total number of individuals. However, numbers of individuals are relatively stable. The black colour indicates the activity of people on balconies. There are more people here on balconies than in Alsancak. As described in the historical discussion, people are usually talking to one another from balcony to balcony, which is not common in Alsancak. Hence this behaviour gives more of a neighbourhood atmosphere as a first image. While walking during the observations there were people having their meals on balconies, watching others, and talking to neighbours. Particularly on the side streets and at the corners, there are more interactions on balconies than on Mithatpaşa Street.

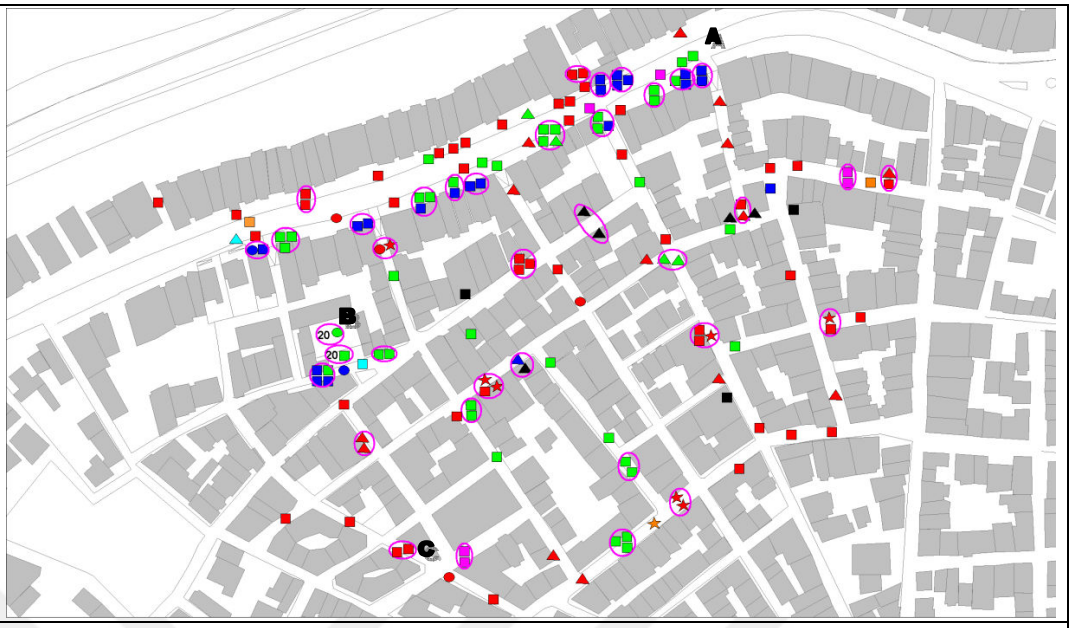
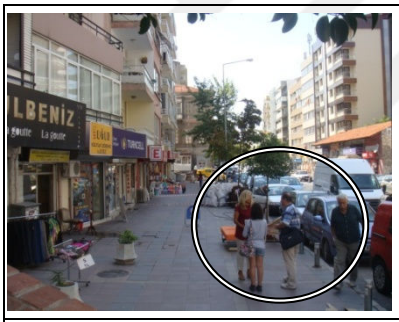


Figure 7.40 Snapshots of Karantina Neighbourhood Weekday 10-12 pm



A. Mithatpaşa Morning



B. Namık Kemal School Garden



C. 135 Street

Figure 7.41 Daily Life of Karantina Snapshots from A, B, C

When the midday observations are examined, it is clear that 177 Street turns into a busier route than in the morning. Mithatpaşa is still busy; the north part of the road is very sunny, there are not many people sitting there, and it is less crowded (see the figure 7.43, D below). There are more children out at midday than in the morning. There are also street vendors with motorbikes, such as the junkman, a water seller, and a mobile fruit seller, shown in orange and yellow on the map. People are mostly standing in front of shops, and in front of banks to withdraw money. Other activities are cycling, dog walking, shopping, and sitting in the patisserie, sitting in front of the shops but also on stairs, side-walks, and

on the main road. At some locations, extensions of the shops can be over the vehicular road, such as over the parking area. These examples are shown later.



Figure 7.42 Snapshots of Karantina Neighbourhood Weekday 14-16 pm



D. Mithatpaşa Midday



E. 177 Street Midday



F. 176 Street Midday

Figure 7.43 Daily Life of Karantina Snapshots from D, E, F

Evenings on weekdays are the busiest time for Mithatpaşa Street. There are more groups in the evenings than in the mornings and at midday (see table 7.5 above). This is also the time when people are leaving their work. Although there are not many differences in the number of observed people, there are more interactions. Another important thing is that there are more people on balconies talking to each other. Moreover, there are teenagers playing on the streets or in the school's garden, indicated in purple as below. There is also an increase in the number of teenagers compared to morning and midday. Side-inner streets can

be used for various forms of entertainments in the neighbourhood. For instance, there was a circumcision feast at the entrance of an old apartment on 211 Street (see figure 7.45, G). Hence the space in front of the building is organised for a celebration. Sometimes an entrance, sometimes a park, and sometimes a cul-de-sac can be the place for gatherings or for children playing.

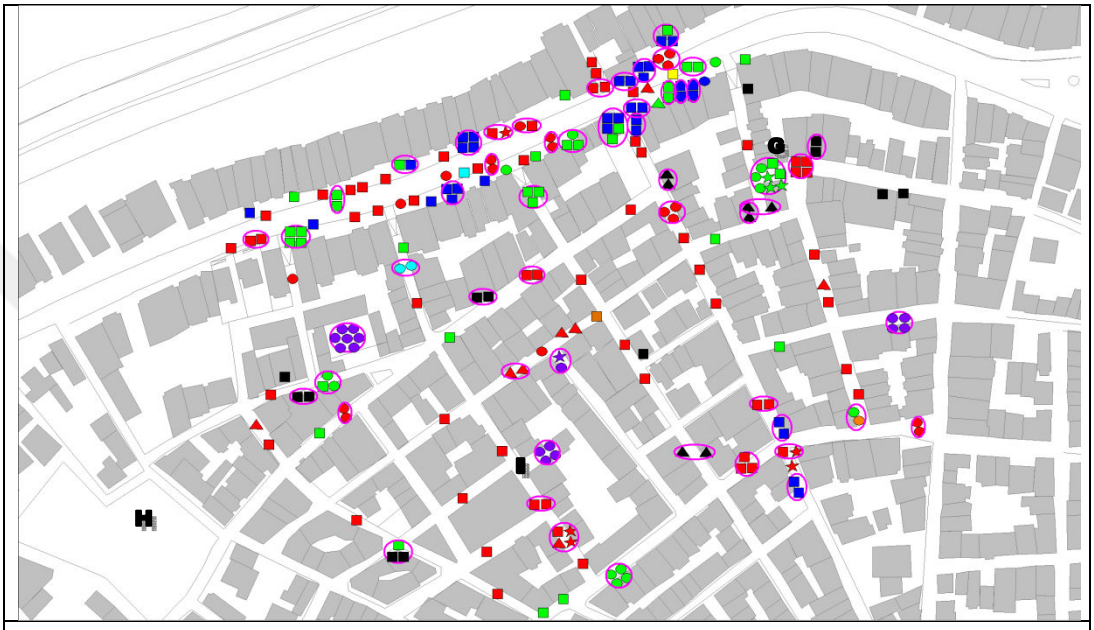


Figure 7.44 Snapshots of Karantina Neighbourhood Weekday 18-20 pm



G. 211 Street Evening



H. Behçet Uz Park Evening



I. Cul-de-sac Midday

Figure 7.45 Daily Life of Karantina Snapshots from G, H, I

There are less people observed on Sunday (19.09.2010) than during the weekdays. Still, the busiest street is Mithatpaşa and then 177 Street in terms of pedestrian movement. On the contrary most of the shops are closed. Therefore there are not as many people sitting as there are on weekday mornings. People

are mostly gathered at the junction of Mithatpaşa and 177 Street, and the south part of 212 Street is also busy. There are labourers on the street for construction works, and transportation. These types of works are usually done on Sunday. There are more individuals in the morning than there are groups.



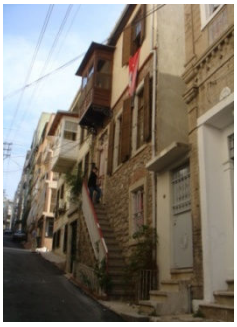
Figure 7.46 Snapshots of Karantina Neighbourhood Sunday 10-12 pm



J. 140 Street



K. 141 Street



L. 133 Street

Figure 7.47 Daily Life of Karantina Snapshots from J, K, L

In the midday on Sunday, 177 Street becomes busier than in the morning. There is an increase in the number of teenagers especially in front of the school garden and on 208 Street. Walking (54%) is the main activity compared to sitting, standing, and others. It is the only time groups outnumber individuals. Again, the junction of 177 and Mithatpaşa is crowded. It is because bus stops are close, and

grocery markets are around. In addition, in the 19th century this street led down to a pier, and is still one of the important arteries that connect Hatay and the sea. 132 Street and its nearby 135 Street are empty most of the time, as well as 209, 210, and 138 Street. They are usually used as a car park due to the lack of space in the neighbourhood.

Table 7.6 Snapshots of Karantina Neighbourhood Sunday Observed People

	Children	Teenage F	Teenage M	Adult F	Adult M	Elderly F	Elderly M
Morning 10-12pm	13	3	12	34	58	5	5
Midday 14-16pm	10	13	26	54	58	8	6
Evening 18-20 pm	15	15	44	48	78	15	10

Table 7.7 Snapshots Karantina Neighbourhood Sunday Observed Activities

	Sitting	Standing	Walking	Talking	Other	Balcony	Entrance
Morning 10-12pm	11	38	80	69	30	9	31
Midday 14-16pm	30	46	91	129	38	12	53
Evening 18-20 pm	40	70	100	144	41	15	64

Table 7.8 Snapshots Karantina Neighbourhood Sunday Group vs. Individual

	Group	Individual	Total
Morning 10-12pm	29	58	87
Midday 14-16pm	48	46	94
Evening 18-20 pm	52	78	130



M. 138 Street



N. 210 Street



O. 132 Street

Figure 7.48 Daily Life of Karantina Snapshots from M, N, O



Figure 7.49 Snapshots of Karantina Neighbourhood Sunday 14-16 pm

In the evening time, there is an increase both in the numbers of children and teenagers. They are often playing around the school, on 200, 207 and 211 Streets. This is because most of the time children choose flat streets to play on, rather than steep slope such as 177 Street. Similarly Mithatpaşa Street is not very convenient due to the traffic. Consequently those in-between streets are better for them. Movement is more diffused over the site except on Mithatpaşa, 177 and 207 Streets. People are sitting and standing much more than in the morning and at midday. The neighbourhood looks more vivid in the evening. It is also related with the weather conditions, as temperatures can reach 30°C and the sunlight comes from the west during the midday. Hence all the streets parallel to the sea are sunny at midday.

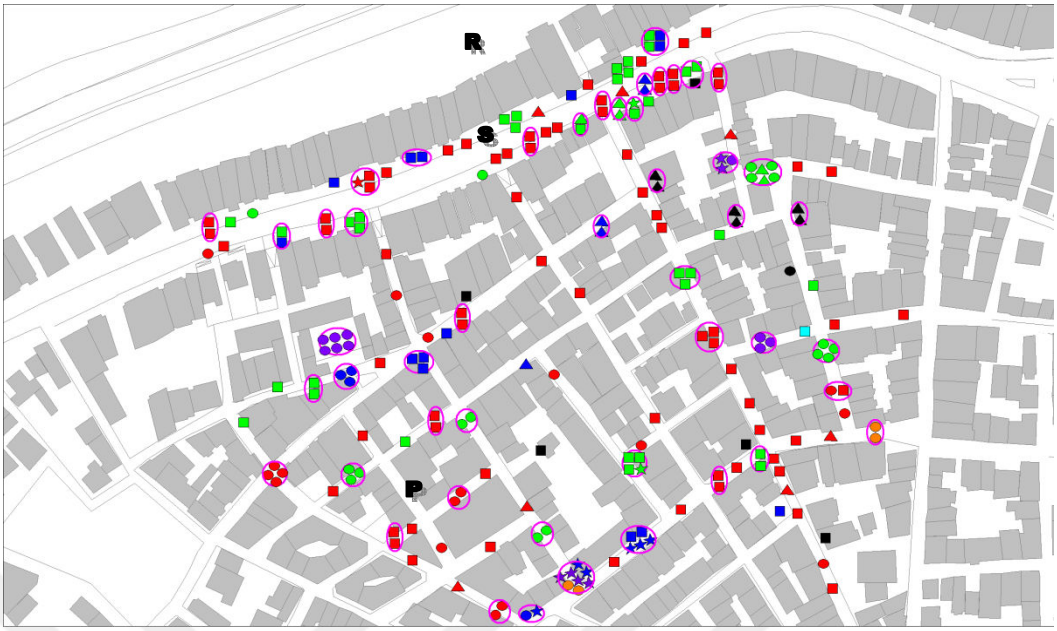


Figure 7.50 Snapshots of Karantina Neighbourhood Sunday 18-20 pm



P. 134 Street



R. Coastal Road



S. Mithatpaşa

Figure 7.51 Daily Life of Karantina Snapshots from P, R, S

Table 7.9 Snapshots of Karantina Neighbourhood Weekday and Sunday Observed People Total

	Children	Teenage F	Teenage M	Adult F	Adult M	Elderly F	Elderly M
Weekday Total	43	48	51	153	243	41	29
Sunday Total	38	31	82	136	194	28	21

Table 7.10 Snapshots Karantina Neighbourhood Weekday and Sunday Observed Activities Total

	Sitting	Standing	Walking	Talking	Other	Balcony	Entrance
Weekday Total	120	197	264	332	145	37	188
Sunday Total	81	154	271	342	109	36	148

Table 7.11 Snapshots Karantina Weekday and Sunday Group vs. Individual Total

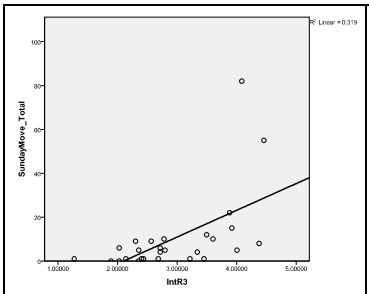
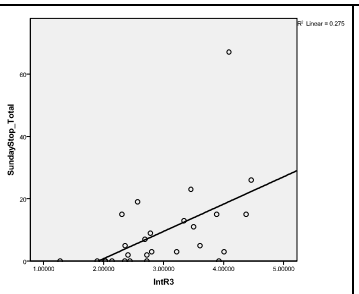
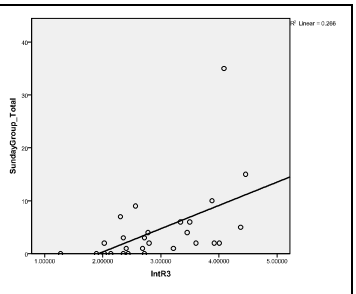
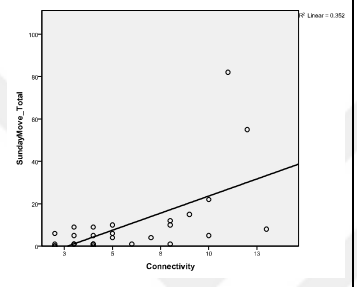
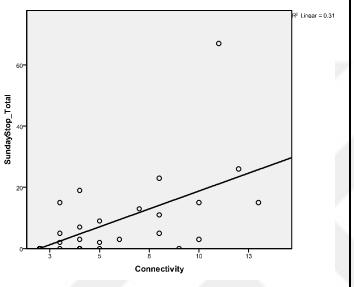
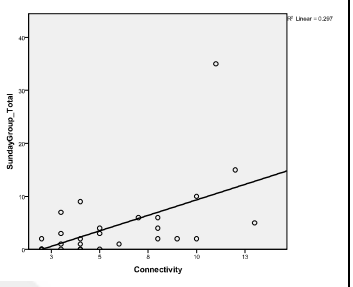
	Group	Individual	Total
Weekday Total	135	233	368
Sunday Total	129	182	311

People, activities, and group-individual numbers decrease in the Sunday observations. However as can be seen from tables 7.9-10-11 above there is not a sharp drop. This is related with the landuse of the neighbourhood. There are not many shops, which would otherwise change the numbers of people drastically. There are more males than females on the streets. Individuals are always high especially during weekdays. Adults are more present than the other age groups. Walking is equal to long-duration activities. Movement is slightly better correlated with connectivity. Stationary activities and groups are also better associated with connectivity than local integration R3 (see the table 7.13 below).

Table 7.12 Output of Snapshot Observations Karantina

Snapshots	***WD_Mor***	***WD_Mid***	***WD_Eve***	***WD_Total***	***Sun_Mor***	***Sun_Mid***	***Sun_Eve***	***Sun_Total***
Male	57 %	61 %	54 %	57 %	64 %	55 %	63 %	60 %
Female	43 %	39 %	46 %	43 %	36 %	45 %	37 %	40 %
Group	34 %	32 %	44 %	37 %	33 %	51 %	40 %	41 %
Individual	66 %	68 %	56 %	63 %	67 %	49 %	60 %	59 %
Children	5 %	13 %	4 %	7 %	10 %	6 %	7 %	7 %
Teenage	13 %	12 %	23 %	16 %	11 %	22 %	26 %	22 %
Adult	67 %	62 %	66 %	65 %	71 %	64 %	56 %	62 %
Elderly	15 %	13 %	7 %	12 %	8 %	8 %	11 %	9 %
Sitting	16 %	24 %	22 %	21 %	9 %	18 %	19 %	16 %
Standing	44 %	24 %	33 %	34 %	29 %	28 %	33 %	30 %
Walking	40 %	52 %	45 %	45 %	62 %	54 %	48 %	54 %

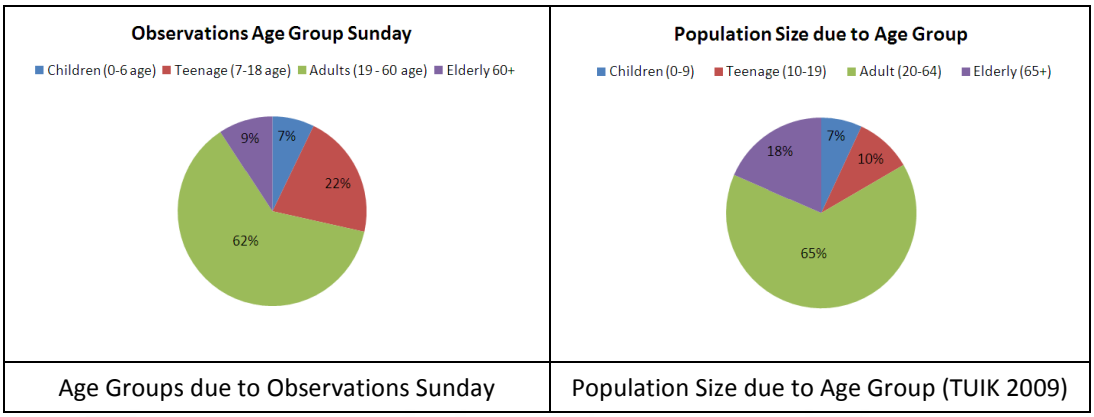
Table 7.13 Correlations of Activities and SSX

		
R^2=.319 r=.565** p=0.002 Movement & Int_R3	R^2=.275 r=.524** p=0.005 Stationary & Int_R3	R^2=.266 r=.515** p=0.006 Groups & Int_R3
		
R^2=.352 r=.593** p=0.001 Movement & Connectivity	R^2=.310 r=.557** p=0.003 Stationary & Connectivity	R^2=.297 r=.545** p=0.003 Groups & Connectivity

Questionnaires and Focus Groups

As mentioned earlier, the Karantina neighbourhood is divided into three parts. This part examines Çankaya Neighbourhood, because the second case area is mostly within this neighbourhood's boundary. Çankaya Neighbourhood is 362.450 m² with a population of 11.058 (2008 census). According to Muhtar Metin Bekar, the population consists of 65%-70% elderly, and mainly females. The average household size per flat is three and there are 1600 households. Monthly wages of residents are not below 1000TL (400£), and residents are mainly teachers, retired teachers, bank officers, officers, and retired soldiers. In addition, the cultural level of the population is generally high. There are more owners than tenants with a ratio of 1:3. There are no problems with safety because there is a police station nearby. In general, the population is from Izmir. People used to spend their leisure time in the park or on the seashore. However, computers and television have locked people into their homes. Although people

know each other, there are not close neighbourhood relations between them (Interview with Bekar 2010).

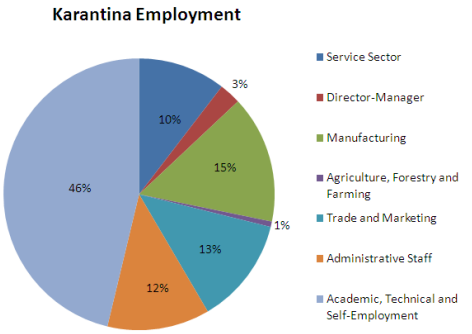


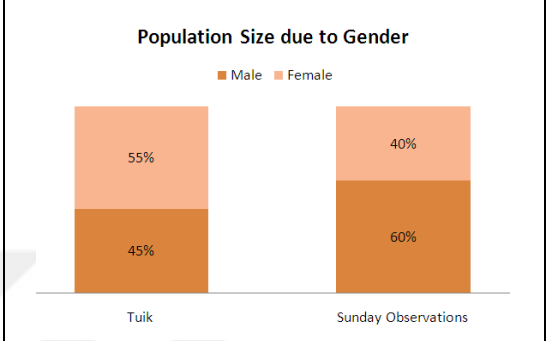
Age Groups due to Observations Sunday	Population Size due to Age Group (TUIK 2009)

Figure 7.52 Age Groups due to Observations and TUIK

When questionnaires and the information given by Muhtar are compared, there are some contradictions. Questionnaires were conducted with 129 residents, 30% from Mithatpaşa Street and the rest from the inner streets. Of the respondents, 45.9% were male and 54.1% were female. Respondents were mainly adult, at 78.2%. Despite reference to the elderly population by Muhtar, there were not many elderly people observed outside. On the other hand when TUIK and observations are compared it is clear that just half of the elderly population is outdoors (see the figure 7.52 above). Tenant and owner rates are also different: 55.2% of the respondents are owners and 44.8% are tenants. People usually reside in Karantina for 5-10 years (see the figure 7.54 below). The mean of households per flat is 3.08; the same as the one Muhtar reports above and the average number of children per household is 1.27. Forty per cent of the respondents are graduates and postgraduates, and 30% work in the service sector (see the figure in appendix 4). In the TUIK analysis below 10% of residents are in the service sector and 46% are in the academic, technical and self-employment groups. Although female numbers are higher in the TUIK analysis, more males were observed on the streets than females (see the figures 7.53 below).

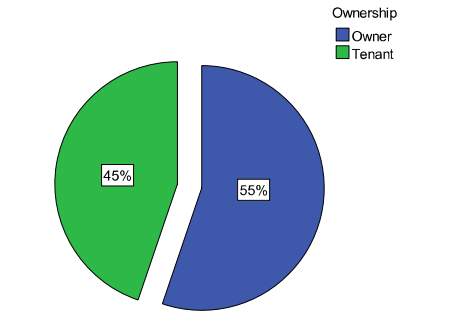
People who live in Mithat Paşa Street more recently are mainly elderly people; their children went away to different neighbourhoods. There are a lot of elderly people in Karantina. The young population got tired of the traffic here. Therefore they moved into Narlidere. They used to park their car on the street at night and in the morning they could not find it, because it was towed away. In addition, all the apartment blocks are old here, from the '60s and '70s. In Güzelbahçe and Narlidere they built buildings with a new technology resistant to earthquakes and safer in terms of security (Resident).

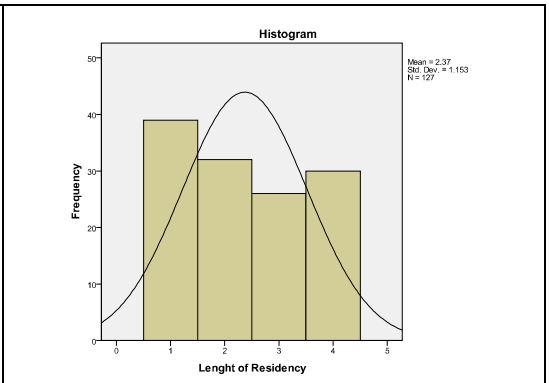




Employment Rates in Karantina (TUIK 2000)	Population Size due to Gender

Figure 7.53 Employment Rates and Population Size due to Gender





Ownership in Karantina	Length of Residency in Karantina

Figure 7.54 Ownership and Length of Residency in Karantina

Table 7.14 Descriptive Statistics: Karantina Neighbourhood Socio-demographic Structure

	N	Minimum	Maximum	Mean	Std. Deviation
Age	119	13	82	42.21	16.715
Gender	122	1	2	1.54	.500
Length of Residency	127	1	4	2.37	1.153
Ownership	125	1	2	1.45	.499
Household	126	1	6	3.08	1.197
Number of Children	119	0	4	1.27	1.014
Education Degree	124	1	4	1.94	.977
Occupation Karantina	123	1	9	3.83	2.114

(Gender 1= male 2= female / Ownership 1=owner 2=tenant
LR 1= less than 5 years 2= 5-10 years 3= 10-20 years 4= more than 20 years
Education 1= graduate and postgraduate 2= high school and institution 3= middle school 4= primary school
Occupation 1= retired 2= house wife 3= student 4= service sector 5= trade marketing business
6= manager director 7= self employed 8= science academic and education 9= art and music)

In Karantina 33% indicated that they don't have many neighbours, and 67% left this question blank. Each knows on average 32 people in their neighbourhood and 11 people in the building. They sometimes visit eight people in the neighbourhood and their frequency of interaction in the outdoors is also reported as 'sometimes'. Regarding the perception of walking, they quite agree that they feel safe when they walk within the neighbourhood. They feel neutral about sense of community, friendship and acquaintance, and about the maintenance and management of their neighbourhood. However they disagree in terms of near home environment relating to issues about adequate space for seating and landscaping, and for children to play (see table 7.16 below).

> The person who was sweeping in front of his entrance door stopped doing that when he started to live in apartments. There was a concierge and it was his work. They lost their sense of sharing, and sense of belonging feeling. They shut their doors and started to live... Each person who migrates here despised the latter comer as a peasant (Resident).

Table 7.15 Descriptive Statistics: Karantina Neighbourhood People Known in the Neighbourhood

	N	Min	Max	Mean	Std. Deviation
I don't have many neighbours	128	0	3	.73	1.155
Number of people known by name in the Neighbour.	126	0	330	31.61	49.191
Number of people known by name in your Building	122	0	60	10.92	10.401
Number of neighbours you visit in your Neighbour.	128	0	100	8.43	15.914
Frequency of visits to people living in your Neighbour.	126	1	3	1.80	.658
Frequency of social interaction in outdoors	127	1	3	2.39	.550

1= Never 2=Sometimes 3= A lot

Table 7.16 Descriptive Statistics: Karantina Neighbourhood Five-Point Scale Variables

	N	Min	Max	Mean	Std. Deviation
Perception of Walking and Safety	125	1	5	3.61	.971
Sense of Community Neighbourhood Scale	83	1	4	2.98	.680
Friends, Acquaintances and Knowing People	84	1	5	2.97	.903
Near Home Environment	126	1	5	2.19	.956
Maintenance and Management	123	0	4	3.17	.652

1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree

Table 7.17 Descriptive Statistics: Karantina Neighbourhood Indices

	N	Min	Max	Mean	Std. Deviation
Interaction in and around the Building	129	0	4	2.18	1.176
Interaction around the Neighbourhood	128	0	4	1.78	1.057
Planting, Playground, Seating, and Chatting	129	0	2	.36	.544

As explained in the earlier chapter, places of interaction in the neighbourhood and building are formed of five indices. In the Karantina case area, on average, two out of five places were chosen as interaction places both in the building and in the neighbourhood; among these, streets and sidewalks with 80%; entrances of the buildings with 79%; staircase and halls with 50%, and balconies with 33%, are in the majority compared to the other interactional places. Moreover, generally, there are no planting, seating, chatting, or playing activities around the residential buildings of Karantina residents. Regarding the interactional places and frequency of interactions; nearly 43% respondents indicated that they

interact at the entrance of the building sometimes, 42% sometimes on street and sidewalks, 26% a lot in the staircase and hall, and 23% report that they interact a lot in neighbourhood open spaces (see the figure 7.55 below). As they walk they interact more in front of the building as can be seen in the figure 7.56 below.

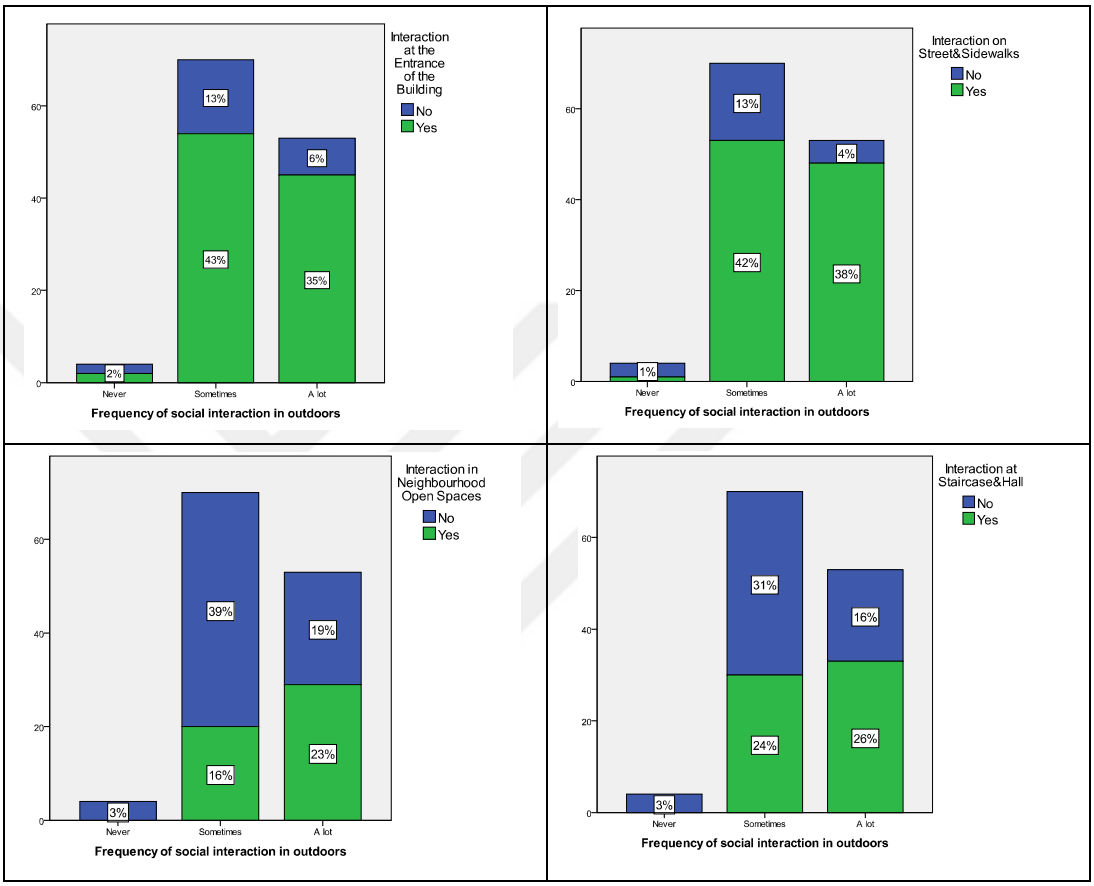


Figure 7.55 Frequency of Interaction and Interaction Places

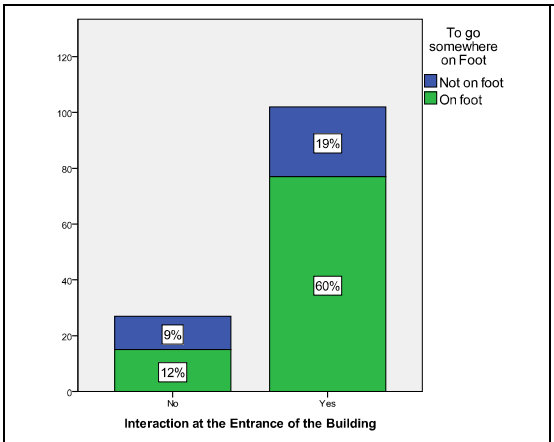


Figure 7.56 Interaction at the Entrance& Walking

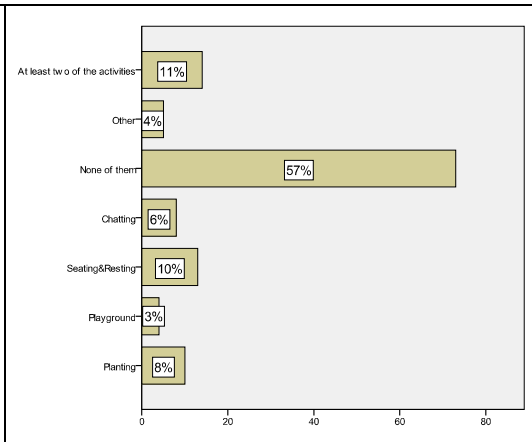


Figure 7.57 Activity Types in front of the Building

Length of Residency (LR)

Table 7.18 Correlations with Length of Residency Karantina

Correlations with Length of Residency	Correlation coefficient _ *r*	Sig (2-tailed) _ *p*
Sense of Community	**.295****	.007
Number of People Known by name in the Building	.219*	.016
Number of People Known by name in the Neighbourhood	.**305****	.001
Number of Neighbours you visit in your Neighbourhood	.168	.059
Friends and Acquaintance	.**321****	.003
Planning to move to another Neighbourhood	**.220***	.013
Interaction around the Neighbourhood	.011	.907
Interaction in and around the Building	.025	.783

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

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

In the Karantina case study, length of residency is related with the sense of community, friends and acquaintance, number of people known by name both in the building and in the neighbourhood, as well as people's wish to move into a different neighbourhood. On the other hand, length of residency does not have any correlation either with the interaction in and around the building or integration around the neighbourhood. In addition, household with children is not associated with the number of people that residents know in their building or district, which contradicts the literature. As can be seen from the table 7.19 below, as the length of residency increases, 56% of the residents are willing to move from the neighbourhood.

> When I moved back to Karantina, I found neither the old friends nor the old milieu. It had become a cosmopolitan neighbourhood. There was no longer any respect and civility as in the old times. It has been 20 years since I came back but still I could not adapt (Resident Necla Kartal in Özsüphandağ, 2001: 32).

Table 7.19 Logistic Regression of Length of Residency and Move

Variables in the Equation		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Length Residency	.444	.183	5.879	1	.015	1.559
	Constant	-.155	.437	.126	1	.723	.857

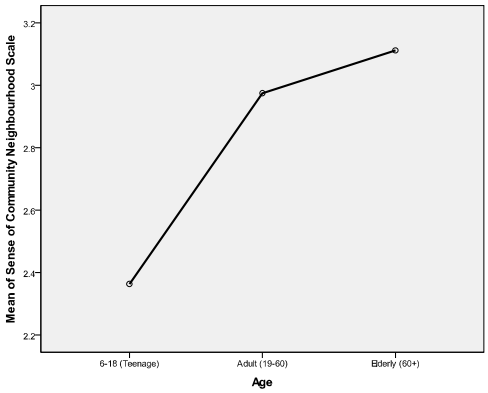


Figure 7.58 Age and Sense of Community

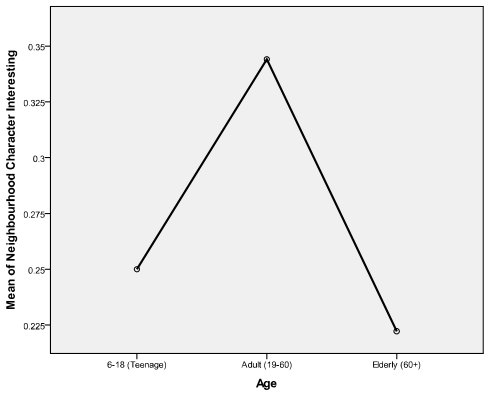


Figure 7.59 Age and NC Interesting

Sense of Community (SC)

As can be seen from the figure 7.58 above, sense of community increases parallel with the growth in age. In the next figure 7.59, although adults find Karantina interesting, the elderly and teenage groups do not define their neighbourhood as interesting, as the adults do. Sense of community is strongly associated with, sequentially, maintenance and management, number of people known in the building, and frequency of visits to neighbours. Then other variables follow, such as frequency of social interaction in outdoors, number of people that are visited, number of people known in the neighbourhood, organisation of near home environment, and the positive social characteristics of the neighbourhood such as friendly, familiar, quiet, interesting, lively, and relaxed (see table 7.20). In the multiple regression analysis below (table 7.21), as number of people known in the neighbourhood and frequency of social interaction increase, sense of community also increases. Moreover 17.8% of the variation in sense of community can be explained by number of people known by name in the neighbourhood and the frequency of social interaction in outdoors, and 17.6 % can be predicted by positive social characteristics of the neighbourhood and near home environment, and activity types around the building. However this percentage is not strong enough to predict one variable above the others. This is also because there might be other factors affecting sense of community.

Table 7.20 Correlations with Sense of Community Karantina

Correlations with Sense of Community	**Correlation coefficient _ *r***	**Sig (2-tailed) _ *p***
Interaction around the Neighbourhood	.129	.246
Interaction in around the Building	-.014	.897
Positive Spatial Characteristics of the Neighbourhood	.065	.556
Positive Social Characteristics of the Neighbourhood	**.222***	.044
Number of People Known by name in the Building	**.457****	.000
Number of People Known by name in the Neighbourhood	**.295****	.007
Number of Neighbours you visit in your Neighbourhood	**.329****	.002
Frequency of Visits to People in the Neighbourhood	**.443****	.000
Frequency of Social Interaction in Outdoors	**.361****	.001
Adequate Space for Landscaping and Planting Near Home	.223*	.044
Maintenance and Management	**.646****	.000
Planning to Move	.187	.092
Near Home Environment	**.288****	.009

Table 7.21 Multiple Regression Analysis of Sense of Community Karantina

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.282	.201		11.324	.000
	Positive Social Characteristics of the Neighbourhood	.059	.027	.225	2.180	.032
	Near Home Environment	.184	.075	.257	2.442	.017
	Planting, Playground, Seating, and Chatting	.242	.129	.198	1.875	.064

a. Dependent Variable: Sense of Community Neighbourhood Scale

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.986	.306		6.485	.000
	Number of people known by name in the Neighbourhood?	.003	.001	.232	2.230	.029
	Frequency of social interaction in outdoors	.371	.125	.308	2.959	.004

a. Dependent Variable: Sense of Community Neighbourhood Scale

Group Statistics and T-tests

People are known in neighbourhood, frequency of visits, and to a degree interaction in around the building have statistically significant differences between male and female groups (see table 7.22). Although females have higher interaction in and around the building and a higher frequency of visits; they know less people in the neighbourhood than males do. This can be an interesting topic for gender space relations. Generally both tenants and females have slightly lower values than the others. In the group statistics table relating to perceptions of walking and safety, tenants and females both agree that their neighbourhood is safe and comfortable; however the walking and feeling safe issue changes between females and males at different times of the day. Males feel safer than females while walking during the evening (see table 7.23).

Table 7.22 T-tests for Karantina Neighbourhood

	Sense of Community			Interaction in around Building			Interaction around Neighbourhood			People Known in Building			People Known in Neighbourhood		
	N	Mean	Sig	N	Mean	Sig	N	Mean	Sig	N	Mean	Sig	N	Mean	Sig
Owner	48	3.04	.381	69	2.14	.941	68	1.82	.566	64	12	.079	67	33	.671
Tenant	35	2.91		56	2.16		56	1.71		55	9		56	29	
Male	33	2.90	.294	56	1.95	.061	55	1.75	.436	54	12	.379	56	44	.022
Female	48	3.06		66	2.35		66	1.89		62	10		65	22	

	Frequency of Interaction			Frequency of Visits			Friends and Acquaintance			To go Somewhere on Foot			Perception of Walking		
	N	Mean	Sig	N	Mean	Sig	N	Mean	Sig	N	Mean	Sig	N	Mean	Sig
Owner	67	2.43	.260	66	1.80	.770	49	3.08	.205	69	.78	.136	67	3.64	.773
Tenant	56	2.32		56	1.77		35	2.82		56	.66		55	3.59	
Male	55	2.36	.552	54	1.61	.008	33	2.93	.603	56	.70	.344	55	3.66	.463
Female	66	2.42		66	1.92		49	3.03		66	.77		66	3.53	

Table 7.23 Group Statistics Gender and Safety Karantina

Group Statistics	Gender	N	Mean	Std. Deviation	Std. Error Mean
I feel safe walking in my neighbourhood during the day	male	56	3.95	1.227	.164
	female	66	3.85	.996	.123
I feel safe walking in my neighbourhood during the evening	male	56	3.45	1.476	.197
	female	66	3.03	1.358	.167
I feel safe and comfortable in this neighbourhood	male	55	3.75	1.250	.169
	female	66	3.70	1.123	.138
Neighbourhood Character Safe	male	56	.59	.496	.066
	female	66	.59	.495	.061

Neighbourhood Characteristics (NC)

When Karantina residents were asked to specify their neighbourhood characteristics as in the table 7.25 below, they mostly chose the following adjectives: central (89.9%), plain (71.3%), relaxed (67.4%), simple (62.8%), peaceful (62%), familiar (59.7%), safe (59.7%), ordinary (58.9%), narrow (55%), dirty (49.6%), friendly (48.8%), pleasant (48.8%), natural (48%), unkept (47.3%), and crowded (45%). It is interesting that some of the answers contradict others, such as; pleasant and peaceful with dirty and narrow. Although they think there is not enough green space they marked the neighbourhood as natural. This is because some residents might associate natural with human beings and the general atmosphere of the neighbourhood rather than the built environment. Interestingly, though, there are not many negative expressions compared to positive ones.

Table 7.24 Characteristics of Karantina Neighbourhood Index

Neighbourhood Characteristics Karantina	**N**	**Min**	**Max**	**Mean**	**Std. Deviation**
Positive Spatial Characteristics	129	0	8	3.50	1.621
Negative Spatial Characteristics	129	0	6	3.15	1.485
Positive Social Characteristics	129	0	9	4.36	2.634
Negative Social Characteristics	129	0	9	2.46	2.372
Positive Management and Maintenance	129	0	4	1.59	1.401
Negative Management and Maintenance	129	0	4	1.65	1.493

Table 7.25 Multiple Choice Neighbourhood Characteristics Karantina

Distinctive	24.8%	**Simple**	**62.8%**	Clean	36.4%
Ordinary	**58.9%**	Complex	20.9%	**Dirty**	**49.6%**
Plain	**71.3%**	**Peaceful**	**62%**	**Central**	**89.9%**
Ornate	14.7%	Anxious	17.8%	Not Central	0
Interesting	31.8%	**Safe**	**59.7%**	Spacious	31%
Boring	34.9%	Unsafe	24.8%	**Narrow**	**55%**
Not Crowded	38%	**Pleasant**	**48.8%**	Comfortable	33.3%
Crowded	**45%**	Unpleasant	22.5%	Uncomfortable	43.4%
Natural	**48%**	Quiet	45.7%	Varied	32.6%
Manmade	28%	Noisy	41.1%	Monotonous	41.9%
Familiar	**59.7%**	Living	40.3%	Well Kept	29.5%
Unfamiliar	20.9%	Lifeless	34.9%	**Un Kept**	**47.3%**
Excited	31.8%	**Friendly**	**48.8%**	**Relaxed**	**67.4%**
Depressed	29.5%	Unfriendly	27.1%	Stressful	17.1%

In the table 7.24 above, respondents chose on average four positive spatial characteristics and three negative spatial characteristics out of eight. Additionally, four positive social characteristics of the neighbourhood out of nine, and 1.59 positive management characteristics out of four were selected. In total, 10 positive characteristics were selected out of 21 adjectives. Despite the differences in the selected adjectives of social characteristics, mean of spatial and maintenance characteristics have similar values. This means that the neighbourhood's management and urban fabric characteristics were perceived by its residents equally in both positive and negative ways. From the table 7.26 below, it is clear that spaciousness as positive spatial neighbourhood characteristics has a strong correlation with the other positive spatial

characteristics, as well as positive social characteristics, and interaction around the neighbourhood.

Another remarkable result is that as people define Karantina as more spacious, their frequency of visits decreases (see table 7.26). Hence it can be concluded that spaciousness is important in terms of neighbouring; as there are open spaces, people will walk more and have the possibility of meeting and interacting with others. However proximity and urban layout also play crucial roles in forming social relations and encouraging people to engage in activities. When the distance is too close and privacy is disrupted, then the 'environment spoiling hypothesis' (Ebbesen et al., 1976 in Skjaeveland and Garling, 1997) might occur. Proximity and spaciousness issues should be considered with the gradual space organisation between the private and public spaces.

Table 7.26 Correlations with Neighbourhood Character Spacious

Correlations with Neighbourhood Character Spacious	**Correlation coefficient _ *r***	**Sig (2-tailed) _ *p***
Positive Spatial Characteristics of the Neighbourhood	**.552****	.000
Positive Social Characteristics of the Neighbourhood	**.373****	.000
Interaction around the Neighbourhood	**.267****	.002
Interaction in and around the Building	.141	.110
Frequency of Visits to People in the Neighbourhood	-.210*	.018

Near Home Environment (NC)/ Interaction/ Friends and Neighbouring

> When we were living in İkiçeşmelik there was a concept of elder sister and brother of our neighbourhood, and we were scared to behave disrespectfully in front of them before our parents. Now everything has degenerated (Resident).

Issues about the near home environment such as adequate space for children to play, to sit and chat with neighbours, adequate greenery, and car parking area all have a relation with maintenance and management as well as with the activities in front of their residential building. Nevertheless it is surprising that these do not have any relation with the frequency of social interaction in the outdoors, friendship, and with the number of people known (see table 7.27 below). Furthermore, as can be seen from the multiple regression analysis, friendship

does not have any relation either with the near home or the type of activities in front of the house (see table 7.28 below) Interaction at the entrance does not have any significant relation with number of people known in the building and frequency of social interaction in the outdoors either (see table 7.29 below). In conclusion, neighbouring might be developing regardless of the near home organisation in Karantina. Friends and Acquaintance is strongly related with maintenance and management, frequency of social interaction in outdoors, and frequency of visits to neighbours (see table 7.31 below).

Table 7.27 Correlations with Near Home Environment

Correlations with Near Home Environment	**Correlation coefficient _ *r***	**Sig (2-tailed) _ *p***
Frequency of Social Interaction (FSI)	-.140	.119
Friends Acquaintance	.201	.068
Number of People Known by name in the Neighbourhood	-.041	.647
Number of People Known by name in the Building	.053	.566
Number of Neighbours you visit in your Neighbourhood	-.080	.376
Planting, Playground, Seating, and Chatting	**.208***	.019
Perception of Walking	.018	.844
Maintenance and Management	**.353***	.000

Table 7.28 Multiple Regression Analysis of Friends and Acquaintance in Karantina

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.558	.232		11.020	.000
	Near Home Environment	.166	.106	.175	1.571	.120
	Planting, Playground, Seating, and Chatting	.193	.181	.119	1.070	.288

a. Dependent Variable: Friends, Acquintance and Knowing People

Table 7.29 Correlations with Interaction at the Entrance of the Building

Correlations with Interaction at the Entrance	**Correlation coefficient _ *r***	**Sig (2-tailed) _ *p***
Number of People Known by name in the Building	.108	.238
Ownership	-.035	.696
Frequency of Social Interaction (HL5)	.144	.107
Near Home Environment	.055	.544

Table 7.30 Logistic Regression of Interaction on Streets/Sidewalks with FSI and NP Neighbourhood

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	NPNeighb	-.004	.005	.871	1	.351	.996
	HL5	1.658	.526	9.925	1	.002	5.246
	Constant	-2.146	1.119	3.675	1	.055	.117

a. Variable(s) entered on step 1: NPNeighb, HL5.

Table 7.31 Correlations with Friends and Acquaintance

Correlations with Friends and Acquaintance	**Correlation coefficient _ *r***	**Sig (2-tailed) _ *p***
Planning to Move to another Neighbourhood	.171	.123
Maintenance and Management	**.500****	.000
Planting, Playground, Seating, and Chatting	.154	.161
Frequency of Visits	**.425****	.000
Frequency of Social Interaction in Outdoors	**.468****	.000

Table 7.32 Correlations with Perception of Walking and Safety

Correlations with Perception of Walking and Safety	**Correlation coefficient _ *r***	**Sig (2-tailed) _ *p***
Interaction around the Neighbourhood	**.251****	.005

Correlations with To go somewhere on Foot	**Correlation coefficient _ *r***	**Sig (2-tailed) _ *p***
Interaction around the Neighbourhood	**.365****	.000
Interaction in around the Building	.082	.356

Seating in front of the building does not have any correlation with either interaction in around the building or around the neighbourhood. There is no street furniture for Karantina residents. To go somewhere by car is not associated with the interaction in or around building and neighbourhood. However, to go somewhere on foot is strongly correlated with the interaction around the neighbourhood. Moreover, as people walk comfortably and safely they interact more with their neighbours around the neighbourhood.

Problems in Karantina Neighbourhood

According to the focus groups that were conducted with adults and children, as well as the street interviews with local shopkeepers, problems of the neighbourhood overlap with the issues mentioned by the questionnaire respondents. The first and main problem in the area is car parking problem.

> In 1965 when Osman Kibar was the mayor, they said that 'there will be an under-car-parking area in every building; hence you need to pay the fee'. All the apartments paid the fee to the Municipality for the underground car parking. There is not any car parking; there are all shops on the ground floor of the buildings. Traffic is still a problem (Resident).

> In this neighbourhood the municipality made a very big mistake. They give the permission to build but were not concerned about the car parking. The car parking issue is very serious. For instance, there are one or two old buildings left, and they will soon build one next to this place. Therefore 5-10 households will move into these buildings. If half of them have a car, they will argue every day regarding where to park and who can park where. The car parking problem is huge (Shopkeeper 154 Street).

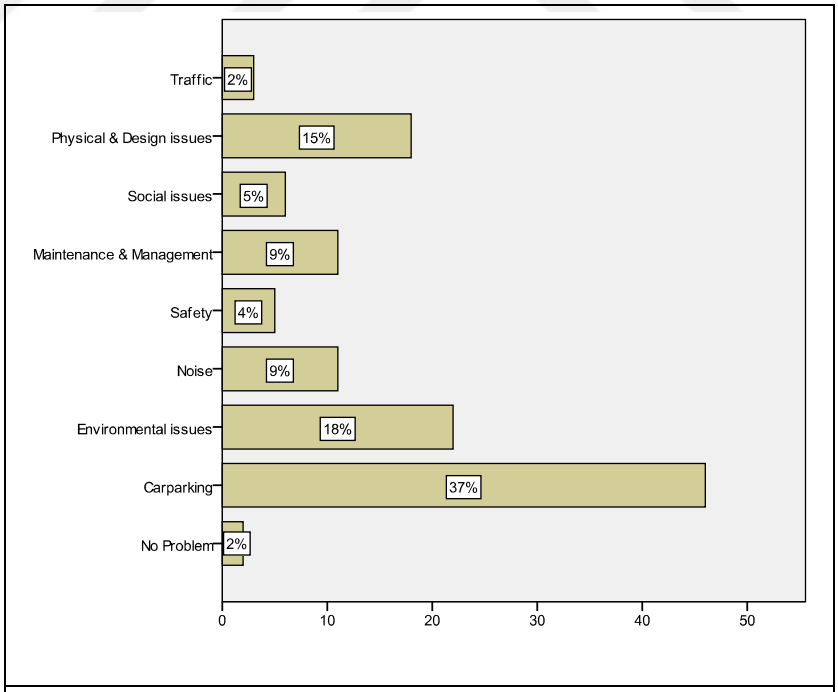


Figure 7.60 First Main Problem in Karantina Neighbourhood

Secondly, physical and design as well as environmental issues are mentioned in the questionnaires. The same topics are mentioned by the adult focus groups as well. Parents feel uncomfortable about letting their children play on the streets

because of the car parking problems, as well as environmental factors, such as dirtiness, and design and management issues (see the figure 7.61 below).

> Car parking is a problem, roads should be changed and well maintained, there is animal mess around the park, and it is not a hygienic place for children; there is not any social place for any activity, very dirty and polluted, not very safe for children especially in the park where there are various kinds of undesirable people. On the roads cars do not allow children to play comfortably and safely, there are not many places for children to play, they narrowed down the playgrounds of children, while they play on the street we wait for them on the balconies" (Focus Group Adults).

> We don't feel comfortable when we send our children to go to the 'bakkal'. Everywhere are cars, sometimes we cannot even allow them to go from one apartment to the other, because of the metro and infrastructure works. Traffic is much worse (Focus Groups Adults).

> This place is full of historical heritage, that's why they don't allow us even to drive a nail in the walls. There is a life in here because all the historical buildings were refurbished and converted into a nursery, or art centre, or rehabilitation centre. This is the only good thing. On the other hand, I am not sure how robust those buildings are in terms of earthquakes and damp issues (141 Street Shopkeeper).

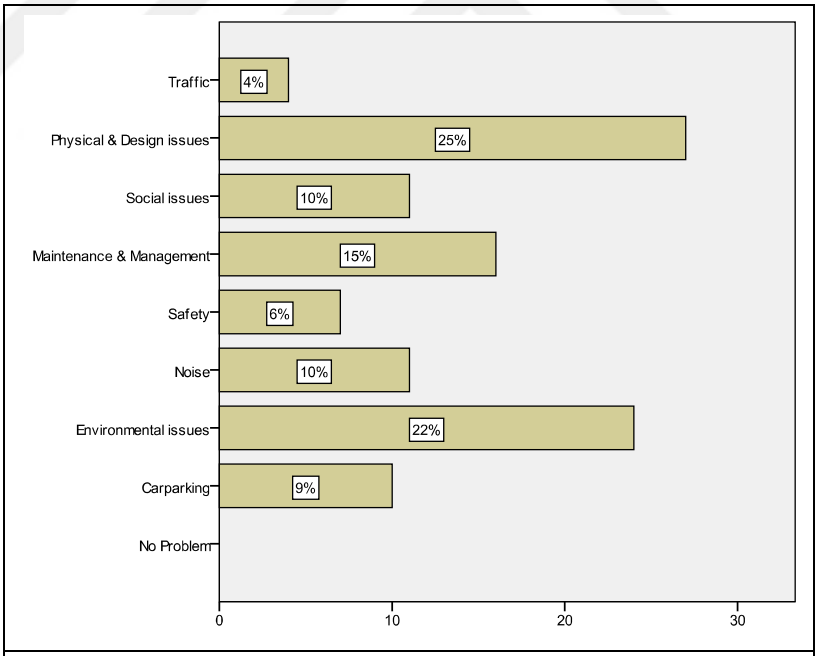


Figure 7.61 Second Main Problem in Karantina Neighbourhood

Thirdly, in addition to the previous problems, maintenance and management, as well as the noise problem, were brought up (see the figure 7.62 below). Another issue is that there are a few homosexuals living in the neighbourhood, which led to some residents complaining that their neighbourhood is not appropriate for

their children now and they would like to leave. Others mentioned that they are harmless compared to earlier times. Since the rent prices were getting lower they started to settle in this neighbourhood. On the contrary it is also emphasised that because the municipality wanted to clear these people from Alsancak, they had to choose different and cheaper locations. Muhtar of Mithatpaşa says it is still a bit of a problem but homosexuals don't usually go out during the day. On the other hand the loud music during the night is a problem. Also there are real estate agencies that specifically take homosexual customers as they pay better rents. At the beginning it was difficult to accept their existence and they were 'out of place'. However there is more tolerance recently in the neighbourhood. Hence big cities can teach people to live with others, as Park (1915) defines, in a 'spatial contiguity'. Nevertheless increase in the population and migration issues might raise safety concerns among the residents. People mention that they do not know anyone in their apartment anymore. Nobody trusts anyone. Most of the respondents (70%) are not planning to move to another neighbourhood but if there were not any financial constraints, 64% report that they would live in another neighbourhood (see the figure 7.64 below).

> Streets are too narrow; municipalities do not consider the future in their works. Roads are very dirty, there is not any maintenance. It is as if abandoned. Small retail shopkeepers are done; they cannot survive and compete with bigger retailers. There is not enough green space. They don't consider car parking while they build new constructions. Every new building causes conflicts between neighbours. If you come here after 5pm in the evening you won't able to find a place to park. People stroll around to find car parking. Whoever comes earlier gets the car parking (Shopkeeper 154 Street).

> Local Authorities need to give the building permission regarding the future projects. They construct buildings that will cover the entire building plot and just give light shafts at the back. They are not aware of how people build in abroad. I don't know whether it is the same in other neighbourhoods but friendship and neighbouring is finished (Shopkeeper 154 Street).

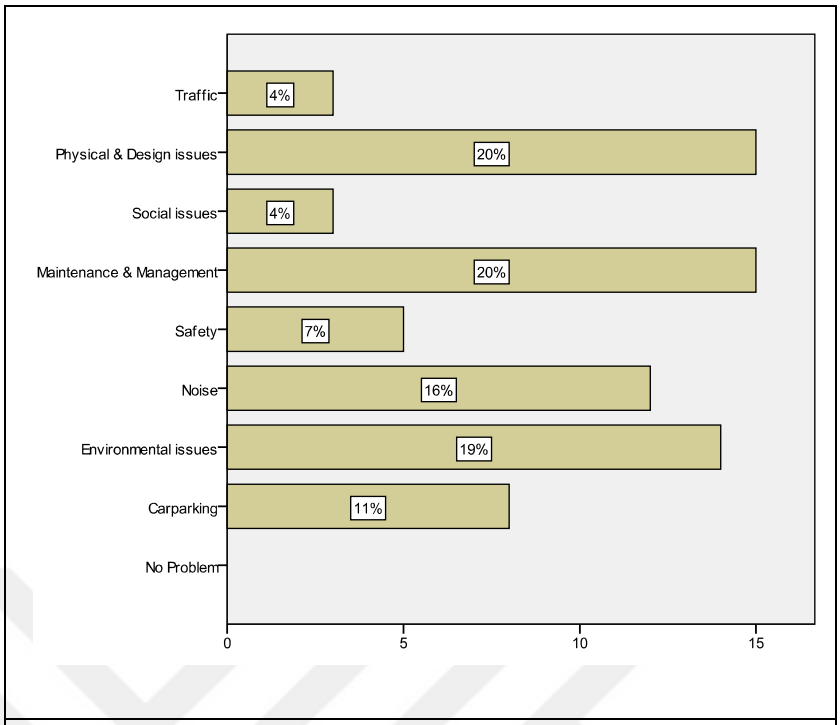


Figure 7.62 Third Main Problem in Karantina Neighbourhood

We have a beautiful milieu, very decent and clean. It is known as 'Karantina'. We have not been as happy to work here in recent years because there are large retail supermarkets. People all go and shop there. Our customers are mostly elderly people. Neighbourhood relations are not very positive recently (312 Street).

A couple of years ago there were more burglary issues. However with the complaints, there is less burglary now. Especially when the children go to school, during the semester, police teams stroll around more often" (Focus Groups Adults).

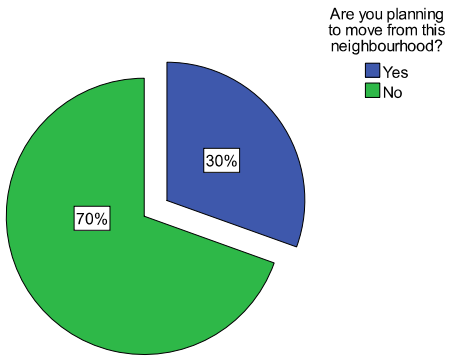


Figure 7.63 Moving to Another Neighbourhood

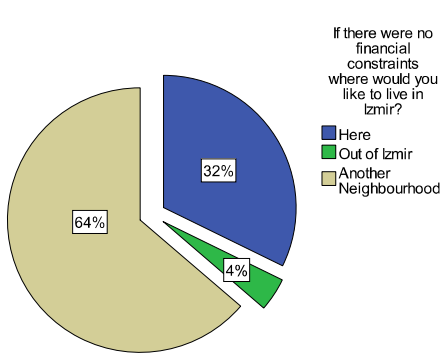


Figure 7.64 Neighbourhood Preferences

Focus groups that were formed of primary school children addressed similar issues. Eleven children aged 10 from the *Namık Kemal Primary School*, 4/B class were interviewed. It was a homogenous group mainly from middle-income and high-income families. Five of the 11 students said that they have peaceful, green, and quiet neighbourhoods; on the contrary the other five said that they have dirty, noisy and inadequate green space in their neighbourhoods. This might be the difference between the coastal part and inner narrow streets of the neighbourhood. They have mostly four to five or more than 10 friends. They know most of the street games. Six of them are brought to school by their parents, three come to school by themselves, and two come on the school bus. In their spare time they mentioned that they spend time with the computer, the play station, playing chess, reading books, playing games, travelling, language courses, music, painting, theatre, and doing tests. They usually spend two hours a day in front of the TV and the computer, and they mostly play in the afternoons during the week and spend more time playing at weekends.

They specify similar problems as their parents, about cars, lack of green, street dogs, and safety. In addition to that they mention the elderly people who complain about them while they are playing. Their interactional places and playgrounds are near the home environment of their apartment block, home, empty car parking areas, side streets, alley, back yard, park, school, street, and seaside.

They picture in their paintings a beautiful environment, clean and peaceful, natural and full of flowers, houses next to the sea or a river, houses with green areas, front yards and playgrounds, parks where only children under 18 can go, colourful houses, swimming pools, lots of trees, places where children can go safely, houses for only children next to their houses, sport schools, and they all want more green (see the pictures below).

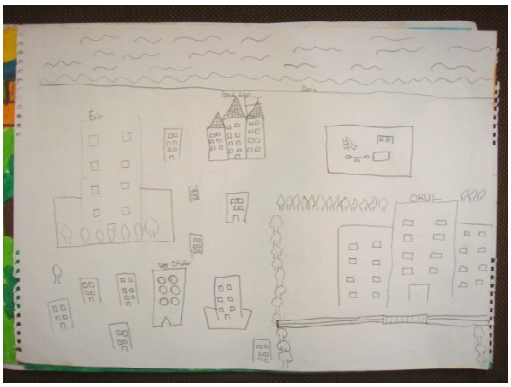
	
Enjoyable environment, house like a clown	Houses for Children
	
Parks just for Children	Bridges between Houses
	
Colourful Houses	House in front of river

Figure 7.65 Drawings of Namik Kemal Primary School Children A

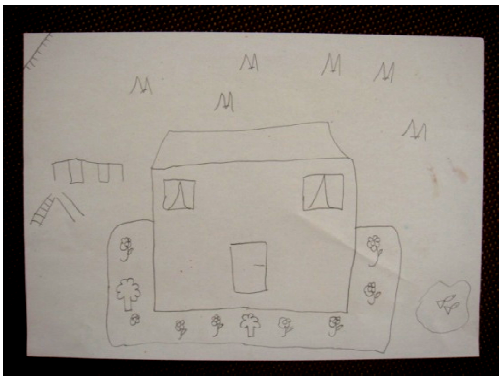
	
Seawater is not suitable to swim in as before	Parks with trees, flowers, lake, less space for cars
	
Karantina two storey and eight storey houses	Segregation of places with motorway
	
Parks with flowers, river, low-storey houses	Houses with front yards, gardens

Figure 7.66 Drawings of Namik Kemal Primary School Children B

7.3 CONCLUSION

In the Karantina case study, historical analysis revealed that the population of the district in the past was 20 times less than the recent population. Indeed it would be merely nostalgia to bring back the old type of spaces and type of

relations since everything is constantly changing. On the other hand, through examining the past, the character of the place can be explored and this character can be sustained in the contemporary types of buildings. In this case area all the previous typologies were almost superimposed and erased by different typologies. Before there were *deniz banyosu* and piers, gardens, open summer cinemas, elevated entrances, and more local places; hence space configuration was taking advantage of the topography and expressing itself in different types of in-between spaces.

Now the urban pattern of Karantina is very compact and at some locations there is deterioration in the privacy; because apartments covered all the outdoor space of the previous two-storey houses and the buildings are attached without any spaces between them. Firstly, typical traditional Izmir Houses with bay windows and elevated entrances are swopped with early modern 'rent houses' with four storeys. These buildings were still sensitive in terms of space layout and entrance of the building. However with apartment blocks, which were encouraged by building contractors, entrances became small, especially those built in the 1970s. These narrow entrances also narrowed down the interaction between people. They had taken away all the characteristics of the place and the possibility of staying longer or spending time with others.

Undoubtedly the apartment blocks have transformed the three-dimensional relation of the building with two-dimensional entrances, which are located in a haphazard fashion. Why was it so important for the resident to sweep her entrance? Because it was her territory, where she personalised the space with flower pots, chairs, and mattress. It was the place where she gathered with her neighbours; hence it was the extension of the house. Now the territorial expansions are mainly in front of shops exhibiting their products or through the addition of seating elements. On the other hand some residents are putting flower pots in front of their building, not to create a nice feature, but for preventing their entrance or sidewalk from being parked on by cars. All the apartment blocks were built without considering the increase in the population

and mobility whether by car or pedestrian. In the end old neighbourhoods became problematic areas mainly because of cars. Apartment blocks covered the previous in-between spaces and there is not much space left for the public. In addition open spaces in the middle of block perimeters are ignored as a lost space.

A dead end street can be segregated in space syntax analysis but could be a suitable place for children to play. Hence local analysis should be carried out with additional explorations. It is clear that the most integrated and connected streets are more vivid in terms of movement and interaction. Junctions of these streets are the intersection points for interaction. For instance, in Karantina, where the 177 Street intersects with Mithatpaşa Street, there stands a shoeblack. Is this a coincidence that this shoeblack has chosen the busiest intersection in terms of movement? Street vendors locate themselves at specific points in terms of pedestrian movement. As the street connects global streets it attracts more movement. However, here the quality of the interaction is important. In Karantina, Mithatpaşa Street is very busy as it is one of the global integrated streets with a diverse local commerce use. On the other hand, on 177 Street, although the accessibility is high and it links two main streets, it does not have the same sort of diversity in landuse; commercial use does not prefer the steep slopes. Local groceries (bakkal) are always located at the corners where the local integration is high. These places are the other interaction points for citizens. Recently they are being exchanged with supermarkets in big cities. However these local shops are still notably in neighbourhoods with a cosy atmosphere. For instance Yildiz Grocery is very well known in Karantina and has been a landmark of the neighbourhood for 80 years both with its unique shop and the shopkeeper. The chat with these shopkeepers revealed that people can easily trust them and leave their door key when they are away. These people are also the ‘eyes on the street’. The surrounding space of local groceries can be used for gatherings of residents. However with modern planning all these local characteristics of the neighbourhood disappeared.

Since the human being became mobile and able to communicate over the telephone in the late nineteenth century, face to face contacts have diminished, from primary contacts to secondary (Park, 1915). One hundred years after the invention of the telephone, another milestone in communication types arrived in the form of the Internet in the 1990s. Now the interactions are in cyber space, such as on MSN, Skype or facebook. People are creating same-interest groups, sometimes expressing their reactions, encouraging others and so on. We are becoming freer and freer, and more segregated from traditional norms and habits. So how can urban designers cope with this problem? How can virtual contact be turned into actual contact? Or is this a choice we are making? Whether it is a choice or not, an urban environment can produce a variety of places for every age and type of people. We have seen that bad urban planning altered the urban fabric of Karantina in a negative way, segregating the residents from the sea, and demolishing previous architectural heritage and near home environment. As a result, the neighbourhood is suffering from quality of space and life. Wind cannot flow through buildings; and blocks are preventing the sea view, lack of green spaces and playgrounds, and lack of canopies. In addition to the spatial form of relations there are also non-spatial forms of associations as Park (1915) stresses. Newspapers, charities, and all types of community are platforms for gathering and other kinds of interaction. These are the other tools that increase neighbourliness and develop the neighbourhood. From the questionnaire responses it can be concluded that neither the sense of community neighbourhood scale, perception of walking, nor the near home environment could be literally accomplished with the existing space organisation. In addition, there is no institution or group formed within the neighbourhood that can support community involvement and association.

CHAPTER 8 CASE STUDY: MAVISEHIR

Introduction

The third case study differs from the previous two regarding the production of space, period, and urban pattern. Mavişehir housing units are one of the first examples of high-rise mass housing projects in Izmir built in the 1990s. We are not going to examine the mass-housing concept in detail as the purpose of this chapter is related to the in-between space, near home environment, and social interaction in this type of housing unit. However it is crucial to mention how and why this housing typology emerged in Turkey, and its brief development.

8.1 HISTORICAL DEVELOPMENT OF MAVIŞEHIR CASE STUDY

As mentioned earlier in the planning history of Izmir, after the establishment of the new Republic, there was just one type of housing production. This was the construction of the detached house on a parcel under the ownership of one person, who is at the centre of this production process. Nevertheless, via rapid urbanisation, there has been an increase in the population of cities with the immigration from rural into urban areas. This was triggered with the implementation of the Marshall Plan, the modernisation in the Turkish economy, planning strategies, and the change from an agricultural society to an urban society (Oc and Tiesdell, 1994). Hence construction of single housing units could not solve the problem of housing for middle and low-income groups. Firstly, there appeared two types of housing productions. One was 'Yapsatçılık' and the other was 'Gecekondu' as defined earlier (Güner, 2006; Tekeli, 2008). Secondly, in the 1960s, co-operatives appeared. Moreover, through the end of the 1960s, it was concluded that neither co-operatives nor the yap-sat system could cope with the problem of housing shortage and fast production. Consequently in the 1980s mass housing was seen as the only solution (Tutal, 2001 in Akayoglu, 2008).

Co-operative associations played an important role in shaping and forming the first mass housing models. They used the concept of 'Urban Co-operatives' in order to emphasise that they also consider the outdoor space and environment not just the building blocks (Tekeli, 2008). In addition to the design concepts of these co-operatives, they involved the users in the participation of the design process, which was not applicable in the single housing production (Aydemir, 1990). Incentives were supplied through public institutions such as the 'Social Insurance Institute' as well as public banks like Emlak Kredi Bankasi, the 'Housing Credit Bank'. As Aydogan (2005) explains this definition corresponds to the 'housing mortgage bank' supplying housing credits and low interests for residents. Mavişehir Housing Project is one of those housing settlements that was funded and developed by this bank.



Figure 8.1 Mavisehir Phase I Mass Housing Units Izmir, (Bolulu, 2011)

There were various reasons that mass housing became widespread compared to other housing productions. Firstly, rapid urbanisation and immigration issues caused housing shortage and the need for fast production. Second, yap-sat was too expensive to supply this housing demand. Thirdly, both yap-sat and co-operatives could not increase the quality of life and were not able to form a sufficient environment for the residents. In addition, co-operatives could not supply housing for high-income groups, as they were established for low- and middle-income groups. Consequently, mass-housing production was first

suggested in 1967 and legalised in the 1980s with the acts and incentives (Tekeli, 2008). Thereupon-fast housing production started in large urban lands, which were located at the nodes of transit roads, and close to ring roads. These settlements were built at the periphery of cities due to the cheap land costs. Furthermore there was not enough construction area within city centres for building large-scale projects (Gorgulu, 2002 in Gorgulu and Kaymaz-Koca, 2006).

According to Bilgin this increase in the housing sector was caused by the changes in the use of new energy resources as well as the emergence of new sectors such as the electronics and communication sector (Bilgin in Gorgulu and Kaymaz-Koca, 2006). With the integration of the government departments ('Housing Credit Bank' and TOKI 'Housing Development Administration of Turkey') into the construction sector, public territories were used for building mass housing units (Guner, 2006). Since Turkey changed its political economy system into a neo-liberal system in the 1980s, foreign and private sectors were also involved in the housing production (Tekeli, 2008). After that, with all these new sectors, real estate properties became important tools of capital. Furthermore since 2003 with the mortgage system (Demirhan and Lale, 2006) there has been acceleration in the production and sale of real estate properties.

The purpose of mass housing is changing. As Uzun and Dogrusoy (2007) emphasise, in the current age, social housing under the slogan of supplying dwelling for low and middle income is in fact beginning to consider the high income group as a target and becoming an investment device for consumption. Apart from a few examples, however, mass housing for high-income groups cannot form liveable environments either. Both social and mass housing units have similarities in terms of construction and design quality, in that they are monotonous, repetitive, and high densed. In the end these issues affect quality of life negatively. Mass housing units for middle and high-income groups are only different from social housing due to the social facilities they offer (Uzun and Dogrusoy 2007).

In addition to immigration into cites and the transformation in the service sector, there were other factors that triggered the construction of mass housing projects, which are explained below. There was an increase in urban rent, which was also related with the wrong urban planning decisions; as well as the development strategies regarding the peripheries. Those outcomes resulted in evolving suburban settlements for middle- and high-income groups at the fringe of the cities (Sayar and Suer, 2007; Uzun and Dogrusoy, 2007). For instance, in the development plan of Izmir in 1973, new development areas were defined as north-south axis and east-west axis along the bay. Hence 'Housing Credit Bank' built mass housing units in these areas (Guner, 2006). Mavişehir is one of the results of this planning decision. Another reason for why this type of housing emerged was that, because of the liberal economy, there emerged a new group of professionals with high wages. Those middle- and high-income group elites demanded to live in an environment with similar type of social groups in isolated areas far from city centres. There were three methods for building these housing estates. Firstly developers tried to build these dwelling units on vacant urban lands in cities, or by rearranging the land use of the site and converting it into residential use like hotel-dwelling type residences with mixed uses. Secondly, suburban areas were formed by construction of luxury houses with gardens or housing groups at the edge of the city. The third method was building high-rise mass housing units through reclamation of 'Gecekondu' slum areas (Gorgulu and Kaymaz-Koca, 2006; Sayar and Suer, 2007). When Mavişehir was built in the 1990s there was a squatter area next to its boundary, which is called the Istasyonalti Neighbourhood. Over time, however, this neighbourhood was reclaimed for the new developments and its residents were relocated into another neighbourhood. Therefore these projects can be the reason for a gentrification problem, which is another issue.

This type of concept project is more like an enterprise with its multi functions such as swimming pool, restaurants, shopping mall, and sports centres in addition to dwellings. Hence housing is becoming a commodity for the real estate market

and an object of consumption. Production has to be fast in order to refund itself for the upcoming projects. For that reason, it has to be self-financed. Residents who got bored of city life and traffic are encouraged to live in those environments through imagery and promotion in the media. So this life style is becoming fashionable. As Harvey argues, spaces are becoming tools of consumption. Segregation of space and temporariness of space has created a society, which uses and disposes of things, as soon as they are out of date. Post-modern life triggered the competition between spaces in order to be different from the other. Structure of daily life changed and new life styles, images, idealised environments, prestige and safety issue in a homogenised milieu were presented for the individual (Harvey, 1997 in Gorgulu and Kaymaz-Koca, 2006). This resulted in the increase of gated communities within the city and at the edge of cities.

> We observed that almost all of the recently built housing estates around us are surrounded by fences. And we have seen that this makes that place safer. If the settlement is enclosed with fences there will be a decrease in the number of security guards to ensure the safety. At the moment there are 46 security guards but if it is gated this number will be lower so the first reason was economical. The second reason was our wish for the residents to feel safer within the site. In other words we thought that people, while strolling around the site, will be able to greet each other comfortably and socialise further as there will not be anyone from outside. For those two reasons we wanted to encircle the housing area but we could not succeed (Mavisehir I Management).

> Pamukkale Blocks can be encircled at any time. However it is more difficult to fence Selçuk Blocks. The area where the canal is located belongs to the Municipality. Unless the Municipality gives us this part, Pamukkale blocks will be enclosed within itself; thus the site will be divided into two physically. This will create an unpleasant view, which we don't want. That's why this is cancelled. If the Municipality passes on the ownership of this canal area to us it will be easier, as well as with their permission indeed (Mavisehir I Management).

As Guner (2006) asserts the new challenge now is how to cope with the shrinking cities. Before there was a tendency to move out from the city centre into suburbia and now there is another trend of coming back with residences into the city centre or close by. In addition, all the empty bits of the urban fabric are being filled with housing units as infill developments (Guner, 2006). Therefore Mavişehir, which was on the edge of the city, is becoming slightly centralised. Since the construction of Mavişehir I, II, and III, other housing estates have been

constructed within the last two to three years. Around Mavişehir, many gated communities have been developed such as Soyak Mavişehir, Mavişehir Albayrak, Mavişehir Modern, Elit Residence and others. Thus the Mavişehir mass housing project influenced its environment and encouraged the transformation within the region. To this point, a brief history of mass housing has been presented together with different factors and dynamics shaping the urban form of Izmir. Now Mavişehir Settlement can be explored in detail.

In the 1970s the 'Housing Credit Bank' started to build mass housing projects in Karsiyaka-Bostanli and Atakent as well as in Gaziemir (Akayoglu, 2008; Aydogan, 2005; Sayar and Suer, 2007). However by the 1980s the Housing Credit Bank's aim to build social housing transformed to housing projects targeting middle- and high-income groups. The Bank's housing policy changed and mass housing projects were seen as a commercial input. In 1992 the Bank began to build Mavişehir Housing Units and looked for functional and spatial variety compared to previous examples (Sayar and Suer, 2007).

There are, however, issues surrounding the choice of location of high-rise buildings in cities: these include 'distance to historical sites', 'master plan decisions', 'city silhouette', 'geological studies', 'population densities', 'construction densities', 'architectural structures', and 'layout of the city' (Sarikaya, 1997 in Aydogan, 2005: 63). Aydogan (2005) adds vulnerable natural environments, waterfront habitat and ecologically significant areas such as bird sites to the list, because Mavişehir is close to an important bird site. Traffic analysis and morphologic structure can be also included, as it is more comprehensive from the layout and the silhouette. The location of Mavişehir can be discussed due to the location criteria of high-rise buildings within the city.



Figure 8.2 Air view of Mavisehir 2005
Source: http://www.skyscrapercity.com/showthread.php?t=220251

8.2 MORPHOLOGICAL ANALYSIS OF MAVIŞEHIR NEIGHBOURHOOD

Mavişehir, with a population of 12,934 (TUIK, 2008), is located at the north side of Izmir bay; it is basically enclosed by Atakent housing units to the east, Gediz Plain and IBA (Important Bird Sanctuary) to the west, Izmir ring road and Izmir-Manisa-Ankara railway triage areas to the north, and Izmir bay to the south. There are mainly three regions in Mavişehir, which were constructed in three stages. The first one, Mavişehir I., which is the case study area, is formed of rectangular blocks aligned perpendicular to the seashore in order not to block the sea view and to allow for wind flow. In between those blocks there are two-storey villas. In second-stage Mavişehir II., blocks were designed differently with a dynamic facade including oriels and setback arrangements. Despite the flats there are also duplex residential units within the blocks. Mavişehir III, as the last stage, is located by the sea and it has 122 villas - both duplex and triplex - offering different floor areas (Aydogan, 2005; Sayar and Suer, 2007). Consequently in this settlement there are various types of housing units to cover different types of

households from studio flats for young professionals to villas and multi-family housing units for bigger families. Our case area just concerns Mavişehir I.



Figure 8.3 Location of Mavisehir and 3 Phases of Development

Mavişehir I. has two urban blocks separated by the canal; 12 apartment blocks at the western part, which are called Pamukkale and eight apartment blocks at the eastern part, which are called Selcuk. In total there are 20 blocks and 88 villas located in between the blocks. Each apartment block consists of two units with two entrances one at the front and one at the back. Thus there are four entrances in total. Floor plans are identical as each floor has four flats. Apartment blocks are approximately 16-19 storeys high. Floor areas of units are as follows; one-room units are approximately 70 m², two-room units are approximately 115 m², three-room units are approximately. 152 m², and four-room units are approximately 176 m² (Aydogan, 2005).

Since Mavişehir is located by the sea and adjacent to the Gediz Delta wetland, the geological analysis is very important. Moreover, Izmir is in a first-degree earthquake zone. For this reason, regarding the foundations, 560 piles with a length of 30-35m and with a radius of 0.65m were used in all blocks of Mavişehir I (Aydogan, 2005). However it can be seen in the interviews and questionnaires below, residents are not very comfortable about the earthquake issue. On the other hand they feel safer with the building structure. As a housing production type, the tunnel form was used in Mavişehir. This system has various advantages as it is safer for workers, construction is of shorter duration than for conventional types, it has better surface quality and strength, and is easily self-financed, so it can be concluded that it is more profitable. Nevertheless it creates standardisation and repetition problems in the space arrangement, the layout, and the facade organisation (Sayar and Suer, 2007).

> The things that I like are more than the things I don't like. Buildings are robust but on the other hand we have geological issues. We experienced a couple of effective earthquakes; there was not any problem till now. The only negative aspect of living in here is the concern of the bad ground and the anxiety of what can be done in a possible earthquake. I am on the fifth floor; however residents on the fifteenth floor are more worried. Especially all the people living by the seashore in Karsiyaka are having this concern; it is also a destiny - you never know what and where it will happen (Resident).

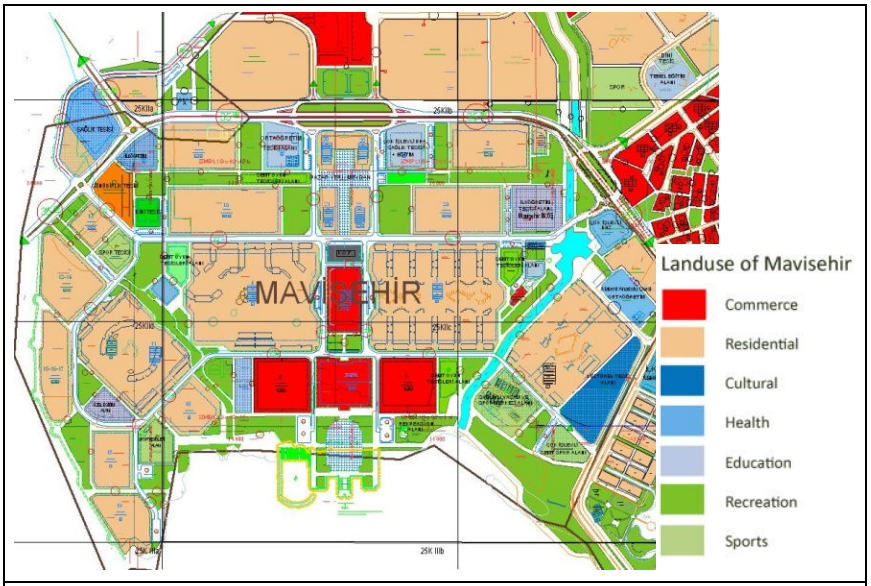


Figure 8.4 Mavişehir Landuse
Source: Karsiyaka Municipality

Previously to date, four studies have been conducted on Mavişehir. Ozcelik (1998) looks at the 'qualities of public housing and their environment'. Questionnaires initiated by Turkey's Housing Credit Bank (1994) examines the criteria determining whether the residents felt satisfied or not by their choices in the housings units of the Bank (Aydogan, 2005: 116). Two other recent studies were done by Aydogan (2005), and Sayar and Suer (2007). Aydogan discusses the levels of resident satisfaction in high-rise buildings. On the other hand Sayar and Suer (2007) explore housing units of Mavişehir and its context to the nearby two close neighbourhoods. One is the squatter settlement and the other is apartment blocks. Researchers conducted questionnaires in those areas in order to find out the social and spatial relations of each neighbourhood. In the questionnaire analysis part the outcomes of the four studies are compared and discussed.

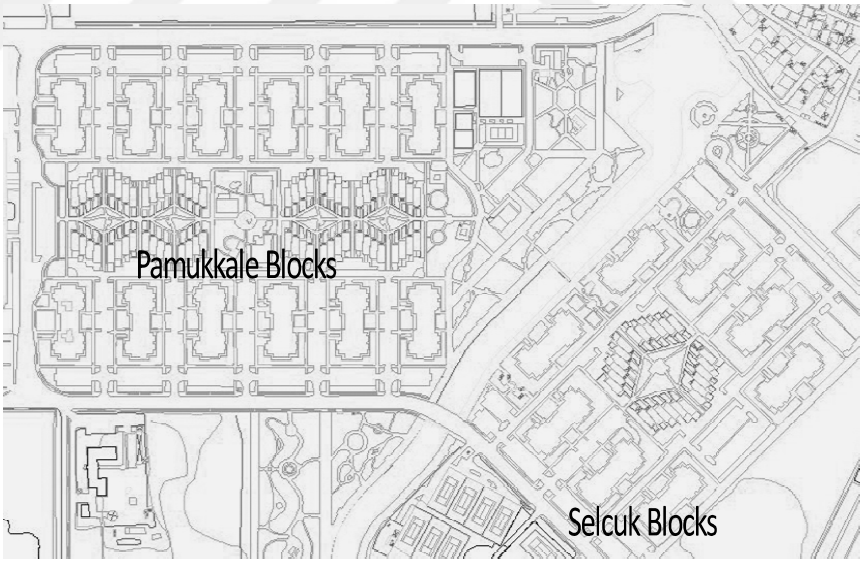


Figure 8.5 Mavişehir I Layout
Source: Karsiyaka Municipality

Space Syntax Analysis and Observations

As explained in background of the historical development of Mavisehir, the third case area is located next to the industrial zone and wetland to the west. In the global integration analysis it is clear that Mavisehir district is in the blue range, the segregated part of the city compared to the city centre, Konak-Alsancak. It is connected to Karsiyaka waterfront by Hasan Ali Yucel Boulevard to the south and to the ring road of Izmir with Cahar Dudayev Boulevard to the north. In addition, in the choice analysis, it is clear that all the main routes, which connect with the ring road and the waterfront road are the most chosen routes in terms of movement. Choice RN is most likely to be the representation of Google map as identifying the main routes in terms of vehicular movement.



Figure 8.6 Mavisehir Global Integration RN

Within the last decade with the construction and extension of the roads, Mavişehir is becoming more connected with its surroundings. Particularly after the construction of the pier, regarding the connection with the south part of the city, there will be better transportation links.

> There are many projects on the agenda of the Municipality; there will be a port, and a marina for 2000 yachts in the place of the fishermen's harbour. In front of Ege Park, there will be a commercial centre. At the east part, there will be an Opera House. This place will be very beautiful and liveable. It is already a liveable place; people just don't know how to appreciate the things that they've got. You understand the value when you lose it (Management).

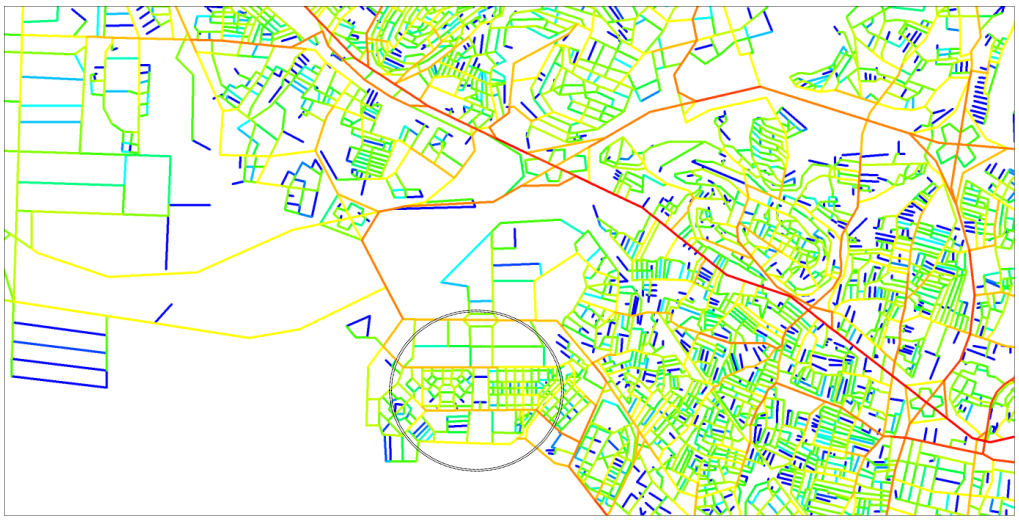


Figure 8.7 Mavisehir Global Choice RN

As figures 8.8 and 8.9 below show neither the synergy nor the intelligibility of Mavişehir I is well structured enough between part and whole relationship of the city. Intelligibility of the system is slightly higher than its synergy. These diagrams reveal how well connected the part is with the whole in terms of whether the system has high connection and high global accessibility or not. It will be easy to have an overview picture of the global pattern of the city from the local structure if the intelligibility and synergy are high. These concepts are already explained in earlier chapters.

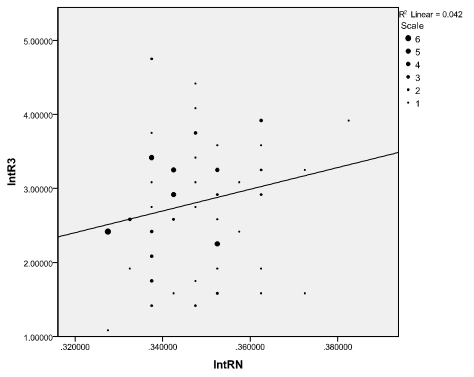


Figure 8.8 Synergy R^2 0.042 Mavisehir

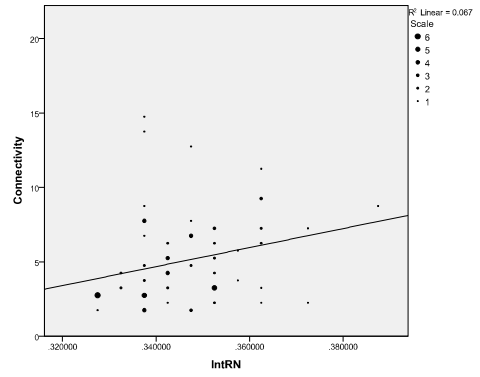


Figure 8.9 Intelligibility R^2 0.067

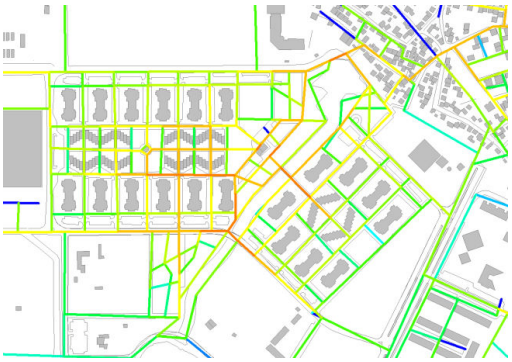


Figure 8.10 Mavisehir I. Choice R400

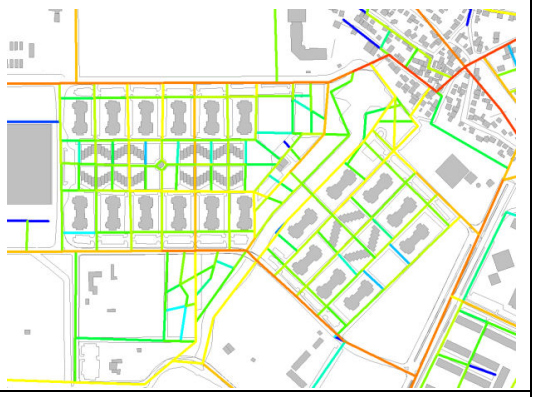


Figure 8.11 Mavisehir I. Choice R3200

In choice angular analysis within a five minute walk in R400, inner streets of the housing group are the more chosen routes in terms of between-ness. These routes are particularly the bridge over the canal, and some of the street segments in between the blocks and villas. On the bigger scale (R3200) outer roads are becoming the preferable routes in terms of vehicle traffic and the connections within their context. It may be concluded that modern housing patterns are introverted rather than extroverted as the main chosen routes are not passing through the housing area but surrounding them. As Hanson (2000) mentions, modern housing estates have “inward facing morphology”. They are bounded and enclosed so that strangers are frozen out. Buildings face their backs to streets; hence streets are unconstituted or their constitutedness rate is very low. There are few doors facing the street; therefore people are hanging around rather than bumping into each other (see the figure 8.37 on page 284).

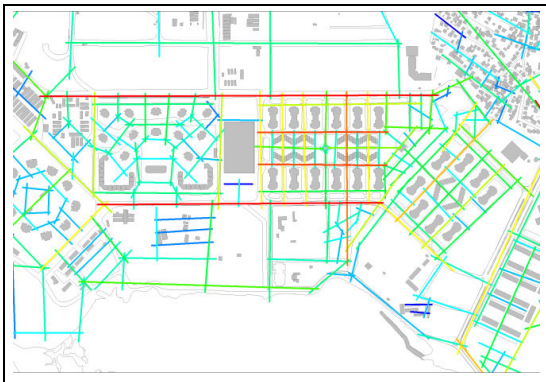


Figure 8.12 Mavisehir Integration R3

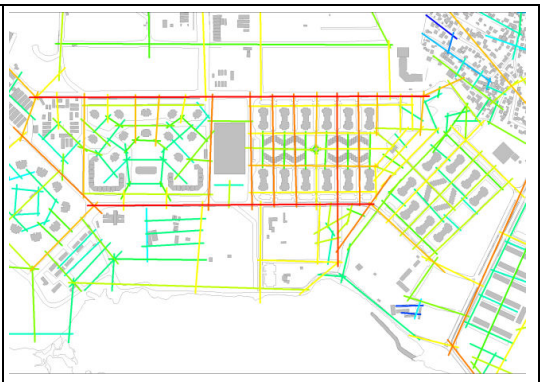


Figure 8.13 Mavisehir Integration R5

In the local integration analysis of Mavisehir, within three and five steps analysis, the most accessible routes are coloured in red. It is also clear where the Mavisehir I settlements are compared with the Mavisehir II settlements, based on the figure 8.12 and 8.13 above. Layout of the former is more accessible than the layout of the latter. Villas located in between the apartment blocks in Mavisehir I created pedestrian routes and a smaller grain in the centre. This case study also supports what MacDonald (2005) found in Toronto; that large-scale developments can be improved and become more lively through injecting small-scale housing units.

Modelling modern housing units with space syntax is a difficult task. In space syntax as the line passing through the street represents the void in-between the buildings, the axial model of open spaces has to be simple and consistent as a result. For instance, in the centre of villas in Mavisehir I, there is a pool. If the axial line is drawn as one continuous line passing through the pool, accessibility degree of these streets is changing, and the two streets crossing the park in the middle are becoming more integrated in the analysis. Drawing the model is open to misinterpretation and different researchers might draw the plan in different ways (Çil, 2006).



Figure 8.14 Mavisehir I Integration R3 Depth Map



Figure 8.15 Mavisehir I Integration R3

The axis, crossing the park and the pool, is the place where some of the benches are located at the intersection points of the routes. Residents of Mavişehir usually rest in the park and they take a break by sitting on those benches particularly when they are coming back from shopping. It is not just the residents

of the housing units who are using this park; it is also open to the public. The management interviewed for this study were asked whether they have any complaints from the residents of the villas, as their terraces are facing this route and various types of people can pass through this axis (see the figure 8.16 below).

> No. Because our security can easily recognise the children coming from slums and control them. They allow them to sit if they sit properly and do not show antisocial behaviour. If not, our security warns them if they behave inappropriately and annoy the residents living in villas. And if they object, our security as a team with our German shepherd interferes in the argument and solves the problem. We don't mind couples sitting here talking, kissing, but if people drink here we don't allow them to. We are against those behaviours (Management).



Villas and terraces by the path



Main axis crossing the park



Main pedestrian axis

Figure 8.16 Snapshots from the Pedestrian Path



Figure 8.17 Mavisehir Connectivity

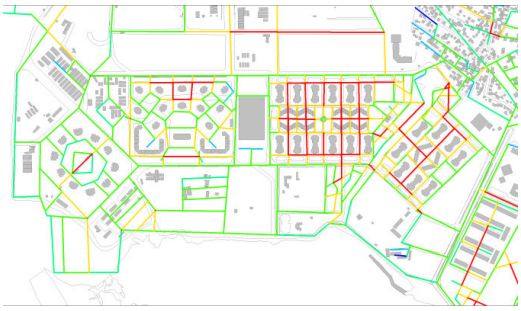


Figure 8.18 Mavisehir Segment Connectivity

In the left figure (8.17) above, it can be seen that Aziz Nesin Boulevard at the north side of Mavişehir and 2040 Street at the south are the most connected streets. In the figure (8.18) on the right, segment connectivity shows the inner street segments in between the junctions; in this regard Mavişehir I has more connected segments than Mavişehir II. As Hiller and Sahbaz (2005) mention, main streets have high segment connectivity while the dead ends have low segment connectivity (Hiller and Sahbaz, 2005 in Van Nes, 2008: 81). In the table 8.1 below

mean values for space syntax measures of Mavişehir I and Mavişehir II can be compared. Although there is not much difference in terms of global measure RN, and control, there is dissimilarity in local measurements such as R3, control, and connectivity.

Table 8.1 SSX Measures of the Street Network in Mavisehir

Settlement	Mean Control	Mean R3	Mean RN	Mean Connectivity
Mavisehir I.	0.0014158	2.7822440	0.34592297	5.0600
Mavisehir II.	0.0126000	2.3484716	0.33422110	3.9886



Figure 8.19 VGA Analysis of Mavisehir I

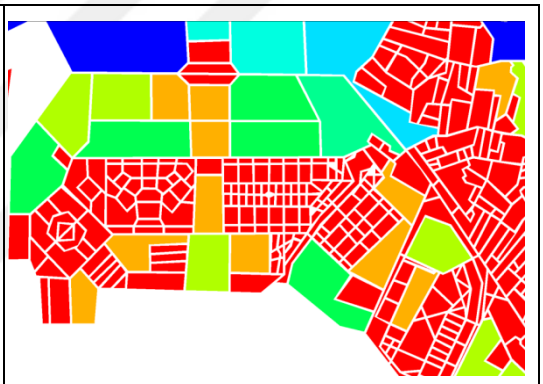


Figure 8.20 Blocksize of Mavisehir

In the VGA Analysis the most visible spaces are along the canal and some of the main routes in the yellowish range in between the blocks and villas (see figure 8.19 above). Although it is accessible and visibility is high there are not many people strolling around. In addition those street segments along the canal are not highlighted in local integration analysis. However, through the rearrangement of this area, people might use this space frequently and spend more time together.

> We had a common project with the Municipality related with the canal and the swimming pool within the canal. However this canal is connected from the river upwards down to the sea, so that the project cannot be implemented now. There was supposed to be a swimming pool, which was planned to be constructed within the canal with timber terraces, bars, restaurants, sun bathing terraces, and social spaces. Hence it is impossible now. Nevertheless the Municipality has different projects for the future. They are considering building a tea garden by the canal (Mavişehir I Management).

The only places that residents can go and socialise are the two parks in the neighbourhood, and the seating areas that are recessed at the intersection of the routes in between villas (see the figure 8.23 below). In Blocksize analysis, bigger grains in orange and green indicate the newly developed areas or retails such as the Ege Park shopping mall, Sports International, and the construction site of the Opera House (see figure 8.20 above).

> In 1995 there was nothing here, neither Carrefour nor the Ege Park Shopping Mall. In the long run, shopping centres were opened and roads expanded. The seashore was unpleasant and they developed the waterfront. They built pedestrian routes for leisure walking up to the industrial site and the zoo. The Municipality has cafés and restaurants at the waterfront and now there are projects of private sector. We are looking forward to them. We have enough green space but it was better in previous years, like two years ago. When it rains too much, seawater can flood and various plants along the seashore are affected. Previously we were also having a flood problem with the canal. Consequently rain and harsh wind destroy the plants. A water pump system is built in order to pour the water into the sea. Besides, a barrier is built to prevent the waves hitting the seashore. Unfortunately two of our residents stop the pump system working and the other complained because the barrier is blocking the sea view and his use of space. After the barrier is knocked down, this area will be destroyed again. TOKI sold some of the lands here, this area will turn into a construction site and I am worried about this (Resident).

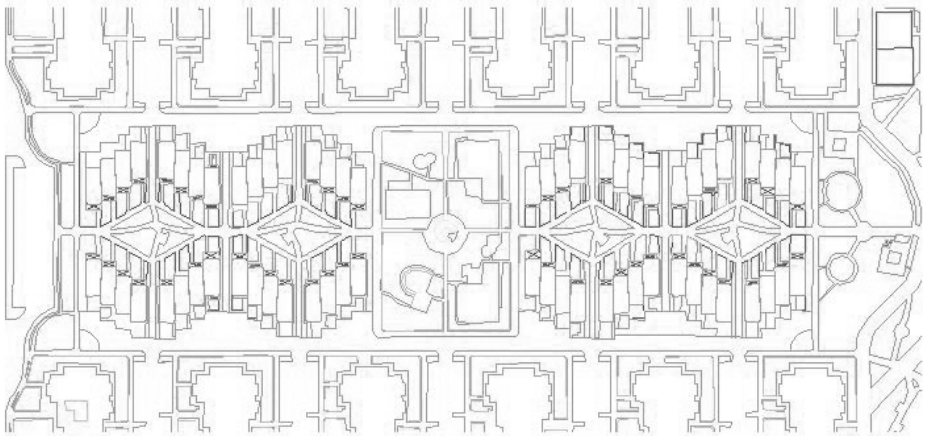


Figure 8.21 Main Pedestrian Path in-between the Villas

> We used to have a choir but not anymore. I am at the same time the chairman of Mavişehir Neighbourhood Association (Koruma ve Guzellestirme Dernegi, MAVIDER). However we cannot preserve and embellish our neighbourhood due to financial problems. Although the yearly fee of our association is 10 TL we are having difficulties to collect even this amount of money from our members. It is very difficult. There was a chorus of Mavişehir, and then Mavişehir II formed another chorus. Instead of collaborating together we are separated. Then we had to close the chorus, the chorus was organising the dinner and other activities (Management).

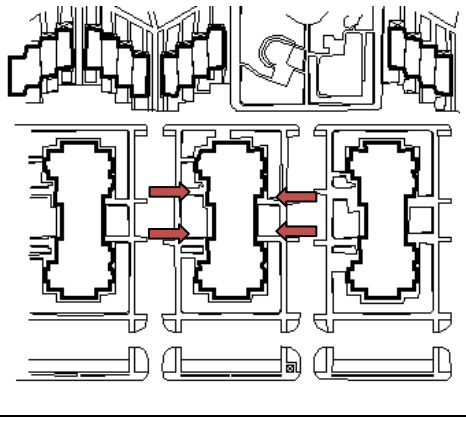


Figure 8.22 Mavisehir Blocks Entrances

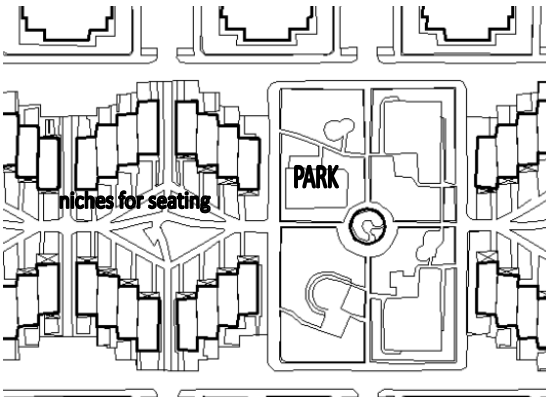


Figure 8.23 Mavisehir Villas and Parks

In the Sunday morning snapshots of Mavişehir, 101 people were observed. There were more individual adults moving around rather than groups. The main axis crossing the park is not busy yet in terms of pedestrian movement. As can be seen in table 8.2 below there are more adults than children, teenagers and elderly. Walking is the main activity compared to sitting, standing, and others. Other activities are getting in the car or getting out of the car, watering the plants, gardening, construction works, coming from Ege Park Shopping Centre, dog walking, and children playing in the park. However, on Sunday morning there are not many children and parents in the park. Residents only sit along the terraces of villas by the main pedestrian path. Group numbers are nearly half the number of individuals (see table 8.4 below). Moreover there are not many people along the canal.

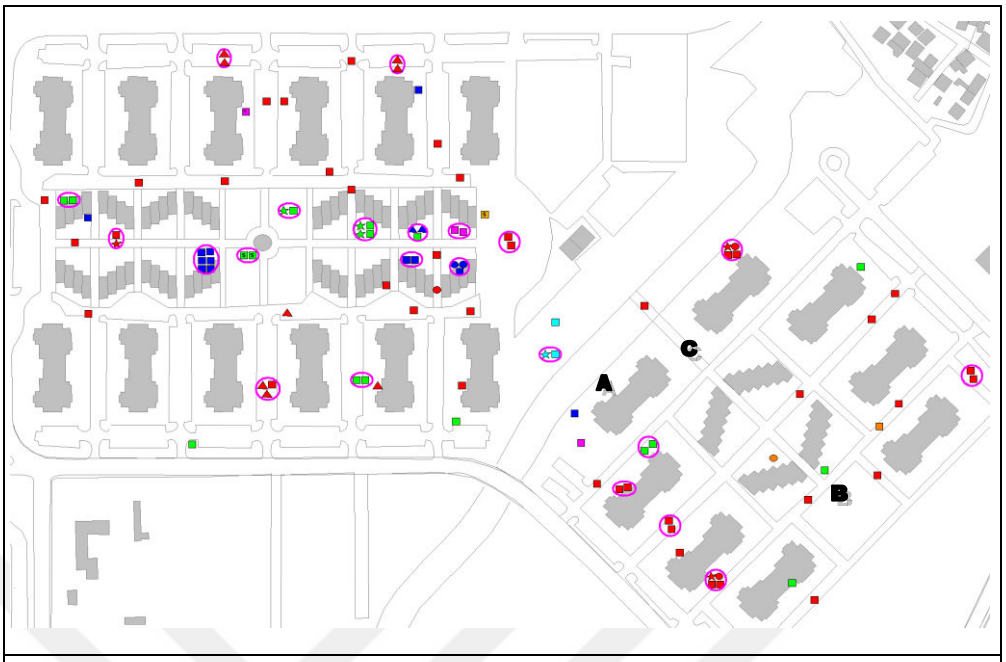


Figure 8.24 Snapshots of Mavisehir I. Sunday 10-12 pm



A. Canal and bridge view



B. Villas Selçuk



C. Park in Selçuk

Figure 8.25 Daily Life of Mavisehir Snapshots from A, B, C

Table 8.2 Snapshots Mavisehir Sunday Activities

	Sitting	Standing	Walking	Talking	Other	Balc/Ter.	Entrance
Morning 10-12 pm	16	21	57	55	26	15	18
Midday 14-16 pm	18	11	64	58	30	4	18
Evening 18-20 pm	30	24	98	121	49	8	16

Table 8.3 Snapshots Mavisehir Sunday Observed People

	Children	Teenage F	Teenage M	Adult F	Adult M	Elderly F	Elderly M
Morning 10-12 pm	7	3	3	31	47	5	5
Midday 14-16 pm	3	1	14	39	40	4	4
Evening 18-20 pm	4	17	34	66	45	6	4

Table 8.4 Snapshots Mavisehir Sunday Group vs. Individual

	Group	Individual	Total
Morning 10-12 pm	20	47	67
Midday 14-16 pm	46	24	70
Evening 18-20 pm	44	60	104

In the midday observations on Sunday, there are more people moving around in groups than in the morning. People are entering or leaving the entrance of their residential block. The number of people observed in the morning and midday are relatively the same; nevertheless there is a swop in the number of groups and individuals. There are more groups than individuals at midday (see table 8.4 above), and the movement pattern is similar to the morning observations. There are still not many children playing in the playgrounds of Selçuk and Pamukkale, and they are usually companied by adults. There were more male adults in the morning, but by midday female and male adult numbers are equalised. There is an increase in the number of male teenagers.



D. Villas in Pamukkale



E. Block Entrance



F. Pamukkale Blocks

Figure 8.26 Daily Life of Mavisehir Snapshots from D, E, F

In the figure 8.26 above pictures show views from the terraces of villas in Pamukkale and the entrances of blocks. These entrances are reconstructed in

order to add ramps as it is a building regulation requirement. Hence some blocks have ramps while others do not. Each block is responsible for its ramp construction.

> Block management considers this issue when they rearrange the block entrance. Some of the blocks built the ramps. Rather than the ramps, there are lifts constructed for disabled people. Instead of 8-10 stairs the entrance should be on the same level with the street, and then there would not be any inconvenience for the residents. We mention and remind the block management about these issues; ramp and lift for disabled. They either can implement this or they cannot due to their finances (Management).

> There are things that we have to implement according to the development plan but we cannot do so. They did not build ramps. Abroad, ground floors are definitely designed with ramps, or the first and second floors are reserved for disabled residents. Here authorities, who issued the building permit, did not examine those issues. For instance, as you know in some buildings there are power distribution units at the entrance. These units are likely to cover space till the fifth floor. I tried many times to take these power units out of the buildings but could not manage it. They probably understood their mistake in Mavişehir I and changed and took the power units out of the building in Mavişehir II. Or there has to be a cargo lift. We had difficulty in removing a resident who had died in the building. When people first move in here they don't know anyone so we need to help them. Especially in their sad and difficult periods we need to support them. Unfortunately these issues were not taken into account (Resident).

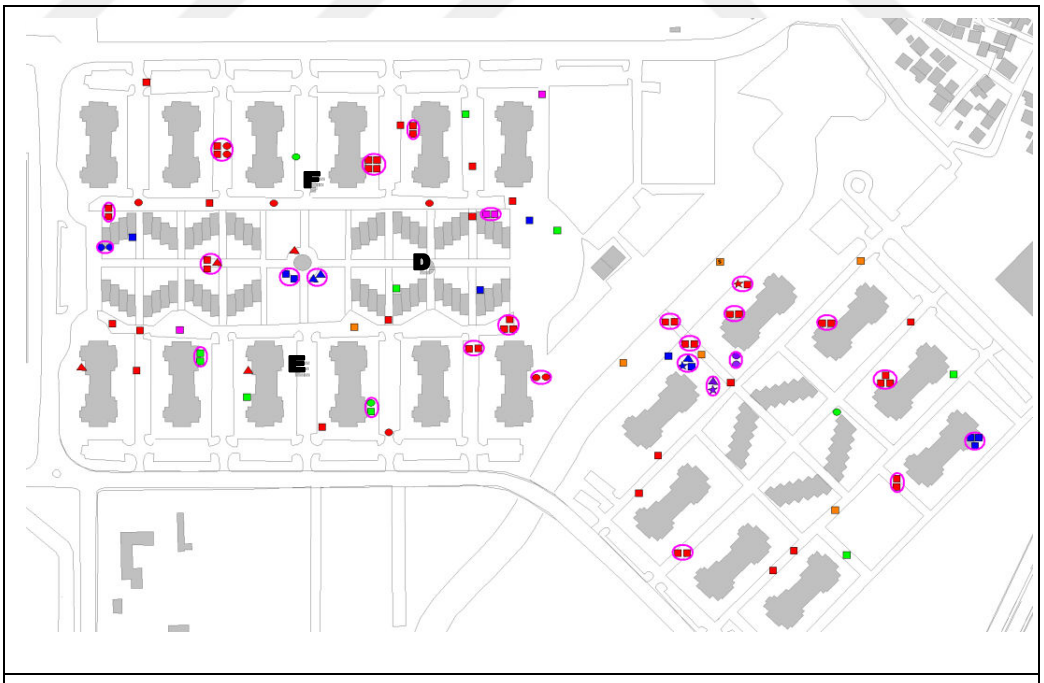


Figure 8.27 Snapshots of Mavisehir I. Sunday 14-16 pm

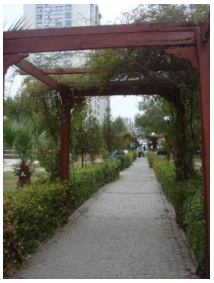
In Sunday evening observations, pedestrian movement increases especially on the main axis in between villas, as well as observed people in number rises. There are more individuals than groups but still there are quite a lot of people moving

within groups. We can see that there are more people around the parks both in Selçuk (east) and Pamukkale (west). The main pedestrian axis is becoming busier compared to morning and midday. There are more people along the canal but not at the further northern point. There is an increase in the number of female adults, and male and female teenage numbers. In the evening observations, the number of female adults outnumbers the number of male adults (see table 8.3 above). Walking is the main activity, followed by standing, and sitting.

> The greatest deficiency in here is that we don't have any social clubs. We examined that in the newly developed housing estates there are cafes and restaurants next to sunbathing terraces and pools. These facilities became a reason for people to gather around at certain periods. Thus these spaces exist as forming socialising places for residents. At the moment we don't have any such kind of places in our site. We just have a recreational pool in Pamukkale; nevertheless it is a place where just elderly people go. Besides it is the resting point of residents coming from Migros Gross market. In fact we are a bit gloomy that we don't have anywhere to socialise, such as a lokal (clubhouse), like a bar and cafe, where we can meet and socialise more. At least people could play backgammon, drink coffee, tea, beer, but they did not plan such a place in the project. From now on if we have to plan to have this, it is dependent on the costs. With the fees we collect from residents we try to supply the requirements of our blocks. Together with the heating, water, and electricity, our blocks are already 15 years old and need renovation and maintenance. Therefore we have to use the fees for the blocks. Other than this, both at New Year and for national celebrations we gather around the green area of the municipality where we formed a kind of theatre stage. Thereupon we organise some firework events and we celebrate and enjoy together in those days. We could not achieve a high quantity of people, just 300-500 not very crowded (Mavişehir I Management).



G. Blocks in Pamukkale



H. Main Path



I. Pamukkale Entrance of Villas

Figure 8.28 Daily Life of Mavisehir Snapshots from G, H, I

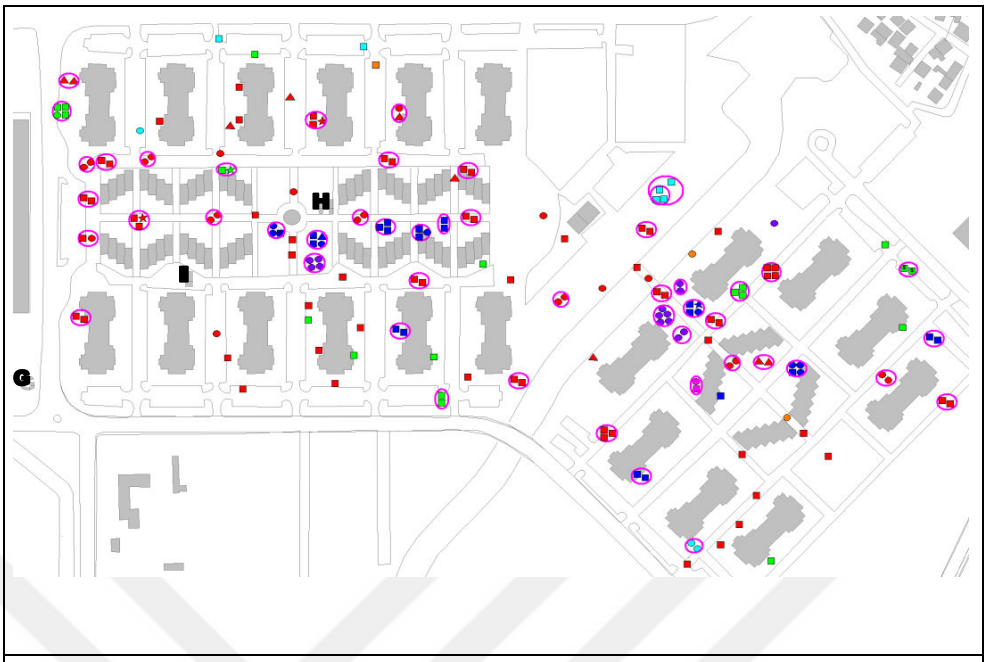
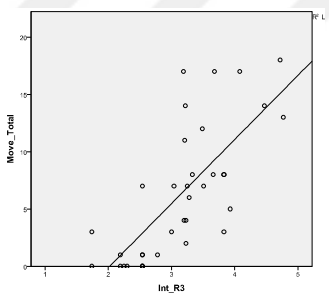
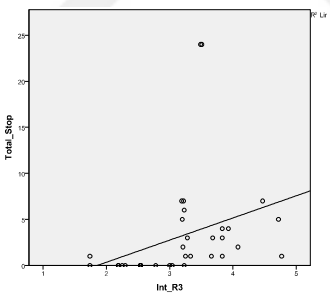
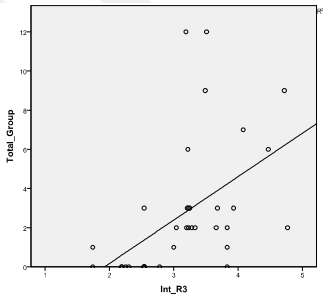
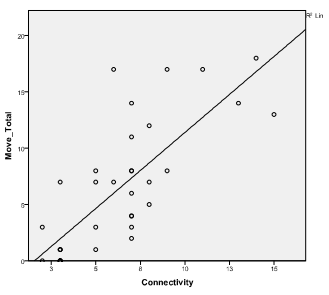
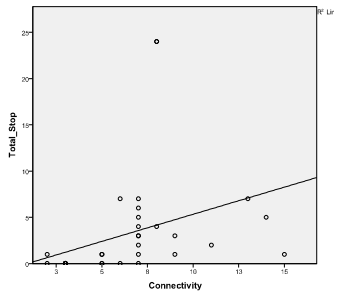
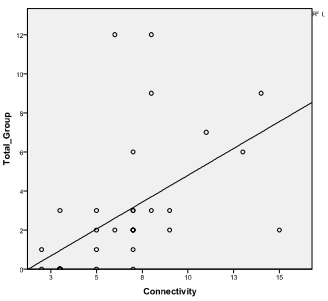


Figure 8.29 Snapshots of Mavisehir I. Sunday 18-20 pm

Table 8.5 Correlations between Activities and SSX Measures

		
R^2=.546 r=.739 p< .0001 Move&Int_R3	R^2=.106 r=.326 p=.053 Stationary&Int_R3	R^2=.254 r=.504 p=.002 Groups&Int_R3
		
R^2=.597 r=.772 p< .0001 Move & Connectivity	R^2=.118 r=.344 p=.040 Stationary & Connectivity	R^2=.294 r=.542 p=.001 Group & Connectivity

In the table 8.5 above, the relationship can be seen when total movement numbers of each street segment and stationary activities (standing and sitting), as well as groups, are correlated with space syntax local measures. It has to be mentioned that these numbers are just the accumulation of each two hours of three periods (morning, midday, and evening) on Sunday. Hence it might not be generalised with the overall activity pattern. From the graphics above it is clear that connectivity and integration is more related with movement pattern than group or interaction and sitting-standing activities. As mentioned in previous studies (e.g. Hiller et al., 1993 and Major et al., 1997) there is a strong relation between integration and pedestrian flow rates. Major et al. (1997) conducted a study in Marple Square Housing Estate of Nottingham and found a relatively good correlation with an r= 0.583. In Mavişehir I, there is a remarkably strong relation between pedestrian movement and integration R3 with a correlation coefficient of 0.739. It can be predicted that there are close to 54.6% of differences in pedestrian movement in the housing settlement (first image on the top left, table 8.5). Hence, as Major et al. (1997) mention, "integration is consistently the strongest predictor of pedestrian flow rates" (Major et al., 1991, p. 4).

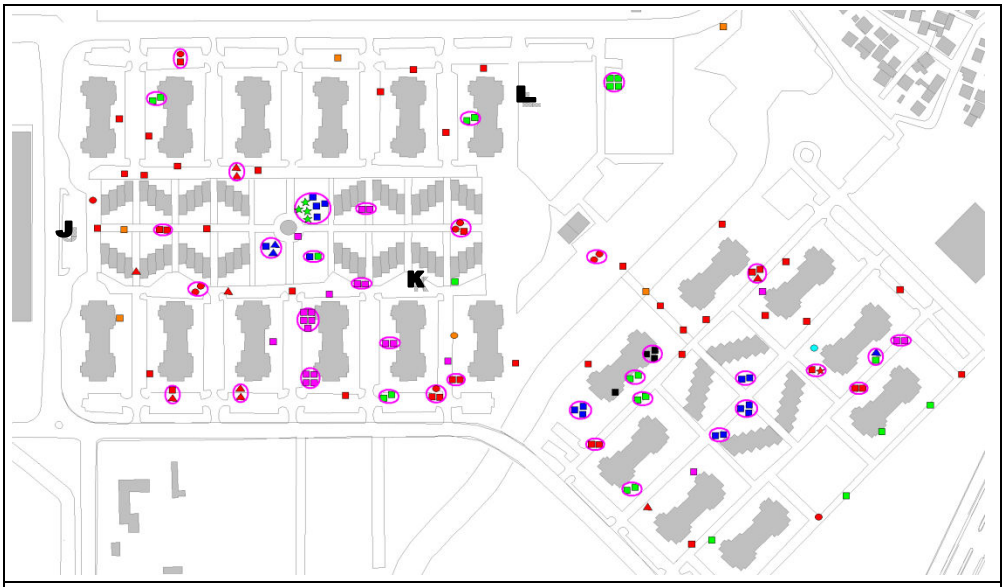


Figure 8.30 Snapshots of Mavisehir I. Weekday 10-12 pm

In the snapshot of the weekday morning, there are more adults than children, teenage and elderly. Walking is the main activity; on the other hand other

activities and standing activities are also pervasive (see table 8.6 below). Sitting activities are located around the park area where there are benches in between the villas in Selçuk. People who cycle are mainly the security guards and concierges who most of the time, are standing around the block. On the ground floor concierges are living and interior extensions can be only seen in front of their flats (see figure 8.31, L below). The pink colour indicates the labourers, whether they are undertaking refurbishment works or gardening, transportation, and maintenance. On the weekday morning there are more labourers than on Sunday morning. The bridge over the canal is busy in terms of moving individuals. In general there is more pedestrian movement in the east-west direction than north-south. It might be because of the Ege Park Shopping Centre, as it is an attractor for pedestrian movement (see figure 8.31, A below). Residents usually have to go to Ege Park even if they only want to buy bread, because there are no small retailers around Mavişehir, only big chain supermarkets. North-south movement is mainly generated by leisure activities as well as by attractors such as the recreational area and sports centre along the sea, the primary school to the north, and the car parking at the north and south parts.



J. Ege Park Shopping Centre



K. Street between villas and blocks



L. In-between Space of Ground Floor (Concierge's Flat)

Figure 8.31 Daily Life of Mavisehir Snapshots from J, K, L

Table 8.6 Snapshots Mavisehir Weekday Activities

	Sitting	Standing	Walking	Talking	Other	Balc/Terr.	Entrance
Morning 10-12 pm	27	43	63	86	67	4	2
Midday 14-16 pm	38	37	105	143	82	0	8
Evening 18-20 pm	9	23	68	68	41	2	11

Table 8.7 Snapshots Mavisehir Weekday Observed People

	Children	Teenage F	Teenage M	Adult F	Adult M	Elderly F	Elderly M
Morning 10-12 pm	5	4	8	51	64	7	6
Midday 14-16 pm	13	26	28	49	62	8	9
Evening 18-20 pm	2	4	11	39	42	3	3

Table 8.8 Snapshots Mavisehir Weekday Group vs. Individual

	Group	Individual	Total
Morning 10-12 pm	27	63	90
Midday 14-16 pm	32	65	97
Evening 18-20 pm	22	51	73

The pedestrian path starts from the east (Selçuk Blocks) and extends to the west (Pamukkale Blocks) by cutting between the villas. After the construction of the Opera House, this path will connect Opera House and Ege Park; moreover as it can be also seen in the earlier space syntax analysis (figure 8.15 above page 268), this route is not continuous and is broken by the Telekom Building in the middle.



M. Pedestrian path



N. Peds. Path



O. Telekom Building

Figure 8.32 Daily Life of Mavisehir Snapshots from M, N, O

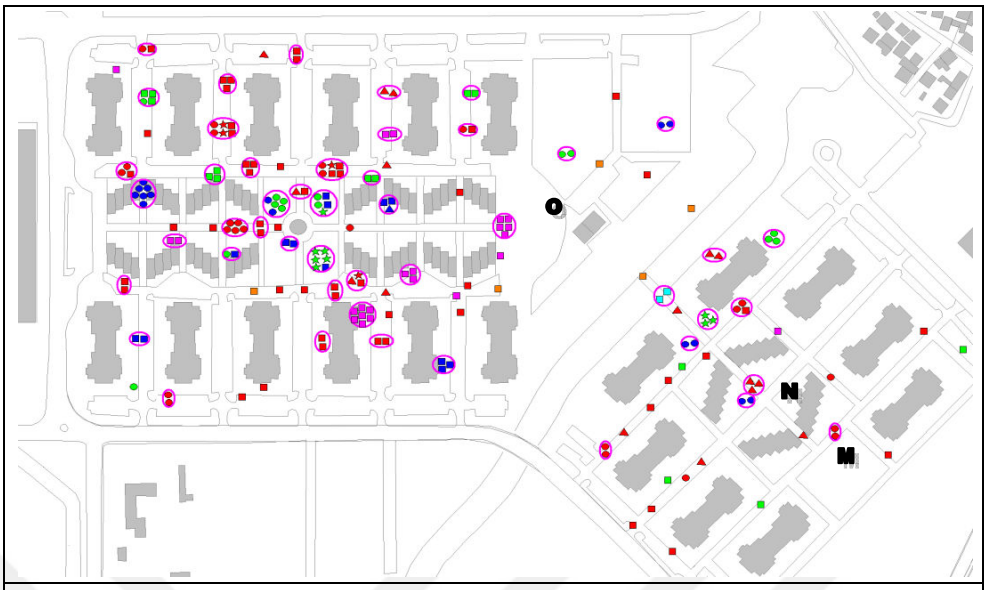


Figure 8.33 Snapshots of Mavisehir I. Weekday 14-16 pm

In the weekday midday observations, except for adults there are more children, teenagers and slightly more elderly than in the morning. There are more people walking compared to morning and there is an increase in the number of groups, but they are still less than individuals. Both playgrounds are occupied by teenagers and children whom accompanied by adults. Teenager numbers are sharply increased, as the students go to school in the morning and leave around 2pm. There are still a lot of labourers within the neighbourhood. The Pamukkale blocks are busier than the Selçuk area.

In the evening snapshots of the weekday (see figure 8.34 below), there are fewer groups than in the morning and at midday. In addition there is also a decrease in the number of both categories; however this is especially noticeable in the numbers of teenagers and children. The main pedestrian path is almost empty compared to morning and midday. Movement is more around the parking lot to the south as people are probably coming from work. Moreover, both parks are nearly empty. Movement is mostly at the edges rather than in the inner parts.

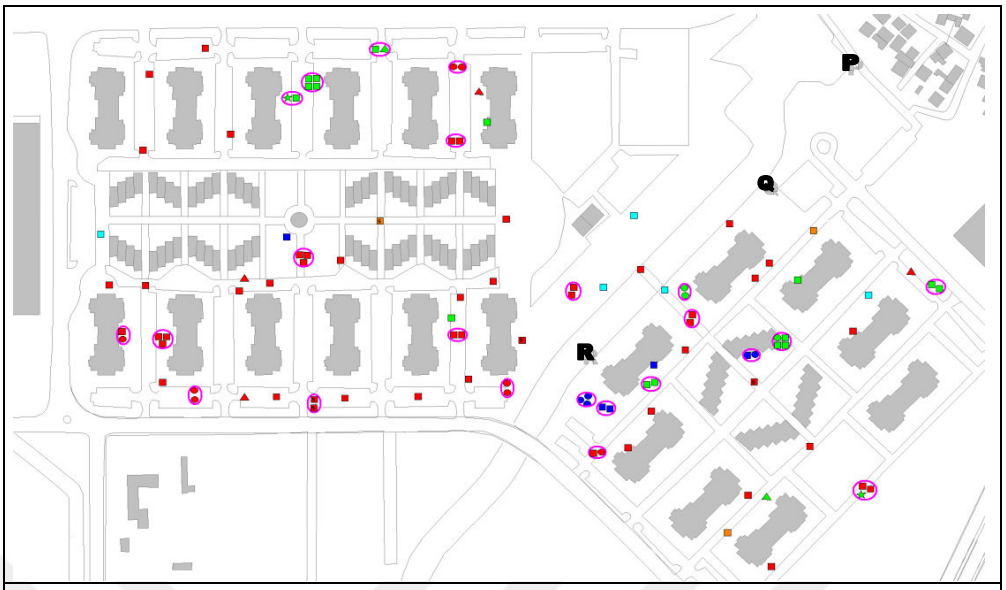


Figure 8.34 Snapshots of Mavisehir I. Weekday 18-20 pm



P. View over the Canal



Q. Bridge and Canal



R. Seating Elements

Figure 8.35 Daily Life of Mavisehir Snapshots from P, Q, R

Table 8.9 Snapshots Mavisehir Weekday and Sunday Activities Total

	Sitting	Standing	Walking	Talking	Other	Balcony	Entrance
Weekday Total	74	103	236	297	190	6	21
Sunday Total	64	56	219	234	105	27	52

Table 8.10 Snapshots Mavisehir Weekday and Sunday Observed People Total

	Children	Teenage F	Teenage M	Adult F	Adult M	Elderly F	Elderly M
Weekday Total	20	34	47	139	168	18	18
Sunday Total	14	21	51	136	132	15	13

Table 8.11 Snapshots Mavisehir Weekday and Sunday Group vs. Individual Total

	Group	Individual	Total
Weekday Total	81	179	260
Sunday Total	110	131	241

When Sunday and weekday results are compared it is clear that more people were observed on the weekday than on Sunday. However, the group number is higher on Sunday than during the weekday, giving more opportunities for predetermined interactions, due to family gatherings. Although on Sunday sitting, standing, and walking are less than on the weekday, more people are observed in front of entrances and balconies mainly terraces on Sunday. Furthermore on Sunday there is an increase in female numbers as well as movement. Percentages of age groups are almost the same (see table 8.12 below).

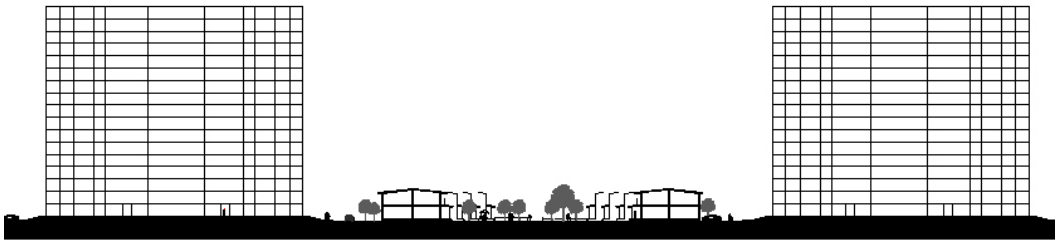


Figure 8.36 Section from Pamukkale Blocks and Villas

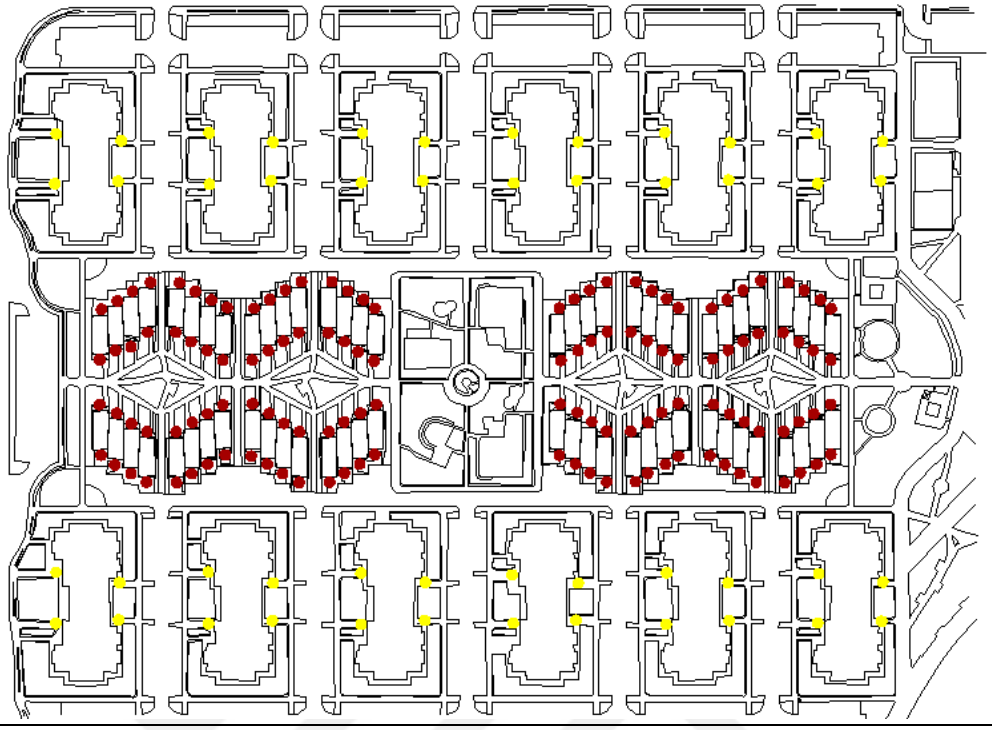


Figure 8.37 Constitutedness of Streets in Pamukkale Blocks



Figure 8.38 Constitutedness of Streets in Selçuk Blocks

Table 8.12 Observations Snapshots Output Karantina

Snapshots	WD_Mor	WD_Mid	WD_Eve	WD_Total	Sun_Mor	Sun_Mid	Sun_Eve	Sun_Total
Male	56 %	54 %	55 %	55 %	59 %	57 %	48 %	53 %
Female	44 %	46 %	45 %	45 %	41 %	43 %	52 %	47 %
Group	30 %	33 %	30 %	31 %	33 %	51 %	40 %	41 %
Individual	70 %	67 %	70 %	69 %	67 %	49 %	60 %	59 %
Children	4 %	6 %	2 %	5 %	7 %	3 %	2 %	4 %
Teenage	8 %	28 %	14 %	18 %	6 %	14 %	29 %	19 %
Adult	79 %	57 %	78 %	69 %	77%	75 %	63 %	70 %
Elderly	9 %	9 %	6 %	8 %	10 %	8 %	6 %	7 %
Sitting	20 %	14 %	8 %	18 %	17 %	19 %	20 %	19 %
Standing	32 %	18 %	18 %	25 %	22 %	12 %	16 %	16 %
Walking	48 %	68 %	74 %	57 %	61 %	69 %	64 %	65 %

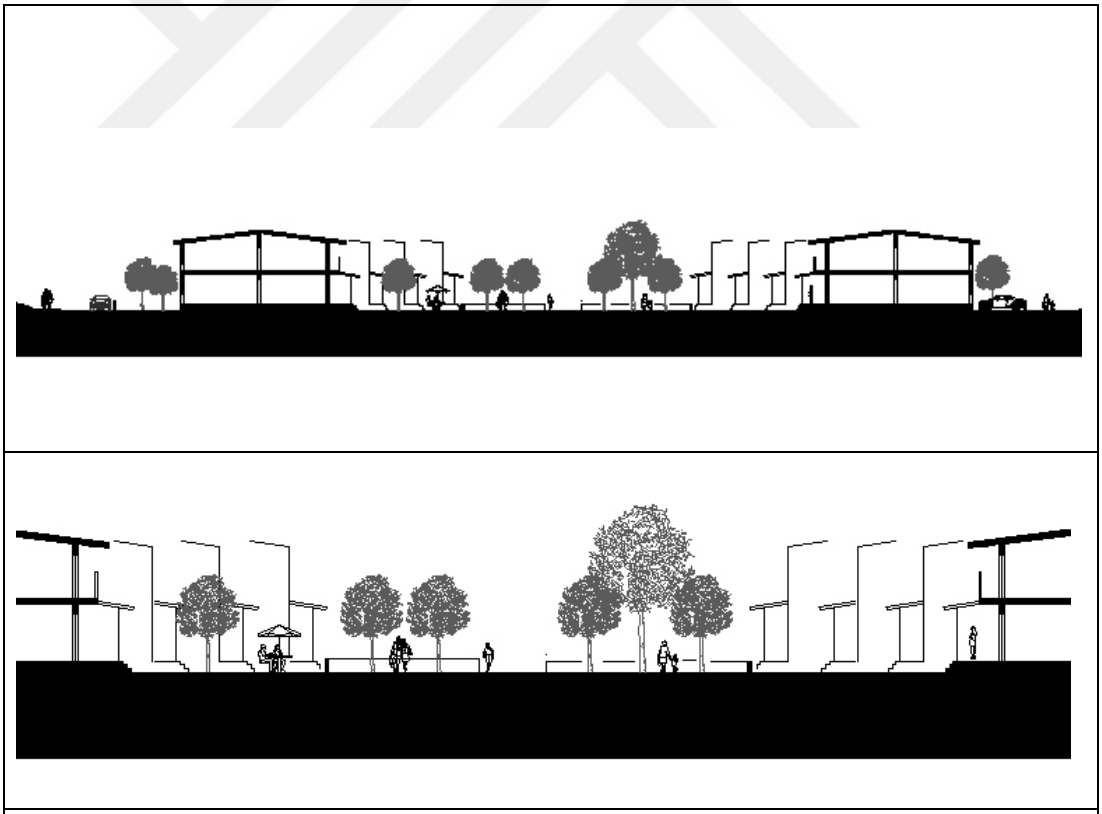


Figure 8.39 Section from the Main Pedestrian Route

Socio Demographic Structure

According to TUIK 2008, the population size in Mavişehir is 12.934. The questionnaire Sayar and Suer (2007) conducted reveals that 53% of the population is from Izmir and Aegean Region. Depending on the neighbourhood surveys from TUIK, female numbers (53%) are slightly higher than males (47%). In Sunday observations there are more males on the street than females; this is opposite to the ratio observed by TUIK. Nevertheless in the questionnaires there are more females with a percentage of 68. In Mavişehir in total, there are more adults than children, teenagers and elderly. This also overlaps with the observations (see figure 8.40 and 8.41 below).

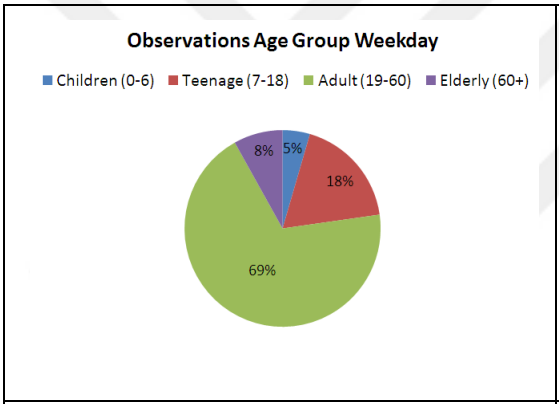


Figure 8.40 Age Groups of Observations Weekday

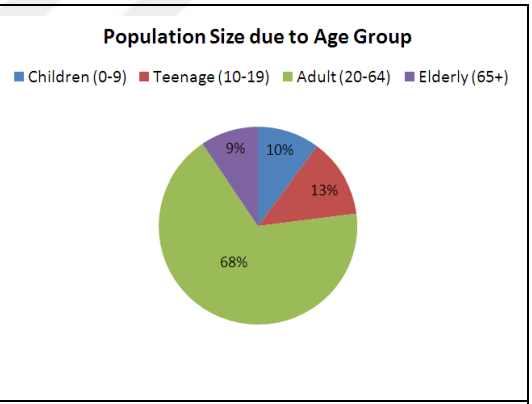


Figure 8.41 Age Group (TUIK 2009)

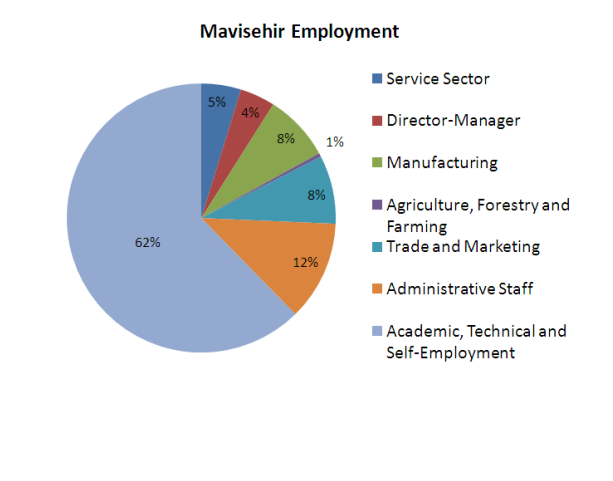


Figure 8.42 Employment Rates in Mavisehir (TUIK 2000)

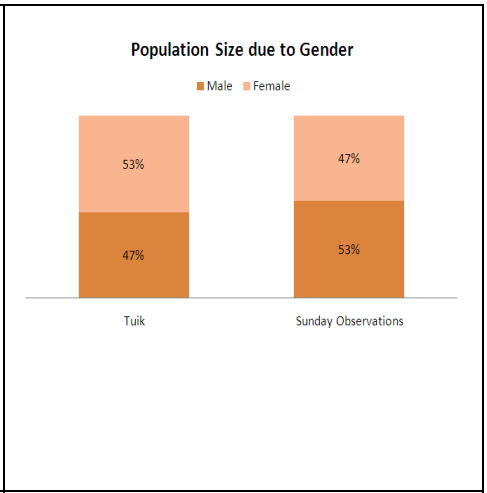


Figure 8.43 Population Size due to Gender

Muhtar Gürol Küçükgörür states that there are 2877 residences with an average household size of 2.5; hence when these numbers are multiplied in Mavişehir I, the population size is found to be approximately 7192.5. Mavişehir I is 164.382 m² with sports area of approximately 2827 m² and a 5835 m² playground. As Aydemir (1990) mentions according to planning standards playgrounds have to be 1.5-m² per person. Based on these standards, there has to be at least 1029m² play areas for children. It can be concluded that there is enough playing space for children in Mavişehir I.

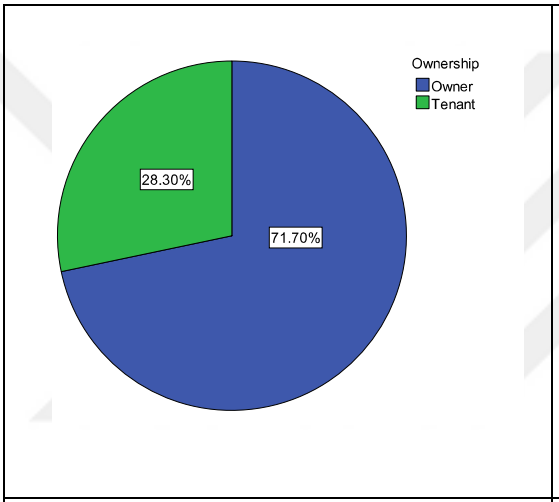


Figure 8.44 Ownership in Mavisehir I

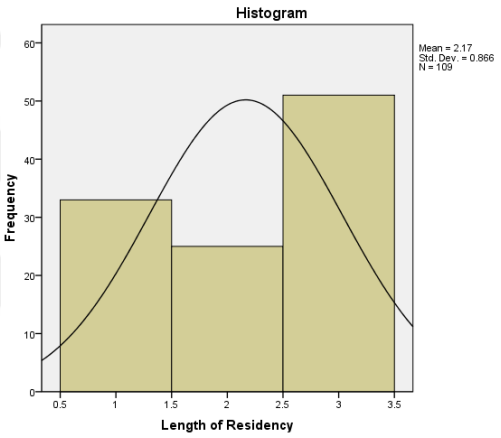


Figure 8.45 Length of Residency in Mavisehir I

In the questionnaire analysis, the average household size is 3.06, with an average number of 1.24 children. Moreover when the findings of education level are correlated with the interview of Muhtar, it reveals that 60% of residents are graduated from university. He says that there is a variety in terms of occupations of residents, although people are working mainly in military service, engineering, and management. In consonance with the questionnaires 21% are retired, 17.6% are housewives, 24% work in the service sector, 12% are students, and 12% are in marketing and finance. Sayar and Suer (2007) mention self-employed people and the managers as the forerunner occupations in the neighbourhood. According to a study conducted by TUIK in 2000, 62% of the population is in the academic, technical, and self-employment sectors (see figure 8.42 above).

Prices of flats and villas are changing; a 1+1 studio flat is 160.000 TL (app. £64000) and the prices can go up to 500.000 TL (£200.000) depending on the size of the flat. Villas cost nearly 1.000.000 TL (£400.000). Another factor that Muhtar mentioned was that people usually choose Mavişehir because of their relatives, or for other reasons such as life quality, comfort, and safety issues, as can be seen from the interviews below. Consequently, descriptive statistics about the socio-demographic structure reveal that the average age is 46, length of residency is between 5-10 years, ownership is mainly owner-occupied, inhabitants are mainly graduates and post-graduates, and in general people are working in the service sector (see table 8.13 below).

> My daughter was a student here. Our father-in-law lives in Hatay not on the main street, one street below the main boulevard. One day I bought a new car and when I went there I could not find a place to park my car in that neighbourhood. Then I was leaving the car in the Military House and taking the bus. Again one day I went there to pick up the children and left the car for just 15 minutes on the street. Unfortunately my car was scratched from front to the back. Later we decided to move into a neighbourhood, which is modern and has car parking. Mavişehir is modern and comfortable. That's why we came here (Resident).

> We moved in Turkey in 1995 from abroad. People who live abroad have a life standard, and quality. We wanted to continue our previous life standard. Mavişehir was newly developed at that time and we sold out our house in Girne and moved into Mavisehir. We are both retired officers my wife and me; that's why we chose here (Resident).

Table 8.13 Descriptive Statistics Mavisehir Neighbourhood Socio-demographic Structure

	N	Min	Max	Mean	Std. Deviation
Age	96	14	90	45.98	17.053
Gender	100	1	2	1.68	.469
Length of Residency	109	1	3	2.17	.866
Ownership	106	1	2	1.28	.453
Household	109	1	6	3.06	1.048
Children	107	0	4	1.24	.930
Education Degree	108	1	3	1.32	.561
Occupation Mavisehir	108	1	8	3.48	2.094

(Gender 1= male 2= female / Ownership 1=owner 2=tenant
LR 1= less than 5 years 2= 5-10 years 3= 10-20 years 4= more than 20 years
Education 1= graduate and postgraduate 2= high school and institution 3= middle school 4= primary school
Occupation 1= retired 2= house wife 3= student 4= service sector 5= trade marketing business
6= manager director 7= self employed 8= science academic and education 9= art and music)

As the table 8.14 below indicates, in Mavişehir I respondents know on average 55 people in the neighbourhood and 18 people from their residential block. They sometimes visit 10 people, and they sometimes interact with their neighbours in the outdoors in their neighbourhood. Moreover, they are quite happy regarding the safety issues, and maintenance and management of the neighbourhood, as well as the spatial organisation of the near home environment. However, they are neutral in terms of knowing people and acquaintances; they are also almost neutral about the subjects concerning sense of community. They interact with their neighbours in the first place in the lift (82%), secondly at the entrance (73%), and thirdly in places such as streets and sidewalks, open spaces, and parking lots (50%). Moreover, as they go somewhere on foot from their residential block they interact more at the entrance of the building (57%). Planting is the activity-type most mentioned (50%) in front of the building, followed by at least two of the activities of planting, seating, playing, and chatting (39%). From the charts in figures 8.48 below it can be seen that residents of Mavişehir interact at the entrance of the building sometimes, 39%, and a lot, 34%; they interact on streets and sidewalks sometimes, 28%, and a lot, 28%; in neighbourhood open spaces a lot, 29%, and 22% sometimes, and in the parking lot, sometimes, 28%, , and 24% a lot.

Table 8.14 Descriptive Statistics Mavisehir Neighbourhood People Known in the Neighbourhood

	N	Min	Max	Mean	Std. Dev.
I don't have many neighbours	109	0	3	.70	1.118
Number of people known by name in the Neigh.	105	0	1000	55.38	122.844
Number of people known by name in your Building	106	0	150	18.03	25.740
Number of neighbours you visit in your Neigh.	107	0	150	10.63	19.428
Frequency of visits to people living in your Neigh.	107	1	3	1.90	.598
Frequency of social interaction in outdoors	109	1	3	2.37	.572

1= Never 2=Sometimes 3= A lot

Table 8.15 Descriptive Statistics Mavisehir Neighbourhood 5 Point Scale Variables

	N	Min	Max	Mean	Std. Dev.
Perception of Walking and Safety	106	2	5	3.95	.623
Sense of Community Neighbourhood Scale	70	1	5	3.40	.699
Maintenance and Management	68	1	5	3.80	.682
Friends, Acquaintance and Knowing People	78	1	5	3.28	.789
Near Home Environment	107	1	5	3.70	.720

1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree

Table 8.16 Descriptive Statistics Mavisehir Neighbourhood Indices

	N	Min	Max	Mean	Std. Deviation
Interaction in and around the Building	109	0	5	1.90	.942
Interaction around the Neighbourhood	109	0	5	2.04	1.283
Planting, Playground, Seating, and Chatting	109	0	4	1.39	1.072

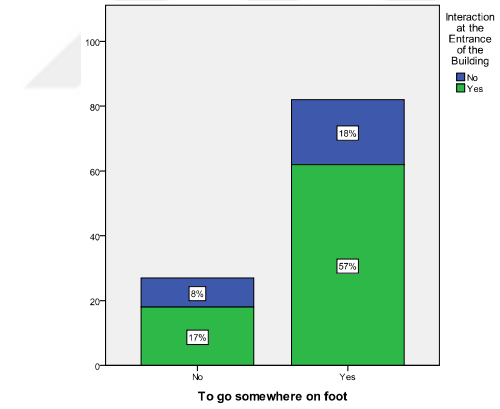


Figure 8.46 Interaction at the Entrance & Walking

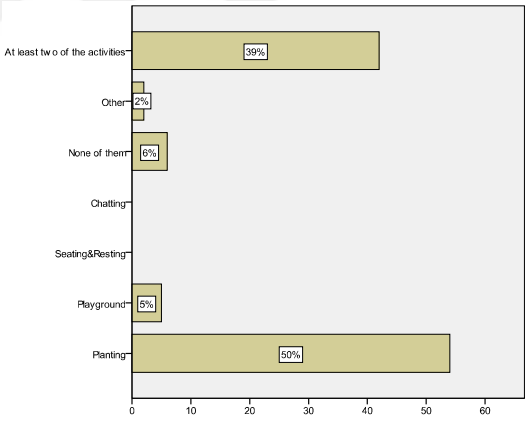


Figure 8.47 Activity Types in front of the Building

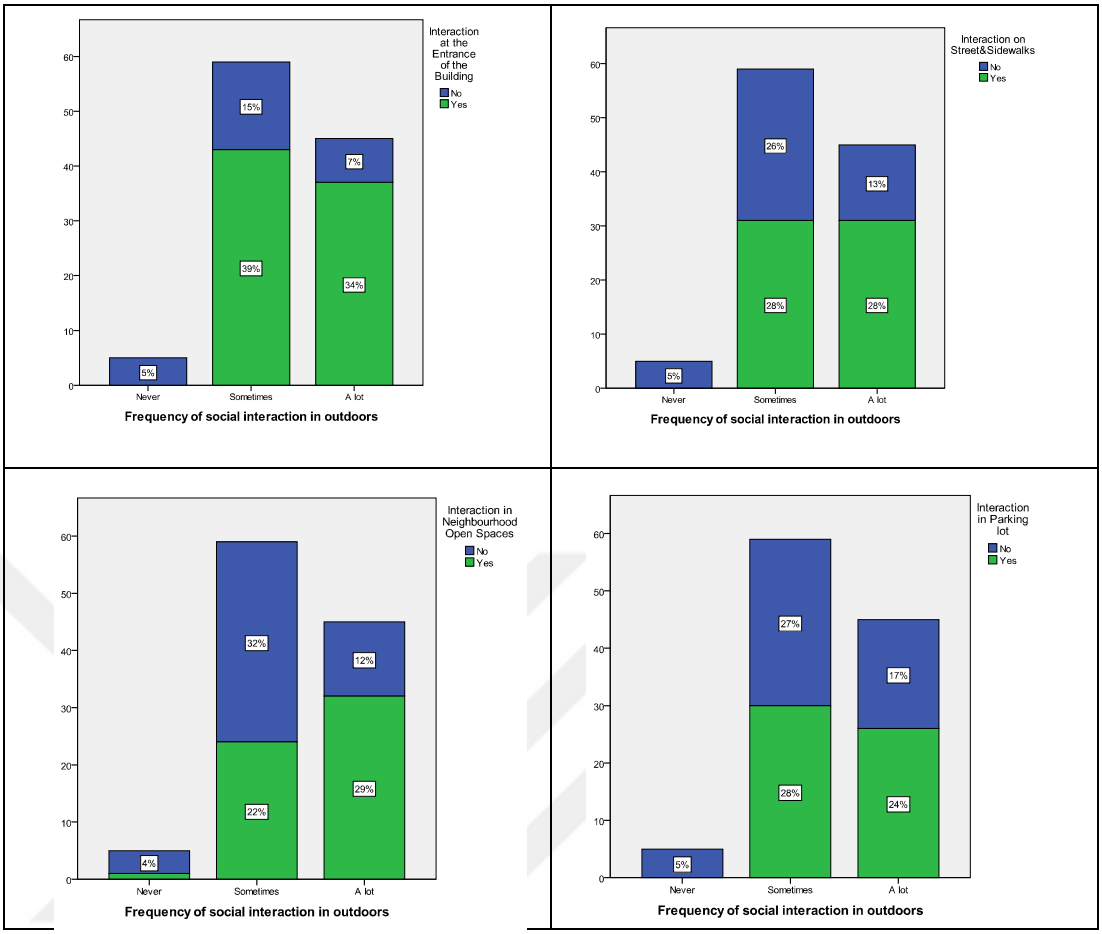


Figure 8.48 Interactional Places and Frequency of Interaction in Mavisehir

Length of Residency (LR)

As Mavişehir was constructed in the 1990s, there are not residents with a residency over 20 years. Respondents are mainly the owner-occupier residents (72%) and have been residing in Mavişehir for 5-10 years. There is a 7% decrease when this is compared with the study of Sayar and Suer (2007). They found that 79% of the residents were owners. As can be understood from the interview below, there is a change in the ownership pattern as some of the flats have been sold. The reason that inhabitants chose Mavişehir was because of its location as it is close to the city centre but away from its problems; it has a safe environment, a good life style, attractive site design and architecture, and prestigious settlement (Sayar and Suer, 2007).

> First of all here I like most the people. There are mainly bureaucrats. It is not a rich place. There is a general belief that in Mavişehir there are high-income people. No, there are not wealthy people living in here, there are retired bureaucrats. Hence they are close to our culture, stance and our social background. But recently as some flats are sold over time, different social groups start to reside here. In addition to people, I like the EGS Park Shopping Mall, and the open bazaar in Bostanli where you can find fresh fruit and vegetables. I like walking, we have sport facilities nearby. The only thing that I don't like is the car parking problem. They just planned two cars per flat; nevertheless there are two to three cars per flat now. As the number of cars increases, problems also increase. I hope they will find a solution (Resident).

> Mavişehir is very cosmopolitan difficult to unite; people are coming from different social group and backgrounds. There are things, which you consider easy to do and implement but it is becoming a big issue here. For instance, dwelling units such as 'lojman' for specific employees, such as soldiers and officers, differs from Mavişehir. It is easy to organise trips, dinners, and events in this type of settlement because people work together, live together and know each other, there is one type of social group. Here there are residents from various social classes, different types of occupations and income levels. So it is very complicated to merge and gather all these types together. Mavişehir was constructed in phases and that's where the names came from. We pass information among each other with Mavişehir II but that's all we do, nothing more (Management).

In her research, Mills (2007) found out that long-term residents have better close relations with their neighbours than the new residents. In low-income neighbourhoods these relations work as a community support. Nevertheless, in new urban areas and middle-high income groups, the type of relationship is changing. One reason is that the traditional gathering space of neighbourhoods such as coffeehouses, mosque, schools, and bakkal is disappearing in the new modern settlements and as a result, community relations are falling to form (Mills, 2007; Ayata and Gunes-Ayata, 1996 in Erkip, 2010).

Length of residency has a correlation with number of people known by name in the building ($r = .246$ and $p = .011 < .05$), so the number of people that residents know in their building block in Mavişehir I has a relation with the duration of their residency, however not with the number of people that they know in their neighbourhood. On the other hand, interaction around the neighbourhood is associated with the length of residence but not with the interaction in and around the building (see table 8.17). In the logistic regression model it is found that with the increase in the length of residency, there is a 92% increase in the interaction in the parking lot and a 64.4% increase in the interaction on street

and sidewalks. As residents inhabit Mavişehir longer, they know more people in their building and they visit more people in the neighbourhood. Besides they interact more within the neighbourhood open spaces (see table 8.18 and 8.19 below).

> Because we are the owners, we have been living here since 1994, for a long time. We usually bumped into each other in the lift, on the street, at the entrance of the block, Ege Park, everywhere. Besides we visit each other (Resident).

Table 8.17 Correlations with Length of Residency

Correlations with Length of Residency	**Correlation coefficient _ *r***	**Sig (2-tailed) _ *p***
Sense of Community	.116	.340
Number of People Known by name in the Building	**.246***	**.011**
Number of People Known by name in the Neigh.	.160	.105
Number of Neighbours you visit in your Neigh.	**.212***	**.028**
Friends and Acquaintance	.095	.409
Planning to move to another Neighbourhood	.049	.610
Interaction around the Neighbourhood	**.278****	**.003**
Interaction in and around the Building	.157	.104

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

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

Table 8.18 Logistic Regression Analysis of LR with Interaction on Street and Sidewalks

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	LengthRes	.497	.230	4.691	1	.030	1.644
	Constant	-.789	.527	2.244	1	.134	.454

a. Variable(s) entered on step 1: LengthRes.

Table 8.19 Logistic Regression Analysis of LR with Interaction in the Parking lot

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	LengthRes	.652	.234	7.741	1	.005	1.919
	Constant	-1.357	.547	6.158	1	.013	.258

a. Variable(s) entered on step 1: LengthRes.

In the study conducted by Lund in 2002 there appear two important things, which also overlap with our study. Lund found that there is a lack of significance between length of residency and the sense of community. Furthermore sense of

community does not change due to ownership; it is not only related with the owner. As Lund emphasises it is not only the owner occupants who are more likely to walk. It can be concluded that long duration of residency might not be necessary for the development of the community (Lund, 2002). In Mavişehir, there is not any statistical correlation between length of residency and sense of community scale either. In addition, from the t-test between ownership and sense of community, we can see that owner is not statistically different to the tenant (see table 8.24 below).

Sense of Community (SC)

In terms of neighbourhood attachment Skjaeveland and Garling (1997) emphasise that as people feel more attached to their neighbourhood they are more likely to interact with their neighbours. By citing references from the literature, Lund (2002) identifies some variables, which has an influence on the sense of community. It is important because, whether direct or indirect, these variables have an impact on the social interaction (Lund, 2002). The variables, which are more likely to affect the sense of community than other variables are; married couples and households with children (Michelson, 1976 in Nasar and Julian, 1995), elderly (Skjaeveland et al., 1996), home owners (Chavis et al., 1986), long duration of residency (Buckner, 1988; Chavis et al., 1986; Skjaeveland et al., 1996), and women (Unger and Wandersman, 1982). In Mavişehir these variables do not expose the sense of community, and it is likely that there are other factors that have more significance.

Table 8.20 Regression Analysis of NP Building and Household with Children

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3.480	12.760		-.273	.786
	Household with Children	6.996	3.597	.219	1.945	.056

a. Dependent Variable: Number of people known by name in your Building?

Table 8.21 Regression Analysis of NP Building and Household without Children

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.250	14.505		-.086	.932
	household without children	6.250	7.427	.166	.842	.408

a. Dependent Variable: Number of people known by name in your Building?

As the age increases, mean of sense of community scale also goes up; however the difference between the mean variables of age is not statistically different as they range between 3.2 and 3.36. Hence they are both neutral about the issues of sense of community. The correlation between age and neighbourhood characteristics interesting shows that only elderly residents define Mavişehir as more interesting than the other age groups. The graphic drops sharply down with adults (see figure 8.50 below).

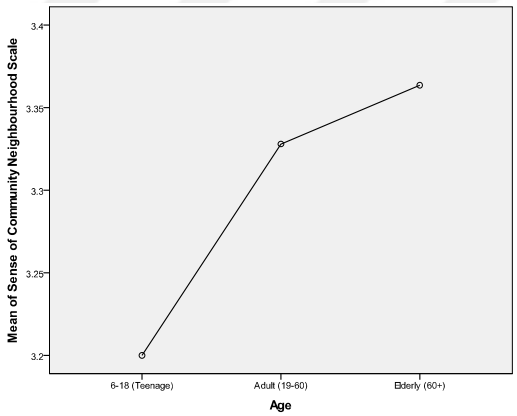


Figure 8.49 Age and Sense of Community

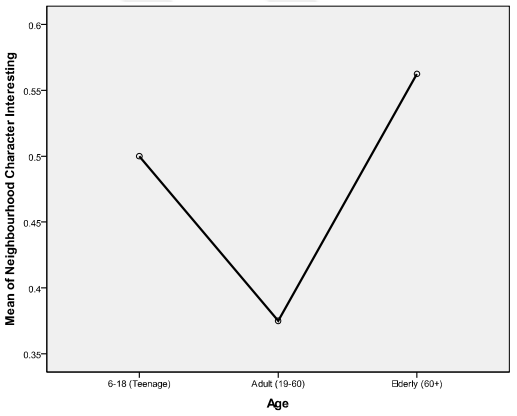


Figure 8.50 Age and NC Interesting

Table 8.22 Multiple Regression Analysis of SC with NHE and Activity Types in front of the Building

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.420	.369		3.850	.000
	Near Home Environment	.453	.100	.466	4.545	.000
	Planting, Playground, Seating, and Chatting	.173	.075	.238	2.319	.023

a. Dependent Variable: Sense of Community Neighbourhood Scale

As can be seen from the multiple regression analysis above, both independent variables are in equation with each other. Near home environment and activity types around the environment have an impact on the sense of community scale. In addition, in the correlation table 8.23 below, sense of community has a high correlation with the maintenance and management, space organisation around the building and the activities around the building, number of people known by name in the building, the visits between neighbours, and the positive spatial characteristics. Although the sense of community scale has a relation with near home environment, it does not have a relation with the interaction in and around the building. Interaction in and around the building does not associate with the sense of community. It might be because there are not places in and around the building for residents to spend time together. Some of the benches are located in two parks, on the routes in between villas and along the canal. However, not all of them afford opportunities for residents to sit and chat.

Table 8.23 Correlations with Sense of Community

Correlations with Sense of Community	**Correlation coefficient _ *r***	**Sig (2-tailed) _ *p***
Interaction around the Neighbourhood	**.339****	**.004**
Interaction in and around the Building	.207	.085
Positive Spatial Characteristics of the Neighbourhood	**.236***	**.049**
Negative Social Characteristics of the Neighbourhood	**-.360****	**.002**
Negative Management and Maintenance	**-.294***	**.014**
Number of People Known by name in the Building	**.322****	**.008**
Number of People Known by name in the Neighbourhood	.092	.451
Number of Neighbours you visit in your Neighbourhood	**.372****	**.002**
Frequency of Visits to People in the Neighbourhood	**.261***	**.030**
Adequate Space for Landscaping and Planting Near Home	**.585****	**.000**
Maintenance and Management	**.791****	**.000**
Planning to Move	**-.284***	**.016**
Near Home Environment	**.519****	**.000**

From the separate regression analysis of sense of community scale with other variables it can be concluded that 57.9% of variation in sense of community can be explained by maintenance and management, 27% of variation in sense of

community can be defined by near home environment, and 10% of variation in sense of community can be interpreted by number of people known in the building.

T-tests for Ownership and Gender

When the t-tests below are examined it is clear that frequency of visits changes between the gender groups. Females are more likely to visit their neighbours than males; this might be because 17.6% of the respondents are housewives. Although the interaction in and around the building does not change between the owner and the tenant, it can be concluded that owners are more likely to interact in and around the neighbourhood than the tenants. In addition, the interaction around the neighbourhood has a relation with the length of residency; however just 6% (R^2=.060) of the interaction can be predicted from the duration of residency.

Table 8.24 T-tests for Ownership and Gender

	Sense of Community			Interaction in around Building			Interaction around Neighbourhood			People Known in Building			People Known in Neighbourhood		
	N	Mean	Sig	N	Mean	Sig	N	Mean	Sig	N	Mean	Sig	N	Mean	Sig
Owner	50	3.37	.338	76	1.91	.969	76	2.16	.055	75	19.8	.370	73	63.5	.251
Tenant	19	3.18		30	1.90		30	1.63		28	14.6		29	32.3	
Male	19	3.45	.478	32	1.69	.106	32	1.81	.323	32	17.5	.938	31	64.6	.386
Female	43	3.32		68	2.01		68	2.07		66	17.1		65	42.2	

	Frequency of Interaction			Frequency of Visits			Friends and Acquaintance			To go Somewhere on Foot			Perception of Walking		
	N	Mean	Sig	N	Mean	Sig	N	Mean	Sig	N	Mean	Sig	N	Mean	Sig
Owner	76	2.38	.566	75	1.97	.076	54	3.29	.725	76	.71	.162	76	3.91	.442
Tenant	30	2.30		29	1.73		21	3.22		30	.83		28	4.02	
Male	32	2.22	.094	31	1.58	.001	21	3.14	.604	32	.81	.404	32	4.04	.149
Female	68	2.43		67	2.00		49	3.25		68	.74		66	3.85	

Table 8.25 Group Statistics

Group Statistics	Gender	N	Mean	Std. Dev.	Std. Err. Mean
I feel safe walking in my neighbourhood during the day	male	32	4.38	.554	.098
	female	68	4.16	.803	.097
I feel safe walking in my neighbourhood during the evening	male	32	4.28	.523	.092
	female	68	3.84	.940	.114
I feel safe and comfortable in this neighbourhood	male	32	4.31	.471	.083
	female	66	4.00	.744	.092
Neighbourhood Character Safe	male	32	.94	.246	.043
	female	68	.85	.357	.043

In table 8.25 above, in terms of safety issues, although the means of females are slightly smaller than males, there are not significant differences. The results of this study indicate that both females and males feel safe in Mavişehir. Both chose Mavişehir as safe with 88% (see table 8.26 below). In Aydogan's (2005) study she found that 63% of the residents were satisfied with the safety and security; however she does mention that the doors were double-locked and the flats have reinforced doors and wrought iron gates. Moreover Sayar and Suer (2007) also emphasise that 18% of the inhabitants considered safety as a problem. In this study 1.83% of the residents mentioned safety as the main problem.

> There is a fishermen's harbour here close by. Profile of the users who go to that place has recently substantially changed. People from various social groups and people from squatter areas are gathering around there. It might be different people may be not the people from slums, but when those people are passing by here, they explore here. Then all of a sudden you realise that your bike is stolen or there is a burglary issue. Consequently there is a safety problem to some extent; if it was enclosed it would be better. However it is difficult to gate here as some of the streets and the canal area is under the ownership of the Municipality. Now they will build the opera house here. The Municipality should pass the ownership of the park area to us, where Telekom is located (Resident).

> There is not any safety problem. We hired a good security guard company, and the outcome is good. We are happy to work with them, because due to the reports, for 3-6 months we have seen that the burglary problem is scarcely there anymore. In blocks and common areas there is a decrease, which is almost none in terms of snatching, molesting, and burglary issues. Therefore we don't have any problem regarding safety. On the other hand if we succeed in enclosing the site we will reduce the number of security guards through putting in some surveillance cameras, and make the costs cheaper (Management).

> I would like our housing estates to be surrounded, gated. It is much better if it is closed because you know who enters and exits from the site. There will be less need for security guards (Resident).

Neighbourhood Characteristics (NC)

Table 8.26 Characteristics of Mavisehir Neighbourhood

Distinctive	44%	***Simple***	**51.9%**	***Clean***	**78%**
Ordinary	23%	*Complex*	10.2%	*Dirty*	3.7%
Plain	36.7%	***Peaceful***	**82.6%**	***Central***	**56.9%**
Ornate	35.8%	*Anxious*	1.8%	*Not Central*	13.8%
Interesting	40.4%	***Safe***	**88.1%**	***Spacious***	**81.7%**
Boring	13.8%	*Unsafe*	1.8%	*Narrow*	1.8%
Not Crowded	20.2%	***Pleasant***	**65.1%**	***Comfortable***	**64.2%**
Crowded	**53.2%**	*Unpleasant*	4.6%	*Uncomfortable*	4.6%
Natural	**52.3%**	***Quiet***	**69.7%**	*Varied*	38.5%
Manmade	16.5%	*Noisy*	9.2%	*Monotonous*	17.4%
Familiar	45%	*Living*	39.4%	***Well Kept***	**81.7%**
Unfamiliar	18.3%	*Lifeless*	21.1%	*Un Kept*	3.7%
Excited	35.8%	*Friendly*	33 %	***Relaxed***	**83.3%**
Depressed	8.3%	*Unfriendly*	26.6%	*Stressful*	0.9%

Mavişehir residents find their neighbourhood mostly safe (88.1%), relaxed (83.3%), peaceful (82.6%), spacious and well kept (81.7%), clean (78%), and comfortable (64.2%). When the variables are put in an index, for instance in average approximately four positive spatial characteristics were chosen despite the two negative spatial characteristics, and five positive social characteristics were chosen while there is only one negative social characteristic. Hence this might be because positive characteristics are picked more than the negative ones. Green (1999) found out that town character is related with the features of the environment; but also with the meanings that are attached to it by the community. Therefore “place character” and “place attachment” are closely associated with each other (Altman and Low, 1992 in Green, 1999). In Mavişehir, sense of community is relatively related with the positive spatial characteristics of

the neighbourhood, and both positive spatial, social, and management-maintenance characteristics are quite strongly associated with each other (see table 8.28 below).

Table 8.27 Neighbourhood Characteristics Index of Mavişehir

Neighbourhood Characteristics Mavişehir	N	Min	Max	Mean	Std. Dev.
Positive Spatial Characteristics of the Neigh.	109	0	8	3.81	2.275
Negative Spatial Characteristics of the Neigh.	109	0	6	1.72	1.446
Positive Social Characteristics of the Neigh.	109	0	9	4.94	2.765
Negative Social Characteristics of the Neigh.	109	0	7	1.05	1.384
Positive Management and Maintenance	109	0	4	3.12	1.192
Negative Management and Maintenance	109	0	3	.14	.499

> Residents are living in a sterile environment in Mavişehir. There is not any argument and noise here. Street vendors do not try to sell their stuff on the street and shout such as “tomato, aubergine” in our neighbourhood. There is a sterile life, our inhabitants usually go to the Ege Park Shopping Mall and stroll around there and then come back home. So they live differently and peacefully without putting themselves under stress. Yes, there are problems like car parking and other issues but they can easily walk to the seashore, which is an important thing (Management).

Table 8.28 Correlations of Neighbourhood Characteristics

Correlations

		Perception of Walking and Safety	Near Home Environment	Positive Management and Maintenance Characteristics of the Neighbourhood	Maintenance and Management	Positive Spatial Characteristics of the Neighbourhood
Perception of Walking and Safety	Pearson Correlation	1	.541**	.144	.733**	.156
	Sig. (2-tailed)		.000	.142	.000	.111
	N	106	105	106	68	106
Near Home Environment	Pearson Correlation	.541**	1	.152	.732**	.190
	Sig. (2-tailed)	.000		.118	.000	.050
	N	105	107	107	67	107
Positive Management and Maintenance Characteristics of the Neighbourhood	Pearson Correlation	.144	.152	1	.357**	.657**
	Sig. (2-tailed)	.142	.118		.003	.000
	N	106	107	109	68	109
Maintenance and Management	Pearson Correlation	.733**	.732**	.357**	1	.339**
	Sig. (2-tailed)	.000	.000	.003		.005
	N	68	67	68	68	68
Positive Spatial Characteristics of the Neighbourhood	Pearson Correlation	.156	.190	.657**	.339**	1
	Sig. (2-tailed)	.111	.050	.000	.005	
	N	106	107	109	68	109

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

> We have a democratic apartment management especially in Mavişehir I. We have meetings within the committee. Imagine an environment where residents will gather and discuss everything in detail till 1 am and identify the bullet points that will be pursued within democratic decisions. For instance, in Mavişehir II, they just meet in front of the block, five members, within a short time they discuss and that's all. Within the building structure, water, heating, roof, and electricity systems work decently as the whole system is central. We don't have any problems either with the maintenance and façade paint or gardening. Certainly we can leave our children comfortably within the neighbourhood because there are the security guards (Resident).

Table 8.29 Correlations with NC Spacious

Correlations with Neighbourhood Character Spacious	**Correlation coefficient _ *r***	**Sig (2-tailed) _ *p***
Interaction around the Neighbourhood	**.292***	**.002**
Positive Social Characteristics of the Neighbourhood	**.559****	**.000**
Frequency of Visits to People	**.199***	**.040**

Spaciousness is not just related with spatial aspects of the neighbourhood, it is also related with the social issues. Hence it is a socio-spatial relationship (Giuliani, 1991 in Skjaeveland and Garling, 1997). Skjaeveland and Garling found in their (1991) study that neighbouring is significantly associated with spaciousness, dwelling density, semi-private space, street/entrance level, structured open space, and building quality. Nevertheless, among them, the most enduring variable is the "perceived spaciousness" (sun light, view, outdoor space, airing) and the perceptions of near home environment of residents. Consequently, perceived spaciousness is a strong exposure of neighbouring. It reduces annoyance in the neighbourhood and increases the place attachment (Skjaeveland and Garling, 1997). As can be seen from the table 8.29 above, spaciousness is an important exposure that affects the interaction around the neighbourhood (R^2= .085) as well as the positive social characteristics of the neighbourhood 31.2% (R^2= .312) in Mavişehir.

Near Home Environment (NHE)/ Interaction/ Friends and Neighbouring

As the main purpose of the study is to find out how the organisation of the space affects social interaction, one of the main predictors of near home environment is correlated with other variables. It can be seen from table 8.30 below that arrangement of near home space is highly associated with maintenance and management, perception of walking and friends and acquaintance. On the other hand, near home environment has no correlation either with the interaction in and around the building or with the interaction within the neighbourhood. Both near home environment (R^2=.167) and activity type in front of the building (R^2=.121) influence friends and acquaintance.

Table 8.30 Correlations with Near Home Environment

Correlations with Near Home Environment	**Correlation coefficient _ *r***	**Sig (2-tailed) _ *p***
Frequency of Social Interaction	**.242***	**.012**
Friends Acquaintance	**.409****	**.000**
Number of People Known by name in the Neigh.	.011	.910
Number of People Known by name in the Building	-.045	.651
Number of Neighbours you visit in your Neigh.	.029	.769
Perception of Walking	**.541****	**.000**
Maintenance and Management	**.732****	**.000**

Table 8.31 Multiple Regression Analysis of Friends and Acquaintance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.652	.391		4.221	.000
	Near Home Environment	.360	.106	.353	3.411	.001
	Planting, Playground, Seating, and Chatting	.217	.082	.275	2.653	.010

a. Dependent Variable: Friends, Acquintance and Knowing People

As a type of in-between space, entrance of the building plays an important role in shaping the social relations in the community of the neighbourhood. Since people know more neighbours in their building they interact more at the entrance of the building. People with a higher frequency of interaction (sometimes and a lot)

interact more at the entrance of the building. Interaction at the entrance increases by 7.5% per the increase of number of people known by name in the building. Furthermore, with the one unit increase in the interaction at the entrance, frequency of social interaction in outdoors increases by 2.7 (see table 8.33 below).

Table 8.32 Correlations with Interaction at the Entrance

Correlations with Interaction at the Entrance	**Correlation coefficient _ *r***	**Sig (2-tailed) _ *p***
Number of People Known by name in the Building	**.257****	**.008**
Ownership	-.037	.705
Frequency of Social Interaction (HL5)	**.279****	**.003**
Near Home Environment	.041	.676

Table 8.33 Logistic Regression of Interaction at the Entrance

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	NPResident	.072	.035	4.338	1	.037	1.075
	HL5	1.020	.489	4.347	1	.037	2.773
	Constant	-1.937	1.064	3.312	1	.069	.144

a. Variable(s) entered on step 1: NPResident, HL5.

Table 8.34 Correlations with Education

Correlations with Education	**Correlation coefficient _ *r***	**Sig (2-tailed) _ *p***
Interaction in and around the Building	.026	.793
Interaction around the Neighbourhood	.078	.420
Neighbourhood Characteristic Interesting	**.273****	**.004**

As stated in other studies, there is a relation between low-income groups, less educated people and the intensity of interaction. From the results of Ayata and Gunes-Ayata (1996), we can predict that low-income groups and less educated people interact more with their neighbours, such as in squatter neighbourhoods where there are closer neighbourhood relations. In this case, as Imamoglu (1995) says, the harmony between neighbours is more important than the frequency of interaction in the neighbourhood (Ayata and Gunes-Ayata, 1996; Imamoglu, 1995

in Erkip, 2010). Thirty three per cent of postgraduates and graduates find Mavişehir interesting whereas this rate increases with high and middle school, at 58% and 80% respectively. As the education level decreases residents are more likely to find their neighbourhood interesting. There is no relation between education and the interaction in Mavişehir; neither is there a relation with the frequency of interaction and visit.

Planning to move to another neighbourhood decreases by 60%, as friends and acquaintance increases (see table 8.37 below). In other words, residents who have stronger relations with friends in their neighbourhood are 60% less likely to move from Mavişehir. From the multiple regression analysis table 8.38 below (R^2= .108), 10.8% of the number of people known by name in the neighbourhood can be predicted from the exposures interaction on street and sidewalks as well as interaction in neighbourhood open spaces. Nevertheless this is not strong enough, and there might be other factors that have an effect on these results.

Table 8.35 Correlations with Friends and Acquaintance

Correlations with Friends and Acquaintance	**Correlation coefficient _ *r***	**Sig (2-tailed) _ *p***
Planning to Move to another Neighbourhood	**-.259***	**.022**
Maintenance and Management	**.590****	**.000**
Planting, Playground, Seating, and Chatting	**.348***	**.002**
Frequency of Visits	**.438****	**.000**

Table 8.36 Correlations with Perception of Walking

Correlations with Perception of Walking and Safety	Correlation coefficient _ *r*	Sig (2-tailed) _ *p*
Interaction around the Neighbourhood	.319**	.001

Friends and acquaintance also have a strong correlation with maintenance and management, as well as the activity types in front of the building, and frequency of visits among neighbours. Moreover, as the residents feel safe and have a comfortable walk during the day and night, they interact more around the neighbourhood. On the other hand there is not any statistically significant correlation between going somewhere on foot and the interactional places.

Table 8.37 Logistic Regression of Planning to Move and Friends

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Friends	-.942	.429	4.811	1	.028	.390
	Constant	1.407	1.306	1.160	1	.281	4.082

a. Variable(s) entered on step 1: Friends.

Table 8.38 Multiple Regression Analysis of NP Known by name in the Neighbourhood

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-6.637	21.034		-.316	.753
	Interaction on Street&Sidewalks	58.267	23.121	.236	2.520	.013
	Interaction in Neighbourhood Open Spaces	53.855	22.935	.220	2.348	.021

a. Dependent Variable: Number of people known by name in the Neighbourhood?

As Zehner and Marans (1973) mention from their previous studies about density, one of the most important outcomes was that the density and the physical features of the environment can encourage the "superficial contacts" in the neighbourhood. Consequently it is clear that there is a relation with the density, physical structure and the social interaction. Here, however, the type of the interaction may not develop the relationships in society; as income, education, life expectations and style of residents can be more important for making friendships and actual contacts (Gans, 1967; Keller, 1968; Michelson, 1970 in Zehner and Marans, 1973).

> Each block unit has 75 residents, in total 150. Hence people can just greet and meet their neighbours of the same flat. Other than that, people are not coming from the same origins and are not the member of the same community as an individual, that's why they keep their distance from each other. They don't know or care about the people who are living two floors above or below them. This is like in Europe, people in Europe are the same, they do not mainly know their neighbours and they are not interested either. It is the same in here. Indeed we have idioms like "neighbour might need even an ash of a neighbour". As Mavişehir management we try to help our residents as much as we can in their difficult days. Apart from that residents who are close to each other and organise dinners and meeting among themselves. It does not include the whole block but at least involves 8-10 neighbours. Nothing else except these, we just want people to greet each other in the lifts and at the entrances, that is enough. Generally they say good morning and they are usually kind to each other such as giving way in front of the entrance door (Management).

Sayar and Suer (2007) define the neighbourhood relations in Mavişehir as limited with acquaintance. According to their survey, residents described their relations within the neighbourhood as distant and rare. In addition, Aydogan (2005) found that almost half of the inhabitants do not know their neighbours, and relates this issue with the rapid turnover of the tenants. Another reason for this is the number of flats per storey. As the flat numbers decrease, sense of neighbourliness increases. An additional interesting aspect Aydogan explored was that 50.2% of the residents found themselves deprived of neighbourly relations and 63.4 % feel that they have privacy from others. This might be the other purpose why they chose Mavişehir. Regarding the privacy issue, however, Aydogan specifies that both Pamukkale and Selçuk blocks have problems with visual and aural criteria of privacy; where 65% of the Pamukkale and Selçuk residents are not happy with the sound absorption, and 51.5% of the residents have made changes in the building such as annexing the balcony, especially in Mavişehir I, because the distance between the balconies is too close to maintain their privacy.

> Not every place is the same. In our apartment block neighbourhood relations are very good. Even some of our neighbours and friends are asking for flats in our apartment block. They want to move specifically into here (Resident)
>
> It is also related with the personality. If the resident is saying that there is not any neighbourhood relationship then you have to ask whether that person is making any efforts and endeavours to form any relationships (Resident).
>
> Women are organising “Gün” social gatherings and every Thursday we have coffee days. Generally in each block, residents of downstairs and upstairs visit each other. On the contrary in our block, not just one floor below or up, all the residents in the block have visits among themselves, and there are even neighbours who participate from the next block. We organise backgammon parties and trips. We celebrate our feasts, “bayram”, together (Resident).

Problems in the Neighbourhood

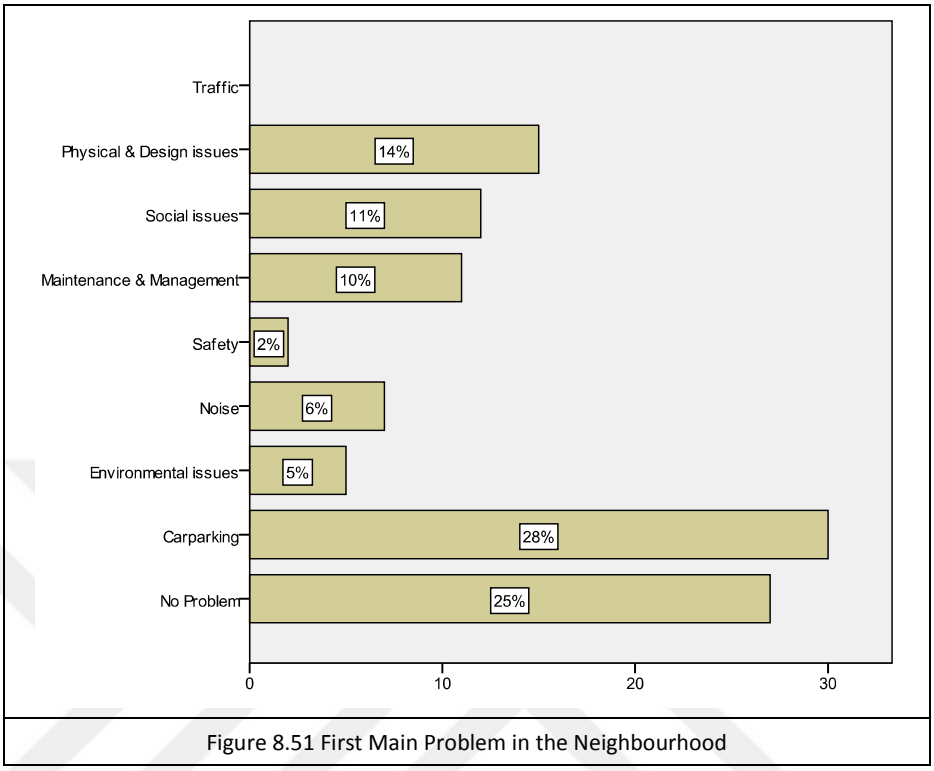


Figure 8.51 First Main Problem in the Neighbourhood

Residents mostly pointed out car parking as the first main problem with 28%; 25% said there was nothing they considered as a problem, and 14% complained about physical and design issues, 11% about social issues and 10% about the maintenance and management issues. Only 15% indicated that they plan to move to another neighbourhood, and 71% would live in the same neighbourhood regardless of financial issues (see table 8.55 below).

> When they first built here, they planned the car parking as one car per flat. At the moment each flat needs three car parking area. Unfortunately there is nothing that can be done. Indeed there is a lot that could be done, but they are all related with the budget. Underground car parking costs a lot. People, when they look from outside, think that very rich people are living in Mavişehir. Literally it is not as it is seen from the outside. In here residents are mainly senior retired people whether from the public or private sector. They did their savings for the retirement period which they could spend the rest of their lives here without any problem, noise, and anxiety. Probably you observed that the elderly population is very dominant. Now how can we ask 10.000 TL per year rather than 2.500TL as a fee? Besides those people have one car. I am retired as well and I have just one car that I can easily find a place for parking. People who cannot find a place are mostly working people or those who have more cars. In these circumstances we cannot find any solution, so this will stay as it is. We don't know what might happen with the technology and possibilities tomorrow. However for now it is unsolvable (Management).

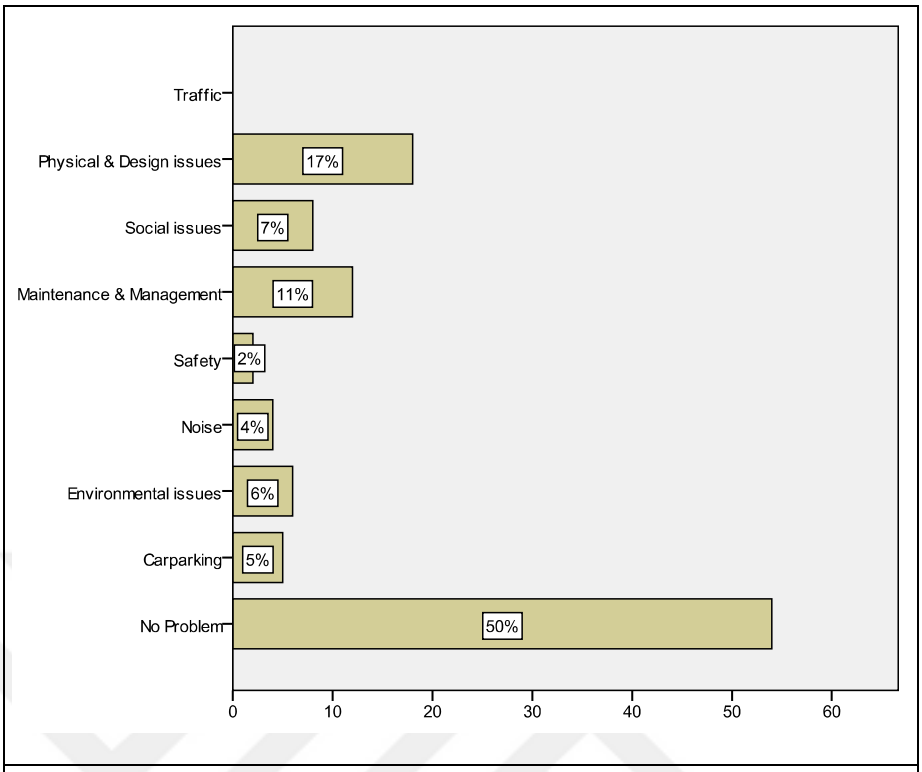


Figure 8.52 Second Main Problem in the Neighbourhood

There are not many public spaces. There was a bicycle path along the sea; however one resident of the villas sued the Municipality, for the reason that people are passing through his private property; and the barriers, which are built for the waves, blocking his view. Although there is a public good, the court decided for the benefit of the private property. Everywhere is car parking - they should build parks. The Mayor of Karsiyaka promised to build more parks but unfortunately they could not do (Resident).

In fact we have a traffic problem especially in the mornings and evenings. We were thinking to use the road by the Fishermen's harbour. However city planners rejected our idea. We see things in different ways so we should respect them (Management).

Due to the close location of Ege Park Shopping Mall, especially on Saturdays and Sundays, this area becomes very crowded. There were a lot of cars coming from outside. That is why we built the barriers as the outsiders started to park their cars in our car parking area. And our residents were finding it hard to park their cars. So we enclosed it with barriers and made it safer (Management).

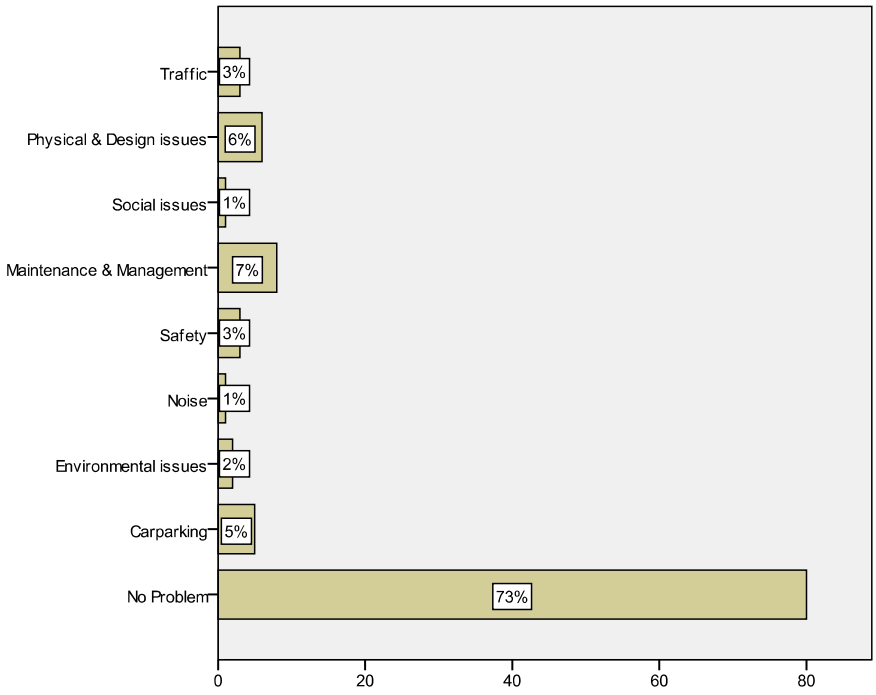


Figure 8.53 Third Main Problem in the Neighbourhood

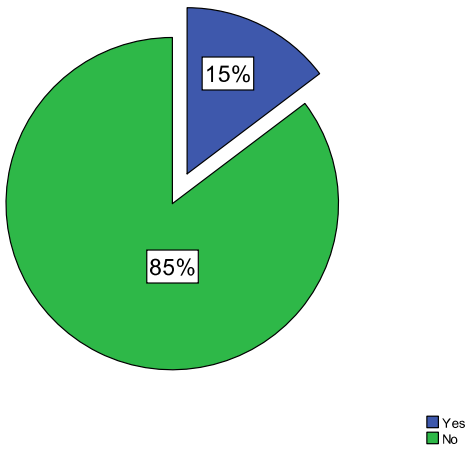


Figure 8.54 Move to Another Neighbourhood

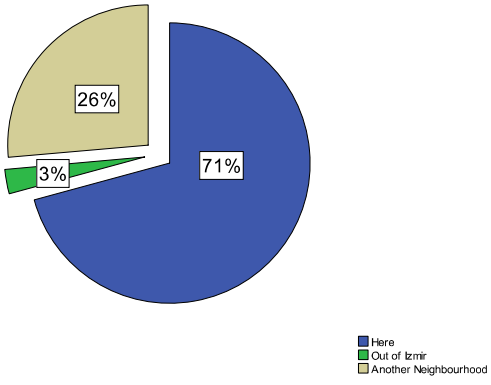


Figure 8.55 Where would you like to live?

There are similarities between the problems of the neighbourhood, which residents mentioned, and the ones that children pointed out in the focus group. Seven children aged 10 from *Mavişehir Primary School*, were interviewed. It was the most homogenous group within the other focus groups; the students were from mainly high-income groups. They usually have 10 -15 friends. They usually play with their friends at the weekends at midday, and during the weekday they play in the afternoon, but they do not spend time a lot on the street. They spent their spare time with the computer, watching the TV, reading books, painting, on the play station, playing tennis, and swimming, especially in the sports international's children club. Their interactional places are playgrounds and open green spaces, basketball grounds and sport areas.

Definition of the Neighbourhood

- Green
- Soon there will be a fence surrounding the housing units

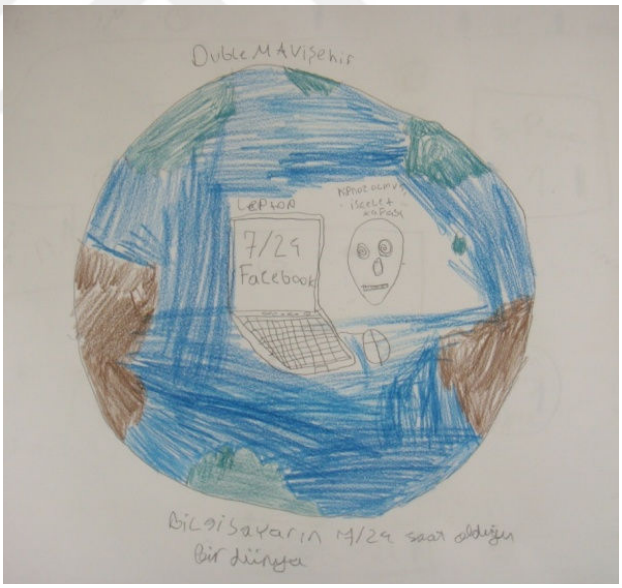


Figure 8.56 24-Hour Laptop and Facebook

Problems of the Area

- Inadequate car parking
- Untied aggressive dogs and their mess in the environment
- Smell coming from the organised industry site, floods
- Graffiti on the walls
- Location of gsm mobile station
- Safety issues such as that anyone can enter pretending they are the guests, people that they do not know in the playground, irresponsible safety guards
- Lack of maintenance such as dirty playgrounds, inadequate sport areas,
- There is not any swimming pool, as well as any well-maintained and open football and basketball grounds

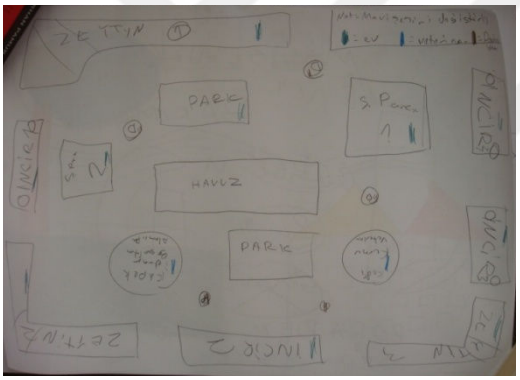
Drawings of children show many playgrounds, safer areas, better maintained and clean environment, 24-hour computer and Facebook, big swimming pool, sport areas, a castle, veterinary surgeries, two-storey house, sensitive people, flowers and fruit trees, and places for children where they can comfortably play.



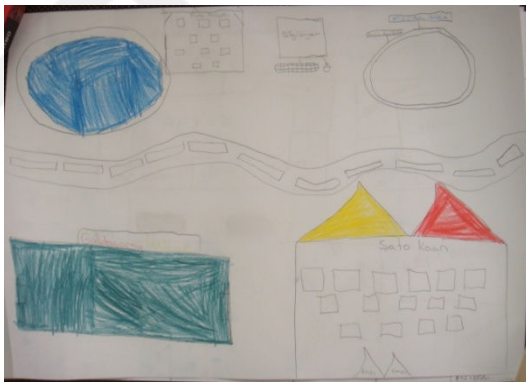
Swimming Pool and Playgrounds



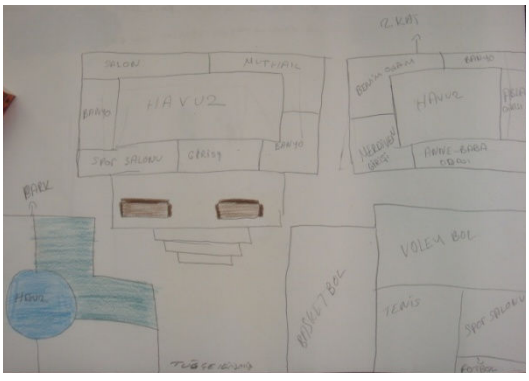
Gated Mavisehir



Specific Spaces for Animal Mess



Castle Swimming Pool and Playground



Sports Areas and Swimming Pool



Two-Storey House and Playgrounds

Figure 8.57 Drawings of Mavisehir Primary School Children

8.3 CONCLUSION

Mavişehir as high-rise mass-housing units were built in the 1990s by the 'Housing Credit Bank' with the cooperation of a private construction company under the scope of 'Mavişehir Satellite Town Project'. It did not develop morphologically; hence it is an end product of a top-down process. Therefore Mavişehir developed with modernist planning discourses; it is a typical example of a housing estate with free standing blocks, with a segregated and introverted life. It does not welcome passers-by and the land use is zoned. When it was first built it was on the edge of the city but now its surroundings are developing fast with new gated communities and transportation systems. It is maintained by the housing estate management that is formed of the residents.

As a fragmented urban pattern and located on the periphery, it is more segregated. Space syntax analysis reveals that Mavişehir's intelligibility and synergy are not good enough to predict the whole structure and understand the pattern of the city from Mavişehir. Most chosen routes and integrated routes surround the neighbourhood rather than pass through. Pedestrian movement and groups are mostly correlated with local measures (R3 and connectivity), rather than main routes and global measure RN. On the other hand, stationary activities are neither strongly related to local streets nor to global streets. These activities can be seen on pedestrian routes in between villas, backyards of villas, playgrounds and where there are seating elements. They are dispersed over the neighbourhood as movement. Terraced single family houses with front and back yards between blocks increased connectivity and local integration values of Mavişehir I's pattern compared to Mavişehir II. Males, individuals, and adults were observed more than the other categories. Hence it is difficult to have co-presence and possibility of interaction between various groups. Walking is observed much more than lingering, as there are not any places to spend time within the neighbourhood.

Children in Mavişehir usually do not play outside on the streets; they either play with their friends in playgrounds or on basketball courts. It was interesting that they raised the safety issue during the focus group despite the security precautions. Although Mavişehir is not a gated community it can be classified as an invisible gated community because of the private safety guards. The neighbourhood is under surveillance day and night. It is mostly a homogenous neighbourhood with similar backgrounds of people. However, after the new developments around the neighbourhood, some residents have started to move into these more prestigious and new neighbourhoods with better facilities.

Questionnaires revealed that most of the respondents indicated lift and entrance of the building as their interaction places. They interact in the outdoors sometimes and visit each other sometimes. Perception of walking is strongly related to sense of community. Moreover, males and females do not have a difference regarding the safety matter; they both feel safe in the neighbourhood during the day and night. Although in the interview they mentioned that they can easily allow their children to play outside, there is not any single child observed playing outside without the supervision of an adult. They are neutral about sense of community and friendship issues. Nevertheless, near home environment, frequency of social interaction in the outdoors, and maintenance have an influence on the sense of community and neighbouring.

CHAPTER 9 COMPARISON AND DISCUSSION

The three case studies investigated in this research reveal different urban patterns related to their morphological processes. First case study, Alsancak, started to develop by the seventeenth century, but prospered in the nineteenth century under Levantine Culture and the trade activities of the harbour. After the fire and the establishment of the new Turkish Republic, the city encouraged modern planning approaches. Moreover, most parts of Alsancak were developed from scratch following Danger and Prost's Plan in 1925. On the other hand, Karantina started to develop as the city extended along the bay with the improvement of transportation systems by the late nineteenth century.

In the early period of the Republic there were family apartments of four to five storeys high and gardens, Izmir traditional houses with courtyards, and detached mansions surrounded with gardens along the seashore. However in the 1950s and 1960s, with the Urbanisation and Condominium Act, most of the two-storey bay window houses and family houses with gardens were knocked down in order to build eight-storey apartment blocks. Therefore the old city pattern shifted from a public/private dichotomy to crowdedness and abrupt connection between indoor and outdoor, which resulted in the degradation of privacy and publicness. In-between spaces were disrupted by wrong planning decisions and development plans. The plot-based approach produced similar types of urban structure, and building regulations did not cover climatic and cultural features of the city.

> Inlaid furniture was not fancied anymore, and another fashion emerged called as 'cubic'. It was easier to use this cubic furniture in terms of cleaning. Then it was the turn for our houses after the furniture. Building contractors came and told the residents that their life will be more comfortable. First they built 'Anadolu Apartment' in Göztepe and then it started around this quarter. Where are you living? I am living in an apartment. This fashion became an epidemic between residents and everybody got their garden houses knocked down. Gardens with wrought iron, *en fer forgé* fences, they are all demolished, it is a pity. Now they are regretful and they are moving to Urla and Narlidere. Alsancak is worse as it was entirely ruined (Ayşe Mayda).

> It is difficult to find the old sincerity due to the economical difficulties of people and life is not as comfortable as before. We are very old. We had the chance to raise our children. Your job is harder, population is increased. In early times, there used to be one household per house in the garden. Now 30 households moved into the same plot. While it was one household (mother, father, and children) in a house, now it is seven storeys with 15 flats and 30 people. The City became crowded (Yildiz Bakkaliye).

By the 1990s the individual could not accommodate his car within the disproportionately crowded over-compact neighbourhoods and city centres. With immigration, mobility, changing life styles, economic structure, different employment types, and the expansion of the city, the urbanite looked for other solutions. In the 1990s Mavişehir emerged as free-standing high-rise buildings with grand open spaces and car parking areas for its residents at the periphery of the city. Therefore the most important thing for the elite urbanite was to find a place for his car, to be within the same environment together with the same backgrounds of people, and to feel safe. In this chapter three case studies are compared in terms of their urban fabric, in-between space and social interaction.

Alper (2009) examined the street network of Greek, Frenk, Turkish and Jewish neighbourhoods of early twentieth-century Izmir. He concluded that the Frenk district has higher indices of global and local measures compared to the other neighbourhoods. In the Alsancak Kültür Neighbourhood (formerly Frenk district) ruined parts of the city were totally transformed under the Danger and Prost Plan. Existing street patterns are composed of radial roads and intersections. As can be seen from the table 9.1 below, when Kültür Neighbourhood is analysed, integration, connectivity, choice, and intelligibility means are higher than in Karantina, and Mavişehir. However, local measurement “through movement” (Choice R800, 10 min walk) is higher in Karantina than in Kültür and Mavişehir. This might be because in local angular segment analysis, the street network of Karantina constitutes of more intersected streets at 90°, right angles. In terms of potential through movement or betweeness, local measures (smaller radii of choice) of Mavişehir and Karantina show higher possibility for the streets to be selected by their residents between the two nodes within the system. As Dalton (2001) mentions, people prefer linearity while they move and choose the

shortest, simplest path and the least angle between origin and destination. Thus, firstly "least angle of change" as a geometrical distance, and secondly the "fewest turn" as a topological distance are the most important factors affecting movement (Conroy, 2001; Hillier, 2005; Hillier et al., 2007 in Van Nes 2008; Turner, 2005).

Table 9.1 Mean Values of Space Syntax (SSX) for Each Neighbourhood

	Kültür			***Karantina***			***Mavişehir I***		
	Min	***Max***	***Mean***	***Min***	***Max***	***Mean***	***Min***	***Max***	***Mean***
Int_RN	0.518798	0.556384	0.533613	0.430036	0.498525	0.450736	0.328982	0.385393	0.346757
Int_R3	1.95859	5.13951	3.19226	1.27368	4.45999	2.93566	1.16341	4.77294	2.75453
Connectivity	2	20	6.25	2	13	5.50725	2	15	4.96739
Choice_RN	0	7.15631	5.42577	0	7.93161	5.31019	0	7.4778	5.19012
Choice_R800	0	4.11042	3.13864	0	4.35488	3.52033	0	4.60798	3.35024
Synergy (RN-R3)	R^2 Linear: 0.498			R^2 Linear: 0.047			R^2 Linear: 0.042		
Intelligibility (RN-Connect)	R^2 Linear: 0.458			R^2 Linear: 0.045			R^2 Linear: 0.067		

Regarding the part-whole relation (synergy) and intelligibility, the results in table 9.1 above reveal that Kültür has a better correlation between local and global integration values, which is also interpreted as the association between residents and outsiders or local and global communities (Chiaradia and Hillier, 2003 in TPR, 2004). This is also related with its centrality effect, as it is more central and also more accessible between local and global movements. Intelligibility is about how the person can perceive the spatial layout and orient himself within the system. One place can have connected streets, but if they are not well integrated with the whole then it would be difficult to understand the urban structure in terms of navigation. Hence, as the connectivity and the global integration measures are strongly related, the clearer will be the perception of the place for its residents and visitors (Hillier, 1996 in TPR, 2004). Therefore Kültür has better intelligibility within the structure of the city. What is interesting is that, although Mavişehir is in the green-blue range in the global integration model, and it has less

connectivity and integration values than Karantina, intelligibility and synergy measures are not very different between the two. Moreover, Mavişehir has slightly higher intelligibility/understandability than Karantina. This means that although Karantina is better integrated within the global system and more accessible, its connected streets and accessibility measure of those streets have less relation among each other. So it is clear that the connected streets of Karantina are not as well integrated as the ones in Mavişehir.

Table 9.2 Correlations between Landuse and Space Syntax (SSX)

	Kültür Landuse		***Karantina Landuse***	
Integration RN	R^2 linear: 0.702	p **	R^2 linear: 0.147	p*
Integration R3	R^2 linear: 0.755	p **	R^2 linear: 0.112	
Connectivity	R^2 linear: 0.838	p **	R^2 linear: 0.141	

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

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

As mentioned earlier space syntax correlates space with people, activities, function and landuse, as well as with the density, and demographic structure. Landuse is compared with the spatial structure of Kültür and Karantina. While Kültür reveals strong correlation with the integration and connectivity measures, in Karantina the relation is not strong enough to predict the landuse from integration and connectivity. As can be seen in the table 9.2 above, there is significant relation only between Int. RN and landuse.

Table 9.3 Correlations between Snapshots and Space Syntax (SSX)

Total Snapshots and SSX - R^2 Linear		**Kültür**			**Karantina**			**Mavişehir I**		
		R3	***RN***	***Con.***	***R3***	***RN***	***Con.***	***R3***	***RN***	***Con.***
Movement (Walk & Cycle)	*WD*	0.737	**0.901**	0.744	0.317	0.189	**0.347**	0.480	0.030	**0.504**
	Sun.	0.782	**0.885**	0.774	0.319	0.170	**0.352**	0.480	0.030	**0.504**
Stationary (Sit & Stand)	*WD*	0.665	0.683	**0.819**	0.210	0.090	**0.240**	0.086	0.068	0.074
	Sun.	0.585	0.564	**0.766**	0.275	0.081	**0.310**	0.086	0.068	0.074
Groups (Interaction)	*WD*	0.871	**0.967**	0.871	0.222	0.144	**0.256**	0.404	0.064	**0.407**
	Sun.	0.916	**0.931**	0.916	0.266	0.123	**0.297**	0.404	0.064	**0.407**

Hillier (2007) defines “Natural Movement” as the outcome of the relation between the urban structure and movement. Spatial layout is the main predictor, followed by the other attractors and landuse. As the grid is accessible and integrated, retail uses will locate themselves on these routes and multiply the effect of the pattern in terms of movement. When Hillier examined the relation between the form and the function, he concluded that there are two generic functional factors affecting this relation; intelligibility and movement. From the table 9.3 above, it is clear that Kültür as a central place has better correlations between movement, stationary pattern and interactional groups. In terms of movement integration-RN has a higher association with movement while stationary activities have better correlation with connectivity, and groups have slightly similar correlations with all measurements. In both Karantina and Mavişehir correlations are much weaker. While Karantina has higher correlation between RN and movement than Mavişehir, the relation between local measurements and movement is higher in Mavişehir. Read (1999) argues that in neighbourhood areas the relationship between global integration and natural movement is much weaker than the correlation with connectivity and local integration. It can be seen in the table 9.3 above that movement has higher relations with connectivity and R3 rather than RN does in Karantina and Mavişehir. Stationary activities reveal better correlations with global and local measures in Karantina than in Mavişehir. Moreover, groups in Karantina are better correlated with RN global streets. On the contrary, groups (interactions) expose higher correlations with local measurements in Mavişehir than they do in Karantina. For instance, in the table 9.3 above, during weekdays, 22% of the interactions-groups can be predicted from Integration R3 in Karantina, while it is 40% in Mavişehir.

When activity patterns are correlated among each other as can be seen in the table 9.4 below; there is strong correlation between stationary activities, movement, and groups both on Sunday and during weekdays. However, in Mavişehir on Sundays and during weekdays, movement and long-duration

activities have much weaker relation compared to the traditional neighbourhood cases. Therefore it can be concluded that in modern settlements there are not niches and in-between spaces that support stationary activities as these activities are mostly found in inner parts of the modern settlements. As Huang (2005) found in the study outdoor interactional spaces in high rise housing, these niches provide the possibility for long duration activities (Gehl, 1996), and allow the pedestrian flow on the main route.

Table 9.4 Correlations of Movement, Group, and Stationary Activities

Total	Kültür	Karantina	Mavişehir
Sunday Stationary & Sunday Group	.806 **	.963**	.805**
Sunday Move & Sunday Group	.968**	.942**	.766**
Sunday Move & Sunday Stationary	.640*	.864**	**.444****
WD Stationary & WD Group	.824**	.929**	.701**
WD Move & WD Group	.979**	.961**	.842**
WD Move & WD Stationary	.718*	.834**	**.382***

The table 9.5 below shows the total number and percentages of observations both for weekdays and Sundays. It is grouped under five sections, which constitute gender, interaction, age groups, main activity types, and socialising. From the snapshots it can be interpreted that there are slightly more males than females. Talking is grouped under socialising because people can walk/sit/stand and talk at the same time. There are more individuals rather than groups, except in Kültür on Sunday. People sitting in the cafes counted as one group; this group in fact contains sub-groups. Hence, due to cafe use in Kültür, there are more groups, “predetermined interactions” (Ferguson, 2007) and stationary activities. In both Karantina and Mavişehir there are more people walking rather than sitting and standing.

Table 9.5 Total Snapshots of Three Case Studies for Weekday and Sunday

TOTAL PEOPLE OBSERVED		Kültür		Karantina		Mavişehir I	
		Weekday	***Sunday***	***Weekday***	***Sunday***	***Weekday***	***Sunday***
		1388	*753*	*608*	*530*	*444*	*382*
Gender	*Male*	56%	58%	57%	60%	55%	53%
	Female	44%	42%	43%	40%	45%	47%
Interaction	*Group*	47%	57%	37%	41%	31%	46%
	Individual	53%	43%	64%	59%	69%	54%
Categories	*Children*	2%	2%	7%	7%	5%	4%
	Teenage	6%	12%	16%	22%	18%	19%
	Adult	88%	82%	65%	62%	69%	70%
	Elderly	4%	4%	12%	9%	8%	7%
Activities	*Sitting*	47%	36%	21%	16%	18%	19%
	Standing	23%	20%	34%	30%	25%	16%
	Walking	30%	44%	45%	54%	57%	65%
Socializing	*Talking*	74%	80%	55%	65%	67%	61%

Table 9.6 Focus Groups with Children

	Kültür	***Karantina***	***Mavişehir I***
Definition of the Neighbourhood	Dirty Noisy Green Enough	Clean/Dirty Peaceful Noisy/Quiet Green/Lack of Green	Green Lack of car parking
Problems of the Area	Dirtiness and Pollution Far and unkept playgrounds Gipsies in Kordon Adults using children's space Badly treated Animals	Cars Elderly people shouting at them when they play on the street Lack of green Street dogs Safety issues	Safety Issues, people they do not know in the park Animal mess Dirty and unkept playgrounds No swimming pool No fence Smell from the industrial site
Interaction Places	Fair site (Kültür Park) Kordon Seaside In front of Apartment Block	Near Home Environment At home, School Empty car parking area Alley, In-between Street Back Yard Park, Seaside On the Street	Parks Green Spaces Basketball grounds Sport Areas

In all case studies children and elderly are the least seen age groups on the streets whereas teenage and adult groups are the most seen. There are more children observed in Karantina on the streets than in Mavişehir and Kültür. This is because in Kültür there are not places for children to play near home. Front yards are either cafes or local shops. Back yards are not spacious, sometimes being used by concierges, or as car parking. In the focus groups analysis children mentioned Kültür Park (fair site), seaside, and in front of their apartment as playing places. Playgrounds are far apart and not well maintained, and adults also tend to use these places so the children cannot play properly. In Mavişehir, children indicated parks, open green spaces, and basketball and sport areas as areas to play; however they complained about the people they do not know in the park, unkept sport courts and animal mess. In Karantina, children were not happy that there is a lack of green space for them; they considered it noisy and dirty, in addition to the fact that there are safety issues, and cars on the street. Moreover elderly people can complain about the noise on the street and warn them to play somewhere else. In the definition of the area, some contradicted others; for example, by saying green or lack of green. However, they point out in-between spaces as their playgrounds, such as front yards, back yards, in front of their apartments, streets, car parking areas, and empty lots. As can be seen from the observations, in Kültür adults probably do not allow their children to play on the street, as it is crowded and difficult to supervise them. In Mavişehir, children in playgrounds are supervised by adults because the neighbourhood is wide and segregated. However Karantina's compactness makes it possible for parents to supervise their children from their windows and balconies comfortably, through 'eyes on the street' (Jacobs, 1961).

In the socio-demographical structure shown in table 9.7 below it can be seen that the respondents' average age is between 42 and 48 and they are mainly female. People living in Kültür have longer length of residency - between 10-20 years - than those in Karantina and Mavişehir. There is more ownership in Kültür and Mavişehir than in Karantina. All case studies have nuclear families. Largely,

people are from the service sector including health, accountancy, bank officers, and engineering. Although the education level of Mavişehir and Kültür is the same (68% graduates and postgraduates in Kültür; 72.2% in Mavişehir), the mean of education is closer to high school graduates in Karantina (see appendix 4 pie graphics).

> Nobody bothers anybody here. They are mature and intellectual people. There is only Alsancak and here. However, Alsancak is more cosmopolitan, but in Karantina there are more elite people. Alsancak is more mixed; here is the most sophisticated part of Turkey. Karşıyaka, Yalı, seashores are the most developed parts of Turkey. Population is increasing so it is not easy. There is not much of an immigration issue in here. Immigrants usually settle in slum areas. Rich people come and settle in this district" (Yildiz Bakkaliye Karantina).

> It is a homogeneous district. Their world-view is homogenous, their reaction to events is homogenous, their points of views are homogenous. Most of them are from here, not coming from somewhere else and living here for a long generation. There is not anyone from outside. Thus it does not decline, social ties are preserved. It is like an elite ghetto. There is not much diffusion (1379 Street Local Grocery Kültür).

Table 9.7 Socio-demographic Structure of the Three Case Studies

Socio-Demographical Structure	***Kültür***	***Karantina***	***Mavişehir I***
Population of all neighbourhood (TUIK 2008)	9.225	11.058	7.193
Age	48.88	42.21	45.98
Gender (1=male 2=female)	1.57	1.54	1.68
Length of Residency	3.04	2.37	2.17
Ownership (1=owner 2=tenant)	1.29	1.45	1.28
Household	2.71	3.08	3.06
Number of Children	1.07	1.27	1.24
Education	1.43	1.94	1.32
Occupation	4.01	3.83	3.48

(Gender 1= male 2= female / Ownership 1=owner 2=tenant
LR 1= less than 5 years 2= 5-10 years 3= 10-20 years 4= more than 20 years
Education 1= graduate and postgraduate 2= high school and institution 3= middle school 4= primary school
Occupation 1= retired 2= house wife 3= student 4= service sector 5= trade marketing business
6= manager director 7= self employed 8= science academic and education 9= art and music)

In all case studies approximately 30% indicated that they do not have many neighbours due to busy life styles or preferences. Kültür and Mavişehir know more people both in their neighbourhood and in their building. This might be because of the issue of ownership, as there are more tenants in Karantina. Number of neighbours visited and frequency of visits do not change significantly

over the three. Kültür has the highest frequency of social interaction among the three cases (see table 9.8 below).

Table 9.8 Neighbours-Frequency of Interaction-Visits in Three Case Studies

Number of People Known - Interaction - Visits	***Kültür***	***Karantina***	***Mavişehir I***
I don't have many neighbours	31.4%	33.3%	33%
Number of people known by name in the Neighbourhood	66.44	31.61	55.38
Number of people known by name in the Building	15.45	10.92	18.03
Number of neighbours you visit in the Neighbourhood	11.32	8.43	10.63
Frequency of visits (1-3 scale)	1.95	1.80	1.90
Frequency of social interaction in outdoors (1-3 scale)	2.60	2.39	2.37

1= Never 2=Sometimes 3= A lot

When the five-point scale questions are compared in the table 9.9 below, Mavişehir has the highest values for the perception of walking and safety, maintenance and management, and near home environment with means of 3.95, 3.80, and 3.70. However all case studies are neutral in terms of sense of community, friends, acquaintance and knowing people. Regarding the near home environment, Mavişehir residents agree that they have enough green space for children and landscaping near their building block; however Kültür and Karantina residents disagree.

Table 9.9 Five Point Scale Questions in Three Case Studies

Scale from 1 (SD) to 5(SA)	***Kültür***	***Karantina***	***Mavişehir I***
Perception of Walking and Safety	3.75	3.61	3.95
Sense of Community Neighbourhood Scale	3.06	2.98	3.40
Maintenance and Management	3.36	3.17	3.80
Friends, Acquaintance and Knowing People	2.91	2.97	3.28
Near Home Environment	2.15	2.19	3.70

1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree

As explained in the research methodology chapter, where residents interact is a multiple-choice question. Therefore interactional places are grouped into two categories. First, interaction in around the building covers five indices, which are entrance of the building, lift, staircase and hall, window, and balcony. Second, interaction in and around the neighbourhood involves five indices comprising street and sidewalk, neighbourhood open spaces, parking lots, cafes, and other

places. Therefore as can be seen in the table 9.10 below, all cases chose two indices out of five as interactional places of the residents. In the Kültür neighbourhood residents mainly indicated streets and sidewalks (81%), entrance of the building (80%), and cafes (45%) as interaction places. In Karantina - in order - streets and sidewalks (80%), entrance of the building (79%), and the staircase and hall (50%) were chosen. In Mavişehir, lift (82%), entrance of the building (73%), streets and sidewalks (57%), open spaces and parking lot (%52, 51%) were selected. In addition in Mavişehir, in front of their apartment block was generally chosen as a place for planting with 83%, while 26% of the residents in Kültür and 8% of the residents in Karantina indicated that their in-between space is used for planting. These spaces, however, do not offer seating for adults or playgrounds for children.

Table 9.10 Interaction Places in Three Neighbourhoods

Interaction Building - Neighbourhood Index	***Kültür***	***Karantina***	***Mavişehir I***
Interaction in around the Building (5 indices)	1.80	2.18	1.90
Interaction around the Neighbourhood (5 indices)	1.87	1.78	2.04
Planting, Playground, Seating, and Chatting (4 indices)	.42	.36	1.39
Entrance of the Building	80%	79%	73%
Lifts	37%	27%	82%
Staircase and Hall	31%	50%	26%
Street and Sidewalk	81%	80%	57%
Neighbourhood Open Spaces	28%	38%	52%
Parking Lots	26%	28%	51%
Cafes Local Shops	45%	27%	36%

In the correlation between length of residency (LR) and other variables in the table 9.11 below, it can be seen that Mavişehir has not got any relation between sense of community and the length of residency while the other two cases have. Both Mills (2007) and Lund (2002) discuss that with the new urban developments, traditional gathering places are disappearing or transforming into bigger-scale developments like shopping malls and chain supermarkets. However, Mavişehir has the highest sense of community scale so, as Lund (2002)

emphasises, length of residency might not be significantly related with the development of the sense of community. On the other hand LR has a relation with the number of people known by name in the building and neighbourhood. Exceptionally, in Mavişehir, LR is not related with the people known in the neighbourhood whereas it does affect the visits differently to the other two cases.

It might be concluded from the table 9.11 below that in traditional urban patterns LR has an influence over the sense of community, people known in the neighbourhood, and friends and acquaintances. Nevertheless, in new urban patterns, length of residency is related with the interaction around the neighbourhood and number of people known in the building, as well as the visits to neighbours. From the logistic regression analysis of Karantina, it is clear that (p= .015 B= 1.559) as the LR increases, 56% of people are likely to move from the neighbourhood. This is also related with the problems of the neighbourhood, which is explained in the second case study.

Table 9.11 Correlations with Length of Residency in Three Neighbourhoods

Correlations with Length of Residency	***Kültür***	***Karantina***	***Mavişehir I***
Sense of Community	**.286***	**.295****	.116
Number of People Known by name in the Building	**.319****	**.219***	**.246***
Number of People Known by name in the Neighbourhood	**.215***	**.305****	.160
Number of Neighbours you visit in your Neighbourhood	.107	.168	**.212***
Friends and Acquaintance	**.308***	**.321****	.095
Planning to move to another Neighbourhood	.032	**.220***	.049
Interaction around the Neighbourhood	.058	.011	**.278****
Interaction in around the Building	-.018	.025	.157

All case areas have correlations between sense of community (SC) and visits to neighbours and frequency of visits, people known in the building, frequency of social interaction in outdoors, as well as with maintenance and management (see table 9.12 below). Both Karantina and Mavişehir have a relation between SC and near home environment (NHE). In Kültür there is not any correlation between SC and NHE. This might be due to the cafe use in front of the buildings.

There are not many buildings that are not for commercial use. Thus residents cannot personalise their in-between spaces. As researchers (Abu-Ghazzeh, 2000; Altman, 1975; Brown, 1969) emphasise, territoriality and personalisation have an impact on sense of belonging and community. On the other hand, as Gehl (2006) mentions, cafes and commercial use on the ground floor are important urban functions that encourage the people to have close encounters both with buildings and with the others on the street. According to Gehl transition zones have the edge effect where the individual can lean and have a good view of the street or public space. In addition, with all the niches, extensions and corners, it gives possibilities for various activities. Extension of the shops and street vendors encourage the interaction between the seller and the buyer (Yatmo, 2008). Local groceries such as *bakkal* are an important element in traditional neighbourhoods. In addition to encouraging interaction they are also the wardens of the neighbourhood.

> Indeed a *Bakkal* knows more about the neighbourhood than *Muhtar,* because he intermingles with the life of the residents and observes everyday life (154 Street Shopkeeper).

As with LR in table 9.11 above, SC (table 9.12 below) has a relation with the number of people they know in their neighbourhood, both in Kültür and Karantina but not in Mavişehir. Positive spatial characteristics of the neighbourhood and the interaction among neighbours within the neighbourhood open spaces are associated with SC in Mavişehir. Therefore as residents have a higher sense of community they are less likely to move from their neighbourhood, as there is a reverse correlation in Mavişehir. As Tylor (1939) mentions, inadequate leadership might result in the decline of the community. Therefore management and well kept places are one of the most important issues that contribute to the sense of community. Skjaeveland and Garling (1997) emphasize, as the neighbourhood attachment increases, people are more likely to interact. Hence in Mavişehir sense of community is higher than in the other two case studies; this might be for the reason that as people has a higher sense of community in Mavişehir they are more likely to interact in the neighbourhood

open spaces. On the contrary as various researchers (especially new urbanists Calthorpe, 1993 in Nasar and Julian, 1995; Duany and Plater-Zyberg, 1991; Jacobs, 1961; Langdon, 1988; Lund, 2002) state, traditional neighbourhoods and mixed use areas have a higher sense of community than the modern urban developments. However in this study it is found that the new modern settlement has a higher sense of community than the traditional ones do. There might be numerous reasons underlying this that are related with urban sociology. Moreover, it has to be mentioned that a sense of community variable formed of eleven questions might not be enough, as sense of community is a wider phenomenon (Lund, 2002).

Table 9.12 Correlations with Sense of Community in Three Neighbourhoods

Correlations with Sense of Community	***Kültür***	***Karantina***	***Mavişehir I***
Interaction around the Neighbourhood	.169	.129	**.339****
Interaction in and around the Building	.062	-.014	.207
Positive Spatial Characteristics of the Neighbourhood	.145	.065	**.236***
Positive Social Characteristics of the Neighbourhood	.106	**.222***	.188
Number of People Known by name in the Building	**.442****	**.457****	**.322****
Number of People Known by name in the Neighbourhood	**.367****	**.295****	.092
Number of Neighbours you visit in your Neighbourhood	**.328***	**.329****	**.372****
Frequency of Visits to People in the Neighbourhood	**.309***	**.443****	**.261***
Frequency of Social Interaction in Outdoors	**.519****	**.361****	**.433****
Maintenance and Management	**.699****	**.646****	**.791****
Planning to Move	.078	.187	**-.284***
Near Home Environment	.216	**.288****	**.519****

In the t-tests of gender and ownership significant correlations of all case studies are indicated in a dark colour (see table 9.14 below). In the second case study, Karantina, interaction in and around the building, people known in the neighbourhood and frequency of visits to neighbours reveal significant differences between male and female. In Mavişehir the only significant change is between owner and tenant in the interaction around the neighbourhood, and between female and male in the frequency of visits to neighbours.

Table 9.13 Gender and Safety in Three Neighbourhoods

Gender and Safety		*Kültür*	*Karantina*	*Mavişehir I*
Neighbourhood Character Safe 0= No 1= Yes	**M**	.56	.59	.94
	F	.60	.59	.85
I feel safe and comfortable in this Neighbourhood (1-5 point scale)	**M**	3.74	3.75	4.31
	F	4.00	3.70	4.00
I feel safe walking in my Neighbourhood during the day	**M**	4.11	3.95	4.38
	F	4.13	3.85	4.16
I feel safe walking in my Neighbourhood during the evening	**M**	3.72	3.45	4.28
	F	3.56	3.03	3.84

Table 9.14 T-tests in Three Neighbourhoods

	Sense of Community			**Interaction in and around Building**			**Interaction around Neighbourhood**			**People Known in Building**			**People Known in Neighbourhood**		
	1	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**
Owner	3.07	3.04	3.37	1.84	2.14	1.91	1.90	1.82	**2.16**	16	12	20	74	33	64
Tenant	2.91	2.91	3.18	1.69	2.16	1.90	1.72	1.71	**1.63**	12	9	15	42	29	32
Male	2.99	2.90	3.45	1.78	**1.95**	1.69	2.00	1.75	1.81	16	12	18	89	**44**	65
Female	3.16	3.06	3.32	1.98	**2.35**	2.01	2.02	1.89	2.07	14	10	17	48	**22**	42

	Frequency of Interaction			**Frequency of Visits**			**Friends and Acquaintance**			**To go Somewhere on Foot**			**Perception of Walking**		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Owner	2.64	2.43	2.38	1.97	1.80	1.97	2.94	3.08	3.29	.73	.78	.71	3.79	3.64	3.91
Tenant	2.48	2.32	2.30	1.85	1.77	1.73	2.66	2.82	3.22	.66	.66	.83	3.66	3.59	4.02
Male	2.56	2.36	2.22	1.91	1.61	1.58	2.87	2.93	3.14	.75	.70	.81	3.78	3.66	4.04
Female	2.68	2.42	2.43	2.00	1.92	2.00	3.01	3.03	3.25	.79	.77	.74	3.92	3.53	3.85

1= Kültür Case Study **2**= Karantina Case Study **3**= Mavişehir Case Study

Residents in Mavişehir chose 'neighbourhood character safe' more than the other case studies. They all agree that they feel safe and comfortable in their neighbourhood both during the night and in the day; Mavişehir has slightly higher results than the others. In addition, usually males feel safer than females (see table 9.13 above). From the table 9.15 below, it is clear that 83% of the

residents in Mavişehir chose their neighbourhood as a safe place, while it is 60% in Karantina and 56% in Kültür. The table reveals the spatial and social characteristics of the three case studies. The most distinctive characteristics that stand out in the list are highlighted below. The first case study, Kültür is found to be more crowded, interesting, and lively and varied than the two. The second case study, Karantina, is found to be more ordinary, plain, and simple than the others. Both Kültür and Karantina are found to be more central and familiar than Mavişehir. Finally, the third case study, Mavişehir, is found to be a more peaceful, safe, pleasant, quiet, clean, spacious, comfortable, well kept, and relaxed place.

Table 9.15 Neighbourhood Characteristics in Three Neighbourhoods

	1	**2**	**3**		**1**	**2**	**3**
Distinctive	32.4%	24.8%	44%	***Simple***	17.6%	62.8%	51.9%
Ordinary	21.6%	58.9%	23%	*Complex*	22.5%	20.9%	10.2%
Plain	29.4%	71.3%	36.7%	***Peaceful***	48%	62%	82.6%
Ornate	45.1%	14.7%	35.8%	*Anxious*	10.8%	17.8%	1.8%
Interesting	57.8%	31.8%	40.4%	***Safe***	55.9%	59.7%	88.1%
Boring	4.9%	34.9%	13.8%	*Unsafe*	11.8%	24.8%	1.8%
Not Crowded	4.9%	38%	20.2%	***Pleasant***	60.8%	48.8%	65.1%
Crowded	72.5%	45%	53.2%	*Unpleasant*	3.9%	22.5%	4.6%
Natural	29.4%	48%	52.3%	***Quiet***	17.6%	45.7%	69.7%
Manmade	21.6%	28%	16.5%	*Noisy*	48%	41.1%	9.2%
Familiar	58.8%	59.7%	45%	***Living***	65.7%	40.3%	39.4%
Unfamiliar	6.9%	20.9%	18.3%	*Lifeless*	2.9%	34.9%	21.1%
Exciting	31.4%	31.8%	35.8%	*Friendly*	45.1%	48.8%	33%
Depressed	6.9%	29.5%	8.3%	*Unfriendly*	5.9%	27.1%	26.6%
Clean	46.1%	36.4%	78%	***Comfortable***	50%	33.3%	64.2%
Dirty	23.5%	49.6%	3.7%	*Uncomfortable*	7.8%	43.4%	4.6%
Central	87.3%	89.9%	56.9%	***Varied***	52%	32.6%	38.5%
Not Central	0	0	13.8%	*Monotonous*	5.9%	41.9%	17.4%
Spacious	41.2%	31%	81.7%	***Well Kept***	44.1%	29.5%	81.7%
Narrow	17.6%	55%	1.8%	*Un Kept*	20.6%	47.3%	3.7%
Relaxed	56.9%	67.4%	83.3%	*Stressful*	8.8%	17.1%	0.9%

1= Kültür Case Study **2**= Karantina Case Study **3**= Mavişehir Case Study

Table 9.16 Characteristics of the Neighbourhood Index in Three Neighbourhoods

Characteristics of the Neighbourhood Index	***Kültür***	***Karantina***	***Mavişehir***
Positive Spatial Characteristics	3.11	3.50	3.81
Negative Spatial Characteristics	1.92	3.15	1.72
Positive Social Characteristics	4.43	4.36	4.94
Negative Social Characteristics	1.00	2.46	1.05
Positive Management and Maintenance Characteristics	1.68	1.59	3.12
Negative Management and Maintenance Characteristics	.64	1.65	.14

Positive spatial and social characteristics are chosen more in Mavişehir, while the negative ones are chosen more in Karantina. There is also a big difference in terms of management and maintenance (MM) characteristics. As can be seen from the table 9.16 above, Mavişehir has much higher positive MM characteristics than the other two. This is because in Mavişehir, in addition to the municipality, there is a neighbourhood management, which deals with all the issues of the neighbourhood; whereas in Kültür and Karantina only the municipality is responsible for the maintenance. Although there are local associations such as “Alsancak Koruma ve Guzellestirme Dernegi” and MAVIDER “Mavişehir Koruma ve Guzellestirme Dernegi”, they do not direct or involve the residents in terms of local sentiment. Moreover, as the manager of MAVIDER, asserts they even encounter difficulties while they ask for the membership fees from the residents. Hence, whether because of financial problems or managerial problems, these local associations did not cooperate with municipalities and remained in the background.

Table 9.17 Correlations with 'Spacious' in Three Neighbourhoods

Correlations with Neighbourhood Character Spacious	***Kültür***	***Karantina***	***Mavişehir***
Positive Spatial Characteristics of the Neighbourhood	**.649****	**.552****	**.640****
Positive Social Characteristics of the Neighbourhood	**.614****	**.373****	**.559****
Interaction around the Neighbourhood	**.286****	**.267****	**.292****
Interaction in around the Building	**.237***	.141	.050
Frequency of Visits to People in the Neighbourhood	.095	**-.210***	**.199***

As Skjaeveland and Garling (1997) emphasise, spaciousness is one of the most important predictors in neighbouring. From all of the case studies it can be seen that spaciousness has a strong correlation especially with positive spatial and social characteristics of the places. In addition, spaciousness is also associated with the interaction in the open spaces of the neighbourhoods, but much weaker than the spatial and social characteristics of the neighbourhood (see table 9.17 above).

The table 9.18 below illustrates the correlation between near home environment and various variables. It can be seen that the activity in front of the building as well as the maintenance and management are associated with the spatial organisation of the near home environment in all cases. Moreover, in Mavişehir, perception of walking, friends and acquaintance, and frequency of social interaction are also related with the NHE.

Table 9.18 Correlations with Near Home Environment in Three Neighbourhoods

Correlations with Near Home Environment	***Kültür***	***Karantina***	***Mavişehir***
Frequency of Social Interaction	-.007	-.140	**.242***
Friends Acquaintance	.122	.201	**.409****
Number of People Known by name in the Neighbourhood	-.004	-.041	.011
Number of People Known by name in the Building	-.002	.053	-.045
Number of Neighbours you visit in your Neighbourhood	.093	-.080	.029
Planting, Playground, Seating, and Chatting	**.370****	**.208***	**.207***
Perception of Walking	.087	.018	**.541****
Maintenance and Management	**.238***	**.353***	**.732****

Table 9.19 Correlations with Interaction at the Entrance of the Building in Three Neighbourhoods

Correlations with Interaction at the Entrance	***Kültür***	***Karantina***	***Mavişehir***
Number of People Known by name in the Building	.082	.108	**.257****
Ownership	.158	-.035	-.037
Frequency of Social Interaction (HL5)	**.228***	.144	**.279****
Near Home Environment	-.093	.055	.041

It is interesting that only Mavişehir has a correlation between the interaction at the entrance of the building and the number of people known in the building (see table 9.19 above). It might be concluded that interaction at the entrance of the building is more important for modern urban settlements in terms of the neighbours known by name in the building. In both Mavişehir and Kültür there is a correlation between the interaction at the entrance of the building and frequency of social interaction, but this is not the case in Karantina. In Alsancak front yards are used as cafes or shops and in Mavişehir there are open green spaces around the building block, which are used for planting. However, in most parts of Karantina, entrances are too narrow and there is not any gradual connection between the building and the street. As you step outside you are directly in the public. There are no soft edges, transition zones, edge or supporting spaces (Gehl, 1986; 2006) like seating areas, or niches along the facade. Except for the old traditional houses, spatial organisation of apartment's entrance prevents the possibilities of activities and it does not support staying. In Mavişehir there is better correlation with near home and interaction issues for the reason that residents also perceive their neighbourhood open spaces as their part of their near home environment.

Table 9.20 Correlations with Friends and Acquaintance in Three Neighbourhoods

Correlations with Friends and Acquaintance	***Kültür***	***Karantina***	***Mavişehir***
Planning to Move to another Neighbourhood	.110	.171	**-.259***
Maintenance and Management	**.575****	**.500****	**.590****
Planting, Playground, Seating, and Chatting	.070	.154	**.348***
Frequency of Visits	**.401****	**.425****	**.438****
Frequency of Social Interaction in Outdoors	**.555****	**.468****	**.509****

As can be seen in the table 9.20 above, friends and acquaintance is strongly correlated with the maintenance and management, frequency of social interaction in outdoors, and frequency of visits in all case studies. Only in Mavişehir are planting, sitting, and chatting in front of the building related to friendship. Moreover as they develop friendships and acquaintances they are less likely to move to another neighbourhood.

> We have been here for 83 years, there is not any change in the neighbourhood, it is always the same, and here people are quiet and inoffensive. There are some neighbours who are sincere but there is not much. There used to be in the past. Now when old people left and new people come, it has changed. I think this is because of economical problems. People do not see anything else because of their matters and problems (142 Street Shopkeeper Karantina).

> For 20 years I have been here, and recently it is difficult to find the same neighbourhood relations or friendship as before among people. It is because elderly people died and a new generation came. This generation is very disrespectful and snobbish. It was completely dissimilar 20 years ago, now quite a different community has formed. A community who doesn't respect, consider, and love each other. I guess all these are happening because of TV, soup operas, and the internet (154 Street Shopkeeper Karantina).

> No there has not been any change in the social relations for 20-25 years. It is the same, their dressing styles, and philosophies are more or less similar. Moreover if there is someone out of this circle, he/she is kind of assimilated within this society. I think it is because of 'natural control of the community'; certainly there must be differences in their essence but 'natural control of the community' is the driver (1379 Street Shopkeeper Kültür).

Using a private car is as high as walking and using the bus. Cycling is not very common; roads are not designed with consideration for cyclists. It is also important to mention here that according to TUIK, car ownership has increased 22% from 2005 to 2009 in the Aegean region. There are no significant differences between the use of cars and bus and walking on foot among the three case studies, as can be seen from the table 9.21 below. However to go somewhere on foot and interaction around the neighbourhood are correlated in Kültür and Karantina, but not in Mavişehir. Furthermore only Kültür has a relation between walking on foot and the interaction in and around the building. All case studies have relations between perception of walking and sense of community as well as interaction around the neighbourhood. Kültür has the highest correlation with interaction around the neighbourhood while Mavişehir has the highest with sense of community (see table 9.22 below).

Table 9.21 Walking, Bus/Car Use in Three Neighbourhoods

	Kültür	**Karantina**	**Mavişehir I**
Using car	69%	53%	64%
Using bus	61%	65%	58%
On foot	75%	71%	72%

Table 9.22 Correlations with Walking in Three Neighbourhoods

Correlations with Perception of Walking and Safety	***Kültür***	***Karantina***	***Mavişehir***
Interaction around the Neighbourhood	**.448****	**.251****	**.319****
Sense of Community	**.481****	**.401****	**.640****
Correlations with To go somewhere on Foot			
Interaction around the Neighbourhood	**.222***	**.365****	.100
Interaction in and around the Building	**.299****	.082	-.039

All neighbourhoods indicated car parking as the first main problem; but only Mavişehir residents did not cite any other problems, while in Kültür they mentioned the noise, maintenance and management; and in Karantina they pointed out physical and design factors, maintenance and management, and environmental issues (for detailed information see case studies). Based on this, it can be concluded that people in Mavişehir are quite satisfied with their environment and like to continue to live in the same neighbourhood (71%) even if there were no financial constraints. This percentage is quite similar to that of Kültür, with 58%. On the other hand in Karantina 64% of people are more willing to move to another place (see table 9.23 below). As McKenzie (1921) discusses, there are two types of neighbourhoods, one with personal choice and the other with economic compulsion. Therefore when their economic status increases people tend to move into a better neighbourhood. In addition, stability in residence is the basic element, which enhances the local sentiment and sense of community. In an environment with a drastically changing population, opportunities to develop local sentiment will be prevented (McKenzie, 1921). As can be seen from the results, Karantina residents are more willing to change their neighbourhood if there are not any financial issues. In this neighbourhood there is no neighbourhood association. Former sports clubs do not operate as before, and are mostly forgotten.

> In here, there are not many young people left, there are mostly elderly residents; people who are retired, elderly mums and fathers. Youth generally moved out to Europe or other cities, neighbourhoods such as Narlidere, Balcova, Buca, Sirinyer, and Karsiyaka. Only elderly people stayed in this neighbourhood (312 Street Shopkeeper Karantina).

This neighbourhood is settled, nothing will change. New young people are coming, they have luxury cars, computers, new technologies, we don't know. In the past whoever went out of home used to go to *Kahvehane* (Male coffeehouses). Now there is not many, everybody is at home. They are locked in with their computers. There used to be coffeehouses, young people used to come and we chat but now that coffee culture has disappeared. There are some in Kordon and Güzelyalı but they are luxury, because before there were neighbourhood coffeehouses where we went with friends. Now everybody is at home (Yildiz Bakkaliye).

Table 9.23 Main Problems in Three Neighbourhoods

		Kültür	**Karantina**	**Mavişehir I**
Planning to Move	*Yes*	19%	30%	15%
	No	81%	70%	85%
If no financial constraints would like to live	*Same Neigh.*	58%	32%	71%
	Another Neigh.	36%	64%	26%
	Out of Izmir	6%	4%	3%
1st main problem		Car parking	Car parking	Car parking
2nd main problem		Noise	Physical and design issues	No Problem
3rd main problem		Car parking and noise	Maintenance and management	No Problem

CHAPTER 10 CONCLUSION

Cities are complex and constantly changing structures because of their physical, economic, and social features. Therefore it is almost impossible in our era to capture the issues related to the formation and functional processes of cities through one research method. Various overlapping methods might at least contribute to a better understanding of socio-spatial relations within the urban fabric. As various researchers emphasise it is a precondition to merge empirical studies with analytical studies (Perdikogianni, 2007). This study explored the relation of in-between space organisation and social interaction in three different urban patterns of neighbourhoods through using a mixed method approach. By correlating and overlapping the results of each one, a more holistic comprehension of the dynamics involved is achieved.

To refer back to the research problem and question, at the beginning of the study the research concentrated on the problem of modern settlements and lack of social relations in those urban environments compared to the traditional urban street. As mentioned in the literature, neo-traditional settlements and compact neighbourhoods are on the agenda of new urbanists and in the regulation of local authorities regarding sustainability (but not yet in Turkey). Sense of community is being used as a tool by developers, designers, or the housing market to attract residents. The results of questionnaires support the ideas of Talen (1999) revealing that there are various intermediate variables affecting sense of community. Urban form, or 'spatial configuration' (Hillier, 1996) is only one aspect of it. Urban designers and New Urbanism can give people the possibility to interact, but developing social relations relies on a range of complex issues and their interrelations. Despite the lack of relation between the public and private space in the modern housing estates, sense of community can depend on safety, homogeneity, and socio-demographic issues.

All neighbourhoods are neutral about sense of community, friendship and acquaintance but it is important to emphasise that Mavişehir's sense of community is higher than that which is present in the two traditional neighbourhoods. This contradicts with the New Urbanist literature. This is because sense of community is not only related with the interaction places; it is related more with the frequency of interaction, visits to neighbours, and number of people known in the building and neighbourhood. Moreover, safety is one of the main factors affecting sense of community. As people feel safer when they walk, their sense of community is higher. In Mavişehir, people report they feel safer than in the other two neighbourhoods; in addition their perceptions of near-home environment are wider when compared to Kültür and Karantina. Regarding the questions about near-home environment, they also referred to common open spaces of their neighbourhood as close by their block. Males know more people in the neighbourhood in all case areas, and owners interact more than tenants in the neighbourhood. Interaction does not only occur in niches and in-between spaces - the walking environment also plays a crucial role. Perception of walking correlated with sense of community as well as interaction in and around the neighbourhood (streets and sidewalks, open spaces, parking lots, cafes, and other places) in all case studies. This also overlaps with the study that Lund (2002) conducted about perceptions of walking and sense of community. She revealed that opportunities for interaction, safe and interesting walking environment and pedestrian-friendly spaces have an impact on sense of community. They are all neutral about street vendors displaying their products on sidewalks, and they enjoy walking where there are local shops.

As some urban sociologists and theorists (Goist, 1971; Park, 1915; Wirth, 1938) discuss increased mobility, increased car ownership, different patterns of communication and degrees of specialisation have changed the structure of the family and created 'non-place' (Webber, 1964 in Hall, 1996). Webber (1964) asserts that city life is about interaction not about place. Planners and urban designers should accept the changes that have been brought about by communication technology and increased mobility, and develop schemes

according to that reality (Webber, 1964 in Hall, 1996). For instance, in Turkey, research conducted by TUIK (Turkish Statistical Institute) between 1990 and 2000 showed that immigration from city to city was 57.8% while from village to city it was 17.5%. Before, mobility was from rural to urban areas; however, with the degree of specialisation, transportation technology, and changes in the work and living places, people are more mobilised between cities and even countries. While in urban areas computer use was 23.2% and internet use was 18.6% in 2005, computer use increased to 47.7% and internet use to 45.5% in 2009 by TUIK. We are becoming more mobile and more dependent on computers and the internet. Family issues still matter, and people spent most of their time with their families; however today there are more nuclear families (80.7%) than extended families that there used to be (TUIK, 2006). In addition, 61.2% of adults in Turkey define themselves as happy depending on research conducted in 2010 by TUIK. In total report 80.7% are satisfied with their friendships, and satisfaction with relations with neighbours is 75% (TUIK, 2010).

With this shift within the family structure, women's employment and household type, as well as economic development and new lifestyle spatial configurations have been transformed both in cities and building types (Mills, 2007; Toker and Toker, 2003). Since the 1980s, with the changes in consumption and rapid urbanisation, new types of settlements were formed and developed around the edges of cities, which are called gated communities. The literature began to use the term 'segregation' to refer to gated communities. Issues such as high immigration into cities and social heterogeneity, fear of crime, security concerns, ability to be in the same environment with the same social backgrounds of people, property values and investment potential, modern facilities and life styles are the reasons for both developing and living in a gated community (Erkip, 2010; Garde, 2008; Vesselinov, 2008). Although Mavişehir is not a gated community encircled by a fence or a wall, it has a management and security system that is responsible for maintenance and safety issues within the neighbourhood. As Erkip (2010) discusses, because of the economic restructuring in Turkey, both the urban form and social structure is changing. Hence there are

invisible boundaries segregating the urban pattern depending on the social status and income level (Erkip, 2010) as in Mavişehir and to a certain extent in Kültür. Moreover, new settlements attract other developers around them over time and became more connected within their periphery and the city with wider motorways and various transportation types.

Still, modern housing estates are more introverted rather than extroverted due to the main routes circling instead of going through them. Most of the studies about modern settlement patterns found out that these parts suffer from a lack of vitality as there are less people and less activity, as well as movement. Hence movement is dispersed and concentrated mainly on the periphery of the housing units (Awtuch, 2009; Major et al., 1997). As Major et al. (1997) mention, post-war public housing in the UK segregated its public space from the surrounding street pattern. Therefore these types of settlements have reduced integration values. Further, in terms of virtual community, correlation between adults and children reveals an L-shaped graphic. This means that in modern estates there are lower numbers of children and higher numbers of adults usually gathered in the inner parts of the estate compared to the traditional urban streets. It is seen that in Mavişehir I, integration values are less than the values of Kültür and Karantina. Children usually gather in inner parts where the playgrounds are based. On the other hand, due to the internal pedestrian street running through the dwelling area, Mavisehir I. is more 'internally coherent' (Awtuch, 2009), particularly compared to Mavişehir II. In addition, another study conducted by MacDonald (2005) revealed that through embedding townhouse forms into large-scale new developments, it is possible to increase the street quality and safety of these places. This is also related with the intervisibility issue of the buildings that are located along the street by facing each other (Hillier, 2002; Jacobs, 1961; Van Nes and Lopez, 2007; Van Nes and Rueb, 2009).

It is, however, also difficult to say that Karantina and specifically Kültür have a strong correlation between children and adult numbers. This is because there is a lack of places for children to play outside. Especially in Kültür, playgrounds are

located far apart and there is only the Gazi Primary School garden, which is only open to students and is being used as a car parking area after the lessons end at 5pm until morning. This also creates traffic problems on the main traffic route. Although Major et al. (1997) mention that in normal urban streets there appears much stronger correlation between adults and children, it is difficult to accept this in Kültür traditional urban neighbourhood. Therefore other parameters should be considered such as traffic, density, safety, and adequate places for children to play, as well as appropriate environmental characteristics that are suitable and affordable for outdoor playing (Churchman, 2003). Due to time limitations this study could not analyse the different socialisation patterns, and the probability of encounter maps between different categories of people. Nevertheless in Kültür during the weekdays, people-to-people graphs showed that different times of the day might have different correlations between children, teenage, adults, and elderly. For instance, teenage and adult correlations increase in the evening, as well as for the elderly and adults.

Intelligibility and synergy are weaker in the two sub-centres compared to the city centre. Stationary activities locate themselves mostly on in-between spaces. As Gehl (1986) mentions, 70% of the long-duration activities happen along the soft edges of the in-between spaces. In Kültür, stationary activities are 70% during weekdays and 56% on Sundays, whereas in Karantina, they are 55% during the weekdays and 46% on Sundays, and in Mavişehir, they are 43% during the weekdays and 35% on Sundays. Long-duration activities are seen more in the centre and traditional neighbourhoods. Therefore when these activities are correlated with integration values, the highest correlation was found in the city centre. Stationary activities, such as sitting and standing, are mainly correlated with local measures particularly with connectivity both in the traditional urban patterns of Kültür and Karantina. These findings are also parallel with what Kim (2007) mentioned in his study that testing the street connectivity of new urbanism projects in the Atlanta region. Private streets, driveways, alleys, semi-public streets - all these in-between spaces have an impact on the connectivity of the street pattern. Movement is correlated with both global and local measures

in the city centre in the Kültür neighbourhood, while it is associated with local measures, R3 and connectivity in sub-centres of Karantina and Mavişehir. As Baran et al. (2008) mention, leisure walking is associated with high global accessibility as can be seen in the Kültür case study. On the other hand, Read (1999) also revealed in the study of five Dutch cities that higher mean connectivity has higher natural movement means especially in sub-centres. Groups Interactions are correlated with all the three measures (RN, R3, and connectivity) in Kültür but only with local measures in Mavişehir and Karantina.

In this study, type of interaction could not be examined. As Ferguson (2007) emphasises there are two types of interaction, whether a predetermined event or a chance encounter. During the observations only interaction groups were recorded but not specific types. In the study that Ferguson conducted he compared two spaces with the same gross pedestrian flow. He looked at the interaction not only as a static activity but also as the interaction while moving. As pedestrian flow and spatial accessibility increases levels of encounter also increase. This can be facilitated by spatial accessibility and configuration (Hillier and Hanson, 1984), and through movement, as well as the strong interface between scales of movement, global and local, and centre and edge (Hillier and Hanson, 1984 in Ferguson, 2007; Penn et al., 1999). Parallel to Ferguson, the three case studies in this research revealed that both stationary activities and movement have strong correlations with groups. In addition movement and long-duration activities are also strongly correlated. Only in Mavişehir, it was found that correlation between movement and stationary activities is weaker than in the traditional neighbourhood patterns. It might be concluded that stationary and movement activities are more segregated in modern urban settlements than in traditional neighbourhoods.

As Seamon (2007) suggests, for a phenomenologically-inspired space syntax study, observations can involve ‘who encounters whom’, ‘in what way’, and ‘how often’. This study showed the interactional locations through snapshot observations and found out where inhabitants interact and their frequency of

interaction through questionnaires. Therefore, returning to the main research question of space organisation and social interaction, in space syntax terminology, spatial configuration generates movement and through this movement it provides co-presence as well as 'encounter fields' (Hiller, 1996). Social interaction is one of the key elements in the sense of community and neighbouring. This study showed that integration values of Kültür have higher movement and co-presence possibility compared firstly to Karantina and secondly to Mavişehir. Therefore, frequency of interaction between residents is found to be higher in the Kültür neighbourhood. There are more diverse territorial extensions in Kültür because of the mixed land use. 'Third places' (Oldenburg, 1999) such as cafes, local shops, groceries through spilling out from the interior space to outside, increase the possibility of stationary activities and interaction among people as well as buyer and seller (Gehl et al., 2006; Mehta, 2009; Yatmo, 2008). On the other hand when the ground floor is in commercial use it does not allow for the possibility of personalisation for the residents to use their front yards. Hence it can be seen in Kültür that many buildings have side entrances. Architects and urban designers should also consider these spaces between buildings. At least two adjacent buildings could be located having side entrances facing each other. How the entrance of buildings and streets are configured was studied with interface maps by Hillier and Hanson (1984). They referred to the number of buildings adjacent and directly permeable to that space as 'constitutedness'; and as the territorial depth increases between the entrance and the street it becomes less constituted. Later on Shu (2000) as well as Van Nes and Lopez (2007) studied the degree of constitutedness and intervisibility in space syntax. Moreover Lopez (2001) suggested in his study that doors were located every seven to nine meters, 63% transparent façade, and edge zones between 0.7m - 2.00m. Both Lopez (2001) and Huang (2005) proposed niches or edge zones for pedestrian interaction without interfering with the movement. In this comparative case study Karantina has higher constituted streets compared first with Kültür and then with Mavişehir. On the other hand residents of all neighbourhoods chose the entrance of the building as

the interaction place with a percentage of over 70%. In addition frequency of social interaction in the outdoors is similar, except for Kültür, which was higher. The interesting point here is that, although Karantina has more constituted streets than the other two cases; there is not any significant correlation between interaction at the entrance and frequency of social interaction in the outdoors. The number of people known in the building does not change either; indeed in Karantina fewer people are known in their neighbourhood compared to others. Constitutedness is important for street life and safety (Hiller, 2002; Van Nes and Lopez, 2007) but it is not sufficient in itself to foster the liveliness and prevent crime. As mentioned above, streets in Karantina are too narrow and there are not spacious places in front of the apartment blocks for residents to linger and interact. Buildings' entrances along the seashore and old traditional bay window houses' three-dimensional entrances are the exceptions. Therefore this supports the discussion by Skjaeveland and Garling (1997), revealing that spaciousness is an important indicator for neighbouring. As Sailer and Penn (2007) found out in the study of an office space, narrow corridors and poor visibility inhibit the possibility of interaction. It is the same for the urban fabric, as can be seen in Karantina.

Mahalle disappeared as a concept; although some new projects have tried to apply the term for revitalisation of old neighbourhood life to attract the housing market (such as 35th street in Izmir, they promise to provide safety and neighbourhood relations through their new urbanist approaches). Karantina is undergoing social transformation: the younger generation has left, old people have passed away, new people have come, and there are more tenants and high mobility; and in relation with these issues there is subsequently less sense of community. Although it is convenient for "village-like interaction" (Garde, 2008), lack of space results in neighbourhood spoiling. It is also related with the transformation of building plots. Earlier detached houses with gardens were knocked down and replaced with apartment blocks within the same parcel lot. This resulted in the degradation of in-between space typology. In Alsancak the situation was different because the Kültür neighbourhood was formed from zero

without referring to its earlier urban fabric. Therefore streets were wide enough to accommodate apartment buildings with front and back yards. It is important to understand society's needs; for instance, how to accommodate cars, and to accept the reality rather than being nostalgic. Another issue is that sub-centres are neglected firstly due to the scarce funding from local governments, and secondly because city centres are always on the agenda of municipalities as they represent the image of the city in terms of marketing strategies as well as its wealthy residents who have political relations and powerful influence on local authorities (Erkip, 2010).

Consequently, in-between space is important because it supports lingering activities in the neighbourhood, and gives opportunity for personalisation and self-expression which also influences the sense of belonging. By affording stationary activities these spaces increase safety and social control and avoid neighbourhood spoiling. Moreover they provide connectivity within the urban pattern; a pleasant and attractive walking environment with landscape and local shops' extensions. These in-between spaces are suitable for niches and seating elements so that elderly people can sit and relax; they are important for providing a safe and learning environment for children in the near home environment, and are also important for the thermal comfort of outdoor places.

Whether as a result of modern planning and design approaches, regulations, or rapid urbanisation, the interface between the building and street has been lost. For the variety of interactions and activities that this intermediate space provides, proximity of buildings and their relation to the street is important. In Mavişehir, the only extension of private space is the space used by concierges or in-between spaces such as verandas of single family row houses located in the middle of blocks, as well as the green plot area surrounding each block. In Kültür, due to the street pattern and mixed land use, there are temporary in-between spaces, territorial markings, transparent in-between space, spilled out, intermingled, and slithery in-between spaces because of territorial extensions and an informal economy. In Karantina, territorial extensions can be seen on

Mithatpaşa Street. While only a few traditional Izmir houses, old mansions, early republic period houses, and some apartments have a three-dimensional relation between the street and the entrance, most of the apartment blocks lack this relationship. Hence the interface between the building and the street is unable to embrace the topography of the area.

In the lack of in-between space there might be less interaction possibility. This does not mean that with the gradual relation between private and public space, sense of community will be high; as mentioned, there are other factors for neighbouring. Hence we should be more sceptical about the reasons for this, in the search of lack of neighbouring and social relations rather than putting the blame on urban form. Nasar (2003) found that neither reduced auto-use nor compact urban pattern produced a higher sense of community in a traditional development than in a suburb. His study agrees with the study of Campbell and Lee (1992) in terms of neighbouring relations of suburban residents. In reality, suburban areas can be a pleasant place opposite to new urbanists' discussions. Moreover, as an important example from Turkey, Erkip (2010) in the case study of Ankara, one traditional neighbourhood in the city centre was compared with a gated neighbourhood. Results revealed that neighbourhood relations are distant, and the residents of both types of neighbourhoods have similar values about community, and they do not participate actively in neighbourhood associations. This case study shows similarities with Erkip's study in the way that, regardless of the urban pattern and location, frequency of visits to neighbours, number of people known in the building and neighbourhood, friendship and acquaintance between residents are slightly similar. When interaction and sense of community relation are examined, it should be noted that sense of community parameters are changing, as the community is transforming. In addition to actual interaction places, virtual interaction networks might be considered within these parameters. Space syntax study can be correlated with a sense of community issues. Therefore this study supports the idea of Montello (2007) and Read (2005), as space syntax can treat spaces equally in terms of movement and accessibility; in fact they might have different space-time experiences, as well as

function. For instance, there can be two streets with the same integration values, but due to topographical and functional reasons it might be tricky to compare these two streets equally in terms of movement. Therefore space syntax analysis should be definitely used in combination with qualitative methods, especially with observations.

To summarise the main outcomes of this study are as follows. Firstly, it is important to use mixed methods, as one method can close the gap of the other method. Secondly, space syntax analysis revealed that connectivity of the street pattern is important for long-duration activities. When traditional and modern settlements are compared, it has been seen that stationary activities are less integrated with pedestrian movement in modern developments. Thirdly, in-between spaces encourage social interaction and increase the frequency and chance of encounter. However this is only one factor in developing sense of community and neighbouring. Structure of the community is changing every day. Life styles, preferences, prestige, safety, accommodating the car, and spaciousness are becoming much more important for choosing a neighbourhood. Although traditional and mixed-use neighbourhoods provide higher frequency of interaction, their sense of community and friendship can be lower compared to modern developments. Therefore urban design should be able to provide various space-types - both homogeneous and heterogeneous - for every type of group and social background.

From Case Study to General Concluding

We came across with different morphological approaches, theories, and analysis together with Conzen, Whitehand, Kropf, Moudon, Alenxander, Lynch, Hillier, and many other researchers. Their concerns were related to the analysis and conception of cities, besides how the city functions. For this purpose various schools such as British-Germano, French, and Italian School pursued different methods in order to understand and examine the urban form of the city. As mentioned in the urban morphology and research methodology chapter, this study proposed a circular analysis method and theory. It starts analysing and

understanding the whole system and subsequently explores the sub-units. Furthermore these sub-units conduce to get the whole picture of the city as Alexander and Hillier applied. This is a circular process, mutually supporting each other and helps to perceive the city (for detailed explanation see figure 2.1 on page 30).

Similar to British-Germano School, this research adopted the question of "how" and "why" to understand the formation processes of the city. As Lynch (1981) states we have to understand what is happening first in order to shape the future. From past to present a range of theories, movements and approaches developed regarding the city. Some were concentrated on the aesthetic values, some on the social issues, some on the function, and some were more analytical, however they were either criticized or accepted as the most convenient solution for that particular time. Therefore it is really important to grasp the recent situation within its reality and context. Cities change and evolve through time. As Moudon (1997) emphasises *form* (understanding the physical structure), resolution (conception of space from different scales), and time (history) are important elements to analyse the urban fabric. Moreover, space should be perceived out of its physical boundaries (Lefebvre, 1991). Which realities shape that space, under which power relations? Every city has its own reality but there are some general issues which gives us the possibility to compare cities or to learn from them. As Lefebvre (1991) states we have to look how different societies attach meaning to their spaces. There is a difference whether a space is an abstract space (formed by power and knowledge, planners, politicians), or a social space by everyday life practises and experiences. Different morphological approaches should be overlapped in the analysis of the city in addition to geography, architecture, urban design, philosophy, sociology, analytic approaches, and environmental psychology. It is difficult to perceive how the city functions from one perspective, thus research projects can be developed by integrating various subjects and departments of the universities.

Each period and city creates its own parameters, problems and solutions. We have to understand how the society and the city shaped through reading those parameters. If there is mobility there will be fragmentation, if there is development there will be speculation, and mega structures. For that reason these dynamics should be interpreted. Afterwards solutions, strategies can be developed. For instance, as McDonald (2005) explored, injecting a small grain into a large grain might contribute to the street life. How to integrate the traditional pattern with the modern pattern, how to overlap different transportation types, but at the same time providing accessibility to pedestrian, quality of space, management and maintenance of space, creating walkable, accessible, integrated, and connected environments are the challenges of our era. Every action will have its reaction in this socio-spatial environment. Thus, researchers, planners, architects, community, and local authorities should work in collaboration to analyse cities and for proposing better schemes.

Neighbourhood associations and communities are important catalysts between the local municipalities and residents. We had seen that inaccurate development plans, decisions, and policies mislead the future of some neighbourhoods. Community involvement is becoming more and more significant in the development of cities. Various measures such as connectivity, integration related to the urban pattern, have to overlap with the quality of convex spaces. A neighbourhood can be constituted, which means the topological depth between private and public space is shallow, provides better safety and lively street. However, this might degrade the intervisibility if the street is narrow, as well as the privacy among the neighbours. There should be possibility for the residents to personalise their front yards, or in between spaces. Ground floor use can be designed to balance the use of shop keepers and residents for appropriating the space in between. Here residents, shopkeepers, and the pedestrians who pass by have their rights on the pavement. Urban designers should evaluate all these challenges.

As a further research this interface needs more attention from different disciplines. Correlations in space syntax analysis can be also done between space syntax measures of a street pattern, and the quality of space, sense of community issues. Space syntax can be seen as a static analysis, but it can be updated with the developing features, and gives possibility to interpret the change before and after, interventions can be tested. While looking at the physical features of the city, environmental and social inputs should be also considered. Other issue is the right of use by different people and category. Detailed research should be done to see how children, elderly use the space, when, whether they are excluded or not in the neighbourhood.

City evolves between the tensions of top-down and bottom-up processes; designed, ordered space versus appropriated and loose space. In non-western cities there are different mechanisms as explained in previous chapters, therefore it is difficult to draw strict lines between private and public space. Although we complain that our cities are chaotic and problematic, it might be this chaos which gives the character and identity to the city. As Dovey and Polakit (2007) mention planners, local authorities and designers have the will to fix the disordered space, and the city. However, what they emphasise is that it is not very easy to understand the everyday life practices and place identity with rigid thinking and perception. It is not very easy to cope with all these issues, and they suggest it is possible to release our thinking free from essentialist approaches to interpret urbanism, especially in non-western cities. Before concluding I would like to say to open up our thinking and perceptions, we need to release our thinking of cities from dogmatic thoughts. It is difficult to implement one model such as design codes, regulations to another place because there are different dynamics. Case studies from different areas will help urban design to evaluate how diverse systems operate and shape cities. Certainly collaboration among diverse disciplines and research projects in different contexts will contribute to urban morphological analysis and its theory.

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APPENDIX 1

Sample size for ±3%, ±5%, ±7% and ±10% Precision Levels Where Confidence Level is 95% and P=.5.				
Size of	Sample Size (n) for Precision (e) of:			
Population	±3%	±5%	±7%	±10%
500	a	222	145	83
600	a	240	152	86
700	a	255	158	88
800	a	267	163	89
900	a	277	166	90
1,000	a	286	169	91
2,000	714	333	185	95
3,000	811	353	191	97
4,000	870	364	194	98
5,000	909	370	196	98
6,000	938	375	197	98
7,000	959	378	198	99
8,000	976	381	199	99
9,000	989	383	200	99
10,000	1,000	385	200	99
15,000	1,034	390	201	99
20,000	1,053	392	204	100
25,000	1,064	394	204	100
50,000	1,087	397	204	100
100,000	1,099	398	204	100
>100,000	1,111	400	204	100
a = Assumption of normal population is poor (Yamane, 1967). The entire population should be sampled.				

Source: http://edis.ifas.ufl.edu/pd006

APPENDIX 2

QUESTIONNAIRE DATE:

1.1 HOUSEHOLD / SOCIO-ECONOMIC CHARACTERISTICS

Street and Neighbourhood:
Age of Respondent approximately/Gender:

Length of Residency

☐ Less than 5 years ☐ 5-10 years ☐ 10-20 years ☐ more than 20 years

Household Tenure

☐ Owner ☐ Tenant

Person per Household:.....
Education:.....
Number of Children:.....
Employment:.....

1.2 COMMUNITY PERCEPTION OF NEIGHBOURHOOD CHARACTER

Could you possibly tick boxes indicating your neighbours' character, you may tick more than one.

☐ Ornate	☐ Plain	☐ Complex	☐ Simple
☐ Distinctive	☐ Ordinary	☐ Peaceful	☐ Anxious
☐ Interesting	☐ Boring	☐ Safe	☐ Unsafe
☐ Pleasant	☐ Unpleasant	☐ Crowded	☐ Not crowded
☐ Noisy	☐ Quiet	☐ Natural	☐ Manmade
☐ Beautiful	☐ Ugly	☐ Familiar	☐ Strange
☐ Living	☐ Lifeless	☐ Excited	☐ Depressed
☐ Comfortable	☐ Uncomfortable	☐ Relaxed	☐ Stressful
☐ Varied	☐ Monotonous	☐ Friendly	☐ Unfriendly
☐ Well kept	☐ Unkept	☐ Clean	☐ Dirty

1.3 HOUSING LAYOUT SOCIAL INTERACTION

☐ I don't know the people living in this neighbourhood/district, I don't have many neighbours. (If you tick the box, Why?)

- ☐ I am very busy I don't have time
- ☐ I prefer to be alone
- ☐ Other.....

1. Number of people known by name in the Neighbourhood/District?.....
2. Number of people known by name in your Residential block/House?..... .....
3. Number of neighbours you visit in your Neighbourhood/District?.....
4. Frequency of visits to people living in your Neighbourhood/District?
   (Never/Sometimes/ A lot)
5. Frequency of social interaction in outdoors (parks, public squares, streets, etc.) with your friends/neighbours
   (Never/Sometimes/ A lot)

1.4 SOCIAL INTERACTION/GREETING/CHATTING/ PLACE OF CONTACT

- ☐ Street/on sidewalks
- ☐ Parking lot
- ☐ Neighbourhood open spaces
- ☐ Dwelling entrance
- ☐ Cafes/Local Shops
- ☐ Staircase/hall
- ☐ Balconies
- ☐ Windows
- ☐ Lift
- ☐ Other……

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

1.5 PERCEPTION OF WALKING IN NEIGHBOURHOOD (STROLLING/DESTINATION)

1. I often see neighbours I know when I walk
2. I often see strangers who make me feel uncomfortable when I walk
3. I feel safe walking in my neighbourhood during the day
4. I feel safe walking in my neighbourhood during the evening
5. I feel uncomfortable walking where there are no sidewalks in my neighbourhood
6. I feel uncomfortable walking when street vender's or local shopkeepers exhibit their products on sidewalk
7. I like walking on the street where there are shops

1.6 NEIGHBOURHOOD SENSE OF COMMUNITY SCALE / MULTIPLE MEASURE OF NEIGHBOURING

1. If I feel like talking I can generally find someone in this neighbourhood to talk to right away
2. I have made new friends by living here
3. I know some people living here due to my child/children
4. My friends in this neighbourhood are part of my everyday activities
5. I met with my friends in this neighbourhood mostly at public places
6. I usually participate social activities in my neighbourhood
7. If I had an emergency, even people I do not know in this neighbourhood would be willing to help

8. I really care about this neighbourhood
9. I am happy with the maintenance and management of our neighbourhood
10. I feel safe and comfortable in this neighbourhood
11. Noise, which is done at the street, can occasionally be a big problem

1.7 Near Environment of the House and Neighbourhood

1. We have adequate outdoor spaces for children's play near home
2. There are benches that we can sit and chat near our home environment
3. We have adequate car parking area near home
4. We have adequate space for landscaping and planting near home
5. We have adequate public transportation facilities in our neighbourhood
6. I found our neighbourhood far to the city centre
7. I am happy with the lighting of public spaces at night in our neighbourhood
8. Sidewalks of our streets are convenient for elderly and disabled people
9. In this neighbourhood there are places for every age group (elderly, adult, teenage, child)

1.8 To go Somewhere from my House

☐	I use bus	(Rarely / Sometimes / A lot)
☐	I walk	(Rarely / Sometimes / A lot)
☐	I drive	(Rarely / Sometimes / A lot)
☐	I cycle	(Rarely / Sometimes / A lot)
☐	Other.....	(Rarely / Sometimes / A lot)

1.9 Which activities are being done in front of your building/house?

☐ Planting ☐ Playground for Children ☐ Seating and Resting

☐ Chatting with Neighbours ☐ none of them ☐ Other.....

1.10 Finally

What are the 3 main problems of your neighbourhood in order?

Are you planning to move from this Neighbourhood? If yes, Where and Why?

If there were no financial constraints where would you like to live in Izmir? Why?

DECODING THE QUESTIONNAIRES

Descriptive Statistics Socio Demographic Structure

Age	*Continuous variable*
Gender	*1= male, 2= female*
Length of Residency (LR)	*1= less than 5 years 2= 5-10 years 3= 10-20 years 4= more than 20 years*
Ownership	*1= owner 2=tenant*
Household	*Continuous variable*
Number of Children	*Continuous variable*
Education Degree	*1= graduate and postgraduate 2= high school and institution 3= middle school 4= primary school*
Occupation Kültür	*1= retired 2= house wife 3= student 4= service sector 5= trade marketing business 6= manager director 7= self employed 8= science academic and education 9= art and music*

Descriptive Statistics Housing Layout and Social Interaction

I don't have many neighbours	1= I am very busy I don't have time 2= I prefer to be alone 3= Other
Number of people known by name in the Neigh.	*Continuous variable*
Number of people known by name in your Building	*Continuous variable*
Number of neighbours you visit in your Neigh.	*Continuous variable*
Frequency of visits to people living in your Neigh.	1= Never 2=Sometimes 3= A lot
Frequency of social interaction in outdoors	1= Never 2=Sometimes 3= A lot

Descriptive Statistics 5 Point Scale Variables

Perception of Walking and Safety	1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree
Sense of Community Neighbourhood Scale	
Friends, Acquaintance and Knowing People	
Maintenance and Management (Safety & Comfort)	
Near Home Environment	

Descriptive Statistics Social Interaction Places Indices

Interaction in and around the Building	(0-5)
Interaction around the Neighbourhood	(0-5)
Planting, Playground, Seating, and Chatting	(0-4)
Neighbourhood Characteristics (NC) *Safe, unsafe, interesting, boring, plain, ornate, distinctive, ordinary, friendly, unfriendly, clean, dirty, central, and etc.*	0= No 1= Yes

APPENDIX 3

Reliability Analysis (Cronbach's a)

A. Kültür Neighbourhood Alsancak

Walking & Safety (alpha: .801) mean:

1. I often see neighbours I know when I walk
2. I feel safe walking in my neighbourhood during the day
3. I feel safe walking in my neighbourhood during the evening

Sense of Community (alpha: .834) mean:

1. If I feel like talking I can generally find someone in this neighbourhood to talk to right away
2. I have made new friends by living here
3. I know some people living here due to my child/children
4. My friends in this neighbourhood are part of my everyday activities
5. I usually participate social activities in my neighbourhood
6. If I had an emergency, even people I do not know in this neighbourhood would be willing to help
7. I really care about this neighbourhood
8. I met with my friends in this neighbourhood mostly at public places
9. I am happy with the maintenance and management of our neighbourhood
10. I feel safe and comfortable in this neighbourhood
11. Noise, which is done at the street, can occasionally be a big problem

Friends (alpha: .859) mean:

1. I often see neighbours I know when I walk
2. If I feel like talking I can generally find someone in this neighbourhood to talk to right away
3. I have made new friends by living here
4. I know some people living here due to my child/children
5. My friends in this neighbourhood are part of my everyday activities
6. If I had an emergency, even people I do not know in this neighbourhood would be willing to help
7. I met with my friends in this neighbourhood mostly at public places

Maintenance (alpha: .718) mean:

1. I usually participate social activities in my neighbourhood
2. I am happy with the maintenance and management of our neighbourhood
3. We have adequate public transportation facilities in our neighbourhood
4. Sidewalks of our streets are convenient for elderly and disabled people
5. In this neighbourhood there are places for every age group (elderly, adult, teenage, child)
6. I feel safe walking in my neighbourhood during the day

7. I feel safe walking in my neighbourhood during the evening
8. I feel uncomfortable walking when street vendors/local shopkeepers exhibit their products on sidewalks
9. I really care about this neighbourhood
10. I feel safe and comfortable in this neighbourhood

Near Home Environment (alpha: .689) mean:

1. We have adequate outdoor spaces for children to play near home
2. There are benches that we can sit and chat near our home environment
3. We have adequate space for landscaping and planting near home
4. We have adequate car parking area near home

B. Karantina Neighbourhood

Walking & Safety (alpha: .790) mean:

1. I often see neighbours I know when I walk
2. I feel safe walking in my neighbourhood during the day
3. I feel safe walking in my neighbourhood during the evening
4. I feel safe and comfortable in this neighbourhood

Sense of Community (alpha: .714) mean:

1. If I feel like talking I can generally find someone in this neighbourhood to talk to right away
2. I have made new friends by living here
3. I know some people living here due to my child/children
4. My friends in this neighbourhood are part of my everyday activities
5. I usually participate social activities in my neighbourhood
6. If I had an emergency, even people I do not know in this neighbourhood would be willing to help
7. I really care about this neighbourhood
8. I met with my friends in this neighbourhood mostly at public places
9. I am happy with the maintenance and management of our neighbourhood
10. I feel safe and comfortable in this neighbourhood
11. Noise, which is done at the street, can occasionally be a big problem

Friends (alpha: .829) mean:

1. I often see neighbours I know when I walk
2. If I feel like talking I can generally find someone in this neighbourhood to talk to right away
3. I have made new friends by living here
4. I know some people living here due to my child/children
5. My friends in this neighbourhood are part of my everyday activities
6. If I had an emergency, even people I do not know in this neighbourhood would be willing to help
7. I met with my friends in this neighbourhood mostly at public places

Maintenance (alpha: .734) mean:

1. I usually participate social activities in my neighbourhood
2. I am happy with the maintenance and management of our neighbourhood
3. We have adequate public transportation facilities in our neighbourhood
4. Sidewalks of our streets are convenient for elderly and disabled people
5. In this neighbourhood there are places for every age group (elderly, adult, teenage, child)
6. I feel safe walking in my neighbourhood during the day
7. I feel safe walking in my neighbourhood during the evening
8. I feel uncomfortable walking when street vendors/local shopkeepers exhibit their products on sidewalks
9. I feel uncomfortable walking where there are no sidewalks in my neighbourhood
10. I like walking on the street where there are shops
11. I really care about this neighbourhood
12. I feel safe and comfortable in this neighbourhood
13. I am happy with the lighting of public spaces at night in our neighbourhood

Near Home Environment (alpha: .785)

1. We have adequate outdoor spaces for children to play near home
2. There are benches that we can sit and chat near our home environment
3. We have adequate space for landscaping and planting near home
4. We have adequate car parking area near home

C. Mavisehir Neighbourhood

Walking & Safety (alpha: .666) mean:

1. I often see neighbours I know when I walk
2. I feel safe walking in my neighbourhood during the day
3. I feel safe walking in my neighbourhood during the evening
4. I feel safe and comfortable in this neighbourhood

Sense of Community (alpha: .849) mean:

1. If I feel like talking I can generally find someone in this neighbourhood to talk to right away
2. I have made new friends by living here
3. I know some people living here due to my child/children
4. My friends in this neighbourhood are part of my everyday activities
5. I usually participate social activities in my neighbourhood
6. If I had an emergency, even people I do not know in this neighbourhood would be willing to help
7. I really care about this neighbourhood
8. I met with my friends in this neighbourhood mostly at public places
9. I am happy with the maintenance and management of our neighbourhood
10. Noise, which is done at the street, can occasionally be a big problem

11. I feel safe and comfortable in this neighbourhood

Friends (alpha: .811) mean:

1. I often see neighbours I know when I walk
2. If I feel like talking I can generally find someone in this neighbourhood to talk to right away
3. I have made new friends by living here
4. I know some people living here due to my child/children
5. My friends in this neighbourhood are part of my everyday activities
6. If I had an emergency, even people I do not know in this neighbourhood would be willing to help
7. I met with my friends in this neighbourhood mostly at public places

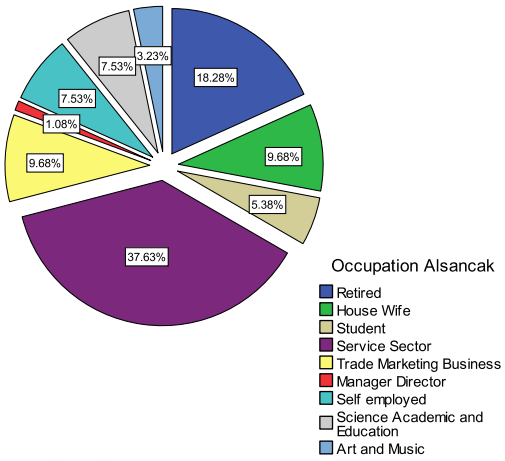
Maintenance (alpha: .878) mean:

1. I usually participate social activities in my neighbourhood
2. I am happy with the maintenance and management of our neighbourhood
3. We have adequate public transportation facilities in our neighbourhood
4. Sidewalks of our streets are convenient for elderly and disabled people
5. In this neighbourhood there are places for every age group (elderly, adult, teenage, child)
6. I feel safe walking in my neighbourhood during the day
7. I feel safe walking in my neighbourhood during the evening
8. I feel uncomfortable walking when street vendors/local shopkeepers exhibit their products on sidewalks
9. I really care about this neighbourhood
10. I feel safe and comfortable in this neighbourhood
11. I am happy with the lighting of public spaces at night in our neighbourhood

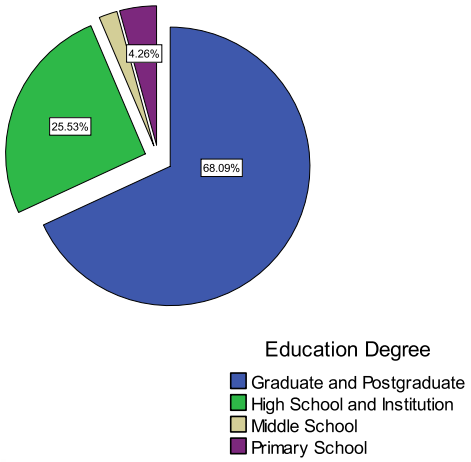
Near Home Environment (alpha: .730) mean:

1. We have adequate outdoor spaces for children to play near home
2. There are benches that we can sit and chat near our home environment
3. We have adequate space for landscaping and planting near home
4. We have adequate car parking area near home

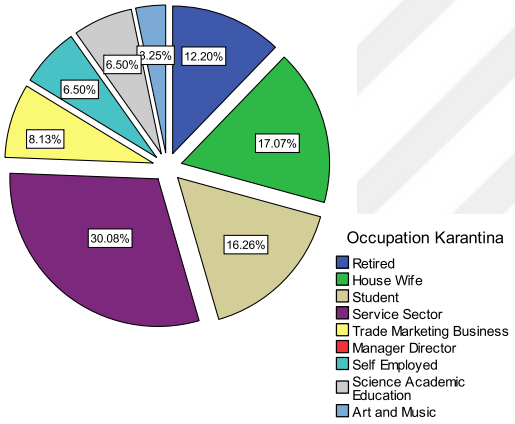
APPENDIX 4



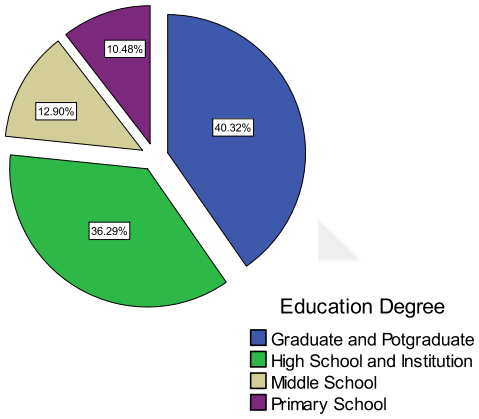
Kültür Neighbourhood Occupation



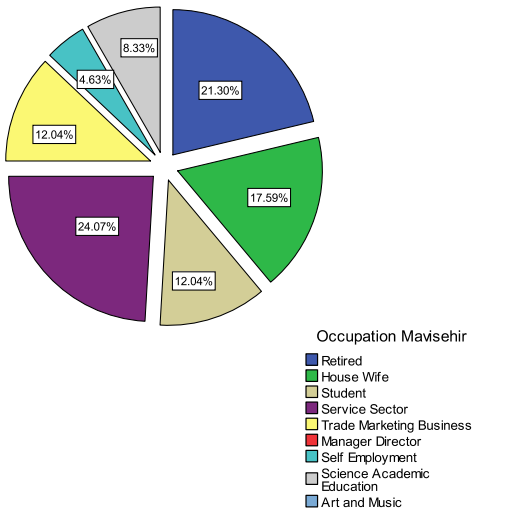
Kültür Neighbourhood Education



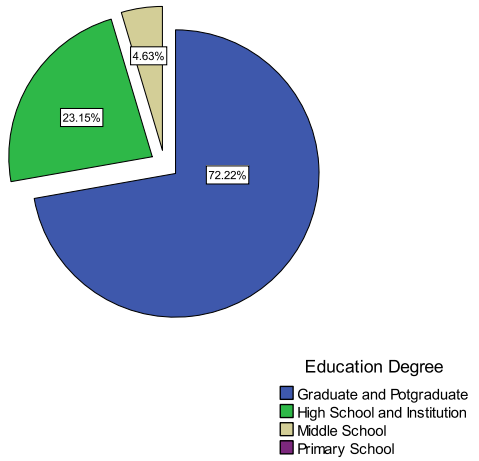
Karantina Neighbourhood Occupation



Karantina Neighbourhood Education

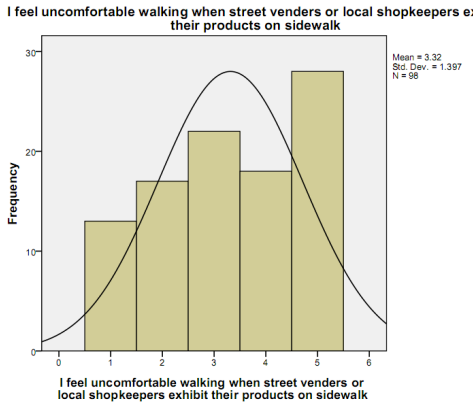
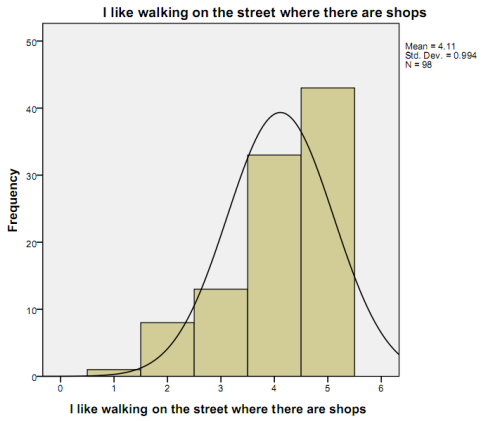
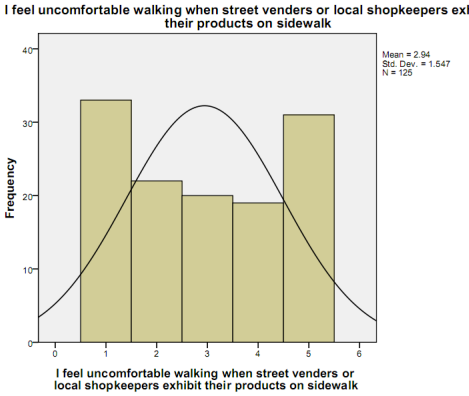
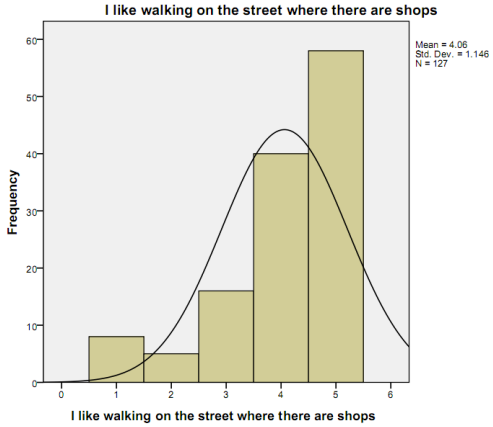
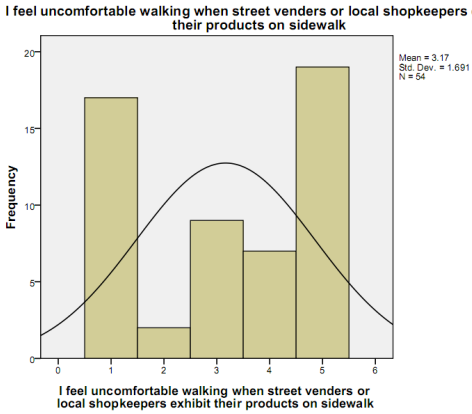
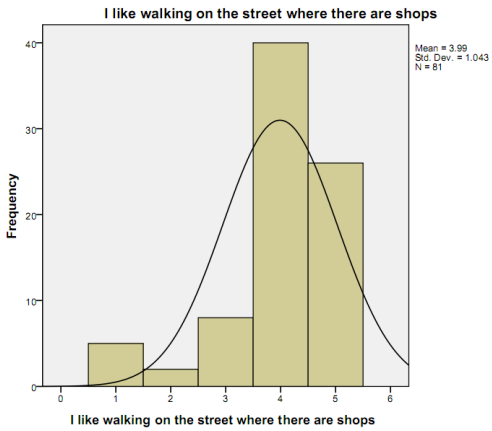


Mavisehir Neighbourhood Occupation



Mavisehir Neighbourhood Education

APPENDIX 5

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APPENDIX 6



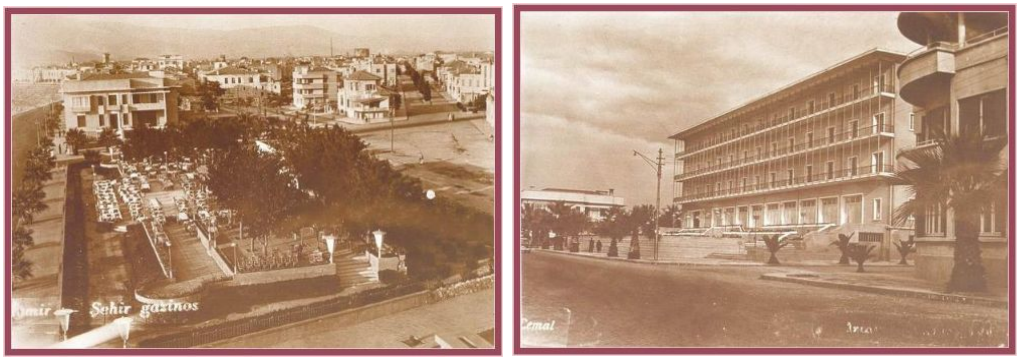

Tayyare Apartment and Cinema (old name Cinema Palas Theatre)
Source: Levantine Heritage web site and Izmir Citysurf




1890 Bella Vista (Rubelin), or French words Belle Vue
Source: http://www.levantineheritage.com/visit4.htm




Bella Vista (Gündoğdu) Source: Author's Archive



From City Gazino to Old Nato Building, and then Military House
Source: http://eski.izmirimiz.com/index.htm



Military House and 1. Kordon, Source: Author's Archive



Bird's Eye View of Alsancak in 21st and 20th Century
Source: Apikam (Izmir City Archive) and
http://www.luksizmir.com/izmir_fotograflari/izmir_kordon.jpg





Les Quais, Izmir Quay (1. Kordon) at the end of 19th century and 21st century
http://www.levantineheritage.com/visit4.htm and Author's Archive

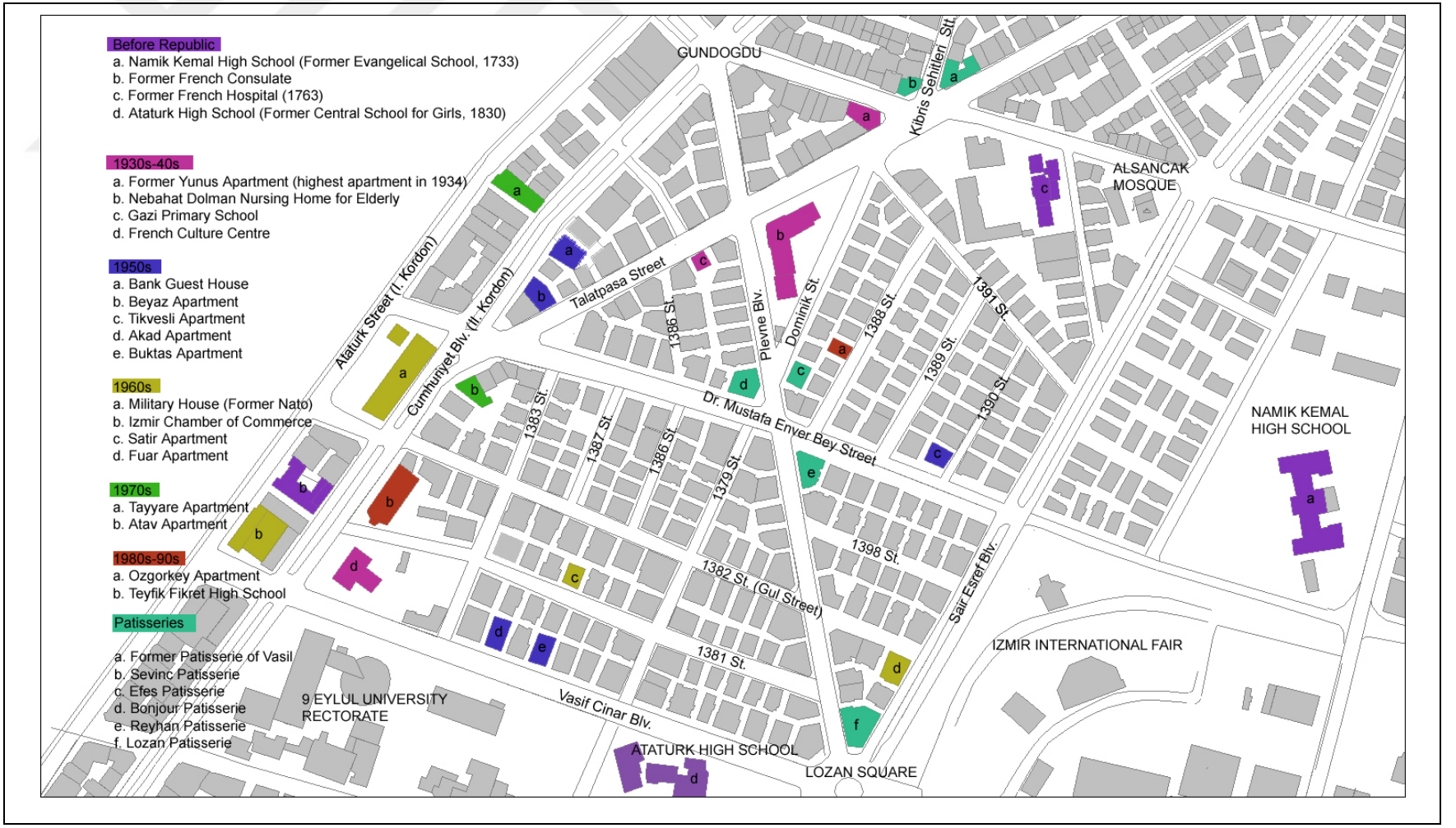



Kıbrıs Şehitleri Street at the beginning of 20th century and 21st
Source: Moralı (2005) and Author's Archive

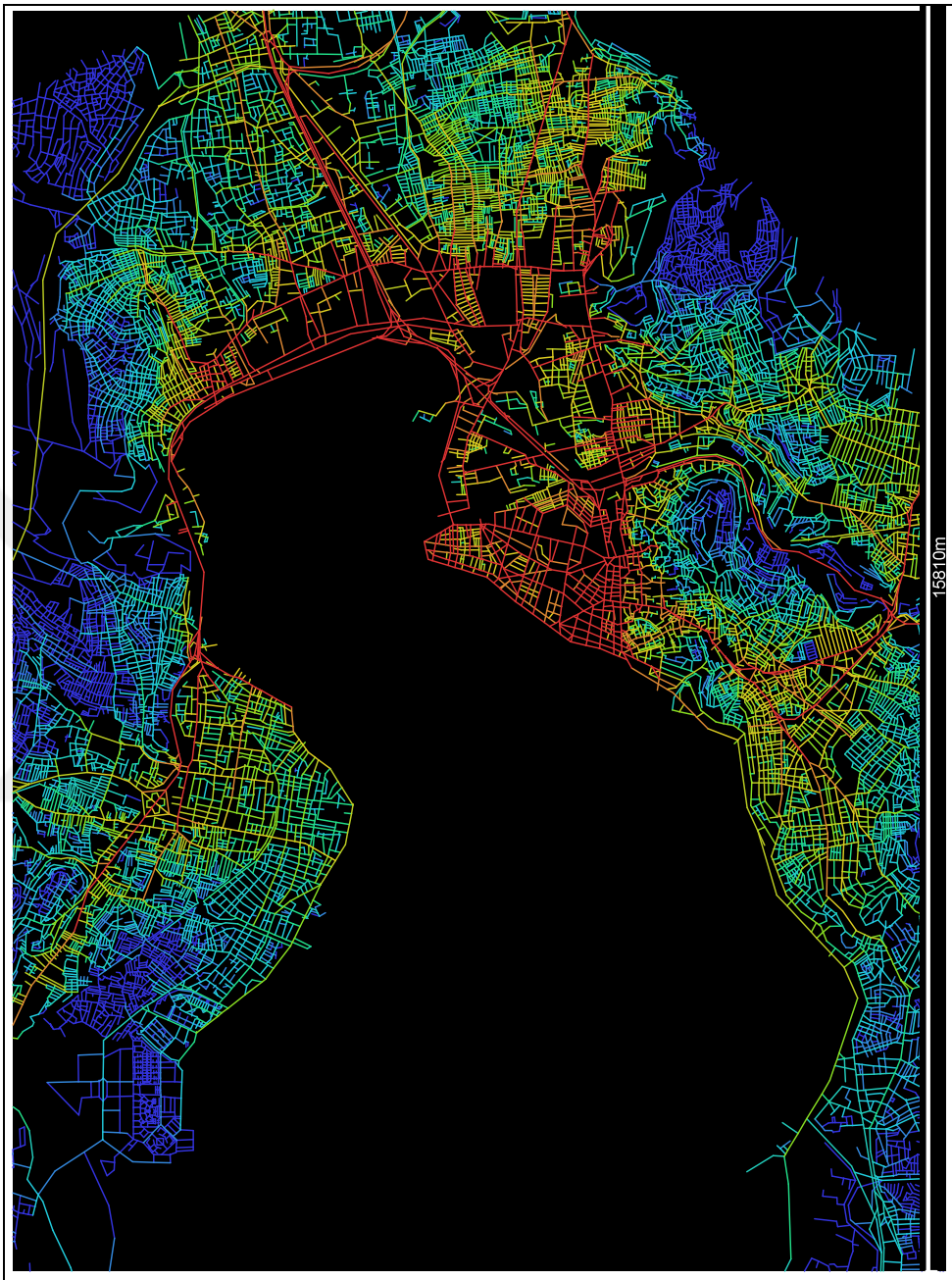



Mustafa Enver Bey Street in 20th century and 21st
Source: Apikam (ICA) and Author's Archive

APPENDIX 7


Before Republic
a. Namik Kemal High School (Former Evangelical School, 1733)
b. Former French Consulate
c. Former French Hospital (1763)
d. Ataturk High School (Former Central School for Girls, 1830)
1930s-40s
a. Former Yunus Apartment (highest apartment in 1934)
b. Nebahat Dolman Nursing Home for Elderly
c. Gazi Primary School
d. French Culture Centre
1950s
a. Bank Guest House
b. Beyaz Apartment
c. Tikvesli Apartment
d. Akad Apartment
e. Buktas Apartment
1960s
a. Military House (Former Nato)
b. Izmir Chamber of Commerce
c. Satir Apartment
d. Fuar Apartment
1970s
a. Tayyare Apartment
b. Atav Apartment
1980s-90s
a. Ozgorkey Apartment
b. Teyfik Fikret High School
Patisseries
a. Former Patisserie of Vasil
b. Sevinc Patisserie
c. Efes Patisserie
d. Bonjour Patisserie
e. Reyhan Patisserie
f. Lozan Patisserie
GUNDOGDU
Kibris Sehitleri Stt.
ALSANCAK MOSQUE
Ataturk Street (I. Kordon)
Cumhuriyet Blv. (II. Kordon)
Talatpasa Street
1386 St.
Plevne Blv.
Dominik St.
1388 St.
1391 St.
1389 St.
1390 St.
Dr. Mustafa Enver Bey Street
1383 St.
1387 St.
1385 St.
1379 St.
1382 St. (Gul Street)
1398 St.
Sair Esref Blv.
1381 St.
Vasif Cinar Blv.
9 EYLUL UNIVERSITY RECTORATE
ATATURK HIGH SCHOOL
LOZAN SQUARE
IZMIR INTERNATIONAL FAIR
NAMIK KEMAL HIGH SCHOOL

APPENDIX 8



Izmir RN Integration Analysis Depth Map



Izmir RN Choice Analysis Depth Map

APPENDIX 9



Alsancak Aerial Photo 1950 Source: IMM Izmir City Surf



Alsancak Aerial Photo 1996 Source: IMM Izmir City Surf



Alsancak Aerial Photo 2005 Source: IMM Izmir City Surf



Karantina Aerial Photo 1950 Source: IMM Izmir City Surf



Karantina Aerial Photo 1996 Source: IMM Izmir City Surf



Karantina Aerial Photo 2005 Source: IMM Izmir City Surf



Mavisehir Aerial Photo 1950 Source: Izmir City Surf



Mavisehir Aerial Photo 1996 Source: Izmir City Surf



Mavisehir Aerial Photo 2010 Source: Google Earth