Analyzing the Quality of Pedestrian Street in the Case of Istiklal Street in Walled City of Famagusta

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Submitted to the
Institute of Graduate Studies and Research
in partial fulfillment of the requirements for the Degree of

Master of Science
in
Urban Design

Eastern Mediterranean University
July 2013
Gazimağusa, North Cyprus

Approval of the Institute of Graduate Studies and Research

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ABSTRACT

Street is a very important urban element that determines the urban pattern and urban socio-economic life which the later can be improved greatly in “pedestrian street”. This kind of urban space can play a significant role in social life of people by providing a place for social activities of users. People interact with each other and their environment. Through this interaction; they need to be responded by the environment. In other words people expect to satisfy their needs through their activities in a space that is facilitated by the qualities such as accessible, mixed-use, attractive, safe, green, clean and vital. In this sense, this study will investigate how “pedestrian street” is affecting the people spending time on the street. It is focusing on the concept of “pedestrian street” and how a better street life and street quality can be brought out when it comes to enhance the physical, social and economic aspects for the street and its users. Therefore, the aim of this survey is to achieve the parameters as legibility, accessibility, richness, inclusivity, diversity, distinctiveness and… to analyze the quality of the Istiklal Street as the case study.

Istiklal Street in walled city of Famagusta in North Cyprus is one of the important urban spaces and also is the only pedestrian street in the city. It is visited not only by the local people but also by most of the tourists of Famagusta and students of EMU as well. Although this street is rich in terms of historical values but today it encounters the serious problems as deterioration of physical and social qualities. Due to this fact, at last the qualities of Istiklal Street as a pedestrian street are going to be evaluated through physical analyses and social survey to determine its current situation.

Accordingly, this thesis includes five chapters. In the first chapter aims, objectives and method of the study are given as introduction. In the second chapter, concept of "pedestrian street" is explained. Third chapter is distributed to human activities, human needs and urban street quality to achieve the parameters as safety, comfort, accessibility, diversity, vitality, legibility and … for evaluating the quality of the street. In chapter four, initially brief information is given about Istiklal Street which is followed by methodology of the study, based on qualitative and quantitative techniques and in chapter five; conclusion is given according to the findings. Through methods such as literature survey, observations of the street and questionnaire, the case study has been analyzed.

The results from the physical and social analyses show that Istiklal Street has factors that contribute to a less attractive street life; lack of places to sit, lack of greenery and lack of social activities for/between people while having the potential to be a convivial pedestrian street.

Accordingly in terms of quality, it is in poor or fair condition, therefore there are just necessary activities. In order to make it more qualified street there would be some needs for increasing optional and social activities in Istiklal Street.

Keywords: Pedestrian Street, Human Needs, Human Activities, Street Quality, Istiklal Street

ÖZ

Toplumun her kesiminden tüm bireyler için ortak kullanım alanı olan sokaklar, geçmişten günümüze çevreyle iletişim kurma, temel ihtiyaçları karşılama, kente dair izlenimler edinme ve toplum olma bilincinin gelişimi gibi pek çok noktada önemli rol oynamıştır.

Kentsel doku ve sosyo ekonomik yaşamın en önemli elemanı olan yayalaştırılmış sokaklar, insanların sosyal yaşamlarında çeşitli aktiviteleri yapma olanağı sağlamaktadırlar. İnsanlar sokaklarda bir araya gelip sosyalleşmekte ve sokak da kendilerine bu sosyalleşme, etkileşme için mekan yaratmaktadır.

Başka bir deyişle, farklı aktiviteleri içeren; ihtiyaçlarının karşılandığı sokaklara gereksinim duymaktadırlar. Bu ihtiyaçlar sokakta bulunması gereken kalite göstergeleri - ulaşılabilirlik, çeşitli kullanımlar, çekicilik, yeşil, güvenli, temiz ve canlı olma- ile yakından ilgilidir.

Günümüzde pek çok ülkede, sokak kalitesinin arttırılması ve kişilerin bulundukları mekanlardan hoşnut olmaları konularında çalışmalar yapılmaktadır. Bu tez kapsamında yayalaştırılmış sokakların kalitesi ve kaliteyi etkileyen insan ihtiyaçlarının neler olduğu tartışılacaktır. Bu noktada kaliteli bir sokak için fiziksel, ekonomik ve sosyal yanlarının iyileştirilmesi gerekliliği tartışılacaktır. Ayrıca bu çalışmada, mekân kalitesi bağlamında, kentsel mekanlar genelinde ve yayalaştırılmış sokaklar özelinde kullanılabilecek mekânsal kalite parametrelerinin belirlenmesine çalışılmıştır.

Tez kapsamında Gazimagusa Surlar içerisinde bulunan ve yaya sokağı olan İstiklal Caddesi çalışma alanı olarak seçilmiştir. Bu sokak tarihi bir alanda yer alması, çeşitli kullanımları barındırması nedeni ile yerli halk, üniversite öğrencileri ve yanısıra yabancı misafirlerin de uğrak noktasıdır. Sokak henekadar tarihi değerler açısından zengin olsa da sosyal ve fiziksel kalite açıdan ciddi problemleri de barındırmaktadır. Bu gerçekler ışığında, tez kapsamında İstiklal Caddesinin mekansal kalitesi fiziksel, sosyal analiz yöntemleri ile test edilerek, bugünkü durumu ortaya konmaya çalışılmıştır.

Bu bağlamda tez beş ana bölümden oluşmaktadır. İlk bölümde, tezin amacı, metodu ve araştırma sorularının yer aldığı giriş verilmektedir. İkinci ve üçüncü bölümde tez çalışmasının kuramsal çerçevesini oluşturan konular tartışılmıştır. Buna göre, sokak, sokağın fonksiyonu ve biçimleri; yayalaştırılmış sokak ve yaya sokaklarının tasarım kriterleri açıklanmıştır. Üçüncü bölümde, kentsel mekandaki aktiviteler, insan ihtiyaçları incelendikten sonra, kentsel mekan kalitesi üzerinde durulmuştur. Bu tartışmalar sonucu, kentsel mekan kalitesini etkileyen kriterler belirlenmiştir. Dördüncü bölümde, çalışma alanı olarak belirlenen İstiklal Caddesi, üçüncü bölüm sonunda elde edilen kentsel mekan kalite kriteri açısından incelenmiştir. Alan çalışması için fiziksel analiz yöntemleri ve anket çalışması kullanılmıştır. Tezin son bölümünde ise sonuç ve öneriler yer almaktadır.

Yapılan fiziksel ve sosyal analizler sonucunda İstiklal Caddesi kullanıcılar tarafından çekiciliği, oturma elemanları, yeşil peyzaj elemanları az ve sosyal aktiviteler açısından eksik bulunmuştur. Bu sonuçlara göre sokak gerekli aktiviteleri barındırmakta, fakat sosyal ve seçmeli aktivitelere sahip olmadığı söylenilebilir.

Anahtar Kelimeler: Yayalaştırılmış Sokak, İnsan İhtiyaçları, İnsan Aktiviteleri, Kentsel Mekan Kalitesi, İstiklal Caddesi

To My Beloved Sister

Sheida

ACKNOWLEDGMENTS

I would never have been able to finish my thesis without the guidance of my supervisor, committee members, help from friends, and support from my family.

First and foremost I want to thank my advisor Assoc. Prof. Dr. Beser Oktay Vehbi. It has been an honor to be her student. I appreciate all her contributions of time, ideas and patience to make my master thesis. The joy and enthusiasm she has for her research was contagious and motivational for me, even during tough times. I am also thankful for the excellent example she has provided as a successful woman and professor.

I deeply thank Prof. Dr. Sebnem Onal Hoskara, Dean of the Department of Architecture and Urban Design in Eastern Mediterranean University. I am also obliged to Prof. Dr. Nacieh Doratli for her helping with various issues.

In addition, I want to give my thanks to my committee members, Assoc. Prof. Dr. Mukaddes Fasli and Assoc. Prof. Dr. Resmiye Alpar Altun, for their time dedication to read my thesis and their presence in the Jury.

I am most grateful to my dear friends Amir, Abolfazl and Nima for providing me with computer files of their unpublished versions of their Design course. It was particularly kind of them to allow me to refer to their collections. Throughout especial thanks to Amir for his time and care.

I am also thankful to Hooman F. Araabi, Urbanism PhD candidate in UCL, for his warm words, comments and advices during my studying.

I especially thank my mom, dad, and sister. My hard-working parents have sacrificed their lives for my sister and myself and provided unconditional love and care, also my beloved ones, Bahareh and Hamoon for their kindness. I love them all so much, and I would not have made it this far without them.

Last, but by no means least, I thank my friends in Cyprus, Spain, Iran, Great Britain and elsewhere for their support and encouragement , Leila and Nina, also Sanaz, Samaneh, Shadab and Kourosh. I would like to thank my dear friends, Sahar and Mahdi for their assistance and Marjan for always being there.

For any errors or inadequacies that may remain in this work, of course, the responsibility is entirely my own.

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Chapter 1

INTRODUCTION

1.1 Introductory Section

Public space could be defined as the space which is open to all, belonged to all and used by all kinds of users, regardless of explaining 'the public'. Based on Lang, (2005), public space certainly has physical and functional characteristics that affect social activities, comfort and safety/security which engage people to the space. The physical and functional features of public spaces refer to physical characteristics, the activities the accessibility circumstances, and the existing land-use that define the activities there. Public spaces that are dynamic and mostly used by people are places that people have the chance to meet each other define several sitting spaces, are available for everyone, include aesthetic and natural elements. Also, urban public spaces play vital role for social interaction and create gathering places for different social groups. Moreover, they have the ability to promote sense of belonging and local identity (Madanipour, 1999., Habermas, 1989., Montgomery, 1998).

"Pedestrian streets" as one of the significant urban spaces are needed for continuing urban life. They are recognized as memorable elements in cities (Woolley, 2003). These understandable spaces shape attractive image of city in a people's mind and include the various kinds of equipments for walking, recreation, shopping, communication, lingering, aggregation and interchanging the cultural affairs.

Social interaction as one of the main activities could happen in public space in general and in “pedestrian street” in particular. These spaces mainly have mixed activities which results in having mixed types of users in a vital and secure place. These users’ activities are sorted according to Gehl (1987) and through these activities people ask for and expect some qualities. All these qualities of “pedestrian street” are also dependent on obtaining the “dynamic economy” and “suitable environment” for living and social identity.

Social-cultural role concentrates on improving urban culture when people gradually spend time in urban public spaces. The existence of the quality of pedestrian-free in urban spaces is a sign of city’s identity and culture. In economical role it can be mentioned that the pedestrian street offers a kind of amenities in cities. In fact the concept of improving the economical condition create a tendency to design the pedestrian streets and what achieved environmental aspect is that the more enhancing the space and attractive moving opportunities, the more perceived from environmental and social affairs. That will improve the sense of belonging that is directly supported by sense of place, buildings quality, level of access and existence of various functions that all make a kind of comfort. Ultimately, successful streets show a common tendency to have qualities in general. The basic qualities of successful places are which that could be matched with pedestrian activities and needs.

1.2 Problem Statement

A large number of designers assume that if they able to only figure out the traffic problem, they will accordingly have answers for the most problems of cities. The

result of this belief is to have cities that are constructed only for cars, not for people. Although urban public spaces can define sustainable cities, most of those "created" spaces that are called "public spaces" do not meet social, spatial and ecological characteristics and cannot be rated as "places for people" (Oktay, 2012).

In the case of "pedestrian street" to be assessed according to social, economic, environmental and physical qualities to reach to success, it should be expressed that it seems essential to support the historical cultural values of the street, to consider using of designing methods and traditional structure, to enhance the people attendance, to design in order to improve the physical aspects of path and to think about night life by raising the attractiveness of functions (Saghafi, 2010). In this sense, there are some characteristics and facilities for pedestrian to be considered such as greenery, vacant buildings, and comfortable pavements, shelters, mixed-uses, public services, safety and security.

Istiklal Street in Walled city of Famagusta is one of the pedestrian street that encounters social, physical, economic and environmental problems which are categorized as lack of greenery, high percentage of vacant buildings, uncomfortable pavements, lack of shadings in day life , unattractive and unsecure night life and lack of diversity in land uses. As it is one of the important public spaces and an attractive pole for not only locals but also the visitors in North Cyprus, the qualities of the street under physical, social and economic dimensions should be increased in order to have qualified urban space. Although this area has a rich historical background, these days it is observed that it began to deteriorate in terms of physical and social qualities. That's why in this thesis the qualities of a pedestrian street are

going to be analyzed in case of Istiklal Street to change it into an active public space in terms of social, cultural and economic dimensions.

1.3 Aim and Objectives of the Study

This study firstly goes through the concept of "pedestrian street" as one of the important types of urban public spaces, also clarifies the importance of this urban space and then determines the human needs in an urban street along with their activities which are done in the street (Figure 1.1). Accordingly, the main aim is to analyze and evaluate quality of Istiklal Street in Walled City of Famagusta and to determine how human needs are affecting their activities in the street.

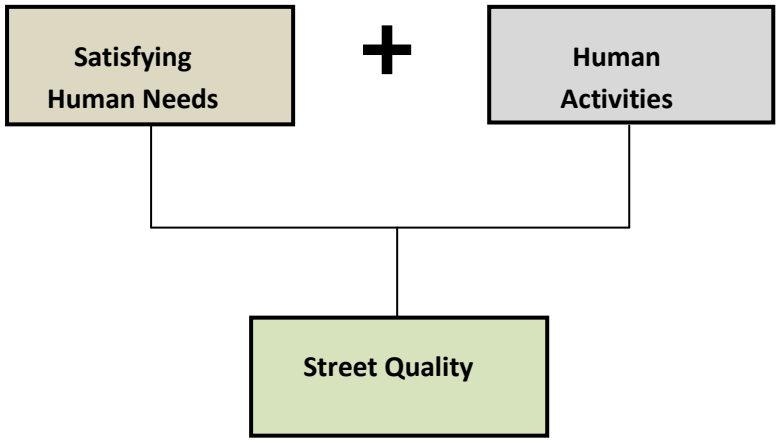


Figure 1.1: Satisfying Human Needs with Activities Leads the Street to Be Qualified

Based on this aim, the main research question will be "What are the qualities of Pedestrian Street In Case of Istiklal Street?" And beside this main research question the following sub questions will form the framework of the study:

- What is street?
- What are the types of street?
- What is "pedestrian street" and its components?

- What are human needs in using an urban space?
- What are human activities through using public space?
- What are the parameters for affecting “pedestrian street”?
- What are the characteristics of Istiklal Street in Walled City of Famagusta?
- Which qualities should be redefined in Istiklal Street?
- What type of activity is existed in Istiklal Street?

The objectives of this research, therefore, listed as follow:

- To understand the definition of street and its types
- To determine pedestrian street and its qualities
- To understand the economic-social and physical(natural) dimensions of pedestrian street
- To define the parameters that affects the pedestrian street qualities
- To measure the qualities of Istiklal street as a pedestrian street
- To determine type of activity taking place in Istiklal Street

1.4 Methodology

This research involves both qualitative and quantitative research that is based on literature survey, documents and case study. The methodology of the thesis can be introduced under 3 steps:

1. Theoretical framework through literature review
2. Case study applications, including data collecting, analysis and evaluation
3. Research findings and suggestions

This thesis has five Chapters. Chapter 1 introduces the need for studying the subject and aims and objectives of the study. Chapter 2 and Chapter 3 include the theoretical

framework through literature review on the subject of street, pedestrian street, urban space quality, activities and human needs in urban spaces.

Based on the theoretical backgrounds, the parameters that help to define street quality are obtained as comfort, safety, attractiveness, inclusivity and …

The case study application that includes data collection, analysis and evaluations is presented in chapter4. The case study is selected as Istiklal Street and analysis has been carried out in natural/physical and socio-economic structure of the area.

The conclusion is presented in Chapter 5 together with suggestions for bringing Istiklal Street to be in a more qualified condition (Table1.1) and explain the type of activities taking place in this street.

Table 1.1: Research Methodology

INTRODUCTION
▼
Definition of subject matter and research problem
▼
Definition of research aims and objectives
▼
Setting up research questions
▼
THEORETICAL FRAMEWORK Through literature review/survey

Street definition Pedestrian street concept Importance of pedestrian street	Activities in urban space Human needs in urban space Urban space qualities

Achieving the parameters that affect street quality

DATA COLLECTION	
▼	
Physical Analysis (Natural + Man-Made)	Social Analysis
* Field work (through various analysis techniques) Observations	* Questionnaire Design Documenting research

DATA ANALYSIS	
▼	
Analysis of physical structure To identify physical qualities of the case	Analysis of social structure to identify qualities related with social issues of the case
▼	
Conclusion and Suggestions	

Chapter 2

CONCEPT OF PEDESTRIAN STREET

2.1 Introduction

“Pedestrian street” can be defined as one of the crucial components of the city and it is the most impressive one of the urban character. Jane Jacobs emphasized on the important role of streets in creating image about a city also she noted that street is an unavoidable urban space (Jacobs, 1961). People experience a city by passing through its streets. We see, feel, and perceive the information demonstrated along the street when moving through it as pedestrians, and then we have cognition about the city. “pedestrian street” acts like a showcase for a city where visitors firstly impressed by and judge about the city whether he or she will like or not. “Pedestrian streets” as a type of urban space are known by people as linear three dimensional spaces. They pass through the street and they will familiarize with spaces shaped by building facades, types of trees, sidewalks and different elements. Thus, the design of “pedestrian street” has influenced on users greatly, and will make the people’s image of the city’s feature (Jonathan Barnett, 1982 in Wibisono, 2001).

This chapter intended to explore the nature of street and its function as urban form as well as urban space, especially in the context of Pedestrian Street by going through the street definition and concept of “pedestrian street”.

This part begins with understanding the nature of street starting from the definition of street and terms that associated with street types and hierarchy; the function of street and its part in the urban setting; and the common street classifications. Through classifying the types of street it reaches to the pedestrian street as the main focus.

2.2 Definition of the Street

Based on Kostof, "the only legitimacy of the street is as public space. Without it there is no city." (Kostof, 1992; pp: 194) The word "street", according to Kostof is, "a complex made up of a roadway, mostly a pedestrian way and flanking building" (Kostof, 1992).

Street is defined by Oxford English Dictionary as "a road in a town or village, running between two lines of houses; usually including the sidewalks as well as carriageway" (Ellis, 1991; pp: 115). Mainly, this description has considered street as a road and place that cannot be seen separately from the situated buildings along it. In street definition, it is significant to focus on paving because the word "street" derives from Latin "sternere" which means "to pave" (Kostof, 1992; pp: 190). Based on Rkywert's idea, street is concerned with all Latin-derived words with "str" root which are linked with building and construction. Street is restated in many European languages such as, Italian "strada" or German "strasse" "suggest the space set out for public use and can contain spaces with clear, controlled borders without needing to connect to other streets. It does not essentially somewhere particular hence, may be ended in a plaza or even in a blind alley (Rykwert, 1991).

Generally, various terms may be applied such as road, boulevard, street, promenade, avenue etc (Figure 2.1-2.2) which have equivalent meanings and almost have been

corresponded interchangeably. However, there is a remarkable difference between street and road. Road proposes moving to a destination, offers transportation system which may lead to walk or using vehicles. Street also includes these mentioned features, but it seems to be more ordinary concept in Moughtin's words "is a road in a town or village, comparatively wide as opposed to a lane or alley." (Moughtin, 1992; pp: 129) one of the main difference between street and road is the existence of the road characteristic that is incompatible with the street. This difference can be considered as fast-moving traffic along with its engineering needs. In this regard, Carmona (2007) defines street as three- dimensional spaces which are situated between two lines of neighboring buildings on both sides.

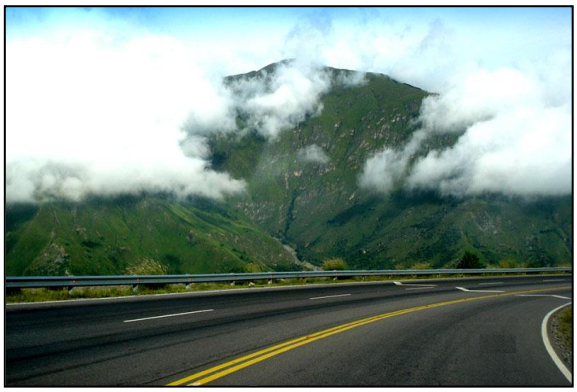


Figure 2.1: Road in the Jujuy Province, Argentina
URL, 1

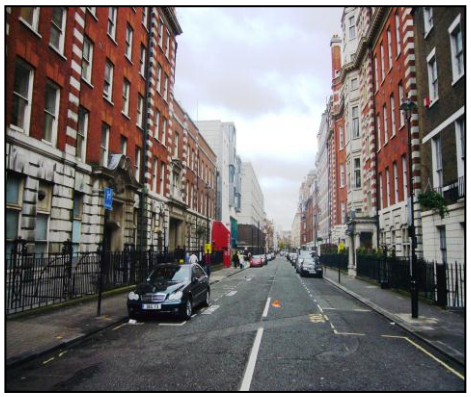


Figure 2.2: Westminster Bolsover Street
URL, 2

Both road and street are social settings and their name and function come from being accepted by the community. Street as a place is an equally perilous matter. More than its architectural identity, there would be economic function and social importance (Rykwert, 1991).

A street can also be described morphologically, i.e. "a linear space between buildings" or regarding its use: a "setting in which a specified set of activities occur"

(Rapoport, 1987:80). Rapoport (1987:81) however noted that “streets are the more or less narrow, linear spaces lined between buildings found in settlements and used for circulation and, sometimes, other activities.” This later definition of a street could inspire the concept of “pedestrian streets” that will be explained in detail in section 2.5.

2.2.1 Function and Form of the Street

In simple words, it could be said that streets are the most virgin kind of urban public spaces (Krier, 1979., Carmona, 2003). They are also the most critical sections of a city. Mostly, the features of urban fabric could be presented by streets (Shamsuddin, 2011). Street can define the city, structurally (Lynch, 1960) by facilitating spaces for socio-economic activities and by signifying the outdoors (Jacobs, 1993). In respect to impressive role of street in the city, Jane Jacobs (1961) described streets and their sidewalks as the most critical components of the public space. Lots of various functions occur along the streets simultaneously (Shamsuddin, 2011).

Reconsideration of different surveys has displayed that people count on streets for many kinds of activities such as social functional and leisure (Mehta, 2006). **Accessibility** and having **opportunities to socialize** are mentioned as two important activities (Gehl, 1987) and people get advantage of the street for transmission and for interacting each other through of meeting, shopping and greeting.

Through reviewing different literatures, it has achieved that planners and designers mostly evaluate the role of street for being accessible. Streets utilize social interactions in terms of contact, awareness and cohesion (Mehta, 2007). In a different

way, streets create chances for short-term, low-intensity connections that form several kinds of transactions with other people in a relaxed condition (Gehl, 1987).

It seems essential to consider about **function** and street responsibilities in the urban space so that street could be figured out and given form by the designers (Moughtin, 2003). In other words, first it is needed to go through the street function, and then it is more possible to decide about the form of the street accordingly. There would be complicated stages of social situations that street offers (Moudon, 1991).

As a whole, it could be mentioned that streets are the vessels of cities and their being successful can refer to how they are linked with local facilities and the whole city. Over the decades the design of streets has usually concentrated on vehicular moving, but actually, streets have many other capacities as well. They are essential units of city and extensively have impacts on the overall quality of life of people (Illustrated Urban Design Principle, 2010).

Places and streets that have sustained over time are those that have a successful form of traffic and activity integration, and where buildings and spaces, and the human needs, shape the area. As defined formerly, street is a multi-functional space, bringing enclosure and activity along with movement. It has some basic functions as:

• Circulation, for all groups of users (pedestrians, cyclists and vehicles);

• Movement access;

• Access to buildings, light equipment and ventilation system;

• A route for facilities;

• Storage space, mostly for automobiles;

• Public space for human activities; everything from marching and gatherings to provide various kinds of opportunities.

Virtually all urban streets carry out these functions, and often there is a balance between them which may vary along the street. In an ideal condition, all these street aspects can successfully exist at the same time, but usually, one of them (especially the movement of vehicles) may be more dominant in compare with others (Illustrated Urban Design Principle, 2010).

Ultimately, the street function can be classified into three broad categories: container for traffic movement, the good exchanging, and social activities. All of these functions definitely determine the form of the street.

Street configuration in terms of shape and **form** still has not been considered as in detailed as public square. Certainly, street has been analyzed a little in terms of form while many grand streets have been created; many others have been appreciated, described and photographed.

The street form can be explained through a number of contrary characteristics such as **straight** or **curved**; **long** or **short**, **wide** or **narrow**, **enclosed** or **open**, **formal** or **informal** (Figure 2.3-2.6). The form of the street also could be described in terms of scale, proportion, contrast, rhythm or connections to other streets and squares.

Figure 2.3: Straight Street
Syria
URL, 3

Figure 2.4: Curved Street
Cartagena
URL, 4

Figure 2.5: Long Street
Barcelona
URL, 5

Figure 2.6: Enclosed Street
Kyoto
URL, 6

Regardless of followed analysis, the street has two significant characteristics particularly related to form; it is, simultaneously, both path and place. There would be a common procedure to consider the street as a way (road) allocated to motor vehicles that its responsibility as a place has been neglected.

There are two basic inclusive forms for the urban street. In the first, streets seem to be sculpted out of an initial block of solid material. In this assumption, the spatial mass of the street described by the frontages is considered as the positive form. The other concept regards buildings as three-dimensional article; so that the city is parkland in where buildings are located as solitary sculptural forms. Space containing streets moves without shape surrounding buildings and other landscape

elements. The notion of the city and its streets subsist side by side in the real world. They may, in fact, correspond to the poles of a continuous process rather than a clear dichotomy. In fact, in the High Street, grouped as an enclosed form, lots of its interest is obtained from the different three dimensional shapes of its towers and spires (Moughtin, 2003).

2.2.2 Types of the Street

American Institute of Architects (AIA) spread a structure for arranging streets with ten classes as **highways**, **boulevard**, **avenue**, **drive**, **street**, **road**, **alley**, **lane**, **passage**, **and path**. They certainly express different levels of appropriateness for vehicular traffic, human interaction and types of buildings (Table 2.1).In this table the last two types specified for pedestrian. The system is based on "*capacity and character*." Capacity is a quantitative concept that relates to people's movement. It is changed upon the quantity and width of lanes, grades, junction management, and many other aspects. Character, relates to a street' s satisfactory for pedestrian interaction and a diversity of building. Street character is presented in the associated buildings, facades and landscape types, width of sidewalk and facilities (Forbes, 1999).

Table 2.1: Street Classification System, Forbes, 1999.

Classification	Example	Description
Highway		Longdistance, medium speed vehicular corridor that traverses open country. Should berelatively free of intersections, driveways, and adjacent buildings
Boulevard		Longdistance, medium speed vehicular corridor that traverses an urbanized area. Linedby buildings, parallel parking, wide sidewalks, or medians planted with trees.
Avenue		Short-distance, medium speed connector that traverses an urban area. With axis terminated at a civic building or monument. May be conceived as an elongated square
Drive		An edge between an urban and a natural corridor, park or pro montory. One side has the urban character and the other has the qualities of a parkway
Street		Smallscale, low speed connector. Streets provide frontage for higher density buildings.Street is urban in character, with raised curbs, closed drainage, wide sidewalks, parallel parking, trees in individual planting areas, and buildings aligned on short setbacks
Road		Small-scale, low speed connector. Provide frontage for low-density buildings. Rural incharacter with open curbs, optional parking, continuous planting, narrow sidewalks, and buildings well set back.
Alley		Narrow access servicing the rear of buildings on a street. No sidewalks, landscaping, or building setbacks. Used by trucks and must accommodate dumpsters. Usually paved to their edges, with center drainage via an inverted crown
Lane		Narrow access behind houses on a road. Rural in character, wit h a narrow strip of pavingat the center or no paving. they are still useful for accommodating utility runs, enhancing the privacy of rear yards, and providing play areas for children
Passage		Very narrow, pedestrianonly connector cutting between buildi ngs. Provide shortcutsthrough long blocks or connect rear parking areas with street frontages. Passages maybe roofed over and lined by shop fronts
Path		Very narrow pedestrian and bicycle connector traversing a par k or the open country.Paths should emerge from the sidewalk network

2.3 Definition and concept of Pedestrian Street

Everyone supposes urban space to be qualified along with being an attractive environment while, improving experienced quality of urban spaces is one of the main purposes of urban design. Through history, cities like Greek and Roman cities are formed upon pedestrian ways. Agora (Figure 2.7, 2.8), Forum (Figure 2.9, 2.10) and then in Baroque period, squares and plazas as pedestrian urban spaces were sketched next to cathedrals. Afterwards, in motorized world vehicles gradually became important element in city street (Saghafi, 2012).

Figure 2.7: The Agora in Athens, Carmona, 2008

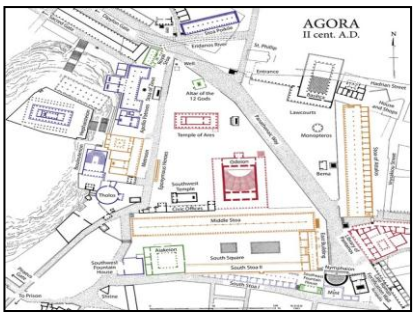


Figure 2.8: Agora Plan in Athens URL, 7

Figure 2.9: The Imperial Forum in Rome, Carmona, 2008

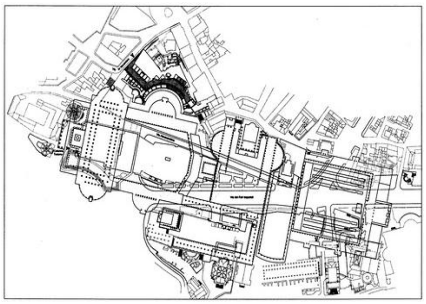


Figure 2.10: Forum Plan in Rome, URL, 8

Social activities are restrained in street and people have forced to underground for their movements because of high growing in vehicular traffic. Basically, one of the main focus of pedestrianisation is to separate pedestrians and automobiles, particularly in central areas (Robertson, 1993). Pedestrianisation, which is assumed

to block vehicular traffic to some extent (Yuen and Chor, 1998), has been proposed as an answer to recover spaces for pedestrians without any vehicles and upgrading the life quality in urban setting.

In the late 20th century, "pedestrian streets" applied as spaces for commercial activity and entertainments (Gelber, 2003., Gehl., Gemzoe, 2004). In pedestrian street the main axis is pedestrian and their interactions rather than vehicular use and they are drafted to create an acceptable number of non-walking and walking pedestrian facilities such as thinking about the situation for sitting, standing, hanging around and watching that happen through "pedestrian streets" along with walking.

"Pedestrian streets" are virtually streets where the vehicular space has been redistributed to human activity. This free carriageway asks leisure wandering and various social interaction and economic exchange in a setting where previously allocated to cars. Shops and cafes add much to this and also take advantage from the enhanced trade they enjoy. An example is Copenhagen's Stroget (Figure 2.11 and 2.12) that was changed to "pedestrian street" in 1962 or Istiklal Street in Istanbul (Figure 2.13) and Sepah salar Street in Tehran (Figure 2.14). After pedestrianisation, sales on the Stroget were occurred to have increased by 30 per cent and the level of air and noise pollution decreased remarkably (Berdichevsky 1984).

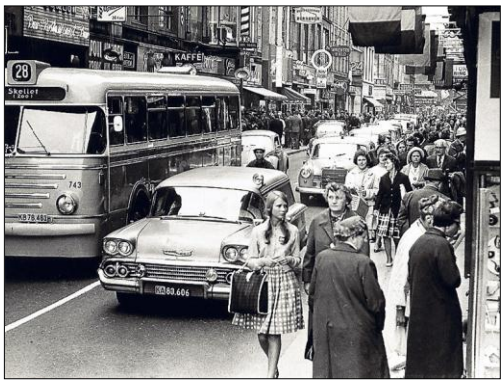


Figure 2.11: Stroget 1962, when cars set the pace (Photo: Gehl Architects)

Figure 2.12: Stroget 2012 after pedestrianized , URL, 9

A “pedestrian street” is accordingly a linear space between buildings in both sides where just pedestrian traffic is permitted to interact. The action of changing a formal street into a pedestrian one is entitled pedestrianization (Francis, 1987:24). Many “pedestrian streets” are named a pedestrian zone (Brambilla & Longo, 1977). In terms of American English the term “pedestrian mall” could be used instead of “pedestrian street” (Redstone, 1976; Brambilla & Longo, 1977).

Through the years, pedestrian streets have been recognized as a fundamental part of city center development (Monheim 1990, p. 245). In Germany, for instance, it is assessed that over 1000 German cities have pedestrian streets in their downtowns (Hass-Klau 1990; Monheim 1990). Roberts (1990) has noted that there are about 2000 “pedestrian streets” in Great Britain today (figure 2.15). Although the form of pedestrianisation process has differed due to variety of historical, cultural and political settings, most have been developed to lessen automobile obstruction in central parts of the city, to make downtown commercial activity more stable, to create more pedestrian-friendly centers, and to utilize the conservation of historical buildings and fabrics.

Figure 2.13: Istiklal Street, Istanbul, URL, 10

Figure 2.14: Sepah salar Street, Tehran
Author’s archive

Figure 2.15: Buchanan Street is a livable pedestrian zone functioning as Glasgow's retail anchor and the best spot to people-watch. Submitted by: Niall Murphy
URL, 11

There have been lots of thorough surveys that studied the progression of “pedestrian street” development in United States and many European countries like Denmark (Berdichevsky 1984), Germany (Monheim 1990), Sweden (Robertson 1991).

2.3.1 Importance of Pedestrian Street

As formerly mentioned, “pedestrian streets” have a significant role in understanding of physical and social pattern of a city. The more increasing the space and diverse moving opportunities of pedestrian, the more achieving of environmental and beneficial of visual, cultural and social issues (Broadbent, 1990). Pedestrian's perception according to their participation and moving of automobiles is changed. So the actual feature of city will be concealed at the back of machinery face. The association of people in an urban space will refer to collective memories. That will raise the feeling of belonging to a city, environment and society. The point is that people perception of city has been related to street activities and the level of pedestrian attendance because of that, the existence of “pedestrian streets” in city will be contributed to the promotion of people perception (Lynch, 1960). Hence, the improvement of street's qualities by the enhancing of pedestrian participation relates to the enhancement of city's image and people's perception. In pedestrian spaces unlike vehicular street, the lack of visual senses has also critical influences on the environmental cognition. The existence of various sounds, smells, touching objects and bulks and the chance to taste foods and beverages create several perception of multi-sense and mentally-emotionally feelings. This mixture will attach attractiveness to the “pedestrian streets” that certainly is a quality for environment and will expand the attending of people, which guarantee street sustainability over the years (Saghafi, 2011)

Designing the “pedestrian streets” can effectively regenerate the urban life of cities. People choose “pedestrian streets” for spending time, because they are secure, calm and unpolluted. They found the “pedestrian streets” as a place for meeting friends and shopping. Citizens take part in urban activities and gradually learn how to respect others over time in urban spaces and it can help the enhancement and promotion of the qualities in urban society and also it raise the level of culture such as respecting to others’ rights and being responsible for society. Especially for youth and children it can be the best way to be educated through the environment. This issue arose from the view of sustainability in a way that the social equity between citizens’ rights is the basic affair of sustainable city and this reality has been presented in “pedestrian streets”. It is considered as one of the critical matter of sustainable transportation network in cities.

2.4 Design Criteria of Pedestrian Street

This section of the research concentrates on different aspects of “pedestrian street”. It explains basis of using a street and identifies the value that streets support. “Pedestrian streets” include variety of uses. They are significant types of public spaces in which lots of people engaged with a vast series of activities. “Pedestrian Street” is a place where people gather and complete their different types of needs in terms of social, cultural, political and economic issues (Saghafi, 2012). It is also a place, where people have the opportunity to interact optimistically. They gather, walk, take lunch, and have pleasant conversation, watching others, read something, rest for a while or shop around (Tavakolian, 1990; Whyte & Underhill, 2009).

In general words, “pedestrian street” can be considered from three points of view. It can be seen as *a physical structure, as place of commercial activity, or as a place of social interaction.* Architects are mostly caring about physical aspects of “pedestrian street” while arguing for a finer environment. Economists and shop keepers look upon the “pedestrian street” from a commercial point of view. Sociologists consider the “pedestrian street” as a stage of interaction.

All three points that mentioned above are important. The “pedestrian street” is certainly a physical structure that can be designed differently but with the characteristic of being free from vehicles. When located in the downtown the “pedestrian street” is also a great street that variety of shops could be concentrated there. A highlighted feature of the “pedestrian street” is that it is a public space where people come across. Many events are happened there; people could have the chance of meeting each other and simply “to linger”. How much of the two last functions are important mostly related to the first one: the physical image. Some streets are naturally more commercial, others seem to be more social, and some are neither. However, all three aspects engaged to create the sense and feeling of each “pedestrian street” (Saghafi, 2012).

“Pedestrian streets” act as an organ of urban spaces that because of having some special potential, they are completely distributed to the pedestrian. Pedestrian streets are important not only because of being common urban spaces, but also because they are necessary for continuing of urban life. Hence, today “pedestrian streets” are known as outstanding elements of cities. The area without any traffic and including pedestrian shopping streets are the signs of “pedestrian streets” which are definitely the critical factors of urban design. These understandable spaces offer pleasant image

of city in people's mind and consist of various types of qualities for walking, recreational activities, shopping, interaction, aggregation and exchanging the cultural issues (Saghafi, 2011).

2.4.1 Physical Aspects

Physical features at the spatial level draw availability and place facilities, lighting, landscape and entertainment, and safety with together (Nathiwutthikun, 2006). Physical aspects of "pedestrian streets" include devices and facilities relayed to daily needs of people. Moreover, they make a kind of diversity in public spaces presented all over the city (Ercan, 2007; Zeka, 2011). The role of physical aspects initially is to cover the shape, size and visual appropriateness (Zeka, 2011).

Aesthetics, architecture, design and visual complications are all related to visual qualities such as lights, art (sculptures, fountains, decorations etc.), greenery, water, materials, textures, colors and surfaces. The lighting could create a sense of safety especially at night times or may only act as a visual quality; a piece of art equipment with several colors (Gehl 2010). In terms of the physical qualities of the street, Jacobs (1993) noted that they may not be the most crucial elements when it comes to defining communities, but they can assist and are important (Jacobs, AB 1993, p. 314). Accordingly, the building design itself leads to define successful urban streets are seldom exaggerated (Carmona et al. 2010). Aesthetic quality of city merely could not define a good street but when it is mixed with e.g. possibilities for lingering, walking and meeting, good climate and scale, the city or street could be great (Gehl 2010). In this regard Carmona stated that architectural style is important too, in order to convey meaning, identity and creating image (Carmona et al. 2010, p.200). And

mostly people like the places with attractive visual qualities, and consequently, these spaces are more likely to be successful (Carmona et al. 2010).

2.4.2 Social Aspects

Social activity is one of the remarkable designing aspects in "pedestrian street". Streets act as the base for the social life in cities. It is the function of social interaction in the street that makes it "the perfect urban space" (Whyte, 1988). A large quantity of social interactions and new information are produced through everyday gathering of people in "pedestrian streets" (Francis, 1987). People aspire to walk and experience street through activity. This is one of the most significant tendencies in drafting urban street (Francis, 1987). Another movement in designing street has an expanding theme of "street livability or sociability", which concentrates on the significance of the street setting as the social life of cities (Francis, 1987). These notions may facilitate various methods to define social transformation in street designs.

According to Whyte (1981), the "triangulation effect" is considerable for social activities on urban streets. The encouragement can be physical affair or sights, like a view to a landmark, a street band, public art, musicians, and entertainers (Whyte, 1981). These may not be perfect art works, but they are great for street because these factors help to attach people together (Whyte, 1981).

2.4.3 Economic Aspect

The "pedestrian streets" generate a pleasant condition in downtowns for shopping. In deed the idea of enhancing the commercial exchanges and economical affluences creates a tendency to design the streets and particularly "pedestrian streets". As a

governmental view establishing the “pedestrian streets” causes the expanding of government's profits through taxes from businessmen. They believe that creating of “pedestrian street” reappear the economical livability to the area (Woolley, 2003). Actually the mixture of shopping and recreational activities in area directly affects the number of visitors. These safe and secure spaces in which people take part are desirable for investing and marketing and it will support lot of pleas in terms of financial aspects.

So it could be said that **Physical aspects** are the qualities of the setting, as: containment, protection and enclosure; comfort, ease of movement and sufficient sitting elements; climatic response, shading elements; existence of natural elements like plants and water; enough parking spaces; linking to public and transportation systems; facade and building conditions; sights and visions and finally street furniture and system of signage. **Economic aspects** include the usability and activities, as: mixed activities to do or to watch; programmed events, spectacles, street activities and public art; equipments for food and drink; arrangement of shops and retail; night and day activities, and vending carts. Both the physical issues and economic activities would be improved for the **social and human needs** as follows: security from insult and/or harassments, different types of accidents, and decreasing threats of criminal assault; comfort, relaxation, visibility, mixing and mingling; active and passive social engagement; mystery and discovery; opportunities for children and the elderly. The three groups of aspects draw a framework to design methods and tools of the following research field study.

2.5 Summary of the Chapter

The function of street is not just as a route for vehicles. Certainly, urban streets often double play as public spaces. In this sense the concept of "pedestrian street" is getting more highlighted. As what mentioned in this chapter the concept of "pedestrian street" could be defined as a linear three dimensional space where only pedestrian traffic is allowed, and used for various (social-commercial-cultural) activities. Thus there were some design criteria which can be considered as physical structure, commercial activity and social interaction. These three groups of aspects draw a framework to design methods and tools of following chapter. Consequently, it could be achieved that pedestrian street which concentrate its aim on presence of people and attract them to the space. Spaces where people walk, shop, meet, and in general words, participate in social, commercial and recreational activities that, for most, these issues lead urban living towards livability. Street livability is mainly determined by better integration of the pedestrians' needs along with their activities that would be responded by street qualities.

In mentioned chapter it was a process from defining street as public urban space to specify it into Pedestrian Street along with talking about "pedestrian street" function, concept and importance in urban spaces. Therefore, it could be achieved that pedestrian street which concentrates its aim on presence of people and attract them to the space, would firstly cares about their needs to respond them by the qualities that are going to be created. These qualities will be assessed in next chapter.

Chapter 3

THEORETICAL FRAMEWORK: Activities, Human Needs and Qualities in Urban Space

3.1 Introduction

The demand for new design theories is increasing. It would support moving away from modern planning and promote the quality of urban areas. As what mentioned in previous chapter, the pedestrian environment is a very important organ of the urban experience and the pedestrian experience includes much more than moving from a place to another, so that it tries to manifest as a place to serve various types of interactions. Its success is dependent upon numerous qualitative factors. In this chapter, firstly the activities and human needs and then urban qualities in order to obtain the needs through human activities in urban spaces are discussed, then based on theories achieved from scalars' ideas in different period, such as Sitte, Bentley, Alexander, Appleyard, Jacobs, Whyte and Carmona, the parameters that affecting the pedestrian street quality such as comfort, safety, attractiveness, vitality, cleanliness and … will be resulted at the end according to Carmona's and Bentley's theories.

3.2 Activities in urban space

Human activities are definite behavioral performance. It is a kind of people responding to the environment so that; they are impressed by physical, cultural, socio-economic and also climatic aspects (Shamsuddin, 2011). Considering human

activities could help to understand ethnic or cultural distinctiveness as well as distinguishing remarkable activities of human in an urban setting.

Human activities are important issues that are in relation with the place character (Gehl, 1987., Carmona, 2003., Lang, 2005). They also act like a component of a good place (Canter, 1977., Montgomery, 1998). People attendance and interactions which is happened in terms of human activities bring liveability into streets (Shamsuddin, 2011).

Shamsuddin (2011) claimed that urban space vitality relates to number of existing people from all groups who are expected to be visible (Shamsuddin, 2011).

3.2.1 Activity Conditions

Activities require a physical base for presenting; on the other hand the choice of this base depends on the environmental condition to support these activities (Shamsuddin, 2011). In this sense, Whyte (1980) and Gehl (1987) explained conditions for people, as the main focus of public space, to have feeling of comfort and like to spend time in an area while participating in different activities. Definitely, people ask for the possibility of free moving, as well as standing and sitting wherever they want to. Options to be distributed to several uses in urban areas and to make familiar with environment so much rely on the design of the urban area to equip main users' activities with a level of satisfactory (Gemzoe, 2006).

While considering human activities at the level of manifestation in cultural setting, they highly have the ability to be changed (Rapoport, 1977).

Climate also is an important issue in defining behavioral patterns. Hence, the urban layout through answering to the climate, will obtain particular behavioral answers (Shamsuddin, 2011). Mehta (2006) declared that based on the impacts of environmental facets on behavior of human, a satisfactory microclimate could be identified by sunlight, shading and wind, that all are significant to consider in design of outdoor activities. Thus, good microclimatic issues turn the natural situation into preferable circumstances, become essential for sustaining outdoor activities.

3.2.2 Human Activities Classification

Studying all the activities that people participate in an area is important to identify the qualities of urban spaces (Shamsuddin, 2011). There has been many endeavors to group these activities. Table 3.1 indicates how Chapin, Brail, Francis and Gehl classified human activities.

Table3.1: Human Activity Classification, Ghahramanpouri, Lamit and Sedaghatnia, 2012

Activity grouping	Chapin & Brail (1969)	Francis (1991)	Simon (2000)	Gehl (2002)
	Work related Socializing home working Recreation/relaxation	Travel Shopping interaction	Movement Rest encounter	Traffic Commercial leisure

Gehl (1987) has defined three groups of human activities in public places as "**necessary activities"** that happen regardless of the physical environment, "**optional activities"** that could be performed under proper situations and "**social activities"**, which take place by high-quality spaces.

Studies conducted by Gehl (1989) indicated that the "pedestrian street" was mostly filled to near capacity and also people perform more than just walk along the street, they were standing, sitting, hanging around and watching so that promoting the level of human activity remarkably. In other words, the "pedestrian street" was including not only necessary activities (the obligatory acts like walking or shopping) but also what Gehl (1987) named as the optional (activities that people select to do only if the situations are welcoming and these consist of strolling, sitting and sunbathing) and social interactions (activities that subjected to the presence of other people like talking, people-watching). According to Gehl (1987), the best designed public spaces invite people to the most optional and social activities (Table 3.2).

Table 3.2: Human Activity, Gehl, 1987

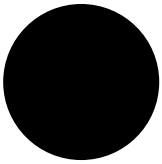
Necessary activities	Compulsory act: walking, shopping
Optional Activities	Activities that one chooses to do only if the conditions and place are inviting : strolling, sitting, sunbathing
Social Activities	Activities that depend on the presence of other people : talking, people watching

3.2.3 The Impact of Environmental Quality on Types of Activities

According to broad research across the world, as it is seen in Table 3.3 Gehl has resulted that "necessary activities" are affected only a little, by the physical features of the environment because they seem to be essential for life to continue. "Optional activities", by contrast, only happen when conditions are optimal, and are thus a kind of barometer of the quality of public space. Activities also define our perception of space because if people decide to stay in spaces rather than just passing through, the spaces themselves seem more 'liveable'. Social activities will happen, whatever the physical feature, but their quality will be influenced by the numbers of people in

urban space, and also by the quality level of space which encourages people to linger (Carmona, 2004).

Table 3.3: The Impact of Environmental Quality on Types of Activities, Carmona, 2004

	Quality of the physical environment	
	Poor	Good
Necessary activities		
Optional activities		
Resultant activities (Social activities)		

Above Table indicates the link between the quality of outdoors and the rate of quantity of outdoor activities. As the quality of outdoor space is fine, optional activities happen with enhancing possibilities. Moreover, when the degree of optional activity goes up, amounts of social activities usually promote substantially.

3.3 Human Needs in Urban Public spaces

One of the main aims of public spaces is satisfying of human needs. Studying people's needs or preferences and what the public spaces suggests to people are key factors for determining what makes a public space for people, or under what circumstances people are attracted to these zones, and on the other hand, what

conditions have led towards unused public spaces. Accordingly, it becomes essential for designers to figure out the human needs in the public spaces.

Since few designers have understood human needs, they define users' needs and satisfaction in a primary way or do not care about it at all (Lang, 1994). This situation is also common among urban designers through designing an urban space. Not considering human needs has made many urban negative effects in an urban space. It is important that designers recognize needs of users in public spaces in a vast way; they are supposed to achieve a strong model of human needs. Maslow's classification of human needs can be a rich model for designing according to the various ranges of needs. Totally, those needs explored by Maslow (1968) are: **survival**, **safety** and **security**, **belonging**, **esteem** and **self-actualization**. These needs in the condition of being cared in design, definitely would improve the life quality of environments and thus satisfy people in public settings. So, serving needs of people will lead to human satisfaction; in contrast, it is inconsideration, which could cause estrangement, segregation and lack of control of public urban space (Lang, 1994).

Caring about human needs is essential because they explain the use of places while use is also important to success. Places that are not defined according to people's needs or that serve no remarkable functions for people will not be successful (Carr, Francis, Rivlin and Stone 1992 p.91-92).

John Zeisel (Krupat, 1985) in his behavioral theory mentioned six particular needs for all people as: **security**, **clarity**, **privacy**, **social relation**, **comfort** and **identification**. Zeisel show sympathy towards complex situation for designers as

many aim to define public spaces that will be expected to consider the different social and psychological needs of various groups of users.

Zeisel described that the structure of Environmental Behavior Research creates a method that tries to explain the "needs, preferences and reactions of users to their environments, thus enabling designers to better connect with users and understand their desires, affects on making decisions for them (Zeisel, 1981).

In evaluating the urban space, as involving in human activity through the public areas, Lang (1994) has distinguished between two sorts of behavioral affairs – places and links - both of which create very different possibilities for activity based upon variety of functions in the urban space. Similarly, he also made a discussion of the many different types of pedestrian connections which exist in an urban setting, according to being appropriate in terms of their situation, users and function.

His most valuable contribution regarding designing for human use of the public area is his appellation of the four basic portions of the physical environment as **spatial character**, **furnishings**, **enclosing character** and **illumination.** They set the quality of a given space, and create the context for human activity in space (Lang, 1987). Considering of all four of these elements accurately can offer places which are suitable for their intended use, built and natural environment which are completely well connected together.

In the following Table (3.4) it could be seen that the similarity between the human needs defined by Maslow compared to Steel's list of the functions that occur in built

environment. Here the same method can get many functions of the built setting and the same kind of contact can face a number of goals (Lang, 1987).

Table 3.4: Human Needs and the Psychological Mechanisms to Afford them, Lang, 1987

Human Needs	Steel's concerns	Design Issues
Psychological	Shelter and security/Task instrumentality	Shelter, access to services
Safety	Social contact	Access to services, privacy, territoriality, defensible space, orientation
Belonging	Social contact/Symbolic identification	Access to services, communal setting, symbolic aesthetic
Esteem	Growth, pleasure	Personalization, symbolic aesthetic, control
Actualization	Growth, pleasure	Choice, access to developmental opportunities, control
Cognitive/Aesthetic	Growth, pleasure	Access to developmental opportunities, formal aesthetic

The above Table is demonstrating the mechanisms in designing appropriate environments with human needs and psychological concerns.

Carr (et al, 1992) declared that successful spaces are those that fulfill several human needs. Based on Carr (1992), these needs are named as **comfort**, **relaxation**, **passive and active engagement** and **mystery** and **discovery** (Carr, et al, 1992). These needs can be responded through the different kinds of activities in the urban space, the presence of pleasant spatial features and facilities in the public area, the existence of safety and climatic comfort.

Carolyn Francis and Clare Cooper Marcus are two outstanding American writers. In their book *People Places (1998),* the authors showed their disappointment through existing public zones in urban fabrics over North America. To fix the poor design features of public spaces and the insufficient coordination of the public space in many downtowns, Francis and Cooper Marcus provide practical approaches for the determination of these concerns. Through the titles of seven groups of urban space according to scale and function, there could be design recommendations which considered the social needs of people within these different kinds of urban spaces. The key issues which are clear throughout their work consist of physical aspects like boundaries, circulation and subspaces along with the importance of particular functional elements like **public art**, **vegetation**, **seating** and **signage** within the public context. Other issues which seem remarkable throughout People Places could be **microclimate**, the need for **visual quality** in the **creation of attractive environments** and the **significance of maintenance** to provide long term sustainability through public zones.

As it can be followed from the literature, different dimensions and typologies of human needs had been discussed in different times by different authors (see table 3.5). As indicated at the beginning of the Chapter, activities that are existed in the urban space are directly affecting human satisfaction (needs) and also urban space quality. Because the main focus of this research is to evaluate the quality of "pedestrian street", it is critical to concentrate on this concept in the following section.

Table 3.5: Human Needs Classification According to some Theorists, Developed by Author, 2013

Maslow (1968)	**Zeisel (1985)**	**Lang (1987)**	**Carr (1992)**	**Cooper (1998)**
Survival	Security	Psychology	Comfort	Accessibility
Safety/Security	Clarity	Safety	Relaxation	Meaning
Belonging	Privacy	Belonging	Passive/Active Engagement	Responsive to socio-economic/ physical context
Esteem	Social	Esteem	Mystery/Discovery	Physical aspects inclusivity: boundary/circulation/subspaces
Self-actualization	relation	Actualization		Functional elements: Publicart/vegetation/seating/ signage/microclimate
	Comfort	Cognitive/Aesthetic		Visual complexity
	Identity	Street furniture		Maintenance
		Enclosure		
		Illumination		
		Spatial character		

3.4 Review on urban quality

The world rapid increasing of population, globalization tendency and their affections on population mobility leads to a serious consideration of environmental quality in urban spaces. Quality is a multiple compounded concept that embarks variety of meanings regarding various occasions and conditions. Based on Juran (1988), quality is “fitness for use”. Gitlow (1989), on the other hand, defined quality as “to do the right business in a right way in all times”. The last definition of quality is “the efficiency of an object or a service towards the needs” (Anon, 1984).

The socio-economic concerns are vital in when talking about quality. That is directly referred to the physical characteristics of cities. The initial aim of designing in urban space is redefining the life quality, while concentrating on human beings as the focal point. Answers of the question "what makes a place qualified or successful?" can be

varied from one's opinion to another. A place would be defined as livable and attractive; safe and managed; and also accessible. The impartial qualities of the same place could be achieved in various ways by its users according to their personal desires and feature, such as age, gender, level of education, profession, their position in the society, previous spatial experiences, wishes and expectations and so on (Gulersoy,2009).

When talking about urban quality, it seems essential to deal recently with two various aspects, firstly, with the people's desires and cultural issues, and then with the urban environment's affairs; the more these two factors cover each other, the higher degree of overall quality is obtained. The expectations belong to two various levels: one referred to the urban construction, the other related to the transitional space. The general needs or desires depend on the first one; so that the demand involves with the availability of places where to conduct the required activities. The necessities that pertain to the second one are responded by the exercise of these activities; the claim in this case considers the accomplishments that the specific space, allocated to that activity (Martincigh, 2003).

In the design process therefore, urban quality stands for the ability of the environment structure of considering both quantitative and qualitative matters, all the material and immaterial needs of the users, by providing the needed performances.

3.4.1 Urban Space Quality

As considered before, the urban public setting is one of the most vital organs of a city and they are its qualities that make it successful or not. The quality of the urban context then pertains to a complex integrated of functional, spatial and cultural

factors. There are many various views in the formation of the quality in urban spaces. Actually it changes according to users' functions, of the places and of their different specific uses, and moreover they may change by times and with the applied culture, habits, tastes and considerations in a specific area; it is then a common value, so that it cannot be easily defined and cannot be fixed once for all in particular, the quality of the spaces distributed to pedestrians is directly related to their possibilities of mobility, of interchanging and interactions (Martincigh, 2003). According to Lynch (1981), the elements of good city form and ideal qualities of successful urban place are vitality (healthy environment), sense (sense of place and identity), fit (spatial adaptation), accessibility (accessibility to people, activities, knowledge) and control. Jacobs and Appleyard (1987) mentions livability, identity, control, access to choices, authenticity and meaning, society and public life, urban self-reliance. They emphasized that all are essential aims for the future of a good environment. Furthermore, Carmona et al. (2003) admitted the significance of permeability, diversity, clearness and flexibility. As a whole, the quality of urban environment is supposed to respond to livability, individuality, character, aesthetics, connection, continuity, accessibility, visibility and diversity.

To define a series of parameters for quality assessment of an urban area, it is needed to study the approaches of scholars related to this subject. For this reason, the following part explains the main characteristics of urban space quality of famous urban designers including Bentley **Camillo Sitte**, **Jane Jacobs**, **Christopher Alexander**, **Kevin Lynch, Bentley**, **Allan Jacobs** and **Donald Appleyard, William Whyte**, **Francis Tibbalds**, **Matthew Carmona** and at last the criteria of successful urban space which was done by the group of "**projects for public space**".

Foremost in **Sitte's** philosophy is kind of disappointment over supposing architecture as a single structure. Writing in the late 1890s, he declared that contemporary designing is focused on the arrangement of street patterns. In response, Sitte describes "**artistic principles**" which is defined to guarantee the continuous of the urban setting spatially and materially to help the combination of new technology and new construction.

Sitte inspected the squares or plazas of ancient Greece and Rome, the Middle Ages and the Renaissance (especially Baroque) to define the factors that gave these places a "**human scale**" (Sitte, 1889). He also emphasized on human scale while describing the level of enclosure in urban streets (Figure 3.1).

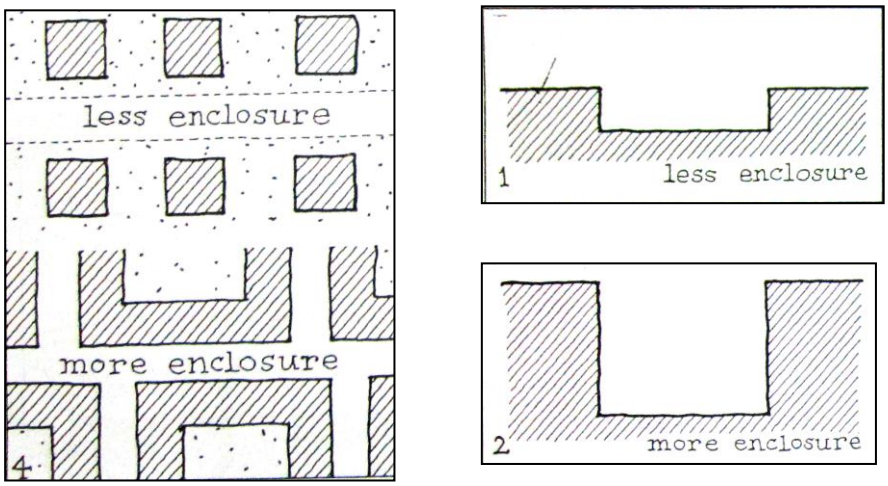


Figure 3.1: Street Enclosure (Bentley, 1985)

About 70 years later **Jane Jacobs** was the one with new ideas. According to Jacobs, successful streets have three main characteristics:

- There must be a clear **demarcation** between public and private space
- There must be "**eyes on the street**"
- Sidewalks need **continuous users and activity**

Again, the importance of **human scale** is being focused as the community concern and the kind of urban **vitality**.

Jane Jacobs (1961) one of the early commentators of democratic streets emphasized on the “eyes on the street” in creating a **sense of place** and safety in the area. Her own observations pushed her forwards to define main principles of street quality like the need for streets to consider **contact**, **safety** and **child use**.

18 years later of Jacobs’s ideas, **Christopher Alexander** developed other theory about urban design. Alexander's approach seemingly resulted from ideas of Sitte. He stated the concept of **timeless principles** and the necessity for individual factors to be donated to a kind of wholeness (Kruft, 1994).

Alexander suggested seven "**rules of growth**” which could be described as (Alexander, 1987).

- Piecemeal growth
- The growth of larger wholes
- Visions
- Positive urban space
- Layout of large urban buildings
- Construction
- Formation of centers

In Alexander's opinion, the pattern languages today have lost their importance and humans could not make connections with patterns that have the ability to create "life" in living and working areas (Alexander, 1979).

Following Alexander, **Kevin Lynch** (1981) introduced five main structural dimensions that require consideration for creating of "good" urban space:

1. **Vitality**, the level of supporting life by places, biological issues and the abilities of people.
2. **Sense**, the degree those users could perceive the place's information by, regarding its unique temporal and physical qualities.
3. **Fit**, the level of accommodating cultural and social behavior of human
4. **Access**, the possibility of getting to other people, activities, resources, places (shelters, open spaces, natural/symbolic space) and information.
5. **Control**, the level to which users of a place define and handle access to a place.

He also described two Meta dimensions: ability or the value of perceiving a level of **legibility**, vitality, sense, fit, access and control and justice for the one through getting how much of it.

Sense of place is definitely significant for urban design particularly in terms of "genius loci" spirit of the place (Porter, 2004).

Lynch (1981) described the identity as the physical or experiential character of a place which permits users to distinguish that place from adjacent spaces or places (create meaning). He also stated this may be performed through the mixture of sensory and temporal features that are unique to the place.

Similarly, **Bentley** et al (1985) in "*Responsive Environments*", suggested qualities such as **permeability**, **legibility**; **varied** or **mixed uses**, **robustness**, **visual appropriateness**, **richness** and **personalization** which all could be considered as some most important factors.

Permeability or **accessibility** means the quantity of possibilities of different channels that could be selected for travelling inside a particular space. Permeability is decreased by separating functions and by street hierarchy design and cul-de-sacs layout. Visual and physical permeability are both significant to be considered in the process of designing.

The quality of **Legibility** leads users towards reading and understanding the location of things in an area. In old and historic cities, the major public buildings, easily, were distinguished from other unimportant buildings. Kevin Lynch (1960) innovated studies regarding legibility. He determined elements as nodes, paths; edges, landmarks and districts all offer legibility in the setting.

Visual appropriateness as designing affair, considers aspects like infill developments and completing existing patterns near the built environment.

Variety or the notion of diversity to offer functions and mitigate asking for using cars, is an additional idea that is coming to be accepted highly in distributing to good urban areas.

The other quality describes places which can function as many different purposes and suggest their users more opportunities than places which are limited to a single fixed use. Spaces which create this possibility have a quality of **robustness**.

Determination about feature already conducted still leave room for the movement of the most detailed section of design. It is better to discuss about the rest through

increasing the possibility of sense-experiences which could satisfy users more than before. This degree of opportunity is called **richness**.

In continuous, regarding the highest level of people attendance in public spaces, lots of people still have to be settled in places designed by others. Therefore, it is especially critical that we make the chance for people to **personalize** their places: this might be mentioned as a kind of way that users can put their own taste on their environment.

The next scholars that are worth talking here are **Allan Jacobs** and **Donald Appleyard**. They defined some qualities for getting better urban space (Jacobs and Appleyard, 1987). There would be five factors that supposed to be considered for having livable streets. This consists of **sufficient sunlight**, **clean air**, **trees**, **vegetation**, **gardens**, **open space**, **human scaled** and **sketched buildings**, **cleanliness** and **safety**. He also emphasized to have the following characteristics for good urban streets:

- **Access to opportunities**
- **Authenticity and meaning**
- **Clean and good for children**

Afterwards **William Whyte** is another theorist with effective ideas in urban design. Whyte (1968) in his book, The Last landscape, examined a model for defining better and stronger use of space. This interprets as a highly dense growth (in a way that people did have the feeling of being jammed) and additionally, a larger amount and better function of open space. The **visual quality** of a setting could be important too (Whyte, 1988). Whyte's ideas could be summarized below.

He claimed that the number of "**sittable**" space is directly dependent on degree of using a public space by people. The situation of the area is a critical matter too - it is better to be located in the middle or heart of the city center, and also it is preferred to be on a main corner, where people could easily be able to walk to. At last, the location of the street is critical - if the space is physically blocked and visually seems to be accessible, naturally, people enter it.

In continuous, **Francis Tibbalds** in his book, making people-friendly towns (1992), described that qualities of urban context should be built into new constructions which are obviously of their own age while considering about 'people-friendly' at same time. Tibbalds explained that the quality of 'people- friendliness' can be obtained only by **mixing uses and activities**. Considering the important aspects of **pedestrian freedom**, how to make places **clear**, easy-to use and **accessible**, together with **human scale**, he also emphasized on the need to create developments that will **last and adapt**, and once more declared that a clear perception of how these factors come together is essential to gaining "People-Friendly Town" in an ideal way (Tibbalds, 1992).

Years later, Project for Public Space (PPS, 2000) highlighted that great public spaces have four key qualities: they are **accessible** enough; people are interacting; the space is **comfortable**; and after all, it is a **sociable** place.

In this sense Matthew Carmona (2008) went through the qualities of public spaces by defining the components of public space as "kit of parts". He also explained that knowing kit of parts is by itself is not valuable enough without an awareness of how the parts are joined and work together to foster the 'qualities' of urban public space

that make it advantageous to human activity. Then he classified the qualities in tangible, intangible and desirable groups. Generally, he highlighted twelve main qualities of public space that are brought in the Table 3.6. They can be redefined as ambitious for improving the quality public space.

Table 3.6: Universal positive qualities for public space, Carmona, 2008

Clean/tidy	Well cared for	Clear of litter, fly tipping, fly posting, abandoned cars, bad smells, detritus and grime; adequate waste-collection facilities; provision for dogs
Accessible	Easy to get to and move around	Ease of movement, walkability; barrier-free pavements; accessible by foot, bike, and public transport at all times; good quality parking; continuity of space; lack of congestion
Attractive	Visually pleasing	Aesthetic quality; visually stimulating; uncluttered; well-maintained paving, street furniture, landscaping, grass/verges, front gardens; clear of vandalism and graffiti; use of public art; coordinated street furniture
Comfortable	Comfortable to spend time in	Free of heavy traffic, rail/aircraft noise, intrusive industry; provision of street furniture, incidental sitting surfaces, public toilets, shelter; legible; clear signage; space enclosure
Inclusive	Welcoming to all, free, open and tolerant	Access and equity for all by gender, age, race, disability; encouraging engagement in public life; activities for young people; unrestricted
Vital/ viable	Well-used and thriving	Absence of vacant/derelict sites, vacant/boarded-up buildings; encouraging a diversity of uses, meeting places, animation; availability of play facilities; fostering interaction with space
Functional	Functions without conflict	Houses compatible uses, activities, vehicle/pedestrian relationships; provides ease of maintenance, servicing; absence of street parking nuisance
Distinctive	A positive, identifiable character	Sense of place and character; positive ambience; stimulating sound, touch and smell; reinforcing existing character/history; authentic; individual
Safe/ secure	Feels and its safe and secure	Reduced vehicle speeds, pedestrian, cyclist safety; low street crime, anti-social behavior; well lit and good surveillance, availability of authority figures; perception of security
Robust	Stands up to the pressures of everyday use	High-quality public realm, not repeatedly dug up; resilient street furniture, paving materials, boundaries, soft landscaping, street furniture; well-maintained buildings; adaptable, versatile space
Green/ unpolluted	Healthy and natural	Better parks and open space; greening buildings and spaces; biodiversity; unpolluted water, air and soil; access to nature; absence of vehicle emissions
Fulfilling	A sense of ownership and belonging	Giving people a stake (individually or collectively); fostering pride, citizenship and neighborliness; allowing personal freedom; opportunities for self-sufficiency

As a result of review on urban space quality, the different principles that are developed by urban design theorists are summarized in Table 3.7.

Table 3.7: Review on urban space quality, Developed by author, 2013

C. Sitte (1889)	**J.Jacobes (1961)**	**Alexaander (1979)**	**K.Lynnch (1981)**	**Bentley (1985)**
Artistic principles	Democracy	Timeless principles	Vitality	Personalization
Human scale	Eyes on the street	Piecemeal growth	Sense of place	Robustness
enclosure	Continues users and activities	Larger whole	Fit	Richness
	Vitality	Visions	Access	Legibility
	Human scale	Positive urban space	Control	Variety
	Sense of place	Construction	Legibility	Permeability
	Safety	Formation of centers		Visual appropriateness
	Child use			
	Contact			
A.Jacobes D.Appleyrad (1987)	**w.whyte (1988)**	**F.Tibbalds (1988)**	**P.P.S (2000)**	**M.Carmona (2008)**
Diversity	Visual quality	People friendly	Access	Accessible
Publicness	Access	Pedestrian freedom	Comfort	Attractive
Spontaneity	Sittable places	Access	Sociability	Comfortable
Livability		Mixed using	Uses/activity	Inclusive
Adequate sun Light		Adoptable		Vital
Clean air		Long lasting		Functional
Trees		Changeable		Distinctive
Vegetations				Safe
Gardens				Robust
Cleanliness				Green /unpolluted
Safety				Fulfilling
Designed buildings				Clean and Tidy
Human scale				
Open space				
Mixed use				
Compatibility				
Comfort				
Democracy				
Mixed user				

3.5 Parameters for Pedestrian Street Quality

Depending on the literature review on urban space quality and human needs in urban spaces, it is decided to use Bentley's and Carmona's principles as parameters for assessing the pedestrian street quality for this study. The reason for selecting these two scholars among others is that their principles are more or less repeated in other theorists' ideas/approaches and also Carmona (2008) is the one who has commented in this field recently. Therefore, it is thought that dealing with only these two will lead us to assess the quality of Pedestrian Street.

Bringing all qualities developed by different authors together, and combined them with the range of urban design objectives; it is possible to identify a set of 'qualities' for public space as presented in the following part.

3.5.1 Green and unpolluted space

Green spaces definitely have a vital role in human life to be healthy. Access to a park or green area can have broad advantages for our wellbeing. A safe, natural environment can be a break from our busy lives – a place to have some fresh air, to exercise or play – a place to go and relax. Green space is also very essential for tackling social problems while could mitigate obesity, cardiovascular disease, mental illness and antisocial behavior. It results that the natural environment can help being healthy, and describes how town planners, health professionals, and people themselves can cooperate to create more green areas and to use it beneficially. Green spaces positively have impacts on our mental and physical well-being and can improve community attachment and make better living environment (Figure 3.2, 3.3). To manage these advantages a comprehensive effort is required from each and

every group, who may concern and public as well. This collaborative project needs to define green spaces available, safe and accessible for everyone, make them to serve all group activities, and suggest their use to improve health and wellbeing and help medicating conditions like, moderating depression (Great Outdoors, 2010).

Figure 3.2:
Using Natural Elements as Shelters, Athens, URL, 12

Figure 3.3:
Combining Greenery with Human Activities, Athens, URL, 13

3.5.2 Legibility

The existence of different choices of moving among places is less than meaningful if people cannot orientate themselves with this movement network. To assist people being informed of the available opportunities, the spatial form of the built environment must be easily perceived. It is going to be achieved greatly by defining legibility (Figure 3.4) that is described as the "quality which makes a place graspable" or as "how easily people can distinguish between the larger pattern of space and the local parts" (Lynch 1960, Bentley et al 1985, Hillier 1985, 49). It seems that legibility can be divided into "physical legibility" and "activity legibility" due to the difference between the functions and signs defined by the physical structure, and those created through activities belonging to built form. Consequently, to use the potential of a place to the full cognition of physical structure of use must

complete one another; hence, main urban forms and spaces must indicate basic and significant functions and vice versa (Oktay, 1996).

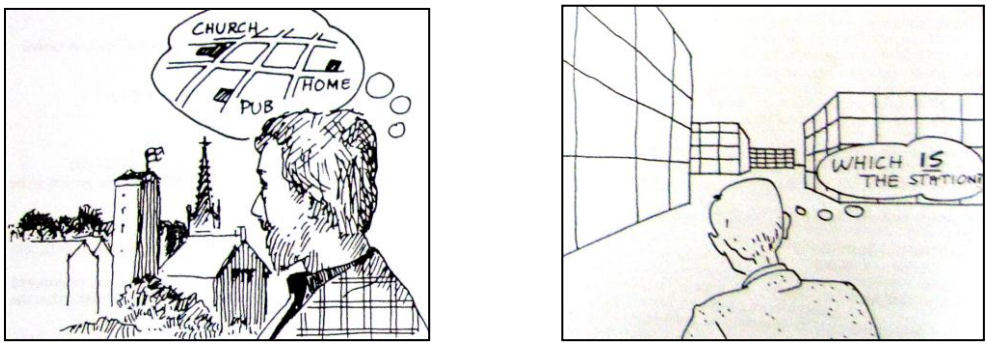


Figure 3.4: Legibility (Bentley, 1985)

Accordingly, clarity and legibility are significant belongings of a space which make it understandable for users through the physical structure and activities. In this regard, successful urban spaces are supposed to have legibility so that they are readable and people could easily find their way without confusion (figure 3.5, 3.6).

Figure 3.5: Street Legibility, Burlington (USA)
URL, 14

Figure 3.6: Street Legibility, Bonn (Germany)
Author's Archive

A clear image of the environment equipped people to easily and quickly make familiar with the space and may perform as a wide frame of reference and a creator

of activity and defines safety and extremeness of human experience. Accordingly, citation is made usually to the components which give an accurate images to the city form; “landmark, district, node, edge and path” (Lynch, 1960).

3.5.3 Diversity

Diversity could be described as the mixture of functions like shops, offices and dwellings in a city context and in the different blocks. In an ideal form, Shops are located in ground floor, offices on the first floor and residential on the upper floors. Existence of diverse functions can create a kind of security in the streets and squares in day and night time (Gehl, 2002). The mixed-use street is becoming vital on the government’s policy agenda. In environmental terms it makes the opportunity for people to shop locally without needing cars, in economic terms it creates an area of its own customers for local businesses, socially, it provides inclusive places for locals to attend in various activities and interact with each other (Jones, Roberts & Morris, 2007).

3.5.4 Function

Generally, as stated formerly, streets are an important section of open public space in the city. For many civilities, it is the streets that exhibit the outdoors (Jacobs, 1993). People pertain to streets for physical, social and leisure functions, for travel, shopping, playing, meeting, and interaction with other people. In detail this part was described in previous chapter at section 2.2.1.

3.5.5 Visual appropriateness

It is kinds of the translation that people have for a place which is trying to fortify its responsiveness (Figure 3.7). Places which are most experienced by people are

focused especially. Achieving visual appropriateness is depending on a number of qualities. Design principles such as order, unity, balance, symmetry, scale, proportion, rhythm, contrast and harmony must be cooperated to guarantee the visual appropriateness of the space (Figure 3.8, 3.9).

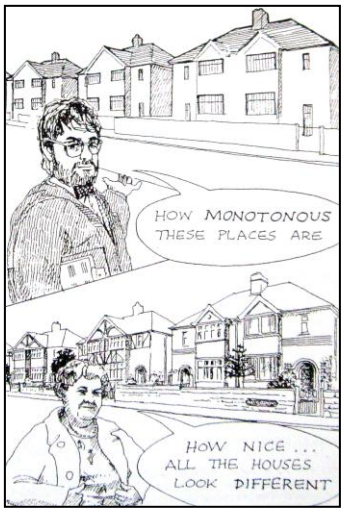


Figure 3.7:
Visual Appropriateness
Bentley, 1985

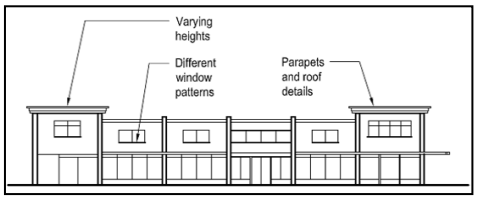


Figure 3.8: Building Scale

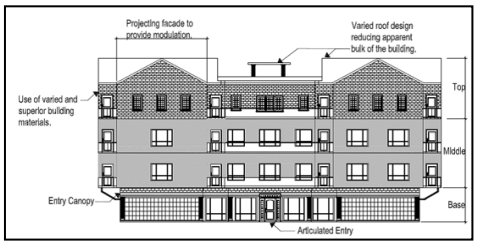


Figure 3.9: Building Detail
URL, 15

Architecture can be distributed positively to the street and gain local identity regarding context. It is also important to locate functions in a readable way for users. Additionally, buildings, which define the physical borders of spaces, should be designed to serve a large number of uses. Its appearance must support this quality by being visually appropriate for all the functions.

3.5.6 Personalization: As a responsive design factor, it aims the translating of a place's pattern of functions clear and obvious (Figure 3.10). Reordering building features through their users' interventions (by adding ornaments for instance) could be an example of personalization. Public innovation can help arranging the goals to gain success in public spaces. In the process of implementation, mostly

it is preferred to examine the whole process in terms of small experiments that can support changes through time.

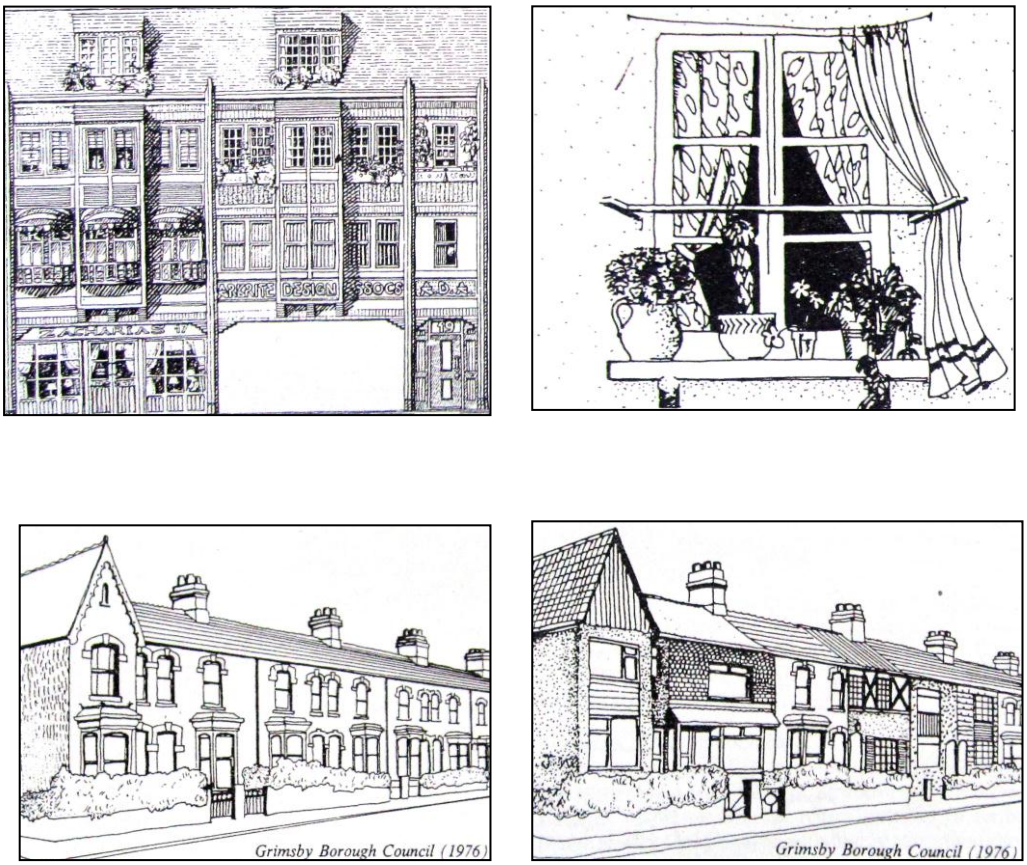


Figure 3.10: Personalization (Bentley, 1985)

The purpose of this process is to make local identity, quality of the natural environment, historical/cultural heritage activates. This aimed to offer a unique sense of place to an urban fabric. This in turn attracts various users and makes places more valuable by enhancing tourism, investment and distinctiveness. Personalization is mostly offended by a number of issues. When the user of a place has a claim on where he/she is, personalization can be achieved. Length and type of stay in urban spaces is also affecting on personalization. Residential and working spaces are easily personalized in compare with public areas due to the short length of stay of their users. Personalization is expected to be conducted by methods regarding visual and

long-lasting qualities and environmental performance which can be easily learned even by immature people. It should be also recognized that personalization is not a accidentally desirable goal. High level in personalization may result in disorder. Hence, personalization is supposed to be considered in the process of designing public spaces. In personalizing a place, people are validating and defining their values for themselves (Figure 3.11). People are also presenting their tastes by defining the design to persuade the impacts of personalization in a way that does not damage the qualities like visual appropriateness or richness (Bentley, 1985).

Figure 3.11: Street Personalization, Brooklyn
URL, 16

3.5.7 Accessibility/Permeability

As far as places define their existence by connecting to other places and a city, public use is very much pertaining to linkage (Figure 3.12, 3.13). Therefore, accessibility could be mentioned as most necessary quality of public setting in offering well used spaces that increase social interactions. The importance of access at the local scale was also clear with the term “permeability” (Bentley et al 1985), the extent to which an environment permits people a possibility of access through it, from place to place and defined as the most crucial quality of urban setting in offering well used spaces that improve social interaction.

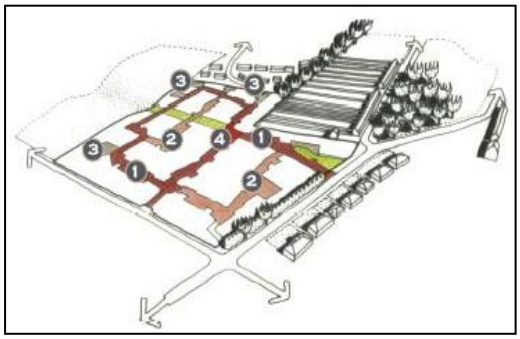


Figure 3.12:
Hierarchy of the Streets
Polnoon Masterplan, Scotland
URL, 17

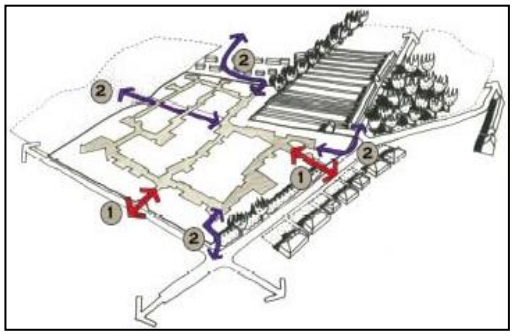


Figure 3.13:
Well Connection into the Surrounding Area, Polnoon Masterplan, Scotland
URL, 18

Permeability can be defined as ***"…the freedom with which a person can walk about and look around"*** in the urban space (Tibbalds, 2001, p. 49). Permeability is defined by the quantity of physical characters such as the number, width and slope of possible channels to the place that must be visible as well (Figure 3.14, 3.15).In this context, small blocks have the tendency to promote visual and physical permeability as they enhance the user' awareness of the existing routes. Thus, raising the scale of the development could be mentioned as reduction of permeability.

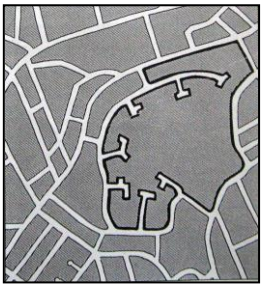


Figure 3.14: Dead-end streets with no visual and physical permeability (Bentley, 1985)

Figure 3.15: In spite of being physical permeable, there is no visual permeability (Bentley, 1985)

The five 'C' principles, "Connections, Convenience, Convivial, Comfortable and Conspicuousness" are the five key factors of an improved interaction and

accessibility of a place. This makes the analysis of street design essential as well as the transportation system between the suggested new streets by testing the characteristics of intersections between transportation means and modifying the related significance of all access points towards the site (Bentley, 1985).

3.5.8 Attractiveness

Attractive public open spaces could perform as key design factors for improving quality of life in urban setting and to vanish the negative impacts of urbanization. In order to achieve this, these open spaces must satisfy the needs and expectations of the people by creating the combination of environmental, economic and social aspects. It is obvious that the local microclimate defined in an area is one of the important factors that form the individual perception and evaluation of an outdoor environment. Desirable conditions will engage people who, on the other hand will make these spaces more pleasant for shops, restaurants or other amenities depending on the number of pedestrian and it is worth to note here again that the success of a public space directly related to the number of people in space (Carmona et al., 2003).

Attractive streets are mostly remarkable streets in the city. They seem vital and livable (Figure 3.16). Pedestrians are drawn to these streets because they are fantastic places while they are safe and accessible enough. They are such places that people like to hang around, meet others, and go for business. Streets are supposed to be planned in order to place all means of transportation. But attractive streets certainly should be designed according to pedestrian axis (Pedestrian Friendly Streets, 2011).In attractive street building facades create in a way that could be defined many entrances and transparency which offer a good connection between indoors and outdoors. In this complex there is usually a good mix of various functions.

Figure 3.16: Attractive Streets, Dallas
URL, 19

3.5.9 Distinctiveness

The degree of being distinctive and also meaningful place that, in the non-existence of a more graceful term, could be entitled “placefulness” is a argumentative characteristic with existence of a real place on a continuous process from placeful (a string sense of place) to placeless (a lack of place identity) (Carmona, 2003). perfect design addresses places as functional, durable, feasible, good to use for people, and that indicate the significance of local character (Figure 3.17) and distinctiveness (CABE, 2006). Obviously, distinctiveness is not only a physical quality, but also is related to the experience of the people (Southworth, 2007).

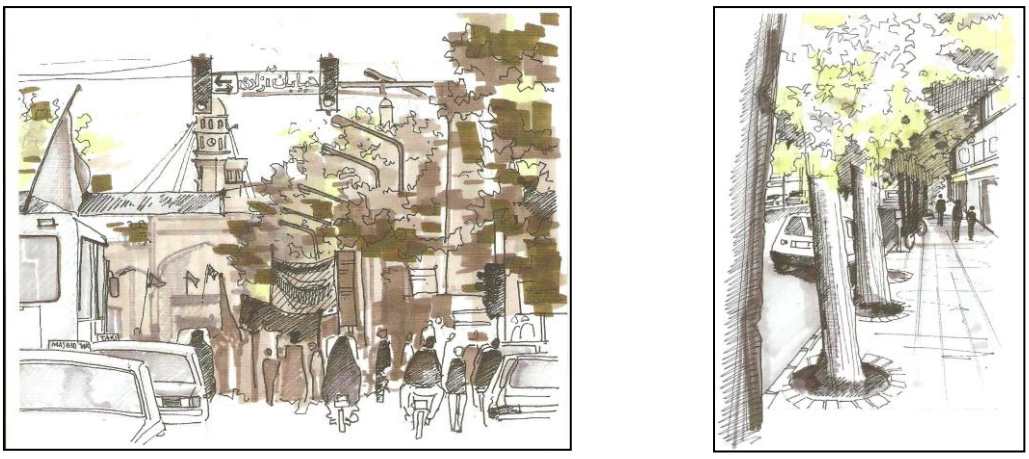


Figure 3.17: Reflection of Local Character by Architectural or
Natural Elements, Mashhad (Iran)
Sketched by Author

As noted by Relph (1976), Garnham (1985) and Carmona (2007), there would be three main elements of urban identity. The first is related to the physical structure or image that is the real physical quality of a place consisting of buildings, landscape, micro climate, and aesthetic complexity. Second, is the human activity that related to how people and place contact with each other. The last concerns meaning and symbols that are the consequences of human activity and aspiration on a place as a response to the physical structure and use of place. The complex interaction and logical links between these are the primary structure of identity, that its distinctiveness or legitimacy will offer a 'sense of place' (Relph, 1976; Jiven, 2003). However, users value places in different ways, according to factors like their experience, ethnic, and culture (Appleyard, 1976 cited in Southworth, 2010). But when everyone distributes an identity to distinct places, these identities are integrated to create a common identity due to the same activities and affairs that are experienced by different people and also people look for particular features of place based on their cultural circumstances (Relph, 2007). As Scheffler (2009) mentioned about the common and distinctive identity of a city, common identity is a local quality that is experienced by locals which encourages them to feel tied to the city and improves their active participation. Distinctive identity has larger scale when talking about a city or place which is seen and perceived by visitors.

3.5.10 Robustness: Robustness can be defined by designing especial spaces that suggest their users more opportunities than places modified for just one fixed use (figure 3.18). This is obvious through ordinary values by creating activities in public space which conduct as the most important base for other activities. This is seldom entitled separating activities. Robustness copes with space designing in order to turn their functions to wider choices for users. Particular criteria manage the success of

robustness implementation while guaranteeing financial possibility and enhancing the number and range of uses (Bentley, 1985).

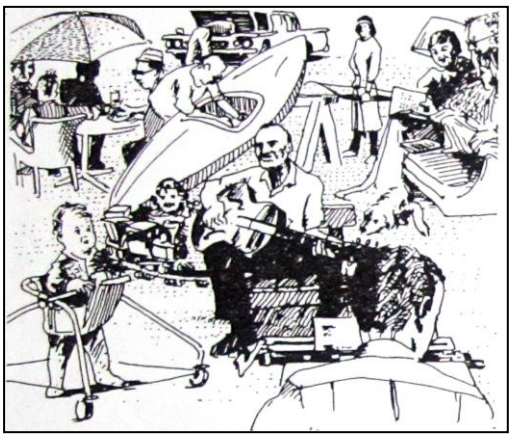


Figure 3.18: Robustness in an urban space
(Bentley, 1985)

Accordingly, leading the discussion to an account of the "form", "function" and importance of the physical structure, Anderson (1986) defined "robustness" and "resilience" as the realm of the above mentioned areas. Robustness is considered as the extent of the possibility in the physical environment, while resilience is focused on the level of latency along with the recognized but unaccomplished capacity within the dominant space. Developing Anderson's discussion, Carmona et al (2003) described robustness, generally, as an operation of the contact between 'form' and the 'uses' it comprehended. Both 'use' ('people') and 'form' ('place'), as the materialization of 'public' and 'space', are the vital and interdependent elements of any public setting.

3.5.11 Richness

It is about the diversity of physical experiences in a space (Bentley, 1985). The visual qualities of desirable space are considered as "richness" and "variety" strengthens by understandable fundamental structure and obvious interactional concepts (Gjerde, 2008).

Although spatial information are transferred through eyes, but it does not mean that sight is the only sense that defines the identity of a place. It could be said that richness is not a merely visual affair. There are other senses that affect on the quality of richness as:

“The sense of motion”: a space can be defined through the starting and ending of the routes

“The sense of smell”: the olfactory sense is the related factor in space identification

“The sense of taste”: this is related by the foods which can be the indicator of the natural and traditional environment.

“The sense of hearing”: Auditory richness is defined in small spaces, and mostly it is imposed on everybody there.

“The sense of touch”: a particular texture in surfaces can lead to identify a certain space regardless of the scale

“The sense of time”: this is related with the two-way relation between the urban fabric and time passing in terms of changing pattern (Bentley, 1985), (Figure 3.19, 3.20)

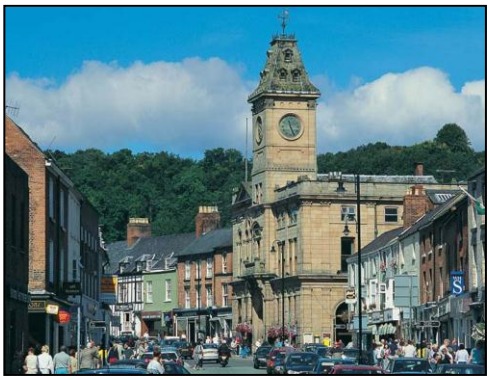


Figure 3.19: Street Richness in Terms of Historical Element, England
URL, 20

Figure 3.20: Street Richness in Terms of Symbolic Element, Italy
URL, 21

3.5.12 Safety

Common open spaces should be safe and secure for all, facilitated by active and passive observation. Physical qualities are most vital issues for feeling safe, belonging in an open space and also degree of being clean repaired and maintained were key elements for users (Vasilevska, 2012). The goal in this discussion is to create a feeling of safety and security for people in a place even at all times of a day so that there would not be any signs of spoil like graffiti, rubbish, weeds or derelict places, and also roads and paths guarantee safety for adults and children (Creating places for people, an urban design protocol for Australian cities, 2011). Generally by enhancing the number of people in the street and by encouraging more life in the street, by making city free from darkness, by decreasing lost spaces, by designing new buildings to observe public spaces and hence provide "eyes on the street", the pedestrian safety quality could be achieved along the street (Gehl, 2002).

3.5.13 Comfort

The best streets seem to be as comfortable as they can be. They offer sunlight when or shade in appropriate condition. People realize comfort and answer to it (Jacobs, 1995). Hence human comfort is going to be defined as: “Comfort, at minimal level, implies a freedom from pain on all dimensions of environmental experience. Biological comfort has to do with a person’s assessment of the level of stimulation to which his or her body is being subjected” (Lang, 1994p.221).

A relative notion is about metabolic comfort (Lang, 1994). This concept implies that one’s metabolic comfort in an open area will pertain to many factors as: “the individual’s activity, the air temperature, humidity, radiation, air movement, and the clothing worn”. More over environmental and physical comfort as well as security are two important affairs of the open public spaces that influence the vitality and livability of urban setting.

3.5.14 Cleanliness

Rapoport (1982) has stated that cleanliness is one of the important factors in commenting about aesthetic qualities. A notion here is that cleanliness and maintenance issues may not save the perceptions of a place that on the other hand lost the ability of communicating through building functions in the ground floor. The cleanliness of the street is also significant for the users of the street, both in terms of the taking graffiti, litter, abandoned articles away and refuses collection (Figure 3.21). Refuse bags that are remained in the street can hinder movement and are unsightly and often with bad smelly (Jones & Roberts & Morris, 2007). Other Problems about urban open spaces are multifaceted, that is related to the level of cleanliness.

Figure 3.21: Street Graffiti, Brussels
Author's Archive

3.5.15 Inclusivity

Exclusion often implies 'exclusivity' or 'security'. In fact, it is a creation of power through controlling the environment and having access to it (Carmona, 2003). An inclusive article, facility or environment does not ignore any group of society. Inclusive concepts consider all kinds of users as disables, elderly, children and … It is a progressive step towards reaching a universal method. The British Standards Institute's BS (2005) describes inclusive design as 'The design of mainstream products and/or services that are accessible to, and usable by, as many people as reasonably possible ... without the need for special adaptation or specialized design' (Inclusivity report, 2010). An inclusively designed street environment will accommodate the various requirements and expectations of ranges of users. It will give a sense of comfort and security to people by giving them the power of control over the space. Exterior spaces are critical within any group setting, and how spaces are drafted, adapted and controlled play a significant role in the life quality of users. Outdoor spaces with good quality can encourage people to use them, making it a desirable experience for social groups and individuals as well. Street as part of the exterior environment should be sketched to serve the needs of all groups of users. It

is important for the urban street to improve the ability of people to walk freely, effectively in a safe environment, and raising sense of confidence while doing so. It is essential to achieve this quality to serve all users especially **blind** or **sighted** and **disabled people**, **older people** and **children** (Crowther, 2010).

3.5.16 Fulfill

Today cities consist of people who do not interested in visiting any place, who does not have any sense of belonging to their environment, and who have defined strict boundaries to separate themselves from "the other"(Carrión M. and Hanley, 2007). Various multi dimensional physical, psychological and environmental issues could define place. Canter (1991) declared that place is understandable with the integration of perceptions, impacts and users' behavior. Sense of place creates fulfill in the environment and continuous presence of people for facilitating the environment (Relph, 1976). People like to describe themselves through sense of belonging (Stedman, 2002). Place belonging is explained as a sense of belonging or fulfill to a specified place and people like to imagine it as their own home, it has defined territory and can be understood as attaching to a particular community according to ethnicity, sex, religion, culture and so forth (Ng & Kam & Pong, 2005).

Based on the ideas of Jacobs and Appleyard (1987) people qualified some sections of environment as liveliness, distinctiveness, manages and access to opportunities. People also prefer to feel that they are attached and belonged to some parts of environment and vice versa.

3.5.17 Vitality

Streets include the preponderance of public spaces and play an important role in cities (Jacobs, 1961; Appleyard, 1981; Jacobs, 1993; Carmona, 2003), acting like a meeting place for different social groups and activities (Jacobs, 1993). Activities in along with different functions and social interaction guarantee vitality and guide towards livability (Robertson, 1993).

A responsive place has the ability to include human activities. Vitality means liveliness, eagerness of a place comes from intensity and variety of activities created by pedestrian (Jacobs, 1961; Montgomery, 1998). Diversity is a vital affair in urban space through the integration of various factors offering level of possibilities and the range of functions serving people (Bentley et al., 1985). The best streets are the ones that are physically, economically and socially have diversity, the impacts of which lead to longer length of activity and livability, distributing to a more vital and also safer environment (Jacobs, 1999). To inviting people to the setting, direct relationship between functions, activity and products suggestion needs to be focused (Shuhana et al., 2004).

To enhance the urban, perceptual, and visual accomplishments of small society, designers need to improve diversity and vitality in spaces, promote perceptual quality of urban structure, to be attractive, vital and healthy. Accordingly, vitality is to create place as safe as possible (Evans, 2001), with the presence of various users in the street to support services and urban spaces and making livable streets as possible (Bentley, 1990).

3.6 Relationship between Human Activities, Needs and Street Quality

The aim of this chapter was to satisfy human need with activities which leads towards achieving urban space quality. As what discussed before urban space qualities were defined in along with human needs, and when these two cover each other the form of human activities changes to optional and social. In other words it could be said that only when human needs were responded through the activities, the street is qualified in terms of defined parameters (Accessibility, legibility, visual appropriateness, attractiveness, distinctiveness and…). Human needs include asking for safety, cleanliness, self esteem aesthetic qualities and… (See Table 3.5) which are satisfied through the different levels of activities (See Table 3.2). When people feel that their needs are going to be answered through qualified street, they change their activities into optional and social. In this regard people prefer to stay and spend time in the street and this definitely is the main aim of successful urban space.

3.7 Summary of the Chapter

After clarifying the feature of "pedestrian street" in Chapter 2, this chapter explored the success of pedestrian street which is dependent on the variety of characteristics they offer. Ultimately there were some criteria to be contributed to the success of "pedestrian street".

In this approach, this chapter was classified into three main sections. The first was talking about human activities, second distributed to human needs and the last focused on urban space quality. The success of "pedestrian street" is not come true until these three aspects were connected to each other.

Human activities went through the possible activities which happen in “pedestrian street”. These activities could be necessary, optional and social. When the urban space got qualified, necessary activities change to optional and in higher levels of qualification social activities could also be done. When talking about human needs, it is expected to meet the characteristics that people ask while being in an urban space. So there were some requirements like safety, comfort, belonging, accessibility, identity, cleanliness, visual complexity and …which are supposed to be responded in the urban space.

On the other hand the qualities of Pedestrian Street were explored to achieve some parameters like safety, comfort, legibility, distinctiveness, diversity, vitality, visual appropriateness and … as the main and important characteristics of Pedestrian Street. The later process was followed by going through some scholars theories. Actually the concept of quality in an urban space according to Carmona and Bentley has covered all other explanations. Finally, it was explained that how human activities, human needs and street quality could interact with each other in order to raise the activities to optional and social levels.

In following chapter the qualities of case study will be evaluated based on the achieved parameters of this chapter.

Chapter 4

CASE STUDY APPLICATION- DATA COLLECTION AND ANALYSIS METHODS

4.1 Introduction

This chapter will present data collection and analysis methods for the assessing the qualities of pedestrian street in the case of Istiklal Street in Walled City of Famagusta. It is compromised in three sections. After this introductory part in section 4.2, selection of case study area will be explained in brief. In the third section 4.3, the methodology of the analysis of will be discussed. The analysis will be explained under the natural, built and socio-economic environment. Summary of the chapter will be presented in section 4.6.

4.2 Selection of the Case Area

Istiklal Street in the Walled Town of Famagusta in North Cyprus is selected as a case study. Cyprus is the third biggest island in the Mediterranean after Sicily and Sardinia and there is 40 miles with Turkey (Figure 4.1). The selected case study area is located in the Walled city of Famagusta. Being the only pedestrian street in the city, it has different characteristics in terms of built and social structures. Therefore, it would provide interesting and diverse case study to assess the qualities of Pedestrian Street. Although the street is one of the pedestrian street with full of retails and mixed-uses, it has some deteriorated areas. Also, their organic street character with attached one or two storey houses and mix use character are also

common characteristics. Later there would be a focus on Walled city of Famagusta where the case is located and also the main area, Istiklal Street, as the case to be analyzed.

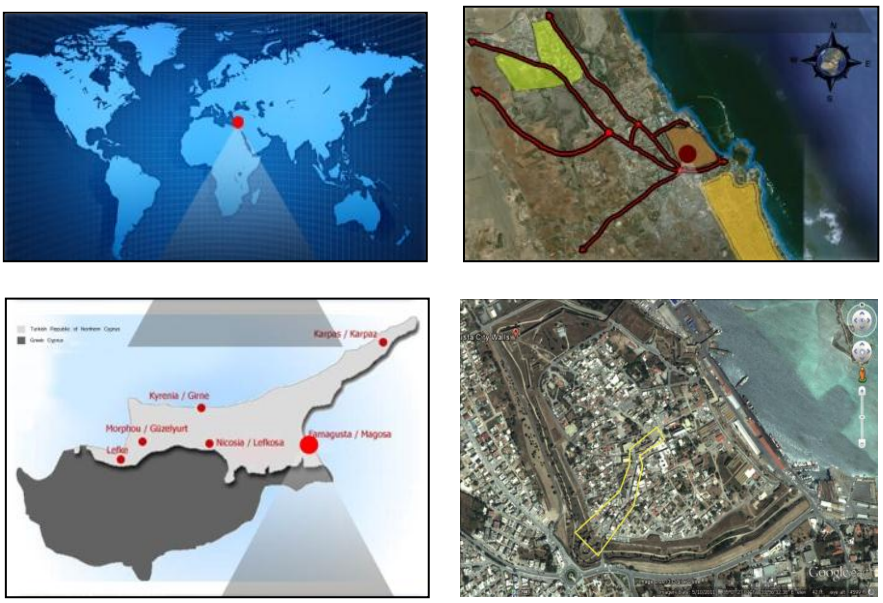


Figure 4.1: Location of Istiklal Street.

4.2.1 An Overview on Walled City of Famagusta

As a homeland of many various cultures, the Walled City of Famagusta, just like the island of Cyprus, could be a good example of medieval cities, not only around the Mediterranean area but also through Europe, with its multi-cultural identity, exhibiting a variety of cultures through Roman, Byzantine, Lusignan, Venetian, Ottoman and the British. The traditional urban structure in the Walled City of Famagusta has a medieval feature with its organic pattern. This urban structure, and therefore the organic setting and dynamic facade, which give today's image of Walled City, are the results of history. In terms of creation of city life, density, population size, occupational differentiation, spatial contribution of urban activities, land-use and the street pattern, the Walled City of Famagusta defined its formal characteristics in different periods within

history, under different social, cultural, economical and political impacts (Doratli et.al. 2003).

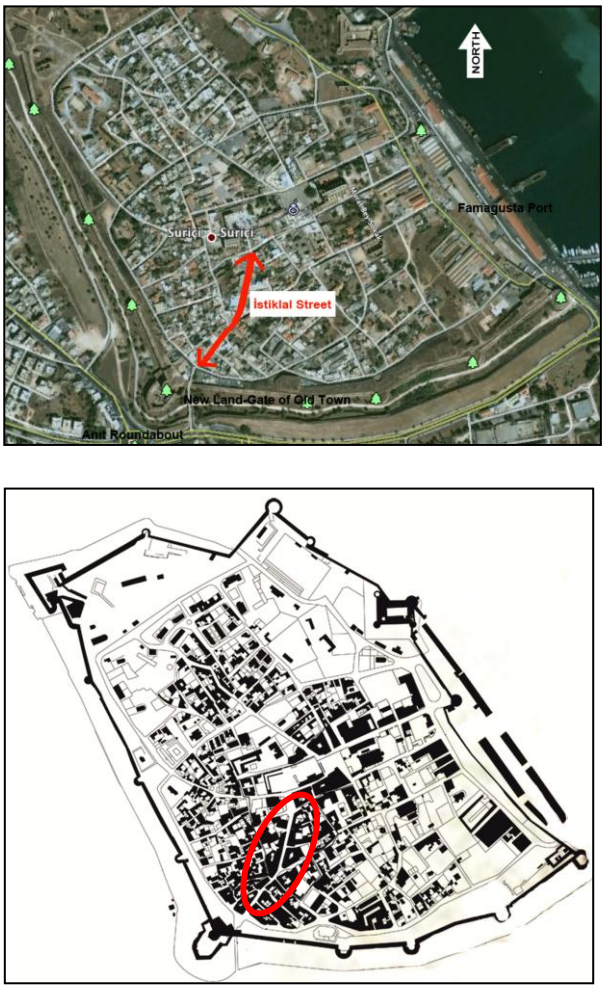


Figure 4.2: Urban Pattern of Walled City and the Location of Istiklal Street

4.2.2 Historic Development of Istiklal Street

Istiklal Street of Walled City of Famagusta is an important commercial street in the area that is now closed to automobiles and includes to pedestrian facilities. It is the main street, which guides its visitors from the land-gate and takes them to the main square, Namik Kemal square. The street is bounded on opposite sides by different shops restaurants and cafes, houses, public buildings, which mostly built or renewed in the British period (URL, 18).

The history of the Walled City along with Istiklal Street went back to the first century AD and it has completed through seven periods: the early periods that was related to the foundation of the city, Lusignan period (1192-1489); that was the time of the first signs of the formation of the Istiklal Street, Venetian period (1489-1571); which was the time that the street was formed, Ottoman period (1571-1878); and British period (1878- 1960); that the street was going to improve into an urban form. And the last one is the period of republic of Cyprus (1960-1974).

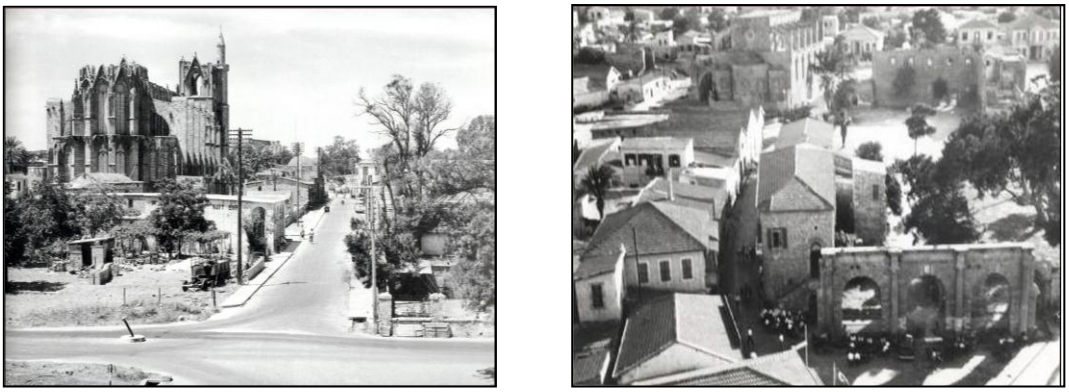


Figure 4.3: Istiklal Street through History, URL, 21

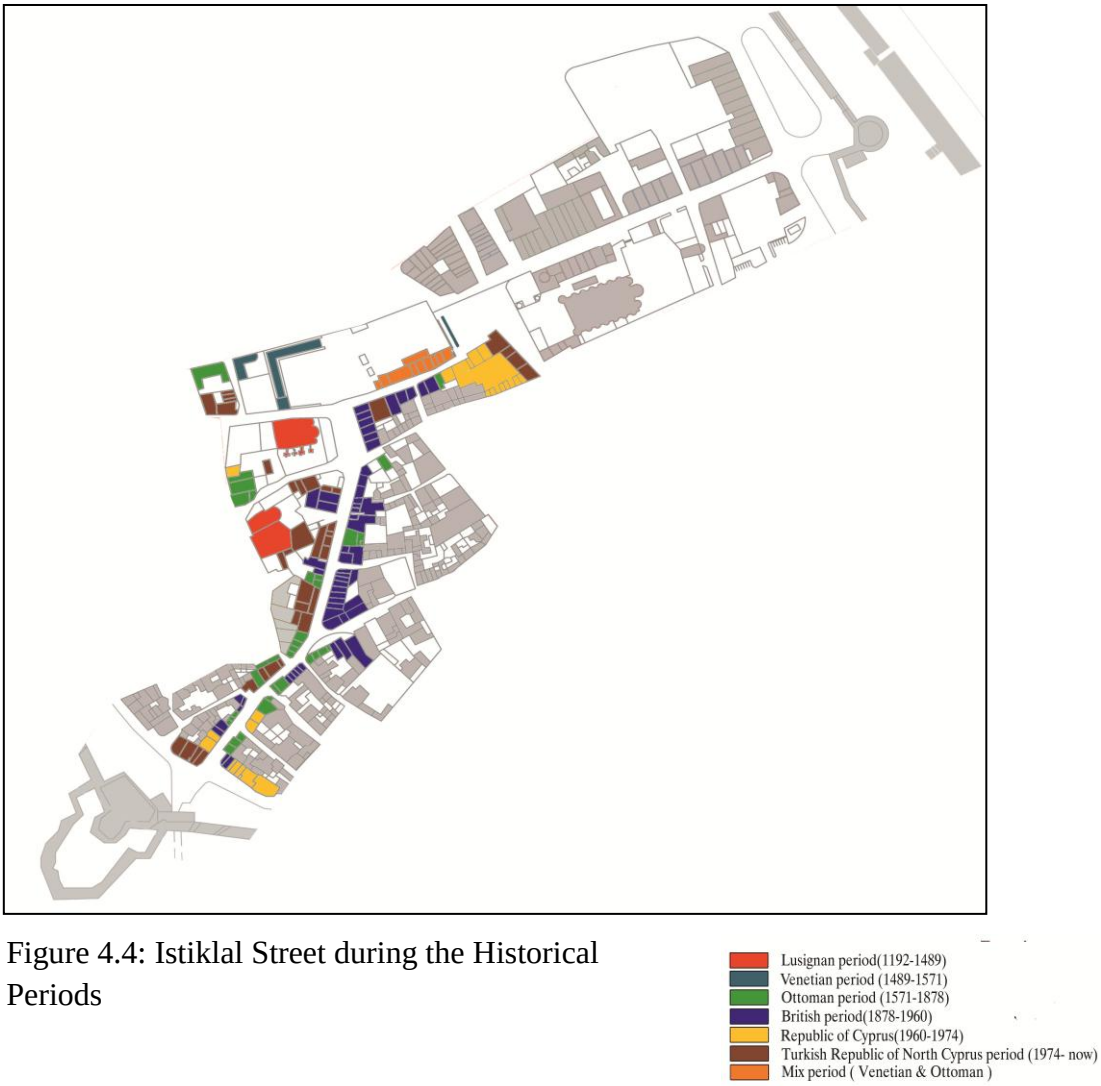


Figure 4.4: Istiklal Street during the Historical Periods

As it is seen in Figure 4.5, in Lusignan period (1192-1489); there were just traces towards formation of the way (Istiklal Street) Nearly along this way there were some historical buildings like Church of Stavros, Church of Peter and Paul and some other religious buildings. In Venetian period (1489-1571); the trend make true and the main axis of the city formed (Figure 4.6). The old city of Famagusta had been surrounded by fortifications all around consisting a dozen bastions, a citadel (Castella) and two gates as land gate (Ravelin) and Sea Gate (Pota Del Mare) and the link between these two gates was forming the main axis which is now Istiklal Street is a part of. At that time more buildings added to this axis which is known mostly as terrace houses.

Ottamans (1571-1878); had preserved the main axis as it was during Venetian Period they just add some shops along the axis and upper floors for some buildings (Figure 4.7). Finally in British period (1878- 1960); this axis was completed and changed into an urban form as a street (Figure 4.8). Also in that time additional buildings changed the feature of the street, many of them were built without any respect to the traditional context. But it could be said that, many of the history of existing buildings today goes back to British period (Onal, et.al. 1999 & Doratli, et.al. 2001& Cobham, C.D., 1969 & Numnan, et.al. 2000). The difference between the current street as Istiklal Street with the one in British period is that it seems more densely in compare with its old version (see Map 10). The important thing about this street is that formerly it was distributed to both vehicular and pedestrians and then in 2000 it has changed to Pedestrian Street (GMM, 2005).

Figure 4.5: Istiklal Street in Lusignan Period
(Doratli et.al, 2003)

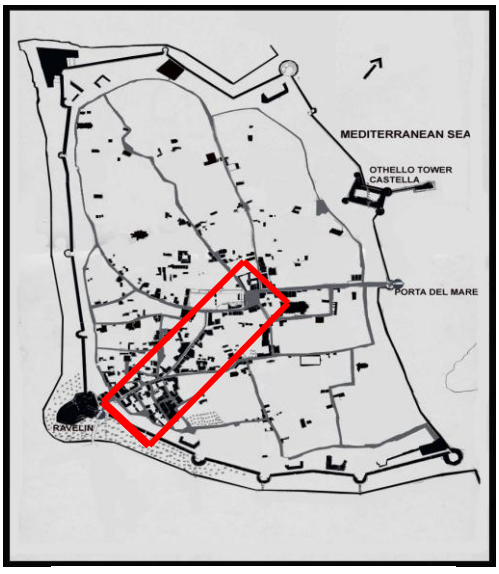


Figure 4.6: Istiklal Street in Vanetian Period
(Doratlt et.al, 2003)

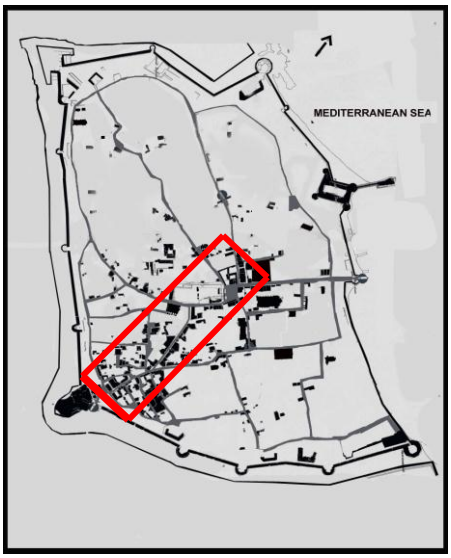


Figure4.7: Istiklal Street in Ottoman Period
(Doratli et.al, 2003)

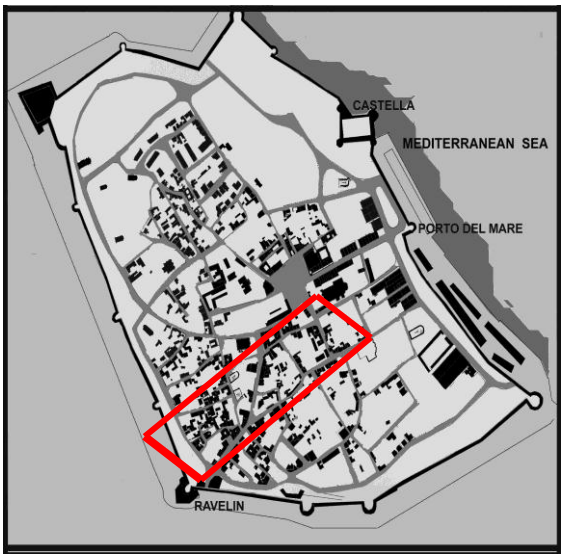


Figure 4.8: Istiklal Street in British Period
(Doratli et.al, 2003)

4.4 Methodology of the Analysis of Case Studies

As obtained from the deep literature review in Chapter two and Chapter three, parameters that affects street qualities, the importance of them and their measurement methods are collected in Table 4.1. As it can be followed by the Table 4.1, in order to be able to achieve a qualified pedestrian street thorough analyses are fundamental.

Table 4.1: Methodology of the Case Study Analyses, Developed by Author, 2013

Quality	**Why is it important to the street**	**Needed Analysis**	**Tool**
Greenery/Unpolluted	-Better parks and open space; greening buildings and spaces; biodiversity; unpolluted water, air and soil; access to nature; absence of vehicle emissions	Natural analysis Observation Social analysis	Maps (1/5000) Photographs Graphs
Legibility	-It is one of the factor to achieve people friendly street (Tibbalds) -It is the quality which help	Lynch analysis	Maps (1/5000) Photographs

	people read their surroundings (Bentley)		
Variety Diversity Mixed-use	-It reduces the need for mobility (Bentley) -It makes urban space livelier by providing many entrances , windows and facades (A.Jacobes &D.Appleyard) -'people- friendliness' can only be achieved through the correct mix of uses and activities (Tibbalds)	Land use analysis	Maps (1/5000) Photographs
Function	-Houses compatible uses, activities, vehicle/pedestrian relationships; provides ease of maintenance, servicing; absence of street parking nuisance	Land use analysis	Maps (1/5000) Photographs
Visual Appropriateness/ Artistic principles/ Vision/ Designed buildings	-importance is how to locate uses in a way the makes people read their pattern easily (Bentley)	Façade analysis Observation	Maps (1/5000) Photographs
personalization	-It will render a place pattern by its users	Façade analysis Observation	Maps (1/5000) Photographs
Permeability Accessibility	-Visual/Physical permeability is --important for well-designed area-it refers to number of choices people have to travel through an area (Bentley) -It is important to get people friendly place (Tibbalds) -It is important to easy to get to and move around (Carmona) -It provides the ability of people to reach other people's activities, resources, places and information (Lynch) -It gives people the chance to be engaged in activities (P.P.S)	Traffic and transportation analysis Social analysis	Maps (1/5000) Photographs Graphs
Attractive/ Pedestrian friendly	-Aesthetic quality; visually stimulating; uncluttered; well-maintained paving, street furniture, landscaping, grass/verges, front gardens; clear of vandalism and graffiti; use of public art; coordinated street furniture	Façade analysis Land use analysis Social analysis observation	Maps (1/5000) Photographs Graphs
Distinctiveness/Identity /Sense of place	-It gives some orientation and ability to find yourself in a place (Whyte) -It gives identity to an urban space -It gives meaning to a place and keeps city heritage (D.Appleyard & A.Jacobes) -It gives a degree to which users can recognize and distinguish space due to its unique temporal and	Façade analysis Social analysis	Maps (1/5000) Photographs Graphs

	physical milieu (Lynch)		
Robustness/Maintenance/ Long lasting	-High-quality public realm, not repeatedly dug up; resilient street furniture, paving materials, boundaries, soft landscaping, street furniture; well-maintained buildings; adaptable, versatile space (Carmona, 2008)	Land use analysis Observation Social analysis	Maps (1/5000) Photographs Graphs
Richness	-Spatial information Sense of motion Sense of smell Sense of taste Sense of hearing Sense of touch Sense of time	Facade analysis Social analysis	Maps (1/5000) Photographs Graphs
Safety	-It prepares an environment for children and all groups of people to explore and … (A.Jacobes & D.Appleyard) -It gives people a kind of sense of place (J.Jacobes)	Social analysis Observation	Photographs Graphs
Comfort	-It encourages people to spend time in an urban space (Carmona) -It has some other qualities in itself: good image, safety, cleanliness and availability of places to sit (P.P.S) -It leads a place towards a democratic one (J.Jacoes)	Social analysis Observation	Photographs Graphs
Cleanliness	-Clear of litter, fly tipping, fly posting, abandoned cars, bad smells, detritus and grime; adequate waste-collection facilities; provision for dogs	Social analysis Observation	Photographs Graphs
Inclusivity/welcoming /Mixed user/Publicness	-It shows that the place has the potential to serve all kinds of users	Social analysis	Graphs
Sense of belonging/Fulfill	-Giving people a stake (individually or collectively); fostering pride, citizenship and neighborliness; allowing personal freedom; opportunities for self-sufficiency	Social analysis	Photographs Graphs
Vitality Livability	-It fosters interaction with space and encourages the diversity of uses (Carmona) -The two qualities are the degree to which places support life, biological functions and capabilities of people (Lynch) -They are two of the main factors to have democratic street (J.Jacobes)	Social analysis Observation	Photographs Graphs

Accordingly, in order to analyze the quality of Istiklal Pedestrian Street, parameters that were achieved from literature are analyzed conducting physical (natural, built)

and social analysis. The analysis stage is essential for having a successful urban space, giving proposals and therefore should be given due attention and effort.

Accordingly, the analyses are carried out at three levels:

- For the natural environment
- For the man-made(built) environment
- For the social environment

Under natural environment the parameters related to greenery and pollution and under physical environment the parameters as accessibility/permeability, legibility, diversity, function, will be analyzed by using 1/5000 scale map and pictures.

For parameters like comfort, safety, fulfill the questionnaire survey will be conducted in order to understand the degree of satisfactory.

The next part will describe the data collection and the methodology of the analysis that is done in the case study:

- **Analysis of the Natural Environment:** Natural aspects of the environment are one of the important issues to decide about form, physical and functional characteristics of city's outdoor and building masses. For conducting natural environment analysis, the parameters related to greenery and pollution have been searched for the case (Istiklal Street) in Walled Town of Famagusta, by using 1/5000 scale map and pictures.

- **Analysis of the Man-made (Built) Environment:** It can be said that, man-made environment is the heritage of society so it is shaped by human beings. Under physical environment the parameters as accessibility/permeability, legibility, diversity, function, will be analyzed by using 1/5000 scale map and pictures.

- **Analysis of the Social Environment**

For the purpose of the socio-economic environment analysis, in addition to documentary research, a questionnaire survey was conducted to understand the satisfaction of the users from these quality parameters, to determine their expectations from the street and the current problems of the street were clarified through this questionnaire.

The questionnaire survey was carried out in selected case study area and it was also taken consideration to ask 26 questions from 80 people (25% from every 5 blocks along the street and the rest by random sampling method during 3 days and in different times) of the total population including locals, tourists, and students.

4.5 Physical Analysis (Natural/Built Environment) in Istiklal Street

Physical analysis includes the parameters that related to natural and built environments such as greenery or the level of the pollution, accessibility, permeability, legibility, Obviously these parameters could not be meaningful merely but from a comprehensive point of view each of the parameters depends on the definition and success of others.

4.5.1 Green and Unpolluted Istiklal Street

These two parameters are assessed by environmental analysis and questionnaire survey. According to users' ideas, 63.8% of them rate poor to the greenery condition and 3.6% believed that this street is polluted. Also, based on personal observation there are no signs of pollutions (whether visual, air or noise pollutions) there.

In this street about the greenery according to natural analysis (Figure 4.9) there are a few green areas along this street and there is lack of variety in kinds of greenery elements but in terms of the trees, in this street there are different types (Figure 4.10).

Figure 4.10: Greenery in Istiklal Street

4.5.2 Legibility of Istiklal Street

As stated in methodology of the analysis, this parameter is assessed for Istiklal Street through Lynch analysis (Figure 4.11). In terms of lynch analysis it could be said that the street itself acts as a main pedestrian path and there are three social nodes. The city Land mark (Lala Mustaf Pasa Mosque) that could be seen while walking along the street (Figure 4.12, 4.13).These elements makes Istiklal Street legible in terms of physical legibility. On the other hand, this street is bounded by two storey (Figure 4.14) attached stone buildings and they have mostly similar materials and details almost in the same way. Accordingly, there is no element which gives the street a clear form and accurate image, so visitors have difficulties to familiarize with the street, although they can easily find their way.

Figure 4.9: Natural Analysis

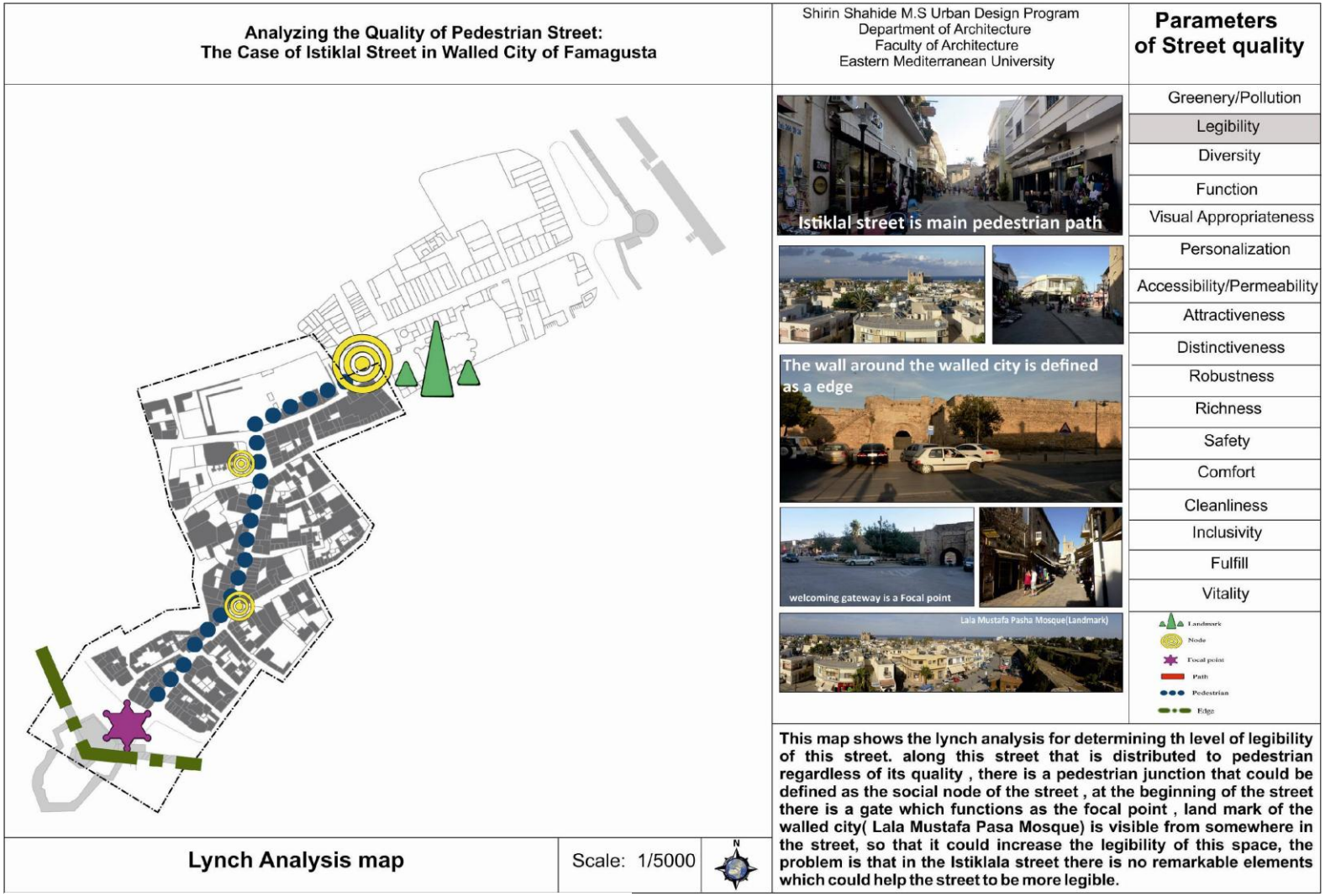


Figure 4.11: Lynch Analysis

Actually Istiklal Street is somewhat legible in terms of physical legibility (easily finding way) but the problem is about activity legibility due to inexistence of particular uses that help this street being legible.

Figure 4.12: Visibility of City Land mark along the Street

Figure 4.13: One of the Social Nodes in Istiklal Street

4.5.3 Diversity in Istiklal Street

Diversity or mixed-use could be assessed by land use analysis to check the integration of activities and uses. As mentioned in Chapter 3, the best condition is created when shops are located on the ground floor, offices on the first floor and dwellings on the upper floors. Accordingly, the mixed of uses can secure life in the street at all time of the day.

Diversity and variety of the functions in Istiklal street, according to land use analysis (Figure 4.15, 4.16) are retails about 90%, leisure, 10% and residential in the first floor about 80%. In the case of this street, it is resulted that it acts like a mixed one, the location of the functions are in the same order as said above. The problem is that there is lack of greenery and there are some vacant lands. First floor analysis of

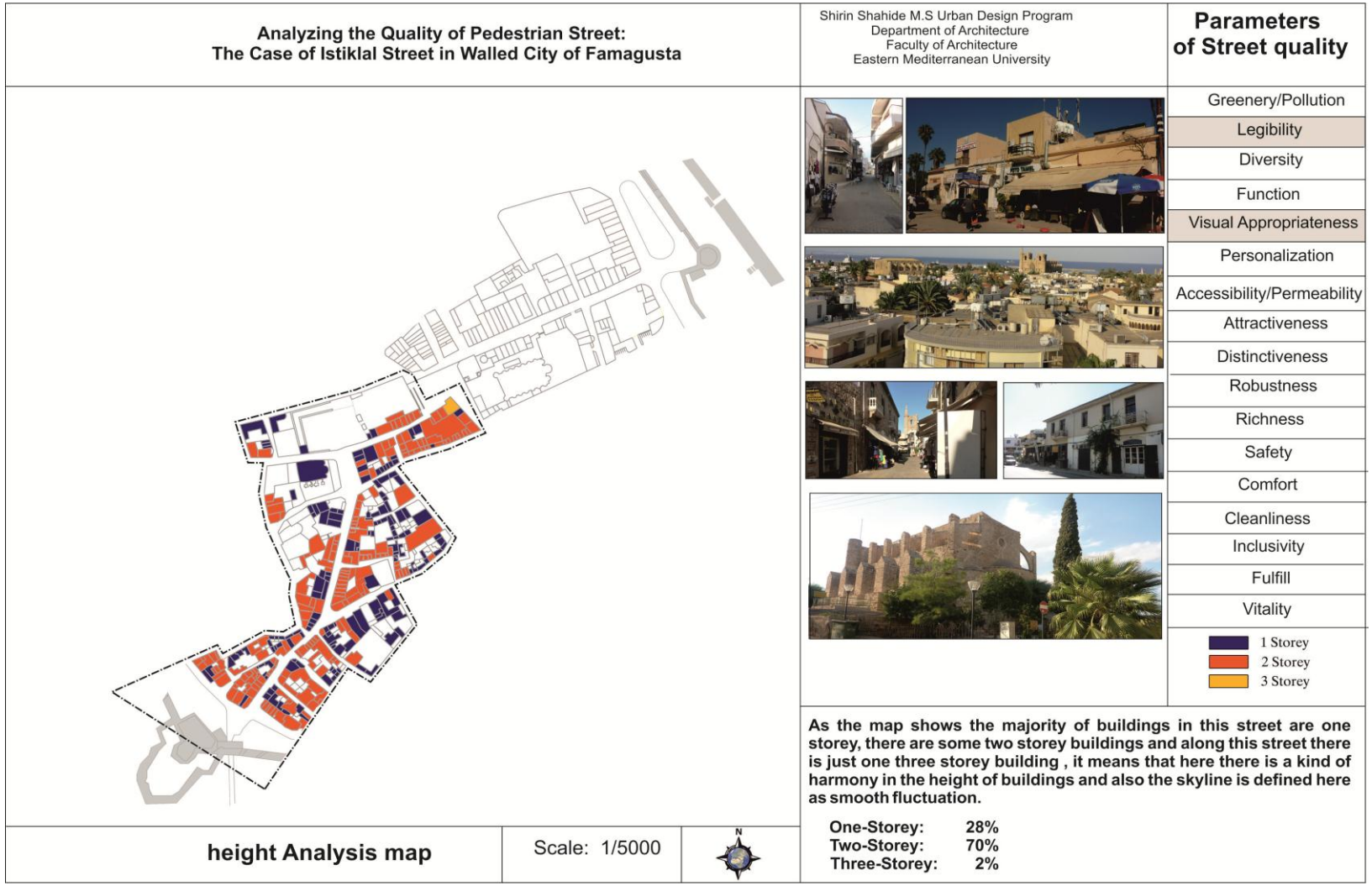


Figure 4.14: Height Analysis

the land use in Istiklal street shows that most of the functions of first floor are distributed to residential which could make the street safe at night time.

4.5.4 Function of Istiklal Street

This parameter could be analyzed under land use evaluation (Figure 4.15, 4.16). Land use directly has high impacts on function of this street. Land use analysis shows that the function of this street may be limited to shopping or passing through the street, as necessary activity (Figure 4.17). As it is said in Chapter 3, function of an urban space is dependent on many factors like travelling, shopping, playing, meeting and social interaction as optional or social activity which some are happened in Istiklal Street.

Figure 4.17: Shopping and Passing in Istiklal Street

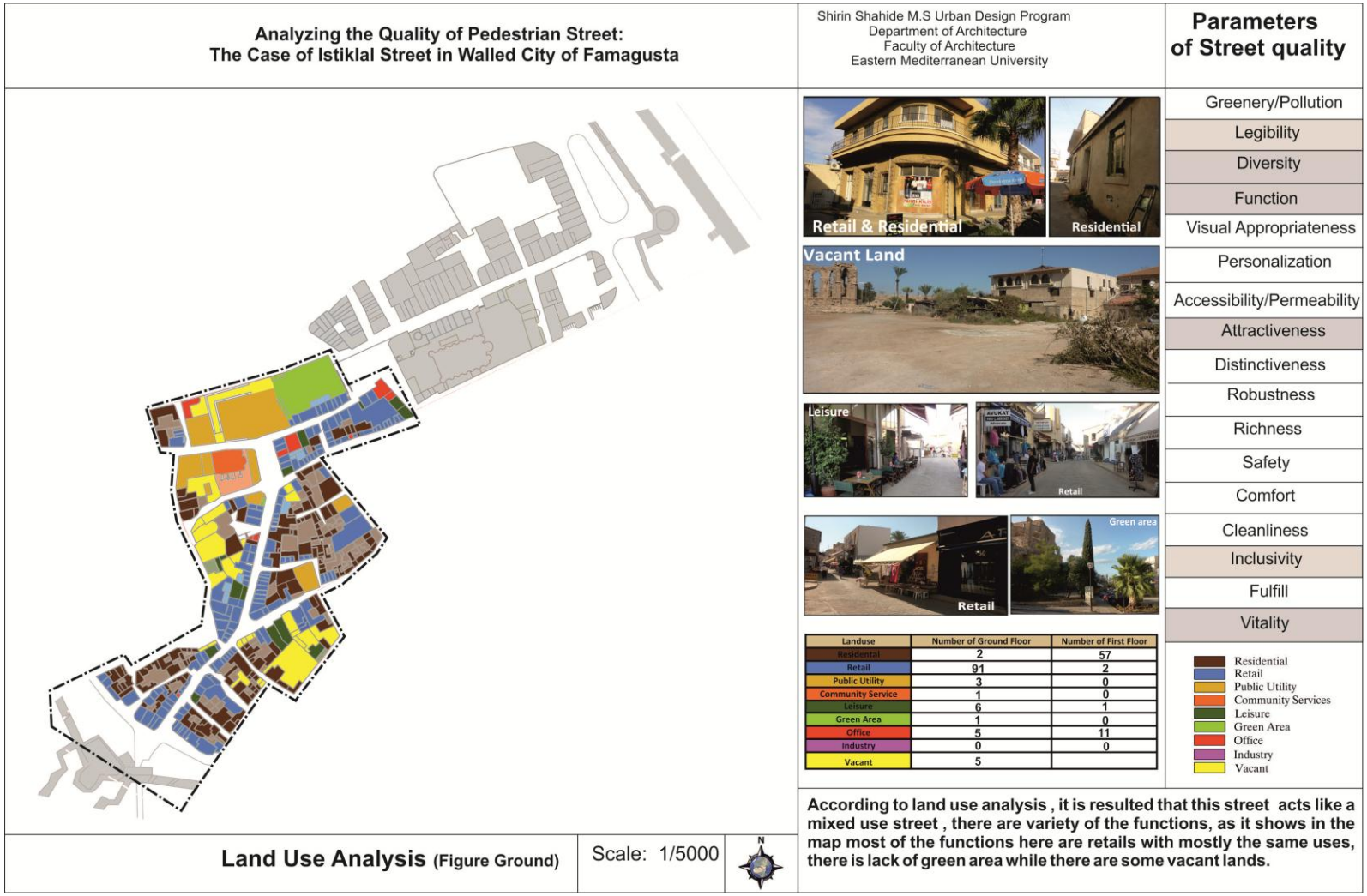


Figure 4.15: Land Use Analysis (Ground Floor)

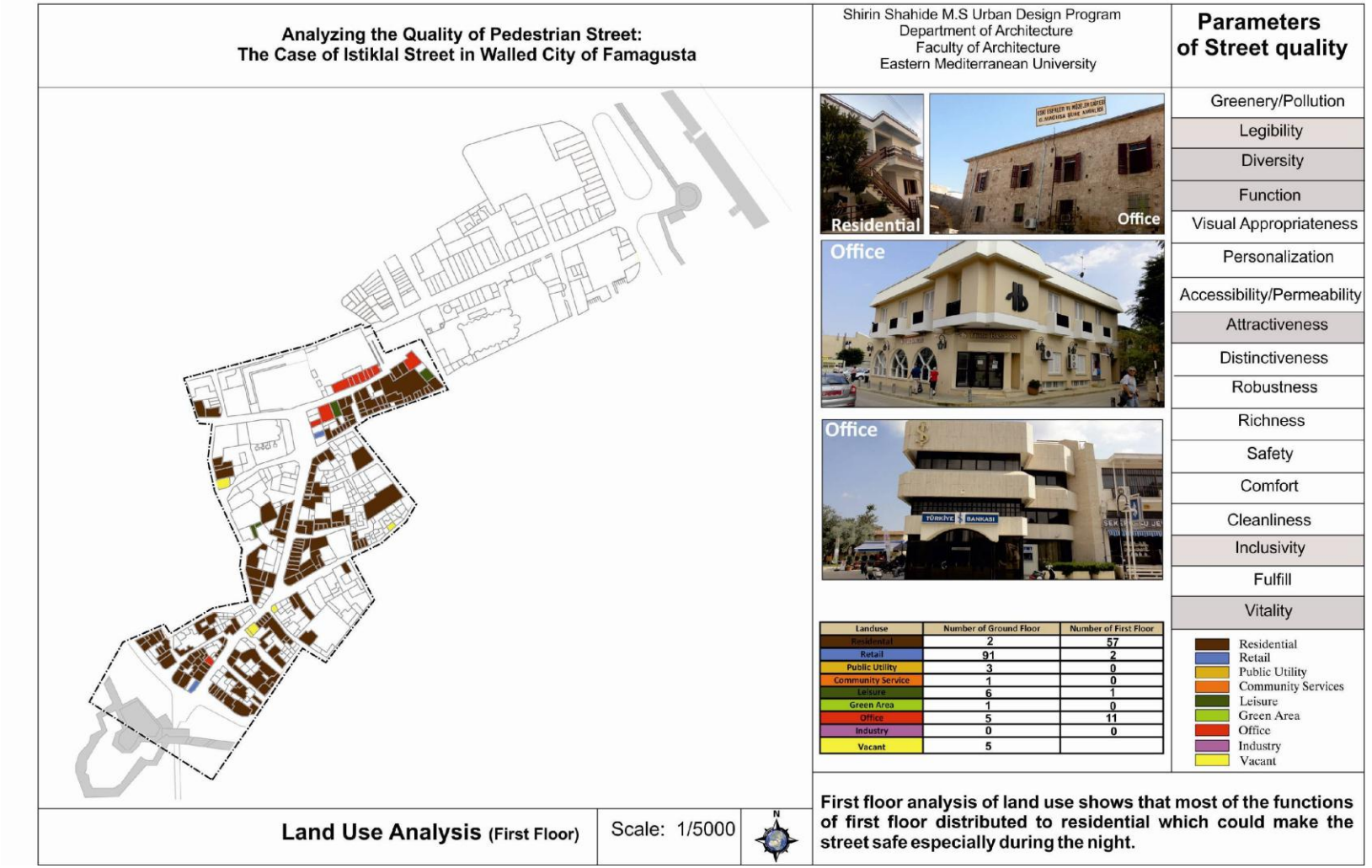


Figure 4.16: Land Use Analysis (First Floor)

4.5.5 Visual appropriateness of Istiklal Street

This parameter according to methodology is assessed by façade analysis (Figure 4.18) and observation. According to literature review, visual appropriateness is achieved through some criteria such as order, unity, balance, scale, proportion, rhythm, contrast and harmony. Based on façade analysis one of the items that is damaged visual appropriateness is lack of cleanliness of façade in this street due to deterioration as mentioned in Figure 6, about 65% of whole facades are deteriorated. Also based on façade analysis building that are bounded this street has a kind of harmony in terms of scale, proportion rhythm (Figure 4.19) but there is no signs of unity, order and balance to give a character to the street for making it legible. Also there is no public art (or a good landscape) which could improve the vitality and give a sense of identity to this street.

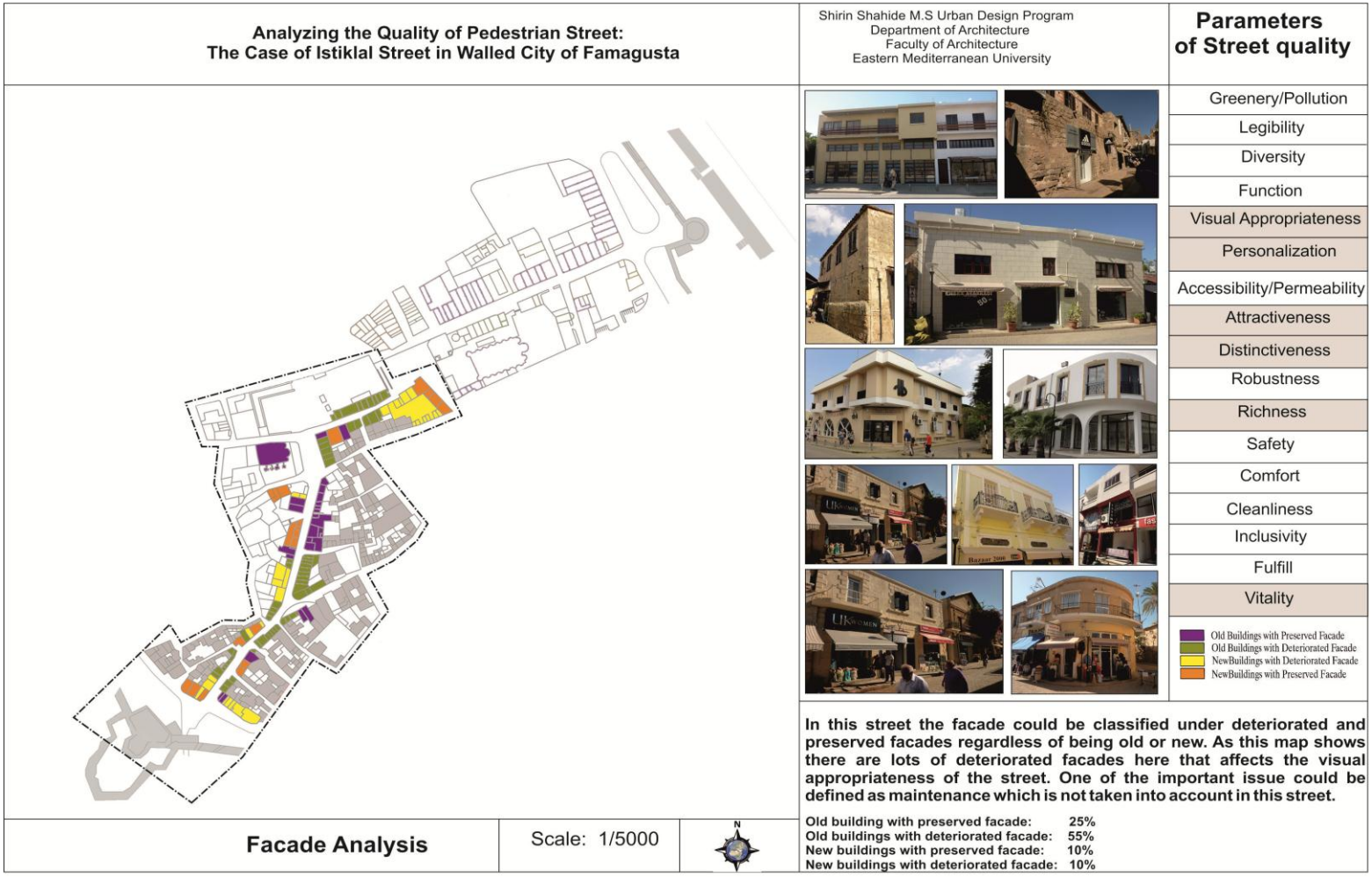


Figure 4.18: Façade Analysis

Figure 4.19: Façade of Istiklal Street

4.5.6 Personalization in Istiklal Street

Personalization is another parameter for street quality that is assessed by façade analysis (Figure 4.18) and through observation as well. The existence of this quality could touchable while walking along the street particularly by cafes and shops when they tried to put their own taste on the place. But still it is not strong enough to make local identity (distinctiveness) according to questionnaire. Additionally, personalization can be supported by using materials in regarding with visual attractiveness which cannot be seen in Istiklal Street as formerly mentioned in visual appropriateness (Figure 4.20).

Figure 4.20: Signs of Personalization in Istiklal Street

4.5.7 Accessibility-Permeability of Istiklal Street

These two parameters are evaluated by transportation, traffic and linkage analysis (Figure 4.21, 4.22) and also questionnaire. In traffic analysis as it is shown in Figure 4.21, Walled City is consisting of four gates which were the main entrances to link to the city. Three of those gates are open now, the main entrance is located in the south side of the walled city which name is Land gate and Rivettina Bastian (Ravellin), most of the routes are two-way except the one which goes to Namik Kemal Square.

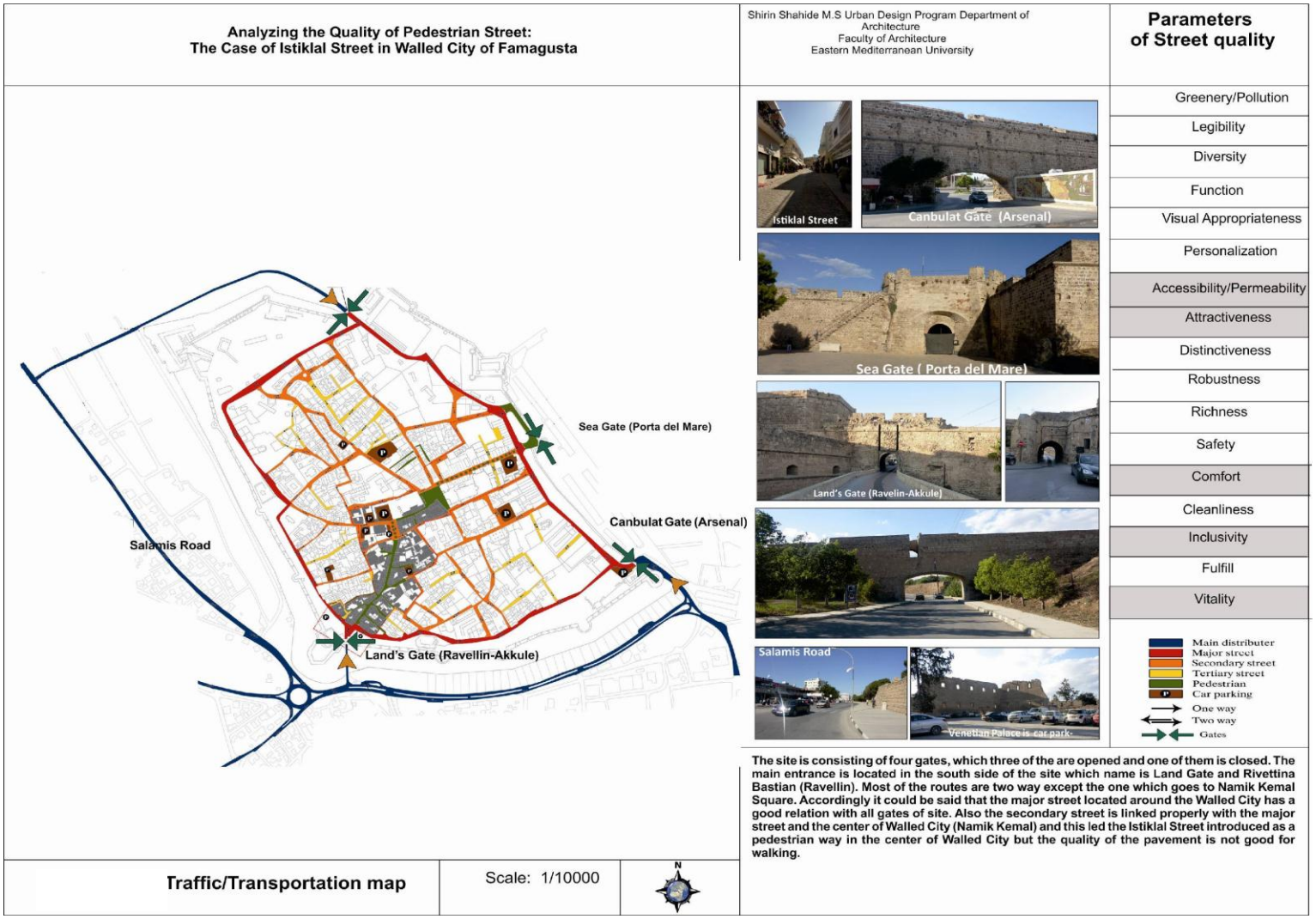


Figure 4.21: Traffic Analysis

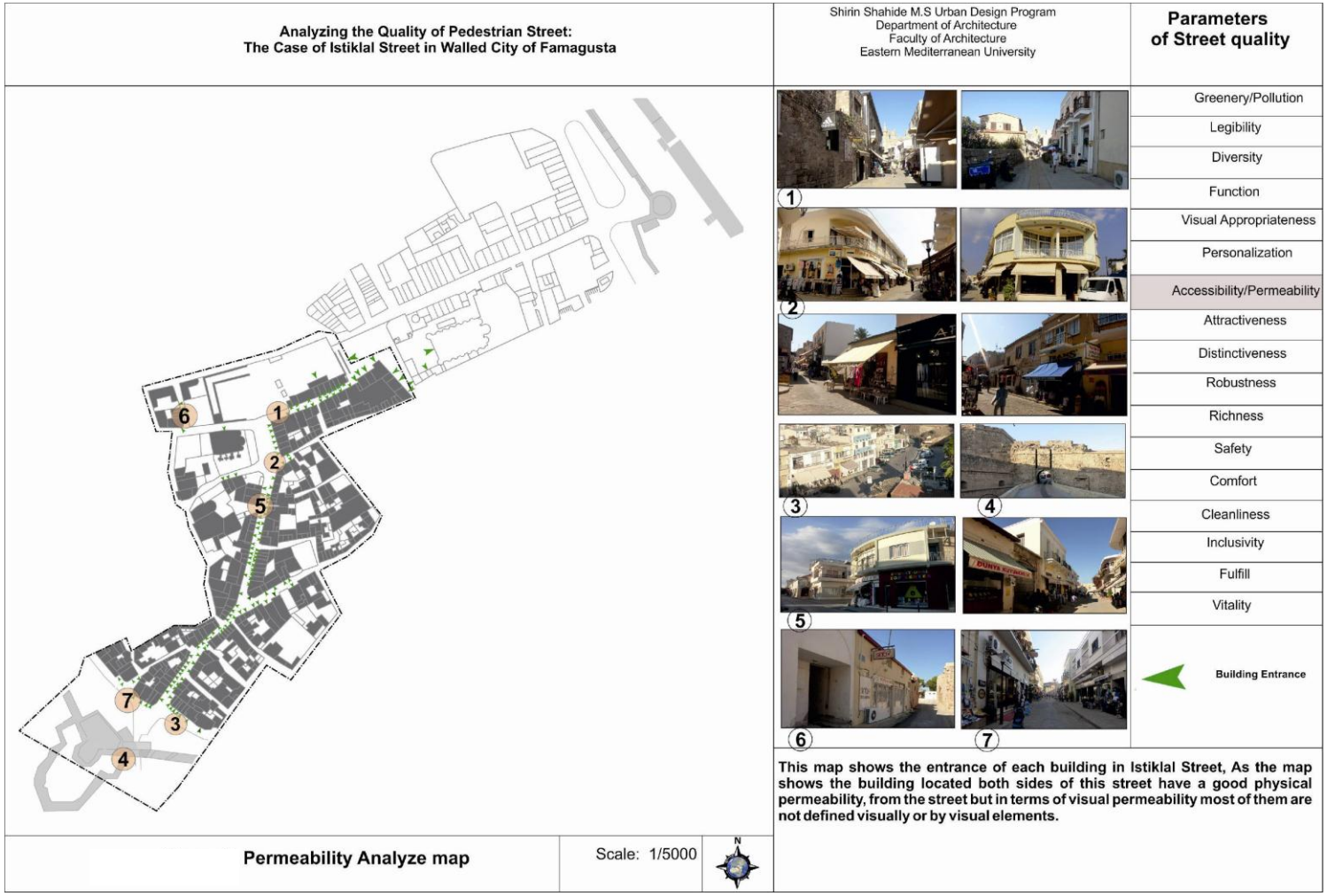


Figure 4.22: Permeability Analysis

Accordingly it could be said that the major street located around the Walled City has a good relation with all *gates* of city, also the secondary street (See legend of Figure 4.21) is linked properly with the major street and the center of Walled city (Namik Kemal) and this led Istiklal Street introduced as a pedestrian way in the center of Walled city, but the quality of the *pavement* is not good for walking. According to the questionnaire, about 50% of the responders believed that this street is not accessible and 37% told that accessibility is not bad. Mostly half of them complained about *public transportation* for getting to Istiklal Street so that a large number of people prefer to use their own car for coming to this street. Almost everybody rate the quality of pavement poor and fair and they said if the quality improves they prefer to walk to the street. People somehow are satisfied with the *location of parking* area in the street so that again they prefer to use their own car and because this street or the links towards are not equipped well for pedestrian , walking is not their preference also this street is not accessible for all groups of users as told in questionnaire.

Permeability analysis (Figure 4.22) shows the entrance of each building in Istiklal Street, the buildings located in both sides of this street as small blocks have a good physical permeability (based on what discussed in Chapter 3) from the street but in terms of visual permeability most of them are not defined visually or by visual elements. As mentioned before, according to questionnaire this street is not accessible enough (50% rated inaccessible); the routs ended to Istiklal Street are not defined. It means even though this street has physical permeability. However, it has problem in terms of visual permeability.

4.5.8 Attractiveness of Istiklal Street

This parameter can be evaluated in this street by natural analysis (microclimate, Figure 4.23), façade analysis (Figure 4.18) and questionnaire along with observation. As discussed before in Chapter 3, *local microclimate*, as one of the main items in perception of outdoor environment, *safety, accessibility and building façade* are the factors that affect attractiveness.

According to social analysis people are satisfied with the level of safety in this street. Only 2.3% of respondent told that this street is not safe at night time. Istiklal Street as mentioned formerly in section 4.5.7 is not accessible in terms of transportation and the routes which lead visitors to the space. Last quality that affects attractiveness is building facades with many entrances to provide a kind of transparency for connection between indoor and outdoor. Based on façade analysis (Figure 4.18) and observation this street could create a relationship between its outdoor and indoor spaces. Regarding questionnaire survey, all people believe that Istiklal Street is an attractive street that might be preserved and improved.

4.5.9 Distinctiveness of Istiklal Street

This parameter could be analyzed under three factors of urban identity: first is the physical setting of the street such as buildings, landscape, climate and aesthetic qualities or visual appropriateness which seriously faces with problems (as what mentioned before) or about landscape that was asked from people in questionnaire

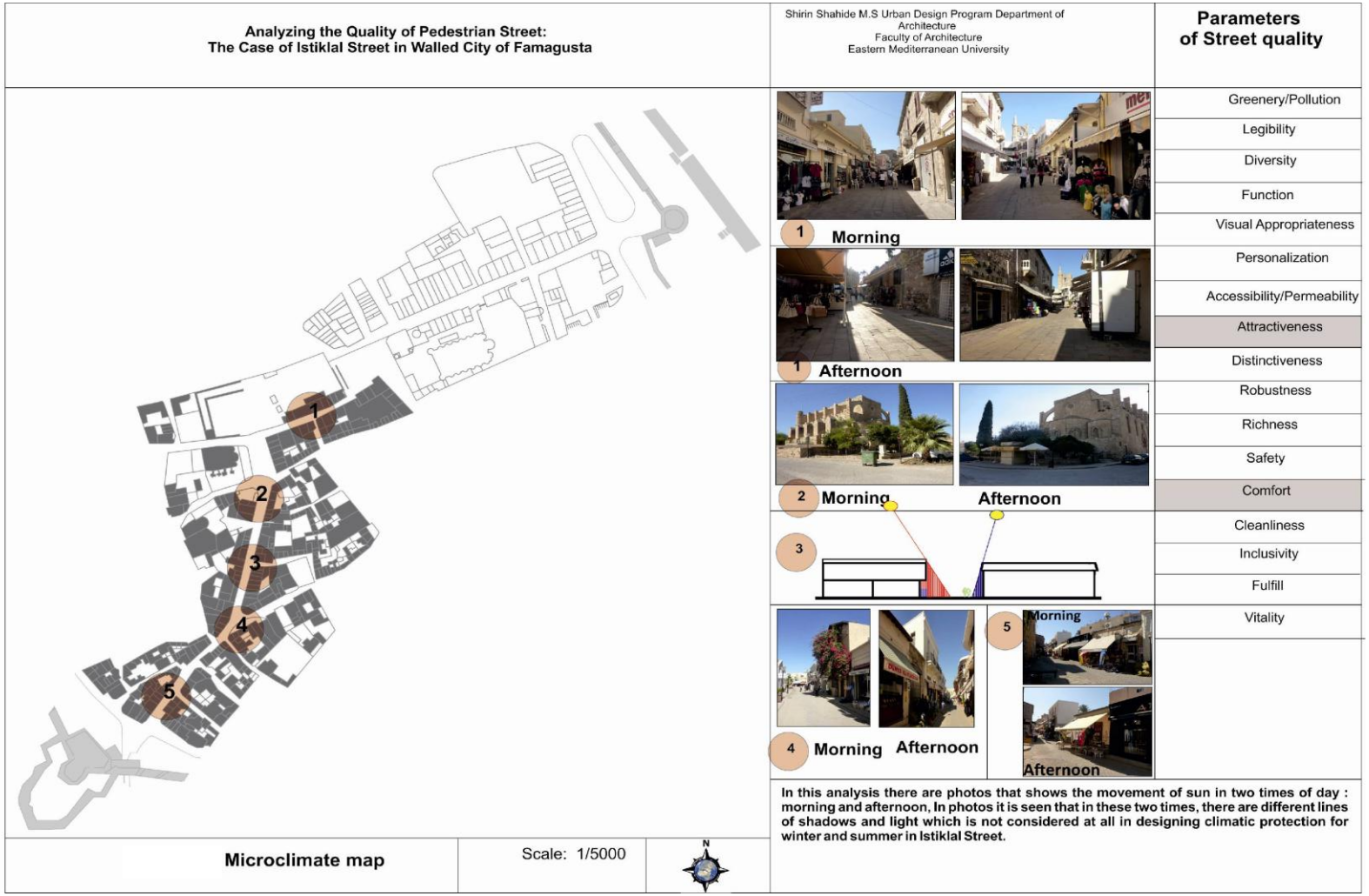


Figure 4.23: Microclimatic Analysis

and climate that does not provided any changes in street feature as solutions. After physical setting there would be the function and activity of the street that encourages users to communicate with environment and each other which is not occurring in this Street especially between people. People do not feel to connect themselves with functions in this space. And the last item is meaning or symbols as the result of human experience and their reaction to the function or physical setting. In this street users' experience may bring some local distinctiveness but regardless of their reaction to the physical settings.

4.5.10 Robustness of Istiklal Street

This parameter was searched through land use analysis (Figure 4.15, 4.16) and observation in order to find multi functional spaces or flexible places which is facilitated for many activities or can serve to various types of users. Obviously, this quality could not be found in Istiklal Street. Also, according to land use analysis each and every function along this street only has one use or even they would not change according to day and night activities.

4.5.11 Richness of Istiklal Street

As discussed before, in cleanliness one of the factors that affect richness is visual qualities including cleanliness and aesthetic aspects which is ignored in Istiklal Street. The other influential factors for richness are variety of functions and activities that Istiklal Street is not facilitated by (as aforementioned, this street just meet necessary activities). Beyond this spatial information there are some other senses which have design implications such as sense of smell, sense of emotion, sense of

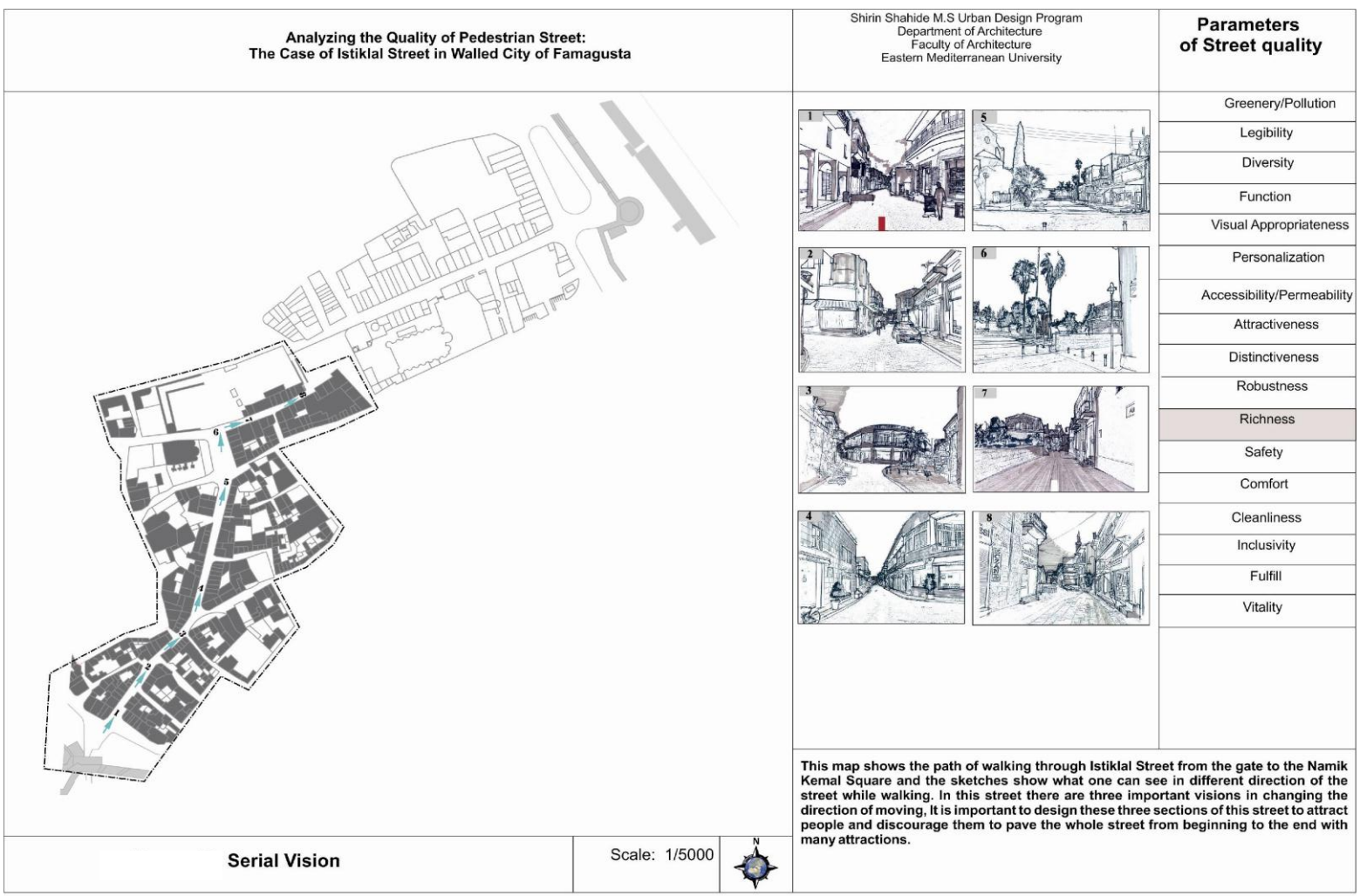


Figure 4.24: Serial Vision

taste, sense of hearing, sense of touch and sense of time. Sense of smell in Istiklal Street according to personal experience is highlighted as the smell of Turkish coffee by cafes along this street, sense of emotion is identified in this street by the starts and ends of these routes as a serial vision (Figure 4.24). There is no especial sense of taste.

About sense of hearing the sound from Lala Mustafa Pase Mosque is mentioned as the remarkable sense of hearing in some times of a day. There is no sense of touch in Istiklal Street when it refers to material and texture of buildings or pavement for instance. As stated before the material of façade according to material analysis (Figure 4.25) is mostly stone and concrete but they are not in a good condition to bring visitors with kind of sense. And the last sense as the sense of time is considered the experience of passing time by for example environmental elements that is particularly happens for locals like changing the color of trees by changing the seasons. But according to vegetation analysis (See Figure 4.9) there is not a good supply of vegetation along this street which could define the sense of time. In general word the richness is needed to be redefined or originally define in this urban space.

4.5.12 Safety of Istiklal Street

Safety is another parameter that was questioned from people. It seems that they are to some extent satisfied with this level of quality in the street (2.3% of responders believed that this street is not safe at night time), but when going through the concept deeply it means that safe environment could serve all groups of people in which they could feel secure and comfortable in day and night that is not happen in this street. Physical features are significant too for the sense of safety and this features are one of the main problems of the street.

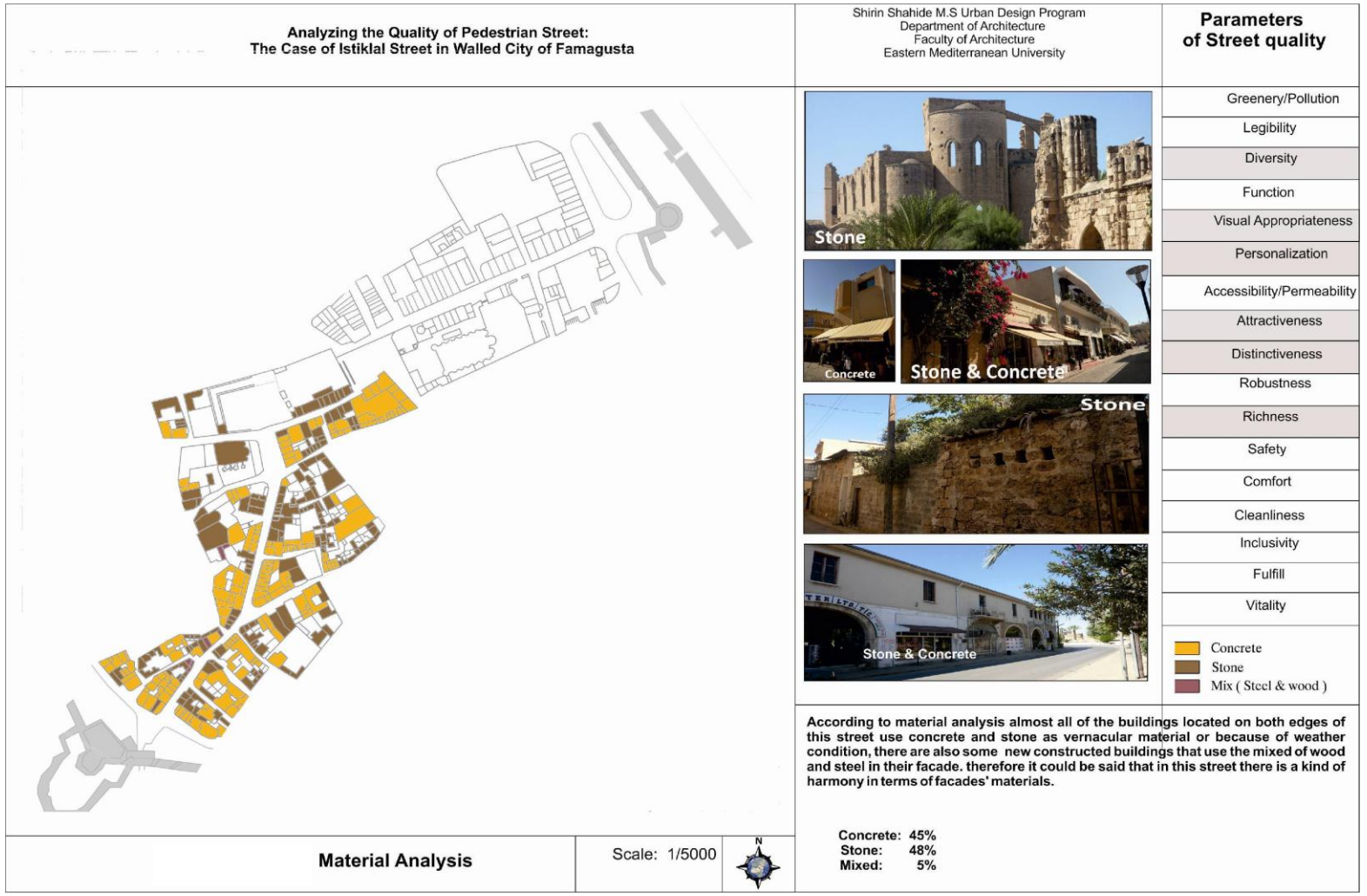


Figure 4.25: Material Analysis

4.5.13 Comfort of Istiklal Street

This parameter actually relates to one's assessment through environmental experience and could be evaluated by social analysis. According to questionnaire people do not feel comfortable in this street and it is directly related to environmental and physical comfort along with security. Through questionnaire survey, 26.3% of respondents ask for sitting elements, 19.4% emphasized on the importance of shelter, 17.4% wanted lighting equipment, 14.6% complained about the bad quality of pavement and others need signage, bin and public art along the street (Figue 4.26). In this sense about 22% mentioned lack of greenery as negative points of this street. Base on these results, it could be said that people do not feel comfortable in Istiklal Street. As mentioned earlier security is existed in Istiklal street, but in terms of physical comfort (street furniture, visual appropriateness, accessibility,…) and environmental comfort (green and unpolluted spaces), Istiklal street as discussed formerly faces serious problems.

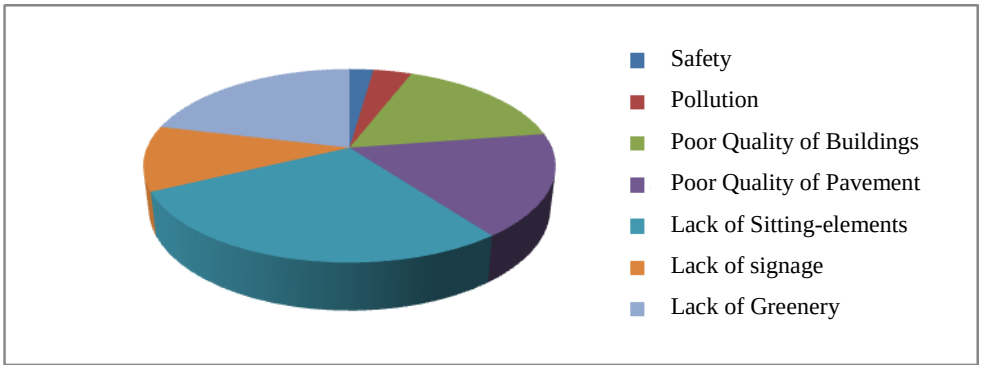


Figure 4.26: Istiklal Street Comfort Rating

4.5.14 Cleanliness

According to the methodology this parameter is going to be analyzed by questionnaire and observation. According to social analysis, people expect to meet high level of cleanliness in this street; just 10% of responders believe that they spend time there because of its cleanliness. But based on personal observation, this street is

acceptable in terms of cleanliness (Figure 4.27). The cleanliness of the street is important to street users, in terms of the removal of graffiti, litter and abandoned articles, which is not a problem in Istiklal Street. The other important issue along with cleanliness is maintenance that could affect on the cleanliness and visual quality of street elements. About this street there is no consideration about maintenance. Both cleanliness and maintenance directly affect on visual appropriateness of the street.

Figure 4.27: Clean Istiklal Street, No Signs of Graffiti or Litter

4.5.15 Inclusivity of Istiklal Street

Inclusivity implies mix-user in the street. This parameter is going to be questioned about Istiklal Street by social analysis. According to questionnaire survey, about 63% of responders were men, 50% were in the age between 23-29 years old, 20% between 30-39, 20% between 18-22 and about 5% were 40-49. Among these people, 20% were locals, 12% tourists and the rest were students. According to observations there were no disabled in the street; also no children could be seen there. The result was that this street cannot meet the needs of all groups of people such as disabled, elderly and children, so it cannot serve mix-users efficiently and safely.

4.5.16 Fulfill of Istiklal Street

Fulfill or sense of belonging is evaluated in the case study by questionnaire. Based on social analysis, only about 10 % respond positively when asked about sense of belonging to Istiklal Street. People responded to this parameter in the way that is resulted in not having any sense of belonging to this street. From the social analysis it could be achieved that this street is not identified for users.

4.5.17 Vitality of Istiklal Street

The parameter in fact relate to many qualities, in other word many characteristics in street could support vitality, such as diversity, safety, attractiveness and so on which finally resulted in presence of people in the street. People and their social interactions, on the other hand, could guarantee the vitality of the street. Regarding the question about the degree of vitality in Istiklal Street somehow depends on existence of other qualities as well. Previously, it was discussed that nearly most of the above characteristics are not defined properly in Istiklal Street, thus this street cannot be identified as vital urban space (Figure 4.28).

Figure 4.28: Istiklal Street at Day and Night

Accordingly, overall results of the analyses of the quality of Istiklal Street are collected in Table 4.2 as follows:

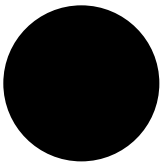
Table 4.2: Istiklal Street Quality Analyses, Developed by Author, 2013

Parameters	Criteria	Qualified	Not Qualified	Somewhat Qualified
Greenery/ Unpolluted	× Access to a park/green area × Safe, natural environment × A place to have some fresh air to exercise		●	
Legibility	✓ Landmark × District ✓ Node ✓ Edge ✓ Path	●		
Diversity	✓ Mixture of shops, offices, dwellings ✓ Shops: ground floor ✓ Dwellings: upper floors	●		
Function	✓ Necessary activity × Optional activity × Social activity			●
Visual Appropriateness	× Order ✓ Harmony × Balance ✓ Proportion ✓ Rhythm × Contrast			●
Personalization	✓ Indicating the function of a place × Reordering building feature through the users intervention × Offer unique sense of place			●
Accessibility/ Permeability	✓ Existence of small blocks × Transportation ✓ Parking area × Quality of pavement × Access for all			●
Attractiveness	✓ Microclimatic design × Different amenities ✓ Safety × Accessible × Pedestrian axis ✓ Transparency in building façade × Mixed of various function		●	
Distinctiveness	× Landscape ✓ Microclimate × Aesthetic complexity × Connection between place and people ✓ Meaning/symbols		●	
Robustness	× Relation between form and use × Existence of flexible spaces for various uses		●	
Richness	× Diversity of physical experiences × Visual qualities ✓ Sense of motion ✓ Sense of smell ✓ Sense of hearing ✓ Sense of taste × Sense of touch			●

	× Sense of time			
Safety	× Physical qualities ✓ Degree of being clean × Free from darkness ✓ Decreasing of lost space ✓ Eyes on the street	●		
Comfort	✓ Microclimatic design ✓ Security	●		
Cleanliness	✓ Free from graffiti ✓ Refuse collection	●		
Inclusivity	× Not ignoring any groups of users × Access for all × Give a sense of comfort or security		●	
Fulfill	× Sense of belonging		●	
Vitality	✓ Diversity × Function ✓ Safety × Relation between function and uses × Inclusivity ✓ Social interaction		●	

According to above table, Istiklal Street as a "pedestrian street" is qualified in terms of legibility (based on Lynch analyses), diversity (based on land use analyses), safety, cleanliness (based on Questionnaire survey) and comfort. It is somewhat qualified by function, visual appropriateness, personalization, accessibility and richness. The traces of these qualities could be seen in Istiklal Street but there is no defined method to improve them. All other qualities are not defined in this street according to conducted physical and social analyses. Hence, the following table could be developed from Table 3.3 to make clear that Istiklal Street is an urban space where often yet, only necessary activities are highlighted.

Table 4.3: Impact of physical qualities on types of activities in Istiklal Street, Developed by author, 2013 - Adopted from Carmona (2008).

	Quality of the Istiklal Street	
	Poor	Good
Necessary activities		
Optional activities		
Resultant activities (Social activities)		

From Table 4.3, it is achieved that necessary activities are done along Istiklal Street. But the current condition of this street is not invited people to conduct optional and social activities there. Thus, the rate of those groups of activities (optional, social) is almost poor.

Finally, it could be resulted that qualities in this street, needs and activities of people are related to each other through what would be indicated in table 4.4.

Table 4.4: Relationship between street quality, human need and activity in Istiklal Street

Parameters		Needs	Activities		
			Necessary	Optional	Social
Qualified	Legibility	Illumination-Clarity	✓		
	Diversity	Survival-Mystery-Socio economic	✓		
	Safety	Safety-Security-Comfort	✓		
	Cleanliness	Survival-Aesthetic-Maintenance	✓		
	Comfort	Safety-Psychology-Street furniture-Relaxation-Accessibility-Functional elements	✓	✓	✓
Somewhat Qualified	Function	Passive/Active engagement-Functional elements	✓		
	Visual Appropriateness	Visual Complexity		✓	
	Personalization	Belonging-Privacy-Self actualization			✓
	Accessibility	Comfort-Access	✓	✓	
	Richness	Belonging-Identity-Meaning		✓	✓
Not Qualified	Greenery	Survival-Comfort-Psychology-Relaxation-Functional elements	✓	✓	✓
	Attractiveness	Survival-Aesthetic-Spatial character-Mystery-Meaning-Functional elements		✓	✓
	Distinctiveness	Identity-Meaning-Belonging-Esteem-			✓
	Robustness	Survival-Belonging-Passive/Active engagement			✓
			✓	✓	✓
	Inclusivity	Survival-Esteem-Comfort-Physical aspects inclusivity	✓	✓	✓
	Fulfill	Belonging			✓
	Vitality	Safety-Clarity-Comfort-Meaning-Belonging-Visual complexity-mystery-Psychology		✓	✓

According to Table 4.4, five out of seventeen parameters are qualified in Istiklal Street. It means that only necessary activities cover these qualities and these qualities can satisfy just a few numbers of human needs.

Also five out of seventeen parameters are somewhat qualified which means we have only optional and social activities and seven out of seventeen parameters are not qualified in this street. In other words these qualities are not existed and this shows this street is somewhat qualified consequently by means of some parameters and also optional and social activities are missing in Istiklal Street.

4.6 Summary of the Chapter

The result of Chapter three was achieving the parameters to be assessed under natural, built and social environment analysis in this Chapter. As discussed in previous chapter there were seventeen selected parameters for evaluating Istiklal Street qualities. Analysis of physical structure resulted in to identify physical qualities of the case and analysis of the social structure leads to define qualities related with social issues of the case. Accordingly, there would be strategies which will be presented as research findings in the next chapter, besides the answer to the research question is going to be the suggested concepts that are affecting the Istiklal Street qualities through achieved parameters.

Chapter 5

CONCLUSIONS AND RECCOMENDATIONS

5.1 Introduction

As mentioned formerly, street in general and “pedestrian street” in particular are the urban spaces that play a vital role in social life of people. They can accordingly improve the quality of life or on the other hand worsen it. There are some qualities in this sense that could affect on success of the pedestrian street.

Istiklal Street in Walled City of Famagusta is one of the most important public spaces in form of “pedestrian street”. It is an attraction pole not only for citizens but also for the tourists of Famagusta and students of EMU. This street is rich in terms of Historical values. The history of Istiklal Street dates back to Lusignan period, since that time, this street has changed in terms of physical and social structure. Current physical feature of this street almost goes back to British period and there are lots of buildings from this period. Istiklal Street in 2000 changed to “pedestrian street”. Before that time it served both vehicular and pedestrians. Unfortunately, these days Istiklal Street faces many problems as erosion in building façade, pavement material and deterioration of historical buildings along with lack of pedestrian facilities like, lack of street furniture, lack of greenery and…which all resulted in loss of identity, vitality and livability. So gradually the importance of this street is going to decrease and people will not be attracted by this space anymore.

From this reason, in this study, Istiklal Street has been evaluated in terms of quality to determine the current situation. In the first chapter, a brief introduction was given. In the second chapter, “pedestrian street” was explained to get its concept, importance and design criteria. Chapter 3 focused on pedestrian activities, pedestrian needs through these activities and urban street quality to achieve parameters for evaluating the level of quality in Istiklal Street in chapter 4. Hence, Chapter 4 has been allocated to the history of Istiklal Street and measurement methods for analyzing each parameter in this street. The findings from Chapter 3 showed that 17 parameters should be tested in the case. The parameters are define as green and unpolluted space, legibility, diversity, function, visual appropriateness, personalization, accessibility and permeability, attractiveness, distinctiveness, robustness, richness, safety, comfort, cleanliness, inclusivity, fulfill and vitality which all are gained according to Carmon and Bentley. The aim of this study initially was to satisfy human needs with human activities through urban space qualities that lead to obtain those parameters.

5.2 Recommendations for Bringing Istiklal Street to Better Qualities

The obtained data has clarified that, some improvements and changes are needed in order to enhance the quality of this street. In following section, some recommendations are given in terms of each parameter for quality improvement of the street.

- Un general there are lack of green areas include: elements like green wall , flower box in combination with people activities, trees as shelters and also there is no organized concept for the existing green area to use them towards pedestrian beneficial.

- This street is readable enough in terms of physical legibility (existence of nodes, landmark, path and edge). Of course the nodes should be activated and improved to increase the social interaction. But this street is not facilitated in terms of activity legibility. It means that some remarkable activities should be defined along this street to make it more legible.
- Diversity or the quality of being mixed-use is almost defined in this street.
- Although this street acts like a mixed-use street, there is not variety of activities. Thus this street needs to be improved in terms of activities, so that optional and social activities will be done in this street as well.
- The quality of visual appropriateness should be defined by landscape and building façade. Good landscape or public art could improve the visual qualities and caring about order, unity and balance in new constructions in this street will affect visual appropriateness.
- Visual appropriateness could prepare a suitable base for personalizing street façade or other elements along the street. The owners of functions should be encouraged to put their own tastes on the buildings, for instance, by using flower boxes in facades or in front of their shops or sculpture and ornaments that gives a kind of local identity to the street.
- Istiklal Street as discussed in previous chapter in not accessible in terms of public transportation and walking. Public transportation should be located near this street. Pavement materials and pedestrian facilities should be improved to persuade people to walk to the street. Also, the level of permeability in Istiklal Street should be increased by defining the ways that end to this street, so that much more users could have the chance for interaction along the street.

- As told before attractiveness is affected by safety, microclimate and building façade. In terms of microclimate this street should be designed according to mixture of shade and sun. In façade of buildings especially ground floor, it is needed to have a kind of transparency to connect indoor and outdoor.
- To make the street distinctive, it is needed to add some symbolic elements in the street. In terms of physical setting, landscape or visual qualities should be defined. For the function, it is required to improve the activities to optional and social by adding some more functions and improve the qualities in the street.
- In Istiklal Street it is needed to create some flexible functions which could respond to more than just one group of users and should have the ability to include more than just one type of activity.
- As what noted before, richness is defined according to spatial information and other senses as well. Spatial information includes visual qualities and variety of functions and activities. Again it is needed to add some aesthetic qualities and raise the level of activities in street.
- As what discussed in analysis, the level of safety in Istiklal Street is acceptable but lighting equipment for example could be designed along the street to improve safety especially at nights.
- Comfort is defined in terms of environmental comfort (greenery, microclimate) and physical comfort (street furniture, visual qualities, legibility and …). Hence to have comfortable Istiklal Street it is needed to define each and every quality according to human needs.
- According to analysis people rate well or fair to the level of cleanliness in Istiklal Street and they were satisfied by this quality. Therefore cleanliness is not a serious

problem but again it could be improved by facilitating the street with bins or distributing the culture of making street clean and unpolluted.

- The main concept of inclusivity is that to create an urban space for all. It means Istiklal Street should consider about all kinds of human needs according to their activities. It would be possible to define activities based on the needs and interests of elderly and children as well as other age groups. Making functions accessible by defining facilities for all abilities, is another option in inclusivity consideration. Also multi-cultural activities and caring about the needs of males and females simultaneously could affect street inclusivity.
- Fulfill or sense of belonging is not going to be created for users until they feel that some parts of the space belong to them. So, it is suggested to define and specialize spaces according to the types of users.
- The quality of vitality is so comprehensive, it could be come true when the collections of qualities get existed in the street, Hence it is highly recommended to improve primarily the qualities of diversity, safety and attractiveness.

  As a result of this research, it could be said that, Istiklal street as the only pedestrian street in city of Famagusta, is deteriorating both in its physical (natural, built) and social identities due to lack of proper designs and maintenance in outdoor spaces. It needs to be redesigned properly according to user needs and activities. In this sense it could be a successful pedestrian street.

5.3 Agenda for Future Research

Accordingly, this research was done to be a base for firstly determining the current situation in terms of street quality and then promoting these qualities in istiklal Street. It can also be used by other researches in future as municipalities, town

planning offices and students who want to study in this field. For me, if I wish to move in this way, I will go deeper through street quality. In this sense, I will define the concepts towards how each and every parameter could be improved to be converted to a quality within the street.

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APPENDICES

Appendix A:

Questionnaire Survey

Questionnaire

There have been various researches along quality of urban space in terms of Pedestrian Street. The purpose of this research is to try to understand the needs and problems of people in Istiklal Street for creating a successful urban space and a pedestrian friendly environment, with the intention of improving the quality of Istiklal Street.

This questionnaire survey is conducted by Shirin Shahideh Master Candidate of M.S in Urban Design program, in the Department of Architecture, Faculty of Architecture, Eastern Mediterranean University, Famagusta, North Cyprus, as a part of her Master studies under the supervision by Assoc. prof. Beser Oktay Vehbi. Furthermore, all collected data will be analyzed by Shirin Shahideh under the guidance of Prof. Assoc. prof. Beser Oktay Vehbi.

If you want any extra information about this project, please send an e-mail to: shirinshahideh@yahoo.com or call +90 533 8883613.

Direction:

- Put a check (√) to your corresponding answer (if you have more than one option please mention)

Thank you in advance for your time and support.

1- Gender: □ Male □ Female

2- What is your age group?
□ 18 to 22□ 23 to 29
□30 to 39□40 to 49
□50 to 60□Over 60

3- Country: ……. Nationality: …….

4- Are you a

□ Student □Tourist □ Local

5- How would you rate fulfilling your needs while walking along this street?
□Fair □Good □Excellent □Superb

6- Do you like to spend some free time in the street?
□Yes □No

7- How many times a week do you come to this street?
□Three times □more than three times □less than three times

8- Is this street accessible enough?
□Yes □No □Not bad □No idea

9- Is public transportation conveniently located near the street?
□Yes □No □Not a problem

10- What sort of transportation do you usually use to get this street?
□Own car □Bus □Bicycle □Other

11- What is the quality of building along this street?
□High quality □Intermediate quality □Poor quality

12- What is the most important consideration to prefer spending time in this street
□Just walking □Meeting friends □shopping

13- If any, what are the negative points of this street?
□Safety □Pollution □Poor quality of buildings
□Bad quality of pavements □Lack of sitting elements
□Lack of signage □Lack of greenery

14- What do you think about safety along the pedestrian paths?
□Poor □ Fair □ Good □ Excellent

15- What do you think about the condition of pavements of pedestrian paths?
□Poor □ Fair □ Good □ Excellent

16- How do you see the location of car parking areas near the street?
□Poor □ Fair □ Good □ Excellent

17- Which kind of existing transportation modes do you prefer to use along the street if all facilities about it be in a good condition?
□ Private car □ Public transportation □ Bicycle □ Walking

18- How would you rate the greenery in Istiklal Street?
□Poor □ Fair □ Good □ Excellent

19- What is the most important consideration for you to prefer to spend time in Istiklal Street?
□Attractiveness □Safety □Sense of belonging □Comfort □Cleanliness □ Livability □Mixed use

20- Is there anything here reminding you of past?
□ Yes □ No

21- Is this street equipped well in terms of street furniture?
□Yes □No

If no what is needed? ……..

□Bin □lighting □sitting element □shelter

□paving material □signage □public art

22- In general, are you satisfied with the quality of Istiklal Street?
□Very satisfied □somewhat satisfied □Not satisfied
□Not sure

Thanks for your time and support

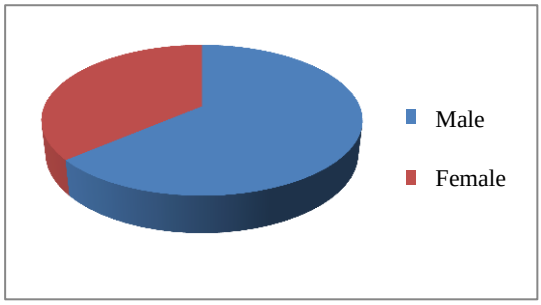
- **1-Gender** (Graph

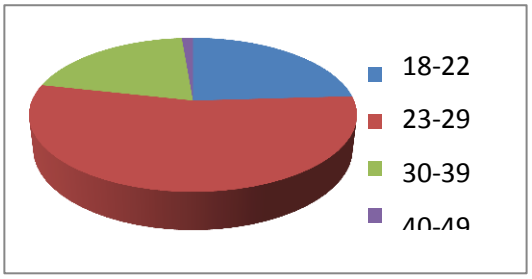
gender

	Valid	80
	Missing	0

gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	51	63,8	63,8	63,8
Female	29	36,3	36,3	100,0
Total	80	100,0	100,0	





Graph 1: Percentage of Male and Female

Graph2: Age Group of People

- **2-Age Group**(Graph 2)

age

	Valid	79
	Missing	1

age

		Frequency	Percent	Valid Percent	Cumulative Percent
	18-22	19	23,8		24,1
	23-29	43	53,8	54,4	78,5
	30-39	16	20,0	20,3	98,7
	40-49	1	1,3	1,3	100,0
	Total	79	98,8	100,0	
Missing	System	1	1,3		
Total		80	100,0		

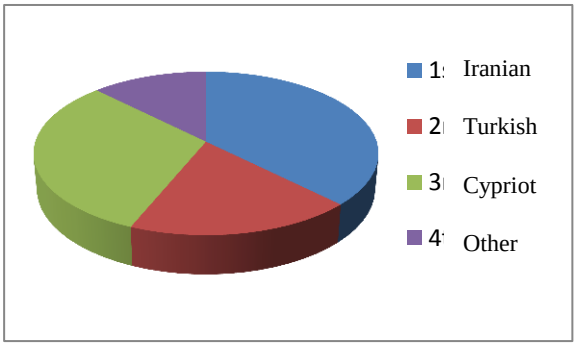
- **3-Nationality** (Graph 3)

nationality

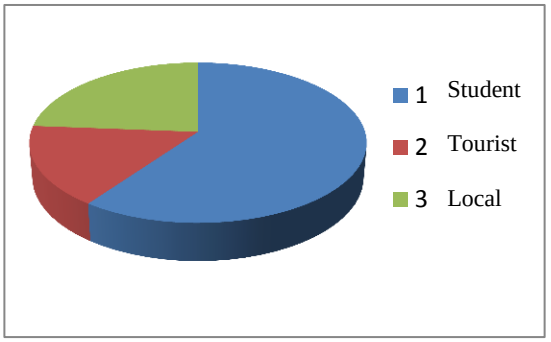
N	Valid	80
	Missing	0

nationality

	Frequency	Percent	Valid Percent	Cumulative Percent
Iranian	30	37,5	37,5	37,5
Turkish	15	18,8	18,8	56,3
Cypriot	25	31,3	31,3	87,5
Others	10	12,5	12,5	100,0
Total	80	100,0	100,0	



Graph 3: Nationality of



Graph 4: Groups of People

- **4-Group of Users (Student, Tourist, Local)** (Graph4)

Reason

Valid		80
Missing		0

reason

	Frequency	Percent	Valid Percent	Cumulative Percent
Student	48	60,0	60,0	60,0
Tourist	13	16,3	16,3	76,3
Local	19	23,8	23,8	100,0
Total	80	100,0	100,0	

Graph one, three and four show that Istiklal Street has multi users from different genders, Different nationality as tourists, students or local people. But the age group graphs shows that very young and old people do not have the tendency to spend their time in this street and also according to observations, children are not attracted to this street. Thus Istiklal street has lost a vast range of users include elderly, especially locals, Children and their parents, teen agers.

5-How would you rate fulfilling your needs while walking along this street?

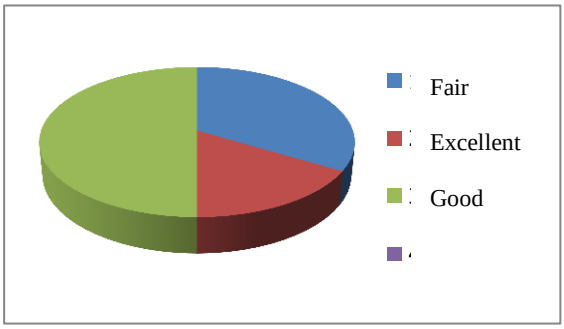
As this graph (Graph 5) shows most of the people cannot fulfill their needs while walking along this street. Their answers mostly alter from fair to good.

needs

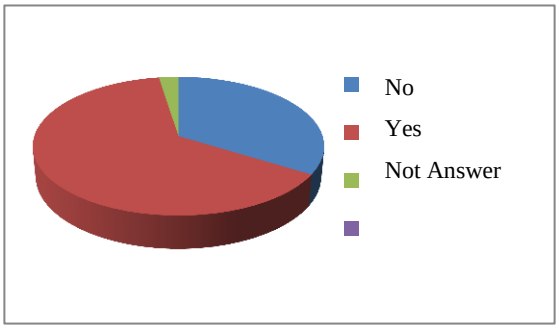
Valid	80
Missing	0

needs

	Frequency	Percent	Valid Percent	Cumulative Percent
Fair	27	33,8	33,8	33,8
Good	51	63,8	63,8	97,5
Excellent	2	2,5	2,5	100,0
Total	80	100,0	100,0	



Graph 5: Fulfilling Needs



Graph 6: Spending Free-time

6-Do you like to spend some free-time in the street?

Graph 6 implies that more that halfe of the people as responders like to spend their free time in this street , but actually it has not happened, or they spend time there while they are complaining about the qualities. It means that this street is important for all groups of visitors but can not satisfy them or their needs in terms of optional activiti

Free-time es.

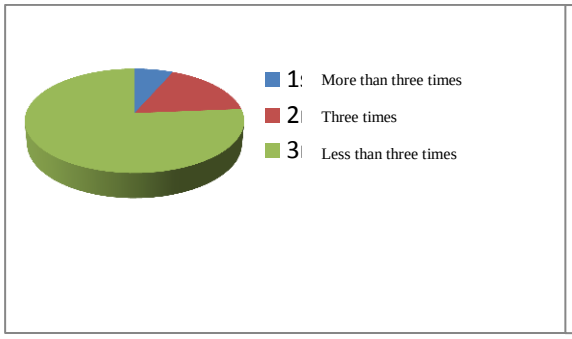
	Valid	79
	Missing	1

Free-time

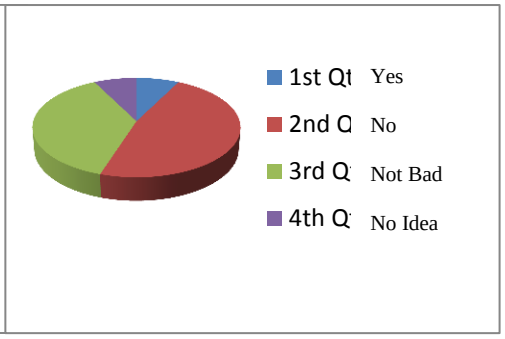
		Frequency	Percent	Valid Percent	Cumulative Percent
	Yes	53	66,3	67,1	67,1
	No	26	32,5	32,9	100,0
	Total	79	98,8	100,0	
Missing	3,00	1	1,3		
Total		80	100,0		

7-How many times a week do you come to this street? (Graph 7)

As this graph shows most of the people go to Istiklal Street less than three times a week. This means that even thou they like this street, they may hardly go there or "less than three times" can positively interpreted to two time a week !



Graph 7



Graph8: Street Accessibility

Week

Valid	76
Missing	4

week

		Frequency	Percent	Valid Percent	Cumulative Percent
	Three times	5	6,3	6,6	6,6
	More than three times	13	16,3	17,1	23,7
	Less than three times	58	72,5	76,3	100,0
	Total	76	95,0	100,0	
Missing	System	4	5,0		
Total		80	100,0		

8-Is this street accessible enough? (Graph 8)

In Graph 9, as it is clear, most of the people believe that this street is not accessible enough due to lack of public transportation, lack of signage system for tourist to get there, bad quality of way to walk there and so on.

Accessibility

Valid	80
Missing	0

accessibility

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	6	7,5	7,5	7,5
No	38	47,5	47,5	55,0
Not bad	30	37,5	37,5	92,5
No idea	6	7,5	7,5	100,0
Total	80	100,0	100,0	

9-Is public transportaion conveniently located near the street?

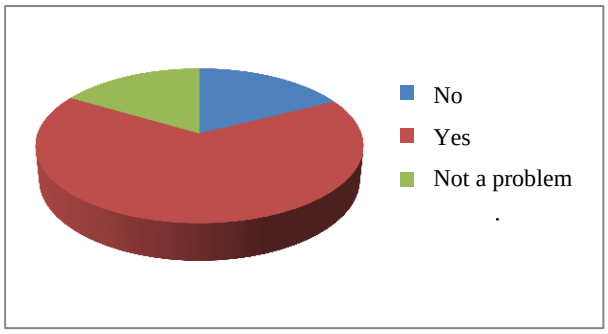
Follwing the previuos question, Graph 9 shows that more than half of the people has told that public transportation is a problem of this street while some believe that public transportation is not a problem at all and others did not have any problem using public transportation. Thus one of the problems of this street in terms of not being accessible can be resulted in unconvineit loction of public transportation.

transportation

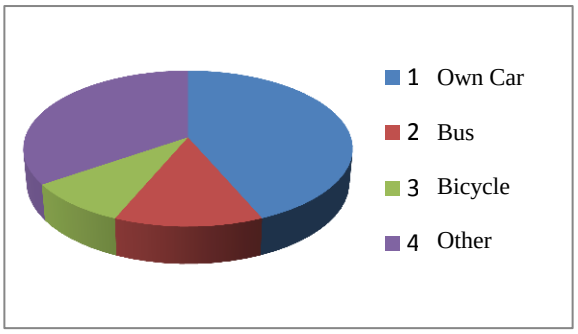
Valid	79
Missing	1

transportation

		Frequency	Percent	Valid Percent	Cumulative Percent
	Yes	14	17,5	17,7	17,7
	No	52	65,0	65,8	83,5
	Not a problem	13	16,3	16,5	100,0
	Total	79	98,8	100,0	
Missing	System	1	1,3		
Total		80	100,0		



Graph 9: Public Transportation



Graph 10: Sort of Transportation

10-What sort of transportation do you usually use to get to this street?

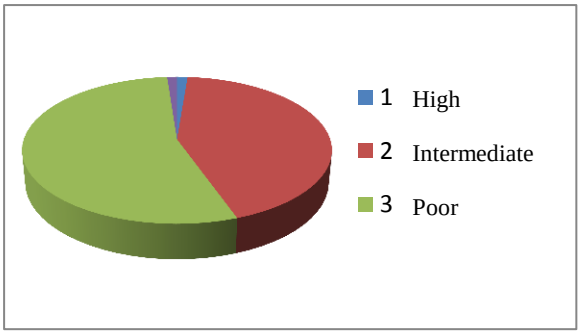
Graph 10 includes four kinds of transportation as own car, bus, bicycle and others that can be walking or using taxi. People preferably are using their own car to get this street maybe because of good situation f parking in this street or the problems of other sorts of transportation that force them to use their own car. As it was explained in Graph 10, people encounter problem when using public transportation especially bus. Also using taxi would be expensive especially for students and locals and they do not like to walk there, because there are not any pedestrian facilities as it will be explained later.

getting

Valid	78
Missing	2

getting

		Frequency	Percent	Valid Percent	Cumulative Percent
	Own car	34	42,5	43,6	43,6
	Bus	10	12,5	12,8	56,4
	Bicycle	7	8,8	9,0	65,4
	Others	27	33,8	34,6	100,0
	Total	78	97,5	100,0	
Missing	System	2	2,5		
Total		80	100,0		



Graph 11: Quality of Buildings

Graph 12: Consideration of Spending Time

11 What is the quality of buildings along this street?

According to Graph 11 most of the visitors of Istiklal Street rate the quality of buildings from intermediate to poor. Obviously they expect to have buildings with high quality in terms of materials, height, richness, cleanliness in future.

Quality of Building

Valid	80
Missing	0

Quality of Building

	Frequency	Percent	Valid Percent	Cumulative Percent
High Quality	1	1,3	1,3	1,3
Intermediate Quality	35	43,8	43,8	45,0
Poor quality	44	55,0	55,0	100,0
Total	80	100,0	100,0	

12-What is the most important consideration to prefere spending time in this street?

According to Graph 12, most of the visitors of Istiklal Street go there for walking, some for meeting friends and the least for shopping. It means that a part of optional activities could not be fulfilled here in this street, because people prefer to meet their friends in other places and also they chose somewhere else for shopping, they only walk which may happen because of getting to other places or just passing time.

Time spending

Valid	80
Missing	0

Time spending

	Frequency	Percent	Valid Percent	Cumulative Percent
Just Walking	39	48,8	48,8	48,8
Meeting Friends	23	28,8	28,8	77,5
Shopping	18	22,5	22,5	100,0
Total	80	100,0	100,0	

14-What do you think about safety along this pedestrian path?

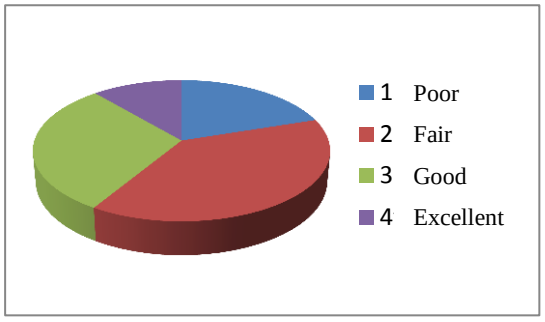
Graph 13 proves that safety would be the item that people are satisfied with. The current situation defines acceptable safety and security for people but it can be improved to higher levels especially at nights in order to bring livability to night life of this street.

safety

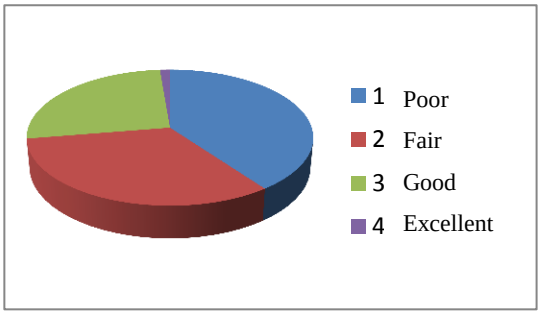
Valid	80
Missing	0

safety

	Frequency	Percent	Valid Percent	Cumulative Percent
Poor	16	20,0	20,0	20,0
Fair	31	38,8	38,8	58,8
Good	24	30,0	30,0	88,8
Excellent	9	11,3	11,3	100,0
Total	80	100,0	100,0	



Graph 13: Safety



Graph 14: Condition of pavement

15-What do you think about the condition of pavement of this street?

As it is seen in Graph 14 people are not satisfied with the quality of pavement in this street. The problem may refer to both material and the way of designing there. Generally it is one of the factors to define comfort of this street which is ignored there.

pavement

Valid	80
Missing	0

pavement

	Frequency	Percent	Valid Percent	Cumulative Percent
Poor	32	40,0	40,0	40,0
Fair	26	32,5	32,5	72,5
Good	21	26,3	26,3	98,8
excellent	1	1,3	1,3	100,0
Total	80	100,0	100,0	

16-How do you see the location of car parking areas near the street?

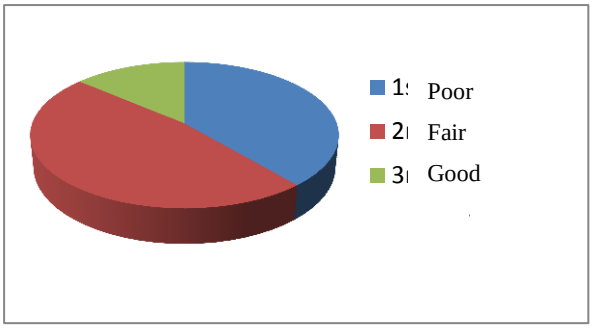
Graph 15 presents people's ideas about the location of the parking area. Most answers change from poor to fair. Since this street is supposed to be a pedestrian one, it is expected by people to have one or more parking area that makes this space accessible enough.

parking

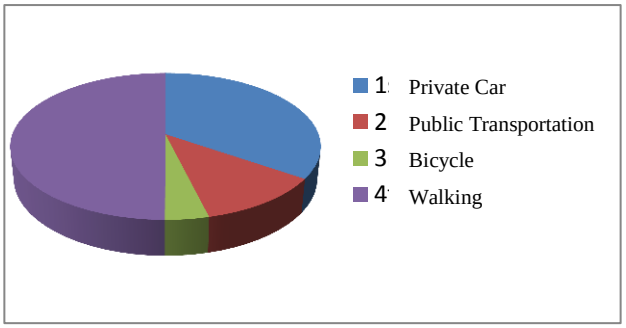
Valid	80
Missing	0

parking

	Frequency	Percent	Valid Percent	Cumulative Percent
Poor	31	38,8	38,8	38,8
Fair	38	47,5	47,5	86,3
Good	11	13,8	13,8	100,0
Total	80	100,0	100,0	



Graph 15: Location of Parking Area



Graph 16: Preference of Using Transportation Mode

17-Which kind of existing transportation modes do you prefer to use along the street if all facilities about it be in a good condition?

Based on Graph 16, people prefer to walk along this street, actually about half of the responders commonly like to walk in this street so that it could be estimated that if the street improves in terms of qualities, more than this range will define their activities by walking.

Transportation mode

Valid	78
Missing	2

Transportation mode

	Frequency	Percent	Valid Percent	Cumulative Percent
private car	27	33,8	34,6	34,6
Public Transportation	9	11,3	11,5	46,2
Bicycle	3	3,8	3,8	50,0
Walking	39	48,8	50,0	100,0
Total	78	97,5	100,0	
Missing	2	2,5		
Total	80	100,0		

18-How would you rate the greenery in Istiklal Street?

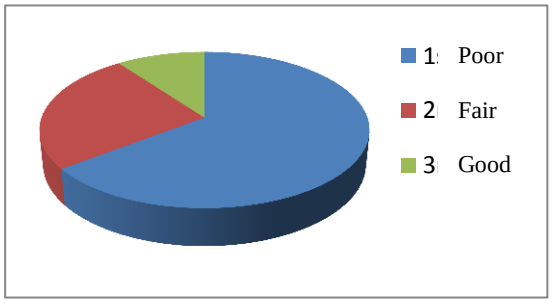
According to Graph 17, just a few numbers of people think that this street is equipped in terms of green area. Others emphasized on the problem of lack of greenery in Istiklal Street. It is totally clear that designing new green area and caring about old and existing greenery in this street, are important in enhancing the qualities of this street.

greenery

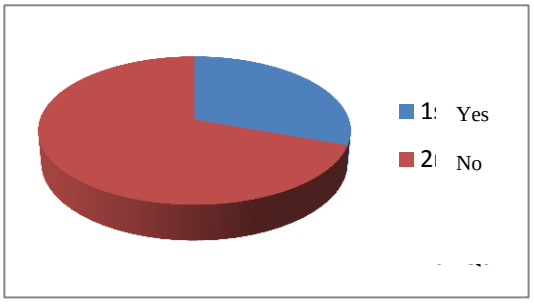
	Valid	79
	Missing	1

greenery

		Frequency	Percent	Valid Percent	Cumulative Percent
	Poor	51	63,8	64,6	64,6
	Fair	20	25,0	25,3	89,9
	Good	8	10,0	10,1	100,0
	Total	79	98,8	100,0	
Missing	System	1	1,3		
Total		80	100,0		



Graph 17: Greenery



Graph 18: Past Reminding

19-Is there anything here reminding you of past?

Graph 18 shows that people do not have anything here as a symbol of past time, so gradually they may lost their sense of pace and diversely if the elements from earlier time as historical, cultural or some symbolic signs as collective memory are improved , it would help in sense of belonging and distinctiveness in this Street.

Reminding of past

	Valid	77
	Missing	3

Reminding of past

		Frequency	Percent	Valid Percent	Cumulative Percent
	Yes	20	25,0	26,0	26,0
Valid	**No**	57	71,3	74,0	100,0
	Total	77	96,3	100,0	
Missing	System	3	3,8		
Total		80	100,0		

21-Is this street equipped well in terms of street furniture?

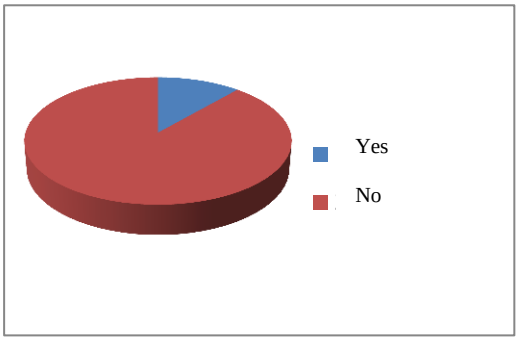
Graph 19, shows a high percentage of people that have agreed with lack of street furniture in this street. They later state that which facilities they need in terms of street furniture.

furniture

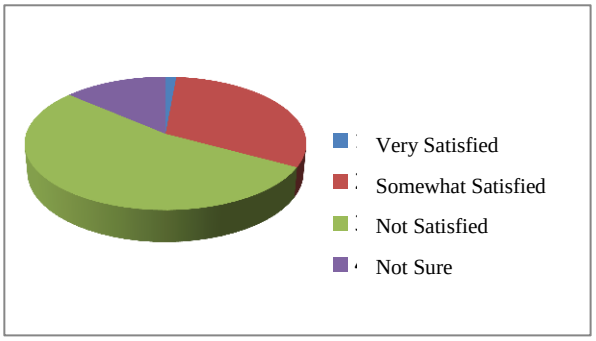
	Valid	79
	Missing	1

furniture

		Frequency	Percent	Valid Percent	Cumulative Percent
	Yes	9	11,3	11,4	11,4
	No	70	87,5	88,6	100,0
	Total	79	98,8	100,0	
Missing	System	1	1,3		
Total		80	100,0		



Graph 19: Street Furniture



Graph 20: General Satisfaction

22-In general, are you satisfied with the quality of Istiklal Street?

About half of the responders according to Graph 20, are not satisfied generally with this street or in other words to emphasize more, a few numbers of people are somewhat satisfied.

satisfaction

Valid	73
Missing	7

satisfaction

		Frequency	Percent	Valid Percent	Cumulative Percent
	Very satisfied	1	1,3	1,4	1,4
	Somewhat satisfied	23	28,8	31,5	32,9
	Not satisfied	39	48,8	53,4	86,3
	Not sure	10	12,5	13,7	100,0
	Total	73	91,3	100,0	
Missing	System	7	8,8		
Total		80	100,0		

13-What are the negative points of this street?

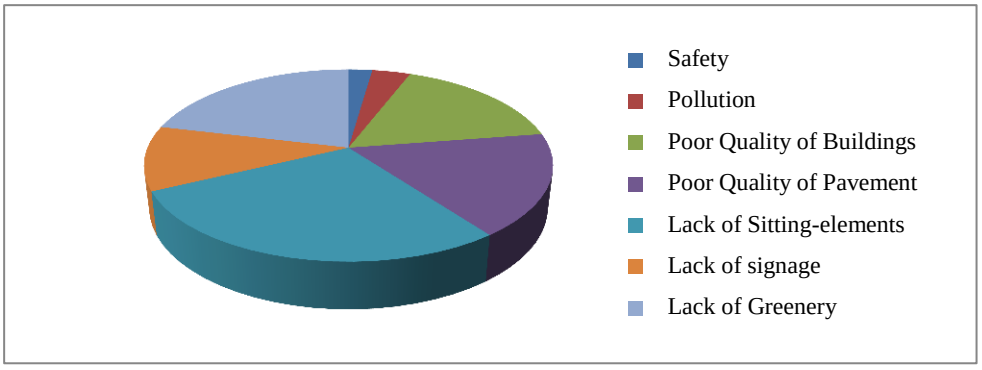
As Graph 21 shows, the negative points of this street could be mentioned from highest percentage to the lowest as: lack of sitting elements, lack of greenery, bad quality of pavements, poor quality of buildings, lack of signage, pollution and lack of safety. All these lead the street to be comfortable, attractive, green and unpolluted (clean), legible, visually appropriate, distinctive, inclusive, rich and robust.

Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Group1	79	98.8%	1	1.3%	80	100.0%

Group1 Frequencies: Negative Points

		Responses		Percent of Cases
		N	Percent	
Group1	**safety**	5	2.3%	6.3%
	pollution	8	3.6%	10.1%
	poor quality of buildings	37	16.7%	46.8%
	bad quality of pavements	38	17.2%	48.1%
	lack of sitting elements	62	28.1%	78.5%
	lack of signage	24	10.9%	30.4%
	lack of greenery	47	21.3%	59.5%
Total		221	100.0%	279.7%



Graph 21: Negative points of the Street

19-What is the most important consideration for you to prefer to spend time in Istiklal Street?

As it is seen in Graph 22, attractiveness, being mixed-use and safety are the main reason for people to spend time in Istiklal Street while livability, comfort, sense

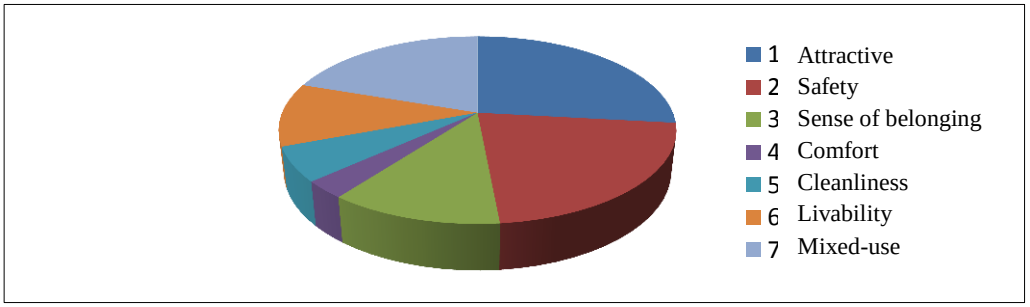
of belonging and cleanliness are the factors that could not be found as qualities in the street.

Case Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
group1	79	98.8%	1	1.3%	80	100.0%
group2	74	92.5%	6	7.5%	80	100.0%

Group2 Frequencies: Consideration for spending time

	Responses		
	N	Percent	Percent of Cases
attractive consideration to spend time	27	26.7%	36.5%
safety consideration to spend time	22	21.8%	29.7%
sense of belonging consideration to spend time	12	11.9%	16.2%
comfort consideration to spend time	3	3.0%	4.1%
cleanliness consideration to spend time	6	5.9%	8.1%
livability consideration to spend time	11	10.9%	14.9%
mixed use consideration to spend time	20	19.8%	27.0%
Total	101	100.0%	136.5%



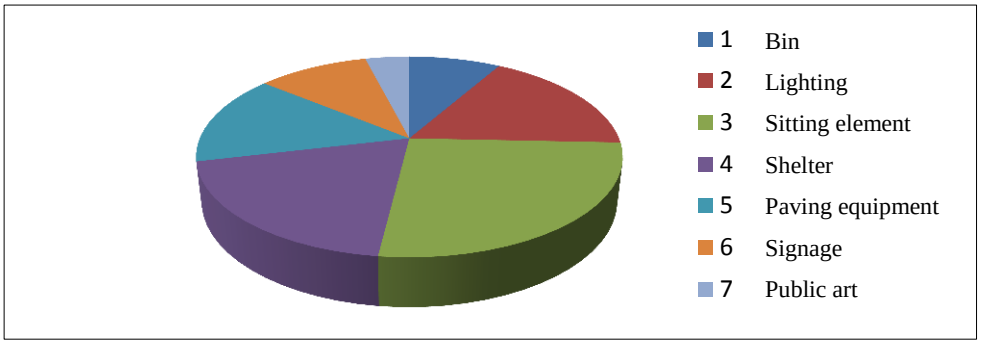
21-What is needed in this street in terms of street furniture?

According to Graph 23, the most essential street furniture based on users' ideas could be classified as: sitting element, shelter, lighting, paving material, signage, bin and public art.

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
group1	79	98.8%	1	1.3%	80	100.0%
group2	74	92.5%	6	7.5%	80	100.0%
group3	69	86.3%	11	13.8%	80	100.0%

Group3 Frequencies: Needed Street Furniture

	Responses		
	N	Percent	Percent of Cases
bin equipment	20	8.1%	29.0%
lighting equipment	43	17.4%	62.3%
sitting element equipment	65	26.3%	94.2%
shelter equipment	48	19.4%	69.6%
paving material equipment	36	14.6%	52.2%
signage equipment	25	10.1%	36.2%
public art equipment	10	4.0%	14.5%
Total	247	100.0%	358.0%



Graph 23: Needed Street Furniture

Conclusion of the Questionnaire

As a result of questionnaire, in the case study area (Istiklal Street), it is now clear that this street plays an important role in social life of people in Famagusta, they like to spend time there so that they are highly expecting to have qualified street especially in terms of pedestrian. From users' opinions, it is resulted that pedestrian ask for facilities which could fulfill their needs through their activities. According to people, locals – students-tourists, facilitating this street may come true by defining street qualities there. These qualities based on this questionnaire would be , making the street accessible, preparing suitable transportation to the street, thinking about multi functional parking areas, improving green area , designing street furniture, promoting quality of buildings and pavement, enhancing signage and lighting system.