THE "PEDESTRIAN REALM" AS A GENESIS OF COMMERCE:

BAZAARS OF THE EAST AND MIXED-USE

CENTERS OF THE WEST

by

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ABSTRACT

THE “PEDESTRIAN REALM” AS A GENESIS OF COMMERCE:
BAZAARS OF THE EAST AND MIXED-USE CENTERS OF THE WEST

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Commerce is an ancient economical framework that enables establishment of social ties, improving cultural relationships, and trading values as well as commodities (Edgu et al., 2012). Different trends have taken place throughout history in this revenue based area, from the old Silk Road trading system to new department stores of this era. At the same time, exponential rise of the pressure of motorized traffic into the open public urban space has made non-motorized users such as pedestrians uncomfortable, but recently they started to be given more attention (Morgan, 1996), through mixed used environment especially in western cultures.

The review of design literature illustrates that the presence of people is a key to successful urban public space (PPS, 2005; Cooper Marcus et al, 1998; Gehl, 1987). Public spaces are argued to attract people. Spaces such as Southlake Town Square, Legacy Town Center and West 7th, Fort Worth have been recognized locations in North Texas illustrates sign of such unique commercial oriented public settings. Alternatively, in the East side of the world, there are developments that date back to centuries before, that are argued to be successful in the same way, spaces such as bazaars in Tabriz, Isfahan and Kerman (Masoudinejad, 2005,
Moosavi, 2005, Kermani, 2009). However, current literature seem to be limited in explaining the physical components of pedestrian realm that makes these places function the way they are.

The purpose of this research is to document and assess the physical make up of the pedestrian realm in higher density mixed-use commercial oriented settings of the East and the West in order to gain greater understanding of pedestrian environments’ role and inform future design challenges with cross-cultural references in similar urban settings. The study focuses on three acclaimed sites in each setting, Southlake Town Square, Legacy Town Center and West 7th Fort Worth in North Texas and bazaars of Tabriz, Isfahan and Kerman in Iran.

The thesis primarily utilizes qualitative research methods and case study analysis techniques to answers the questions set forth by the research. Study uses interviews (Taylor and Bogdan 1998), observations (Francis and Marcus, 1998; Francis, 2001) as well as map analysis techniques (Wheeler and Koo, 2011). This research attempts to assess the physical make up of the pedestrian realm by examining the knowledge and the perceptions of three major stakeholders groups of such environments: pedestrian, designer and developer/planner’s point of view, to provide broader qualitative information about each of these settings. Case studies and site observations are utilized to further explore and the themes emerged from the interviews.

In conclusion, both mixed-use centers and bazaars settings are strongly influenced by commerce and retail to bring in pedestrian flow as well as other important elements such as variety of other uses and rich space configurations. Although the sites studied as part of this research are different at first glance they represent much common ground in terms of their physical characteristics and pedestrian realm qualities that contribute to pedestrian traffic, and presence. In all of these settings human scale played a very important role in the design, and activity watching was the most important use of the space. The configuration of the pedestrian
realm in the case studies helps to suggest and understand design and planning criteria that is beneficial for other commercial settings in different cultures.
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CHAPTER 1
INTRODUCTION

Commerce is an ancient economical system that enables establishment of social ties, improving cultural relationships, trading values as well as commodities (Edgu et al., 2012). Various trends have taken place throughout history in this revenue based on area, from the old Silk Road trading system to the new department stores of today. At the same time, exponential rise of the pressure of motorized traffic into the open public urban space has made non-motorized users such as pedestrians uncomfortable. However, recently they have been given more attention (Morgan 1996), through mixed used development. For example there are a number of mixed used development throughout North Texas spaces such as Southlake Town Square, Legacy Town Center, and West 7th Urban Village (Ozdil et al, 2008; Abrahams et. al, 2010). Alternatively, in the East side of the world, there are developments that date back to centuries before, considered successful in Cooper Marcus et al. definition, spaces such as bazaars in Tabriz, Isfahan and Kerman (Masoudinejad, 2005, Moosavi, 2005, Kermani, 2009). According to Cooper Marcus and others (PPS, 2005; Marcus and Francis, 1998; Gehl, 1987), the presence of people is a key to successful urban public space and these places mentioned in this research are argued to be successful in terms of bringing in foot traffic. However, the physical attributes of pedestrian realm that makes these places function the way they are, has not yet been investigated.

This thesis documents and evaluates the physical attributes of the pedestrian realm in bazaars as the business core of old cities of the East, compared to the new mixed-use commercial settings of the West, to have a better understanding of what the role of the pedestrian realm is in higher density mixed-use commercial settings.
Therefore, research proposed to test the role of pedestrian realm in three case studies in each of these categories described by conducting qualitative analyses on three levels: pedestrian, designer and developer or planner, as well as, providing a basic understanding of the setting configuration by analyzing the aerial photos through web based sources (such as Google Earth).

1.1 Background

Commercial environments, example representative of consumption space, are in many instances also being planned as live, work, entertainment centers to attract more users to such areas and maximize their use. Varied strategies like service improvement, invitation of famous brands into the facility or holding various events are being used for that reason (Young Min et al, 2012). The time spent in shopping centers by North Americans follows only that spent at home and at work or school. These centers have already become tourist destinations, complete with tour guides and souvenirs, and some include hotels so that vacationers and conferees do not need to leave the premises during their stay (Goss, 1993). Retail land uses are shown to effect movement patterns by acting as a multiplier by transforming a linear relation between spatial integration and pedestrian flow into an exponential relation in mixed-use areas (Hillier et al, 1993). That makes spatial characteristic of pedestrian spaces interesting to investigate.

Through the studies on walking behavior, it has been suggested that neighborhoods with higher residential and employment densities, more connected street patterns, and a variety of destinations show higher rates of walking (Cervero and Kockelman, 1997, Frank and Pivo, 1994; Handy et al, 2002; Handy, 2003; Saelens et al, 2003). Land-use mix has continuously been referred to for its importance for walkability and pedestrian oriented activities (Cervero and Kockelman 1997; Frank and Pivo 1994; Handy et al, 2002; Handy 2003; Saelens et al, 2003). A mix of land-uses can encourage pedestrian activity. Mixed-use, defined as developments with three or more significant revenue generating uses with significant functional and physical
integration of project components, a relatively close-knit and intensive use of land, uninterrupted pedestrian connections, and development in conformance with a coherent plan that frequently stipulates the type and scale of uses, permitted densities, and related items (Schwanke, 2003; Witherspoon and Abbett, 1976; Ozdil et. al in Regional Choices for North Texas, 2008). They are serving the immediate neighborhoods around as well as being a destination on the larger city.

Alternatively, bazaars, a marketplace or an assemblage of shops where miscellaneous goods and services are displayed to buy and sell (Gharipoor, 2003), famous for its role as a center of activity or as Ardalan stated a city within the city (Ardalan et al, 1973), is generated from a retail oriented setting. This retail business established itself where it could expect good revenue from the courtiers, soldiers, and visitors from the nearby streets and it has been active to this day. Streets leading to major gates coming from other cities of the time, helped the shops to establish along these streets, thus making trade more convenient. Bazaars are valuable constituents of cities and generally tend to be located in the central area of a city. In Iranian cities, these areas formed the hub of the city before the onset of urban planning, development, and design in 20th and 21st centuries (Kermani, 2009). Bazaar is used as a main pathway and a place for meeting people, seeing and being seen as well. Bazaar develops based on meeting the needs of the society as well as providing the best accessibility for people in the neighborhoods residential quarters.

Since mixed-use center and bazaars seems to be bringing more pedestrian flow and accommodates pedestrian activity, this raises a research opportunity to have a greater understanding of the physical make up of the pedestrian realm in these settings as well as how does these settings are influenced by the commercial setting around it?
1.2 Purposes and Objectives

The purpose of this research is to document and assess the physical make up of the pedestrian realm in higher density mixed-use commercial settings of the East and the West in order to better understand the role of the pedestrian environments and inform future design challenges with cross-cultural references in similar urban setting. The study primarily focuses on three acclaimed sites in each setting: Southlake Town Square, Legacy Town Center, and West 7th Fort Worth (Ozdil et. al, 2008) and Bazaars of Tabriz, Isfahan and Kerman (MasoudiNejad 2005, Moosavi 2005, Kermani 2009).

1.3 Research Questions

This research primarily answers the following three questions:
1. What is the role of the pedestrian realm in bazaars and mixed-use centers?
2. What are the physical attributes of the pedestrian realm in each setting?
3. What are the characteristics of bazaar and mixed-use centers that contributes to the pedestrian realm?

1.4 Definition of Terms

**Mixed-use Development (MXD):** A development with three or more significant revenue generating uses that have a significant functional and physical integration of project components, a relatively close-knit and intensive use of land, uninterrupted pedestrian connections, and development in conformance with a coherent plan that frequently stipulates the type and scale of uses, permitted densities, and related items (Shwanke, 2003; Ozdil, et al., 2009).

**Bazaar:** a marketplace or assemblage of shops where miscellaneous goods and services are displayed to buy and sell (Gharipoor, 2003).

**Pedestrian Realm:** Strictly speaking, pedestrian activity can be viewed as a travel mode. A ‘pedestrian’ is defined in the dictionary as “one traveling on foot.” Yet the fact that walking has
been the predominant mode of transportation through most of human history makes it more valuable than just a mode of transportation (Owens, 1993).

**Commerce:** In its general sense means reciprocal communication, intercourse, or correspondence between man and man (Catechism, 1820).

**Retail:** Consists of the sale of physical goods or merchandise from a fixed location, in small or individual lots for direct consumption by the purchaser.

1.5 Research Methods

The research takes its methodological references from both qualitative and quantitative paradigms (Guba et al., 1985; Taylor et al., 1998). The study primarily includes person-to-person interviews. Research also follows case study approach to document and study each setting (Francis and Marcus, 1998; Francis, 2001). It grounds its basics with the aerial photos obtained from Google Earth to get a basic general idea of how pedestrian spaces are located according to the general pattern of the setting. For each case, a standard process is applied and can be categorized into six staged of implementation:

- Data acquisition
- Case study selection
- Inventory and analysis
- Interview
- Qualitative analysis
- Conclusion

There are two different settings selected for this research based on familiarity of the author and in each of these settings three matching case studies were selected based upon ongoing mixed-use study at *University of Texas at Arlington* in collaboration with *Vision North Texas* case and with the criteria set and invested by the author, which was mostly based on the availability of data and physical component of bazaars.
Also the study intends to test the role of the pedestrian realm in three different settings in each of these categories explained, by conducting qualitative analysis on three stakeholder groups: pedestrian, designer and developer/planner's point of view. In the case of bazaars, the person-to-person interviews for the pedestrian is through random phone calls by the area code matching that particular setting and asking the interviewee whether they are pedestrian users of the setting. Designers and developer/planners are selected based on their involvement in the design, planning/developing or shop owners or shopkeepers as users. The contact information is obtained through a general information system. They are reached through phone calls or in-person interviews.

1.6 Significance of the study

Pedestrian realm research is significant in landscape architecture studies because of the value of population density and spatial characteristics in creating well attended outdoor spaces. They are also valuable due to their function as public spaces which provide opportunity for urban ensembles. According to Cooper Marcus and others (PPS 2005, Cooper Marcus and Francis 1998, Gehl 1987), the presence of people is key to a successful urban public space. However, the component of the pedestrian realm that makes these places function the way they are not investigated by looking into two separate cultures in the world.

As the most significant pedestrian network in some of the Eastern cultures such as Iran, bazaars play an important role in the development and livability of traditional cities. In the West, on the other hand, mixed-use development has proven to be a destination center, if well designed, for a variety of social activities. These reasons encourage the designer to think about the role they play in human communities and the associated attributes. Because of the value invested in these spaces, it is important to know the role they take in the overall image of a commerce oriented setting and the components that contribute to their function as a pedestrian realm.
1.7 Limitations of the Study

Source selection: This research intends to be as accurate as it can so reaching to more reliable sources was prioritized rather than numerous sources that can be reached and interviewed for this special topic.

Data accessibility: Availability and accessibility of reliable data are two key issues in scholarly research. Usually there is expensive or not published data that are very hard to reach on such specialized topics. In these cases using written document or aerial photos have been recommended to overcome the inefficiency.

Time limitation: This can be an ongoing research and can be investigated more in different setting and places in various human cultures and eras, but time limits the investigation to two more familiar settings for the author that would allow deeper understanding and greater access to the information needed in order to conduct such research.

Generalizability: This study concentrates on small set of cases in two different geographies. Although it generates knowledge that has implications for different settings the the findings are limited to those settings ad cannot be generalized outside the study population.

1.8 Summary

The pedestrian realm comes in many form and shapes, and carries multiple meanings and values in design and planning fields. It has always generated discussion among professionals, and what seems to be a key factor is that activities that are going on in this realm are desirable qualities especially for commercial settings. Retail and commerce in general tends to attract people and communities to their settings and activities associated in these settings are happening based on specific characteristic adjacent or as a part of it. This raises research questions that are- what specific physical attributes do pedestrian spaces possesses and what role do they take in commercial settings. For these reasons two different set of developments in Eastern and Western parts of the world are selected and investigated through qualitative
approach as well as documenting the physical components through aerial photos provided by Google Earth and other secondary resources.

The format of this thesis is organized into five major chapters: 1) Introduction, 2) Literature Review, 3) Research Methods, 4) Analysis and Findings, and 5) Conclusions.

The first chapter, Introduction, states the significance of the issues surrounding the pedestrian realm in commerce oriented settings, introduces the research objective, and gives a brief explanation of the research undertaken in this thesis. The next chapter, Literature Review, covers the basic definition and researches of pedestrian realm, pedestrian realm and commerce, bazaar and mixed-use centers. The Research Methods chapter discusses the design of data collection and analysis and their significance and limitations. The Analysis and Findings chapter focuses on the themes distilled from the data analysis. The final chapter, Conclusion, discusses the significance of the study, how it relates to the profession of landscape architecture, and possible future research.
2.1 Introduction

Both researchers and designers must be concerned with raising the standard of the designed environment from the present level, to one which successfully meets the complex levels of human demand (Smith et. al, 1997). Reaching to these design standards are the real challenge for the designer and researchers, looking for the best examples and precedents that responds to the desired quality and learning from the features is the first step to take. Whereas the importance of considering historic precedents has been established in the study and theory of urban form, much less attention has been paid to the historic precedents of urban function (Marcus, 1998). The medieval town square or Italian piazza cannot provide models of function to emulate, although they may offer important lessons in form, such as height to width ratio, sense of enclosure, and furnishing to enhance uses (Marcus, 1998). In “People’s Places” a quote discussing historic urban spaces can say it all, “In North America we’ve not had the density to obtain it, the physical form to contain it, or the socio-economic to sustain it (Marcus, 1998, 2).” This is rather a uniquely said sentence looking at the density, form and socio-economics together to reach the quality that is desired of the pedestrian realms of today’s cities.

Commerce and retail centers have played a significant role throughout history and despite the new trends they tend to attract pedestrian activities and people (Goss, 1993). Therefore the public life has a great influence on commerce, as well as, commerce influencing the public life (Young min et al, 2012). Many regional shopping malls and retail commercial strips have failed in recent years, and many others are performing poorly (Schwanke et. al, 2003). Exponential rise of the pressure of motorized traffic into the open public urban space has made non-
motorized users such as pedestrians uncomfortable, but recently they started to be given more attention (Morgan, 1996).

Different trends have taken place throughout history in this revenue based area, from the old Silk Road trading system to the new department stores of today. Bazaar started establishing centuries before the automobile era which can provide an example to focus on a non-motorized urban area. Located on the edge of the Silk Road, the first establishment of commerce started shaping the urban social centers of the East.

Looking at the physical characteristics of commercial settings that tend to attract pedestrian flow and the qualities leading to the success of these settings, bazaars and mixed-use centers are chosen to be documented and investigated physically.

Mixed-use, defined as developments that have three or more significant revenue generating uses that possesses significant functional and physical integration of project components. It is a relatively close-knit and intensive use of land with, uninterrupted pedestrian connections, and development in conformance with a coherent plan that frequently stipulates the type and scale of uses, permitted densities, and related items (Schwanke, 2003; Witherspoon and Abbett, 1976; Ozdil et al in Regional Choices for North Texas 2008). They are serving the immediate neighborhood around them, as well as, being a destination on the larger scale city or in this case even a metroplex. Three of these centers were selected in North Texas; Southlake town center, Legacy Town Center and West 7 Fort Worth, as commerce oriented examples of the West.

The other settings chosen for this analysis is bazaars from the old East. Bazaar defined as a marketplace or assemblage of shops where miscellaneous goods and services are displayed to buy and sell (Gharipoor 2003). This high class retail business established where it could expect proper revenue from the courtiers, soldiers, and visitors from the nearby streets. The bazaar was also used as a main pathway and a place for meeting people, seeing and being seen. This has shaped a greater role for this setting as a pedestrian realm and the activities
rolling in between trade and business. The bazaar started establishing centuries before automobile era which can provide an example to focus on non-motorized users. For this research three bazaars were selected in Iran; Tabriz, Isfahan and Kerman.

2.2 Pedestrian Realm

2.2.1 Definitions

Before reviewing the physical settings under investigation in the literature, it is helpful to define what exactly is meant by ‘pedestrian activity’ or ‘pedestrian realm’. Strictly speaking, pedestrian activity can be viewed as a travel mode. A ‘pedestrian’ is defined in the dictionary as “one traveling on foot.” Yet the fact that walking has been the predominant mode of transportation through most of human history, makes it more valuable than just any mode of transportation (Owens, 1993).

Susan Handy found a significantly higher number of walk trips per month reported in older mixed neighborhoods than in newer segregated ones (Handy, 1993). The frequency of walking trips seemed to be independent of both propensities for walking and socio-economic characteristics. A different body of literature deals with the growing concern for the automobile on urban life. This concern can generally be traced back to planning concepts reacting to the negative impacts of the industrial city (Has-Klau, 1990). Not surprisingly, traffic appears to be an important influence on pedestrian behavior. Donald Appleyard’s (1981) extensive studies on the impact of traffic on street life concludes increasing traffic levels results in greater perception of hazard, higher levels of noise and pollution, and a dramatic drop-off in neighboring, use, and value of the street”(Owens, 1993,117).

The most important body of research for this thesis consists of work on the “general topic of pedestrian life (Hill, 1991). This particular study deals with pedestrian activity in the most inclusive way, as an important component of social interaction and community in urban places. Rapoport (1987) divides pedestrian activity into two principle types: dynamic and static. Dynamic activities are principally comprised of walking, strolling, and running. Static activities
include standing, sitting, squatting, leaning, working, playing, talking, and pottering. These correspond well with the distinction made by Gehl (1986) between coming and going activities and staying activities. Significantly, staying activities last longer. In a summer study of residential streets, Gehl found that although activity frequency was evenly split between the two types, staying activities accounted for 90% of the total time spent on streets. Gehl goes on to argue that the influence of environmental quality on pedestrian activity varies with type. Necessary activities such as walking to school or work are minimally affected because they have to be done anyway. However, optional activities such as strolling or sitting are highly sensitive to the character. Pedestrian street life is affected by the physical variables of the environment, but perceptual and cultural variables as well (Rapoport, 1987). Likewise, issues such as safety, climate, noise, fumes, congestion, topography, distance, proximity to services (benches, cafes, shops), and other human activities all affect the attractiveness of a street for pedestrian use. Rapoport (1987) claims, however, that the single most important characteristic of pedestrian-supporting spaces is complexity. Gehl (1986) has a notion of ‘soft edges’ that states the same thing in a much less abstract way” (Owens, 1993, 118).

Regarding the commercial setting there can be three categories providing soft edges to consider:

- Easy access in and out,
- Good ‘staying’ areas in front of the building,
- Something to do there (Gehl, 1986; Owens, 1993).

Gehl particularly emphasizes the need to make strong links, both physically and psychologically, between indoors and outdoors. This can be influenced by the arrangement of interior activities, distance, and the quality and comfort of intervening spaces. Little or no setback leaves no occupiable space. According to Gehl, too much distance (more than 18 ft) discourages the connection between building and pedestrian realm. A monotonous edge can also discourage walking by increasing perceived distance, and “the quality of the route is just as
important as its actual length” (Gehl, 1986). Alexander (1977) reinforces the need for good edges in his book ‘A Pattern Language’, “If the edge fails, then the space never becomes lively.”

Gehl (1987) described outdoor activities and a number of physical conditions that influenced them. He describes in detail, good places for walking, standing, sitting, seeing, hearing, and talking. Whyte (1988) analyzed from direct observation, the social life of the street and described: street people, who they are and what they do, the physical street, its sensory environment, and the design and management of spaces, carrying capacity, steps and entrances, and sun and shadows”(Owens,1993).

Another factor affecting attractiveness for walking is street design. For at least twenty five years the overwhelming criteria used in street design has been to maximize its utility to the automobile (Untermann, 1987). This has resulted in streets that are wider, smoother, and more uniform in the name of safety. While this may improve driver visibility it also encourages faster driving, thereby making a less inviting street to walk along (Bosselmann, 1987). Some general discussion can be found in the urban design literature, with the exception of Jacobs (1961) and Jacobs (1985). There is a few studies that are focusing on detailed analysis of the pedestrian realm (Owens, 1993).

Berridge Lewinberg Greenberg (1991) developed a comprehensive approach aimed at integrating environmental, economic, social, and built form issues in reurbanization. The areas of interest in the report were employment areas, centers, corridors, mixed use, mix of housing types, density, urban design, the public realm, the pedestrian environment, parking, fit, transition, and special features.

Milius Bollenberghe Topps Watchom (1995) provided guidelines for a comprehensive plan and integrated community, achieved by providing architecture, and landscape architectural guidelines which reflect the qualities, images, and streetscapes of traditional urban neighborhoods. The design guidelines cover detailed information for all residential, mixed use, and commercial development.
Lynch (1960) distinguished five elements which facilitate the linkages of a community to a city being, paths (channels where people move), edges (linear elements such as railway lines), districts (sections of the city having some identifiable characteristics), nodes (strategic spots where people can enter), and landmarks (points of reference such as a monumental building). Lynch (1981) also denoted five categories or theories for a 'good city form'. He defines vitality (a healthy environment), sense (sense of place or identity), fit (a setting's adaptability), access (to people, activities, resources, places, and information), and control (responsible control of the environment) as examples of that are influential in shaping a good city formation (Lynch, 1960, 119-125).

2.2.2 Theoretical Framework of Morphological Analysis

There are a whole series of questions about the patterns of land use, streets, lots, and building form. Moudon (1997) contends that every morphological analysis is based on three basic principles:

- Three fundamental physical elements compose the urban form: buildings, plots/lots (and their related open spaces), and streets,
- A morphological analysis can be performed at different levels of resolution, namely the building/lot, the street/block, the city and the region
- A morphological analysis must consider the historical dimension of the urban form since the spatial elements undergo continuous evolution and transformation.

Therefore, “form, resolution and time constitute the three fundamental components of urban morphological research” (Moudon, 1997, 5).

2.2.3 Physical Elements

2.2.3.1 Spatial characteristics and their impact on travel behavior

In recent years, review of literature has demonstrated a link between urban form and travel behavior and addressed the question: “Does the built environment affect how often and how far people drive or walk or when they take the train or the bus?” (Crane, 2000, 1). In this
attempt, several spatial characteristics have been examined to assess the extent to which they influence people’s travel behavior within the neighborhood and more particularly to local commercial areas.

In 1976, Kain and Fauth conducted the first study that sought to explain urban travel behavior as a function of both economic circumstances and urban form. This study provided evidence that urban form matters. However, economic factors were found to be more decisive, namely that once people can afford a car, they usually drive to work “regardless of where they live, or the structure of their environment” (Kain and Fauth, 1976). Since then, various researchers have aimed at demonstrating that “creating more compact, diverse and pedestrian-oriented neighborhood, in combination, can meaningfully influence how Americans travel” (Cervero and Kockelman, 1997, 1).

2.2.3.1.1 Density

Density is usually referred to as the first spatial characteristic that influences the way people travel. Indeed, it is commonly argued that increasing the level of residential density encourages people to walk for their daily activities since they are able to reach a wider range of services and activities within a smaller radius of “travel” (Villain, 2011). Numerous studies support the conclusion that higher densities contribute to reduce Vehicle Miles Traveled (VMT) (Ewing, 1997; Burchell et al. 1998) and to increase transit use, especially when high-density developments are located near transit corridors (Hotzclaw, 1994; Dunphy et al, 1996; Levinson et al, 1963; 1000 Friends of Oregon, 1996; Kitamura et al, 1997).

However, some authors have pointed out that density as a generator of people travel approach is often inadequate. First, the population density of a neighborhood does not always show a significant association with modal choice (Soltani et al., 2006). Also, as a measure of the urban form, density results from complex processes and often masks variations in land use patterns and design between places that could feature the same density (Handy, 1996; Crane 1996; Dunphy et al, 1996). Therefore, measures of density must be analyzed in combination
with other measures of the urban form, such as diversity and spatial structure pattern (Tsai, 2005). Furthermore, definitions and meaning of density is often subjected to debate and discussion as they may vary according to the scale of analysis, ranging from the neighborhood level to the metropolitan level (Tsai, 2005).

2.2.3.1.2 Land Use Mix

A number of studies were performed to determine whether a higher level of land use mix is positively correlated with lower levels of motorized travel. Consequently, increasing land use diversity by mixing residential, commercial, institutional and recreational activities is one key objective of the strategies developed by urban planning movements (Villain, 2011).

Recent studies have demonstrated that increased mix of land uses affects travel by reducing vehicle distances and thus vehicle times (Boarnet et al, 2001). Cervero (1996) concluded that commuters are definitely more likely to use transit if they have the opportunity to stop, shop or engage in any other activities on the way home from the transit stop. Finally, mixed land use neighborhoods are often associated with higher levels of walking trips, for both work trips (Frank et al, 1994) and non-work trips (Rajamani et al., 2003).

2.3 Commerce and Pedestrian Realm

2.3.1 Typology of Retail Configurations

In 1963, Berry proposed classification of retail configurations in order to give a more realistic picture of the urban commercial structure that resulted from technological and transportation evolutions. Berry’s typology preserves the spatial emphasis previously given by the hierarchical model (Fairbain, 1984) and identifies three different types of retail configurations (Villain, 2011).

- Nucleations correspond to a mixture of planned and unplanned shopping areas, occurring at various transportation foci. Berry identified five different types of
retail nucleations: Central business district, regional shopping center, community center, neighborhood center, convenience or isolated store cluster.

• Ribbons of commercial activity are retail structures located along arterial routeways. These are easily accessible, automobile-oriented and usually not associated with a specific category of commercial offer.

• Specialized shopping areas are retail configurations devoted to a specific category of merchandise and are mostly located at focal points of the transportation network. Repair shops, furniture and allied stores, large and independent discount store or medical centers are examples of specialized shopping areas. (Berry, 1963, 21

Brown (1991) proposed his own “post hierarchical” taxonomy of urban retail locations. By combining the form – or shape – of a shopping area with the types of retailing function, Brown asserts the locational dimension that was emphasized in both the hierarchical model and Berry’s classification (Villain, 2011). He identifies three different forms of shopping areas:

• Clusters correspond to “compact agglomeration of retail outlets.” These may be either planned or unplanned,

• Linear shopping areas are assemblage of retailing facilities that extend along major, and even minor, roads,

• Isolated forms of retail are single, often freestanding, outlets separated from other commercial establishments.

Brown (1991) characterized three functions of shopping:

• General shopping, this embraces a wide variety of retailing outlets catering for the multi-purpose shopping behaviors of consumers,

• Specialist shopping areas are those with a large number of shopping outlets selling similar products, and
Ancillary locations are not primarily shopping areas but consisting of retail establishments capitalizing upon pedestrian traffic generated by non-retail activities such as hotel lobbies, airport departure lounge.

Table 2.1 A non-hierarchical classification of retail locations (Source: Brown, 1991)

<table>
<thead>
<tr>
<th>FORM</th>
<th>FUNCTION</th>
<th>GENERAL</th>
<th>SPECIALIST</th>
<th>ANCILLARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLUSTER</td>
<td>Town and city centers</td>
<td>Bright Lights District</td>
<td>Sandwich Bars in Financial District</td>
<td></td>
</tr>
<tr>
<td>(unplanned)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLUSTER</td>
<td>Mega-center</td>
<td>Specialty Center</td>
<td>Shopping Center</td>
<td>Shops in Airport Departure Lounge</td>
</tr>
<tr>
<td>(planned)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LINEAR</td>
<td>Traditional Route</td>
<td>Ethnic Shopping Street</td>
<td>Hamburger Alley</td>
<td></td>
</tr>
<tr>
<td>ISOLATED</td>
<td>Corner Shop</td>
<td>Carpet Warehouse</td>
<td>Crush Bar in Opera House</td>
<td></td>
</tr>
</tbody>
</table>

This set classifications aim to provide a new conceptual framework to analyze retailer’s locational decisions. Within the context of this research, it is necessary to emphasize the challenges experienced by local commercial streets in competing with new retail forms as these new formats, by being more accessible, are deemed to be more convenient to suburbanites, and to cater more to their shopping needs, requirements, and expectations (Villain, 2011). In sum, the spatial distribution of the retail system within the metropolis has evolved alongside forces of changes from both the demand and the supply side.

2.3.2 Morphological Analysis of Commercial Streets

This section probes street typologies and road classifications that were previously developed in various disciplines, from urban morphology to transportation planning. Within this set of classifications, streets are generally organized into a hierarchy according to the primary function they perform within the urban system (Villain, 2011).
2.3.2.1 Street Pattern

The study of the street pattern – the arrangement of streets and blocks – is closely related to the concept of “street connectivity”, also referred to as “street permeability.” Advocates of new urbanism and neo traditional development argue that increased network connectivity can reduce travel distances for all modes, including walking and bicycling, as well as providing pedestrians a wider range of routes (Dill, 2003).

2.3.2.2 Defining and Measuring Street Connectivity

A highly connected – or permeable – pedestrian network is defined as “having directional and continuous pathways that allow direct and safe pedestrian travel between residential and commercial parcels” (Hess et al., 1997, 1). In contrast, a low permeable street network is characterized by a lack of direct, continuous, and safe pedestrian systems (Hess et al., 1997).

Measuring street connectivity is based upon the combination of two physical distance measures: the route directness (pedestrian route directness ratio) and the completeness of pedestrian facilities (Hess et al., 1997) or the route distance (Randall and Baetz, 2001). Other measures of street connectivity include: intersection density, street density, block density, connected node ratio, linked node ratio (Dill, 2003). According to Hess (1997), variations in pedestrian volume between urban and suburban neighborhoods may be explained by the differences in street connectivity (Hess et al., 1997; Hess, 1997). Therefore, improvements to the pedestrian environment through the provision of more direct and shorter routes may discourage car trips, while stimulating walking trips within the neighborhood (Randall and Baetz, 2001). Therefore, for the purpose of this research, street connectivity – or street permeability – is regarded a key spatial determinant underlying the spatial distribution of commercial activities.
2.3.2.3 Accessibility

Accessibility is another key feature for “exploring the link between the spatial structure of a community and its region and the travel patterns of its residents” (Handy, 1992:5). According to Hansen (1959), the concept of accessibility reflects the “intensity of the possibility of interaction.” Consequently, as a spatial characteristic, accessibility is measured as a combination of proximity, density and street pattern (Handy, 1996:5).

Handy concludes that higher levels of accessibility, both local and regional, of a specific location are generally associated with a decrease in the total amount of travel, due to shorter trips distances. Similar conclusions were reached by Hotzclaw (1994) and Cervero and Kockelman (1997) whose results revealed that “residential neighborhoods that were spatially accessible to commercial activities, tended to average appreciably less Vehicle Mile Traveled (VMT) per household” (Cervero and Kockelman, 1997, 19).

Although this research does not explore the relationship between accessibility and retail location, these findings are crucial for the purpose of this study since they point out the necessity to combine local spatial characteristics (local accessibility, and local connectivity/permeability) with more regional and larger considerations regarding the position of the local commercial street within the urban area.

2.3.2.4 Route Typology

The Italian school of urban morphology identified four main types of routes and organized them into a hierarchical framework. A route is defined as a “structure apt to provide access to a place, starting from another” (Caniggia et al, 2001). These are the matrix route, the settling route, the connecting route and the break-through route.

The matrix route, which pre-dates urbanization, usually serves as the key vector of the urbanization process along which residential units are being built. This basic structure is then gradually completed by the implementation of settling routes and connecting routes, to form a denser urban structure. In a first set of circumstances, when the matrix route is centrally
located, it usually becomes the local commercial street within the morphological unit. On the other hand, when located in a peripheral location and running along a natural barrier for instance, the matrix route is converted into a transportation route in order to ease access and movement within the urban environment and another centrally located route emerge as the local commercial artery (Figure 2.1). (Caniggia et. al, 2001). These street patterns are important integration factor of the commerce oriented settings and it is essential to know how they relate and act in these settings.

![Figure 2.1 Route types](image)

2.3.2.5 Ordinary vs. Specialized Streets

More generally, streets are often grouped into two main categories based on street network performance. A key distinction is made between “ordinary” and “specialized” streets. The first type constitutes the majority of streets since they are dedicated to residential purposes. In contrast, “specialized streets” can be subdivided into two “sub-types”: the “commercial street” and the “transportation street.” In addition to their differences in terms of function, commercial and transportation streets also differ regarding their position within the street network. Theoretically, commercial streets are centrally located within a morphological unit, whereas transportation streets usually constitute physical barriers, defining the spatial boundaries of the morphological area (Caniggia et al, 2001; Villain, 2011).
2.4 Bazaars

“The bazaars are developed as the vital backbone of the city and the pedestrian streets leading into the city’s body proper insert themselves as ribs. Within this structure the vital organs of the city for example bathhouses, schools, caravanserais, bakeries, water cisterns, tea houses and numerous merchants and craft stores evolve and flourish. Together, all these ‘organs’ represent the religious, political, financial, and social integration of the traditional city. The city walls and gates define and protect the mass of the body proper. As the linear system of the bazaar grows and the residential areas spread out from the main spine, the old skin is shed and a new layer is created” (Ardalan et al, 1973).

The Iranian bazaar acts as “the center of social representation of city like piazza for European cities during the middle Ages and hiroba in Japanese cities. The bazaar complex consists of a large number of buildings, generally referred to as bazaar or when smaller as bāzārča. Furthermore there are the sarāys or caravanserais, and their smaller version, so-called timčas. All these buildings are interconnected with covered market streets (rāsta) and passageways (dālān). These streets and lanes are not only market streets, but also communication routes for people and goods to enter and exit the bazaar” (Bakhtiar, 1974).

In order to create space and light through openings in the dome, which is the semi-spherical roof of traditional building (Pirnia, 1991), domed crossroads –čahār-suq- were built where market streets crossed one another. “The bazaar consists of a number of smaller bazaars that makeup a multi-functional, multi-layered construction. When the bazaar was expanded over time, the original regular, linear structure slowly and subtly adapted itself to the demands of each historical period” (Soltani-Tirani,1982:111) and shaped the bazaar the way it is today.

2.4.1 Definition
Bazaar (Pers. bazar, market), a permanent market or street of shops, or a group of short narrow streets of stalls under one roof. The meaning of the word has been much extended in English, where it is now equivalent to any sale, for charitable or mere commercial purposes, of mixed goods and fancy work (Gharipoor, 2003).

Figure 2.2 Growth of Bazaar to the gates 11th century, Isfahan, Iran (Kiani 1985)

2.4.2 History

Archaeologists have found evidence of bazaars in different parts of Iran. It is certain that the creation of cities were based on not only the growth of the population but also on the increase of production, which brought about the growth of trade and accumulation of wealth.

Archeologists could find proof of the existence of bazaars in different areas of the country; Kermanshah (9000 B.C.), Zagheh hills in Ghazvin (7000 B.C.), Sialk hills in Kashan (6000 B.C.), Hasanlu in Kerman (6000 B.C.), Tal Eblis in Kerman (5000 B.C.), Khabis in...
Kerman (4000 B.C.), "the burned city" in Sistan (3000 B.C.) and Shush (from 4000 B.C.) (Kiani, 1985).

In Iran, together with the growth of the population and joining together of villages, in the fourth millennium, urbanization took shape, and since then, we have witnessed economic growth and trade even with faraway lands (Kiani, 1985). Drawn site plans of the “burned city” in Sistan prove that the city was divided into a number of zones and one of these zones had been assigned to commercial exchanges. Also based on the documents of Persepolis, in the ages of Achaemenid [The Persian Empire from 6th to 4th B.C. (Columbia Encyclopedia, 2011)] crafts were completely categorized and the bazaar was one distinct part of the city. Even Xenophon commented that these bazaars were far from crafts-schools.

The economy of Iran in the Parthian era [The Persian Empire, which ruled from 250 B.C. to 226 A.D. (Columbia Encyclopedia, 2011)] was based on agriculture and business. At that time they built many stores and caravanserais in some important commercial roads, which were connected to China from the east and into Rome from the West through the “Silk Road.” Based on documents bazaars were placed in the central regions of Partian city of Dora (Soltanzade, 2001). Moreover in the Sassanid period [The Persian Empire, which ruled between 224 A.D. and 640 A.D. (Columbia Encyclopedia)] the government converted many villages into cities and in these cities the bazaar played an important role in the urban design.
Figure 2.3 Linear growth of Bazaar in the 6th century, Isfahan, Iran (Source: Kiani, 1985)

Figure 2.4 The structure of Bazaar in 15th century, Isfahan, Iran (Source: Kiani, 1985)
2.4.3 Different Forms of Bazaar

Bazaar was designed due to a linear geometry and the linear passageway surrounded by shops and stores was the primary space of it. The major reason is that it used as a public passageway in urban fabric. From the morphological standpoint. There are two types of bazaars (Karimi, 1997):

- Organic un-planned bazaars
- Planned bazaars

The organic ones were those bazaars which had developed in an unplanned manner and over the centuries to form complex, organic entities into which, from time to time, accents of rational order were injected. Their growth was dependent upon economical needs of the city. In some cases, the direction of bazaar has changed to provide access to the major and public buildings of the city. After the formation of it, new buildings were usually constructed adjacent to it. Bazaar of Tehran is the great example. Some sections in bazaar of Isfahan, Yazd and Kerman are also classified into this category.

The opposite category includes planned ones. They were rationally planned configurations set down in new terrain and were intended to form the major street of the city. They were usually constructed during the periods of great economic growth and welfare. The Vakil Bazaar of Shiraz is the great example.

Bazaar has also played a basic role in the development of urban fabric. For instance, in cities which have grown in an unplanned manner, location of fundamental buildings of the city and the direction of urban streets have gradually changed to become more compatible with location and direction of bazaar. The other category includes planned cities, in which bazaar was located as the major street of the city. In this case, it was an urban axis which would connect the major gates of the city physically and visually.

In summary, the integration cores of Iranian old cities form a compact, dense and continuous sub-structure in the center of the city. “The center of integration usually matches the
geographical center. The physical shape of the core can vary from city to city, but two forms are more common: linear extensions and deformed grids. Regardless of its shape, the core, which is always the final destination of all major routes, matches the location of the central bazaar” (Karimi, 1997).

<table>
<thead>
<tr>
<th>Bazaar’s name</th>
<th>service</th>
<th>Scale</th>
<th>Population of the city</th>
<th>Features</th>
<th>Availability of data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shiraz</td>
<td>Commercial</td>
<td></td>
<td>1,455,073 (2009)</td>
<td>Arge karimkhan civic center</td>
<td></td>
</tr>
<tr>
<td>Kerman (Pourahm ad 2001)</td>
<td>Commercial</td>
<td>0.62 mile length</td>
<td>496,684 (2006)</td>
<td>Ganjalikhan square</td>
<td>Yes</td>
</tr>
<tr>
<td>Kashan</td>
<td>Social</td>
<td></td>
<td>473,149 (2006)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qazvin</td>
<td>Social</td>
<td></td>
<td>349,821 (2006)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yazd</td>
<td>Social</td>
<td></td>
<td>423,006 (2006)</td>
<td>Khan square</td>
<td></td>
</tr>
</tbody>
</table>

2.4.4 Structure (sub-spaces of Bazaar)

2.4.4.1 Main Street (Raste)

The primary movement system of the bazaar forms a central linear circulation space, called raste, domed throughout its length, parallel to which on both sides run the small regular dependent spaces of shops. Between them, at frequent intervals, arched entrances lead to the
larger spaces—caravanserais, colleges, bathhouses, shrines, mosques and stores, all tightly connected to the central spine yet each a separate, self-contained world (Kheirabadi, 2000). The intersection of two rastes is called chaharsuq, which means "four bazaars" in Persian. Because it is a center from which four different markets extend.

The main raste in the bazaar starts from the main entrance of the Bazaar, which is an urban space surrounded by an open space from one side and closed on the other three sides. These peripheral rastes act as small bazaars for similar products, such as raste for shoemakers. The raste also connects neighborhood residential areas to the bazaar. Through these residential alleys the bazaar is connected to the whole of the city. The number of these routes (raste) depends on the development of trade at different areas. Being closer to the main street always increases the value of peripheral routes (Gharipour, 2003).

These peripheral rastes are in an organic form in the old part of bazaar and in a designed form for example Safavid bazaar in Isfahan. While the space of the organic Bazaar is irregular in all directions, the second is characterized by domed structural bays, which are rhythmically organized (Herdeg, 1990).

Figure 2.5 Different kinds of main street (Source: Kiani, 1985)
Almost all parts of the raste in the Bazaar are rooved by vaulted brick roofs. The height of the roof differs in different parts of the Bazaar. In some places, for example in front of Qaisariya and madrasa or mosques and in the Chaharsuq (intersection of two rastes) the roof is higher than other areas to highlight the importance of these spaces (Gharipour, 2003).

2.4.4.2 Small bazaar (Qaisariya)

"Qaisaria" derived from "kaisara," a Roman word, was the name given to long roofed corridors in which shopkeepers and craftsmen with the same business show their products. In some cities these complexes are also called "bazaarche," which means small bazaar (Gharipour, 2003).

2.4.4.3 Hostel (Sarai and Caravanserai)

Caravanserai, which is considered the most important space in the bazaar (Soltanzade, 2001), is a hostel for caravans, a group of travelers, and individual travelers, with provisions for trade. The wholesale merchandise from outside the city is sold here to the retailers in the bazaar, thus the caravanserai acts as a "filter" (Herdeg, 1990).

They were designed to accommodate travelers as well as land loads of camels and horses, to transfer them into shops. In some caravanserais shops were also designed. These single or double storied buildings consisted of a courtyard surrounded by several rooms. The rooms in the second floor were residences for travelers and the first floor stores, shops and stables (Soltanzade, 2001). But, as mentioned, many of caravanserais inside the bazaar served as shopping centers and could not be compared to other sorts of caravanserais outside of cities. Some of them acted as a guesthouse for travelers without economic purposes.

Sarai is usually a double storied complex of shops with the same business, which are located around a non-roofed courtyard, usually containing a garden. The Sarai is attached to
the raste through a narrow corridor. There are many shops located in both sides of it. These corridors act as mini-markets for the products, which are related to the Sarai. Every corridor or peripheral raste is separated from the main street (raste) with a door. By closing these doors at night the security of each part could be guaranteed (Gharipour, 2003).

In these double storied complexes usually shops were located in the first floor and factories in the second floor, these stories are connected via a foyer and stairs. In some cases shops are connected to the courtyard through an Iwan (veranda) and in some cases there is not any level difference or Iwan between the shop and the courtyard (Gharipour, 2003).

2.4.4.4 Halls (Timce)

Timce is an economic complex, which was designed like Sarai but smaller and also often roofed. In timce some shops are located around a courtyard. These timces in the Bazaar act as shopping complexes for special products (Gharipour, 2003).

Figure 2.6 An open Hall (Source: Kiani, 1985)

2.4.4.5 Shops and workshops (Hojre)

Shops and workshops, called “hojreh,” are simplest and smallest, but they are the most important elements of a bazaar. The shops are located in both sides of the raste and corridors.
These are mostly double-storied, but in some parts of the bazaar with less importance, these stores are single-storied. The first floor of shops is usually factory or commercial space, while the second floor is usually the warehouse or an office for commercial trades. The area of the shops is between 10 and 25 m² almost 90 to 225 sf. (Gharipour, 2003).

![Figure 2.7 A shop located in Naghsh-e-Jahan Square (Source: Kiani, 1985)](image)

All the shops and workshops in the bazaar are separated from the streets (raste and corridors) with steps. This difference between the level of the shop and the street is related to the kind of business and craft inside the shop. For example, the level of shops in some parts is about fifteen cm, six inches, above the route, and in some cases (usually workshops), it is six inches lower. In some markets like the bazaar of Shiraz shops are placed on a platform, which is about fifty cm or two feet higher than ground level (Gharipour, 2003).

The connection of shops or workshops to the streets is based on the functions. In some parts of the bazaar such as druggist stores or provisions stores, shops are in more contact with
customers and people are able to come in, and evaluate the quality of products to select. In some other parts such as coppersmith's raste (Main street), shops are connected to the Bazaar through a long corridor (inside the shop) to increase the safety of the raste. In some other parts, like the raste for goldsmiths', shops are higher than the level of the bazaar to guarantee the security of the shop. The value of shops is related to their distance from the main street of bazaar. Closer to the main raste, the value of the shop is higher (Gharipour, 2003)

2.4.4.5 Environmental consideration

“Architecturally speaking, bazaar is a covered public passageway which is surrounded by shops and stores in two sides. It was therefore, a place for shopping, walking, social dialog, and cultural interaction of people” (Moosavi, 2004, 3). Architectural and spatial nature of the bazaar was highly dependent on the climate, culture and economic power of the city. In most of the Iranian cities the bazaar is a covered street, or series of streets and alleyways, lined with small shops grouped by service or product.

All of the urban bazaars were covered to provide protection against unpleasant climatic conditions. In hot climate, the roof would provide shadow and in cold climate it would protect from snow and rain. The natural light could penetrate to interior space through skylights, which could provide natural ventilation. The roofscape of most bazaars were similar but the number and size of the openings of roof differed due to climate conditions as well as security considerations. In cold climate the openings were smaller than those in hot climate. The height of interior space was another feature which differed due to climate conditions. Bazaars of hot climate were taller to provide better ventilation, while those of cold climate were shorter to keep the warm weather inside (Moosavi, 2004).

Combination of domes and vault was the most common structural system in construction of the roof. Two shells of roof were used in order to provide thermal and sound insulation in most areas and the internal shell was the one that inherited all decorations. This
insulation is a thick layer of air locked in between two brick shells that prevent heat transmission between buildings and environment (Moosavi, 2004).

In the early times, adobe and sun-dried brick were the most common materials for bazaar construction. Brick remains the most dominant material for construction of a bazaar, however in some areas combination of brick, timber and stone was used. Thick walls of masonry because of its low heat transmission co-efficiency prevent the heat transfer between the building and the environment as well (Moosavi, 2004).

2.4.5 Urban morphology

Lynch's (1960) model of the structure of urban perception provides a convenient starting point for understanding the key elements of urban space in relation to social experience in the commercial settings. His methodology and findings are well known. His groundbreaking central finding was that the mental maps which people use to help them find their way through cities are composed of five fundamental, reasonably invariant elements: paths, edges, districts, nodes, and landmarks (Lynch, 1981). These elements are represented in bazaar as well:

Path: the main corridor -raste, the sub-corridors, alleys and cal-de sacs

Edges: the streets at the border of bazaar

Landmark: entrance of bazaar or domes of the mosques or the palace

Nodes: intersection of the corridors- char sough

District: the different residential district that is attached to the bazaar, bazaar itself forms a district in the city context (Rajabi, 2007)
Figure 2.8 Bazaar of Tabas in older fabric
1- Gates of the city 2- Bazaar, connecting the gates 3- Public and governmental buildings of city
4- City wall (Source: Moosavi, 2004)

Figure 2.9 Bazaar of Kashan
1- Bazaar as a major street of city 2 - Major squares of the city 3-Public and governmental
buildings of the city (Source: Moosavi, 2004)
2.5 Mixed-Use Centers and Developments

The Urban Land Institute (ULI) describes the difficulties associated with defining mixed-use developments (MXDs), understanding they can differ significantly in purpose, size, mix of uses, physical character, setting and design. Instead, the ULI established a concept describing this type of urban form as having three or more revenue producing land uses, significant functional and physical integration, and developed in accordance with a coherent plan, helping to differentiate MXDs from other multi-use projects that are less intensive in land use and not functionally integrated into the urban environment (Schwanke, 2003; Urban Land Institute, 1987; Ozdil et al, 2010).

2.5.1 Definition
While the term “mixed-use development” does imply a physical land use mix, it is important to understand that planning and design process extends beyond that, incorporating social, economic and environmental values. Thus, when understanding mixed-use developments, it is important to acknowledge planning and design processes which integrate:

- Social mix-income, housing tenure, demography, visitors, lifestyles,
- Economic mix-activity, industry, scales (micro to large), consumption and production,
- Physical land-use mix-planning use class, vertical and horizontal, amenity/open space,
- Temporal mix—24-hour economy, shared use of premises/space, for example Street markets, entertainment, live work (Evans and Foord, 2007).

Vision North Texas defined mixed-use developments as three or more significant revenue generating uses that have significant functional and physical integration of project components, a relatively close-knit and intensive use of land, uninterrupted pedestrian connections, and development in conformance with a coherent plan that frequently stipulates the type and scale of uses, permitted densities, and related items (Schwanke, 2003; Witherspoon and Abbett, 1976; Ozdil et. al in Regional Choices for North Texas 2008). In short, the definition used in this study describes developments that essentially include shop-live-play.

2.5.2 History

Mixed-use development is not a new development concept. Historically, it arose out of necessity rather than a planned effort. The need for protection, lack of space, predominantly pedestrian orientation and proximity to the greater population all contributed to the formation of highly dense, compact cities (Urban Land Institute, 1987). In more recent times, technological advances in transportation and engineering, coupled with a shift in planning trends based upon numbers instead of humanistic disciplines, reduced the American city into simplistic categories and quantities of sprawl (Duany et al., 2000).
In North Texas, changes in growth patterns started in the 1990’s as developers and planners directed growth inward, focusing on revitalization efforts in downtown central business districts and planning for the future with the development of light-rail transportation (Kirk, 2008).

2.5.3 Different Forms of Mixed-use Development

These centers are intended to be places that people can easily park their cars once, then shop, eat, mail a letter – all without having to ever move their cars. They are active and inviting places, due to the thoughtful design, which tends to be centered on the pedestrian. The streets are designed not only for cars, but for pedestrians and bicycles as well. Their appeal is wide so that many people visit them each day for work or shopping, and they are desirable places to call “home” for many (Ozdil et al. 2010)

2.5.3.1 Mixed Use Centers

The mixed use centers for North Texas are defined as: Regional, Metropolitan, Community and Neighborhood (North Texas 2050, 2010). The four centers reflect areas with a variety of uses (including both employment and housing), at least a moderate intensity of development and, for some, and their roles as distinct or traditional centers of communities (see Table 2.3). The mixed use centers differ in terms of size, scale, and specific function. For the most part, Regional and Metropolitan centers are similar in that they provide a strong employment base for the North Texas region, have a mix of land uses, and are highly developed. In turn, Community and Neighborhood centers are also similar. They are mixed use but do not provide as many job opportunities as the larger centers. Also these two centers may have a single family residential component compared to the Regional and Metropolitan centers, where most residential uses are at higher densities. All of the centers are envisioned to be mixed use and pedestrian friendly, with more intense development than their surroundings. Characteristics common to all four are the presence of transportation connections and rapid transit lines. Transit-Oriented Development (TOD) is expected around transit stations in all four types of Mixed Use Centers.
Specific criteria have been established to distinguish the four centers and to identify where they are located in the North Texas region (North Texas 2050, 2010; Ozdil et al. 2010).

Table 2.3 The center Typologies in North Texas (Source: North Texas 2050, 2010)

<table>
<thead>
<tr>
<th>Typologies/Districts</th>
<th>Mix of Uses</th>
<th>Employment Intensity</th>
<th>Residential Density</th>
<th>Scale</th>
<th>Height</th>
<th>Transit System Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Center</td>
<td>Office, retail, MF residential, light industrial and entertainment, includes mixed-use. Emphasis on employment uses.</td>
<td>100 - 200 jobs/acre</td>
<td>50 - 100 units/acre</td>
<td>600 - 1,000 acres</td>
<td>5 to 50 stories</td>
<td>All modes of transportation; regional public transit, parking restrictions, and served by multiple major highways.</td>
</tr>
<tr>
<td>Metropolitan Center</td>
<td>Office, retail, MF residential and entertainment; includes mixed-use.</td>
<td>50 - 80 jobs/acre</td>
<td>15 - 50 units/acre</td>
<td>100 - 500 acres</td>
<td>2 to 10 stories</td>
<td>Served by one or more commuter regional lines and local services. Freeways with multiple access points. In some cases served by public transit.</td>
</tr>
<tr>
<td>Community Center</td>
<td>SF and MF residential and retail; includes mixed-use.</td>
<td>30 - 50 jobs/acre</td>
<td>5 - 10 units/acre</td>
<td>20 - 100 acres</td>
<td>1 to 5 stories</td>
<td>Served by at least several local transit and located on an arterial network. Served by a transit route providing connections to at least one Metropolitan Center. Commuter parking is located in this center. In some cases served by public transit.</td>
</tr>
<tr>
<td>Neighborhood Center</td>
<td>Mix of uses at a neighborhood scale.</td>
<td>20 - 30 jobs/acre</td>
<td>10 - 15 units/acre</td>
<td>20 - 100 acres</td>
<td>1 to 5 stories</td>
<td>Served by local roads and local transit to nearest larger center. Commuter parking in located in this center. In some cases served by public transit.</td>
</tr>
</tbody>
</table>

- **Regional Centers**

  "Regional Centers are the densest of the four mixed use centers, with a wide variety of uses. A Regional Center has a balance of office, retail, and entertainment, light industrial and multi-family residential uses. Regional Centers are envisioned as pedestrian-oriented, urban areas, in a central location. All modes of transportation serve the Regional Centers. The North Texas region has two Regional Centers, Downtown Dallas and Downtown Fort Worth" (North Texas 2050, 2010).

- **Metropolitan Centers**

  "Metropolitan Centers offer the same variety of uses, just on a somewhat smaller scale. Their development is less intense than Regional Centers. They tend to be populated urban areas that are primarily mixed-use, accommodating business and multi-family residential land uses. They meet a wide variety of business and employment needs and are large enough to serve several surrounding cities. Metropolitan Centers also include larger historic downtowns of..."
cities in the North Texas area. Metropolitan centers are served by one or more corridor/regional transit lines and local bus services. Twenty Metropolitan Centers have been identified so far in North Texas, one of which is Legacy Town Center” (North Texas 2050, 2010).

- **Community Centers**

  “Community Centers have a mix of uses and are distinguished by their smaller size and scale. Community Centers offer development that provides retail and residential within the same building or in close, walkable proximity to one another. They attract visitors and people from across the region because of their uniqueness, historic nature and design character. They provide access to shops, restaurants and community-oriented services. Community Centers are traditionally located on a major arterial network and served by a transit route providing direct transit to at least one Metropolitan Center” (North Texas 2050, 2010).

- **Neighborhood Centers**

  “This is the smallest of the four Mixed Use center types. Neighborhood Centers serve the shopping, service or entertainment needs of one or more existing or planned residential neighborhoods. They contain a diverse mix of land uses, at a neighborhood scale, including those schools, shopping, personal services and restaurants. These centers may offer quality amenities, like parks, that attract people from the adjacent neighborhoods. Good pedestrian, bicycle and bus transportation links are found in Neighborhood Centers, some may also include transit stations and adjacent Transit- Oriented Development. Neighborhood Centers are served by local roads and local transit to the nearest larger mixed use center” (North Texas 2050, 2010).

2.5.4 **Structure (Sub-spaces of Mixed-use Centers)**

The urban design concept sets the framework for positioning various uses, but positioning also depends on marketing and operational needs of each individual use in the project. Strategically positioning uses in the mixed-use development can make the difference between successful and unsuccessful project. Positioning must take into account issues such as access,
entrance, address, identity and visibility, security, marketability, connections to other uses, ownership, and the importance of the components to the project’s success (Schwanke, 2003).

Mixed-use centers do not have common design formula like bazaars do, but there are certain features that are present in these developments besides the mix of uses. Several spaces and sub-spaces have been identified by Schwanke (2003) about mixed-use projects. These are common features of these developments.

2.5.4.1 Retail / Entertainment Space

Retail as a central component of a mixed-use project, requires the design and layout for the overall project requirements to go hand in hand with the design for an effective and attractive retail component; retail is a principal defining element in the creation of a public realm and circulation system, which the entire project must draw on for strength.

- Retail placement: retail space is usually located centrally for two reasons. First, an architecturally attractive retail center with a creative mix and positioning of tenants, especially restaurants, can serve as a stimulating amenity. Second, retail establishment thrive on pedestrian traffic.
- Visibility, identity, and access: the exterior design signage for and architectural design of the retail component should boldly identify the facility as a shopping area. Readily available parking and easy auto access are also critical for the suburban mixed-use centers.
- Main street retail design: the design of retail storefront is important (Schwanke, 2003).

2.5.4.2 Public Spaces and People Oriented Places

Designing an interactive public realm is essential to the success of a mixed-use development. People-oriented spaces, whether open or enclosed, designed to create a strong image and sense of place for the development. Such spaces significantly shape the development's relationship with the surrounding environment, the interrelationship of uses
within the project, and the visual connections between spaces, and provide a sense of excitement for the entire mixed-use development. In some case, pedestrian spaces take on such importance that they may become almost separate uses in themselves. Public and people-oriented spaces in mixed-use projects come in various shapes, sizes, and configurations (Schwanke, 2003).

Streets: Increasingly the designer and the developers are using the street itself as a primarily open space in mixed-use development. Using streets as a primary element in the open space system provides for active and pedestrian friendly environment that they can easily view and access. Providing excellent integration with the surrounding urban areas, it also allows for other new developments to be easily connected to the project and can establish a framework for strong public realm. The resulting strong urban enclosure frames the open space of the main street retail area and provide twenty four-hour “eye on the street.” (Schwanke, 2003, 54).

Urban plaza and square: one of the most common forms of public spaces in mixed-use developments. They differ from town greens in that they are largely hardscape design, although they often do include some green space as well. Among the critical planning factors for a successful urban plaza or square (one that is active and draw people) are well defined edges, surrounding uses that animate the space (such as retail shop or restaurants), adequate sun exposure, and attractive landscaping, including trees, water fountain elements, an seating.

2.5.4.3 Parking design

The placement of parking is critical not only for the parking and the uses served but also for the overall design. The strategic location, design, and programming of parking areas and structures can also create and enhance attractive, well-traveled pedestrian link that can reduce demand for car movement. On street parking can be used effectively to provide attractive and functional parking arrangement in retail areas. It can be parallel or angled parking on the main street to provide convenient parking for retail tenants (Schwanke, 2003).

2.5.5 Urban morphology
Urban form typologies of mixed-use developments vary, and reflect development purpose, site location and context of the surrounding urban environment. Infill and revitalization mixed-use development efforts are most often built vertically, representing the desire or need to increase density and improve transit accessibility, or vertical integration into the surrounding urban environment (Urban Land Institute, 1987). The architecture of these developments are often three or more stories, with a mix of retail, office and residential (Ozdil et al, 2009; Vision North Texas, 2009, p.40).

The physical configuration of mixed-use developments/centers (whether they are vertical or horizontal in architectural character) is defined in four broad categories:

Typology:

- Mixed-Use Building/Tower,
- Integrated Multi-Building/Tower Structure,
- Mixed-Use Centers; Town Centers, Urban Villages, Districts (Schwanke, 2003),
- Traditional Centers, Main Street Districts, Downtowns, Neighborhood Districts, and Central Business Districts (Ozdil, 2008).

2.6 Summary

Understanding of pedestrian realm of any setting starts with the knowledge of form, physical characteristics, attributes and its history. Bazaars have a long history that dates back to centuries before in the East, and mixed-use centers have been recently revived based on traditional qualities of the physical environment of the central city in the West. These retail oriented settings have various qualities but essentially trying to create physical environment to generate pedestrian activity. Such settings are trying to react to their target service area based on the demand created for whether regional, district level or metropolitan. Although mixed-use centers and bazaars might seem different in the first glance the literature review provided here
illustrates varying physical characteristics that are similar. They both seem to benefit from street pattern or networks of path one way or another, retails and buildings are mostly formed aligned with this path and the public pedestrian spaces are desired for each of these setting for them to be activated and better used. Searching for attributes for pedestrian realm in commerce oriented environment can help to better understand the role of the pedestrian realm and the attributes that can generate the future success of such settings. Following chapters is set to provide the research that is necessary to better understand these issues.
CHAPTER 3
METHODOLOGY

3.1 Introduction

This research documents and evaluates the physical make up of the pedestrian realm in mixed-use commercial settings of the East and the West. The study primarily focuses on three acclaimed sites in each setting: Southlake Town Square Legacy Town Center, and West 7th Urban Village and Bazaars of Tabriz, Isfahan, and Kerman. This research is set to better understand the pedestrian environment's role and inform future design challenges these cross-cultural references each appear in similar urban settings.

3.2 Qualitative Approach

The thesis primarily utilizes qualitative methods and case study analysis techniques to answers the questions set forth by the research. The study uses interviews (, 1998; Guba et al 1985), observations at selected sites (Francis and Marcus, 1998; Francis, 2001), as well as map analysis techniques (Wheeler and Koo in 2011).

In-depth interviewing using open-ended questions are the approach of this research. Because interviewing is flexible and dynamic and referred to as non-directive and unstructured, it uses non-standardized and open-ended interviewing (Taylor and Bogdan, 1998, 88). Through in-depth interviewing, a researcher can see things from the informant's point of view because in-depth interviewing is directed towards understanding informants' perspectives regarding their positions, experiences or situations expressed in their own words (Taylor and Bogdan, 1998, 88).
3.3 Study Location

In order to address the questions raised pertaining pedestrian realm in the earlier chapters two case study sites are selected from two different settings. Three cases represented the mixed-use developments/centers of the West and three cases represented the bazaars of the East.

Since North Texas has various mixed use developments typologies, the three that have the highest percentage of retail, according to case studies done by Vision North Texas of the retail in comparison with other uses contribute more evidenced-based data to the subject than the other developments do. Legacy Town Center, Southlake Town Center and West 7th, Fort Worth are the selected case studies used in this research.

For the Eastern case studies, the country of Iran was selected because of the familiarity the author has with the language and the location. This study relies on secondary data for the case studies so the selection of bazaars was through the availability of data. Bazaars Located in the city of Kerman, Tabriz and Isfahan were selected and they are titled by the city names.

3.4 Data Collection Methods

3.4.1 Interviews

Interviews, which are used for the purpose of obtaining the current information, motivations, concerns, and past experiences of the locals, all give insight into the sites’ complexities that would otherwise be unattainable (Lincoln and Guba, 1985). Consequently, the study examines these unique assets by conducting qualitative analyses on three levels: pedestrian, designer, and developer/planner’s point of view, to provide broader and in depth information about each of these settings.
3.4.1.1 Stakeholder Groups

Data triangulation involves using different sources of information in order to increase the validity of a study (Guion et. al, 2011). For this analysis three different groups were chosen because of their different backgrounds and unique ways of thinking the pedestrian realm in each of thes settings. Designers, planners/developers and users were selected for this research, so three different insights are collected.

The benefits of triangulation include an increasing of confidence in the research data, innovative ways of understanding a phenomenon, unique findings, integration of theories, and a clearer understanding of the problem (Thurmond, 2001). These benefits largely result from the diversity and quantity of collected data that can be used for analysis.

One of the primary disadvantages of triangulation is that it can be time-consuming. Collecting more data requires greater planning and organization—resources that are not always available to lead researchers (Thurmond, 2001).

3.4.1.2 Selecting the interviewees

Although ‘developer’ can mean many things depending on the situation, developer entities consistently fall into one of three categories: major property owners, public organizations, or private developers (Peloquin, 1999). The first point of view comes from the planner/developer, who goes through coordinating the activities of a project, especially in mix land-use projects that are more complex. “I see it as folly to conduct design without planning or planning without design” (Turner, 1996, vii). It is suitable to further investigate the designers’ point of view since after all, the analysis is used as design to further inform the designer with the results. Over all, everything is designed and developed for the users benefit. Therefore it is important and beneficial to further investigate the users’ mind set on this matter, and how they would benefit more from the space and its quality.
Designers and developers were asked to participate in the interviews, unlike the randomization approach for interviews with user, the designers were employed based on their familiarity with the case studies. In North Texas settings, designers were selected based on the fact that they either designed the setting or had been part of the design team. For the bazaar setting, the designers were selected based on their work on restoration, a major design project on that site, or on urban renewal projects.

In case of planners or developers the specific criteria would be them having had some kind of experience with the setting. For North Texas studies, the developers themselves were reached through their contact information. In the bazaar case the planner or developer who has been involved in restoration or enhancement of that specific site was selected.

The interviews are structured as open-ended questions to participants who were obtained through probability sampling. Users were selected through random calling by the area code of that area in case of long-distance participants and a random fifth person in case of on-site interview.

3.4.1.3 Interview Design

Interviews are digitally recorded at the time of the interview. The interviews are transcribed and translated by the researcher and then destroyed. All participant identities are protected. Information is collected on the interview respondents and identifying information was not revealed to keep the anonymity of the participants.

An introduction to the study is followed by the interview questions. Interview questions are organized in two parts first part focus on the profile of the interviewee and second part concentrate on the in- In-depth questions about the role, the make-up and the characteristics of pedestrian realm in each setting. he following questions are asked in interviews with users, designers and planner/developers to gain meaningful insights to each of the selected settings.
However, the respondents were probed with more questions for details and specific descriptions of their perspectives (Taylor and Bogdan, 1998) after the planned questions were asked.

Part.1 Interviewee Profile Questions:

1- What is your professional background?
2- What is your educational background?
3- How long have you been involved with this particular setting (Southlake, Legacy, West7, Tabriz bazaar, Isfahan bazaar, or Kerman bazaar)?

Part.2 In-depth Interview questions about the role, the make-up and the characteristics of pedestrian realm each specific case:

1- What are the physical characteristics of the pedestrian spaces in (Southlake, Legacy, West7, Tabriz bazaar, Isfahan bazaar, or Kerman bazaar)?
2- What qualities of (Southlake, Legacy, West7, Tabriz bazaar, Isfahan bazaar, or Kerman bazaar) do you think contribute to the pedestrian traffic?
3- How would you improve the pedestrian environment in (Southlake, Legacy, West7, Tabriz bazaar, Isfahan bazaar, or Kerman bazaar)?
4- Is there a relation between commerce and pedestrian space? Please elaborate in detail.

3.4.2 Case Study

Case studies can be utilized to reveal several kinds of information. While some of this information may be unique to the given project and its context, it may also be useful for advancing knowledge in the profession in general. The elements that a full case study should include are: baseline information, the roles of key participants, process, problem definition and response, program, design, site visit(s) (Francis and Marcus, 1998; Francis, 2001).
3.4.2.1 A Suggested Format for Case Studies

From the range of knowledge that can make up a case study, at least three levels of information are possible in a case study analysis. The first, and simplest, is a project abstract of two to three pages. The second level is a full project case study. With this level there is a general description for the case study but more analysis is conducted in the area of interest, rather than being comprehensive. The third level is a more in depth case study with contextual or specialized internal information included (Francis, 2001). The design of the case studies for this research is a combination of the first and second suggested formats.

3.4.2.2 Case Study Design

Case study analysis typically involves designing the case study, conducting the case study, analyzing data, and disseminating the results. Case studies can be surveyed alone or together for comparison across projects (Yin, 1994).

Information for case studies can be assembled in a variety of ways. It is important to be systematic and consistent in using these methods. Successful case studies incorporate a variety of methods such as site analysis; interviews with designer(s), developer(s), manager(s), and public officials, interviews with users and non-users, and internet searches (Francis 2001). In this study interview with the designer in general and the developer or planner directly involved with the development was selected for the research. In the case of bazaars, because they have no specific developer, the planners who have been involved in restoration or enhancement of these settings were targeted for the interviews. In the case of the mixed-use, since they are more recent and the developers can be approached as informants, they were selected as interviewees. This study intends to incorporate the idea of the designers’ idea familiar with each of these settings contributing to the hypothesis of the research. Their understanding is valuable in the overall conclusion.
3.4.2.3 Aerial photo analysis

Systematic Google earth scans, were conducted to document and assess the physical components of bazaars and mixed-use centers according to the procedures and techniques used by Wheeler and Koo in 2011:

- To catalog current types of built form
- To analyze pattern elements
  - Public spaces and the district
  - Street pattern and connectivity
  - Building format and scale

Google Earth and related services provide easily available, relatively high resolution aerials, maps, and street-view images worldwide (Wheeler et al 2011). It is intended to develop illustrations comparing built landscape forms, primarily aerial photos and figure-ground diagrams of streets.

3.5 Analysis and Evaluation Techniques

This study looked for emerging themes from the answers to the interview questions. Themes identify and respond to the research questions raised at the beginning of this study. These themes also correspond to the literature review of the study. The interviewees are coded according to their role, whether designer (D), planner/developer (P/D) or user (U).

Case Studies and site observations are used as supporting techniques to further explore and/or validate the themes emerged from the interview analysis. Data gathered through both techniques as well from the secondary sources synthesized as a whole to respond to the questions set forth earlier in the research.
3.6 Methodological Significance and Limitation

This research is limited because the sites were not randomly chosen. This study relies on existing secondary data and their availability through accessible sources. The case studies chosen for this research were the one that the author had some familiarity with. The one in Iran were selected based on the accessible data including books and published papers.

In the same line of limitations interviewees are assumed to have the best knowledge about the sites, places and issues raised in this research. Although research made the best effort to access key stakeholders the findings from the interviews are limited to the knowledge, perception, and opinion of the interviewees.

This study is methodologically significant because it attempts to respond to the questions raised by benefiting from multiple data sources. Both interviews and case studies can represent a comprehensive research by itself but combination of both allows researcher to have a stronger validation for the issues attempted to be addressed in this research.

3.7 Summary

For the objective of this research, which is to search for the role of pedestrian realm in commerce oriented setting and identify the physical characteristics and the qualities of the pedestrian realm that contributes to the success of these setting, the interviews and case studies are considered to complement one another. The open-ended interview questions are designed so that they provide more opportunity to include a variety of responses. The responses are analyzed for emerging themes at the end the research questions that was initially associated with this research. Following chapter gives detailed analysis and findings as a result of the research outlined on the earlier chapters.
CHAPTER 4
ANALYSIS AND FINDINGS

4.1 Introduction

This chapter concentrates on the analysis of interviews and the case studies and reports findings. The objective was to answer three questions: (1) the role of the pedestrian realm in bazaars and mixed-use centers, (2) the physical attributes of the pedestrian realm in each setting, and (3) the characteristics of bazaar and mixed-use centers that contribute to the pedestrian realm.

Each of the research questions are associated with one or two of the interview questions. The data collected from the interviews were analyzed to generate common themes or attributes of case studies. These attributes then were compared with generated the information for this research. In this research the common attributes were divided by bazaar or mixed-use setting to let the research make a general comparison of the attributes.

Three case studies in mixed-use centers, Southlake Town Square- Southlake, Legacy Town Center- Plano and West 7th Urban village - Fort Worth as well as three bazaars, Kerman Bazaar-Kerman-Iran, Tabriz Bazaar-Tabriz-Iran, and Isfahan Bazaar-Isfahan-Iran were selected. The primary purpose of each case study was to evaluate, report the physical characteristics observed, studied and obtained through interviews.

4.2 Interview Findings

Eighteen interviews were conducted for the six different settings under review. Thirteen of them were conducted over the phone and five of them conducted in person. For each case designer (D), developer/planner (P/D) and users (U) that had been involved in the setting were
approached. All the interviewees were asked the same questions. The answers have been analyzed for emerging themes.

4.2.1 Interviewee Profiles

For each of the settings interviewees who were involved in the design development or were city officials, or who work in that place were identified. They were found via general sources or informants, or through a published paper or article identified through online sources.

From the six designers, five of them were architects involved in urban design one way or another and one was a landscape architect. The planners and developers covered a wide range of background from geography location and urban planning, to the tourism industry and law. All of the users had at least bachelor’s degree with two out of six studying in college. They were all approached because they were working on those particular settings at the time the interviews were conducted. Two out of six of the interviewees own a shop in one of the studied setting.

The interviewees’ duration of involvement ranged from two months for one of the users to twelve years for one of the developers. If the overall involvement with these types of settings is considered, twenty five years was the maximum.

4.2.2 In-depth Interviews

The purpose of this analysis is to study the physical characteristics and the qualities of the settings. Through physical analysis the researcher gained greater insight by viewing the spatial qualities of the pedestrian realm in each setting. Validation shown in the responses of the interviewees either support or challenge the data.

4.2.2.1 Commerce and pedestrian realm

All the participants think there is a very direct relation between commerce and pedestrian space. It is with commerce that the pedestrian space is activated and without pedestrian space the existence of commerce is doubtful.
P/D1 said, “When people are attracted to those places they would benefit from the retail and the goods that are represented there and they would be more encouraged to buy. This stopping and staying to see the bazaar is what would help the commerce...Every move creates a place that is softer and more aesthetically appealing and interesting. This helps the pedestrian to decide to come to those places more often. We should make the space represent more calmness and security and interest.”

D1 believes “there is a two way connection. It is not like that if you have a decent kind of pedestrian space the probability of commerce happening along the way and being successful is necessarily going to occur. But there are places that have good potential for retail activity but they do not have a good environment for people. They hesitate to go there.” D4 describe it in the same way. “I would say that pedestrians tend to attract commerce more than commerce attracts pedestrians. When you have people there that tends to be a good location for commerce to land. If you just have commerce sitting out in a prairie somewhere, it does not necessarily mean that people are going to go there other than for a short five minute car trip.” U1 stated, “If somebody is going shopping the more they can watch and see the easier it is for them to buy and so they are shopping with an ease of mind.”

D2 believes “In the case of bazaar it was first a pedestrian way. Then gradually the shops have taken shape along the way; and it was elaborated with the courtyards and ‘caravanserai’...Such as another street just in front of Tarbiat Street, which used to be a pedestrian only street. Both sides of the street started to be shops and boutiques all along the way. Instead of going somewhere else and concentrating in a shopping center or a mall they all prefer to stay along the way which attracts pedestrian traffic....The more pedestrians they attract the more they sell. The value of the shop itself and the goods depend on the number of people passing by.” U2 supports this idea and as a user and a shop owner believes, “Making a decision for somebody on foot is easier. But for somebody in the car it is hard to park, get out and buy.
For somebody on foot shopping is something that they do on their way going somewhere else. So they would get the things they need in an easier way."

D3: “Definitely there is a relation. They may have different effects depending on the region they are responding to. And basically the scale of commerce can be different. But the thing that is for sure is they are affecting each other.”

U3 prefers the pedestrian space be developed so the commerce that already exists there prospers. “Commerce is happening in bazaar, and it is happening a lot, at least in Isfahan Bazaar. Many, many kinds of commerce start from here. I assure you, if the architecture and environment supports that, it will be the best attraction. It is important to note that bazaars are competing against very modernized and contemporary shopping centers with all the facilities. But it is still out-competing them in terms of attracting people. We who are going there every day have never gotten tired of the environment. Tourists or people come here once a week, or month.” He believes the reason that bazaars are successful in competing with other modern shopping centers is the pedestrian environment that is provided there.

P/D4 as a developer believes the market should come first, “We have a saying here that great projects start with a market. You really can’t force a market if a market does not exist. so I think the market absolutely comes first and then the reality is we all have choices as to where we go and all too often we are going to have three or four choices within a reasonable distance from wherever we live or work and especially in an area like Dallas-Fort Worth.... If you get (things to) line up right, the market is going to want to come. But, if you (have) a compelling place around the lineup then I think it becomes a powerful draw because now people are going both because they are getting their needs met, but also because they are going to a place that makes them feel good and makes them relax.” Intermixed with this, they are providing a good pedestrian environment to survive.
P/D2 believes even moderate pedestrian spaces with successful commerce can survive the competition. “I say it is effective if we have a good pedestrian space. But, for example in Tabriz Bazaar, there are places that do not have a desired pedestrian space but at the same time it is one of the more active and vibrant places. That is due to the commercial prosperity. But in Isfahan Bazaar, with all the improvement and paved areas there is still a lack of commerce. Some main accesses are still not that vibrant. That means improvement of physical appearance did not really help the economic situation. But I would say it should be something in the middle. You should see both at the same time. The commerce should be well accepted and the pedestrian quality should be well presented at the same time.”

On the commerce side P/D6 thinks the “spaces can be activated in many different ways. They can either be programmed, and that does not necessarily have to be commerce. It could be performance, but in general in streetscape, it is commerce that makes the street perform.” D5 believes the commerce has to be recruited, which makes it most essential for the pedestrian environment to happen. Commerce “is the biggest attractor, by the frontages, it is the biggest attractor, it’s what activates the edges that I spoke about in the beginning....Best pedestrian space... is not enough. You cannot attract commerce; you have to recruit commerce. Commerce is not coming, it is recruited. So you have to recruit commerce, because commerce attracts pedestrians.”

Believing in the coexistence of both, P/D3 defines it as a “very straight direct relation. They coexist. If one is not there the other won’t exist. You cannot have a great pedestrian space with nothing to do there. The commerce won’t happen if you do not have people on foot. They have to get out of the car to walk around and buy goods. If not, they won’t bother buying more than they need to stay alive.” Likewise, D6 believes “as planners we like to think that space is everything. Well if retail is inappropriate, if it’s not merchandized carefully, that basically won’t work. You’ve got to have the right mix for the right target. That developer is targeting a certain
income level, you know certain profile. If they nail that, then you have a nice mesh of commerce and pedestrian space.”

P/D5 summarizes this relation in a very rational way. “There are multiple relations. On just the front side of things I would say that the more successful the commerce, the more successful the amount of pedestrian traffic in front of the commerce trying to get to where the commerce is occurring, I think of the commerce as the anchor or the activity generator. Then the pedestrian space is the conduit to allow the pedestrians to get to where that commerce occurs. So you conventionally design a place in the pedestrian space so that it can allow outdoor dining to occur. If the commerce is a restaurant, allow seating and music and other kinds of pedestrian amenities in front of the commerce. If it is pure retail, folks that are waiting on someone shopping are waiting in a pleasant environment; or the folks shopping can just take a rest and decide what they are going to do next. And so, that it becomes a more pleasant environment. Finally, just the overall image and identity that's set by the pedestrian space carries over to the commerce and starts to help to brand the environment of that particular commercial tenant. But I think it is a symbiotic relationship.”

- **Type of commerce**

Although most of the participants had a great emphasis on the type of commerce that is occurring along the pedestrian realm influencing the existence of pedestrian activity, some of them only mentioned the type of commerce. Identifying food related commerce especially restaurants, coffee shops, and such, as the most successful of all, was emphasized by the planners, designers, and users.

Explaining about the relation to the overall scale of the setting D3 argues if the type of commerce is responding to what the setting is intended for it will work. “In the new neighborhood that is designed, you see they put a pedestrian axis and most of the service and commercial facilities are aligned on that path. This is at the neighborhood scale. The bazaar on the other hand is responding to the city scale and it should provide city scale facilities and
commercial activities for the users. These commercial areas bring other complexes along their way so they can respond better to the users. It would not only be just a place to shop, it would be a place for social interaction, cultural centers, and other facilities. Now recreational centers are located side by side the commercial centers. This is happening in many cities. They both prosper. Although this is independent of merchandising, some things like different brands of different goods, is also happening on a bigger scale."

Explaining more about the type of commercial setting that helps generate pedestrian activity D6 explains about the Loop quality of West 7th. "There is one thing that happens in West 7th. It has a classic retail loop where you can walk down one side of the street that has retail, see retail across the way, get to the end, come back on the other side, So you can loop, which I mean it is a very successful mode of retailing. You see it in small towns. You see it used very effectively for one or two blocks in mid-cities. So, if it’s got the loop going on and you know the side walk is adequate. It’s not too broad, broad enough, with the parallel spaces and the moving lane separate from the curbs. So I think that is fundamentally commerce. Well if you just have retail and merchandize on one side that’s far less successful. So again, it’s two sided. A loop helps."

At the end, emphasizing the type of commerce that is affecting the activity, P/D6 explains, “However the type of commerce is really important. Because you have activities on the ground floor that don’t produce a lot of pedestrian traffic like a law office or something of that nature, that is not having the trade coming in and out of the door. Then that space becomes dead to some degree. But you can overcome it if you have a lot of transparency on the ground floor. At least some activity on the inside. When you think of a linear space, and activate a linear space like you would on the main street, or a number of streets in downtown or on West 7th, I think of that like Hansel and Gretel. They are following the breadcrumbs, the store fronts are the bread crumbs that lead you down a main street, and if you do not have them, you are not going to be interested in moving through that space as much as you would be if there was activity."
Believing that the better pedestrian environment influences the commerce to be vibrant, P/D1 emphasizes certain types of commerce by saying that “it [pedestrian environment] would not help all sorts of commerce. It would only help for the goods that are lighter such as shoes, bags, and clothes which are the everyday needs of people, not the heavier goods or more specialized ones.”

Getting to more specific type of commerce which is food places, separating them from all other commercial activities that can happen along a pedestrian way, D5 believes food places are the single most attractive type of commerce of all. “Because you return more often….I would say large shops, I would say competent. I think a lot of store, but (also) really competent. Then they go out of business. I think that destination commerce is better than drive by commerce. You know people go to it instead of just finding it conveniently on the way. So (comparing) destination commerce and drive by commerce, I think destination commerce is much better.”

**Density**

It is about the quality that surrounds the environment. P/D5 elaborates on how these spaces can be successful with another important factor supporting them. “There are many, many, many examples of development where they took all of the interest that you see in areas in Europe and the Middle East as I mentioned before that are completely pedestrian oriented. There are no cars. And then they try and transfer that into North America which is primarily a vehicular environment and many of those places in the 60’s and 70’s failed miserably. They did not fail because its pedestrian space provided access to commercial space. They did not fail because that’s not a good idea. They failed because they were improperly positioned, and didn’t understand what else is required to make a purely pedestrian environment work. That has to do with immense density and then the pedestrian area takes prominence. Because it is the one and the only well-spring from urbanity that exists within that city fabric they are going there to relax. While they are relaxing there are also commercial activities and commerce occurring around them and they can take advantage of that. There is just not that density around it to
make it work. Now if somebody came in today and said let's shut Legacy’s main street down and let's redesign it. Let's make it purely a pedestrian environment, it probably could work today because it's already made an impact on the market place, and people know what it is and they know how to access. They would go, come and walk around but in the late 90's when it was under construction, and it was an unproven thing, it would not have worked.”

4.2.2.2 Physical Settings Commerce Oriented Setting

- Activity watching

  **Bazaars:** Watching people do their shopping or interacting is considered as one of the interest of the bazaar. As P/D1 mentioned, “It is like a museum or an exhibition you want to visit.” Or he mentioned, “it is similar to when you are watching television and you can change the channel whenever you want to and you never get tired.”

  P/D1 talks about “…The diversity of artistic work and the variety of space that are there, and the flooring of the bazaar on one side and social activities displaying the existence of different strata of people, they all convert the bazaar to an exhibition that you constantly want to visit.” D1’s emphasis is on people: “You see people, you see people who are interacting in all sort of manner. “The shops are small and most of the connections you have with the shopkeeper is happening in the main path itself. “When you are passing by and seeing the connection and the relation between customer and the shopkeeper, it is by itself one of the interests of bazaar… an experience by itself, when you see how people are trading, which you would lose something if you send them inside the shops.”

  P/D3 mentions ‘watching’ as an important quality of the pedestrian realm in Isfahan bazaar. “It is designed to provide window shopping opportunities and using the facilities also for shopping itself.”

  Watching people and the environment is stated here to suggest that some people do not want to shop in that setting but would rather watch and enjoy the environment. D2 declared
“In this new generation we don’t see people doing their shopping there [Tabriz bazaar]. If they go there they go to watch and enjoy the environment.”

**Mixed-use Centers:** People appreciate a place to sit and watch other people and the activities that are happening around them. P/D6 said, “There is never enough space for people to sit and enjoy, and watch, that too activates the space.”

D4, speaking as a designer, “The more people that are there, the more people come. A lot of people just like to come watch other people. Then they do sort of secondary shopping. Other people are using it like a mall when they are doing primary shopping.”

- **Architecture**

  **Bazaar:** Although there were several participants talking about the architecture of bazaar but they categorized it as the quality that provides the variety of space. U1 “Some come mostly for the wholesale shopping, some are tourists that like to walk and enjoy the architecture... Some come to renew their home’s appliance, there are all sort of things that makes bazaar so popular.” Different uses being placed along the pathways of bazaar, the diversity of it and the fact that it can respond to everyday life of people, makes it a good place for people to fulfill their needs in one stop and stay longer.

  **Mixed-use Center:** D4, speaking as a designer, “The good architecture that is pleasing is historic in character, that’s got a lot of detail, which is not just sort of a stucco box that has nothing that’s interesting visually.” This consideration, that architecture influences the overall image of setting points out the distinctive character offered by architecture but it was mentioned, that style does not necessarily have any significant impact on pedestrian realm. As in West 7th, which represents a unique type of architecture, P/D6 discusses that, “I think the architecture is not as relevant as most people think, because you can look at towns like Southlake Town Center and see very traditional architecture that also frames the space. This influence is seen again at West 7th. Contemporary architecture that does the same thing, it frames the space.” The architecture should respond to the overall character of the design and be very thorough
about how it is shaping the overall look of the environment. Apart from giving a sense of enclosure, the style does not play an important role in the quality of a pedestrian realm.

- **Atmosphere**

  **Mixed-use Centers:** Ultimately, it is all about creating the atmosphere, and all three participants agree on the fact that Southlake was successful in creating an atmosphere to draw people to come and enjoy. P/D4 brings up an example that supports the idea by drawing a picture of an employee working in Southlake, “At their previous place of employment they would go to their office and then they would go home, but they never really got to see their family during the day. Now they are working at Southlake Town Square and get a call from their spouse and have their children with them stopping by at the shops or getting their Jumbo Juice, and they can say, “Hey I’m in town square,” and in five minutes they can run down, hug the spouse, give them a kiss, hug the kids, tell them they love them, ask ‘How was their day at school?’ and get back to work,… I think there is that human element to an environment like this that makes it so compelling for many people.”

  U4 also mentioned “It is suburban but there is a quality of city life,” so bringing the atmosphere that people desire the most is one of the strengths that a pedestrian realm creates. The fact that Southlake is a town square in a suburban area has been stated by the participants, but the fact that it is trying to remain a small town of Texas, although trying to be modern and keep up with modern life, is another important factor. As P/D4 stated “the design guidelines of the Southlake Town Square comes from studies of many small and medium sized American towns”

  On the other hand, the qualities provided in West 7th do not look that different from the nearby downtown area. It is the feel that people use to have when they were walking down the main street of downtowns that people want to experience again. This has been mentioned in P/D6’s response. “They are traditional, really no different than downtown…..the old downtown
main street.” D6 refers to this same kind of area as ‘uptown’ once its establishment is completed.

The general overview of comments reveals the fact that people enjoy the old downtown or traditional town center atmosphere. Even if it has uptown qualities, creating an atmosphere that represents the idea that it is possible for people to experience a by-gone era is critical. People enjoy having a ‘city life’ quality in a suburban area like Southlake.

- Clarity

**Mixed-use Centers:** From a user point of view it still is not clear where everything is located and it is partly because of the uses happening in different levels and not exactly on the streets. But the streets themselves help to introduce what to expect. D6 “What is important is that part [street frontage] of it is organized so that public way finding is pretty simple. It is fairly simple in West 7th.” As expressed by a user in West 7th who even after a year living there does not see the place clearly enough. When she was asked about a suggestion for improvement she mentioned. “Definitely I need a restaurant guide because I do not even know what is around here.” She is still confused by a lack of clarity in this mixed-use center of West7th.

- Sense of comfort

**Bazaar:** There are two major factors that are contributing to the sense of comfort in the bazaars. One is the protection from climate conditions and the other is provided by the pedestrian being protected from the movement of motor vehicles.

The harsh climate condition has transformed the main streets covered in some parts, which affects the comfort of the people. Also, they can still get natural light at the same time. Every once in a while the courtyards are exposed to climate conditions. P/D1 describes it: “The covered bazaar can help to provide a natural shelter that makes it calm and relaxed for the pedestrians to move through the covered path. That means in summer when it is hot everywhere else, the main streets of bazaars are in shade and so cooler and in winter it is the other way around. So you see that naturally it is a well-adapted environment that a person
would rather walk in the bazaar.” D1 also states it as an important factor. “This beautiful space that is both covered and both lightened is the best solution in a hot and arid climate like Kerman. You can go there any time of the day, which is absolutely perfect. For example in Kerman at 2:00 pm you cannot go and walk on the streets just like that.”

The opposite condition in Tabriz also came up with the same solution to bring comfort as P/D2 explains. “One is definitely security and the comfort in different climates especially in Tabriz bazaar. Both in bazaar and even other spaces this covered main street quality contributes to people’s a presence around the clock, any time of the day or night. “D2 explains the same quality, “Since the climate of Tabriz has always been cold, so all the main streets (raste) have domes on them and covers made of brick... so because of the cold climate it is providing a safe area for the pedestrian. It is cooler in summer because of its height. It would take a while for it to warm up. And in winter, because of its closeness, the cold weather does not really get into the space.” P/D3 describes it as “one of the best qualities of bazaar in cold and hot seasons is that since it is covered and the walls are so thick with masonry material, the transmission of heat takes time to happen so there is a big different between bazaar’s indoor and outside temperature. That makes it easier for people to walk in bazaar.”

Beside safety, comfort is another essential need to human beings and this quality is much more needed for pedestrian spaces. This element should be provided by the environment, not the visitors to the space. Covered pathways provide shade and comfortable temperature for the pedestrians. This distinguishes them from other pedestrian environments. The right temperature and shade are two essential elements for the sense of comfort in pedestrian realm.

Mixed-use Centers: A common theme that was stated by both the designer and the developer of Southlake Town Center was the focus on creating a sense of comfort for the pedestrian. Whether it is the width of the sidewalks to accommodate outdoor seating or it is the accessibility by both automobiles and pedestrians, attention to comfort leads the design.
D4 as a designer states: “Shade, the ability to sit down at a restaurant inside or outside to get something to drink; the width of sidewalks being the most important. A fifteen to twenty foot sidewalk width allows for a small restaurant seating area. Vendor and retail come out on the sidewalk and yet the pedestrian can still pass by easily.” P/D4 as a member of the developers group stated, “The streets are designed so that it's readily accessible by the automobile and it's also readable at a driver level.”

• Design Details

Bazaar: P/D1 talks about the details of the setting that makes it even more diverse. “There is diversity in the space and function and activity plus the color, scent and sound that is coming from different shops like spice shops.” “The other important thing is the artistic and aesthetic qualities. Artistic qualities such as the shape and form of the arches and domes or the tiled ceilings and patterns are there on the columns and the walls.” P/D1suggestes details for enhancing the bazaar as well as “predicting present needs of people. For example a water fountain or seating area. One of the problems of Kerman bazaar is unfortunately we do not have anywhere to sit. It would be better to provide spaces for travelers and people to stop and sit....the more we encourage people to stop and sit, intentionally providing places that makes people stop and stay for a longer time which can help them to enjoy more as well as provide a suitable area for them to rest.” So if details are provided for pedestrians on the move as well as for static spaces then as discussed in the literature review, ninety percent of the pedestrian activities should be in staying mode (Gehl, 1986). “Overall, things that are impediments for the presence and movement of people should be reduced. Appearance improvement should be considered in bazaar, with more provision of green space with water features and seating areas, such as provided by coffee shops and cafés as well as urban furniture.”

On the other hand, D2 as a designer explains the details have different purposes. “The domes are eye catching elements giving people a sense of direction. For example when you see a high ceiling with a higher kind of dome you expect something different to occur there.
When there is an intersection you get to choose where you want to go. Special buildings or activities are emphasized by details." Elements such as these can be used to provide better direction and clarify the space.

The details are the main attraction for some people, in which case they should be unique and specific to the setting, UI believes "bazaar has many different courtyards and halls with the same architecture of the old times with tiles and details. Many are coming to see those qualities."

**Mixed-use Centers:** many different elements of these settings have been identified by users to be important for pedestrian activity. P/D5 identifies "the dimension from the sidewalk to the building and how to allow outdoor dining, where to put trash containers and where to plan the entrance to the building. The office would need more privacy than the retail and how to coordinate all of that? ...This comes down to planters, special paving, notches and furniture allowing for outdoor dining."

When it comes to users, the attention to details is prominent, U5 defines the physical characteristics that attract pedestrians such as "benches, lots of trash cans, open shop doors that invite consumers in... even lights in certain areas of Shops at Legacy"

As P/D4 stated, when asked about what changes could improve the pedestrian realm, "Edit that landscape pallet and look at the slightly different approach to certain streets." He also mentioned that "the individual building and store fronts... and we routinely work with our retailers to dress up store fronts whether it's adding pots and plants outside the front door or changing details of the store front. Whether it is a painting detail or an awning detail, even, you know, addressing the signage programs. Signage itself can be a critical part of a streetscape and so we are always looking at the opportunities to address the sign detail itself."

U4 believes that it is the details that are bringing in the people. "You know if you are not buying anything, it is still nice to walk around because there is nice scenery, the pillars and, the fountains, so it brings in people."
D5 describes the details of the design to be very important such as the width of the sidewalk being a couple of feet more. “That sidewalk has to be surprisingly wide 18-20-24 feet.” He also mentions lighting. “I would say that lighting is important at night.” but as far as other detailing, D5 does not feel that it changes the overall environment. “I do not think surface like paving is particularly important. The best places I know are not [elaborated paving surfaces]. There’s this really nice concrete, not bad concrete, but just concrete.”

In the answer to the question of how would you improve the space, D mentions, “I would simplify it. I think the urban designer put a lot of junk on it. If I redesigned it I would clear it up, like some of these planters, the different levels (have too much) junk. If that’s cleared, that (would) help people. I think that’s the main critique that I would have.” And following the same argument in West 7th P/D6 thinks “traditionally we overcomplicate our public spaces with too many design details. I think they just need to be really basic. But West 7th is good because it has trees; you get some shade in the summer when it’s hot. To have some places to sit, (but) I think they can use more personally” and he also critiques the design detail: “I think in West 7th the sidewalk has areas where there is two different levels and I think that complicates the space visually and I think it complicates it for the user. My personal preferences for the space to be level and not have these multiple grades that are going on.”

- **Diversity of people**

  **Bazaars:** Along with the other diversities, people with different background and diverse societies and cultures are another important factor that can be seen in the pedestrian realms of the Kerman bazaars.

  P/D1 mentioned, “More over the diversity of society, you see different people in bazaar like travellers, strangers, Afghans, people from countryside, all types of people.”

- **Diversity of uses**
**Bazaars:** The variety of uses or in other words, mix of uses, established in this bazaar play an important role for the pedestrian realm. It is the quality that attracts people to the area and what keeps them for a long period of time. This can also imply the variety of activities that are happening in bazaars.

P/D1 describes it as, “The other thing is the variety of uses, that means different functions and activities which are happening in the bazaar. These different activities are partially vending, partly temporary retailers, partly the gatherings of people around the public shows or the presenters. Some parts are historic or touristic centers..., which people come to visit.” Also he explained the variety of uses as “the wide diversity of functions. These uses are commercial as well as social. Also services such as those offered by a library are influential. It is both retail and production. Some parts of bazaar may manufacture carpet or handy crafts.” D1 emphasize that some functions that are there that have their own customers. Like it is right that there are so many modern coffee shops all over town, but the coffee houses in bazaar have their own attraction that young people like so they go and hang out there.” P/D2 “It is more a place for cultural and social exchange that is why many of the traditional ceremonies and celebrations are happening in bazaars. That is one reason that makes the bazaar become part of the urban fabric.”

P/D3, remarked that it is “a place which had all sort of urban facilities. T means if you close the entrances of the bazaar at night, there were all types of things that a person would need to live (and cannot wait until morning to buy).” D3 identifies two major uses for the pedestrian accesses in bazaar to make it successful. He Identifies commerce based uses and service based uses. His description of service uses includes a mix of uses, which are hotel, restaurants, and cultural exhibitions. However, ultimately where each use is located plays a very important role in bazaar's diversity. D3 explains, “Locating the service based elements that I mentioned, if they are scattered in the city fabric with no organization that won’t help the pedestrian movement that much.”
Mixed-use Centers: P/D4 believes, “We are living in a world where (we are) more and more trying to get efficient with our lives, but at the same time enjoy the time that we spend. For Southlake Town Square, the key to its continued success is the mix of uses there. It is obviously a shopping environment with the addition of movie theatre and a hotel, a series of restaurants … places to sit down, eat, drink, and enjoy a conversation with friends. Those are the uses that people are most familiar with…There’s another component of services in the environment most commonly found on the second floor of the two story buildings where we have space that’s occupied by doctors, dentists, lawyer, accountants, financial services firms. The whole series of uses that allow people to multitask while they are here. ”P/D5 defines this as the most influential quality. “I would say the biggest contributor of Legacy that contributes to pedestrian activity would be the mix of uses that exists.” and D5 believes it is how the mix works together, “The mix of uses has to be sensible.” The kind of use and the organization of the uses are important factors that draw pedestrians to the environment. He believes “the other thing is retail, particularly restaurants. You know, if I had fifteen shops then I would make ten of them restaurants, because people go back more often to them, I mean food places not restaurants, food places.”

P/D5 notes that another design element of the pedestrian realm is, “Thinking about where different uses (should be located) to get people from one area to the other and then focus on where the people would want their parking if the streets could be closed down for festivals.”

• Edges

Mixed-use Centers: Gehl’s (1986) identifies ‘soft edges’ as the most important factor for pedestrian spaces regarding the commercial setting. The edges of the pedestrian realm as the main attractor of the pedestrian activity is discussed by both D5 and P/D5, informing that it is all about the store fronts and how activity is triggered by retail.
P/D5 explains the process. “Once the goals are laid out then we go for the space ‘edges’ formed by the building. What is the best way to accommodate everything I just said before, first of all thinking about the space between building to building across the street environment and have articulate that to be something of having visual interest.” D5 elaborates on this. “Pedestrians are supported by what happens at the edge of the space. You can make a beautiful park, a beautiful square, a beautiful street but it is the edge which is called the frontage. Does it not speed the energy, does it not interact with the people? If not, then it won’t work. So the first thing is the edge, the frontage, the function of the frontage. By the way, the frontage is the first floor that meets the public realm.” Therefore the store front or the edges of the setting should be design to be interactive with pedestrian, and create activity and energy.

- **Demographic preference**

  **Bazaar:** P/D1 mentioned gender preferences which can bring up interesting matters. With more than twenty years of experience in Kerman bazaar he describes a phenomenon of gender preference there and he relates it to the safety and security of bazaar, “If we get statistics of the people who are passing through the covered portion of the bazaar maybe eighty percent or at least seventy percent are families. Men as an individual are less common to go through the bazaar.”

  D2 also has seen a pattern of gender preference in bazaar. “There is another access in front of bazaar called Tarbiat Street which is now selling leather bags and shoes. This street is restricted to cars and it has been built in recent years. It is full of people, especially women.”

- **History**

  **Bazaar:** Another factor that is unique only in bazaars is its history. The fact that it has been under construction and modification throughout history is significant to users. Pedestrian
experiences of different sections of bazaar with each one’s unique historical significance is often enhanced by the different architectural styles presented.

P/D1 describes “moving through the bazaar is moving through history of that place. … Each part of bazaar has been established in a different period of time. For example, a part is for Qajar period, a part is for Zandieh era, a part is for Safavid era with different type of architecture, and so on. This variety of spaces seen from an historic view that produced a different shape and form draws a person as a pedestrian to follow it.”

- **Human scale**

  **Bazaar:** P/D2 describes human scale in a different format. He sees it as geometry which is defined as the relation of forms. “The geometry that is used in these spaces… made many elements to be human scale elements.”

  **Mixed-use Centers:** The other fact that not only the designers but also the developers are aware of and see as an important factor is human scale. The fact the people need to be in an enclosed space and the combination of streets and buildings should provide that type of enclosure for people to feel comfortable in those space. D4 as a designer states, it is “about the proportion of the street being 2:1 or 1:1 with two story buildings as minimum height. This creates more of a room, a more comfortable space to be in.” P/D4 describes, “It was set up with a traditional street and blocks pattern. It is designed at a human scale so that the sidewalk and streetscape environment are understandable at a pedestrian scale.”

  The sense of enclosure and human scale is an important factor mentioned by both D6 and P/D6. They believe “the sense of enclosure, the height of the building in relation to the public right of way is really important.” D6 emphasize, “That street has a certain section so that building face to building face has theoretically has a comfort distance.”
• Parking

Mixed-use Centers: Since it is a destination environment, it has to accommodate parking places. The location of the garages located in the middle of the blocks contributes to the pedestrian traffic. As P/D5 described, “We’ve located the garages such that the folks go and park, they go out into the streetscape, and that what generates the pedestrian activity. This, of course, is really different than what you see elsewhere where you have a strip shopping center with the same kind of restaurant but you’ve got a parking in front and the only pedestrian activity is to get from the car to the front door. They only interaction of pedestrians occurs within the building or the restaurant itself. In this theme we purposely did not do that. We located the parking and the garage in the middle of the of the block so that people would walk out to the streets and then make their decision of where they would go. This way they use the sidewalks to get to the restaurant.”

D5 thinks, “I would say that the parking has to be very easy to use. And I would also say that you need to protect the pedestrian by a wall of parallel parking on the street because people are not going to tolerate the perception of danger as cars pass by.”

• Pedestrian connectivity

Bazaar: The ability to physically access the bazaar is provided by different secondary pathways stemming from the neighborhood. The fact that Kerman bazaar is established in north-south axes and east-west axes makes it easier for pathways to connect from all directions.

D1 explain it as, “It has a very straight kind of East-West access and North-South access. The best thing about it, is everybody can access it easily. That means from all of the streets around you can either access one of the main streets, all of which have some kind of access to the bazaar.”
Access is the foundation of the bazaar. Being restricted to cars is a key attribute of its pedestrian realm. D2 describe is as: “Everything about Tabriz bazaar is for pedestrians... The (accesses) are two parallel lines that are going north-south and one diagonal which is east-west..... This is mainly designed for pedestrian movement and the original of Tabriz bazaar is mostly ‘caravanserai’ kind of systems” which means it has a courtyard in the middle and shops are aligned on the edges. “So if we look at it fundamentally you see there are the courtyards with two main streets and some secondary pathways that are connected to the neighborhood”

But at the same time, he thinks that the accesses are no longer than they should be in order to keep it coherent for the pedestrian. “In Tabriz, the longer it gets the width stays the same... making its integration lower. That can cause your perception of the space to be much less because it is long, you do not see the end and you have no idea of what is happening.”

**Mixed-use Centers:** Although streets are an integral component of every project, creating a street that pedestrians enjoy walking along is an important factor. Street enhancement is also key, as it was mentioned by a user of Southlake Town Center. She expressed that she would not want to walk down a street without a sidewalk. She would not feel safe and comfortable doing that.

P/D4 believes “making better streets make a better pedestrian experience.” D5 believes the fact that Legacy Town Center has shops located along the way, making it more successful. He mentions, “I do not think that squares work at all. I think that streets need two sides; at least it’s easier... I think the square is to visit and it’s to look at.”

“The fact that everything is happening behind the blocks and away from the street is an important feature of West 7th. The store fronts toward 7th street are showing signs that activity is happening but does not reveal it completely.” As it was mentioned by D6 it has an inward looking character. “It is an inward looking project so the West 7th frontage is not made for as large a crowd as the internal street is.”
• **Public space**

**Bazaar:** Mentioning that the bazaar was among the last in hierarchy of the spaces in the cities, P/D1 indicates the bazaar itself as a public space; “which was the biggest square and public space of that time and from there you would enter the bazaar.”

**Mixed-use Centers:** The amount and the quality of open space is an important factor, it helps people to enjoy nature and the environment. They are coming out of their homes to be outside and the amount of open space created in Southlake seems to be satisfying for the people who are using it. The observation study reveals the fact that the open space in Southlake is used and treasured by the people coming to this setting. P/D4 talks about the thoughts that have been given to this as an important factor. “The proportion of open space for parks and gathering places meet a bench mark of ten percent.” ...At the end of the day great public places are not necessarily driven by any particular scale. It’s driven by an understanding of how they are being used, how they relate to the overall environment. It was that sort of analysis and understanding of the actual creation of the open space that exists here today.”

A very important part of a pedestrian realm is public space and D6 describes the need of it as he mentions the need of owning the place by the people who are coming and enjoying it, “If you think about west 7th there really aren’t that many spaces for people just to do something and hang out. It is pretty much that it is formal and structured. Most people are just going ... to show up, there is not a space that the general public thinks they own, and they go to.”

• **Merchandising**

**Bazaars:** The commerce itself attracts pedestrians to come to these places, and the fact that bazaar plays an important commercial role in the city draws shoppers. D2 mentions, “This bazaar is still a very important factor of the economy of Tabriz and the region. It has not yet lost its importance.....So if somebody is in a carpet business, they have to have a shop in
bazaar as well as at other branches, in other parts of the city. Bazaar has kept its character as the major trading center of the city.

**Mixed-use Centers:** P/D5 believes the first and the most important is whether it is generating more value. “The primary task has to do with real estate interest and design just to make money, transactions of land, and you know, vending…a really tremendous amount of land use planning that can (make it) easily marketed and sold.”

D6 mentioned merchandizing as an important factor as it makes all the difference for who the users will be. “The key there is, and this (applies to) any (commercial place), for all the ordinary commerce or retail environment - is how it is merchandized … They've got a fairly good selection. A variety of all stores that have hit the market well and the other important piece is the restaurants…so that becomes the magnet that gets people to drive to West 7th. That’s how it is ‘merchandized.’"

- **Relation to the city fabric**

  **Bazaar:** The pedestrian realm in order to be well read and used should correspond to the overall urban fabric. How it is knitted to the city fabric can be the key to success or failure of that pedestrian space.

  D3 describes the relation of bazaar’s main street to the overall city fabric. “One of the characteristics of the city of Isfahan is that this city is organized on two very distinct axes. One is its natural axis which is Zayande-rood River. And the other is its main boulevard, Charbagh….The main street of the bazaar meets the main axis of the city. The arteries and accesses that are the main axes in between the districts and the small bazaar (bazarche) are located along that axis. So we have the bazaar, then the pathways branching from the main street toward the districts, and then we have these tertiary routes…. The functional elements that are matched with the structural elements of the traditional city help the traffic of the pedestrian. This helps the existence of the pedestrian.”
P/D2 comments the same way but he describes it as an axis that is knitted to the urban fabric. It reads like the open spaces and the streets we see in the urban fabric. “The bazaar is itself a pedestrian space….The urban fabric is defined as a movement axis for pedestrians to reach the open spaces. If you look at an extensive plan of the bazaar they are ‘sarais, caravanserais, timce,’ identifiers of open space, and the main accesses are the main streets”.

D2 views it in a different way. “The main accesses of bazaar are still connecting the two parts of the river and the city so these can be used in the every-day life of the people if connected well to the rest of the district and the city…. When we say pedestrian pathways are important you can see it on the other side of Mehran River. For example, the connection of the bazaar to the northern part of the river is a bridge”.

**Mixed-use Centers:** D5 spoke during the interview about the location of the center to the general urban fabric and how it has to be seen. Being located in a busier area, “the second thing is that the street pretty much has to be on a thoroughfare that goes somewhere. So you have to have a big road or it has to be near an intersection that has traffic. “Also what is surrounding it in the overall fabric is an important issue.” I think being a job rich environment, an office park, helps.” It has to be seen, and on the way of the everyday transportation route of the people.

Being surrounded by vacant land, it is hard for West 7th to be successful on its own, and the pedestrian feels that. When the nice environment gets to an end where there is not enough to do and nothing interesting to be drawn to, this makes it an isolated island. D6 describes this. “It is an island …, from other neighborhoods, you are not really likely to walk there, even though there is a single family a block away on the north side, it has nothing to knit back into. So it is more like a destination for most people except for the selected few that are over there. So that is a kind of weakness that happens in that.”
Security and safety

Bazaar: It is the restriction of cars from getting into the bazaar that makes it safe and secure for the pedestrian to pass through liberally and freely. P/D1 explains, “The bazaar with its safe environment from the transportation point of view provides a comfortable place for the passenger. That is why everybody loves to pass through bazaar even when they just want to access the other part of the district, especially the families and women.”

The pedestrian realm responds to safety and security. The more that people feel safe and secure from all kinds of risks that may threaten their movement the more it encourages them to use that environment. One of these threats is automobiles. P/D3 associates calmness with being safe. The absence of automobiles “provides security and safety. Bazaar in a real sense is calm and out of danger. Somebody who is walking can wander without being afraid of being hit by anything from behind or the side.” U2 describes one of the streets as being popular because, “For example in Tarbiat St, on the other side of bazaar, it is all paved and no cars are allowed in that area. So, if you make it comfortable for people to come it can help the business as well.”

D2 describes how the presence of cars discourages the pedestrian traffic to move on, “The only problem is that when you are on foot and coming from these pedestrian spaces and you encounter traffic, which is all buses and cars with lots of pollution and unsafe activity, you are discouraged from continuing your path.”

Mixed-use Centers: wide sidewalks arrange a safe and secure environment for pedestrian in Mixed-use centers. However, on the other hand, one of the informants brings up a good pedestrian realm example that has proven to be offering a very active pedestrian environment.

P/D5 refers to The Grove in West Hollywood. “The grove is the most successful exterior shopping in a town center in the country and draws more people than Disneyland. What he [the designer] chose to do there was he has a street environment like Legacy but there are no cars.
He has large garages and an urban kind of retail mixed-use environment that is situated on the street. A trolley car runs along the route, but it is entirely a pedestrian environment and I would say if you are looking for something that generates pedestrian activity that is the most successful type of project. It is all pedestrian and of course as pedestrians walk around they are not worried about parking or any of that when they are hanging around or walking."

D5 mentions the desired environment for pedestrians. "It has to be safe." Having parallel parking as a wall to protect the pedestrians from any possible danger (is helpful).

- **Sequential quality**

  **Bazaar:** It is important to be able to transit to the spaces with knowingly shifting from a private space to a public space. It is what experienced in the residential neighborhood in the bazaar district, although it has been cut off with the new vehicular transportation routes.

  P/D1 describes this sequential experience. “People from cal-de-sac and alleys by their houses would come to the alleys and from there to the streets, then to the square which was the biggest square and public space of that time. From there they would enter bazaar. So bazaar had the highest rank of the urban sequential movement because of the variety of functions and the bigger space it had.” It acted as a sequential path that lead people through their environment. Separate identification elements occurred along each pathway.

  D3 identifies the secondary pathways of the bazaar as "main access between districts" so “this secondary pathway branches out into the district and neighborhood itself.” Because the main structure of the city is established based on neighborhood or district structure, it continues to keep that structure in contrast with the other cities of similar structure. "So we have a network of access paths between the districts which have the potential to be converted to a pedestrian axis with some traffic limitation." That is how he identifies the sequential quality that exists in the city fabric enabling the pedestrian routes to work and draw people from the surrounding area.
P/D1 describes it as, “Exactly like the veins of the body the further we get from the heart the more the veins narrow. The same thing is happening here between the bazaar and square to the cal-de-sacs in the district and neighborhoods.”

- **Unity**

  **Bazaar:** The variety of spaces and functions need an element of unity to make them coherent. D2 believes it is the material that is the unifying element of the bazaar. He explains “So if we look at it fundamentally, you see there are the courtyards with two main streets (raste) and some secondary pathways that are connected physically. These connections are the unifying elements of the bazaar. You know you are in the same environment because you are experiencing different spaces with the same type of character.” Therefore, all this variety needs to be read as a unique setting. The unifying elements help to convey the desired character.

- **Variety of shopping options**

  **Bazaars:** It is all about having different choices, although each shop provides some sort of variety for what it exhibits different shops of the same kind are located along a path that draw people to study all their choices before they make their decisions. The lack of decision making adds to the development of activities along the path. This continues on different paths with different kinds of shops.

  P/D3 describes it as a quality that contributes to pedestrian traffic. “Isfahan Bazaar has different sections for each profession such as goldsmith articles, home supplies, spices, food, carpet, and so on. At the bazaar a variety of stores offering the same articles exists. People have many choices from the fifty or sixty stores offering a variety of options for the same article.”

  **Mixed-use Centers:** As the retail and the food places are the most important as attraction points, the variety that a mixed-use setting provides for other choices are important as well.
D5 describes the quality that contributes to the pedestrian traffic as, “There is a large congregation of restaurants along with a movie theater and a walkable environment that draws people from elsewhere to come to Legacy. It becomes a local tourist destination....There is a collection of restaurants, that becomes a sub-regional drive-to destination based on the activity of the restaurants, even more than the quality of the restaurants. People come in to be entertained. They call it ‘eat or drink.’”

U5 thinks the main attraction is the restaurants and other uses around them. “There are a lot of restaurants. Well, there is a variety of stores. There is Cold Stone, there are antique shops, and there are culinary places, restaurants, a theatre, and bars. And in fact all types of retail….The lake, there is a lake that help pull the traffic in”. Ultimately for the pedestrian to stay the variety of shopping options is significant as well as places to gather to eat or drink.

- **Variety of spaces**

  **Bazaars:** Different uses with their unique architecture are providing a variety of spaces in Bazaars. Each type of architecture is assigned to a different use, so the variety of uses is providing a variety of spaces.

  P/D1 stated, “You see a variety of uses and a variety of spaces.” He describes it as “the matter of shape and form is there too. You see the mosque with its exclusive style of architecture somewhere on the path. You walk down and you see the ‘caravanserai’ with its courtyard and different building style, then you encounter the water storage with its unique architecture, after that, there is the coffee house and the restaurants. This space variety again attracts people and keeps them from getting tired. This helps to take away from fatigue and dullness”.

  Also playing with the feeling of inside and outside created a good combination for people to enjoy, As D1 states, “The variety that exists, is critical. For example it is a covered space that you are walking through; it is neither inside nor outside.” Then “this pathway, in
contrast with many pictures that we see that are mostly arches and shops on both side is not like that.” In some places it has a setback, which is a doorway or an entrance to a major building or there are ‘caravanserais,’ which you enter and there is this courtyard with a beautiful landscape. “You see a diversity of spaces with a variety of experiences…..The other thing is the openings that this bazaar has, another appealing feature, like, there are some places that are covered and little light is coming from above, and there is a place where it gets open, completely an open court yard, which you see a lot in Kerman Bazaar." “You think the bazaar has come to an end, which is not so, there is this vast court yard in the middle and the main street starts from the other end again. That is very appealing in my mind.”

P/D2 believes its unique quality is that “it is not a repetitive path. The existing ‘sarai’ and ‘caravanserais,’ the bends and the intersections, ‘charsugh,’ and the variety of activities in the main street (raste) offer a lot of variety. For example you see the main street (raste) in the bazaar, you move through it for a while then you enter an intersection, ‘charsugh,’ which turns into three different activities that follows three different routes.”

**4.3 Case Study Details**

Each case study begins with an introduction containing basic project history and information that pertaining to site location. Following the introduction is detailed information regarding site physical characteristics, such as location, site surrounding and relations, accessibility, figure-ground comparison. The third section of the case study describes the finding and analysis of each setting, backed up interviewees’ response quotes associated with that particular setting.

**4.3.1 Case Study: Southlake Town Square**

Southlake Town Square is a 125 acre master planned mixed-use development, located within the corporate limits of the city of Southlake, Tarrant County in North Texas. It is bound to the
north by State Highway 114, to the south by Southlake Boulevard, and to the west by Carroll Avenue. The primary mixes of uses are commercial, retail, office, residential and institutional. Like many town squares in Texas, Southlake Town Square is home to Southlake City Hall. The development of Southlake Town Square began in 1998, it was a collaboration between developer Cooper and Stebbins, designers David M. Schwarz Architects and Mesa Design Group, and the City of Southlake (Southlake Economic Development, 2006).

The land use data used in this case study is a combination of data obtained from North Central Texas Council of Governments (NCTCOG) and the City of Southlake. The current mix of uses onsite are Commercial, Office, Retail, Hotel, High Density Residential, Institutional and Public Park. (Parker, 2010)

New pedestrian-oriented districts of entirely commercial space pose great design challenges, since office and retail uses require much more parking per square foot than residential. Cognizant of the parking load this directive imposed, block arrangements were
studied by David M. Schwarz/Architectural Services that managed the vehicle demands yet placed the pedestrian first. Ultimately, an alley system was created to access an efficient, unadorned parking deck at the center of each block (O’Looney et al, 2006).

The Southlake design allows individual blocks to accommodate their parking load without sacrificing any prominent public street facade to a garage or parking lot. Two adjacent blocks then create what the architect calls an “attachable urban fragment.” A project may thus begin with an urban place, which provides the “critical mass” from which to grow. As that place is extended, the buildings that frame urban. While the 460x480-foot blocks for the two-story buildings at Southlake are large, suburban commercial district plans with greater densities potentially require giant block sizes. At Southlake, efforts to limit the perceived length of streets have included mid-block vehicular breaks that read as streets and notched corners of the larger blocks to accommodate squares and plazas (O’Looney et al, 2006).

Figure 4.2 Southlake Town Square Location and surrounding environment (adapted from Google Earth, 2012)
Southlake are all the work of local developers who have invested unusual imagination in the projects. Southlake Town Center with a median household income of $170,000, Southlake is the richest midsize town in the United States, defined as places with more than 20,000 but fewer than 65,000 residents. Southlake Town Center was built around a combined city hall and sub county courthouse facing a block-square garden. The building looks like a half-scale model of the National Building Museum, the grand old Pension Building in Washington, D.C. The buildings around this city hall have three stories, tapering a block away to two stories. The attention to façade detailing is intense, but the developers allowed a mix of modern buildings amid the traditional ones. Southlake has a hotel and post office, for example, but no schools, churches, markets, or hardware stores (Wallace, 2009).

Six of the 17 national retailers reported that their Southlake stores had the best opening-day sales of their entire national chains, and management reported no retail turnover in the town center’s first year of operation. Southlake Town Square has provided a once-center less suburban community with a home for its city hall, governmental offices, and post office, and quickly became a popular setting for community events. More than 6,000 residents turned out for the first Fourth of July celebration and more than 20,000 for the second, an estimated 25,000 people attended a weekend Art in the Square festival the first year, with 40,000 the following year (Bohl, 2003).
4.4.1.1 Physical attributes of the pedestrian realm

Everything stated in the responses that were somehow responding to the attributes of the pedestrian realm in Southlake has been collected in this section. The important fact is everybody agrees on the success of the project and the fact that it is attracting pedestrian activity and they see it as a combination of factors that has assisted to establish this environment (Appendix A).

- Sense of comfort
- Human scale
- Architecture
- Atmosphere
- Public Space
- Variety of uses
4.3.2 Case Study: Legacy Town Center

Legacy is a well-established, mixed-use development located in Plano, Texas. Plano-a growing edge city twenty-six miles north of downtown Dallas in the Dallas–Fort Worth metro area. Legacy, a 2,665-acre corporate community with a 36,000-person workforce, is an example of the smart growth principle of building communities that “work smarter, not harder.” (NCTCOG, 2012). Legacy Town Center is a compact, mixed use, walkable neighborhood built on a greenfield site in the middle of the Legacy Business Park, to the east of the Dallas North Toll way in Plano. The 150-acre development contains approximately 2,850 apartments, 300 townhouses, 750,000 sq. ft. of retail, 900,000 sq. ft. of office space, 400 hotel rooms, and a five-screen Angelika Art House Theater. The first phase of the development opened in 2001 across the street from the HP Enterprise Services Headquarters, previously known as Electronic Data Systems (EDS). The second phase was added in 2006, and the last building in Legacy Town Center was completed in early 2009. Most of the buildings in the development range from three to six stories with apartments and offices above ground floor retail. In addition to the Angelika five-screen Art House Theater, there is a 150,000 sq. ft. furniture store, over 25 restaurants, and three parks to draw people to the Center. Legacy Town Center was built to provide a place to live, work, and play for the approximately 45,000 employees in the Legacy Business Park. (NCTCOG, 2012).
The overall project was designed by Andres Duany, recognized as a pioneer of the “new urbanist” design. Multiple developers were selected to develop different aspects of the project depending on use (residential, commercial, and hotel), and phase to phase. (Johnsongardner, 2009).

The town center is comprised of residences, office buildings, and a lifestyle/entertainment retail center with lofts and offices above. The development is characterized by its pedestrian-friendly street grid system, its hierarchy of streets, from principal landscaped boulevards to residential collector streets, its open spaces of both neighborhood and community scale, and the layering and mixing of uses (North Texas 2050, 2010).

Ground-level shops, eateries and offices enliven the street. A streetscape is created through the use of environmental graphics, public art, outdoor seating, landscaping, and lighting. These elements, in conjunction with the lively 24-hour mix of uses, make Legacy Town
Center a powerful draw for those seeking a unique live-work-play environment (North Texas 2050, 2010).

In his search for pedestrian traffic, the developer of Legacy Town Center built a pseudo prairie town of 1900 and welcomed specialty retailers such as a svelte independent bookstore with 24,000 square feet faced with glass and blonde veneer and offering not only books but also peripheral activities such as cooking classes (Wallace, 2009).

Figure 4.5 Legacy Town Center and surrounding environment (adapted from Google Earth, 2012)

Legacy Town Center is a master plan community which is envisioned, designed and built as the core of a 2,665-acre suburban business park. Design is primarily shaped by walk able block sizes, pedestrian friendly building frontages and accessible open space infrastructure for a diverse set of residential, commercial, entertainment and service uses. Some of the key design features include but are not limited to: Pedestrian friendly streetscapes, 5-acre parks, 4-acre lake within the development, enhanced infrastructure, luxury apartments, hotels, boutique retail, 120-foot-wide fountain, and 24 live-work-play environment (North Texas 2050, 2010).

In its final phase, the town center is considered a considerable success, creating a very dense mixed-use center in the midst of a suburban environment, and large-acreage corporate
campuses. The center has achieved mixed uses in four- to seven-story structures, as well as structured parking (Johnsongardner, 2009).

Legacy Town Center seems to respond the market dynamics and act as an oasis within the larger corporate office/business park context by providing uses and amenities that serve its clientele. It assumes a town center role due to its prominent location adjacent to the toll way and a business park (North Texas 2050, 2010).
4.4.2.1 Physical attributes of the pedestrian realm

In Legacy Town Center, as all the other setting, but particularly mentioned, the restaurants play an important role in attracting the pedestrian traffic and the intentional situation of the parking garages systematically bring people to the sidewalk and create more pedestrian movement to attract more pedestrian activity (Appendix A).

- Edges
- Details
- Variety of uses
- Variety of shopping options
- Parking
- Safety and Security
- Merchandising
- Relation to the city
- Pedestrian access
- Organization of uses

4.4.3 Case Study: West 7th, Fort Worth

The West 7th Urban Village is one of 16 different small geographic areas zoned for dense, multiple-use development that is mass-transit and pedestrian friendly. The village is located at the six-point intersection of West 7th Street, Camp Bowie Boulevard, University Drive and Bailey Avenue. Several renowned art museums, the Rogers Memorial Center, University of North Texas Health Science Center, and the historic Seventh Street Theatre anchor the area (City of Fort Worth, 2012). It serves as a gateway to the Cultural District and Downtown. People are already drawn to cultural venues in the district, and the introduction of a lively, mixed-use urban neighborhood with a greater variety of retail and entertainment attractions should help increase activity (City of Fort Worth, 2012).
West 7th Urban Village is a vibrant and walkable live/work environment which is an important link between Downtown and the Cultural District. Mid-rise and high-rise housing, retail, and offices overlook the Trinity River corridor, which provides scenic and recreational opportunities for the residents and businesses within the urban village.

The project area is 200 acres and almost 13 acres of it is dedicated to residential use. The other uses type included in West 7 is mixed-use with 24.64 and 41.40 acres of it is still vacant land (North Texas 2050, 2010). Other land uses include boutique retail, restaurants, urban-scale apartments, and professional offices (City of Fort Worth, 2012).
Urban design elements that have been used and established in West 7th can be identified as (City of Fort Worth, 2012):

- Neighborhood-scale mixed-use development is proposed for both sides of West Seventh Street between Foch and Norwood.
- West 7th Street becomes an attractive boulevard with a comfortable pedestrian environment that encourages walking. Buildings front West 7th, creating an attractive sequence of storefronts at the sidewalk’s edge.
- The Linwood neighborhood is further integrated with land uses along West 7th Street through improved pedestrian connections.
- A modern roundabout creates a unifying gateway landmark and improves vehicular and pedestrian circulation in the village.
- A boutique hotel adds to the urban ambiance.

They are still some challenges that need to be considered in order to make a better environment. Vacant lots and auto-oriented development along West 7th create an environment in which walking is impractical and uncomfortable. Some vacant lots are not maintained, and
others are used for parking. Pedestrian connections to surrounding streets are limited. Strategies to address this issue include policies that encourage more intense use of developable land, rezoning to apply more appropriate urban development standards, and urban design strategies such as pedestrian improvements and landscaping (City of Fort Worth, 2012).

4.4.3.1 Physical attributes of the pedestrian realm

In West 7th the common theme that has been collected from the responses indicated the need for reconnection with the city and downtown but at the same time it is considered utilitarian space for the pedestrian (Appendix A).

- Atmosphere
- Architecture
- Mixed-use activity
- Human scale
- Pedestrian access
• Activity watching
• Details
• Clarity
• Merchandising
• Public space
• Relation to the city fabric

4.4.4 Case Study: Kerman Bazaar

Located along the Silk Road, the oldest and most important trading route in eastern civilization, Kerman, which was once a trading metropolis of international renown has one of the most historical bazaars in Iran. Kerman was chosen for its location and the role its bazaar once played in the formation of the city itself. Commercial trading with adjacent cities was easy as Kerman lies on a vast plain. Kerman is the most remote of Iranian cities in the chain of cities that cut through the central plateau in the east of the country.

Kerman is the center of Kerman state, which is placed in the South – Eastern portion of Iran, and is classified as dry and warm climate. The city is located near loot desert and is surrounded with mountains, the altitude of the city is 1750 m upper than sea level, but its climate is affected by near deserts and loot desert (Aletaha, 1999).
Particular attribute has had a remarkable influence on the construction and development of the bazaar, in such a way that the commercial zones of the city have expanded to the outskirts. As a result, the commercial axis and city plan have been designed based on the main commercial lines. The south-north and east-west lines link important commercial gates to each other. This kind of plan justifies its important role and makes the architectural plan of the commercial axis a cross-shaped intersection which made the bazaar of Kerman into one of the most vibrant bazaars in Iran. Moreover, this development made for easy access between the bazaar and the old quarters of the city. The bazaar of Kerman is one of the best-preserved examples of large, enclosed, linear and covered Bazaar complexes in Iran. It includes mosques, caravanserais, shops, Bazaars, and historical neighborhoods. The bazaar is today still the commercial hub of Kerman, thanks to its location and the fact that it continues to have an essential commercial function. The shops and Sarai in the bazaar house numerous trades,
crafts and service providers. There are both itinerant retail traders and permanent retail establishments, and private and public services. Wholesalers, agents, export and import businesses, finance and credit services, crafts and trades and all the related brokerage activities are to be found here. One major positive development is that the bazaar has acquired a new commercial function as a tourist destination, visited for its sights and sounds as well as for its goods and services. This has resulted in the proliferation of shops that specifically cater for tourists by making, buying and selling traditional craft products, some of which only survive because the main clients are tourists (Arjomand Kermani, 2009).

Figure 4.11 Kerman Bazaar and surrounding environment (adapted from Google Earth, 2012)

Neighborhood centers play an important role in the social and cultural life of a city, which made the district dynamic and lively for local residents. Apart from its role in the district itself, the neighborhood centers were shaped around a Bazaarce, or small Bazaar, a branch of the main bazaar and it connected nearby districts to the main bazaar. These neighborhood passages were like arteries distributing lifeblood to all parts of the body, carrying the life and
dynamism of the main bazaar, as the main commercial and social element and the structural backbone of the city to other districts even those quite far away (Arjomand Kermani, 2009).

These pathways in Iranian cities are of secondary importance to the main bazaar, and render residential quarters accessible through a system of paths peripheral to each walled quarter. Normally four to five meters wide, these pathways lead through the encircling walls through gateways. Constantly kept in the shade by the surrounding high walls, these paths are today cool channels for pedestrian circulation even in the hottest of summers. The Kerman bazaar has been and still is the liveliest location in the city, and it continues to exert considerable influence on the cultural, economic and social life of the town (Arjomand Kermani, 2009).

Figure 4.12 Kerman bazaar figure-ground (Source: National Cartographic Center, Iran.)
In some parts open public spaces were created along the covered bazaar. This open space was generally located where the main bazaar and the minor pathways meet.

There are also other public spaces where the main bazaar intersects with a secondary pathway, in this photo we can see a mosque and the courtyard that were located at the intersection point.

4.4.4.1 Physical attributes of the pedestrian realm

In Kerman bazaar the common theme that has been collected from the responses indicated the variety being the most important factor of the pedestrian realm, and this variety is sub categorized in people diversity, variety of function and variety of spaces including architecture. All the participants implied the covered part of the main pathways to be very successful and the fact that it is restricted to cars is a positive point (Appendix A).

- Variety of uses
- Variety of spaces
- Diversity of people
• Activity watching
• Sequential qualities
• Relation to the city fabric
• Pedestrian access
• Sense of comfort
• Security
• Gender preferences
• History
• Details

4.4.5 Case Study: Tabriz Bazaar

Tabriz city, with an altitude of about 1340 meters above sea level. According to the last census of Iranian Statistics Center in 2006, Tabriz city has a population of more than 1,398,060. the Mehran Rood River goes through the middle of it. This shows the geographical superior situation and the centrality of the Mehran Rood River, Moreover, at the Qajar era, it was the residence place of princes, successors, merchants, scholars and the nobles. The bazaar of Tabriz dates back to the early periods of Iranian urbanism of 6th century. The bazaar faced many recession and growth periods and was destroyed several times. What is remaining today from the bazaar is a memento of the Qajar era, which is most likely that the main passages in the bazaar are reconstructed exactly as the past after a destructive and violent earthquake in 1780. Since it was located on Silk Road route, Tabriz was one of the most important commercial centers in Iran and in the world in past times. It was the center of exchanging European commodities and therefore, was famous in the world (Mansouri, 2011).
Figure 4.14 Tabriz Bazaar, Tabriz, Iran Location (adapted from Bing, 2012)

Figure 4.15 Tabriz Bazaar and surrounding environment (adapted from Google Earth, 2012)
In this sense, apart from the number of mosques, hamams, shrines, education buildings and sports facilities in Tabriz bazaar, allocation of the trades show similarities. In the southern parts of the bazaar, silversmiths, glassware and mirror sellers are located along with the wooden works and carpenters. Western parts of the bazaar are occupied by mosques, educational facilities, and dried fruit sellers. As it can be seen from the Figure 4.17, in the central core of the bazaar carpet sellers, housing utensils and furniture, spice, tea, fabric and textile and clothing shops are located. North of this central core is divided into two parts named as upper and lower bazaars, lower bazaar is being the part from the core to Mehran River and upper bazaar is being the northern banks of the Mehran River. In short, Tabriz bazaar is generally occupied by jewellers, gold and silversmiths on south, leather and shoe sellers at
east, religious and educational facilities at west, carpets and textiles in center and iron, copper and metal works at north (Edgu et al, 2012).

Figure 4.17 The allocation of bazaar functions within the Tabriz bazaar (Edgu et al, 2012)

The spatial configuration of Tabriz cover bazaar does not directly expose any grid or intersections. The main arteries and axes are apparent in the schema, but the axes also show the orientation of the shopping connecting the clustered elements in terms of Sarais. Thus the formation of Sarais alongside the main arteries is the basic philosophy of Tabriz covered bazaar. These courtyards based shopping areas present a uniform layout through the bazaar. (Edgu et al, 2012).
4.4.5.1 Physical attributes of the pedestrian realm

In Tabriz bazaar the common theme that has been collected from the responses indicated the variety of spaces and the diversity of uses being the most important factor of the pedestrian realm. Also the importance of the pedestrian access connection to the city has been emphasized in different ways (Appendix A).

- Pedestrian access
- Variety of spaces
- Diversity of uses
- Unity
- Human scale
- Activity watching
- Relation to the city
- Details
4.4.6 Case Study: Isfahan Bazaar

Isfahan city is located in 32° 38’ 30” N latitude and 51° 38’ 40” E longitude. The minimum height is 1550 meter around Zayandeh Rood and maximum is 2232 m in Sofeh Mountains. Isfahan is the capital city of Isfahan province and the third biggest city in population in Iran after Tehran and Mashhad, and one of Iran metropolis. History of Isfahan city core consisted of two parts, the old section, which started from the old square, close to the Friday mosque, and the new section, which started from Naghsh-e-Jahan square, with its measurements of 1680x523 ft. and connected to the old section.

Figure 4.19 Isfahan bazaar, Isfahan, Iran location (adapted from Bing, 2012)
By the 11th century, after selecting Isfahan as the capital of Saljuqi period, the old square had become the center of the city and old square become such an important urban space, that is a big difference in that particular era. It had a castle, and mosque and residential. There were some peripheral markets along the main streets radiating from the old square from at least that time (Arjomand, 2010). The 1.5 km (1,650 yard) shopping street is still the main street in the bazaar, the longest vaulted bazaar street in the world. Creation of Naghshe-e-Jahan square played an important role in Isfahan's town planning. The important point is the best design for connecting of this new square with the old structure of the city core. The purpose of design was linking it with the main chain of the grand bazaar, which extends from the Old Square (Karimi and Motamed, 2003). The buildings surrounding the Naghsh-e-Jahan square (originally including a large number of coffee houses), to the south east and the large bazaar to the north, where the old core was located (Walcher, 1997).
Socio-spatial aspects of the society are demonstrated by the public space structure, the physical shape and activities within, “a dynamic ensemble of people and environment” (Dovey, 2010, 7). It can be argued that these consumption spaces were originally a city’s focal points, from which other buildings of the city developed.

Having a notion about the earliest consumption spaces, the current trend towards the opening up of shopping centers to their surroundings reveals a comparable image. In the last
twenty years there has been a shift away from the common inward-looking and enclosed shopping Centre design towards approaches that attempt to embrace surrounding areas. These transformations lead to the emergence of ‘interface spaces’, which have a noticeable effect on urban spaces and public life, physically and experientially.

It is a complex of street and lane, of courtyards, of public amenities, a complex which is repeated tens of times in the immense area the market covers, providing the essential elements in commercial and religious life and extended to the houses of many of the citizens who reside in the bazaar district (Bakhtiar, 1974).

“The volumes of the various sections of the bazaar, the width and the height of the bazaar lanes were determined to a large extent by the trades and crafts that were sustained in the different sections. Some areas required simple cells with low ceilings and circular openings in the roof to admit light and air. Others required higher ceilings and more ventilation, but these, too, had circular openings in the roof, often at the apex of a vault or dome, and sometimes with the light filtered through thin sheets of alabaster. These admitted a pale yellow light and kept the interiors warm and dry in winter, in summer they were cool, shaded and airy. Many of the old covered streets have lost their roofs. Closer to the market center, however, the bazaar is still covered and except where, as in the case of the dyeing sections, an industry is extended to the use of the roof, and there is little indication of the activity below. Beyond the plain and undecorated walls may often lie cool and tranquil gardens, shaded courtyards and arcaded walks, but none of this is evident from outside” (Bakhtiar, 1974:18).
4.4.6.1 Physical attributes of the pedestrian realm

In Isfahan bazaar the common theme that has been collected from the responses indicated the variety of spaces and the diversity of uses being the most important factor of the pedestrian realm. Also the importance of the city fabric and its connection with the bazaar was one the important facts (Appendix A).

- Pedestrian access
- Diversity of uses
- Relation to the city
- Sequential quality
- Security and safety
- Activity watching
- Sense of comfort
- Variety of shopping options

4.4 Synthesis of Findings from Interviews and Case Studies

The case study details, secondary data analysis and the corresponding interview analysis exposed the fact that in spite of many differences that pedestrian setting of East and West have there are many common features.

Table 4.1 Overview of the themes in each case study

<table>
<thead>
<tr>
<th>Themes</th>
<th>Isfahan bazaar</th>
<th>Tabriz bazaar</th>
<th>Kerman bazaar</th>
<th>West7th</th>
<th>Legacy Town Center</th>
<th>Southlake Town Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity watching</td>
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<td>x</td>
<td>x</td>
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<td>Atmosphere</td>
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<td>Clarity</td>
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<td>Human scale</td>
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<td>Parking</td>
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<td>Pedestrian connection</td>
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<td>Merchandising</td>
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<tr>
<td>Relation to the city fabric</td>
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<tr>
<td>Security and safety</td>
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<td>Sequential quality</td>
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<td>Unity</td>
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<td>Variety of shopping options</td>
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<tr>
<td>Variety of spaces</td>
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</tbody>
</table>
The table above reveals the overall look of the case studies combined with the attributes collected from the interviews, there are several common features in pedestrian spaces and pedestrian realm, in both bazaars and mixed-use centers. Among them activity watching, pedestrian connection, diversity of uses and design details are most common. Histories, variety of spaces and sequential qualities have only been identified as contributors to the pedestrian realm in bazaars. Parking, clarity and atmosphere have only been mentioned in mixed-use centers.

4.5 Summary

The fact that the commerce and pedestrian realm coexist, and both should be equally get improved in order to have a successful setting was a unanimous response, the type of commerce and how it impacts the overall setting varies. Food places and every-day life goods are among the types that attract more pedestrian so it affects the commerce oriented settings, and that is because people will likely to come back to them more often as places that provide a static but engaging activity. On a different note with similar emphasis some qualities like density are considered important for such spaces to thrive. These settings need to be supported by a dense neighborhood.

Commerce oriented centers of the East and the West are different settings in terms of design principles and form but when it gets to pedestrian realm criteria, they have several attributes in common, they both share the same criteria for enhancing the pedestrian environment, such as variety of uses, activity watching quality of space or relation to the overall city fabric whether it is provided or desired. In addition there are attributes that are particularly important in commerce oriented settings such as merchandizing or the variety of shopping options provided for residents and visitors alike.
The study also revealed that there are attributes that are more specific to Eastern settings such as history or variety of spaces. On the other hand, some features are more specific to Western settings such as parking or clarity of environment as it is explained in the earlier sections. Human scale, activity watching, sense of comfort, design details and pedestrian connections were the one that was more emphasized, and revealed by most of the case studies. Following chapter sums all the finding and analysis of this document and suggest further research in the area of pedestrian realm and commerce.
CHAPTER 5
CONCLUSIONS

5.1 Introduction

The purpose of this research was to document and assess the physical make up of the pedestrian realm in higher density mixed-use commercial settings of the East and the West in order to better understand pedestrian environments’ role and inform future design challenges with cross-cultural references in similar urban settings. The study primarily focuses on three acclaimed sites in each settings: Southlake town square (Narayana), Legacy town center (Audirac, 2005), and West 7th Fort Worth (Abrahams, et. al, 2010) and Bazaars of Tabriz, Isfahan and Kerman (Masoudi, 2005, Moosavi 2005, Kermani 2009).

The research takes its methodological references from both qualitative and quantitative paradigms (Guba et al., 1985; Taylor et al., 1998). The study primarily includes person-to-person interviews and phone calls. It grounds its basics with the aerial photos obtain from Google Earth in order to get a basic idea of how pedestrian spaces are located according to the general pattern of each settings.

Pedestrian realms are significant because of their role in adding pedestrian population density and spatial characteristics desired for leisure in such settings. They are also valuable due to their function as public spaces which provide opportunity for urban ensembles. According to Cooper Marcus and others (PPS 2005, Cooper Marcus and Francis 1998, Gehl 1987), the presence of people is key to successful urban public space, However, the component of pedestrian realm that makes these places function the way they are, has not been investigated yet.
5.2 Evaluation and Summary of Themes

Three settings in mixed-use centers, Southlake Town Square- Southlake, Legacy Town Center- Plano and West 7 Urban village - Fort Worth as well as three bazaars, Kerman Bazaar, Tabriz Bazaar, and Isfahan Bazaar were selected to explore pedestrian realm in public settings. The primary purpose of each case study was to organize, evaluate, report the physical characteristics observed, studied and obtained through interviews, the objective of which was to answer three questions: (1) the role of pedestrian realm in bazaars and mixed-use centers, (2) the physical attributes of the pedestrian realm in each setting, and (3) the characteristics of bazaar and mixed-use centers that contributes to the pedestrian realm.

- The role of pedestrian realm in commerce oriented settings were investigated in this study and the results revealed the fact that the relation of pedestrian realm and commerce is symbiotic, and complementing each other. The types of commerce definitely influence the pedestrian activity and should be dependent to the scale of the customers that it is responding. It is desirable for them to be related to everyday-life essential, and the most compelling and attractive types of commerce are the food places such as restaurants, café and such, because people tend to return more often to such places and they provide a gathering place and activity watching potential. Both bazaars and mixed-use centers identified commerce and pedestrian realm as inseparable elements. Both of these elements should be addressed well. P/D5 and P/D1 argue about both pedestrian realm and commerce are equally influential and the success of a commerce oriented setting was equally divided between pedestrian realm and commerce, in both of these setting.

- The physical attributes of the pedestrian realm in these settings represented a lot of common ground for the pedestrian realm in commerce oriented settings. The most important of all, is for the pedestrian environment to have a well-adapted relation to the city fabric. It is suggested by the findings of this study that such settings should be visible and
located near major transportation active routes, which is supported by the density and neighborhood well-defined connections, so that it can bring in foot traffic. Pedestrian access from district and neighborhood should be practical. Pedestrian only environments are considered to be more successful because of the sense of comfort and security they provide. Among the physical attributes, the importance of the edges was only mentioned by one of the designers in mixed-use centers. On the other hand the unity was only mentioned by one of the designers in bazaars (Table 4.1).

The literature has identified that the ability of space to provide a potential for activities that are more static and keep the pedestrian in the environment is important (Gehl, 1986) The complexity of space can help it to provide the opportunity for diversity of spaces and architecture that at the same time have a unifying elements or character. A decent amount of detailing but not overcrowding the environment, providing a sequential qualities so the place would be cohesive and readable for the pedestrians, providing a safe and secure environment without automobiles harassing the pedestrian activity are the most essential physical characters as mentioned by the informants.

The edges are the most important feature of the pedestrian environment as they stimulate the activities, define the human scale and sense of enclosure for the pedestrian to be comfortable and motive. It is desirable for it to be activated by commerce or at least transparent edges which provide an opportunity for activity watching. It is well activated by food places as well as variety of uses and shopping options that pedestrians enjoy choosing from.

Parking should be provided and positioned sensibly. The mid-block location of the parking is a strategy to bring people to the sidewalks and from there to the other activates provided as it was mentioned by the interviewees. It was one of the qualities mentioned by mixed-use centers only, and it was because the parking in these setting are located in the setting and adjacent to the pedestrian realm while in bazaars they are mostly located outside of the settings.
Public spaces are other factors that help pedestrian spaces to thrive. People should feel they belong to the place or they should be provided with a sense of ownership of the place which can be achieved through public spaces.

The characteristics of these setting that contribute to the pedestrian realm are identified as sense of comfort, which can be provided by the right temperature and right amount of exposure to the natural environment. Security and safety, and the gender preference are based on these qualities as mentioned by the informants. Activity watching is the most important activity that occurs in these settings, therefore every physical characteristic that provides a potential for this option is considered as essential. Diversity of people is one of the contributing factors to activity watching potential, as well as variety of uses. Additionally, a well-defined mix of uses provides variety of options and a potential to satisfy all demands in one stop. All of which provide a good atmosphere for pedestrian to relax and enjoy their time while they are meeting their timeframe of works that needs to be done. For the places that represent a distinguished history, it is important for them to present it, whether it is through different architectural styles or through decent representation of the past. It can offer a sense of place and identity for the pedestrian environment.

5.3 Mixed-use Centers and Bazaars

Both bazaars and mixed-use centers play major roles as destinations for their region and the city around them. They draw people from around to come and enjoy their time. In mixed used centers it was mentioned that they are responding to the bigger regional scale, being the North Texas area, and in bazaar they serve to the whole city and the region around it as well as it being a tourist destination.

In bazaars reviewed in this study the pedestrian realm has not been designed for pedestrians only but after the introduction of the automobiles, it has been restricted to automobile movement, so it became pedestrian only space in time. In mixed use centers
reviewed in this research, it is designed for the automobiles mainly, but in a way that creates a pedestrian realm at the same time. While making a comparison between bazaars and mixed-use centers of the West, P/D5 mentioned that, if there is no automobile traffic it is hard to introduce the space to the pedestrians, but once it is established and became known to the community, it is actually a good suggestion to make a pedestrian only environment. On the other hand D3 concludes that bazaars are formed as pedestrian access because it has the potential and if it was to suggest a pedestrian access it would work best in the historic part of the city. This potential comes from the integrity of the network between districts and the urban fabric, he mentioned.

On the other hand it is rather interesting to see that details are not as important as they look. Pedestrian spaces with less detail work as well as the one with a lot of detail. In fact D5 mentioned that, if he wanted to suggest any improvement for the Legacy, he would take all the ornamental impediments off the pedestrian realm.

The other fascinating finding of this study is that architecture is not mentioned strongly by the respondents in each settings. The human scale and the right geometry of the environment that provides an enclosed area for the pedestrian to feel safe and secure seem to be themes that emerged more than the architecture itself. Human scale has had an important role in the success of these places, they are support the idea of enclosure and being protected with walls and certain height to width relationship.

Safety and security is another important characteristic of the pedestrian realm, and it mostly deals with vehicular movement and the location of the parking to provide that safe environment for the pedestrians either in bazaars or mixed-use centers. As it was mentioned by the interviewees, accident causing problems discourage pedestrian activity.

One of the most important issues mentioned and observed in mixed-use centers is the location of parking garages. Parking garages are located in the mid-block where the desired placement of such structures so that people can have easy access to the restaurants or the
destinations of their choice. They get to enjoy the environment and also shop around. This strategy is intentionally used to create pedestrian activity.

Pedestrian only environment such bazaars due to the comfort and safety level they are providing and by the fact that people are not occupied by cars as much, seem to prone to more pedestrian activity. This is a finding that can be investigated in detail with further research. But generally, they tend to be attractive to people and be successful in terms of pedestrian experience.

Mix of uses inserted in all of the settings studied in this research have seemed to shape a better pedestrian environment. The fact that all of these projects have been activated by store fronts is what draws people to use these setting. Furthermore a variety of uses are appreciated by pedestrian, and the rich environment such mix of uses creates, once again can support the idea of variety of activities should be provided by a setting.

One of the most mentioned of these uses would be restaurants, coffee house or cafes, this indicates people are attracted to places filled with even minimal food options, which in turn leads to repeat business. So as one of the participants mentioned, the world is changing from utilitarian only and recreation only uses to a mix of those where you get to enjoy and at the same time get your needs fulfilled. Locating food places and restaurants are the most important elements mentioned by all the designers and developers/planner, whether to add restaurant or identifying restaurants as the most important quality of pedestrian realm.

The other very important factor that has been stated in all of these setting is that people enjoy activity watching. People enjoy watching other people interact, watching diversity of people and diversity of spaces. So the most important factor here as also supported by literature is diversity, variety and complexity of people, uses, and spaces. It was stated several times pedestrian activity encourages more pedestrian activity.

Details are what people on foot pay most attention to. Creating a good pedestrian realm needs careful attention to the details in design. However once a designer has accomplished all
the other factors, the details come in handy, but without having paying attention to overall
general comfort of the pedestrian, the details are not that significant of the fact. As one of the
participants mentioned you go to a place to watch activities, no matter if it is poorly designed
with details. If the activities are already there that would attract the pedestrian, such as all of
these setting except Southlake demanded seating area, that meant they were not sufficient or in
some places even rare but still all these places are abundant with people.

5.4 Importance to the Profession of Landscape Architecture

Pedestrian realm is an important aspect of landscape architecture whether it is on the
East or the West. In most cases in the urban settings the professional work of landscape
architecture are designed to be used for people on foot. Although the availability, function, and
aesthetics of pedestrian realm is believed to be major ingredients of such settings, the
knowledge about the physical attributes and characteristics of it in commercial oriented centers
such as mixed-use centers, and bazaars in informative to the extent that it can better inform
such future projects, Studying, documenting and assessing these characteristics can help
advance the design solutions and better understand the needs and the necessities for a
successful design, which is defined as a design that is accepted and used by people.

5.5 Future Research

Although this research covered important grounds it also initiated other questions that can be
future research. Those areas include:

- The pedestrian realm can be studied in other kind of setting such as transit
  stations, plazas, and public spaces in different settings.
- Each of these case studies can be analyzed in a more comprehensive way with
  concentration on one or all of the themes emerged from this study.
• There is a chance to study if there could be a design solution research on how to convert the pedestrian route to a vehicular route smoothly with a minimum interruption or traffic congestion.

• Each of these categories can be thoroughly investigated, for example details that have been identified in all case studies represent a broad range by itself. Further investigation can be made on what details or themes that emerged from this study are more important for pedestrians.

• Relationship of these setting to the overall city fabric and the knitting of them to the fabric can be further investigated.

• The relation of commerce and pedestrian realm has been investigated here from a more physical and design point of view, the recommendation here is to investigate it from economic point of view. A commerce point of view can show what types of commerce can best help the pedestrian spaces to be successful.

• Car restriction and creating pedestrian-only-routes is very important and need further study. For example, what are the considerations and what are the advantages or disadvantages of having a pedestrian only circulation route.

• Demographic preferences in the pedestrian spaces studied in this research are intriguing. A deeper study of demographic and gender preferences would yield a greater understanding of the psychology of the sexes in pedestrian commercial environment.
APPENDIX A

CASE STUDY DETAIL

The attributes from the interviews sorted by the case studies.
Southlake Town Square

Sense of comfort
Common theme that has been stated by both the designer and the developer of Southlake was tendency to create a place that can provide a sense of comfort for the pedestrian, whether it is the width of the sidewalks to accommodate the outdoor seating area or it is accessibility by both automobile and pedestrian, they are all provided to create a more comfortable place for the people to enjoy.
D4 as a designer thinks: “shade, the ability to sit down at a restaurant outside or inside and get something to drink” and “the width of sidewalks being the most important 15-20 feet, allows for more restaurants and vendor retail comes out on the sidewalk so that the pedestrian pass”
P/D4 as a member of the developers group stated “the streets are designed so that it’s readily accessible by the automobile and it’s also readable at a driver level”

Human scale
The other fact that not only the designer but also the developer is aware of it and see it as an important factor is the human scale, and the fact the people are in need to be in an enclosed space and the combination of streets and buildings should provide that kind of space to people to feel comfortable in that space.
D4 as a designer thinks, it is “about the proportion of the street being 2:1 or 1:1 with two story buildings I think of a minimum, creates more of a room, more comfortable space to be in”
P/D4 “it was set up with a traditional street and blocks pattern, it is designed at a human scale so that the sidewalk and street scape environment are understandable at a pedestrian scale”

Small town Texas model
The fact that Southlake is a town square in a suburban area has stated by everybody, but the fact that it is trying to stay and be inspired by small town of Texas although it is trying to be modern and keep up with the modern life was another important factor.
As P/D4 stated “the design briefs of the south lake town square comes from a study of many small and medium size American towns”

Architecture
Of course architecture is a very important factor in all of these setting studied in this research but the fact that it is keeping up with historic character was mentioned as an important factor that read4 well with the street and block pattern.
D4 as a designer thinks, “The good architecture that is, you know, pleasing, is historic in character, that’s got a lot of detail, which is not just sort of a stucco box that has nothing that’s interesting visually”

Atmosphere
At the end of the day it is all about creating the atmosphere, and all three participants agree on the fact that Southlake was successful in creating that atmosphere for the people to come and enjoy.
D4 as a designer thinks, “The more people that are there the more people that come, a lot of people just like to come watch other people then they do sort of secondary shopping other people are using it like a mall when they are doing primary shopping”
P/D4 brings up an example that support the idea “one of our customers gave me a great story about how at their previous place of employment they would go to their office and then they would go home but they never really got to see their family during the day. Now they are working at Southlake town square and get a call from their spouse and have their children with them stopping in either shop or getting their Jumbo Juice and they can say hey I am in town square and in 5 minutes they can run down hug the spouse get them a kiss, hug the kids, tell them, they love them, how was their day at school and get back to work and it’s 5 minutes. I think there is that human element to an environment like this that makes it so compelling for many people.”
The users of Southlake also mentioned “It is suburban but there is quality of city life, I guess”

Public Space
The amount and the quality of open space is an important factor, it help for the people to enjoy the nature and the environment, they are coming out of their home to be outside and the amount of open space created in Southlake seems to be satisfying for the people who are using it. The observation study reveals the fact that the open spaces in Southlake was used and treasured by the people using this setting.

P/D4 also talks about the thoughts that have been given to this as an important factor “proportion of open space for parks and gathering places and we used a bench mark of ten percent” and “At the end of the day great public places are not necessarily driven by any particular scale, it’s driven by an understanding of how they are being used how they relate to the overall environment. It was that sort of analysis and understanding of the actual creation of the open space that exists here today”

Mix of uses
P/D4 believes “we are living a world where more and more, we are all trying to get efficient with our lives, and to … but at the same time enjoy the time that we spend and for south lake town square, I think one of the.. The key is to why it has been successful and continues to be successful is the mix of uses there, here. it is obviously a shopping environment with the edition of movie theatre of a hotel , a series of restaurants, we have over a 90,000 square feet of places to sit down, eat , drink, enjoy a conversation with friends, of those, those are the uses that people are most familiar with but what many people don’t see when they are here unless they are actually using it, is that there’s another component of services in the environment most commonly found on the second floor of the two story building where we have space that’s occupied by doctors, dentists, lawyer, accountants, financial, services firms. The whole series of uses that allow people that multitask while they are here”

Streets
Although streets are important component of every project but creating a street that pedestrian enjoy to walk is an important factor as well as enhancing it with a better quality can be a key point, as it was mentioned by the user of the Southlake, she would not want to walk down a street without sidewalk, she would not feel safe and comfortable doing that.
P/D4 “And I think in terms of “making better streets make a better pedestrian experience… and here landscaping is going to be one of the first thing you do”
The user of the Southlake “I don’t know I would not want to walk down 1709 by its own, there could have been sidewalks."

Details
As P/D4 stated, when he was asked about what changes would improve the pedestrian realm “edit that landscape pallet and look at the slightly different approach to certain streets and when you add to that, with in Texas and other areas of the country we are living a world which is very different in terms water and how we use water”
P/D4 also mentioned that “the individual building and store fronts, and we routinely work with our retailers to dress up store front whether it’s adding pots and plants in those pots outside front door or doing details of the store front whether it is a painting detail or owning detail, even you know addressing the signage programs, we think of signage as …. Signage itself can be a critical part of a streetscape and so we are always looking at the opportunities to address the sign detail itself”
The user of the Southlake also “ you know if you are not buying anything, it is still nice to walk around because there are like the nice scenery, the pillars and stuff , the fountains , so it brings in people”

Legacy Town Center

Edges
Talking about the edges of the pedestrian realm and how it is the main attractor of the pedestrian activity both D5 and P/D5 think that it is all about the store fronts and how it is activated by retail, and then thinking about what has to be done with the sidewalks to enhance that environment.

P/D5 “once those goals are laid out then we go for the space edges formed by the building, what is the best way to … accommodate everything I just said before but also perhaps the realm to the pedestrian has to do something with the edging …Well first of all thinking about the space between building to building across the street environment and have articulate that to be something of having visual interest.”

D5 describes it as “Pedestrians are supported by what happens at the edge of the space, you can make a beautiful park beautiful square, a beautiful street but it is the edge which is called the frontage does it not speed the energy, does it not interact with the people, then it won’t work. So the first thing is the edge, the frontage, the function of the frontage. By the way the frontage is the first floor that meets the public realm.”

Details
The details play an important role in this setting but surprisingly D5 thinks that too much detail would make the place undesirable for pedestrian.

P/D5 “looking at the dimension from the sidewalk to the building and how to allow outdoor dining just to allow, where would fire tracks be placed where we put trash and where entrance to the building would be , you know some like the office would have to need more privacy than the retail and how to coordinate all of that.”. “this comes down to planters, special paving, notches and furniture’s allow for you know outdoor dining”

User “benches, lot of trash cans, the shops leave the doors open quite often which is very inviting for any consumer… certain lights in the certain areas of shops at Legacy”

D5 describes the details of the design to be very important such as the width of the sidewalk being couple of feet more “is that sidewalk has to be surprisingly wide 18-20-24” but other detailing does not change the overall environment “I also do not think surface like paving is particularly important. The best places I know are not [elaborated paving surfaces] There’s this really nice concrete, not bad concrete, good concrete” he also mentions lighting “I would say that lighting is also important at night”

In the answer to the question of how would you improve the space , he mentions “I would simplify it, I think the urban designer put a lot of junk on it, if I redesigned it I would clear it up, like some of these planters, levels are pretty much junk. If that’s cleared, that help people. I think that’s the main critique that I would have”

Mix of uses
Although it is designed as a mixed use center but the range of uses and how it is working together plays an important role.

P/D5 explains “I would say the biggest contributor of Legacy that contributes to pedestrian activity would be the mix of uses that exists…. It would be a range of uses, you’ve got a lot of office and housing that proximity to retail and restaurants. That drive a local pedestrian, you know you create a local pedestrian interest to look up from their offices and residences and to what are the shopping and retail might be”

D5 believes it is how the mix work together, “The mix of uses has to be sensible”

Variety of shopping options
The retail and the food places being the most important, the variety that this setting provides for other choices are important as well.

P/D5 mentions the qualities as “there is a large congregation of restaurants and the movie theater and a walkable environment that draws people from elsewhere to come to legacy really, almost as a local tourist destination.” “there is a collection of restaurants, that becomes a sub-regional drive-to destination, just because the activity of that restaurants before the quality of restaurants. People come in there to be entertained. They call it eat or drink.”
User thinks the main attraction is the restaurants and other uses around them “there are a lot of restaurants. Well there is a variety of stores. There is cold stone, there are antique shops, and there are culinary places, restaurants, theatre, and bars. And in fact all types of the retail…. The lake, there is a lake that help pull the traffic in” and the lake being a natural element to enjoy.  

Parking  
Since it is a destination environment, it has to accommodate parking places, the location of the garages being on mid-blocks contributes to the pedestrian traffic.  
As P/D5 described “we’ve located the garages such that the folks go and park and I they go out into the streetscape and that what generates the pedestrian activity. That of course would be really different than what you see elsewhere where you have a strip shopping center with the same kind of restaurant but you’ve got a parking in front and the only pedestrian activity is to get from the car to the front door where the only interaction of pedestrian occurs within the building or the restaurant itself, in this theme we purposely did not do that we located the parking and the garage in the middle of the of the block so that would walk out to the streets and then make your decision of where you would go where you would use the sidewalks to get to the restaurant.”  

D5 thinks “I would say that the parking has to be very easy to use. And I would also say that you need to protect the pedestrian by a wall of parallel park on the street because people are not going to tolerate the perceive danger as cars went by”  

User of Legacy sees it as an important factor as well “Valet parking, that’s big because there in not a lot of accessible parking, and then there is a lot of parking structures”  

Safety and comfort  
P/D5 “The grove is in West Hollywood and the grove is the most successful exterior shopping in our town centers in the country and draws more people than Disneyland and what he chose to do there was he has a street environment like Legacy but there are no cars he has large garage and he had urban kind of retail mixed-use environment that situated on the street and he have that trolley that runs down, but it is an entire pedestrian environment and I would say if you are looking for something that generates pedestrian activity that is the most successful type of project because it is what you have like you said in the Middle East, where there is, it is not a vehicular environment, it is all pedestrian and of course as pedestrian going around they are not worried about parking or any of that when they are hanging around or walking.”  

D5 mentions the desired environment for pedestrian, “It has to be safe.” Having parallel parking as a wall to protect the pedestrians from any dangers.  

Real estate  
P/D5 believes the first and the most important is whether it is generating more value “in the primary task it has to do with real estate interest and design just to make money, transaction of land and you know vend… all that really tremendous amount to land use plan that can be easily marketed and sold”  

Relation to the city  
D5 talked about the location of the center to the general urban fabric and how it has to be seen and being located in a more busy thoroughfares “the second thing is that street pretty much has to be on a thoroughfare that goes somewhere. So you have to have a big road it has to either be a big negative and load the traffic or it has to be near an intersection that has traffic “and also what surround it in the overall fabric is an important issue” I think being a job rich environment, an office park helps, it is job rich environment, it is very dense, that helps”  

Street  
D5 believes the fact that Legacy has shops located along the way makes it more successful, he mentions “I do not think that squares work at all, I think that streets need two sides, at least it’s easier, and it is easier when they have two sides. I think the square is to visit and it’s to look at.”  

Organization of uses  
What kind of use and organization of the uses are important factors that draws pedestrian to the environment D5 believes “the other thing is retail, particularly restaurants, you know, if I had
fifteen shops then I would make ten of them restaurants, because people go back more often to
them, I mean food places not restaurants, food places.”
P/D5 note that another design element of the pedestrian realm is “Thinking about where
different uses go to get people from one area to the other and then focus on the where the
people would want their parking if the streets could be close down for festivals

West 7th Fort Worth

Atmosphere
The qualities that have been provided in West 7th does not look that different from the down
town, and it is the feel that people use to have when they were walking down the main street of
down towns, this has been mentioned in P/D6 response “they are traditional, you know
sidewalks, street trees, on-street parking, really no different than downtown…..the old school
down town main street” and D6 describes it as uptown once the establishment of it is complete.

Architecture
West 7th has a unique architecture that is different from all the other setting studied in this
research and that is mostly related to the contemporary look of it and the height.
P/D6 “I think the architecture is not as relevant as most people think, because you can look at
towns like Southlake town center and see very traditional architecture, that also frames the
space and there you have something at West 7th a contemporary architecture that does the
same thing it frames the space.”

Mixed-use activity
From the observation point of view, Mix of activities that happen in West 7th is notable, the only
problem that is being observed is, these activities does not have a wide range to expand in
terms of physical location that reveals the potential of the place to expand across further toward
downtown or Lancaster.
P/D6 “With the activities going on adjacent to the public right of way, are performing well then
you do not have to have overly designed public space where it also perform well.” And “Of
course all the store front being filled is very helpful, because that helps to activate the space.”
so its use and the number of uses and lack of vacant space that really begin to activate the
space.”
Also the User of the West7th implied the variety of activity creates a great experience “Very
easy going, try to take care of a lot of attraction in here and basically have some fun. Great
experience”

Human scale
The sense of enclosure and human scale is an important factor mentioned by both D6 and
P/D6.
P/D6 “the sense of enclosure, the height of the building in relation to the public right of way is
really important.”
D6 “that street has a certain section so that building face to building face has,… theoretically
has a comfort distance”

Street
The fact that everything is happening behind the blocks and away from the 7th street is another
important observation of this project. The store fronts toward the 7th street are showing signs of
the activity that are happening but not revealing it completely.as it was mentioned by D6 it has
an inward looking character.
D6 “there is a public street, there is a street section….. about the plan, it is an inward looking
project so the West 7th frontage is not given as much crowd as internal street…..there is room for
moving lanes of traffic, there is too parallel parking, street trees lightings, etc… tree structure.
So that street section is thoroughly consistent because the predominantly of the parking, it is
structured, there are linkages and from the garage to the street which are the sales, carriageways, walkway..."

**Activity watching**
People appreciate a place to sit and watch other people and the activities that are happening around them.
P/D6 “what I forgot to mention about West 7th, there is never enough space for people to sit and enjoy, and watch, that too activates the space”
The user believes in “Lot of attractions, there is a lot of shopping, and there are a lot of people, who like to do that, and just walk around and have a good time and just see everything.”

**Details**
P/D6 “I think traditionally we over complicate our public spaces with too many design details, I think they just need to be really basic but West 7th is good because it has trees you get some shade in the summer when it’s hot they do have some places to sit I think they can use more personally” and he also critiques the design detail , “I think West 7th the sidewalk has areas where there is two different levels and I think that complicates the space visually and I think it complicates it for the user I would , my personal preferences for the space to be level and not have these multiple grades that are going on”

**Clarity**
From a user point of view it still not clear where everything is located and it is partly because of the uses happening in different levels and not exactly on the streets, but the streets themselves create a good clear image of what is going on what to expect.
D6 “what is important is that part of it is organized so that the public way finding is pretty simple. I think in this case it is fairly simple in West 7”
The user while being in West 7th for more than one year does not see the place clear enough when she was asked about the improvement suggestion she mentioned “Definitely just more restaurant guide because I do not even know what is around here, just location wise.”

**Real estate**
D6 mentioned merchandizing as an important factor, it make all the difference for who the users be “The key there is, and this is any, all the ordinary commerce or retail environment is how it is merchandized … they've got a fairly good selection of, I’ll say variety of all stores that have hit the market well and the other important piece is the restaurants…so that becomes the magnet that get people drive to West 7th, it’s s that how it is merchandized.”

**Public space**
A very important part of a pedestrian realm is public space and D6 describe the need of it as he mentions the need of owning the place by the people who are coming and enjoying it, “If you think about West 7th there really aren’t that many spaces for people just to do something and hock, it is pretty much that formal and structured. Most people are just going … to show up, there is not a space there that a general public thinks they own, and they go”

**Relation to the city fabric**
Being surrounded by vacant land and positioned as brown field make it hard for West 7th to be successful on its own, and the pedestrian feel that when the nice environment gets to an end where there is not enough to do and nothing interesting to be drawn to, which makes an isolated island.
D6 describes it as “it is an island …, from other neighbor hoods you are not really likely to walk to there, even though there is a single family a block away on the north side so …. it’s sort of that island phenomena, it has nothing to knit back into so it is more like, about destination for most people except for the selected few that are over there. So that is kind of weakness that happens in that”, “right now there is nothing to knit back to for the most part. Now there is more residential taking place north of that so over time that is going to be more of the uptown type of neighborhood and it’s going to have a different feel to it then, it be more than just about that West 7th project”
Variety of uses

Variety of uses or in the other word, mix of uses established in this bazaar plays an important role for the pedestrian realm, it is the quality that attracts people to the area and what keeps them for a long period of time. This can also imply the variety of activities that are happening in Kerman bazaar.

P/D1 describes it as, “The other thing is the variety of uses, that means different functions and activities which are happening in the bazaar. These different activities are partially vending, partly temporary retailers, partly the gatherings of people around the public shows or the presenters, some parts are historic or touristic centers like Ganjalikhian Bathhouse or Ganjalikhan caravanserai, which people come to visit.” Also he explain the variety of uses as “the wide diversity of functions, these uses are commercial as well as social and also services such as library. It is both retail and production. Some parts of bazaar may manufacture carpet or handy crafts”

D1 emphasize on some functions out of many to be more attractive for people “There are some functions that are there who has its own customers, like it is right that there are so many modern coffee shops all over town but the coffee houses in bazaar has its own attraction, that young people like to go and hang out there”

Variety of spaces

Different uses with their unique architecture are providing a variety of spaces in Kerman Bazaar. Each type of architecture is assigned to a different use, so the variety of uses are providing a variety of spaces.

P/D1 stated, “you see a variety of uses and variety of spaces” and he describes it as “, the matter of shape and form is there too. You see the mosque somewhere on the path, you walk down and you see the caravanserai, then you encounter the water storage with its unique architecture, after that there is the coffee house and the restaurants, this space variety again attracts people and keep them from getting tired. This helps to take away from fatigue and dullness.”

Also playing with the feeling of inside and outside created a good combination for people to enjoy, as D1 talks about “the variety that exists for example it is a covered space that you are walking through, it is neither inside nor outside.” Then “And this pathway in contrast with many pictures that we see that are mostly arches and shops on both side it is not like that, in some places it has a setback which is a doorway or an entrance to a major building or there are caravanserais which you enter and there is this courtyard with a beautiful landscape, you see a diversity of spaces with variety of experience.”…..”The other thing is the openings that this bazaar has, is another appealing feature, like, there are some places that are covered and little light coming from above and there is a place where it gets open, I mean completely an open court yard which you see a lot in Kerman bazaar.” “You think the bazaar has come to an end, which is not like that, there is this vast court yard in the middle and the main corridor starts from the other end again. That is very appealing in my mind.”

Diversity of people

Along with the other diversities, people with different background and diverse society and culture are another important factor that can be seen in the pedestrian realms of the Kerman bazaar.

P/D1 mentioned that “More over the diversity of society, you see different people in bazaar like travellers, strangers, Afghans, people from countryside, all types of people.”

Activity watching

Watching people do their shopping or interacting is considered as one of the interest of the bazaar, as P/D1 mentioned it is a like a museum of an exhibition you want to visit. Or he
mentioned it is like when you are watching television and you can change the channel whenever you want to and you never get tired.
P/D1 talks about “The diversity of artistic work and the variety of space that are there, and the flooring of the bazaar on one side and social activities and existence of different stratum of people, they all convert the bazaar to an exhibition that you constantly want to visit”
D1 in the other hand emphasize on people: “You see people, you see people who are interacting in all sort of manners.” “the shops are small and most of the connection you have with the shop keeper is happening in the main path itself”, “when you are passing buy and seeing the connection and the relation between customer and the shopkeeper is by itself one of the interest of bazaar... an experience by itself, when you see how people are trading, which you would lose something If you send them inside the shops.”

**Sequential qualities**
Being able to transit to the spaces with knowingly shifting from a private space to a public space is what is experienced in the residential neighborhood in the bazaar district, although it has been cut off with the new vehicular transportation routes cutting the southern part of the bazaar.
P/D1 describes this sequential experience “In past, if we look at the traditional cities and the traditional bazaar, spatial system and its structure had more sequential qualities. In old cities people from cal-de-sac and alley from the house would come to the alley and from there to streets then to the Arg square which was the biggest square and public space of that time and from there you would enter the bazaar. So bazaar had the highest rank of the urban sequential movement because of the variety of functions and the bigger space it had.”

**Relation to the city fabric**
P/D1 describes it as “Exactly like the veins of the body the more we get far of the hearth the more the veins get narrower. The same thing is happening here between the bazaar and Arg square to the cal-de- sacs in the district and neighborhoods. The same sequential system is visible here. This gives a natural movement from their doors getting to the path without they need to hesitate. But today this sequential system has fallen apart partially because of vehicular transportation system that cuts through this texture.”

**Pedestrian access**
The ability to physically access the bazaar is provided with it being penetrated with different secondary pathways that are coming from the neighborhood, but the fact that Kerman bazaar is established in south-north axes and east-west axes makes it easier for pathways to connect from all directional.
D1 explain it as “It has a very straight kind of East-West access and North-South access. The best thing about it is everybody can access it easily. That means from all of the streets around you can either access one of the main corridors, all of which have some kind of access to the bazaar”

**Sense of comfort**
The harsh climate condition has lead the bazaar to become covered in some parts, that has influenced the comfort of the people getting out of the sun and toward shade where you can get natural light at the same time and every once in a while the courtyards are exposed in the way of the passenger, all has helped the traffic of pedestrian in Kerman bazaar.
P/D1 describes it: “If you look at it in Kerman the weather in summer is extremely hot and it is extremely cold in winter. The covered bazaar can help to provide a shelter that makes it calm and ease naturally for the passengers that move through the covered path. That means in summer when it is hot everywhere, the passages of the bazaar are in shade and so cooler and in winter it is the other way around.so you see that naturally it is a well-adapted environment that a person would rather walk in the bazaar”
D1 also state it as an important factor “this beautiful space that is both covered and both lightened is the best solution in hot and arid climate like Kerman. You can go there any time of the day, which is absolutely perfect. For example in Kerman at 2:00 Pm you cannot go and walk on the streets just like that”
Security
It is the restriction of cars from getting into the bazaar that makes it safe and secure for the pedestrian to pass through liberally and freely.
P/D1 “The bazaar with its safe environment from the transportation point of view provide a comfortable place for the passenger, that is why everybody love to pass through bazaar even when they just want to access the other part of the district, especially the families and women”

Gender preferences
P/D1 mentioned gender preferences which can rise a very interesting matter, with more than twenty years of experience in Kerman bazaar he describe a phenomenon of gender preference here and he relates it to the safety and security of bazaar, “If we get statistics of the people who are passing through the covered portion of the bazaar maybe eighty percent or at least seventy percent are families. Men as an individual are less common to go through the bazaar.”

History
The other factor that is unique only in bazaars is the history and the fact that it has been under construction and modification through history, so it would look interesting for a passenger to experience different parts with different historical significance and it may be visible from the architecture and different architectural style used here.
P/D1 describes “moving through the bazaar is moving through history of that place” and “each part of bazaar has been established in a different period of time, for example a part is for Qajar period, a part is for Zandieh era, a part is for Safavid era with different type of architecture, and so on. This variety of spaces in a historic approach has produced a different shape and form that draws a person as a pedestrian to follow it.”

Details
P/D1 talks about details of the setting that makes it even more divers, “This diversity in space and function and activity plus the color, scent and sound that is coming from different shops like spice shops, they all look like you are sitting in front of television and changing the channels.” “The other thing is important is the artistic and aesthetic qualities, this artistic qualities such as shape and forms of the arches and domes or the tiling of the ceilings, patterns that are there, the columns and the walls.” Suggesting details “predicting today’s need of people for example a water fountain or seating area. One of the problems of Kerman bazaar is unfortunately we do not have anywhere to sit. It is better to provide spaces for traveller and people to stop and sit.” “The more we encourage people to stop and sit, intentionally providing places that makes people stop and staying for more time which can help them to enjoy more and a suitable areas for them to rest.” “Overall, thing that are impediment for movement and presence of people should be reduced, appearance improvement should be considered in bazaar, with more providing green space, water feature and seating area especially coffee shops and café and as well as urban furniture, this would make more attraction.”

Tabriz Bazaar

Pedestrian access
The access being the foundation of the bazaar, it being pedestrian and being restricted to cars is important attribute of its pedestrian realm.
D2 describe is as: “Everything about Tabriz bazaar is for pedestrian…… the direction of main pathways were going to the gates of the city. Then when it gets bigger, which is now. One that is called the new Raste and the other one is called the old Raste. They are two parallel lines that are going North-south and one diagonal which is East-West….. This is mainly design for pedestrian movement and the original of Tabriz bazaar is mostly caravanserai kind of systems” which means it has a courtyard in the middle and shops are aligned on the edges.” “So if we look at it fundamentally you see there are the courtyards with two main corridors (Raste) and some secondary pathways that are connected.”
D2 complains about the vehicular routes that are cutting the progression of the pedestrian access “With automobiles coming to Tabriz the southern entrance is cutting the bazaar in half
which is Jomhoori St. this street has cut the bazaar in half otherwise everything else is designed for pedestrian movement.”

But he thinks it is at the same time longer than it should be to make it coherent for the pedestrian “in Tabriz, the longer it gets the width stays the same that makes its integration to become lower. That can cause your perception of the space to be much less because it is long, you do not see the end and you have no idea of what is happening.”

But he suggest to provide a transitional hub for changing the mode of transportation so it would not be as crowded as it is at the entrances, “I believe if we can connect the main access of the bazaar to the major activity centers of the city, it can revive all the major activities within the city. I think the main problem of the bazaar is the main accesses have been cut in several parts by the vehicular access. It is possible to improve one of these accesses and manage the vehicular traffic around it”

P/D2 comment the same way but he describes as an axis that is to be knitted to urban fabric as it read like the open spaces and the streets we see in urban fabric “the bazaar is itself a pedestrian space” “The urban fabric is defined as motion axis such as pedestrian axis plus the open spaces. If you look at extensive plan of the bazaar they are Sarais, caravanserais, Timche as an open space, and the main access which are the corridors, you would see that in urban fabric as streets and squares.”

**Variety of spaces**

P/D2 “that it is not a repetitive path, the existing of the Sarai and caravanserais, bends and the intersections (Charsugh) and the variety of the activities in the main corridor (Raste). For example you see a main corridor (Raste) in the bazaar, you move through it for a while then you enter an intersection (Charsugh) which turns into three different activity that follows three other access”

P/D2 “the variety that exist in construction of the space… The variety that exists in construction of the space that itself from the visual quality stand point has a great contribution to the space.

**Diversity of uses**

P/D2 “it is more a place for cultural and social exchange that is why many of the traditional ceremonies and celebrations are happening in bazaars. That is one reason that makes the bazaar to become part of the urban fabric.”

User “Some come mostly for the wholesale shopping, some are tourists that like to walk and enjoy the architecture... Some come to renew their home’s appliance, there are all sort of things that makes bazaar so popular.”

**Unity**

The variety of space and function need an element of unity to makes it coherent, D2 believes it is the material that is the unifying element of the bazaar

D2 “So if we look at it fundamentally you see there are the courtyards with two main corridors (Raste) and some secondary pathways they are connected.”

**Human scale**

P/D2 describes human scale in a different format, he see it as geometry which is defined as the relation of forms “The geometry that is used in these spaces, the geometry that made many elements to a human scale elements”

**Activity watching**

Watching people and the environment is stated here as though if people do not want to shop in that setting they go to watch and enjoy the environment.

D2 “in new generation we don’t see people doing their shopping there, if they go there they go to watch and enjoy the environment.”

**Relation to the city**

D2 “I believe if bazaar wants to live its life the way it does right now it is better to encourage more pedestrian activity and connect it to the everyday-life transportation”

D2 “The main accesses of bazaar are still connecting two parts of the river and the city so these can be used in every-day life of people if connected well to the rest of the district and city....
when we say pedestrian pathways are important you can see it on the other side of Mehran river, for example the connection of the bazaar to the northern part of the river goes on a bridge which even when people were passing on the river the right and left of them were shops, those are very important."

Details
D2 “The other factor would be the domes that are eye catching elements give people a sense of direction. for example when you see a higher ceiling with a higher kind of dome you know this should be something different and there is either an intersection when you get to choose where you want to go or there you see a special building or activity that has been emphasized on.”
P/D2 believes the attraction of the details is attracting pedestrian traffic, “The way of using light for illumination of the space at the same time ventilation”

Commerce
The commerce itself is attracting pedestrians to come, and the fact that bazaar plays an important commercial role in the city.
D2 mentions “this bazaar is still very important factor of the economy of Tabriz and the region. It has not yet lost its importance….. So if somebody is in carpet business they have to have a shop in bazaar as well as other branches, if they have, in other parts of the city. Because it has kept its character as the major trading center of the city.

Sense of comfort
D2, “The other point is the climate condition, since the climate of Tabriz has always been cold, so all the corridors (Raste) have dome on it and covered and it is made by brick. The fact that the lights are coming in a mild way from the ceiling. You never get tired when you are out there, that is because of its special kind of space.so because of the cold climate it is providing a safe area for the pedestrian and it is cooler in summer because of the height it has, it would take a while for it to warm up, and in winter because of its compaction the cold weather does not really get into the space”
P/D2 “One is definitely security and the comfort in different climates especially in Tabriz bazaar both in bazaar and even other spaces this covered corridor quality contributes to a presence around the clock, any time of the day or night.”
User “Because of its paved character and that there are no cars and people can move easily. Or for example in Tarbiat St. On the other side of bazaar, it is all paved and no cars are allowed in that area…. it is comfortable for people to pass, they’ll go. If it is not they don’t go. Second floors are mostly hard for people to go they prefer to stay at the ground floor. So if you make it comfortable for people to come it can help the business as well.

Focal points
For enhancing the bazaar D2 suggested focal points, “I believe from South and North of the bazaar there could be two squares with two distinctive functions that can bring more people, Because right now it is working properly the way it is, it may need a little bit of encouragement to assure its life from now on.”

Gender preference
D2 also has seen a pattern of gender preference in bazaar “There is another access in front of bazaar called Tarbiat Street which is now selling leather bags and shoes, this street is restricted to cars and it has been built in recent years. It is full of people specially women.”

Security and safety
D2 describes safety and security as an important factor “The only problem is that when you are on foot and coming from these pedestrian spaces you encounter this traffic of cars which is all buses and cars with lots of pollution and unsafe activity so you are discouraged from continuing your path”
P/D2 mentions safety and security very briefly “This [variety of activities and spaces] is in a way the main factors of interest of the bazaar plus the other factors such as security safety and comfort.
Pedestrian access

This bazaar is now a pedestrian-only environment but it was used to be used by the mode of transportation of the old times such as horses and carriages but now it is a pedestrian-only path which is connecting different parts of the urban fabric with motive and static spaces.

P/D3 commented “Isfahan bazaar is mainly designed for pedestrian… At the old times there were gharries and horses coming and going in the main accesses, but now it is mainly pedestrian.”

D3 look at it as a series of motive and static spaces that are responding well to the pedestrian needs “If we want to remark the elements that are there, we can talk about paths which are organized for pedestrian movement, paving or the resting areas that are static spaces but they are for the pedestrian usage and seating.”

Diversity of uses

Different uses being placed along the pathways of bazaar, the diversity of it and the fact that it can respond to everyday life of people, makes it a good place for people to fulfill their needs in one stop and stay longer.

P/D3, remarked “It was a place which had all sort of urban facilities, that means if you close the entrances of the bazaar at night, there were all types of things that a person would need to live, it was a covered city by itself” But on the other hand he thinks young people are looking for more modern facilities and food products which can improve the environment “young people prefer to have entertainment and all sort of food products along their shopping activities, so if we provide those, we can respond to the taste of young people as well.”

D3 identifies two major uses for the pedestrian accesses in bazaar to make it successful. He identifies commerce-based uses and service uses but his description of service uses include a mix of uses itself, which are hotel, restaurants and cultural exhibitions.

D3 describes it as “what bazaar has is couple of different main elements, one is the part which is mostly commerce-based area that itself has two different section, one is the old bazaars or old city elements such as corridors, Sarai or courtyards and the small bazaars, the other is shopping centers and malls. The other element is the services and this too has old and new sections, old elements such as mosques and water storage and those kind of functions, the new parts are the spaces that are formed because of the traffic of pedestrian which are touristic, residential and recreational centers that is established through the renovation of the existing historic buildings, it is been converted to mixed-use, which is matching the main structure of the city fabric and bazaar by the way. They are located at places with historic value or major nodes and you know…, whether it is located on somewhere with physical value or touristic value so it has multiple functions, cultural, residential, and touristic and even restaurants.

So if we take a vehicular access and turn it into pedestrian access with none of these attractions, it would not work definitely.”

Relation to the city

Pedestrian realm in order to be well read and used should be corresponding to the overall urban fabric, how it is knitted to the city fabric can be the key to success or fail of that pedestrian space.

D3 describes the relation of bazaar main corridor to the overall city fabric, “What is one of the characteristics of the city of Isfahan is that this city is organized out of two very distinct axis, one is its natural axis which is Zayande-rood river. And the other is it main boulevard which is Charbagh....the main corridor of the bazaar, is matching the main axis of the city, and the arteries and accesses that are the main axis in between the districts, and the small bazaar (Bazarche) are located along that... So we have the bazaar then the pathways branching from the main corridor toward the districts and then we have these tertiary routes”... “The functional elements that are matched with the structural elements of the traditional city would help the traffic of the pedestrian. This helps the existence of the pedestrian.”
Sequential quality
Automatic sequence that lead people through their environment and identifies each path way
D3 identifies the secondary pathways of the bazaar as “main access between districts” so this
secondary pathway branches out into the district and neighborhood itself,” because the main
structure of the city is established based on neighborhood or district structure and it is still
keeping that structure in contrary with the other cities of similar structure. So we have a network
of the access between the districts which has the potential to be converted to pedestrian axis
with some traffic limitation” that is how he identifies the sequential quality that exist in the this
fabric that enable the pedestrian routes to work and draw people from the surrounding area.

Security and safety
Pedestrian realm respond to safety and security as, the more people feel safe and secure from
all kind of dangers that can threat their movement, the more it encourages them to use that
environment, one of these dangers being automobiles.
P/D3, associates the calmness with being safe and absence of automobiles “it is still providing
security and safety from the automobiles. Bazaar in the real sense is calm and out of danger.so
somebody who is walking can stroll without being af raid of being hit by anything from behind or
sides.”

Activity watching
Sometimes people are just visiting a place just to watch other people and the activities that are
happening around them. The pedestrian environment that provides that option for the user, is
responding to one of the basic needs.
P/D3, mentions watching as being an important quality of the pedestrian realm in this bazaar “It
is designed to provide window shopping opportunity and using the facilities also for shopping
itself”

Sense of comfort
As much as safety, comfort is another essential need of human being and this quality is much
more needed for pedestrian space since it should be provided by the environment not the
individuals. Covered pathways are providing shade and comfortable temperature for the
pedestrians and that distinguishes them from other pedestrian environment, so the right
temperature and shade is two essential elements for the sense of comfort in pedestrian realm.
P/D3, describes it as “One of the best qualities of bazaar in cold and hot seasons is that since it
is covered and the walls are so thick with masonry material, the transmission of heat takes time
to happen so there is big difference between inside and outside of the bazaar temperature wise.
That makes it easier for people to walk in bazaar. Especially in summer it is enjoyable and
calming to stroll while in the same time walking in the streets of Isfahan is intolerable and even
dangerous, when it is 37-40 (98-104 F) degrees outside.”

Variety of shopping options
It is all about having different choices, although each shop is providing some sort of variety for
what it exhibits, different kind of stores of the same kind are located along a path that draws people to
study all the choices before they make their decisions, that definitely adds to the activities along
that path, the same thing happening on different path with different kind of shops.
P/D3 describes it as a quality that contributes to pedestrian traffic.” Isfahan bazaar has different
sections for each profession such as goldsmith, home supplies, spices, food, and carpet and so
on. There , variety of stores of the same profession exist that people can chose from, like if they
are looking for a certain thing there are 50- 60 stores offering variety of options for that.”

Details
User “bazaar has many different courtyards and halls with the same architecture of the old
times with tiles and details, many are coming to see those qualities.”

Separation of accesses
Although it is a pedestrian only access but there are motorcycles and bikes using the bazaar as
well that identified as “making problems sometime”, the separation of accesses can be take into
consideration. That also implies the need for a pedestrian only pathway.
P/D3, “now I can say it was designed for one to two percent of the population that is using the bazaar right now. So I would recommend that the use of pushing carts be banned for certain hours of the day that is more crowded. If you are walking in the Qasariyeh there is no place to move because of the tourists and traveller are coming and going so the calm and ease can be hard to achieve here.

User “The situation of Isfahan is, because most of the traffic of freights and sometime motorcycles, or the bikes those are the things that are making problems sometimes.”

Transportation mode
Although it is not the quality that already exist in this bazaar but D3 identifies it as one of his suggestion for better improving the pedestrian environment “the other thing that can help the spatial quality are definitely the specific movement path, transportation facilities, converting spaces, because you be able to… since you are coming with other transportation modes such as bus, cars you have to at some point get on foot so you can walk from there. That conversion space is critical.”... “The organization of vehicular and pedestrian transportation in relation to each other to improve spatial qualities of pedestrian realm. This organization include a lot of things from paving to the pathway to the transportation facilities, interesting and attractive spaces on the pedestrian path.”

Organization of uses
D3 “locating the service elements that I mentioned. If they are scattered in the city fabric with no organization that won’t help the pedestrian movement that much.”
APPENDIX B

APPROVAL LETTER
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EXPEDITED APPROVAL OF HUMAN SUBJECT RESEARCH

IRB No.: 2012-0425  
TITLE: The "Pedestrian Realm" as a Genesis of Commerce: Bazaars of the East and Mixed-use Centers of the West"  
Effective Date: February 28, 2012  
Expiration Date: February 28, 2013

Approved Number of Participants: 25 (Do not exceed without prior IRB approval).

The University of Texas Arlington Institutional Review Board (UTA IRB) has made the determination that this research protocol involving human subjects is eligible for expedited review in accordance with Title 45 CFR 46.110(a)-(b)(1), 45 FR 60364 and 65 FR 50353, category (6)(7). The IRB Chairman (or designee) approved this protocol effective February 28, 2012. IRB approval for the research shall continue until February 28, 2013.

APPROVED NUMBER OF PARTICIPANTS:  
This protocol has been approved for enrollment of a maximum of 25 participants and is not to exceed this number. If additional data are needed, the researcher must submit a modification request to increase the number of approved participants before the additional data are collected. Exceeding the number of approved participants is considered an issue of non-compliance and will result in the destruction of the data collected beyond the approval number and will be subject to deliberation set forth by the IRB.

WAIVER/ALTERATION OF INFORMED CONSENT  
The above referenced study also qualifies for a waiver of the requirement to obtain documentation of written Informed Consent under the federal guidelines for the protection of human subjects as referenced at Title 45 CFR 46.117 (c). An IRB may waive the requirement for the investigator to obtain a signed consent form for some or all subjects if it finds that:

1. That the only record linking the subject and the research would be the consent document and the principal risk would be potential harm resulting from a breach of confidentiality. Each subject should be asked whether the subject wants documentation linking the subject with the research, and the the subject's wishes must govern.

   AND/OR

2. Pursuant to 46.117(c)(2), the research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside of the research context.
MODIFICATION TO AN APPROVED PROTOCOL:
Pursuant to Title 45 CFR 46.103(b)(4)(iii), investigators are required to, “promptly report to the IRB any proposed changes in the research activity, and to ensure that such changes in approved research during the period for which IRB approval has already been given, are not initiated without prior IRB review and approval except when necessary to eliminate apparent immediate hazards to the subject.” Modifications include but are not limited to: Changes in protocol personnel, number of approved participants, and/or updates to the protocol procedures or instruments and must be submitted via the electronic submission system. Failure to obtain approval for modifications is considered an issue of non-compliance and will be subject to review and deliberation by the IRB which could result in the suspension termination of the protocol.

ANNUAL CONTINUING REVIEW:
In order for the research to continue beyond the first year, a Continuing Review must be completed via the online submission system within 30 days preceding the date of expiration indicated above. A reminder notice will be forwarded to the attention of the Principal Investigator (PI) 30 days prior to the expiration date. Continuing review of the protocol serves as a progress report and provides the researcher with an opportunity to make updates to the originally approved protocol. Failure to obtain approval for a continuing review will result in automatic expiration of the protocol all activities involving human subjects must cease immediately. The research will not be allowed to commence by any protocol personnel until a new protocol has been submitted, reviewed, and approved by the IRB. Per federal regulations and UTA’s Federalwide Assurance (FWA), there are no exceptions and no extensions of approval granted by the IRB. The continuation of study procedures after the expiration of a protocol is considered to be an issue of non-compliance and a violation of federal regulations. Such violations could result in termination of external and University funding and/or disciplinary action.

ADVERSE EVENTS:
Please be advised that as the principal investigator, you are required to report all adverse (unanticipated) events to The UT Arlington Office of Research Administration, Regulatory Services within 24 hours of the occurrence or upon acknowledgement of the occurrence.

HUMAN SUBJECTS TRAINING:
All investigators and key personnel identified in the protocol must have documented Human Subjects Protection (HSP) training or CITI Training on file with The UT Arlington Office of Research Administration, Regulatory Services. Completion certificates are valid for 2 years from completion date.

COLLABORATION:
If applicable, approval by the appropriate authority at a collaborating facility is required prior to subject enrollment. If the collaborating facility is engaged in the research, an OHRP approved Federalwide Assurance (FWA) may be required for the facility (prior to their participation in research-related activities). To determine whether the collaborating facility is engaged in research, go to: http://www.hhs.gov/ohrp/humansubjects/assuranceenzyme.htm
CONTACT FOR QUESTIONS:
The UT Arlington Office of Research Administration: Regulatory Services appreciates your continuing commitment to the protection of human research subjects. Should you have questions or require further assistance, please contact Robin Dickey at robind@uta.edu or you may contact the office of Regulatory Services at 817-272-3723.

Sincerely,

Patricia Turpin

Patricia Turpin, Ph.D., RN, NEA, BC
Clinical Associate Professor
UT Arlington IRB Chair
REFERENCES

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Zoha Niazi was born in Tehran, Iran. She completed her master degree in architecture in Azad University of Teheran. She joined several different architectural firms before she decided to continue her education in landscape architecture. In 2010 she enrolled in the program in landscape architecture at the University of Texas at Arlington.