Social sustainability and public life in Iranian Squares:

the case of Naghshe Jahan Square

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Abstract

Iranian town squares have always been places where people were able to engage in social interaction, cultural exchange, economic activities and political events. These programmes were shared by different socio-economic and cultural groups. This study focuses on the potential role of Iranian town squares in public life and their place in social sustainability.

The history of Iranian cities, amply demonstrates that their squares have been very useful in improving the quality of life of the citizens and have played an important part in publicising the special identity of the towns. At the present moment, some of them are still thriving and useable and they are among the most significant factors making their cities sustainable. In addition, they improve the quality of municipal life by providing dedicated spaces for contact and socializing.

This study offers a new understanding of Iranian squares based on how they have developed, how they have been used and how they affect people's lives. In this regard, Naghsh-e-Jahan Square was chosen as a case study to provide a detailed analysis of the phenomenon

Naghsh-e-Jahan Square is located in Isfahan city, one of the largest in Iran. The researcher, who is an architect and interested in this subject, explored this square in detail. As she comes from an Architecture background so she can probably design better public spaces. The fact that she is not a native of Isfahan was somewhat of a disadvantage for the case study: she was, for instance, unable to enter the square to attend various religious, political and other annual events. Furthermore, the researcher had difficulty in finding different groups for interviews because her stay in Isfahan was short. The researcher's point of view as an architect has been taken into consideration in this study, especially with regard to the walking strategies approach. Moreover, the researcher tried to suppress her opinions during the interviews and drawing exercises.

Another point is that this research could have benefited from exploring town squares in other countries across the world. For instance, this might usefully apply to some Middle Eastern states, especially Iran's neighbours.

This study shows how Naghsh-e-Jahan Square as a case study has been successful in addressing changes in society by adapting to people's needs over the centuries. Another aspect of this study concerns the lessons that can be learnt from Naghsh-e-Jahan square. These can help urban planners by providing information to assist them in developing and designing new public urban spaces and especially town squares in Iran. In addition, the results of this study can be applied to the traditional town squares that have not been as successful as Naghsh-e-Jahan Square.

Acknowledgments

I offer my special thanks to my first supervisor Dr Cristina Cerulli for providing outstanding guidance and encouragement. I also owe a huge debt to Prof. Doina Petrescu my second supervisor. I am particularly thankful to her for her support and encouragement, which always seemed over and beyond the call of duty, whenever I was in need.

I am deeply indebted to my dear teacher Deborah Cobbet who made the final stages of submission possible. I cannot adequately express my thanks to her for her help and support.

Special thanks go to my teachers in Iran Prof. Hashem Hashemnezhad and Dr Vahid Ghobadian. Prof. Hashem Hashemnezhad who introduced me to Sheffield University and, when my motivation was low, provided the necessary encouragement and assistance to keep me going, for which I am truly grateful. I am also deeply indebted to Dr Ghobadian who referred me to this university and boosted my confidence to study here.

I pay homage to the memory of my best friend Maureen Webster for a debt that was not repaid. Her words of wisdom were inspiring and by listening to my problems, she provided me with much needed emotional support during the years of our stay in UK.

I would also like to thank my parents whose strength and dignity made the good things in my life possible. I know they are extremely proud of me. Also my parents-in-law who provided me with much needed emotional and instrumental sustenance for which I am extremely grateful. Thanks for enduring our separation during these years of study.

Thanks too to Fariba Fani Maleki one of my best friends who was my fellow student; she always encouraged me and made the university environment more liveable for me. I also owe a significant debt to my friends Hoda Yazdanpanah, Ali Sherafat, Hamed Imantalab, Nader Poormoosavi and Khalifeh Behbahani.

Finally, but nowhere near the last of my thoughts are my husband Hassan Khalifehei and our two beautiful children, Hatam and Ilya. I sincerely thank my patient husband who was my best comrade throughout this long process of study. Although he was also busy with his own thesis, he accompanied, guided and supported me. I will be forever grateful to him. Thank you so much.

To Hatam who grew up while his mum was working on her thesis. I now look forward to dedicating every spare minute I have with you to make up for all that lost time. Thank you for your patience. You now get your mum back. Last but not least, my love to Ilya, who fortunately arrived after this thesis was finished.

To my beloved son Hatam

who endured the hard years occasioned by this research

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CHAPTER 1: INTRODUCTION

The social and economic structure of many countries have changed during the past century, thus, the role of public space and the character of public life is not completely obvious. It cannot be said that public spaces have declined in Iran but it is necessary to improve their quality. Low quality of public spaces is one of the factors that has a detrimental impact on the quality of social life. Therefore, meaningful public spaces are needed to enhance social interaction and exchange of ideas among different members of society; in addition, they allow people to learn more about each other. Public places are the relationships between individuals and social interaction.

Town squares are considered as public places in the cities. Town squares are one of the parts of Bazaar and a Bazaar historically is regarded as one of the most important parts of the Iranian city. Today, Bazaars are still social and commercial places. "Urban sociologist, urban planners and designers generally explain the bazaar as the heart of Iranian city." (Masoudi Nejad, 2007, p. 188)

Town squares in Iranian cities have been places in which people can take part in social interaction, cultural exchange, economic activities and political events which can be shared by different socio-economic and cultural groups of people. Some authors argue that the public place has always been "the place for people to meet and greet each other, a place to exchange information about the city and society, a place where important events were staged." (Gehl and Gemzoe, 2008, p. 10)

Public open urban spaces are one of the integral parts of cities and there is a rich literature on this subject. As has been proved, they improve the quality of social life. In contrast, very few studies focus on public spaces in Iranian cities with the exception of some historical studies; Tavasoli (1991), Sultanzade, (1994), Pakzad (2003) and Tafahomi et al. (2007.p.84) without any consideration of the relationship between public urban spaces and people and the role of public urban spaces in the Iranian cities in general. This study aims to partially address this conspicuous gap in the literature by focusing on traditional Iranian town squares and their potential role as models of contemporary urban life that is socially sustainable.

1.1 Hypothesis

Most traditional town squares in Iranian cities now seem to be less popular than new public urban spaces such as parks, shopping centres, coffee shops and cultural centres. There is a need to revitalize existing public places and to adapt them to today's and tomorrow's needs which is common across the globe, as Gehl & Gizmzoe point out. "Lost public space is being regained and new urban spaces established all over the world due to the desire for a better balance between the functions of the city as market place, meeting place and traffic space." (Gehl and Gemzoe, 2008, p. 19)

Changing patterns of life in Iran mean that people need more public spaces. Traditionally, most people, particularly men, gathered in town squares which have mosques, baths and other public spaces to share information and socialize. They also frequented traditional gym centres which are gradually disappearing from Iranian cities. In general, women did not have any place to meet in public spaces and traditionally had to gather in their houses, thus developing relationships with their families only. But today's Iran, a country in which the majority of its university students are female, has substantially different needs.

Iranian cities need to address the changes in society by adapting themselves to be more inclusive across genders and ages. However, town squares are spaces for all people and are also a main part of the structure of cities and today the lack of them is completely obvious. On the other hand, some of the old town squares are working for people and they are civic elements that help people to know the cities better. In addition, they are alive and attractive for people. For example Naghsh-e-Jahan Square is one of the traditional Iranian squares which is still alive and popular. In this study this square will be discussed more and analysed as a case study. Some of the many questions being raised in this argument: why and how are some Iranian town squares used for new needs and activities? Do they have any role to help cities improve social sustainability?

Also, which are the characteristics of traditional Iranian squares that new ones should inherit? What makes traditional Iranian squares such focal points in urban life? Since public spaces help to improve the quality of social life, they are also crucial to make a city more sustainable.

1.2   Research Questions

As a result of the previous sections, the main questions addressed in this study are:

Q1)   What lessons can be learnt from a critical investigation of the well-established and thriving traditional Iranian square "Naghsh-e-Jahan"?

Q2) Does Naghsh-e-Jahan Square have any role in making Isfahan city more socially sustainable?

In order to respond to the main questions, these sub-questions have come up and the research objectives have been set out as:

Q1)

A) How has Naghsh-e-Jahan Square been used over the centuries?

-Developing and understanding of how Naghsh-e-Jahan Square developed historically

B) How is Naghsh-e-Jahan Square used today?

-Exploring the current function of Naghsh-e-Jahan Square by understanding common activities and uses by different groups of people

-Finding out what facilities the Square provides for its users

-Exploring the built fabric of Naghsh-e-Jahan Square

-Investigating what people presently feel about the town squares

-Understanding people's perceptions about the square (what is important, attractive or even forgotten about the square and also finding out people's expectations)

Q2)

A) What is the definition of sustainability and particularly social sustainability?

-Defining sustainability, focusing on social sustainability

B) What are the criteria of social sustainability for public urban spaces?

-Defining a set of criteria of social sustainability in urban design

-Evaluating and validating relevant factors of social sustainability

C) What criteria of social sustainability can be addressed in Naghsh-e-Jahan Square?

-Mapping how Naghsh-e-Jahan Square can improve Isfahan city against the criteria for social sustainability

1.3   Research Methodology

The research process consists of: 1) Literature Review 2) Collecting data 3) Organizing and categorizing collected data 4) Analysing and visualizing collected data 5) Interpreting results.

As this research looks at the historical conditions of the selected case studies, the first stage, being interpretive-historical research, is based on collecting historical data such as photos, maps and publications. Multiple methods are involved in a second stage in order to look at contemporary conditions including qualitative methods such as observation, walking, visual methods and semi-structural interviews.

Interpretive-historical research

Because the case study method is intended to investigate physical, historical, social and institutional location (Denscombe 2003, p.37), it starts with interpretive-historical research about how and why this square was built and for what reason this place had been used by people and the government. In this regard, firstly, some documents, such as published and unpublished records, personal materials and photographs are considered as the evidence and data; secondly, organizing the data by identifying; thirdly, analysis, assessment and evaluation of the existing data and finally, narration (Groat & Wang 2002, p.137).

This methodology attempts to highlight issues related to the history and development of Iranian Squares to identify the process of change and the importance of the squares (see section 3.3.1).

Multiple methods for looking at contemporary conditions of the case studies

This section seeks to identify relevant factors to study about the contemporary conditions of squares in Iran. It helps to identify the factors that influence the use of squares in Iranian cities and therefore should inform any designs for new or regenerated squares that are successful in terms of social interaction (see section 3.3.2).

Qualitative methods

Qualitative methods focus on commonly considered appropriate values and attitudes about open spaces due to the fact that they have the potential to provide insights into the context of people's daily lives. Thus, appropriate approaches are needed to reveal the depth of feelings and emotions that people have in relation to their environment (Burgess et al. 1988, p.456)(refer to section 3.3.3)

Observation methods

Direct observation is considered as a means of data collection for the section of qualitative studies. According to Sanoff (1991), observation and behavioural mapping is a method to describe what people do in an environment. Direct observation gives opportunities to get first-hand information of the case study and to record a wide range of primary data (Creswell 2008).

After Gehl (2004), the methods of observation used in this study are: firstly, finding how the square is used, secondly, providing information on where people walk and stay and thirdly, on what activities they do there as part of their daily life or for recreational purposes. In observation methods, individuals are considered as objects of observation and the source of information for

the study are people's spontaneous behaviour and their continuous activities (Razzaque 2009, p.27) (see section 3.3.4).

Walking as a tool

Walking was chosen as a tool to collect the data for research. Although walking is an ordinary practice that happens for most people every day, the special value of walking as an experience is that it has an important relationship with the sense of place. The objective is to point to walking as an aesthetic practice capable of explaining the urban spaces that frequently have a nature which still demand comprehension, in order to fill it with meanings rather than design (Careri 2001, p.26).

These types of strategic walks: walking towards, walking across, walking along, walking into, walking out, walking through and walking about, after Chora & Bunschoten (2000) have been undertaken with a photographic and video camera with the specific aim of identifying and recording aspects and variables such as those indicated by Lennard (2008). These include a threshold experience, architectural backdrop visual enclosure, continuous building walls (with a sense of inclusion) transportation positions, traffic conditions around the squares, parking and hospitable setting (see section 3.3.5.1).

Photography and visual documentation as a method

In this research, during the observation, in addition to walking and keeping in mind all sensitive experiencing; the vision, sound and aromas, distances and depth (Mahiques 2009), visual and photographic documentation is used as a complementary method during walking. This is in order to help the data to be collected, reviewed and selected, compared and triangulated, documented, converted and analysed. Additionally, the sensory memory of the camera is helpful to record overload information and save time all through the observations (explained in section 3.3.6.1)

Semi- structured Interviews

Semi-structured interviews are also chosen as a methodology to collect information about people's feelings. The questions are designed to find out functions, facilities and subjective perspectives. Also, the interviewees can put comments for every question (see section 3.3.7.1).

7

Research Methodology Process

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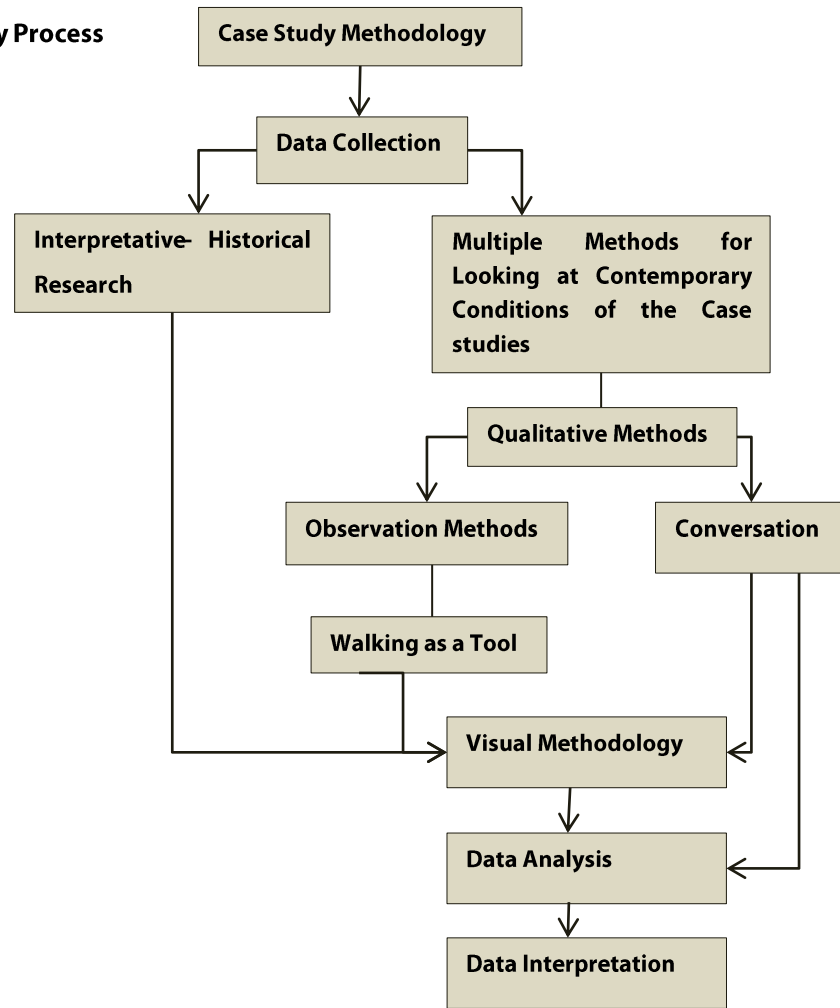
Figure 1: Research methodology process

1.4   Thesis Structure

This dissertation is structured by seven chapters:

1) **Introduction:** The first chapter gives a brief understanding of the research context and hypothesis and provides an overall view of the research questions by explaining the research objectives. Also, it briefly explains the methodological approach of the research and, finally, this part summarizes the contents of each of the seven chapters.

2) **Literature review:** Reviewing existing literature on public urban spaces in particular town squares and social sustainability, also, conducting theoretical framework for this study are the tasks of this part.

3) Research Methodology: A case study method is followed in this research through detailed data collection and analysing the data. It provides an overview of the research process, what the steps are and how they are to be conducted.

4) Iranian Context: This part of the study provides background and contextual information for the study. It explores the history and evolution of Iranian urban public spaces, particularly town squares. The aim of this chapter of the study is to identify the context of the case study.

5) Case Study "Naghsh-e-Jahan": This part is dedicated to dissecting the case study of the research in depth following the methodology and historical analysis of the case findings with reference to the objectives of the study.

6) Data Analysis and Interpretation: In this stage of the research the collected data from the existing condition of Naghsh-e-Jahan Square are analysed and interpreted critically.

7) Discussion and Concluding Remarks: The final phase of the study is explaining a summary of the findings and results of the study, a restatement of the aims which gives a brief review of the overall research questions and objectives, limitation of the study, further research scope on this topic and finally theoretical and practical implications of the research.

The appendices provide additional information to the reader. There are a few appendices, each signposted within the relevant chapter of the thesis.

CHAPTER 2: LITERATURE REVIEW

This chapter comprises of three main parts. The first part of this chapter discusses theories to formulate a framework like urban open space definitions and influential factors on them. The second part of the study provides a review of the relevant literature on a historical perspective of town squares. These sections of the literature review can give us a brief understanding of public urban spaces and especially town squares.

The third part of this chapter is dedicated to the theoretical framework, selected criteria and criteria selection framework for social sustainability. This section of the literature will indicate significant dimensions and relevant variables which are likely to be important in helping to design a square.

2.1 Definition of Public Open Spaces

Generally, public open space means the space open to the sky and the public. Town squares, streets, parks and outdoor recreational areas can be considered as public open spaces. Town squares as a major kind of urban open space have been focused on in this study.

According to Carr et al., (1993, p. 3) "Public space is the stage upon which the drama of communal life unfolds." They also consider the streets, squares and parks of a city such dynamic spaces that are providing the channels for communication, similarly, Jackson (1985) believes a plaza is an urban open space that causes people to come together for passive enjoyment. Lynch (1960) points out that urban open space includes characteristics to attract people and to provide meetings.

Marcus and Francis (1997) observe a plaza as a mainly hard surfaced outdoor urban public space without cars and they explain that the major functions of public open spaces are for walking, sitting, eating and watching. Similarly, Kato et al. (1993) claim a public place which is surrounded by buildings is called a plaza, in other words, a void spot within a city and Gehl (1998) defines town squares in comparison with streets. Also, he points out that streets are used for movement and this function is suggested by their linear form, however, the size and shape of town squares cause people to stop and settle in (Gehl and Gemzoe, 2008, p. 26). Additionally, Kato et al. (1993) stress that a city is not only an assemblage and concentration of roadways and buildings but that it needs a social centre. Town squares should be evaluated as social, economic and political centres in the cities that have existed during the centuries and were created because of human needs.

"Cities need an element of chaos, or more precisely an active street life. As part of their culture as urban places-indeed the very notion of urbanity-cities should also offer an evening and night-time economy." (Montgomery, 1995)

2.1.1 Physical Factors in Town Squares

The physical dimensions are physical variables which exist in town squares and they can influence the quality of them. According to Project for Public Spaces (2000, p. 16) there are three physical dimensions that are important to make a place great.

2.1.1.1 Access and Connection

Accessibility is one of the important aspects that influence the quality of the place. "A successful public space is easy to get to and visible" (Project for Public Spaces, 2000, p. 16). Also, PPS (2000) explains factors such as reliability for getting there, continuity, connectedness, readability and convenient access for this section. Comfortable accessibility can persuade people to go there and can help a place to be alive.

2.1.1.2 Comfort and Image

Comfort can be considered as a basic need; for example the need for food, drink, shelter from elements and a place to rest all require some comfort to be pleasing (Carmona and Tiesdell, 2007, p. 231). Also, PPS (2000, p. 16) defines comfort and image as safe, walk-able, sit-able, cleanliness, green and charm attraction. Normally, people prefer to be secure and relaxed in every public place.

2.1.1.3 Uses and Activities

Uses and activities make the place attractive, lively and vital. High use can show that people like to be in town squares and what activities they do more there is one of the main questions. According to Gehl Architects (2004), pedestrian activities in public places can be divided into three groups: necessary, optional (urban recreation) and social activities.

Necessary activities are defined as the activities that people have to do, for examples going to work and school, shopping and waiting for the bus or taxi (Gehl Architects, 2004, p. 28). Optional activities are the things that people are tempted to do and these activities would be done if the quality of the space were high, for instance they come to the public space and find it attractive then prefer to stay and do some activities there. Finally, social activities occur when people move about in the same public space, for example interacting with other people, watching and listening (Gehl Architects, 2004, p. 28).

2.1.2 Social Factors in Town Squares

As town squares give the opportunity for meetings, hearing others and experiencing other people functioning in different situations, they should be considered as important spaces to improve

social aspects in a society (Rowntree, 2007, p. 15). Town squares can be divided into three sections in social dimension: private, public and civic parts.

2.1.2.1 Links between People and Town Squares

Rogers (1999) believes that a direct relationship between urban open spaces and the people who live there is crucial. It has been reported that

> "Safe, well maintained, attractive and uncluttered public spaces provide the vital glue between buildings, and play a crucial role in strengthening communities (Rogers, 1999, p. 57)."

The main link between people and town squares is the activities they do there. Activities such as socializing, eating, resting and shopping in town squares improve the quality of city living, diversity and increase the educational and cultural opportunities that make the positive experience of social life (Diamond and Liddle, 2005).

2.1.2.2 Environmental Behaviour

The physical environment influences human behaviour, as people influence and change it (Carmona 2003, p.106). Carmona continues this example by stating that "a window in an otherwise solid wall allows one to see out, while a continuous wall does not afford that opportunity". Furthermore, he considers human behaviour inherently as situational: it is set in physical, social cultural and perceptual context. One of the earliest pieces of research on the subject of environmental behaviour was by Pushkarev and Zupan (1975). They analysed pedestrian behaviour on streets and in town squares (S. Lo et al. 2003, p.606). According to Whyte, who did behavioural observation on a series of towns squares, "people's movements are one of the great spectacles of a plaza" (Whyte 1980, p.22).

2.1.2.3 Social Life

Public spaces can improve sociability. One of the major factors that makes a city liveable is the quality of the social life that occurs in its public realm (Lennard 2008). Jacobs (1987) considers encouraging people to participate in community and public life as an essential factor for making a good city (Jacobs & Appleyard 1987, pp.115-116) and Lennard (2008) emphasizes town squares as an unparalleled school that provides social learning and develops a sense of community.

Town squares as a public urban space are essential to increase social aspects positively in cities. Besides public spaces providing democratizing functions, all individuals have the opportunities to be seen by others (Rowntree, 2007, p. 65). Cities need places in which people gather freely and communicate, and according to Rowntree (2007) "Towns need places where people, regardless of their age, culture or appearance, will feel secure and free".

Town squares would provide a range of personal, social, cultural and economic facilities as well as opportunities to know the backgrounds and values of the cities.

As Gehl (1998) highlights, social activities such as festivals, ceremonies and protests and more private activities such as seeing and hearing people and experiencing what happens in the city would make the city attractive.

Moreover, the lack of these places causes the quality of social life to decrease. Also, people need somewhere to spend spare time and need some places to communicate to each other and "Social life is made of social relationships and the quality of the former depends on the quality of latter"(D'Antonio et al. 1994). Humans who built a place for living and worshipping changed them after passing time because of new thought and physical instruments. In addition to individual aspects of life, they needed social interaction; in other words, humans needed a place to be with others, hence, they built places to have a social life.

2.2 Town Squares: A Historical Perspective

As town squares are public places for everybody to use, they must have both historical and memorial features for residents. "It is so powerful, that with its help hundreds of people together can create a town, which is alive and vibrant, peaceful and relaxed, a town as beautiful as any town in history"(JIVE´ et al. 2003).

In addition, this kind of place can be beneficial to attract the tourists in order to better know the cities. These places are public so everybody can use them and some of them can be known as the heart of the city.

Agora, in Greece -According to Hippodamus, the land was divided into three areas: sacred, private and public. Also, "Aristotle argued that to decide questions of justice and in order to distribute the offices according to merit it was necessary for the citizens to know each other's personal characters" (Morris 1994, p.54). It shows the importance of public places in ancient Greece that it is the first place for the invention of the Agora at the end of the seventh century BC. The first Agora, built in Athens - the capital of Greece - is a large triangular shaped market place at one of the main crossroads in the centre of the city (Lennard 2008). There is a special pattern that the Greeks used for the Agora in every city. Besides, Greeks could operate a kind of democracy in the city according to the human's freedom.

Wycherley explains that the Agora was "the constant resort of all citizens, and it did not spring to life on special occasion but was the daily scene of social life, business and politics" (Wycherley 1976). Lennard (2008) considers the Agora as a centre for teaching, gossip, religion, recreation and public demonstrations in ancient Greece.

The Agora was always a limited space in which to operate the free social and cultural interactions among citizens and these two aspects of the Agora have criteria, being open and having limitation (Falamaki 1992, p.73). The Agora was active as a factor of democracy and civic engagement and they could create an urban experience that is common for a lot of countries (Lennard 2008).

Forum, in Rome-Similarly, the Romans built the Forums with arrangement of their civic regulation and responding to people's needs. In contrast to the Greeks, they could not create special shapes and similar functions for them, as the Forums were different in every city and the most variety and the biggest was in Rome, the capital of the Empire (Morris 1994, pp.65-69). The major activities in the Forums were commercial, political and religious. Also, the same as Agora, they were limited with uncovered space and people gathered in the open spaces. After the fall of Roman Empire, the tradition of people gathering in the Forums turned to other open spaces. People liberally found

open spaces to do their social interactions and the cities had not got one place to communicate (Falamaki 1992, p.75). In this regard, Lennard (2002) believes that "it took six centuries for Europe to recover socially and culturally and for these cities and their squares to revive."

Hiroba, in Japan-Whereas in the West the spaces were supposed to be the gathering places of the people, "humanizing them by mutual contact", there did not exist any square in ancient Japan that symbolized the life of the community Besides, religion was very private in Japan in those days and now (Kennedy 1974, p.84). Because of the politics that was common in those days, not everybody could use the public places made by government and only the temples might be used by ordinary people. Thus, the lack of spaces like the Forum and the Agora was the reason for finding other places and because of the regular form of Japanese cities, Hiroba was created. As a result, some of the streets were turned into places for communication and other social interactions in ancient Japan.

"In the absence of real squares, the case has always been that the community life process had its occurrences in open areas. (never designed Hiroba)" (Kennedy 1974, p.87). It shows that Hiroba was made naturally by humans' needs for having a social life with an invisible format.

Town square in Iran, There were various types of town squares in Iran in the past and some of them are still useable. They are considered as public places in the cities. The traditional Iranian town squares are one of the main parts of a bazaar. These town squares were the centre for things such as economic, political, religious and social activities. Every bazaar encompasses aesthetic, economic and social functions. A bazaar is constituted of different buildings such as commercial, religious, governmental, bathhouses, squares and other public places.

Almost all historical cities in Iran had this kind of Bazaar but not all of them remain and some of them are not heavily used. Since a Bazaar is a multi-functional place, it would be used by different groups of people and town squares were the centre of social life. The relationship between a Bazaar and town square is a significant point that gives them importance.

Conclusion

Maybe being multi-functional and democratic, and having representative self-governments makes European town squares a unique creation. However, those were in contrast with other squares which had existed in countries such as China, Mesopotamia and Egypt before the invention of democracy and they had been built to show off the power of their government, as the traditional European squares are places that people use daily for trade, social interaction, religious and political assembly and sometimes entertainment (Lennard 2008). Although these squares are one

of the distinctive features of the cities, every square is exclusive and there are various shapes for them. Local differences in materials, architecture styles and history make every square exclusive with its individual personality and reflect the unique history of the city and its inhabitants' values and manners.

"One of the greatest inventions of the European city, indeed one could not conceive of the most European cities without it, is the central market square" (Lennard 2008).

Every culture puts different stresses on public spaces; also, it is influenced by some other factors such as technology and changing economic and political systems (Carr et al. 1993). A town square should reflect the culture and character of its land.

In this study, the traditional Iranian town square has been focused on as a case study. The traditional Iranian square has been chosen because these kinds of squares are disappearing from urban space and there are not any new ones in the present urban tissue. However, the Iranian cities need these kinds of places to be more sustainable and can meet social, economic and environmental needs of people.

2.3 Sustainability

As town squares can influence cities to be more sustainable, this section reviews the literature concerning sustainability. This section attempts to highlight and classify the existing literature on social sustainability and its relationship with public urban spaces. The main objectives of this part of the study are evaluating and validating the relevant factors of social sustainability that are influenced by the town squares in Iranian cities.

2.3.1 Definition

There are numerous definitions of sustainability developed throughout the last four decades. For this study I will be using the the World Commission on Environment and Developmen's (1987) (cited in Burton et al. 2000) definition of sustainability articulated in terms of meeting today's needs without compromising the ability of future generation to meet their needs.

Today, sustainability underpins many urban design projects and it is generally considered in this field that the main dimensions of sustainability are the economy, environment and society and they are related to each other in some ways (Barron and Gauntlett, 2002 and Macintosh et al., c2006.) Therefore, sustainability refers to three broad subjects: economic, social and environmental, and all the pillars must be considered and addressed to make a long term viability of a society.

There is relatively limited literature focusing specifically on the influences of the town square on social sustainability in Iranian cities, thus this research is going to partially address this gap in the literature.

2.3.2 The concept of Social Sustainability

Burton (2000) points out that the widest definition of social sustainable development is that of the WCED (1987); this definition contains concepts of inter-generational equity and social justice, as well as environmental awareness (Haughton and Hunter, 1994). (Burton et al. 2000)

In the 1980s, urban development projects focused largely on the environmental and economic improvement of cities; however, since the 1990s in Europe, this approach to urban development has been replaced by a more integrated approach, which addresses wider social and cultural elements. (Colantonio and Dixon, 2010, p. 4)

Discussions about sustainability have moved on from considering this only as an environmental concern to contain economic and social dimensions (Carley and Kirk, 1998). Colantonio (2009) recognizes social sustainability as "A fundamental component of sustainable development,

becoming increasingly entwined with the delivery in sustainable community discourse and the urban sustainability discourse".

Various authors attempt to define "social sustainability" and in this regard some define urban social sustainability as the continuing ability of a city to purpose as a long-standing viable setting for people interaction, communication and cultural improvement (Yiftachel and Hedgcock, 1993, p. 140). Also, a socially sustainable city is noticeable "by vitality, solidarity and a common sense of place among its residents" (Yiftachel and Hedgcock, 1993, p. 140).

Polèse and Stren (2000, pp. 15–16) describe social sustainability as development that is compatible with harmonious progress of society and improvements in the quality of life for all people. Social sustainability can be seen as the maintenance and enhancement of the "well-being" of the present and future generations (Chiu and Lee, 2003). In the same way, Chan and Lee (2008) cite successful socially sustainable projects which address the improvement of "well-being" for current and future generations.

According to Davidson and Wilson (2009) social sustainability is defined as life-enhancing within communities and, additionally, they propose social sustainability as a system of cultural contacts in which the positive aspects of disparate cultures are valued and promoted (cited in Michael and Peacock, 2011, p. 3).

Furthermore, Lennard (2008) believes that "the European square nurtures social sustainability by facilitating the continuous social, emotional and cultural development of all its inhabitants-what Mumford calls "the care and culture of human being". (Figure 1)
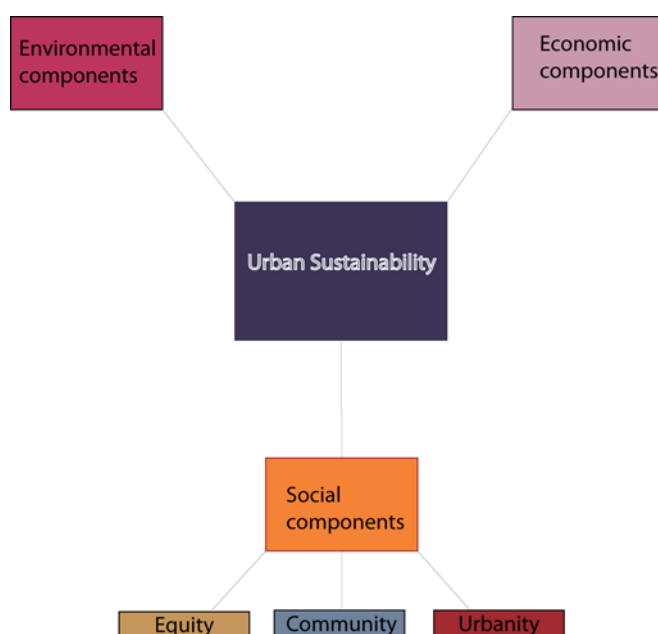
Figure 1: These categories are adapted from framework suggested by Newman, op cit, Ref 2 cited by Yiftachel and Hedgcock (1993, p. 130)

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For Bramley and Power (2009), social sustainability hinges on equity and community. Social equity can be identified in the explanation of McKenzie (2004) that clarifies the condition combined "equity" of access to services such as health, education, recreation and the transport system, in addition to equity between generations meaning the activities of current generation will not disadvantage future generations. Similarly, Sachs (1999) notes that a strong explanation of social sustainability rests on the essential values of "equity and democracy", also all human rights such as political, civil, economic, cultural and social for all people (Sachs 1999, p.27). In short, social equity means to treat all people fairly.

The social community dimension will be improved by enhancing social networks, community participation, sense of place and belonging, pride and security (Bramley and Power, 2009, p. 5). In summary a community dimension in social sustainability means encouraging communities within people. As a result a consideration of social urban sustainability development requires both of these dimensions to be covered (Michael and Peacock, 2011, p. 3).

Social sustainability will create a harmonious living environment, reduce social inequity, enhance life quality and also provide significant factors such as provision of social infrastructure, accessibility, preservation of local characteristics and the ability to fulfil the subjective needs of people. (Michael and Peacock, 2011, p. 3)

2.3.3 Social Sustainability and Quality of Life

Chiesura (2004) believes that, in addition to environmental criteria such as energy and water saving, waste recycling and transportation, another aspect that should be evaluated as central is the quality of life. Although, sustainability in urban cities has various definitions, all are looking for the factors that make the cities liveable, pleasant and attractive for their citizens (Chiesura, 2004). On the other hand, one of the main aspects which makes a city sustainable is improving the quality and quantity of social interactions.

Well-designed public space is an essential component of the character, economic magnetism and finally distinctiveness of a place. Also, the quality of public space can be considered as a major aspect for the economic, social and environmental sustainability of cities (Orr et al., 2010). Orr (2010) adds that public space improves the quality of life of people by providing a proper setting for social and economic activities, making a sense of belonging and pride in the city and protection from climate change.

2.3.4　Liveability

Liveability is one of the main factors for social sustainability. There is not one agreed definition for liveability. Liveability can encapsulate many experiences and satisfy multiple needs; also it seeks to bring together economic and social as well as environmental concerns (Beaney, 2009, p. 57). Furthermore, a liveable urban public space encourages people to go there, promenade and gather (Falk, 1996, p. 112).

With particular relevance to this study it can be defined as a requirement for keeping public urban spaces feeling safe and busy (Falk, 1996, p. 112). Every aspect that can draw people to public realms can be considered as liveability factors in this study. Factors such as activities, uses and facilities may be accepted as liveability factors in this study.

2.3.5　Sociability

Sociability is one of the human needs. Public urban spaces can be spaces for debating and sociability (Tonnelat, 2008, p. 5). Public urban spaces can provide an opportunity for people to socialize with different groups of people. They allow people to meet in planned and unplanned ways and interact with others (Holland et al., 2007, p. ix), which is one of the main aspects of improving sustainability. Sociability can enhance the sustainability of a place by drawing people to the place and making communities.

2.4　Conclusions

The last stage for this section is developing a framework on the base of the existing literature on social sustainability and indicating significant dimensions and relevant variables which are likely to be important in helping to design a square. After reviewing the literature on social sustainability, the following diagram (Figure 2) came up. This diagram shows principles such as equity, diversity, providing a good quality of life, space to grow and adaptability, security and interconnectedness that are defined in (Figure 3). Amenities and social infrastructure, social and cultural life and voice and influence are the indicators that are defined in (Figure 4). Finally, social sustainability factors that are the main objectives of this section include moving, learning child care, health care, playing, working, community asserts, a sense of belonging, support of social interaction, shared space and collective activities, local identity, public events, democracy and governance, residents having a say in shaping their surroundings, newspaper and group board community notices and the ability to fulfil psychological needs. The relationship between principles, indicators and implementations is shown in (Figure 2). The result of this section is used in making nodes (see section 4.1) the produced implementations may create some nodes of the study.

Principles

Equity	Diversity	Providing a good quality of life	Space to Grow and Adaptability	Security	Interconnectedness
DFID (1999), Chambers and Conway (1992) Sachs (1999), Baines and Morgan (2004) and (Sinner et al, 2004)	Banies and Morgan(2004), Sinner et al, (2004)	Hodgson,n.d, Chiesura (2004), Michael and Peacock,n.d	Woodcraft et al (2011) Colantonio (2009), Polese and Stern (2000)	Branley and Power (2009) Colantonio and Lane (2007)	Viftachel and Hedgcock (1993) Hodgeon,n.d

Indicator

Amenities and Social Infrastructure Woodcraft (2011)	Social and Cultural Life Woodcraft et al, (2011)Sachs (1999), Michael and Peacock,n.d	Voice and Influence Woodcraft (2011)

Social Sustainability Implementation

Amenities and Social Infrastructure:
- Health Care
- Moving
- Learning
- Child Care
- Playing
- Working

Social and Cultural Life:
- Community assets
- Sense of Belonging
- Suport for Social Interaction
- Sharred Space and Collective activities
- Local Identity
- Public Events

Voice and Influence:
- Democracy and Governance
- Residents Having a Say in Shapping their Surronding
- News paper and Group Bord Community Notice
- Ability of Fulfillment Psychological needs

Figure 2: The principles, indicators and implementations of social sustainability

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Principles	Definition of Social Sustainability Principles of a Square	Literature
Equity	Social equity means to treat all people fairly; also the distribution of advantages and disadvantages with fairness and justice.	Chambers and Conway (1992) Sachs (1999), Baines and Morgan (2004)
Diversity	Allows for diverse opinions and values to be taken into consideration.	Baines and Morgan (2004)
Quality of Life	Assurance that the communities' basics needs are met.	(Hodgson, n.d.), Chiesura, (2004)), Michael and Peacock, (2011)
Space to Grow and Adaptability	Social infrastructure requires being adaptable over time to new needs and new possibilities.	Woodcraft et al., (2011), Colantonio, (2009), Polèse and Stren (2000)
Security	Allows individuals and communities to have economic security and have confidence that they live in safe, supportive and healthy environments.	Bramley and Power (2009), Colantonio and Lane (2007)
Interconnectedness	A community provides processes, systems and structures that promote connectedness within and outside the community at the formal, informal and institutional level.	Yiftachel and Hedgcock, (1993),(Hodgson, n.d.)

Figure 3: The definitions of considered principle of social sustainability in this study with literature

Definition of Social Sustainability Indicators		
Amenities and Social Infrastructure: communities need services and support such as educational and job opportunities, recreational, health care and childcare amenities, not just buildings.	**Social and cultural life:** Communities not only need places but also social and cultural networks.	**Voice and influence:** Communities should have a strong feeling of being involved in making their public urban spaces.
Amenities and Social Infrastructure Factors and Definitions	**Social and cultural life Factors and Definitions**	**Voice and influence Factors and Definitions**

Mobility,
Transport Facilities
    Public Transport networks: Metro, Bus Lines and Taxi
    Private Transport networks: Car Park and Accessibility
 Circulation
 Cars and Pedestrians
 	
Learning, Schools, Educational institutes and Gyms
 	
Working, Shopkeepers, Merchants, Peddlers and those Employed in the Square
 	
Playing, Adult and Children entertainment
 	
Health Care, Emergency needs
	Community assets,
	Shops, restaurants and gardens
	Sense of belonging,
	
	Support for social interactions, well maintained public spaces
	
	Shared space and collective activities,
	
	Local identity, festivals and distinctive architecture
	
	Public events, Cultural, Religious and Political events
		Democracy and Governance,
		Residents having a say in shaping their surroundings,
		Newspaper and group board community notice,
		Ability to fulfil psychological needs,

Figure 4: The definition of social sustainability indicators

CHAPTER 3: RESEARCH METHODOLOGY

This research is based on an interdisciplinary approach combining elements from social science, ethnography and anthropological methodology as well as urban history and design. This chapter attempts to highlight the methodology of research after reviewing the research questions and is going to explain, firstly, the reasons for choosing multiple case study methodology and qualitative data methodologies for this research.

3.1   The Methodological Framework

The theoretical framework of the methodology is based on:

PPS (2002) - In evaluating several public spaces around the world, PPS developed a diagram as a tool which helps urban designers to judge any urban public spaces, good or bad. The diagram has four key qualities: Uses and Activities, Access and Linkage, Sociability, and Comfort and Image.

Gehl Architects (2004), in a brief study on urban public spaces of London city, categorised activities in urban public spaces into three different types: necessary, optional and social activities.

Carmona and Portella (2008) studied designing new squares in London. This investigation starts with a synthesis of the history and development of London squares.

Lennard (2008), who used European squares as a teacher and identified aspects and variables to understand a square, for example a hospitable setting, building uses and urban fabric and framing social life.

Before explaining the methodology it is necessary to review the questions and explain how they will be answered.

Q1) What lessons can be learnt from a critical investigation of the well-established and thriving traditional Iranian square "Naghsh-e-Jahan"?

Q2) Does Naghsh-e-Jahan Square have any role in making Isfahan city more socially sustainable?

In order to answer the main questions, the following questions will be responded to as the objectives of this study.

Q1:

A) How has Naghsh-e-Jahan Square been used over the centuries?

■ Developing and understanding of how Naghsh-e-Jahan square developed historically

Via analysing the historical documents and plans obtained from the official government. Understanding the changes helps to find how the square adapts with people's emerging needs (also addressing and overlapping the second research question) (refer to section 3.3.1).

B) How is Naghsh-e-Jahan Square used today?

■ Exploring the current function of Naghsh-e-Jahan Square by understanding common activities and uses by different groups of people

By interviewing three different groups of people (refer to interview section 3.3.7) and also through walking strategies that will be done by the researcher with taking photos and recording films as visual materials

■ Finding out what facilities the Square provides for its users

By interviewing three different groups of people (refer to interview section 3.3.7) and also through walking strategies that will be done by the researcher with taking photos and recording films as visual materials

■ Exploring the built fabric of Naghsh-e-Jahan Square

Via walking strategies and also by considering existing documents such as plans, maps and photos)(see section 3.3.5)

■ Investigating what people feel in the town squares presently

Through the direct method of conversation with people to conduct the semi-structured interviews that are described in the interview section 3.3.7 to find out their emotions in the squares and understand their needs

■ Understanding people's perceptions about the square (what is important, attractive or even forgotten about the square and also finding out people's expectations)

Again by the direct method of conversation, the interviewees will be asked to draw their perceptions of the square after finishing the semi-structured interviews (see section3.3.7)

Q2:

A) What is the definition of sustainability and particularly social sustainability?

■ Defining sustainability, focusing on social sustainability

Through using the literature review and exploring common aspects of urban sustainability and public open spaces in the city (see section 2.3)

B) What are the criteria of social sustainability for public urban spaces?

■ Define a set of criteria of social sustainability in urban design

Again by using the existing literature review and considering the chapter on the concept of social sustainability (see section 2.3)

■ Evaluating and validating relevant factors of social sustainability

Developing a framework on the base of the existing literature on social sustainability and indicating significant dimensions and relevant variables which are likely to be important in helping to design a square (see section 2.4)

C) What criteria of social sustainability can be addressed in Naghsh-e-Jahan Square?

■ Mapping how Naghsh-e-Jahan square can improve Isfahan city against the criteria for social sustainability

Via using the designed social sustainability framework (Figure 2 in section 2.4) against exploring the current condition of Naghsh-e-Jahan Square (by walking strategies, visual methods, interviews and drawings. This part of the method might overlap and address the first research question)

All the main questions, sub-questions, objectives and methods are tabulated in Figure1 and Figure 2.

Research Question	Sub- Questions	Objectives	Methods
Q1) What lessons can be learnt from a critical investigation of the well-established and thriving traditional Iranian square "Naghsh-e-Jahan"?	A) How has Naghsh-e-Jahan been used over the centuries?	Developing and understanding of how Naghsh-e-Jahan square developed historically	Via analysing the historical documents and plans obtained from the official government. Understanding the changes helps to find how the square adapts with people's emerging needs (also addressing and overlapping with the second research question) (see section 3.3.1)
	B) How is Naghsh-e-Jahan Square used today?	Exploring the current function of Naghsh-e-Jahan Square by understanding common activities and uses by different groups of people	By interviewing three different groups of people and also through walking strategies that will be done by the researcher with taking photos and recording films as visual materials (refer to section 3.3.7)
		Finding out what facilities the Square provides for its users	By interviewing three different groups of people and also through walking strategies that will be done by the researcher with taking photos and recording films as visual materials(refer to section 3.3.7
		Exploring the built fabric of Naghsh-e-Jahan Square	Via walking strategies and also by considering existing documents such as plans, maps and photos (refer to section 3.3.7)
		Investigating what people feel in the Naghsh-e-Jahan Square (subjective perspective) presently	Through the direct method of conversation with people to conduct the semi-structured interviews that are described in the interview section 3.3.7) to find out their emotions in the squares and understand their needs
		Understanding people's perceptions about the square (what is important, attractive or even forgotten about the square and also finding out people's expectations)	By the direct method of conversation (see section 3.3.7), the interviewees will be asked to draw their perceptions of the square after finishing the semi-structured interviews

Figure 1: The first main question of the study, sub-questions and the relevant objectives with the suggested methodology to achieve the results

Research Question	Sub-Questions	Objectives	Methods
Q2) Does Naghsh-e-Jahan Square have any role in making Isfahan city more socially sustainable?	A) What is the definition of sustainability and particularly social sustainability?	Defining sustainability, focusing on social sustainability	Through using the literature review and exploring common aspects of urban sustainability and public open spaces in the city (refer to section 2.3)
	B) What are the criteria of social sustainability for public urban spaces?	Define a set of criteria of social sustainability in urban design	By using the existing literature review and considering the chapter on the concept of social sustainability (see section 2.3.2)
		Evaluating and validating relevant factors of social sustainability	Developing a framework on the base of the existing literature on social sustainability and indicating significant dimensions and relevant variables which are likely to be important in helping to design a square (see section 2.4)
	C) What criteria of social sustainability can be addressed in Naghsh-e-Jahan Square?	Mapping how Naghsh-e-Jahan square can improve Isfahan city against the criteria for social sustainability	Via using the designed social sustainability framework (Figure 2 in section 2.4) against exploring the current condition of Naghsh-e-Jahan Square (by walking strategies, visual methods, interviews and drawings. This part of the method might overlap and address the first research question)

Figure 2: The second main question of the study, sub-questions and the relevant objectives with the suggested methodology to achieve the results

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3.2   Case Study Method

This research is based on case study methodology where a case study is looked at in relation to the case studies and existing literature. "A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident." (Yin 2003, p.13) As this study will be carried out in physical and social dimensions which mean quantitative and qualitative methodologies, assessing these two dimensions needs real life cases (Razzaque 2009, p.20).

Some authors criticize case study methodology because of the lack of a scientific approach and limited generalizability (Johnson 1994); however, others suggest that this shortcoming can be passed by using multiple case studies (Francis 1999, Yin 2003).

The case study method was chosen because it allows a combination of integrated understandings rooted in the literature review and analyses of diverse data. To describe and identify the characteristics of town squares this study will produce a rich picture based on a range of qualitative and historical data. For this reason, a methodology based on the case study of Naghsh-e-Jahan Square is appropriate. Investigation, assessment and analysis of the case study will come out by using a range of methods.

3.2.1   Case Study Chosen

A traditional Iranian square was chosen as the case study. The Naghsh-e-Jahan Square in Isfahan (1598- 1629) is one of the most significant traditional Iranian squares. The square has a similar climate to the majority of Iranian cities. The main criteria for case selection are summarized in the following section. One of the important points that it is necessary to mention is that in this study the investigations about the square focus on the square itself not on the residential area around it. The case study will be studied and analysed during the investigation in relation to the literature to achieve a new understanding and to establish principles for the design of new squares in Iran.

Figure 3: The location of the square in Iran, Source of base map: (Iran Map, 2010)

3.2.1.1 The main reasons for choosing Naghsh-e-Jahan Square as the case study

In this research, one of the best examples of Iranian town squares has been chosen as the case study. It is Naghsh-e-Jahan Square (1598- 1629) which is historical, alive and well known. It is located in Isfahan, the second biggest city in Iran after the capital Tehran. The criteria for case selection are:

_**Historical significance:** This square is one of the most popular traditional urban spaces in Iran. As this square was built about four centuries ago, this place is historically valuable (for further information refer to section 6.26.2).

_**Contemporary significance:** one of the major reasons to choose this square is its contemporary condition that can be cited: intensity of use, perceived as a model and tourist attraction (for further information see section 6.3).

_**Urban location:** Naghsh-e-Jahan is located in Isfahan, one of the biggest and most unique cities in Iran. Isfahan city is introduced in section 6.1.

It is a square that has been adapting to changing needs. Naghsh-e-Jahan is one of the biggest tourist attractions. For more details about the case study see chapter 6.

3.3   Data Collection

"According to Leedy and Ormrod (2005) the structure and organization of the case study approach will be methods, data analysis and research report"(Razzaque 2009, p.7). This approach will be followed in this research and the ways to collect the data will be described in the following sections. Although data collection for case study can be conducted through many sources of evidence, this research may focus on six important ones that Yin (2003) names: "documentation, archival records, interviews, direct observation, participant-observation, and physical artifacts." Most of these sources will be used and explained in the following sections of this chapter.

Every historical case study needs its past to be known and one of the aspects that make the square worthy of study is its historical importance. However, the interesting point is how it can work during the centuries, so it would be necessary to search its past and the reasons that cause it to always be useable. In this regard, the interpretive-historical method has been chosen.

3.3.1   Interpretive-Historical Research

Because the case study method is intended to investigate physical, historical, social and institutional location (Denscombe 2003, p.37) it starts with interpretive-historical research to find out how and why this square was built and for what reason this place had been used by people and the government. According to Newman, "Each city has a distinctive profile of human, cultural, historic and natural characteristics." (Newman & Jennings 2008)

As a city is shaped by geographical, historical, cultural and political layers, knowing the urban history of a city is one of the ways to appreciate it. Historical developments are formative for cities. Moreover, "Towns and cities are products of history, yet they themselves have helped to shape history "(Rogers & Herbert 2007).

Groat & Wang (2002, p.136) point out that "we define interpretive research specifically as investigation into social-physical phenomena within complex contexts, with a view toward explaining those phenomena in narrative form and in holistic fashion." In this regard, firstly, some documents, such as published and unpublished records, personal materials, photographs and maybe artworks and crafts, must be considered as the evidence and data, secondly, organizing the data by identifying. The next step will be analysis, assessment and evaluation and finally, narration (Groat & Wang 2002, p.137). Also, the main objective which will be achieved in this section is finding out about processes of changes of Naghsh-e-Jahan Square during the centuries.

As a result, this methodology attempts to highlight issues related to the history and development of the traditional Iranian Square to identify the process of change and the importance of the square; in this regard, factors such as context, accessibility, materials and microclimate can be considered as physical conditions. This study aims to determine how places were used, the positioning of access roads and pedestrian paths, the position of main entrances and other entrances, trees and other vegetation that existed there, the orientation of internal and external spaces, the material of facades with respect to the direction of sunlight, shade and local wind, as well as, environmental noise (Carmona 2003, p.185). To research these aspects, in addition to the historical documents, records and photos, primary investigations on the squares as they exist today are crucial. All historical photos, documents and maps which are found by the researcher are categorized and organized successively to achieve the process of change and show how people are using this square today as well as in the past. Additionally, social aspects should be assessed by answering questions such as for what reasons people came there and what ceremonies had been performed there. And concerning the political aspects, how the government used this town square and in what ways this place had been important for the government.

3.3.2 Multiple Methods for Looking at Contemporary Conditions of the Case study

This section seeks to identify relevant factors to study the contemporary conditions of the square in Iran. It helps to identify the factors that influence use of the square in the Iranian city and therefore should influence any designs for new or regenerated squares that are successful in terms of social interaction. Thus, searching the present conditions by other research methods is the next stage.

3.3.3 Qualitative Methods

The design of the methodology was informed by the literature review which was helpful in providing a theoretical framework and identifying criteria for selecting an appropriate case study, the examples and the methods. Denscombe (2003) points out that "Such a literature review will present certain things as worthy of inclusion, and should allow the researcher to prioritize those aspects of the situation to be observed." This study has got both objective and subjective approaches. Additionally, for detail a survey observation technique is selected. Observation of what is the main question that will be answered by the help of the literature review in the next paragraphs.

Qualitative methods such as those chosen are commonly considered appropriate values and attitudes about open spaces due to the fact that they have the potential to provide insights on the

context of people's daily lives. Thus, methodological approaches are needed that can reveal the depth of feelings and emotions that people have in the environment (Burgess et al. 1988, p.456).

This research investigates what people do in the Naghsh-e-Jahan Square and the social interaction, the community, why people are there and what people's needs are.

3.3.4 Observation Methods

Direct observation is considered as a main type of data collection for the section of qualitative studies. According to Sanoff (1991), observation and behavioural mapping is a method to describe what people do in an environment. Direct observation gives opportunities to get first-hand information of the case study and to record a wide range of primary data (Creswell 2008).

There are three main reasons for using observation in this study: firstly, finding how the square is used, secondly, providing information on where people walk and stay, thirdly, what activities they do there as part of their daily life or for recreational purposes (Gehl Architects 2004, p.71).

Although some authors believe that observation is not a very reliable data collection method due to the fact that every observer may record different observations (Silverman 2006, p.19), some authors believe we can see a lot by observation (Spaces 2000, p.51). It can help researchers and urban designers to understand users' behaviour on site, not only what they see from maps and plans.

Moreover, observation allows the researcher to generate data about users of the case study square, sometimes recording (numbers, gender and etc.), and sometimes inferring (age, level of education and occupation). Additionally, contextual information on the weather conditions, the seasons, date, time of day and special ceremony days should be recorded (Bradley & Millward 1986, p.3). In observation methods, individuals are considered as objects for observation and the source of information for the study are people's spontaneous behaviour and continuous activities (Razzaque 2009, p.27). Additionally, the observer can use photography, video and conversation with people (Bradley & Millward 1986, p.3).

Several types of observation methods can be used to collect data, such as trace measure, behavioural mapping, counting, interviews and questionnaires to measure people's feelings (Spaces 2000, pp.99-113). It will be explained how Naghsh-e-Jahan Square will be observed in the following section.

3.3.5 How to See the Whole

In this research it is important to understand the place and the daily social interactions in the squares to identify the users of the square, how they think about these places and finally, what they expect of this kind of public open space.

Walking is preferred as a tool, because it is needed to explore the square and discover its physical and social aspects, in other words "see the whole". As experiencing, feeling the square and finding out the events that happen there are the objectives of this exploration, it is necessary to be there to sense the space close up. Walking can be considered as a method to understand spaces in flux in a way that questions, the logic of surveying, measuring and designing a location from some fixed and static viewpoints can't (Rendell, 2007, p. 188).

For this reason, it is chosen to walk and observe in the space rather than sit because the observer can better command the environment, as urban spaces need to be seen by new eyes to understand how people are experiencing them. Careri (2001) emphasizes that walking is a primary way for human beings to explore their environment from the early years of childhood onwards. Certeau, (2002, p. 93) and Wunderlich (2008, p. 125) point out that walking is an elementary mode of the experience of an urban space and city. Rendell (2007) believes that "when we walk we encounter sites in motion and in relationship to one another, suggesting that things seem different depending on whether we are 'coming to' or 'going from'"

According to Chora and Bunschoten (2000, p. 75) "Immersion in the city with new eyes means walking through it, entering its flux, encountering emergent phenomena, recognizing them as manifestations of proto-urban conditions, sorting them into boxes." Therefore by walking, our bodies can purposefully be moved through the space to both feel it with all senses and analyse it critically; what we can see, hear and even smell should be recorded as data and certainly the time of walking is important. Wunderlich (2008) argues that "in contrast with other life world activities, walking particularly affects the haptic sense." This is what Rodaway (1994, p. 42) explains as the "contact between body and its environment". Moreover, Rendell (2007, p.190) points out that walking is "a way of at once discovering and transforming the city; it is an activity that takes place through the heart and mind as much as through the feet."

A camera is used during this kind of observation to capture people coming in contact with the square and each other. It requires recording the pictures and voices which are also related at times. "Sometimes the voice you hear describes what you see; at other times the two do not coincide"(Rendell 2005, p.184). Therefore, all of them can be considered as collected data that should be analysed.

3.3.5.1 Walking as a Tool

As a result, walking has been chosen as a tool to collect the data for this research. "Walking then turns out to be a tool which, precisely due to the simultaneous reading and writing of space intrinsic to it, lends itself to attending to and interacting with the mutability of those spaces, so as to intervene in their continuous becoming by acting in the field, in the here and now of their transformation, sharing from the inside in the mutations of these spaces that defy the conventional tools of contemporary design." (Careri 2001, p.26)

Although walking is an ordinary practice that happens for most people every day, the special value of walking as an experience is that has an important relationship with sense of place. The objective is to point to walking as an aesthetic tool capable of explaining the urban spaces that frequently have a nature still demanding comprehension (Careri 2001, p.26). Photography was chosen as the main way to record, document and capture walks. Chora & Bunschoten (2000, p.81) identify a number of strategic walks that can be devised: walking towards, walking across, walking along, walking into, walking out, walking through and walking about and most of these are used in this research.

These types of strategic walks, after Chora & Bunschoten (2000) will be undertaken with a photographic and video camera and will have the specific aim to identify and record aspects and variables such as those indicated by Lennard (2008) as necessary to understand a square like, for instance, threshold experience, architectural backdrop and hospitable setting.

The process of investigating the square through walking will start with "walking towards". Since the square has four sides, walking may be done towards most of the sides with the camera to find out and record some of the variables that Lennard (2008) identifies as the criteria to understand a square:

-Visual enclosure, continuous building walls (the sense of inclusion) the feeling of that one is a member of the neighbourhood

-Threshold experience

-The usage and fabric of surrounding buildings

-Residential population

-Crossing of pedestrian ways to enter the square

-Transportation positions

-Traffic conditions around the squares

-Parking (Lennard 2008)

"Walking into" the square is one of the important aspects that should be researched. This strategic walk will allow the understanding of issues related to the relationship of the squares and their immediate surroundings as well as the relationship between inside and outside the square. The main question is how people can get into the town squares. This walk focuses in particular on:

-Understanding the pedestrian entrances and their importance in the case of usage

-Researching the scale and facade of the entrances

-Understanding the relationship between the entrances as a point of contact between the square and the surrounding texture

This type of walk will entail "walking along" the four elevations inside and outside the town squares which will involve walking along open space and the bazaar corridor around the square in this study with a view to find

-A hospitable setting

-Seating: formal and informal

-Changes in level, steps and balconies

-Focal points and anchors

-Sun and shelter from the elements

-Paving for pedestrians

-Building uses around the square

-Civic and religious building

-Cafés, restaurants and shopping centres

-Facades

-Architectural backdrop (Lennard 2008)

A further type of strategic walk used is "walking across" where walking across the main space of the square allows the finding out of how people use the square and whether there are some things to attract people when they are walking across the town squares.

-Finding the natural and architectural elements that attract people

-Searching for the exciting activities that make people walk across the square

"Driving through" - as there is a main street which passes through the square, it will be necessary for the researcher to experience driving through the square. Although it may not be a walking strategy, "driving through" has got the same method as walking strategies and so is put in this section of the study.

3.3.6   Visual Methodology

Photos, films and drawings are used as parts of data in this research. According to Knoblauch et al. (2008), the photo interview, subject informant photos and other forms of combined research, photo elicitation, or visual ethnography are a category of visual methods or visual research; consequently, this study uses visual methodology as some of its methods.

In this study there are three categories of gathered visual data: photos taken during the walking, driving and some interviews, videos recorded during walking and driving and also when willing interviewees were drawing their perception of Naghsh-e-Jahan Square.

The use of photography has a long tradition of theorisation and analysis and different forms of drawing and illustration, photography and film recording pull together the uses of visual technologies (Knoblauch et al., 2008, p. 3). How visual technologies will be employed to achieve the data and how and by which means the outcomes will be analysed are the questions that will be answered in the end of this section.

3.3.6.1   Photography, Film and Visual Documentation as a Method

In this research, during the observation, in addition to walking and keeping in mind all sensitive experiencing; the vision, sound and aromas, distances and depth (Mahiques, 2009), visual and photographic documentation is used as a complementary method during walking in order to have photos and films for collecting and analysing data in the squares.

Before more explanation about visual methodology, it is necessary to define photography and film recording. One of the best definitions that shows the main character of photography and video is: "The excitement that greeted the invention of photography was the sense that man for the first

time could see the world as it really is." (J. Collier and M. Collier, 1999, p. 8) It is really needed during social research and helps by showing the reality through observation of the squares.

According to Knoblauch et al (2008), photography has been accepted by social sciences that concentrate on the peculiarity of the visual and its special symbolic structure. Visual cues are important to social researchers to find out physical and social borders and tie signs (for instance, visual signs of what goes with what), trace activities and conversations eventually, observing social and environmental change (Rieger, 2003), and reviewing research records (cited in Pauwels and Margolis, 2011, p. 60).

In this research there are two kinds of photos which come from walking and driving. During the walking the researcher takes photos that will be considered as data. Furthermore, the researcher needs to experience the car-only access route (the street which crosses the square) by car in the case study. Because during driving it should be difficult to take suitable photos, the researcher prefers to record film during the driving and it will give her more time to choose suitable photos rather than driving several times down the street. She puts the camera on a tripod and tries to stabilize it in the car and then turns on the camera and starts to record film when the car is crossing the square by this main route. The result is a film that some photos will be captured by Ashampoo Software (a software that helps to capture photos of films by just one click).

3.3.6.1.1   The main reasons for using camera during observation of the square

As a consequence of the previous section, in this study the camera will be used as a tool during all the observations in the case study because photos and films help the data to be arrested, reviewed and selected, compared and triangulated, documented, converted and analysed. Additionally, the sensory memory of a camera is helpful to record overload information and save time all through the observations.

●**Visually arresting, reviewing and selecting information**

A camera is a significant tool for capturing some events and behaviour in the squares that are important and that happen occasionally. It gives a means of not losing them and preserving them or even some events and activities that the researcher does not have enough knowledge about and needs to find out about. Furthermore, it may be useful to review and select the information that is related to the study ground and gives the researcher the opportunity to think about the data and choose whatever he/she needs. In this research, camera records will be valuable for arresting, reviewing and selecting the events that happen in the squares, how people use the squares and what communities there are in the squares.

Moreover, because in the square there are a wide range of phenomena, "looking closely" (Pauwels & Margolis 2011, p.60) will be necessary and photos and films can give our eyes this ability.

●Helpful for comparing and triangulating

As one of the major sections of this is comparing and triangulating the data, it is necessary to have comparative data and one of the ways to make data visual and comparative is by using a camera.

"The reliably repetitive operation of the camera allows for comparable observation of an event as many times as that needs of research demand" (J. Collier & M. Collier 1999, p.16). The data that exist in photos can be critically analysed, triangulated and compared with others and also it will be helpful to control the data during a visual observation.

●Documentation

The history of using cameras for documentation goes back to the late 19th century when anthropologists and para-anthropologists used photography to make a scientific study of human kind by documenting supposed 'racial types' as part of the discipline's project. Also, they used photography as a 'visual notebook' to record aspects of material culture shaped by a particular society (Banks, 1995).

Every practical researcher needs to document and make explicit the conditions in which phenomena are observed and observations recorded. By this kind of documentation, individual records turn into artefacts linked to the contextual information necessary to use them as evidence for empirical investigations (Pauwels & Margolis 2011, p.61). As photos can be exact records of material reality (J. Collier & M. Collier 1999, p.16), they will definitely be used as documentation of the data.

Because a camera can help as a tool to preserve the vivid impressions in a responsible and usable form (J. Collier & M. Collier 1999, p.16), it can definitely be used to document and conserve data during this study.

●Converting and analysing information

In every piece of research it is necessary to convey information and data, and photography and film recording are valued in converting observations to records. In this regard, Pauwels & Margolis (2011) believe that what can be seen, heard or smelled a short or long moment ago can only represent the first and small stage of an observation; written notes, drawings, photos taken and videos are the next step of observation. During this step the researcher can decide which tools will

be more useful then research strategies that use these tools and technologies can transfer the act of observation to the more durable materiality of observation records.

As the camera is explored as a research tool with associated methodologies that widen our perceptions if it is used skilled and appropriated, (J. Collier & M. Collier 1999, p.5) this study will be employing photography and film recording to convey data from the town squares. It will also use them to transfer and send some visual messages that the researcher is not able to show in any other way. (Pauwels & Margolis 2011, p.60). In contrast to language, the particular nature of photography is its representing of visual characteristics of objects and as a visual system of illustration (Christmann, 2008, p. 2).

"Photography is only a means to an end: holistic and accurate observation for only human response can open camera's eye to meaningful use in research."(J. Collier & M. Collier 1999, p.5)

Also, Pauwels & Margolis (2011) believe that photography is durable, stable, portable and communicable for the evidence that empirical sciences need. Furthermore, photographs and video are documents that can be filed and cross-filed and eternally duplicated, enlarged, reduced and turned into many charts, diagrams and tables and methodically extracted into statistical designs (J. Collier & M. Collier 1999, p.16).

Data will be managed, categorized and analysed using the software Nvivo 9. Details of the methods for organizing and categorizing data using Nvivo 9 are discussed in section 4.1 while the strategies for analysing the data (photos, films and interviews) will be explained.

●Using the sensory memory of the camera for overload information

One of the main problems that a researcher can face during the observation of a phenomenon is an overload of information to keep and it makes the researcher confused. A camera is definitely an instrumental extension of our senses (J. Collier & M. Collier 1999, p.5). Although it does not mean that cameras can record all senses and behavioural activities, it is helpful to record and preserve as much information as possible just in a photo or video.

As it has been said in previous paragraphs, Collier & Collier (1999) believe that cameras can be considered as a critical eye to gather accurate visual information and they add that this instrument might help us see more, with greater accuracy and in sharp focus.

●Useful for saving time during observation

The other problem that every observer may face is a shortage of time. As there is too much information that should be gathered and also making decisions about which one will be useful, the camera will be a valuable tool to gather data in parallel with giving the opportunity to select the related data.

●**Drawing and Visual Documentation as a Method**

As mentioned at the beginning of this section, another type of material gathered in this study is the drawings that are supposed to be produced by interviewees (refer to 3.3.7.3). The interviewees will be invited to share their perception of the square; they will be asked to produce and present a map of this square and show significant buildings as well as the route that they regularly use to get into the square. Participants will do this by memory (although some of the interviews will take part in Naghsh-e-Jahan Square). By these drawings, participants show what they have in their mind and they are given the option to choose to write, draw or paint. They will use drawing to convey their conceptions and transfer the narratives behind the drawing.

In addition to having the same benefits as photography and recording films (including documentation, reviewing and selecting information, converting and analysing information and being helpful for comparing and triangulating), drawing can be more helpful to achieve the important information about the space that interviewees keep in their mind. As Leeuwen and Jewitt (2000, p. 119) believe, drawings show the emotional state of a person much better than verbal descriptions. Finding out what users of the square have in their mind of the square, what variables such as shapes, scales, colours, orientation, greenery and facilities impressed interviewees more and how they conveyed their perception of the square by drawing plans, elevations or both are the objectives of doing the interviews.

Although the researcher will ask them the questions about the square by interviews, drawing the sketches of the space is helpful to show her what is important, attractive or even forgotten by interviewees in the square and also, the researcher may find out what their expectations of the space are or "instinctual wish-fulfilment" (Leeuwen and Jewitt, 2000, p.121) when they are drawing their imagination of the space.

The researcher will try to record when they are drawing because the process of their drawings is interesting and helpful. But it has been expected (in Iranian culture) that some of them do not like to be filmed or photographed; therefore in these cases the researcher will take notes during the drawing process. It will be observed that the interviewees remember different parts of the square

separately when accessing their memory of the space and all the drawings have got narratives that will be needed to be found out to analyse.

3.3.7   Conversation

In this study, one of the main approaches to collecting data is by interview. To find out the contemporary conditions of Nagsh-e-Jahan Square it is using three points of view: other authors, people and the author (as an architect and researcher). To get an insight into people's opinions and feelings, the researcher needs to connect with them directly. Conversation was seen as the best way to achieve that. Through conversation we can know other people, learn about their experiences, feelings, hopes and opinions about the world they live in (Kvale, 2007, p. 1) and get the story behind people's experiences of Naghsh-e-Jahan Square.

In this study, the conversation includes two sections: 1) Semi-structured interview 2) Visual material.

3.3.7.1   Semi-structured interview

Semi-structured interview has been chosen as a methodology to support the conversations and collect information about people's feelings and opinions in the Naghsh-e-Jahan Square. A semi-structured interview refers to a context where the interviewer can design a series of structured questions in the form of an interview schedule and also the interviewer is able to vary the sequence of questions and ask further questions depending on the replies (Bryman, 2012, p. 196). The approach of this study fell more within semi-structured interview because participants can put more comments and narrative responses that are helpful to emerge new data and nodes.

3.3.7.2   Interview structure

The interview questions refer to certain topics which cover some parts of the research nodes (see section 4.1.1). The designed questions are trying to address subjective perspectives, facilities and functions (uses and activities) which are the main parts of the nodes (explained in section 4.1.1): legibility of the space, existence of significant functions, history significance, level of safety, important place in people's memory and sense of belonging, walkability, sit-ability, sun and sheltering, cafés and restaurants, attractiveness and so on. All the questions have room for any comments and the researcher uses the opportunities to bring up new questions during the interviews. The interview questions can be replied to by given fixed responses with a rating scale in a similar format to a questionnaire. Additionally, every question has got room for any comments and narrative responses that allow interviewees greater freedom of expression.

In this study, by using semi-structured interviews the researcher achieves firstly, some fixed responses on a rating scale that facilitate analysing and categorizing the results and, secondly, narrative responses that are coded and classified. This approach facilitates faster interviews that can be more easily analysed and compared and also gives the researcher the opportunity to ask new questions that will come from some answers and gives some more room for different comments from participants.

3.3.7.3 Visual material

The conversation has got an extra section which asks interviewees to produce visual documents of their conceptions of Naghsh-e-Jahan Square. This part of the interview will be asked of every interviewee but it has been expected that some of them will accept drawing and some of them will not have enough self-confidence to draw. However, the researcher will try to convince them that they do not need any artistic skills for painting and drawing.

The second part, which is the interviewees' perception of the square, gives the researcher the rich visual documents of the square and shows what opinions of the square people have in their mind, what is important, attractive or even forgotten and also it might be useful to find out people's expectations.

3.3.7.4 Interviewees

Semi-structured interviews will only be done for people who have experienced the square. In this regard, the situation in the Isfahan city is so important that people can be categorized into three groups: residents of Isfahan (the people who have lived in Isfahan for at least 5 years), shopkeepers (the people who work in the square as a shopkeeper or other job that requires them to come to the square daily) and tourists (Iranian tourists who come from other Iranian cities to visit Isfahan and experience the square). Each group includes six people. Also, this study will try to have equal gender representation in each group, which means there are three men and three women in each group. The researcher will try to interview all the different job ranges in the square and if this is not possible she will interview the shopkeepers as the main job in Naghsh-e-Jahan square.

	Females	Males
The people who work in Naghsh-e-Jahan Square	3	3
Residents of Isfahan	3	3
Tourists of Naghsh-e-Jahan Square	3	3

Figure 4: Interviewee groups

3.3.7.5 The process of interviewing

Whilst walking around the square and bazaar corridors, the researcher will try to approach the people who are working and walking in the square and bazaar corridors. She will try to find interviewees who belong to the mentioned groups (people who work in the square, residents and tourists). As the researcher will settle in a hotel close to Naghsh-e-Jahan Square, she may be able to find tourists to interview.

A two-sided information sheet has been produced and will be offered to the participants. On one side there is a very concise explanation of the project, aimed at participants with limited literacy (page no. 2) and on the other side, more detailed and comprehensive information will be provided (page no. 1). Both sides aim to explain the research in simple language and clarify the objectives of the research and the reasons why we are asking for their input. Both sided are translated into Farsi (see appendix no.2).

After approaching the person and finding out whether he/she is in any of the mentioned groups, the researcher will introduce herself to the person and will ask him/her to participate in the interview. The first stage is interview and the second stage involves drawing.

Also, in an Iranian context it is easy to ask somebody to do an interview by giving an oral introduction of the project, especially when the interviews are anonymous and without any photography. The researcher does not need to identify the participants by name and address. The time needed is indicated on the questions and the participant will decide whether they would like to take part. Only the participants that are completely sure that they want to participate will take part. Moreover, the method for recording the interview data is taking notes and recording with hand drawing with their permission.

As mentioned before, this semi-structured interview has got a second part for drawing and conveying what the participants have got in their mind, so this part will be offered to all participants after finishing the first part. Also, the researcher will try to convince the participant that they do not need to have any skills in painting, drawing and art in order to draw their feelings about the square.

The second part, the drawing, will be offered to all participants after finishing the first part which is text. The interviewees will be asked to document their perception of the square so they will be requested to produce and present a map of this square and show important buildings and the route that they often use to get into the square. In this regard, they can choose to write, draw or paint. Every participant who accepts cthis challenge will be provided with equipments such as

blank paper, several colours of pencils, pastels and markers, a ruler and so on. In this part of the interview, I will request the participants' permission to record film and take photos during their painting or drawing. It has been expected that some of them will not allow me. Having some photos and films are helpful for the researcher to remember the process of drawing or painting which is useful to make the narratives behind this kind of visual document.

3.3.7.6 Transcription

The researcher will not use any recorder during the first part of the interviews. Because of the Iranian political condition, Iranian people cannot trust each other easily and the first stage for making people trust the researcher is telling participants that I am not going to record anything and I will just make some notes of your statements. Consequently, all the interviews are in Farsi. The Farsi transcriptions will be translated by the researcher into English. After translating to English, all the interviews will be put in a data base as an Excel data base file that will help the author to see all the interviews in one table and this will make the classifying and comparing easier. All this process gives the author the opportunity to get more familiar with the data.

3.3.7.7 Ethical considerations

As it has been mentioned before, a two-sided information sheet will be produced and offered to interviewees. On one side there is a very concise explanation of the project, aimed at participants with limited literacy (page no. 2) and on the other side, more detailed and comprehensive information will be provided (page no. 1). Both sides aim to explain the research in simple language and clarify the objectives of the research and the reasons why we are asking for their input. This information sheet gives the interviewees clear information in their own language, Farsi.

Before starting every interview, the interviewee is also informed verbally that the interview is completely voluntary and he/she can give up at any stage of the interview, that he/she does not have to answer any question that he/she does not like and that the interview is confidential, anonymous and without any photography. Furthermore, the questions are not of a sensitive nature or personal attitude and the researcher will try to convince interviewees that they are not revealing anything particularly personal.

Conclusion

This chapter shows how theoretical methods are to be applied to the exploratory qualitative case study. It provides an overview of the designed methodology of research. The research methodology chapter starts with a section on the methodological framework. It provides a brief outline of the research objectives, and the ways to achieve them.

The second section explains the case study methodology and the reasons for choosing this particular method and the case study itself. The research therefore employs a multiple methodology approach to collect data for the case study as discussed in the third part of this chapter. The next stage of this study is devoted to the methods describing the data analysis.

CHAPTER 4: DATA ANALYSIS

Following the data collection as described in section (3.3), the next stage is analysing the collected data. Firstly, historical data such as maps, publication and photos need to be organized and sources should be identified and dated. Then the organized data should be analysed by comparing, assessing and evaluating. It will help to find changed processes of the square. Secondly, the data collected from multiple methods which are about the contemporary condition of the squares should also be analysed critically then all results will be presented in tabulated and diagram form.

Categorizing and analysing were piloted in early phases of the research to inform data collection. In this research, the collected data appear as words, photos and drawings which come from different methods, such as interviews and observation (walking strategy and driving). This part of the study aims to highlight how to organize, categorize and display the data by explaining the details and process of data analyses.

4.1   The analyses structure

There are different approaches to analysing qualitative data. Data analyses in this study can be done by two major approaches: manually and by computer assisted methods. In this research, a combination of the two approaches is used. Bazeley (2007) recommends that for first time or small scale studies, coding on hard copy printouts should be done first, not via a computer monitor. Also, there is something about manipulating qualitative data on paper that gives the researcher more control over the work and touching and manually handling the data gets additional data out of memory and into the record (Saldana, 2009, p.22). Furthermore, the high volume of the data, the shortage of time and also experiencing new software that the supervisor of this research recommended has encouraged the researcher to use the software. As a result, in this study the first steps of the analyses of the data (which will be completely explained in the following paragraphs) are manually conducted and the next steps of this process (again, this will be explained in the following paragraphs) will benefit from using computer software to assist.

Computer Assisted Qualitative Data Analysis Software (CAQDAS) can aid the researcher to build an accurate and transparent picture of the data whilst also providing an audit of the data analysis process as a whole—something which has often been missing in accounts of qualitative research (Welsh, 2002, p.1). I have chosen NVivo, which is a software package to aid qualitative data analysis designed by QSR (Its full title is NUD.IST Vivo) (Welsh, 2002, p.1), over other packages because it is widely recognized as one of the best CAQDAS packages for qualitative research. Also, it is capable of handling text as well as visual material. In this study, it has been used to analyse interviews, photos and drawings. The possibility of importing every document directly and codifying the

document easily on screen can be other advantages of using this software. Additionally, it is possible to write memos and captions about particular aspects of documents and link these to relevant pieces of text in different documents (Welsh, 2002, p.5). Furthermore, running queries to uncover trends or see how ideas are related, visualizing the results and using visualizations to gain new perspectives on the material are the other objectives of using Nvivo. Besides word trees, tag clouds, tree maps and cluster analysis, NVivo visualization techniques help the researcher to see the patterns and connections in the collected data (QSR, 2014, p.38).

4.1.1   Categorising the data (Nodes)

A node (code) in qualitative research is most often a word or short phrase that symbolically assigns a portion of the data (Saldana, 2009,p.8) and to codify in nodes (in NVivo data are "coded" at "nodes"(Welsh, 2002)), data are arranged in a systematic order and are permitted to be segregated, grouped and linked in order to show meaning and explanation (Grbich, 2006, p.21). After reviewing and the critical literature review, especially authors such as Gehl Architects (2004), PPS 2002 and Lennard (2008)), the aims of this study are clear and the researcher already knows what themes and cases to look for.

Making nodes is the first stage to organize and categorize the data before codifying the collected data. The definition of the nodes has been developed in stages throughout the research.

Stage 1: Based on the project research questions and objectives, the nodes which are produced by this stage need to complete by the next stage.

Stage 2: Based on the literature review of this study, especially authors such as Gehl Architects (2004), PPS (2002), Lennard (2008) (refer to section 2.1) and the sustainability section (refer to section 2.3), the nodes which are created in this stage are updated by considering the stage 1 nodes.

Stage 3: Prototyping data coding, reviewing and refining nodes as appropriate; this stage is done manually by reviewing the nodes which come from stage 1 and 2 and also pilot data gathering (data collected by the walking strategy, such as photos, films and maps) that the researcher collected from the first observation.

Stage 4: Piloting Nvivo coding; in this stage the created manual nodes are entered into Nvivo to make the coding structure of the study. This stage is helpful to show the relationships between the nodes in Nvivo model. Then the nodes are upgraded by considering the collected data.

Stage 5: Nodes are fixed and data are coded in the final nodes.
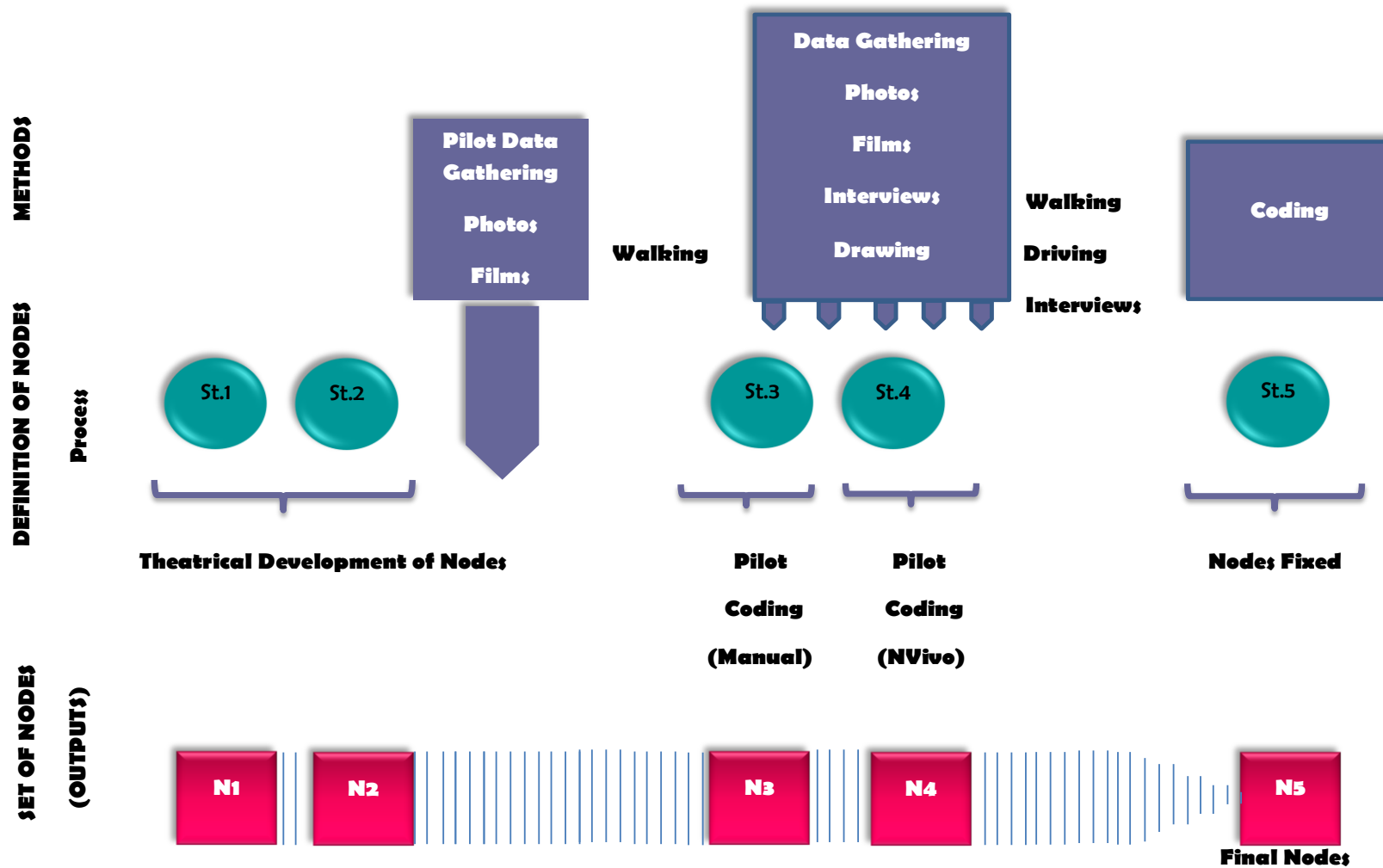
Figure 1: The nodes of this study have been structured by different stage of the study.

The initial organization of the data (nodes) has been performed according to the structure shown in Figure 2.

Figure 2: The initial nodes structured manually

The nodes are important and helpful to explore and select the collected data and they are the main objectives of the study which is explored in the case study of Naghsh-e-Jahan Square. Also, it is the main stage to organize and categorize the collected data. This initial nodes structure has been made manually as I needed to have more opportunities to see all the nodes in a page with changeability before using NVivo. After starting the analyses, the final nodes structure has been presented according to the structure shown in Figure 1.

The nodes are categorized according to functions (use and activities), built fabric (focal points and anchors, civic and religious buildings, changes in levels, steps and balconies, surfaces and fittings, entrances, variety and colours), subjective perspectives (legibility of the space, existence of significant functions, history significance, level of safety, important place in people's memory and sense of belonging) and facilities (walkability, sit-ability, sun and shelter elements, cafés and restaurants and attractiveness). Also, during and after the data collection stage it may be possible that some new nodes will be added.

4.1.2   Preparing data for analyses

Before analysing the collected data, it needs to be prepared. According to Miles and Huberman (1984, p.21), analysis consists of three main stages: data reduction, data display and conclusion drawing. Data reduction can be one of the main parts of data preparation. Data reduction refers to the process of selecting, focusing, simplifying, abstracting and transforming and this is a part of analysis (Miles and Huberman, 1984, p.21). This part of the analysis has been done on the first part of the interviews (texts) and the captions of selected photos and drawings. Data reduction is a part of the analysis process which is done manually.

Limited photos taken during the walkshould be selected to reduce the volume of the data and also to avoid repetition. Films are the other part of the gathered data that should be prepared for analysis. In this regard, films taken while driving are converted into photos. After watching the driving films several times, some photos are captured from the film with the assistance of Ashampoo software (which is helpful to capture photos of a film by one click each time). Therefore, the driving photos will be added to the walking photos for analysis.

4.1.3   How to analyse the Interviews (text part)

After Denscombe (2003, p. 145), the text part of the interviews is the initial questions which can be divided into two categories: facts and opinions. Factual information such as age, sex and place in the city are not much in the way of judgment but they are helpful to categorize the data, opinions, attitudes and beliefs which reveal information about people's feeling and values. The questions should allow people to give their ideas. In this regard, the questions are designed to address subjective perspectives, facilities and functions (uses and activities) which are the main parts of the nodes: legibility of the space, existence of significant functions, historical significance, level of safety, important place in people's memory and sense of belonging, walkability, sit-ability, sun and sheltering, cafés and restaurants, attractiveness and so on. Also, the researcher will try to make the questions and answers refer to the nodes. All the questions have room for any expansions and the researcher will use the opportunities to bring up new questions during the interviews and, if during the interviews the researcher can find a new point, it will added as a new node (Figure 3).
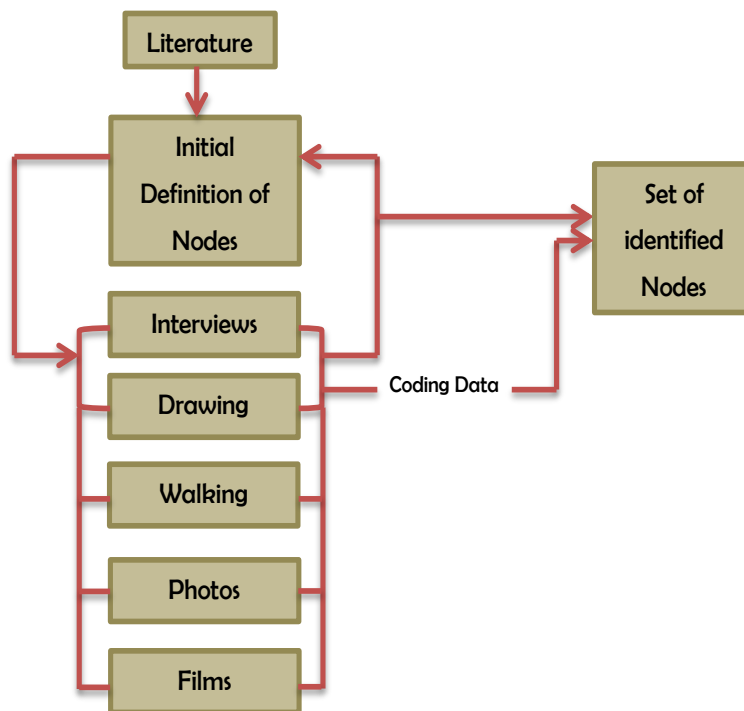
Figure 3: The coding stages of the data

The most frequent form of the interviews is narrative text but according to this method the semi-structured interviews have a similar format to questionnaires and also have the benefit of being open handed. Moreover, the researcher will try to summarize and simplify the answers in the short sentences which can be referred to the nodes to codify. Then all the interviews will be entered into an excel file which can tabulated. All the questions and people's responses in this stage are turned into the node symbols. It means this excel file is a data set which can be entered easily into Nvivo Software (which will be explained in section 6.4)

As mentioned in the interview section (3.3.7), every interview question can be replied to by given fixed responses with rating scales as well as having room for any comments and points of view. As a result, the fixed responses (with rating scales) work as a similar format to a questionnaire. Although the approach to this study and interviews is qualitative in this part of the study, a quantitative approach has been chosen to analyse this part of the interviews. This is because a quantitatives method of data analysis may be useful to the researcher who is trying to draw meaningful results from the qualitative data (Abeyasekera, 2005, p. 1). Furthermore, it is contributing to conveying the data more easily. To achieve these objectives, fixed responses of the interviews will be entered into Excel Software to produce some graphs which can be seen in the results (see chapter 7).

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4.1.4   How to analyse the visual materials

In this study visual methodology is conducted with photos taken, films and also participants' drawings. This section addresses ways of analysing these visual documents.

The researcher walked to record the determined variables which in this study are called nodes; consequently, all photos taken are aimed to refer to the introduced nodes.

According to Pink (2007), analysis is not a simple matter of interpreting the visual content of photos; different viewers of photos give subjective meanings to their content. However, these photos are produced by the researcher purposefully as documentation, firstly to remember the experiences and show how other things looked (Banks, 2011, p.114) and the use of photos in this part of study is different from the photos found in the historical part. The consequence of this approach is that the researcher has the ability to create and select the photos that refer to the existing nodes.

In order to analyse the visual materials, it is necessary to transfer visual evidence into verbal knowledge although the main objective is to explore the relationship between visual evidence and verbal knowledge. Also, the photos do not illustrate the field notes and are just evidence of the experiences, but the words and photos contextualize and complete each other and they are a set of different representations and strands of the research (Pink, 2007, p.96)(see Figure 4).
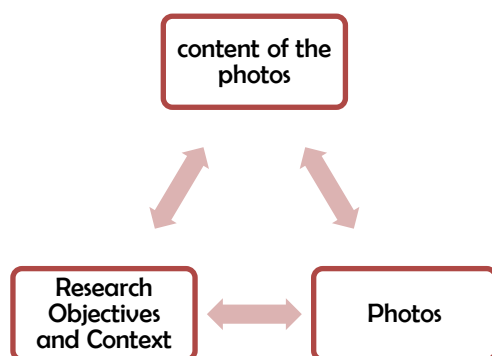
Figure 4: The relation between content of the photos, photos and research objectives and context

Accordingly, to transfer the photos into textual knowledge, the first step of analysing visual data (photos taken and interviewees' drawings) in this study is organizing a regular order to write proper captions for every photo and drawing. In this regard, the photos and drawing are numbered and the drawings are linked with interviewees' numbers. To analyse the images (photos and drawings), they should be broken down into their constituent elements (Leeuwen and Jewitt, 2000, p.15) and every mentioned constituent element must have a caption. The numbered captions vary from the simply descriptive to a brief narrative of the experience or event and are

intended to allow the visual data some autonomy (Banks, 2011, p.145) by referring them to the nodes; also, the location of every photo is already shown in the walking maps. To write all the captions, the researcher has tried to reduce the written text to an introductory statement and a number of captions (Banks, 2011, p.145) because it is helpful to codify the nodes in the next step.

There are some important principles to analyse the drawing materials; the use of space on the paper sheet, the order of appearance of building elements and the symbols chosen (Leeuwen and Jewitt, 2000, p.131).

4.1.5   Management of data types

The data collected by different methods (interpretative historical research, walking strategies, visual methods, interviews and literature) need to be managed and analysed. The following Figure6 shows the management of the data types.

Method	Data	Analysis	
		Preparing Data/ Data reduction	**Interpretation**
Interpretative historical research	Historical Data	_Selection	See section 6.2
	_Text _Photos _Drawing/Painting _Maps		
Walking	Contemporary Data	_Synoptic Drawings, Notes, Photos, stills from film _Selection _Coding	See section 6.3.2
	_Notes _Photos _Films (to generate stills)		
Visual methods	Researcher's Photos (walking) Film Conversation Drawings Participants Photos Film	_Synoptic Drawings, Notes, Photos, stills from film _Selection _Coding	See sections 6.3.2 and 0
Interviews	Conversation Text Drawings	_Coding	See section 6.3.3
Literature	_Text _Photos _Drawings	_Selection	See chapter 0

Figure 5: The management of the data types of the study

4.2 Analysis

This section reports my project. It took place in Naghsh-e-Jahan Square in Isfahan in summer (2010). My initial visit for one day to Naghsh-e-Jahan Square in Isfahan was in order to conduct a qualitative observation of the square. The objectives of my observation were to gain initial insights into how the square functions, how people use the square and why they choose this place in preference to other places.

During my 13 hours of observation I tried to see the whole of the square, so I walked all around it and observed how busy it was at different times, the kinds of social interaction taking place and how physical dimensions influence the social dimensions. I took photos as a record of these observations.

In addition, I conducted informal interviews with the people who were in the square to find out why they had come to the square and I took notes during these interviews. The number of people who did interviews was about ten. I tried to find people of different ages and people in different groups as well as individuals. Most of the population were family groups and I aimed to interview both men and women. I had a male partner during the interviews with men. It helped us (me and male interviewees) to feel more comfortable. Furthermore, all conducted interviews are in Farsi and they have been translated by author to English.

I realised that observation cannot be done once and it needs to be done over several times.

The report is divided into two sections: the first part focuses on photographic and film making and the second one is interviews done by random people who were in Naghsh-e-Jahan Square.

4.2.1 Photos and Films

_The activities during the day and night hours were different and the time of activities can be categorized into three sections where I explain the rate of population.

10:00 am to 12:00 pm: Although all the shops are open, the town square is not busy. The reason for these low numbers might be people avoiding the hot weather and trying to protect themselves from the sun. Nobody can sit in the court yard because it does not have any trees which are an essential component in Iranian cities. This town square once had tall trees that were cut down by the Isfahan Municipality. One of the salesmen said those trees had blocked shop widows and the elevation of Naghsh-e-Jahan but the lack of trees is clearly a problem during the summer days.

Figure 6: During a hot morning in summer, people do not use the open space of Naghsh-e-Jahan Square that much

Figure 7: Market traders are using the awnings to protect their shops from the sun of the hot summer.

The shops which are open to the court yard are not busy (Figure 7). The pool in the court yard is the only place where anybody is standing (Figure 6). The micro- climate in the Bazaar corridor is completely different from the court yard and people are trying to use indoor spaces such as the Bazaar as it is cooler (see Figure 8).

Figure 8: People are attracted to the Bazaar corridor during a hot summer day

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12:00 pm to 4:00 pm: The population in the court yard is minimal. Although during the hot hours in summer days in most Iranian cities people try to come out less than at other hours, the lack of shade is likely to be the major reason that makes the court yard empty (Figure 9).

Figure 9: The empty space during a hot summer day

As Figure 10 shows, at the hot hours of this day people are using the shade of trees. This image was taken in one of the pedestrian entrances of the square.

Figure 10: People are using the shade

4:00 pm to 11:00 pm: this is when the town square is really alive and busy. The people flow in until 9 pm and then the population decreases again until 11. From 4 pm to 6 pm most people are walking and shopping. Gradually the number of people who sit in the open space of the square grows. Finally, from 8 pm onwards, people are mainly sitying in the square.

Figure 11: At 6 pm most people are walking instead of sitting.

Figure 12: The population of sedentary people is increasing.
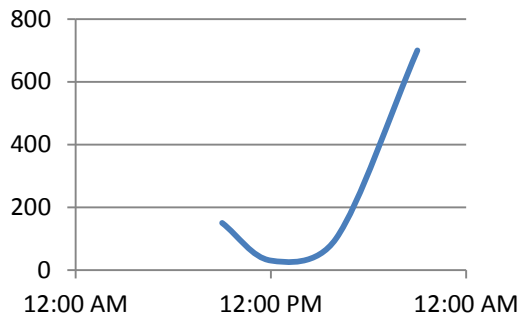
Figure 13: The number of people from 9 am to 10 pm (the number of people is estimated)
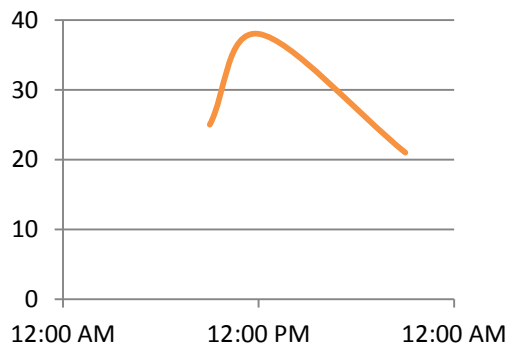
Figure 14: The temperature (in degrees Celsius) from 9 am to 10 pm

Access:

This town square has kinds of entrance for cars and pedestrians. In the past, cars could come in the square and circulate all around. Currently, cars can only circulate in a limited area of the square (North end). The red arrows in the following picture show the movement routes for cars and the blue ones show the pedestrian ways in Naghsh-e-Jahan.

Figure 15: The access to Naghsh-e-Jahan Square

Seating:

Seating opportunities vary according to orientation and location and help the square not to appear empty and make people comfortable alone or in groups (Carmona & Portella 2008, p.126). One of the good points that helps the square to be lively is a good quality and variety of seating opportunities. The lawn, benches and edges are suitable places for people to sit and the capacity of seating is high.

Figure 16: The front of the Sheikh Lotfallah Mosque where people use the stage for sitting

Edge:

In addition to articulating the spaces (Carmona & Portella 2008, p.126), the edges give the opportunity to sit and to stay in the square.

Figure 17: The space in front of the Great Imam Mosque where the edges make a special place for sitting and socializing

Water: There are two pools. One of them is used as a more formal water feature and one is used as a paddling pool for children and sometimes men. In addition to the aesthetic recreational aspects of these pools, another main point of the water in the dry weather of Isfahan is making the atmosphere cooler.

Green: Meadows help the space to be green and cool but, as has been said in previous chapters, the lack of trees is completely obvious.

Shopping: Another attractive element that draws a lot of people such as tourists and residents (the people who live in Isfahan city) to Naghsh-e-Jahan Square is the shops. The shops provide the traditional hand craft productions which are special in Iran; although they are expensive productions, they have got their customers. Sometimes people go there to look at the windows of these.

Informal interviews

People who are there can be divided into two groups:

_People who work and own businesses there

_People who are using this place, who can be divided into two groups too

A: people who are living resident in Isfahan

B: tourists who go there to visit this town square as an attraction

All of the interviews were conducted in the evening. The majority of people in the square were families and they sitting on the lawn. Some of them had picnics or were eating food or ice cream that they had bought from the shops in the town square.

By observing Naghsh-e-Jahan and doing some informal interviews either related to the activities of people or spontaneous. I can begin to understand why people to stay in Naghsh-e-Jahan square are.

The results of the informal interviews

•Why do people come to Naghsh-e-Jahan?

Amongst the reasons are: shopping, the beauty of the square, nice afternoon weather, walking, watching other people and as a habit.

Shopping: I realized all the population were interested in shopping or watching the shop windows. Although these shops mostly sell traditional and expensive hand crafts, people like to spend their time in front of the shop windows. I consider these shops as one of the main attractions in this square. Women were keener on shopping than men because I saw many men sitting in the court yard and were waiting for their women to come back from shopping.

Aesthetic aspects: after shopping, visiting the square because of its beauty is one of the main reasons why people are there. One of the interviewees, who was a tourist from one of the southern cities, said, "I am here to show this Masterpiece to my children that they should know our heritage." Someone else cited, "I come to enjoy the beauty of these buildings" and there was also a couple who said that "we feel a holy sense surrounding us".

Nice climate was the third reason that people cited. The weather being cool and the nice smell of water and meadow make the town square more pleasant in the evening but not in day time.

Walking: a lot of people were walking and wandering around Naghsh-e-Jahan without any specific purpose. Strolling is one of the reasons that makes people go there.

Watching other people: some people said they like to sit and watch other people and some of them said that they get used to coming to Naghsh-e-Jahan because they miss here after a while.

Another important point that is necessary to make is the residents of Isfahan are a little biased about Naghsh-e-Jahan and one of them that said it is part of his identity and all the tourists admire Naghsh-e-Jahan.

Conclusion

This chapter identifies the data analysis process of the research, which comprises several sub-sections, to demonstrate how to prepare the data and analyse the interviews and visual materials.

The final part of this chapter describes the pilot study of the research, which helped in the conducting and improving of the research methodology. The following chapter will clarify the Iranian context of the study.

CHAPTER 5: IRANIAN CONTEXT

As the case study is located in Iran, this chapter seeks to explain Iran geographically, climatically and historically. It presents the concept of public spaces in Iranian cities and its historical origins. The discussion in this chapter emphasizes the historical nature of public spaces such as town squares and bazaars.

5.1 Geography

Iran is a country located in South West Asia (Figure 1). This country is the 18th largest country in the world in terms of area at 1,648,195 km2 (636,372 sq mi), and the population of this country is over 74 million (World Bank, 2002).
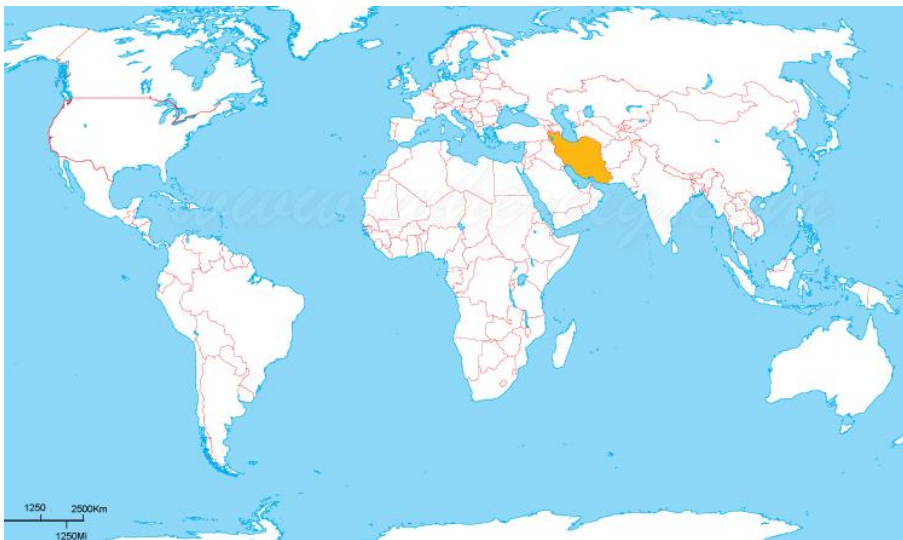
Figure 1: Location Map of Iran in the world, Source: (Whereig, 2011)

5.2 Climate

Iran climate varies considerabley. The northern part of Iran is covered by forests. The eastern part consists mostly of desert basins such as the Dasht-e Kavir, Iran's largest desert, in the north-central portion of the country, and the Dasht-e Lut, in the east, as well as some salt lakes. This is because the mountain ranges are too high for rain clouds to reach these regions (Shafaghi, 2003, translated by author). The only large plains are found along the coast of the Caspian Sea and at the northern end of the Persian Gulf, where Iran borders the mouth of the Shatt al-Arab (or the Arvand Rood) river (Shafaghi, 2003, translated by author). Smaller, discontinuous plains are found along the remaining coast of the Persian Gulf, the Strait of Hormuz and the Sea of Oman (Shafaghi, 2003, translated by author).
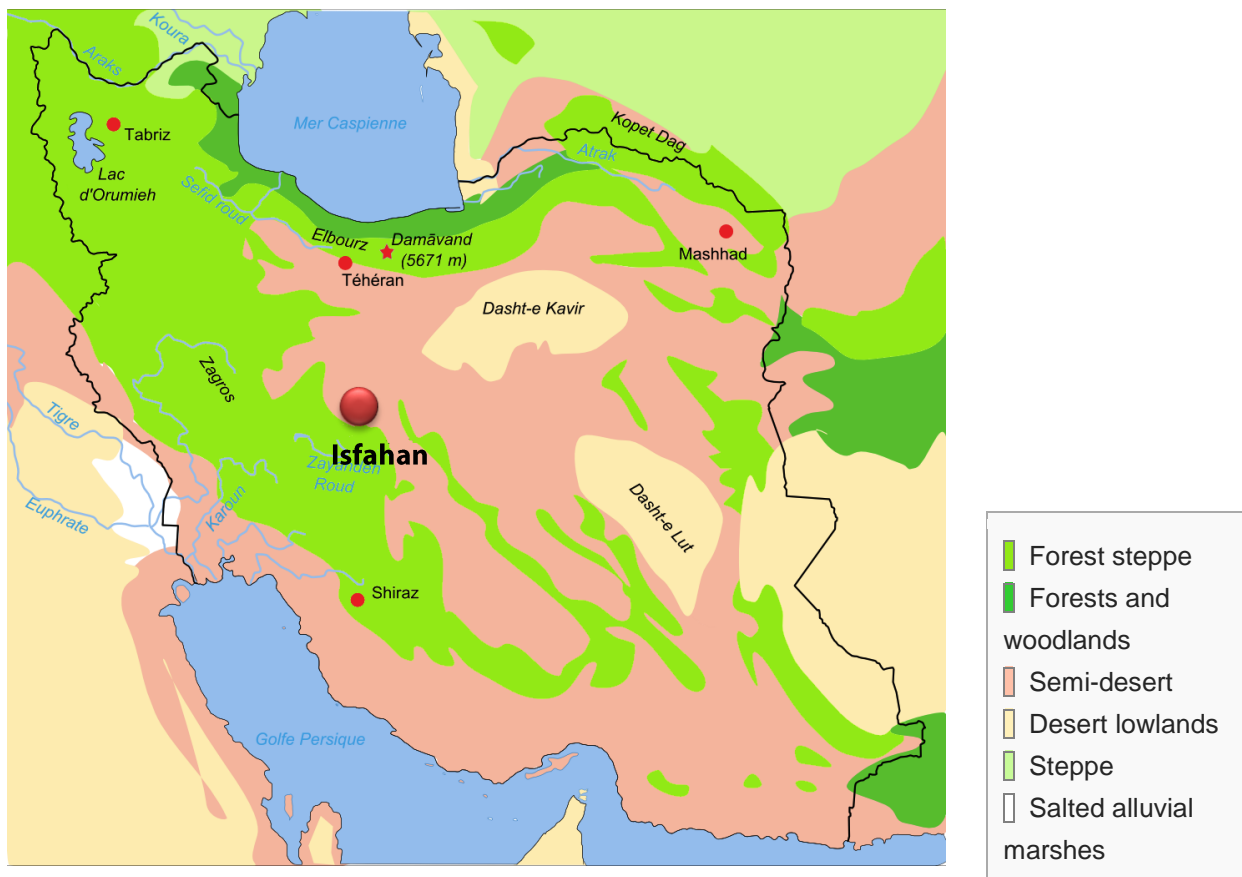
Figure 2: The climate of Iran Source: (Fabienkhan, 2006)

5.3 Religion

The population of Iran is 75,149,669 (Statistical Centre of Iran, 2011), of whom Muslims constitute 98.8% (including 91% Shia and 7.8% Sunnis), The Christians have a population of 0.7%, the Jews, 0.3%, the Zoroastrians, 0.1% and the remaining 0.1% are the followers of other religions (Hussain, 2013, p. 1).

Most Iranians subscribe to the Shii form of Islam. This variant came to Iran in the early days of Islam and the Shia have recognised twelve Imams at various stages of their history (Hussain, 2013, p. 1). Shiism is considered to be the official religion of Iran. It uses a variety of ceremonies. These are shown in Figure 17 in section 7.1.9.1.

5.4 Politics

During the Qajar (1785 to 1925) and Pahlavi (1925 to 1979) dynasties, the country gradually but enthusiastically began to imitate everything Western, and the last Shah (king) of the Pahlavis tried to develop an essentially collective identity rooted in the country's pre-Islamic heritage and in loyalty to the ruler (Menashri, 2001, p. 1). Following the revolution and triumph of the Islamic Republic in 1979, Iranian views changed radically and the westward trend.was reversed The leaders of the Islamic Republic have tried to ground their collectivity strictly on the basis of the

Islamic religion (Menashri, 2001, p. 1) and this trend continues, though the Iranian people have always vacillated between religious values and the adopting of Western styles.

5.5   Gender Roles

Because of Iranian politics and religion there exist specific restraints for men, but more especially for women, in the public sphere. Wearing the hejab is compulsory for women of all religions. Iranian women can not perform certain actions in public spaces. For example, they can not enter water or lie on the ground for relaxation or for any other reason. Also, young men and women who are close relatives, (such as immediate family or spouses) can be together in public places, otherwise they must at least have oral permission from a police officer. Despite these kinds of limitations, young people know how to manage their meetings and relationships in public spaces.

Urban History of Iranian Cities

Iranian cities have experiences three noticeable periods that are before Islam, after Islam and contemporary period (Habibi, 2002, p. 6, translated by the author). The Figure 3 shows these periods.

Iranian cities before Islam (9th century BC-7th century AC)	• Persian style arise of Mesopotamia (9th BC-4th BC) • The complex of Persian and Greek style then formation of Persian-Helenic urban style (3th BC) • This era is consisted of partian and Susanian periods (3th BC- 7th AC)
Iranian cities after Islam	• Khorasanic Style (600-950 AD) • Razi style (950 _ 1200AD) • Azari style (1200 _ 1500AD) • Esfehan style (1500 _ 1700AD) • Tehran style (1750 _ 1900AD)
Iranian cities in contemporary period	• (1800-1920) • (1920-1945) • (1945-1979)

Figure 3: Three noticeable urban design periods in Iranian Cities, Source: After (Habibi, 2002)

This research is aimed at focusing on public urban spaces; the changes of public urban spaces in Iranian cities during their history will be emphasized. Two major stages of historical classification in Iranian public urban spaces are the Hellenic age and the Islamic-Iranian age (Kerishman, 1975 cited in Tafahomi et al., 2007).

5.6   Iranian Public Urban Spaces before Islam (9th century B.C-7th century A.C)

This era starts with Iranian urban civilization and finishs with a Muslim attack on Iran and conquest of it. The first historic period of this era is called Maad age. The cities at this time were enclosed a

big and strong castle on the top of a hill with tough walls around which ordinary people lived. The Bazaar was in the first stage of its birth at this time (Habibi 2002, p.7, translated by the author).

Comercial Road

Comercial Road

1- King's Palace

2- Storage

3- King's Relatives Houses

4- Military House

5- Town

6- Bazaar

7- Residential Area
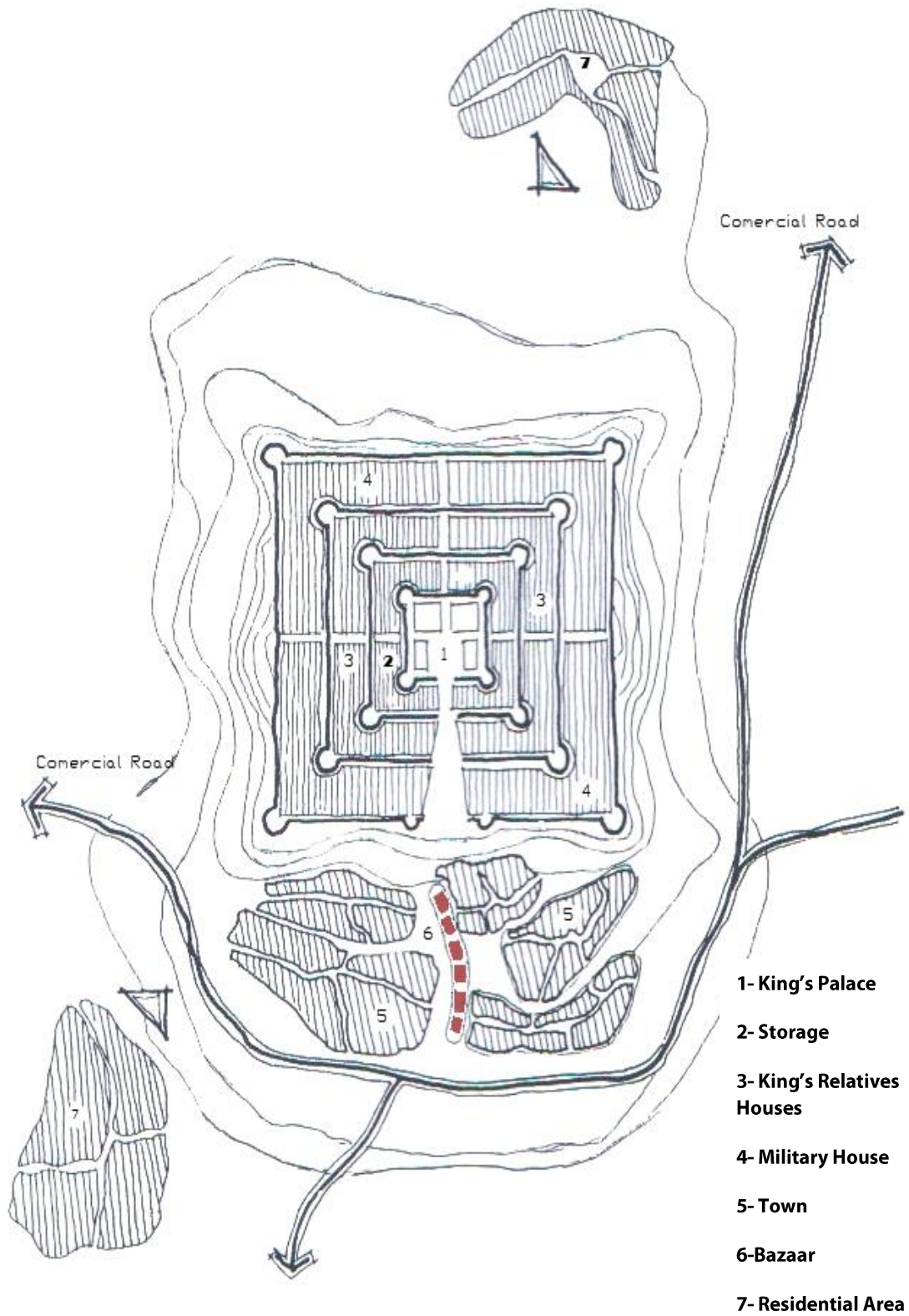
Figure 4: Physical Structure of Cities in Maads era (9 B.C_ 7 A.C), Source: After Habibi (1976)

In the middle of the Achaemenian Empire (550–330 B.C.E.) period, Persians built their cities with the plan blessed by Zoroastrian (the common religion before Islam in Iran) priests and the city was a square about 700x700 metres. Fire existed in the middle (as Zoroastrians believe in fire as a holy element). Near the fire place they built places for storing water after building this core they started to construct houses and finally gardens around it (Sayednia, 1995). Again, a Bazaar is an obvious element in the urban plan, as people used it for trade and also for social interactions. Figure 5 is an example of city planning in this era.

1- King's Palace

2- Storage

3- King's Relatives Houses

4- Military House

5- Town

6- Bazaar

7- Agricultural Lands
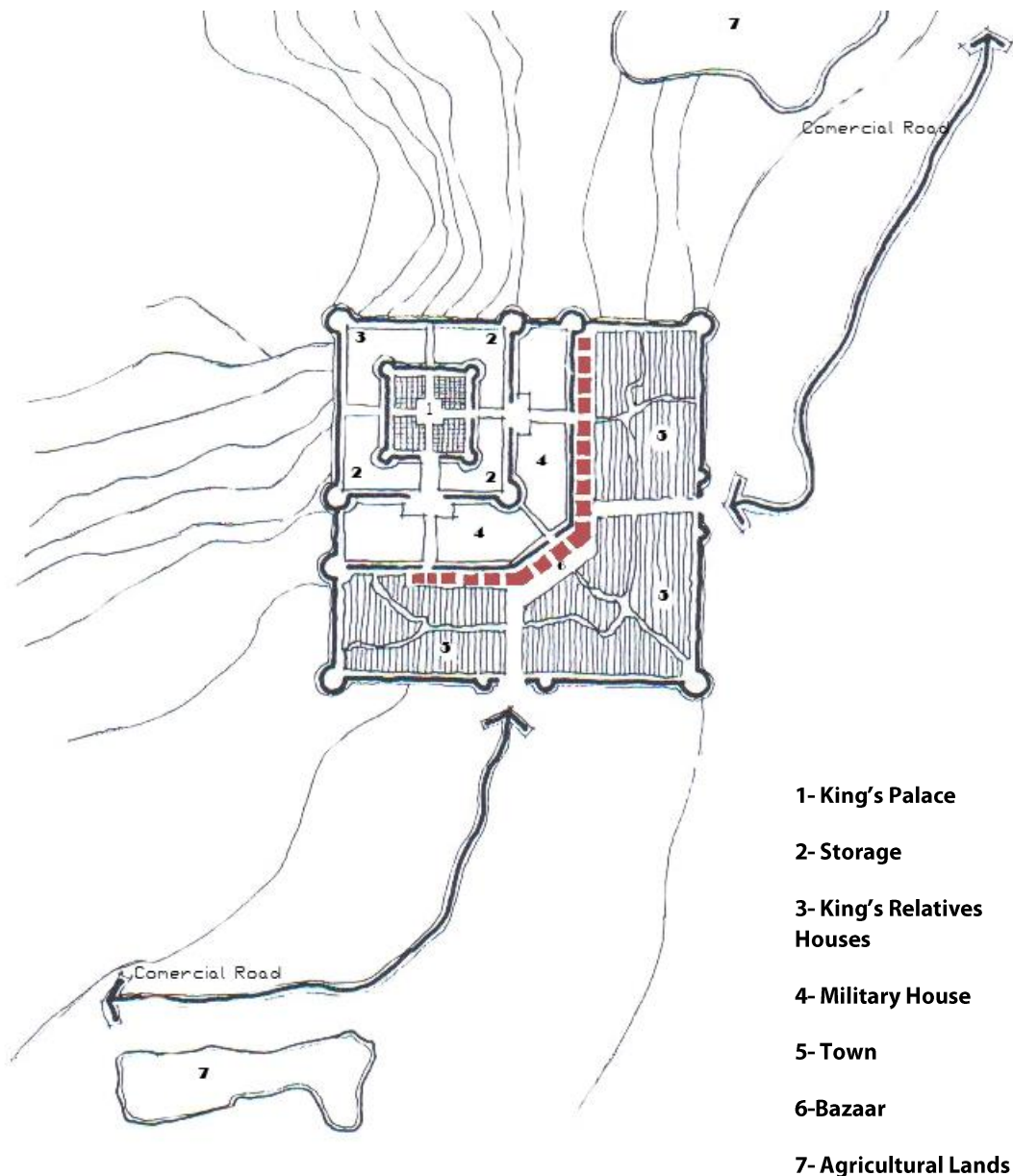
Figure 5: Physical Structure of Iranian Cities in the Achaemenian era (550–330 B.C.E.), Source: After Habibi (1976)

After this period, due to the Greeks' attack (330 B.C.E) on Iran, the process of cities changed. It was the first time Eastern and Western civilizations mixed to create a new civilization called Persian-Hellenic and the Seleucid Dynasty commenced. Habibi (2002) believes these kinds of cities were built on the basis of the Greek government and they were military cities. They used the Hipodamus' criteria in the Classic era to construct the cities (Habibi 2002, p.20). They considered human scale for designing streets and the cities had chess network. One of the main revolutions in the urban design was the advent of the squares in the cities and these squares were the same as their original one, Agora, which contained an open space and the major buildings of the city. Town squares in Iranian cities are called Maydan; Pirnia (1999) believes this is from the Arabic word for middle. The square was a centre for commercial, cultural and governmental exchanges and was representative of the power and credibility of the Seleucid government (Habibi 2002, p.20). However, Tafahomi (2007) argues that the Seleucid's were not very successful in changing the form of cities because people looked at them as an occupying army.

After the Parthian Dynasty (247 BC – 224 AD) conquered Iran, they attempted to change the structure of Seleucid cities and they built towers and fortification around the cities. This was the first time circular cities were constructed. The Bazaar and square which remained of the previous era can be seen in the middle of Figure 6.
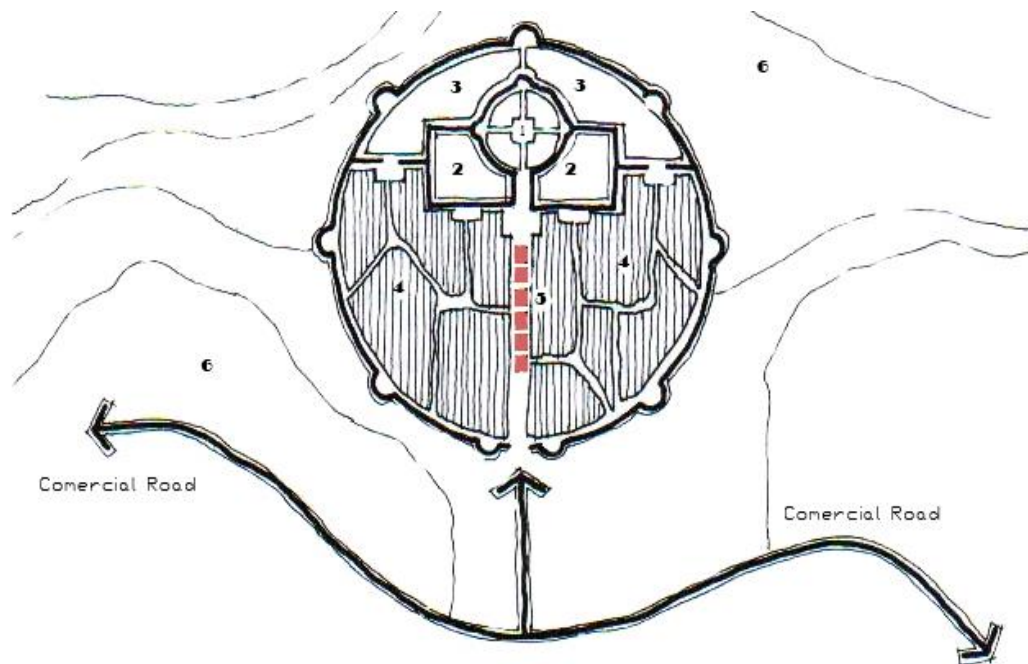
Figure 6: Physical Structure of Iranian cities in the Parthian era (247 BC – 224 AD), Source: After Habibi (1976)

The Parthian government was replaced by the age of Sassanid in the third century A.D. They divided city structure into three parts for different social classifications. The centre of Sassanid's city was called Kohandej (Old Castle) and that was the palace for the king and his relatives, temples, warehouses, courts and halls. This section was divided from the other parts of city by strong walls. The second ring, called Sharestan (Town), was the place where significant people lived who got governmental jobs and it contained houses, streets and small markets. Again this part was protected by walls and gates. Finally, the third cycle that distributed out of the city walls was called Rabaz (Suburb) and this part belonged to ordinary people such as craftsmen, farmers, tradesmen and so on. This part also contained farms, gardens, roads and houses (Tafahomi et al. 2007, p.3)(Figure 7).

In the Sassanid period, trade was common among countries such as Iran, China, India and other countries. The Bazaar became a major axis that moved from town to suburban areas. Here different materials such as silk, ivory and wool were sold (Pigulevskaja 1963 cited in Habibi 2002). The Bazaar is integral to Iranian urban space and therefore will be discussed further in 5.10.

Town squares were located in suburbs in front of the town gates where carvans entered. All Bazaars were opened to this wide area and it was a space for governmental announcements and ceremonies, but this space did not have any special design (Habibi 2002, p.34). Other authors believe that social and commercial interactions of people were limited to space outside of the city walls (Charkhchian & Daneshpour 2009, p.15). Tafahomi (2007) argues that Iranian town squares at that time were different from the Greek Agora and the Roman Forum which had cultural and recreational roles.
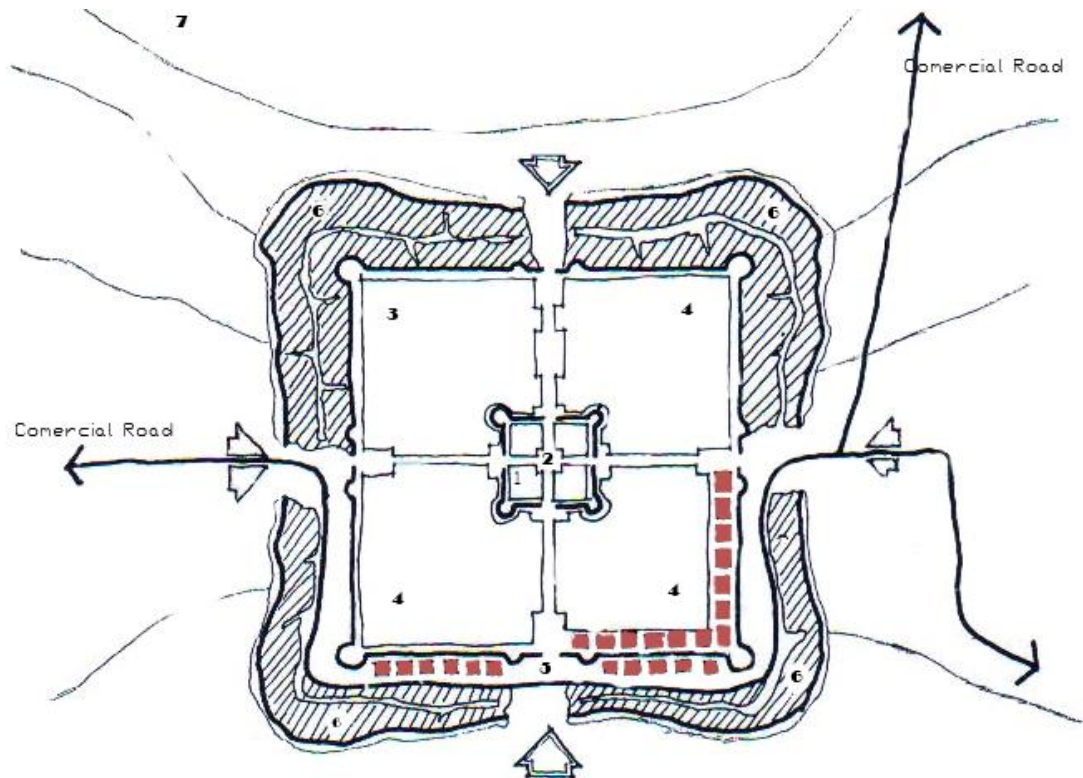
1- King's Palace

2- Fireplace

3-Military house and Storage

4- King's Relatives Houses

5-Bazaar

6-Town

6- Agricultural Lands

Figure 8: Physical Structure of Iranian cities in the Sassanid era, Source: After Habibi (1976)

The role of public space in Iranian cities, as in other countries, was social, commercial and political. As the Sassanid dynasty used religion for political purposes, there were a lot of strict rules for people in the cities. The government did not allow bazaars to become the major focal point of cities because of the importance of the castle (Tafahomi et al. 2007, p.86). Some authors believe that there were squares outside of the cities for people to gather, but they were completely observed by the government and streets were the only places that people could use with liberty.

5.7   Iranian Public Urban Spaces after Islam (7th -18th century A.D)

The conquest of Iran by Arab Muslims happened in 7th century. The Muslims changed the form of Iranian cities. According to studies, this period was divided into five stages in Iran which are:

Khorasanic, Razi, Azari, Esfehan andTehran style (Habibi, 2002).Analysing civil society in Muslim countries involves knowing Islam, not only as an individual religion, but also as a political theory and the main source of a legitimization of political power (Kamali 2001, p.457).

■ Khorasani Style (600-950 AD),

The Samanian Dynasty was the first local government formed in Iran after the Muslim attack. In this era cities improved. The major change was removing the internal walls of Sharestan that were explained in previous chapter. They built new walls that bounded the whole city but the city was not limited that much. A characteristic of the muslimcity was two major roads which crossed each other at a focal point was called a town square. Bazaar gates opened onto the town square. This pattern has remained in Iranian cities to this day (Frye 1997 cited in Habibi 2002).

1- Bazaar
2- Center of Mohalla
3- Services
4- Bironi
5- Andaroni
6- Khalvat
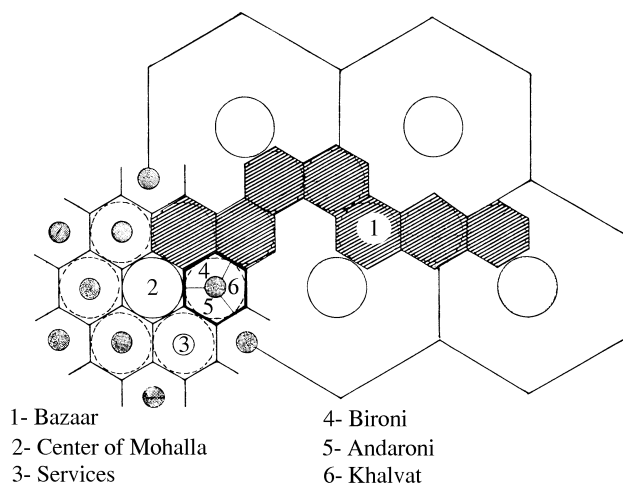
Figure 9: Diagram of hierarchy of urban components (Mohalla, bazaar, interactional areas etc), their arrangement and relationship. In addition, here the four major residential areas; Andaroni, Bironi, Khalvat and services are distinguished. Source: Pourmosavi (2010).
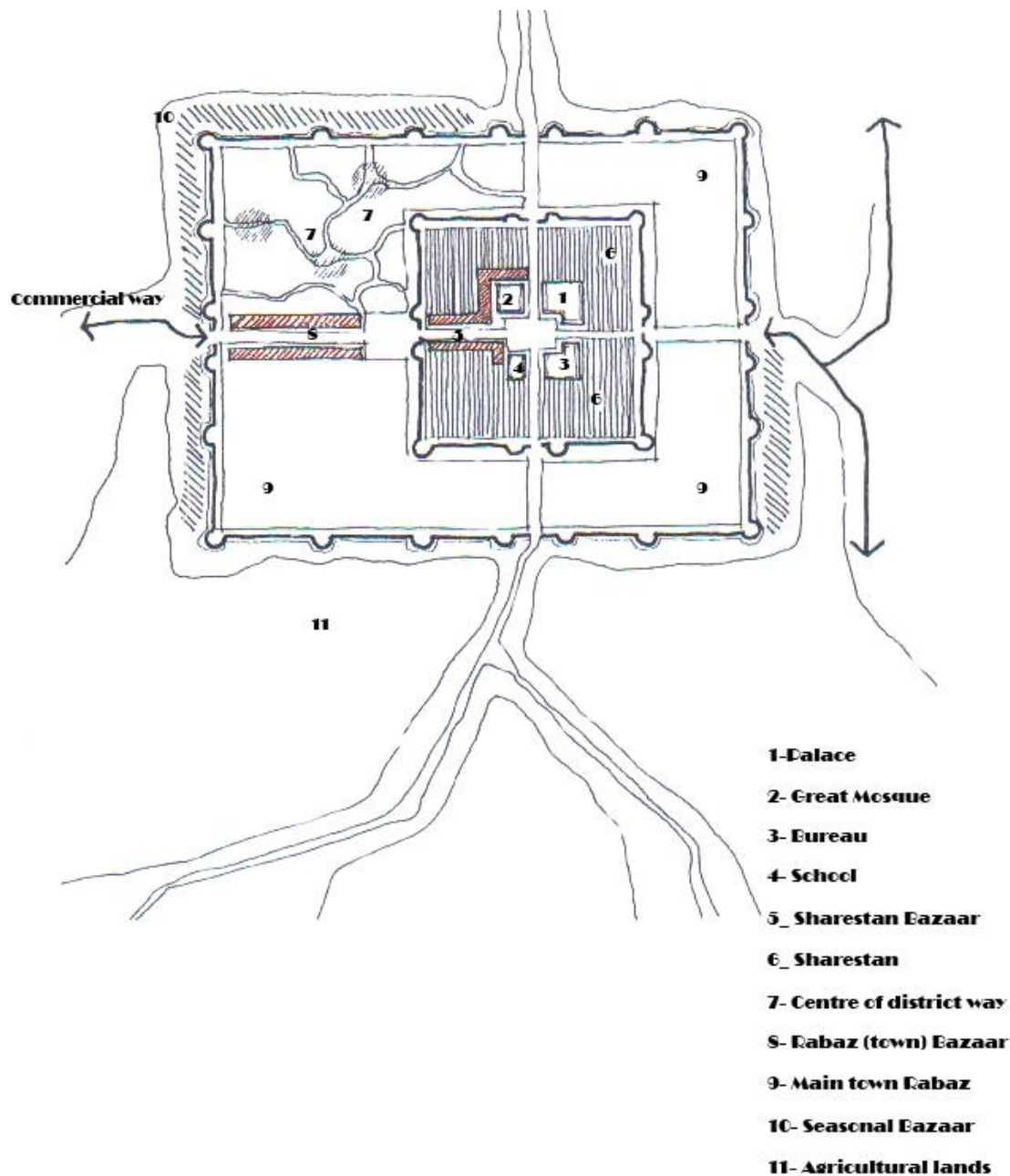
Figure 10: Physical Structure of Iranian cities at the beginning of Arab domination, Source: After Habibi (1976)

In this age, some large squares were built that were surrounded by comprehensive mosques, governmental palaces, official buildings and bazaars (Ardalan & Bakhtiar 2000).

■Razi style (950 - 1200AD),

At this time, science, literature and politics were developing in Iran, so a lot of schools were built (for boys) next to the mosques (Habibi 2002, p.72). Often there were governmental offices, bazaars and a great mosque located around a main square. In this period, districts became an important

part of the cities and each district had a particular mosque, school, public bath, cemetery, bazaar and public local square in the centre of the district (Tafahomi et al. 2007, p.87). Older people (especially men) of the district gathered there to socialize and sometimes to solve the problems of neighbours. The following diagram shows the relation of districts (mohallas) with the main town square.

1- Midan-e-Shahr,
   Char-Sooq (Main Square)
2- Center of Mohalla
3- Dwelling Unit
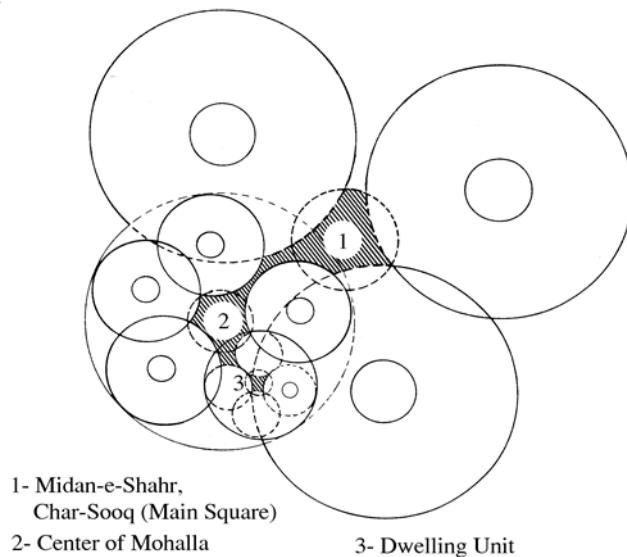
Figure 11: Hierarchy of interactional urban spaces and social gatherings. Central courtyard is considered as the smallest social interactional area. The Centre of Mohalla is an important urban space, with mostly affairs related to the society discussed in there at presence of Mohalla elders. Finally, Midan-e Shahr is the largest and the most important urban social gathering in Islamic cities. Moreover, all important events such as religious festivals, games etc took place in there.
Reference: Pourmosavi (2010).

■ **Azari style (1200 - 1500AD),**

The Mongolian attack on Iran was a disaster for Iran's cities. The Mongolian army destroyed many cities such as Marv, Bokhara, Samarkhand, Nyshabor and Ray (Habibi 2002, p.79). As Mongolian people were nomadic, the urban structure was not important. Many villages were also destroyed (Tafahomi et al. 2007, p.87).

1- Palace
2- Great Mosque
3- Mosque
4- School
5- Bureau
6- Sharestan
7- Centre of district way
8- Bazaar
9- Main town (Rabaz)
10- Seasonal Bazaar
11- Agricultural Lands
12- Gate
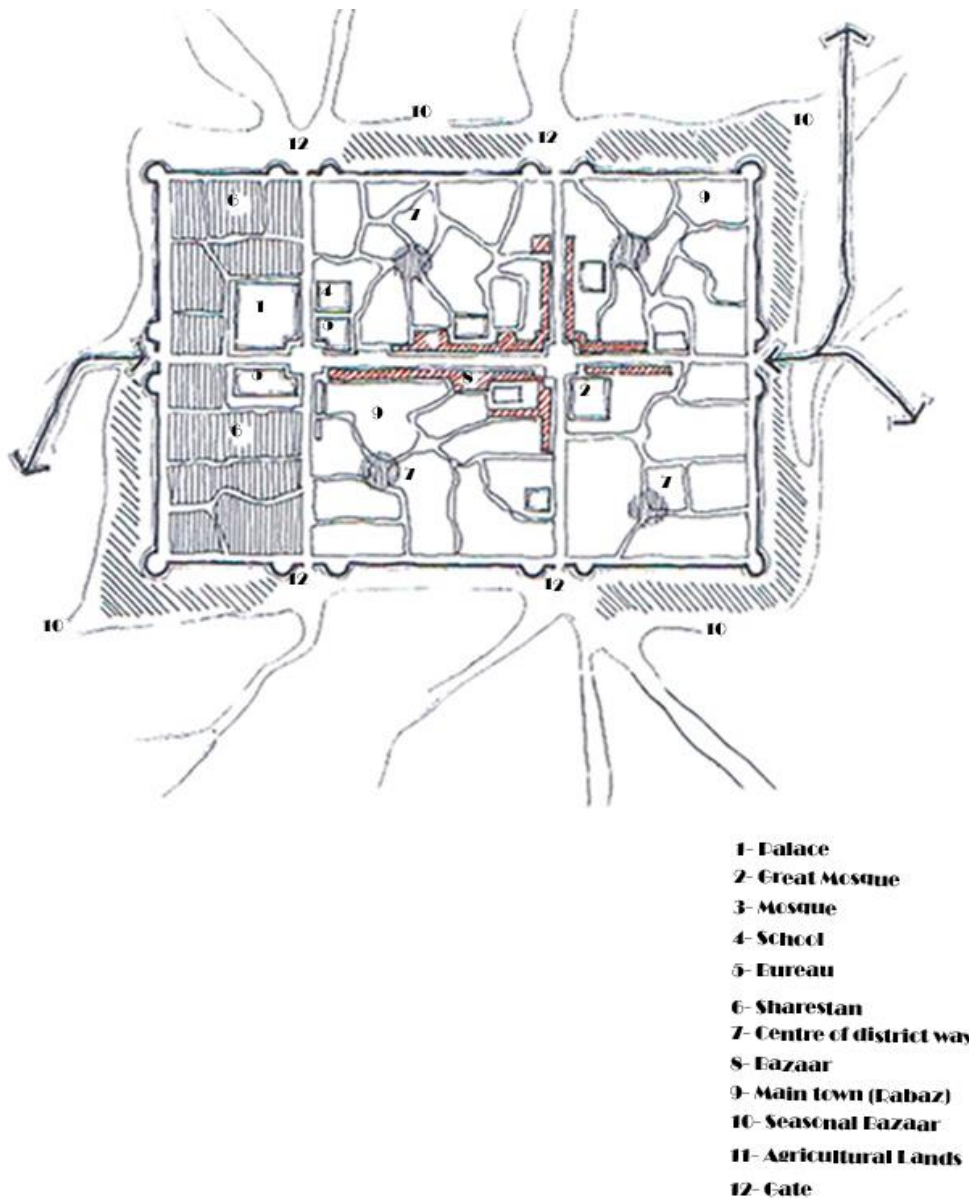
Figure 12: Physical Structure of Iranian cities in the Seljuk era, Source: After Habibi (1976)

■ **Isfehan style (1500 - 1700AD),**

In the Safavid era, urbanism improved and some of their heritages are still with us. They made roads and secure cities and Isfahan was the capital of this empire (1590-1722). People always give identity to buildings; however, this architecture style provides the people's identity. The main characteristic of this era was that every city or even village had a centre of gravity which was a square, the governmental, commercial, social, cultural and political hub. Because this era was concurrent with the Renaissance era in Europe and squares in the Safavid era showed the power and independence of the Safavid Empire from other countries (Habibi 2002, p.96).

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Figure 13 shows the pattern of the cities in this era and illustrates how the main public spaces were located in the centre of the cities.

1)Suburban spaces such as: cemetery, farms and gardens
2) Gate
3) Bazaar
4) Square
5) Religious space
6)Service spaces
7) Joints
8) Residential units
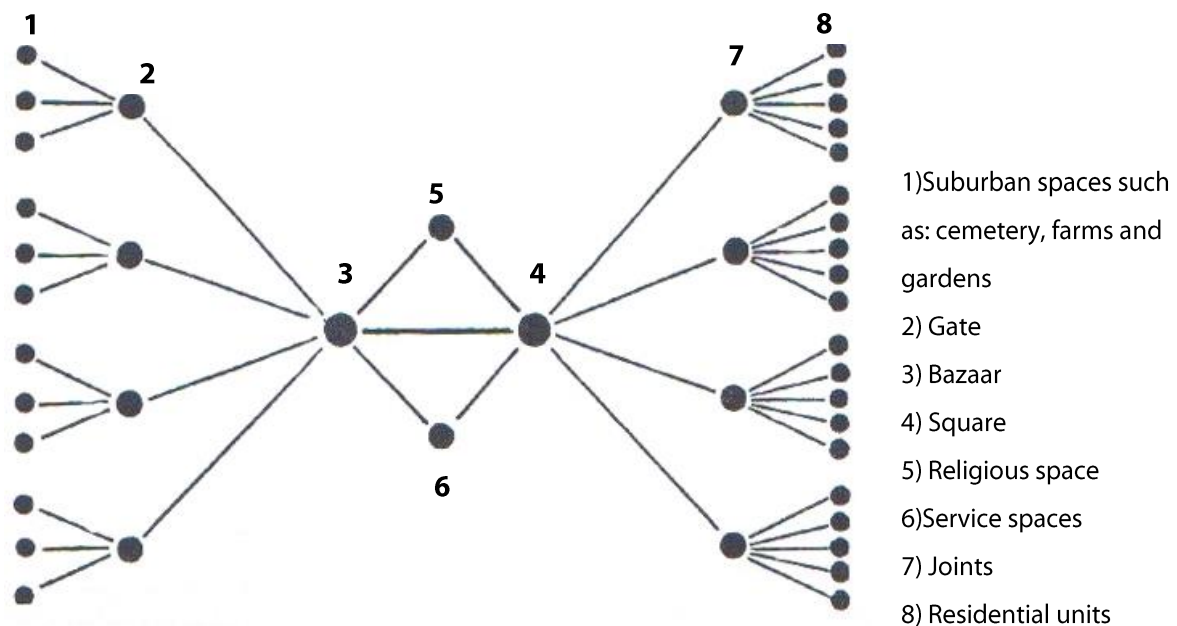
Figure 13: The pattern of the cities in the Safavid era (1590-1722) Source: After (Fakouhi 2006, p.386)

5.7.1   An Example of aTown Square (1598-1722)

Ganj Ali Khan is one of the squares which was built in the same period as Naghsh-e-Jahan Square. As Ganj Ali Khan Square is located in the researcher's home town Kerman, it can be used as an example that the researcher herself has experienced. Ganj Ali Khan square is one of the traditional squares, which now seem to be less popular than new public urban spaces such as parks, shopping centres, coffee shops and cultural centres. Although this square is still alive and useable, it is not attracting people like Naghsh-e-Jahan Square. This section of study tries to highlight the reasons why Ganj Ali Khan Square is suffering from this situation.

5.8.1.1 Ganj Ali Khan Square

Town squares are the turning point in the bazaars and although they have commercial, social, economic and political roles, most of them can be categorised as "an instrument of power" (Hirst 2005, p.3). For instance, Naghsh-e-Jahan square that exists in Isfahan (one of the former capital cities) represents the power of the government.

Ganj Ali Khan Square is one of the traditional squares in Iran. This square was built at the same time as Naghsh-e-Jahan Square, in the Safavid period. This square is located in the ancient city of Kerman which is one of the South East Iranian cities and has hot and dry weather.

This square is a main part of the Ganj Ali Khan Complex which includes a bazaar, bath house, mint, carvanserai, water reservoir and mosque. Gang Ali Khan Square is 99 metres by 54 metres and is

located in the centre of the complex which covers an area of 11,000 square metres ("Ganjali Khan Complex," 2013).

This square is surrounded by Vakil Bazaar. In the south, the entrance of the Ganj Ali Khan Bathhouse is placed in the middle. The west side is where the water reservoir is located and on the north side the mint is positioned and all these three edges are covered by bazaar arcades. The west side, where the Mosque and the main Carvanserai are found, is the only side that is not enveloped by the bazaar arcade.

5.8.1.2 The Changing Context around Ganj Ali Khan Square

Because of the changing the pattern of urban planning, the urban residential context around Ganj Ali Khan Square has changed; the reasons could be: Changing the slow urbanization to fast urbanization, Entrance of new immigrants, Revolution of the size of building plots and creation of new roads, Construction on the basis of new materials available in the markets andChanging from big houses to smaller flats

5.8.1.3 The expansion of Kerman City

As we have seen most Iranian cities have a historic core that includes a Bazaar, town squares (religious and governmental buildings) and residential areas. These are considered as the old core of a city and from now on will be called the historic urban fabric.

Possible reasons for why the residential context around the old core of the cities changed or, in other words, why a lot of residents abandoned them to be replaced by:

The lack of modern urban facilities and equipment, Difficulty and cost of repairing and maintain old, traditional building stock, Lack of institutional support, Need of supporting and encouraging the residents by the government because the residents, especially the younger generation, have experienced the new manner of living which has made them leave the historic urban fabric and Lack of appeal to the younger generation

The change of urban fabric can be divided into three stages: historic, ruined and finally turning to unfamilar new fabric (Haeri 2009, p.24, translated by author) and construction that is completely different from old one.

The population of the cities suddenly began to grow from the middle of the decade of 1961 and the main reason was the immigration of people from rural areas to the cities and this caused the cities' form to change from a compact to a dispersed form.

According to Haery (2009), before 1920 the entrance of a house was in a blind alley which was a place shared among neighbourhoods with gate and a semi- private entrance. After passing out of this area, there were the first streets with local shops providing some daily necessities for local people, the semi-public realm. The streets got wider until you reach the religious, governmental and commercial centres, the public realm.

In next period (after 1920), with the advent of cars streets and roads were built and made the cities different. Using cars in Iranian cities influenced the urban planning in different phases. First of all was the construction of the main streets (the streets that joined the main public buildings together) for cars in the cities because in this period there were just public and governmental vehicles. Then, after the numbers of personal cars for ordinary people increased, the alleys were prepared for cars as well and they got wider and finally cars needed to enter the houses. As a result, the urban hierarchy distorted.

Although this process took place in every country, the difference is that it happened more slowly and thoughtfully in Western countries, whereas in Iran it happened very hastily and without planning. Therefore, the cities are still suffering from this problem. The following maps show the situation of Ganjali Khan Square in Kerman, a plan of the square in relation to the bazaar and the nolli plan of the complex.
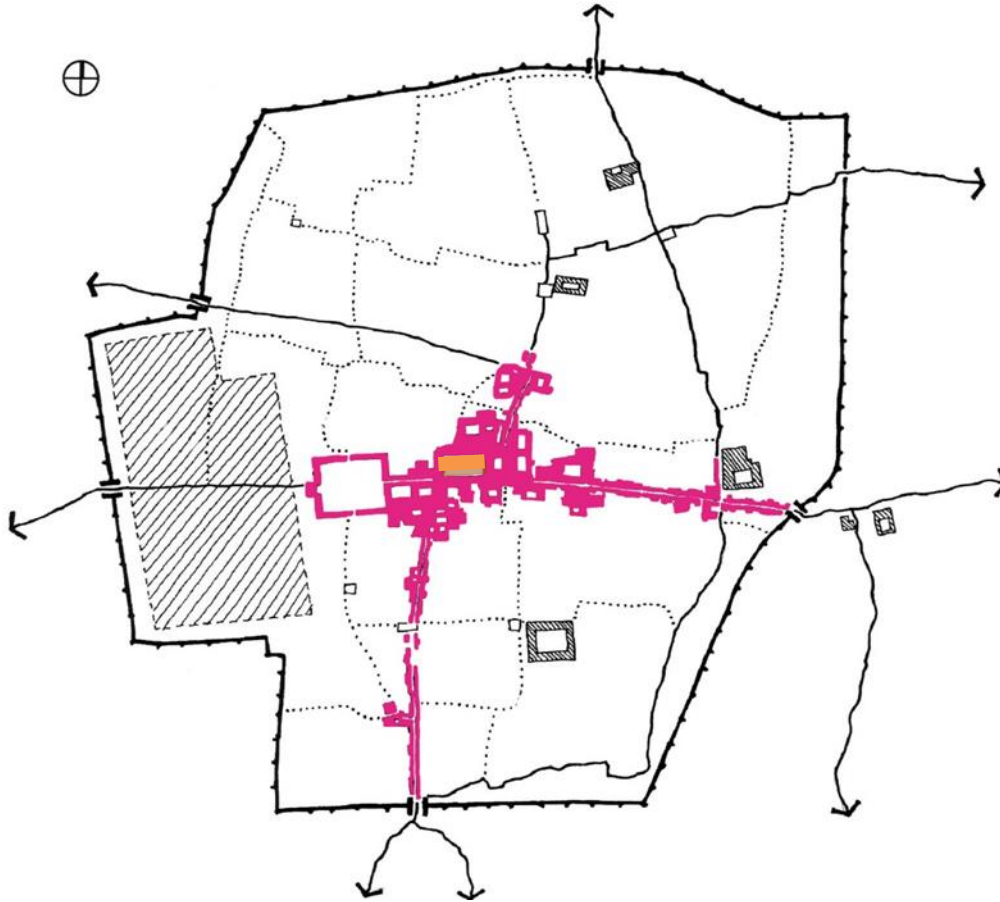
Figure 14: The situation of Ganjali Khan Square and Kerman Bazaar, Source: After (Tehran University, 2009)
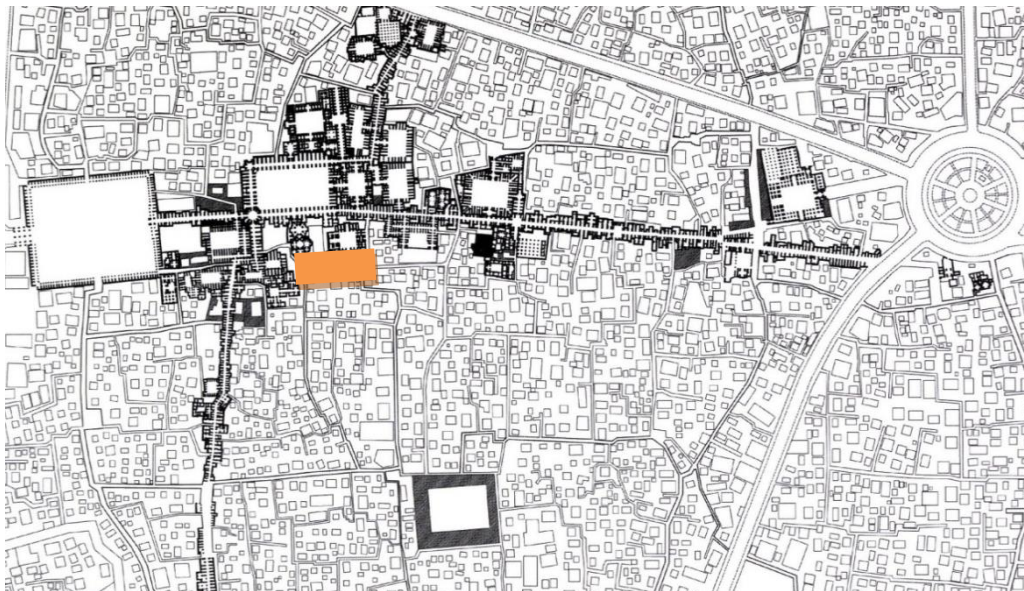
Figure 15: The plan of the square in relation to the bazaar(Tehran University, 2009)

■Tehran style (1750 - 1900AD),

The Ghajar Dynasty was influenced by the industrial revolution that happened in Europe. Foreign teachers came to Iran to teach the students and consequently European culture also entered Iran and it made a new movement in this era. According to Tafahomi (2007), squares in Tehran city began to include new building types such as banks, post offices, police stations and councils. New functions like cinemas, hotels, restaurants and cafés jostled with old buildings around the squares (Tafahomi et al. 2007, p.88).

5.8 Iranian Public Urban Spaces in the Contemporary Period from 1945 (after modernism)

Tafahomi (2007) compares Modernism in Europe with Iran and believes that European Modernism had tried to focus on the roles and forms of public urban spaces. However, in Iranian Modernism the roles and forms of public urban spaces decreased and Tafahomi says that, although changes in social, economic and political patterns of Iranian people had been started by Modernism, wide ranges of destruction of urban fabric and ignoring people's behaviour in urban spaces show the changing of urban spaces.

Iranian town squares can be divided in the following types according to use (Sultanzade 1994):

Public squares, Commercial squares, Governmental squares, Military squares, District squares and Athletic squares

Public squares: in almost every dwelling place (city or village) there were squares where people gathered and these squares were embraced as the place of worship (mosque), water reservoirs or rivers and some as commercial places or bazaars. In general, all of them depended on the population. The Sabzeh square of Tehran and Isfahan (Old Square) are squares of this kind.

Commercial squares: in large and medium cities, in addition to public squares, there were squares with commercial functions. Some of them only sold something particular and that was the why they were called by the name of the special product, for examples fruit, vegetable and even horse and sheep.

Governmental squares: usually, in the capital city or major large cities, there existed a governmental square that was used for military parades or other formal ceremonies which related to the government and they were even used to punish offenders. These squares were surrounded by governmental, royal and administrational buildings. The Arg square in Tehran city was one of this type of square. At times, in these squares there were more functions such as social, commercial and religious events. The best example for this type of square is Naghsh-e-Jahan square in Isfahan.

Military squares: there was an important square in the capital city and other major cities that was used for military services and these squares were a place for continuous military practising. Therefore, these squares consisted of a wide open space, rooms for settlement of the soldiers and an ammunitions depot. At present, there are some of them but with different functions.

District squares: this kind of square existed in some big districts and they were built in two different sorts. Firstly, it was a major wide way with some shopping units and social places. Secondly, it was the centre of the district and it looked like a small square that was placed in conjunction with some ways and streets. These small squares consisted of commercial units, baths, mosques and water reservoirs.

Athletic squares: some kinds of sports took place in the main square of the city but at times there were particular squares for athletic activities and races, for instance the horse riding square in Tehran.

•Location of the squares

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The squares might be placed in various places, in regard to their functions. For example, some of the squares that were places to sell livestock were outside the cities and a number of military squares had the same conditions. However, some of them were in the heart of cities because of their civic functions and additionally, several squares only worked for a limited district. In contrast, a number of these squares were used for all over the city.

• Some principles to organize the functions and spaces in Iranian squares (after Sultanzade 1994):

Indoor spaces: the spaces which surrounded the open space were always public and civic. For example, commercial units, mosques, baths, some recreational places and other governmental buildings were often created organically and they were not built by previous design and whenever a new place was needed, people added it. In contrast, there were some squares which were made by a previous plan and they have got special regulations and hierarchies. Naghsh-e-Jahan square is the best example of this sort of square.

Open spaces: the main functions in the open space of town squares were the contemporary commercial activities which operated in some areas. Also, in the evening and at night people gathered in this space to communicate and watch some programmes that were common at that time and religious ceremonies were conducted in this public open space. Additionally, some areas belonged to passing horses and pedestrians.

5.8.1   Two Examples of Town Squares (after 1945)

Two well-known town squares from the contemporary period (after 1945) are used as illustrations. Both the squares are used today and one of them "Haft Hoz Square" is a local square which is located at the centre of the Tehran city district Narmak. The other, "Azadi Square", is a symbol located in the west of Tehran city.

The reason for choosing these squares as examples is that they are well-known to Tehran residents and most Iranian people.

5.9.1.1 Haft Hoz Square "a local square"

Haft Hoz Square is located in the east of Tehran and in the Narmak district. The Narmak region is one of the Tehran districts in the east of Tehran. It is necessary to explain the Narmak region before introducing Haft Hoz Square as this square is one of the main parts of this region.

This residential area was built for government employees in about 1953. Narmak is famous for its name of 100 Squares because this district has 100 local squares and green spaces. As all residents should have been considered in equal situation and on the other hand it was impossible to have a main square and different widths of street, so because of some unwanted differences the district's houses shared between the employees by lottery although there were changes for some high rank employees rather than others (Falamaki 1992, p.32, translated by author). It shows the efforts to make an equal and reasonable area for average class of the people.

The main and biggest square is that placed in the middle of the Narmak district. It represents an attempt which works as the centre of the area, is Haft Hoz. There are seven pools in this square and this is the reason for its name "Haft Hoz", which means "Seven Pools" in Persian. Although the government (after the revolution in Iran) named the square Nabovvat which means " Prophecy", people know it by the old name.
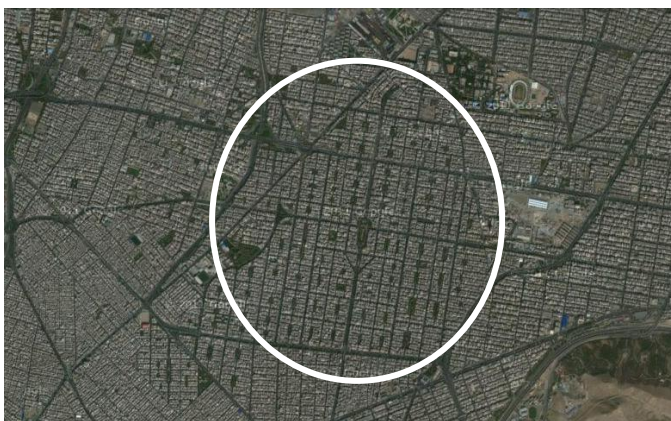
Figure 18: The map shows the sub squares of the Narmark district. Source: Google Maps

Since residents of this area have lived together for a few generations, they know each other more, so they have a lot of common memories. The sense of belonging among the residents and the district is of a high level.

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There are commercial, cultural and service units located all around the square and the space of the square is always the place for the accumulation of different residents' groups such as the elderly, youth, kids and women (Lashgarian, 2008 translated by the author).

5.9.1.2   Azadi Square "a symbolic Square"

Azadi Square is one of the main squares in Tehran. The square has a big sculptural and monumental building which is known as a symbol of Iran among all Iranian people and even in other countries. This huge sculptural building is located in the centre of the square and is called Azadi Tower.

Figure 19: Azadi Square in Tehran from above
Source: ("Symbol of Tehran," 2011)

The reason for building this square was that the government decided to build a national symbol in the Iranian capital Tehran in 1966("Symbol of Tehran," 2011, translated by author).

At that time the square was situated in the western point of the city but now it is just located in the west and some authors consider that this tower worked as a gate for the capital city because of the location of the old international airport. The first building which foreign people who come to Iran saw was Azadi Square. Also, it functions as a roundabout.

At first sight, this square is composed of Azadi Tower, green spaces (in the inside and margins of the square) and pedestrian and vehicles routes around without any of the clear external edges which existed in traditional squares. External edges such as walls and buildings gave them a specific space and made them limited. Instead, the tower makes a visual focus surrounded by regular flooring and green space.

In fact, this tower was built by four 66 metre-wide columns that are joined at the top of the tower and make four arches with a height of 23 metres. They are similar to the gates with a height of 46.25 metres and also it goes 5 metres underground. Different Iranian styles of architecture (for example: Hakhamaneshi, Susanid and safavid architecture) have been used and mixed with a

completely modern attitude in the architecture of Azadi Tower. One of the main characteristics of this tower that is mentioned a lot is the combining of before and after Islam arches. The top arch is Islamic and the lower arch is similar to Kasra Arch (which is the most famous arch in Iran before Islam) ("Symbol of Tehran," 2011, translated by author) see Figure 20.
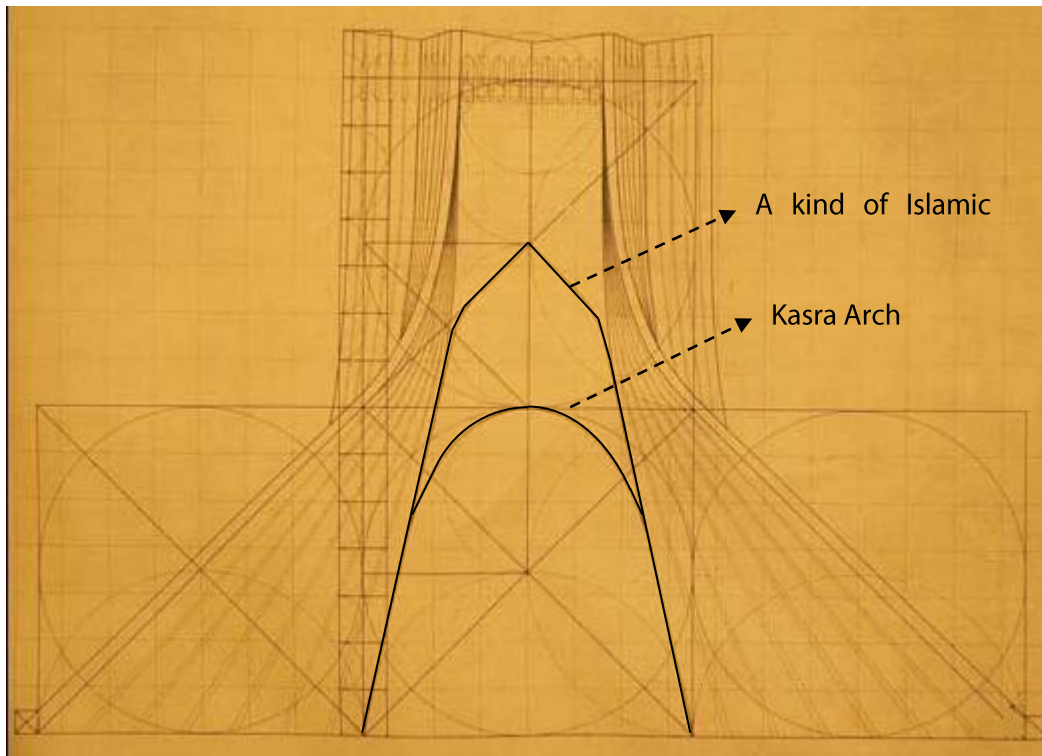
Figure 20: The main elevation of the tower showing the differences between the arches Source: After ("Symbol of Tehran," 2011)

There is an underground transit for pedestrians on the eastern edge of Azadi Square. This underground route has access to the street around the square and the architecture of this space was inspired by Iranian Bazaar architecture (see Figures 21 and 22).

Figure 21: The pedestrian entrance on the eastern edge. The picture also shows the water pools that were inspired by Iranian Gardens, Source: ("Symbol of Tehran," 2011)
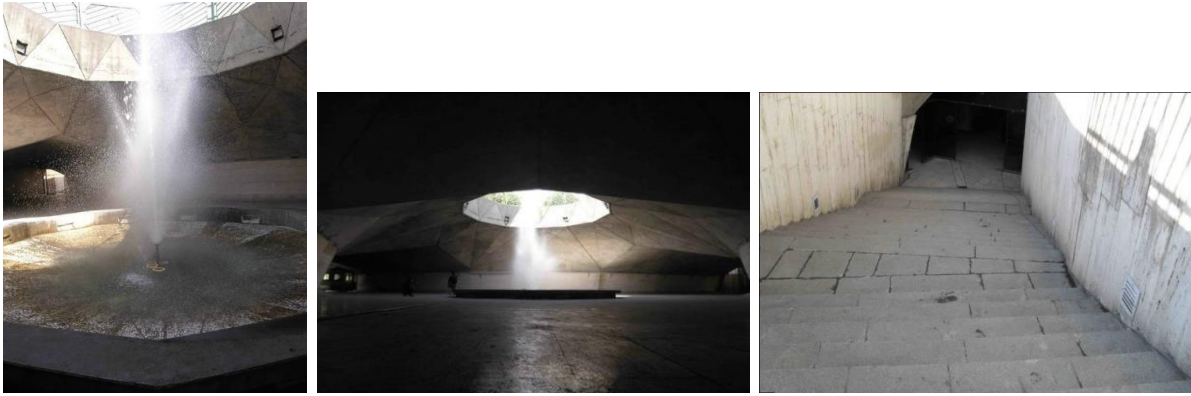
Figure 22: The underground entrance of the transit which was inspired by Iranian Bazaar architecture style, Source: ("Symbol of Tehran," 2011)

Although at first this square and the tower were supposed to be a ceremonial space for welcoming high ranking governmental guests, after a while it became an urban landmark. Also, it can be visible from long distances because of the particular location among the streets. This square has got more functions than just symbolic ones. It has a big cultural centre which is located underground and includes a library, two museums, a community hall, a showroom, concert and conference halls, a cinema and a restaurant ("Symbol of Tehran," 2011).
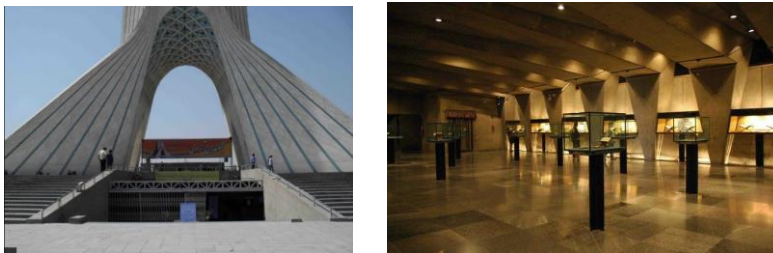
Figure 23: The entrance of the Cultural Centre, Source: ("Symbol of Tehran," 2011)

The form of Azadi Square is the same as the majority of contemporary ones, it is circular because of cars.

5.9   Traditional Iranian Bazaars

Traditional Iranian town squares have always been part of an urban system that includes the bazaar. A Bazaar is the main axis that includes the majority of public urban places such as town squares or organizes the important places of a traditional Iranian city along its way. Bazaars have always had a very significant impact on urban townscape and also traditional town squares (which are the main subject of this study) are one of the main parts of the bazaar. The relation between these civic, social, cultural and commercial elements is considerable.

5.9.1 Definition of "Bazaar"

The word of "Bazaar" is originally Iranian and it is a permanent trading area. A Bazaar could be considered as the heart of the city in traditional Iranian cities. Therefore the majority of important and vital buildings of a city were always constructed adjacent to it; furthermore, bazaars worked as the main street of urban fabric and connected the two major entrances of the city (Moosavi, 2005).

Figures 4, 5, 6, 7 and 8 show the condition of bazaars before Islam and by comparing them with Figures 9, 10, 11 and the conversion process of how the Bazaar has become the main axis in traditional Iranian cities during the centuries can be disscused (Figure 24).
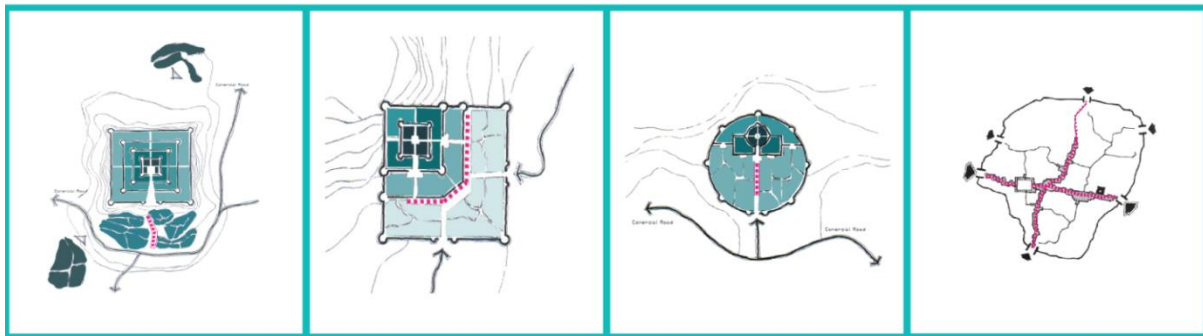
Figure 24: Bazaar in relation to main axis of city

Iran was located on the commercial routes between Rome and China (Silk Way) (Figure 25). Therefore Iran started to trade with them and the cities located on those networks benefited. Bazaars were not equally important in different Iranian cities. The significance of Bazaars was dependent on being located alongside trading routes (like Silk Way) (Moosavi, 2005).

Figure 25: The situation of Silk Way in the map of Iran, Source: after (Tehran University, 2009)

Big Iranian cities have always had local commercial centres in most of the districts and Bazaars would have mostly been used for foreign merchants; however, in small cities Bazaars met citizens' needs.

Today there are bazaars in most traditional Iranian cities and they are used for commercial, political, cultural and civic activities. Mowlana (1979) observes that because of modern banking and shopping centres the significance of the Iranian bazaar has decreased, it is still considered as one of "Iran's most important channels of communication and news" and people trust it more than other interior media to have true news. Consequently, Bazaars have an important social and political role in addition to the economic role.

5.9.2   Bazaar Structure

In addition to shops, Bazaars include spaces such as the Rasteh (the main passageway that shops open onto. This is almost always roofed and every part of Rasteh belongs to the same guild), caravansarais (public houses for passengers and merchants), Saray or Khan (commercial houses for receiving and distributing goods), Charsu (an intersection where two Rasteh cross each other and also a turning point with special different decorative roofs - this place is also used for gathering

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people), Tim & Timcheh ("They refer to large and small, enclosed areas in which heavy-weighed and expensive goods are sold and the roofs in such structures are most beautifully decorated implementing various fields of art" (Mehraby 2010)), public bathhouses, mints and reservoir waters. The main factors that influence the structure and architecture of a Bazaar are the climate, economy and culture of a city and it can be seen that in different climates of Iran there are various kinds of architecture for Bazaars. As has been mentioned in section 4.1.2, the majority of Iranian cities have got a hot and dry climate; consequently, the case studies chosen in this study are located in this kind of climate.

5.9.3 Who Manages the Bazaars?

In the past decades the Bazaar was the most high-status and powerful place in urban life of people and undoubtedly the bazaary (the people who work in Bazaars as shopkeepers and producers) were considered to be one of the high-ranking members of society (Moosavi, 2005, p.1).

5.9.4 How do Bazaars and Town Squares affect Iranian politics?

By striking and closing its door in objection and thus threatening to stop the economic life of the country, the bazaar has been able to force Iranian governments to change decrees. For instance, the movement against the tobacco concession of 1892, the constitutional revolution of 1950-53, the nationalization of oil and the Mossadegh era of 1950-53, and Ayatollah Khomeini's 1963 campaign against Mohamad Reza Shah Pahlavi are the events that were supported and run by bazaary people (Mowlana 1979).

In Iranian cities, the bazaar is an important centre of news, a place where opinions are created and from which gossip is spread over cities. The importance of bazaars as a channel of communication becomes even more significant when it is connected to religious and informal communications such as mosques and Islamic schools. They also support financial, religious and political organizations (Mowlana 1979, p.3) although these days the power of bazaars is decreasing because of some global, commercial and political aspects and the changing of the pattern of life in societies.

Although Iranian Bazaars might have different shapes in the cities' structure, they all have similar features such as being the main axis and being the social and commercial line in Iranian cities.

Conclusion

This chapter outlines the evolution of the Iranian context for public urban spaces and especially town squares. The intention here is to contribute some basic contextual information for the case study of "Naghsh-e-Jahan Square", which will be comprehensively discussed in chapters 6 and 7.

This chapter furnishes some background information about Iran (geographically and climatically), the history and evolution of Iranian cities, public urban spaces and town squares. It also provides a brief understanding of the traditional Iranian bazaar which is relevant to historic town squares. The next chapter will provide comprehensive information about the history of Naghsh-e-Jahan Square and present the collected data about its present condition.

CHAPTER 6: CASE STUDY "NAGHSH-E-JAHAN" SQUARE

This chapter is devoted to the case study of Naghsh-e-Jahan Square. This chapter starts with a section of background information about Isfahan city. After that, the history and evolution of Naghsh-e-Jahan Square, considering physical and social aspects, is discussed. It presents a historical analysis of Naghsh-e-Jahan Square. The next section of this chapter addresses the analysis of the present condition of Naghsh-e-Jahan Square which has been done by walking strategies and conversations. The last section of this part of study is going to explain the process of analysis by Nvivo 9 Software.

6.1 Background Information about Isfahan

Isfahan is one of the historic cities of Iran and was the capital in the 11th century in the Seljuk period under Malik Shah (r. 1072-92), the period in which many important buildings were constructed by vizier Nizam al-Mulk (1063-92) (Shafaghi, 2003, p. 273, translated by author). However, the city developed in the Safavid empire. Shah Abbas the Great (1587-1629) reinstated the city as the country's capital and he located the city centre in the southwest and constructed a huge square known as Naghsh-e-Jahan (Shafaghi, 2003, p. 303, translated by author).

Figure 1: Location of Isfahan Province in Iran, source: ("Isfahan Province," 2014)

6.2 Naghsh-e-Jahan Square History and Evolution

This section of the study addresses the history and evolution of Naghsh-e-Jahan Square. This part of the study explains the historical analysis of the square in both social and physical aspects. The historical maps and photos gathered are identified to show the process of change in Naghsh-e-Jahan Square.

6.2.1 Naghsh-e-Jahan Collection

Naghsh-e-Jahan means "Image of the world" in Persian. It is located in Isfahan, one of the biggest cities in Iran (Map 17). It was constructed between 1598 and 1620 by Shah Abbas, the king of Iran

in the Safavid era (1501-1722). It is a huge rectangle that is 508 metres long and 160 metres wide (an area of about 89,600 square metres). The following map shows the location and accessibility of Naghsh-e-Jahan Square in Isfahan during the Safavid period (1501-1722).
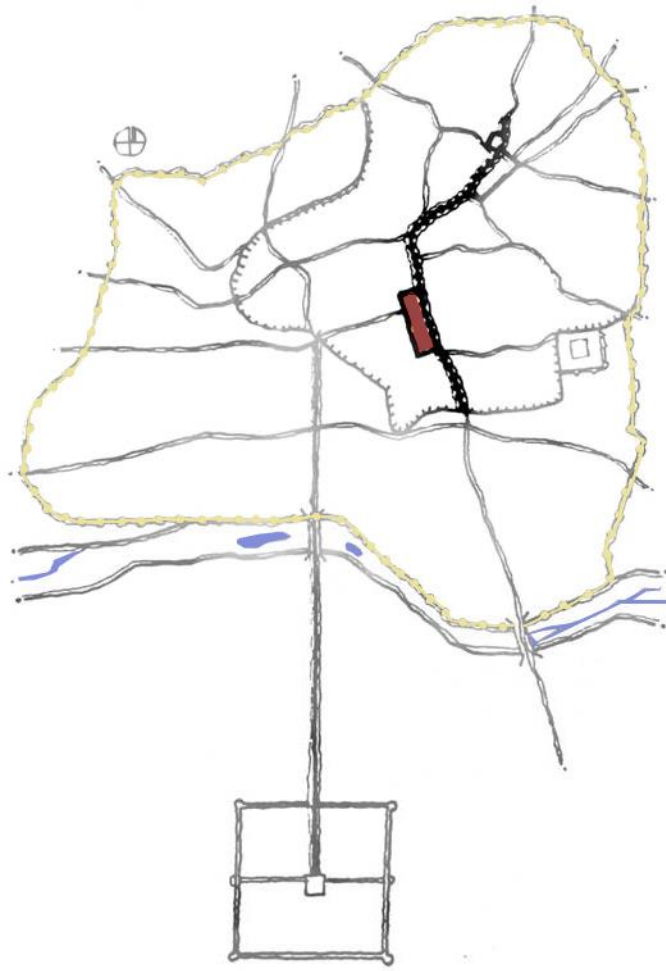
Figure 2: The location of Naghsh-e-Jahan Square in Isfahan and accessibility to the square in the Safavid era (1501-1722) Source: base of drawing Ahari & Habibi (2001)

This collection has been made of a huge open space and buildings that embrace this space the same as the architectural style in desert climates. The measurement of this square is about 512 by 159 metres. The buildings are Abbasi (Imam), a mosque in the south; Sheikh Lotf Allah Mosque on the eastern side; Ali Qapu building on the western side; and a gateway of a gold bazaar on the north side of the square (Figure 7). However, these places are very worthy for Iranian architecture but some believe that the worth of this open place is not only because of the buildings by which they are surrounded.

•**Ali Qapu Palace (early 17th century onwards)**

The Ali Qapu Palace is located on the west side of Naghsh-e-Jahan Square. The Ali Qapu worked as a gate for the royal gardens and the square (Rezaeian, 2010, p. 90). There is a wide and fabulous hall on the fifth floor (the highest floor) where the king and his employees used to observed the ceremonies (Rezaeian, 2010, p. 92). This magnificent building is an architectural masterpieces and the interior space of this palace is covered with a special painting that is called 'Persian miniatures'. This building now functions as a museum from which people can have a wide view on the square (see Figure 3).

Figure 3: Ali Qapu was built in fifth floor which is the highest building of the square. The image has been captured from a video record of Naghsh-e- Jahan Square from above (Rezaeian, 2010) by the author

•**Great Abbasi Mosque (built 1611 onward)**

The Great Abbasi (Shah and the last name Imam) Mosque is the other masterpiece and is placed on the north edge of the square. The prominent point about this mosque is the way of solving the challenge between the orientation of Qibla (Muslims' prayer direction) and the square's orientation which is matched with climatically direction (see Figure 9). Also, this mosque is famous because of its tile work (Figure 4).

Figure 4: The Imam Mosque Entrance (Esfahan - TripAdvisor," n.d.)

•Sheikh Lotfollah Mosque (1603-1618)

Sheikh Lotfollah Mosque is one of the main buildings that shins in Naghsh-e-Jahan Square and, the same as other cited buildings, was built in the Safavid era. This mosque stands on the eastern edge of the square. The decoration of this mosque is incredible. The dominant colour of the dome is not glittering blue but golden beige (Rezaeian, 2010, p. 100) which is in contrast with other mosques (see Figure 5). The tile work of this mosque is famous and gives the building a sense of holiness, as with Imam Mosque (see Figure 6) but this mosque does not have a court yard as was common at that time.

Figure 5: The Sheikh lotfollah Mosque dome. Source: Theme, n.d.

Figure 6: The interior space of the Sheikh Lotfollah Mosque. Reference: Taylor, 2008

•Qeysarieh Entrance

The Bazaar of Isfahan is one of the oldest and largest bazaars of the Middle East and was built in the 17th century A.D. (Shirzad, n.d.). The bazaar connects the old city with the new. The Qeysarieh

Entrance is a big gate that is located on the opposite side of the Imam Mosque. This entrance also is connects the square with the bazaar.

Great Abassi Mosque (Imam Mosque)

Sheikh Lotf Allah Mosque

Ali Qapu building

Qeysarieh Entrance (Gold Bazaar Gateway)

Bazaar
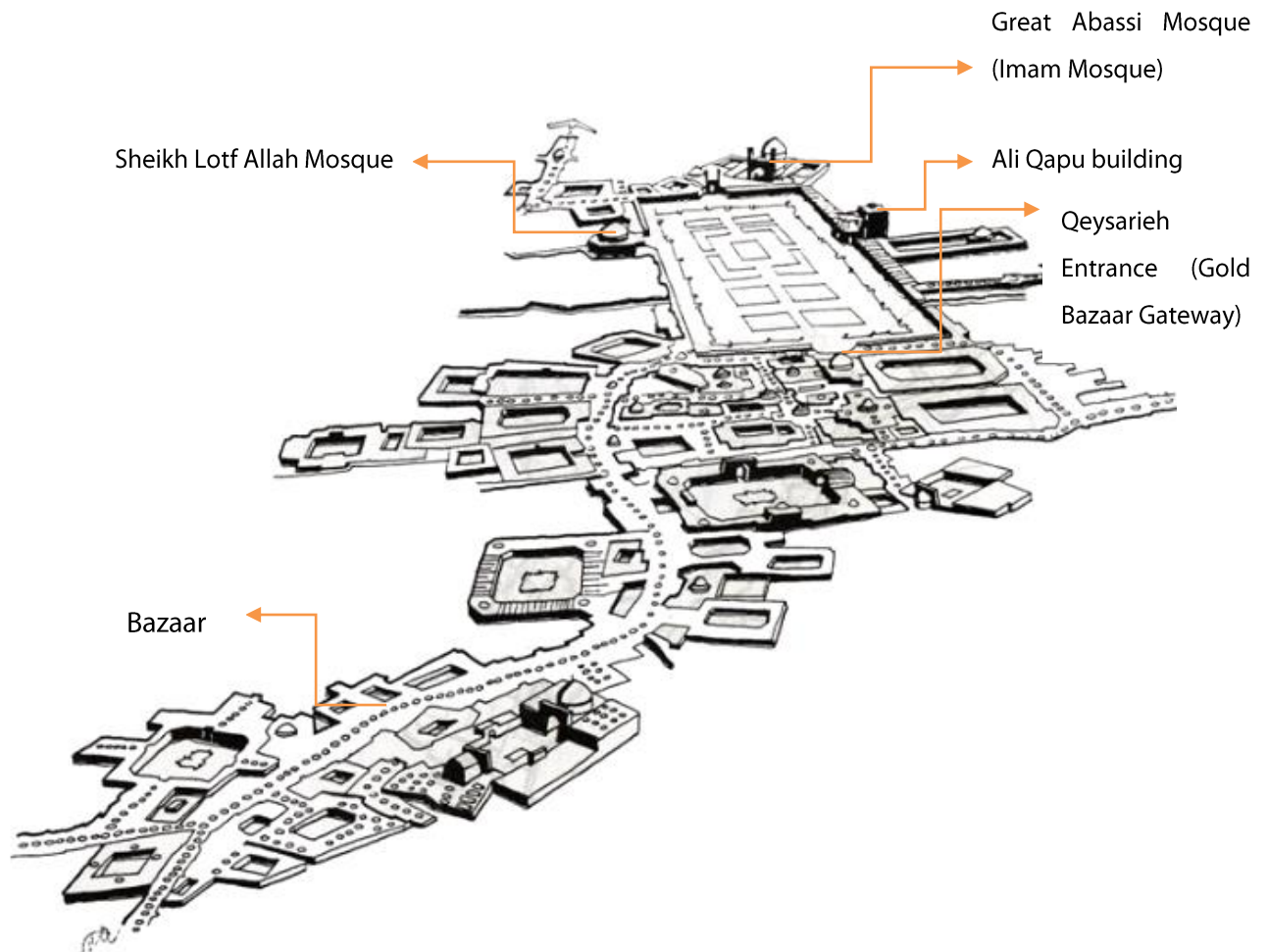
Figure 7: Naghsh-e-Jahan Collection, the perspective shows the location of the main buildings of the square
Source: After Ahari & Habibi (2001)

6.2.2 The geometry of the collection

This square has been shaped as a rectangle with two axes; Southern-Northern and Eastern-Western, and these two axes do not cross together in the middle of square. Indeed, the gravity's centre of the square is not similar to the geometric centre of the square and the orientation of this square has compatibility with the orientation of the sun. The proportion of width to length is 1/3.

Figure 8 illustrates the physical shape of the square in combination with the Isfahan bazaar.
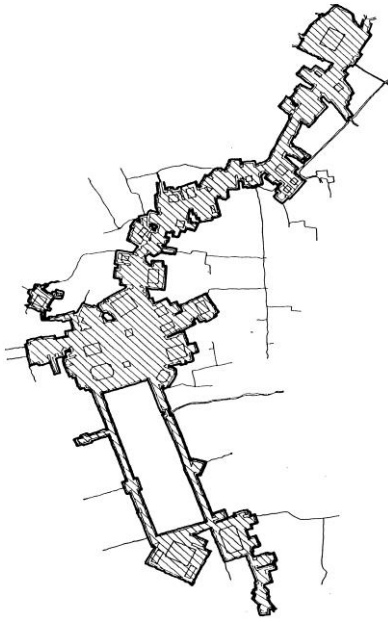
Figure 8: The physical shape of Naghsh-e-Jahan square and the Isfahan Bazaar, Source: After Ahari & Habibi (2001)

Figure 9 demonstrates the orientation of Qibla (Muslims have to pray in the Qibla direction). This orientation is very important in traditional Iranian squares which always have mosques.
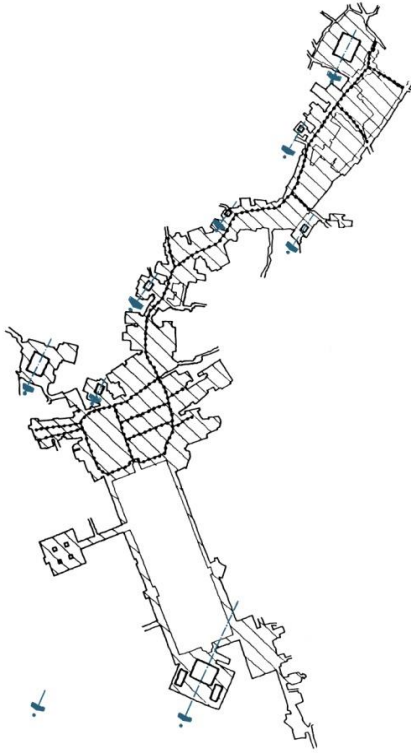
Figure 9: The orientation of Qibla Source: After Ahari
& Habibi (2001)

The Naghsh-e-Jahan collection can be divided into indoor and outdoor spaces. The following map
(Figure 10) illustrates the indoor routes.
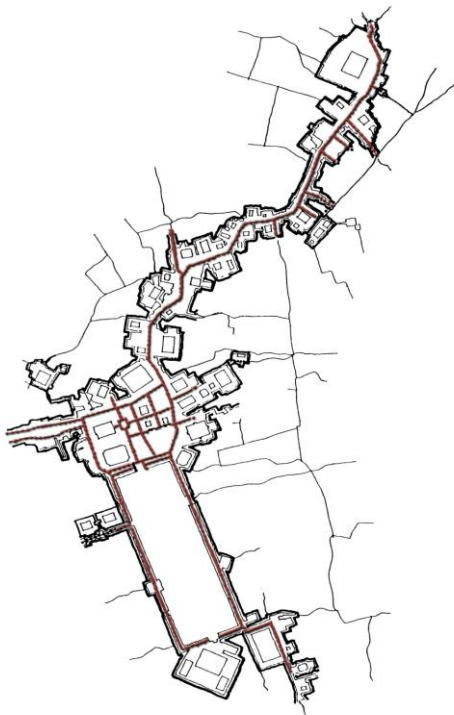
Figure 10: Indoor public routes between the square
and the bazaar, Source: After Ahari & Habibi (2001)

The following elevations (Figures 11, 12 and 13) are showing how the main buildings of the square give variety to the square elevations.
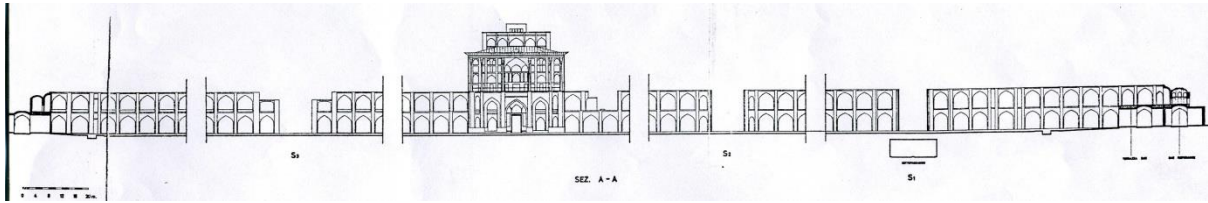
Figure 11: The elevation of the west side of Naghsh-e-Jahan Square, Source: (Cultural Heritage, 2000)
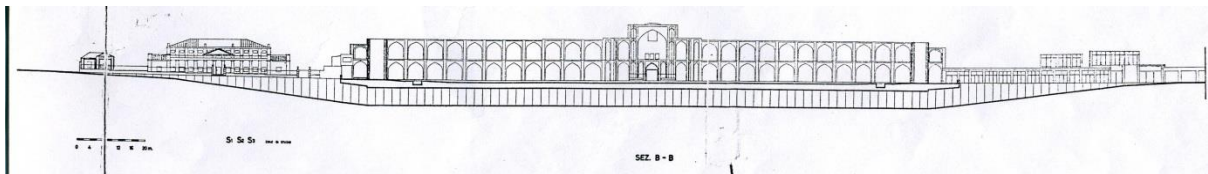
Figure 12: The elevation of the north side of Naghsh-e-Jahan Square, Source: (Cultural Heritage, 2000)
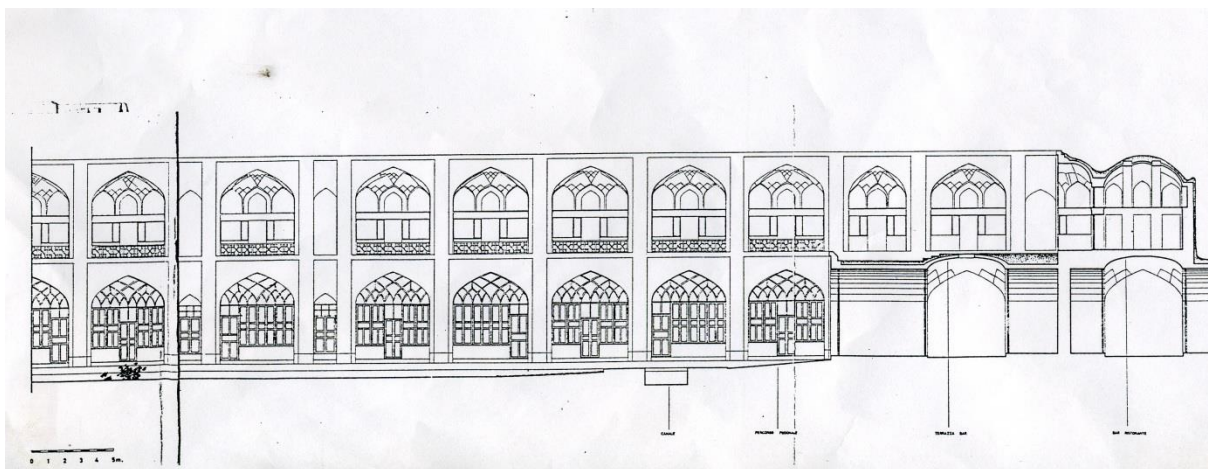
Figure 13: Detailed elevation of Naghsh-e-Jahan Square, Source: (Cultural Heritage, 2000)

6.2.3 Changing the organic city to designed city

Naghsh-e-Jahan square was a turning point in changing the organic structure of the Isfahan city of the Saljooghi Empire to a geometrically structured city in the Safavid period. The organic structure of Saljooghi's city with a snaky axis of a large bazaar has been revolutionized by the geometric form of Naghsh-e-Jahan square. The western side of the square has been joined to the chequered grid of royal gardens and then to the checked grid of Four Garden street's gardens. The direct axis

of this street is as a base structure of the area (Ahari & Habibi, 2001). It can be said that this town square is the centre of gravity for Isfahan city (see Figure 14).
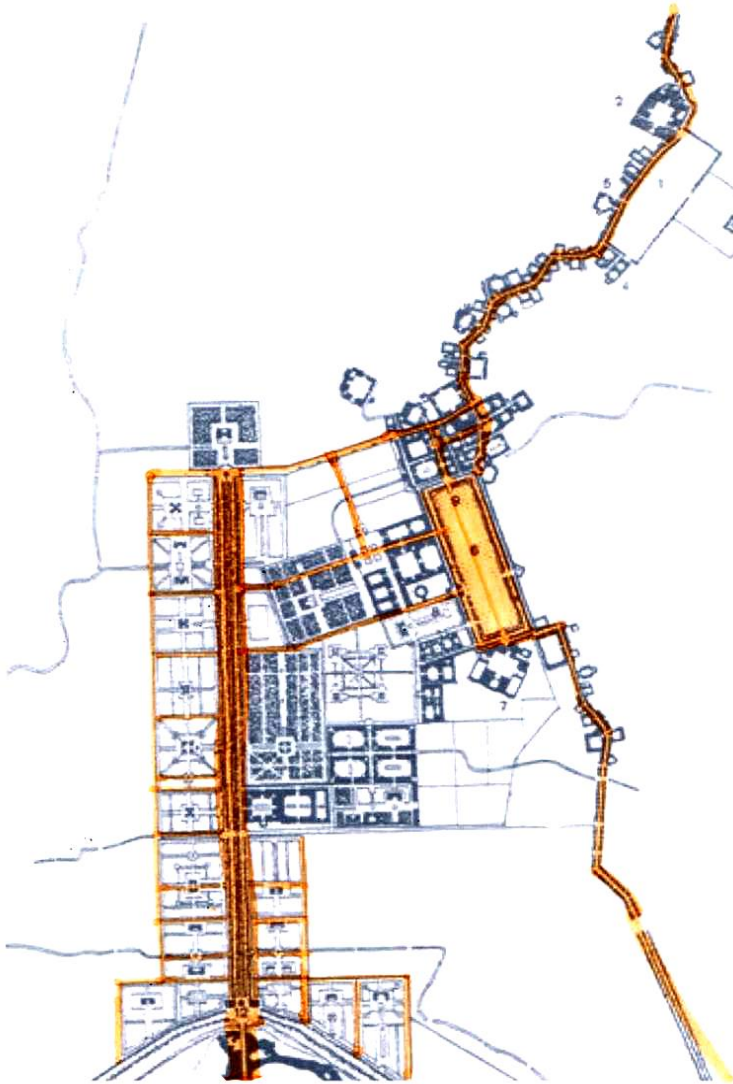
Figure 14: Changing the organic city to a geometric and formal city, Source: After Ahari & Habibi (2001)

6.2.4 Physical aspects

The physical variables which exist in Naghsh-e-Jahan Square are considered in this section. George N. Curzon (1966), who travelled to Iran in 1889 as a journalist who worked for the Times newspaper, says that the centre of Isfahan is Naghsh-e-Jahan Square which undoubtedly is one of the most magnificent squares in the world. He discribes this square as a place to show governmental exhibitions (Figure 15) and also as a centre of living for people. Blunt (1966) adds reason for constructing Naghsh-e-Jahan was as a symbolizing the success of the political and economic reforms that the king had begun fourteen years earlier. It was the major model for Islamic Medieval cites which developed the square as a core of urban life.

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Figure 15: One of the first taken pictures from Naghsh-e-Jahan (1794-1925) that shows the governmental parading, Source: (IICHS, 2009)

Shah Abbas, the king, built this square with his palace, great mosque and bazaar all around. One of the functions of this square was that the king sat in his palace (Ali Qapu) and watched the parade of his military. The second floor of the shops was the place that other viewers used. Curzon (1966) states that after a while it was military houses that ruined the second floor. In this regard, Blunt (1966) says Naghsh-e-Jahan plaza included coffeehouses, wine bars and opium houses and was a place for polo matches, horse races and other games. Moreover, it was a main economic hub.

Some European authors say that in 1809 there were not any trees (Figure); however, Curzon (1966) has reported that in 1889 there were lines of trees in front of the arcades.

Figure 16: The drawing of Naghsh-eJahan by French architect, Pascal Coste, in 1839. The colours of the traditional materials (bricks and tiles) are obvious, Source: Coste, 1839

There are two big pools on both sides of the square and also two marble columns that remain from polo (Curzon 1966) and are still in the square (Figure). It is necessary to say that polo is a traditional Iranian team sport and the history of it goes back to 600 B.C. Rich people were interested in it. It is played on horseback and players can score by driving a small wooden ball into the opposing team's goal and they use a long handled mallet. Playing this sport is considered as one of the reasons for the huge size of this square.
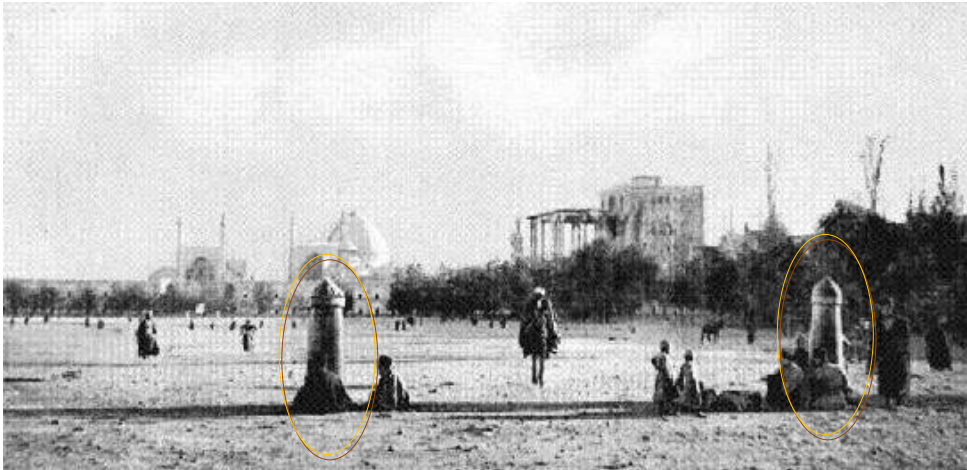
Figure 17: The old photo taken in the Qajar era (1794-1925), There are two big pools on both sides of the square and also two marble columns that remain from polo (Curzon 1966) and are still in the square, Source: "Naghshe jahan-2.jpg," 1889

The traditional materials which were used for Naghsh-e-Jahan Square are bricks and tiles. However, Isfahan, the same as other big Iranian cities, is near the mountains, so stone could be used. The history of using brick goes back to the second millennium B.C. However, the only era that stone was used is in the Achaemenian Empire (550–330 B.C.E.) when they built their famous palace (Takht Jamshid). The advantages of using bricks include: stability against earthquakes (the majority of Iranian cities are Earthquake-prone), ease of transport and the fact that the porous texture of the bricks makes them thermal insulation to improve the climatic conditions of Iranian cities (Stierlin 1976, p.86). Stierlin (1976) additionally explains the special tile decorations which were Islamic architectural features.

6.2.5   Social aspects

The social activities in this square were different during days and night. During the days the open space of Naghsh-e-Jahan was used for trading and people operated tents for selling their products (Figure18). During the night they gathered the tents and the function of the square changed into a place for playing, jumping, storyteller groups, acrobats, wrestler shows, fighting cocks and sometimes there were tents for prostitutes that Curzon says that in 1889 when he was there and all of them were ruined.
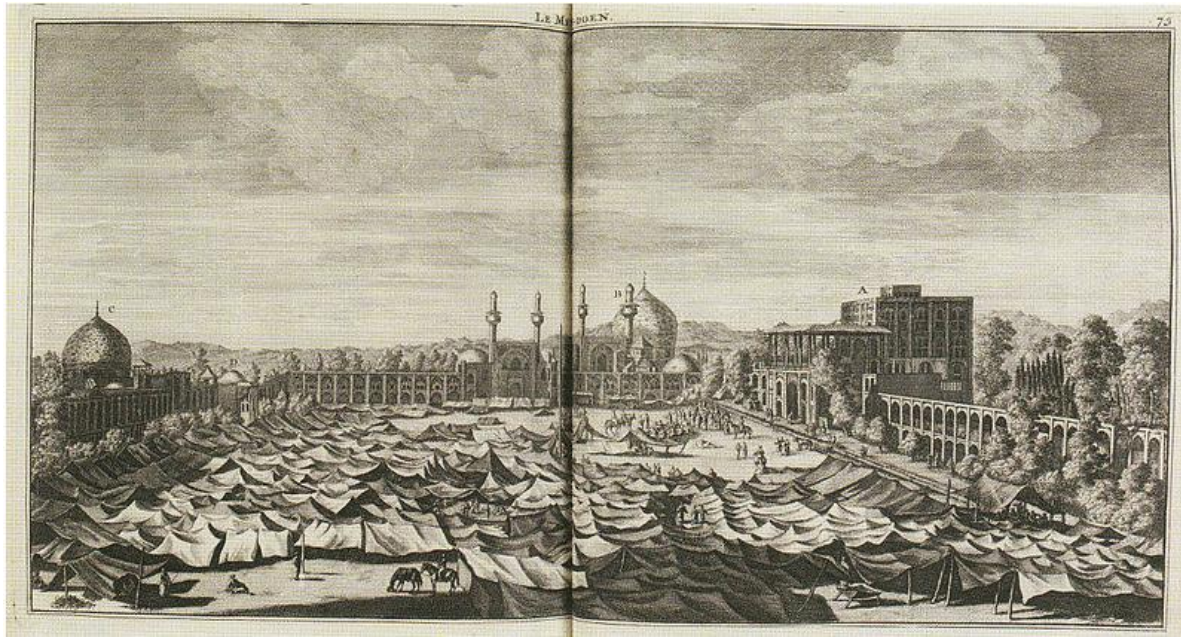
Figure 18: Painting of Naghsh-e-Jahan by Cornelis de Bruijn (1718). It shows how the square filled up with merchants during the day, Source: ("drawing of the square," 1718)

In the Safavid period there was a wooden tower with a height of 30 feet in the middle of the square that functioned for putting the races' gold cup on and for target shooting. After a while it was used for executions (Curzon 1966). (Figure)

Figure19: The wooden tower is obvious in the image (1794-1925). There are some records of memories about executions in this square by foreign tourists, Source: ("Naghshe Jahan," 2013)

During the centuries the square changed and, as can be seen in Figure 1, polo matches no longer took place in Naghsh-e-Jahan Square. The square was modified for the use of carts. Also, the green spaces in the middle of the square helped to make different routes.

Figure 1: This picture shows how the open space of the square has changed, as polo matches did not take place in this square anymore; the open space has been changed for transportation, Source: ("old-picture," n.d.)

Figure 2: The picture shows tall trees and the appearance of different people in Naghsh-e-Jahan Square. The image shows before the revolution (1978), Source: "axwrooz," n.d.

Figure 2 demonstrates the condition of trees and greenery in about 1978 as well as the presence of transportation (like bicycles and carts) and the different people in the square.

Conclusion

This part of the study provided a brief historical analysis and transformation of Naghsh-e-Jahan Square during the centuries. It was structured around two major phases of physical and social aspects.

6.3 Naghsh-e-Jahan Square Present Conditions

This section seeks to identify relevant factors to study about the present conditions of the square in Iran. It helps to identify the objectives of the study (see section 1.3). After reviewing the literature (section 2.3), objectives of the study (Figures 1 and 2 in section 3.1) and analysing the data (Figures 1 and 2 in section 4.1.1) the structured nodes need finding out in Naghsh-e-Jahan Square. The relevant data has been collected by walking strategies and conversations (semi-structured interviews).

6.3.1 Who Manages Naghsh-e-Jahan Square?

Naghsh-e-Jahan Square is managed by two governmental organisations. The first organisation is Isfahan Cultural Heritage, Handcrafts and Tourism which manages and maintains Naghsh-e-Jahan Square historic buildings and museums. The second organisation Isfahan Municipality is responsible for controling the shops. This organisation also maintains green spaces, pools, cleaning, lighting and drinking water.

6.3.2 Walking Strategies in Naghsh-e-Jahan Square

As was highlighted in section 3.3.5.1 of research methodology, one of the methods to find out the level of social sustainability is walking. In addition to walking and keeping in mind all sense experiences; vision, sound, distances and depth (Mahiques 2009), taking notes and visual and photographic documentation have been used as a complementary method during walking in order to have notes, photos and films for collecting and analysing data in the squares (see section 3.3.6.1).

Photography was chosen as the main way to record, document and capture the walks because photos and films help the data to be captured, reviewed and selected, compared and triangulated, documented, converted and analysed. Additionally, the sensory memory of the camera is helpful to record information, avoid overload and save time all through the observations (see section 3.3.6.1). The walking strategies which have been used and experienced in this study are: walk towards, walk into, walk along the open space, walk along the bazaar corridor, walk across and also drive through the route. These types of strategic walks, after Chora & Bunschoten (2000), have been undertaken with a photographic and video camera and also had the specific aim of identifying and recording aspects and variables such as those indicated by Lennard (2008) as necessary to understand a square like, for instance, threshold experience, architectural backdrop, hospitable setting and other aspects that were highlighted by PPS (2002) such as uses and activities, sociability, access and linkages and comfort image. Uses and activities are considered important by Gehl (1998 and 2008) to understand sociability and improve social sustainability.

As a result, this section traces my own journey through walking as a way of exploring concerns about these aspects: functions, built fabric, facilities and subjective perspectives. These aspects have made the nodes (refer to Figures 1, 2, 3 and 4 in section 6.4) functions (use, activities and conflict between functions), built fabric (focal points and anchors, civic, religious and historic buildings, changes in levels, steps and balconies, surface and fittings, entrances, variation and colours) and facilities (walkability, sit-ability, sun and shelter elements, cafés and restaurants and attractiveness) to categorize, codify and analyse the data collected.

All walking strategies were done during two days of the summer in 2012. The researcher spent both walking days in the square from 9 am till 8 pm. The walking strategies were conducted on the basis of Figure 22. The researcher was trying to experience walking along all the pathways indicated. All the walking was done but there was no order or sequence in doing the walking. Whenever a group of people gathered or a space appeared to be more populated, the researcher tried to be there. This was possible as most corners of the square were visible from any position.

Furthermore, the driving and walking strategies took place at two different times during two different trips. All the photos, no.1 to 67, have been taken by the researcher and all descriptions are the researcher's voice.

Walk Toward

Walk Into

Walk Along Bazaar Corridor

Walk Along Open Spese

Walk Across

Drive Through The Route
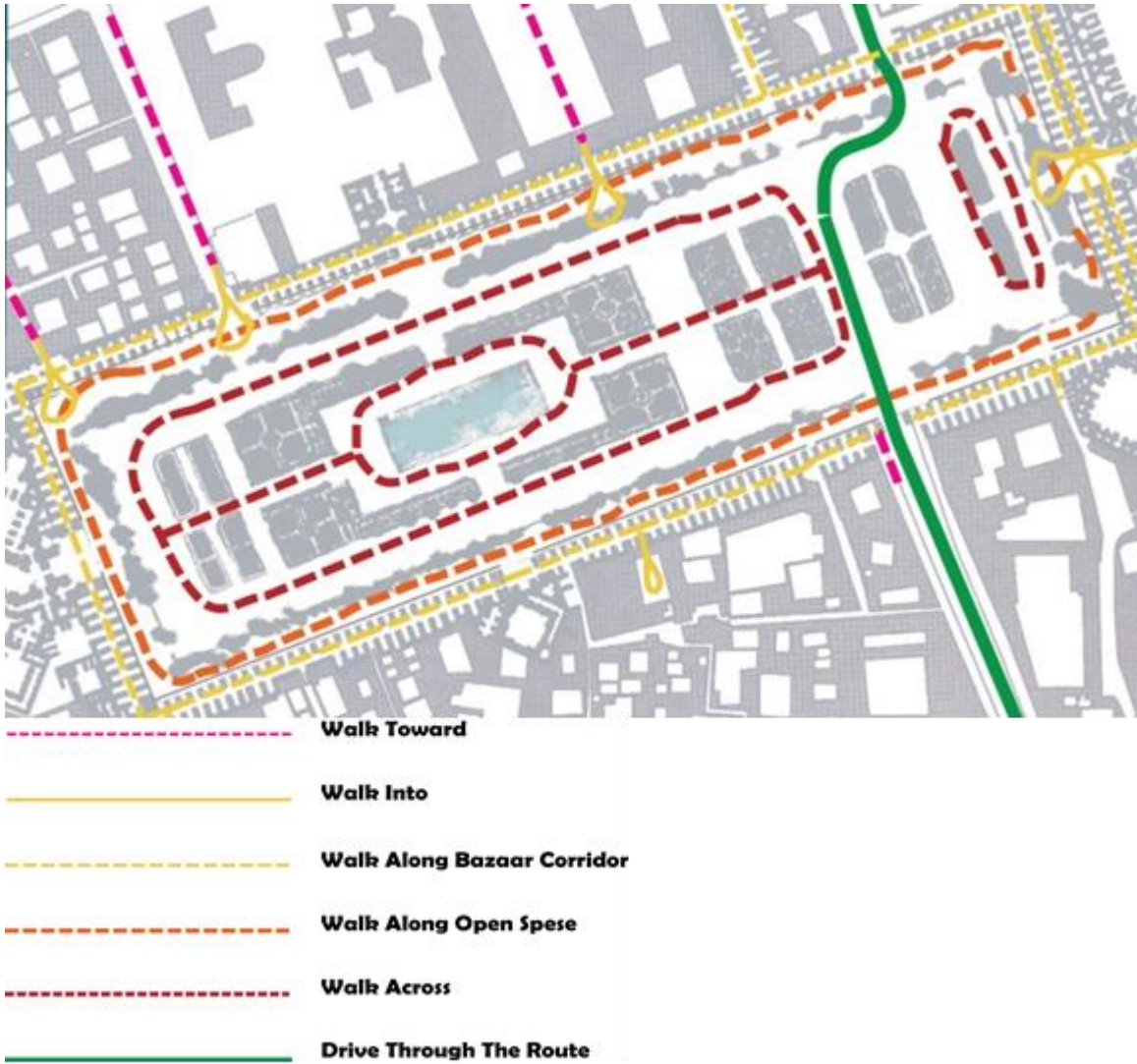
Figure 22: All the strategic walks that were done by the researcher. Source: The base of map (Tehran University, 2009)

The process of investigating the square through walking starts with "walking towards". The walking has been done towards two sides of the square (the Ali Qapu and Sheikh Lotfolla sides) which include the main pedestrian entrances (Figure 23).
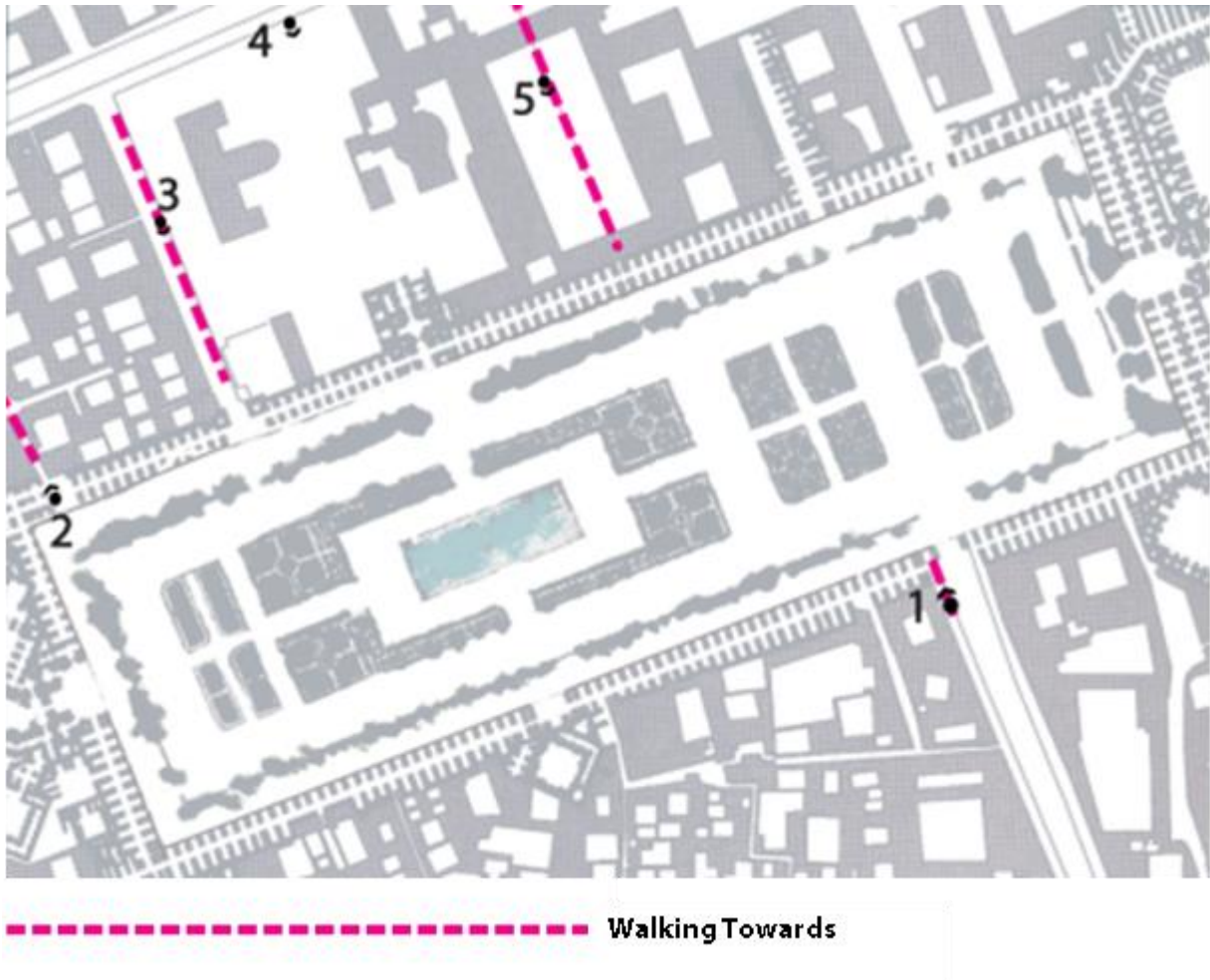
Figure 23: "Walking Towards" strategy direction and the location of the photos (no. 1 to 5) captured during this strategic walk. Source: The base of map (Tehran University, 2009)

The researcher carried a camera to capture and record some of the variables based on the objectives of the study. The selected photos have been explained by the researcher (see photos no.1 to 5 and their explanations).

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(1) After passing the crowded street with a lot of shops and arriving at one of the main entrances, views open out; the square can be seen from the arch. Bollards prevent vehicles from entering the pedestrian path children ride their bikes and the steps do not have any ramp.

(2) Walking along the bazaar corridor, the view opens out onto one of the main pedestrian entrances Bollards prevent vehicles from entering the square and unauthorised car parks. There are adjoining market units on both sides of the way which mostly sell traditional sweets, carpets and paintings.

(3) After walking a few metres along the bazaar corridor, the view opens out to the other main entrance. Walking towards the square, on one side of the way are adjoining market units and on the other side there is the Islamic art and culture research centre. Bollards prevent car access and unauthorised car parks, flower boxes

(4) Walking towards a section of the square under construction, the pedestrian path way will lead to the entrance of Ali Qapu and relevant bazaar corridor.

(5) Walk towards the square through a green open space with tall trees and good shade, well-kept hedges and lawns, beautiful flowers and plants, bins and lights every few metres, people around the entrance point and the view opens out to the square.

This strategic walk allowed an understanding of issues related to the relationship of the squares and their immediate surrounding as well as the relationship between inside and outside the square (see Figure 24). This strategic walk helped to replay how people can get into the town squares.

Figure 24: "Walking Into" strategy direction and the location of the captured photos (no.6 to 9) during this strategic walk. Source: The base of map (Tehran University, 2009)

The photos no. 6 to 9 are the results of walking into Naghsh-e-Jahan Square. The photos have been described by the researcher.

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(6) Walking into the square along the pedestrian path way which leads to one of the corners of the square. I see people, bicycles and the focal point of Imam Mosque.

(7) Walking into the square, the pedestrian pathway leads to the square. This is the only pedestrian entrance which disconnects the bazaar corridor. The view opens out to the middle of the square roughly, to see Sheikh lotfollah Mosque as a focal point on the opposite side, unauthorised motorcycle parks, an unused kiosk and people sitting on the steps.

(8) Walking along the bazaar corridor, the view opens out to a green space where one of the main pedestrian entrances of the square is located. There are unauthorised motorcycles parked and the steps are not in a good condition. The sign shows the location of the public toilets.

(9) Walk into the square from the Qeysarie entrance of the bazaar and the view opens out to a view of most of the square. Three main buildings or focal points of the square can be seen. The street and cars split this part of the square from the other side. The paddling pool is not very clean and there is a fountain with cold water.

This type of walk is entitled "walking along Bazaar Corridor" which is walking along the four elevations inside the bazaar corridors around the square with a view to finding the nodes of study.
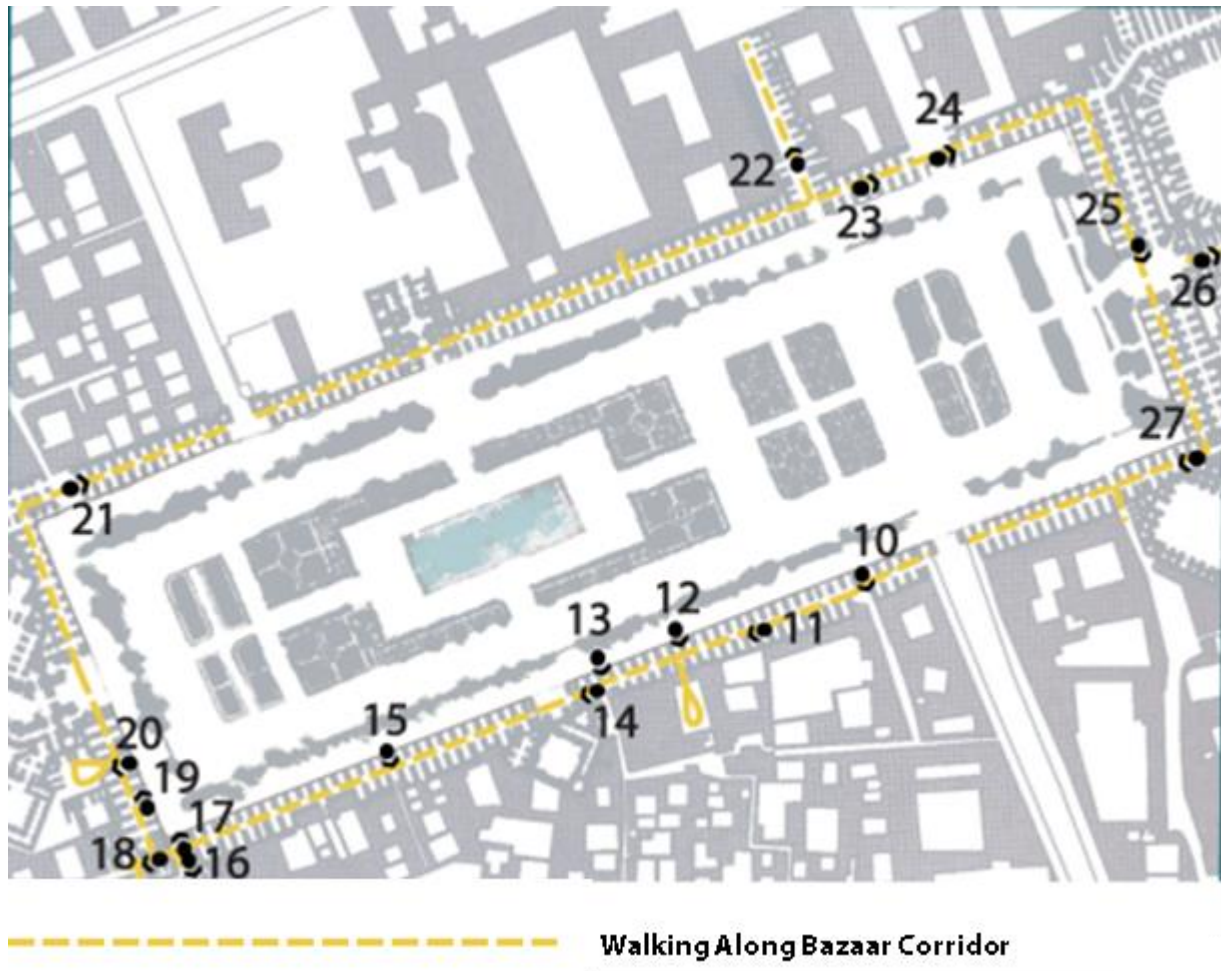
Figure 25: "Walking Along Bazaar Corridor" strategy direction and the location of the captured photos (no.10 to 27) during this strategic walk. Source: The base of map (Tehran University, 2009)

The photos no.10 to 27 were taken on this strategic walk and have been explained by the researcher.

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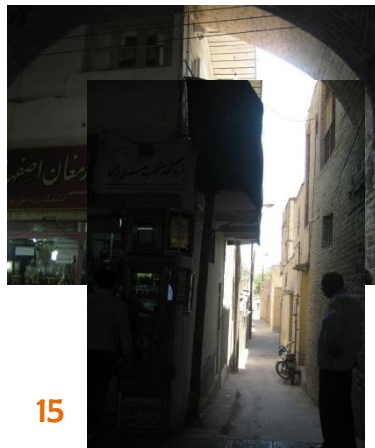
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(10) Turning left and moving a few metres by walking along the bazaar corridors, there is the other entrance from the alley leading to surrounding residential areas. Bollards and fences again prevent vehicles from entering the square. Wheelchairs cannot enter.

(11) After continuing to walk along the square, an entrance protected by bollards can be seen which leads to an open space with a traditional restaurant and many shops. An old woman is trying to pass the bollards with her big bundle. The open space is well set out with a display of traditional Isfahanian hand crafts around. The environment feels friendly with pleasant traditional Persian music.

(12 Walking along the Bazaar corridor, approaching a local entrance which is an intersection of the residential area and the square, the bollards again prevent vehicles from entering the square. Unfortunately, they do not allow access for wheelchairs.

(13) Continuing down the bazaar corridor, approaching the square's open space and one of the main buildings of the square, Sheikh Lotfollah mosque is located on the left side. Bicycles can be seen even in this populated area. There is a small window in the wooden door at the left side of the mosque that is used to sell tickets to visitors of the mosque.

(14) Walking along the Bazaar corridor, there are a lot of stalls full of traditional goods which attract people although the design of the shops is not modern. A simple lamp makes the display attractive.

(15) Moving a few metres by walking along the bazaar corridors to the other entrance which connects the alley of residential surrounding areas with the square, it seems the entrance used to be wider and the new shop makes this entrance narrow. There are no bollards to prevent motorcycles from entering.

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(16) Walking along the bazaar corridor and turning left, the bazaar corridor opens out to an open space with a car park and also a gate for car access to the square and some parts of the bazaar corridors in order to deliver goods. The mud brick walls appear to be in a poor state of repair. Vehicles create chaos.

(17) After continuing to walk along the bazaar corridor and turning right, we see an entrance to the corner of the square which leads to the Imam Mosque side. There is again tiresome unauthorized motorcycle use. Shops and shade attract people.

(18) Walking along the Bazaar corridor, a private car appears in the bazaar corridor blocking the way which seems to be unauthorized. A big roof light and also a few colourful decoration lamps catch the eye and attract people to the shops.

(19) After continuing to walk along the Bazaar corridors around the square, many people can be seen in the bazaar corridor in the morning, especially women.

(20) After a few metres walking along the bazaar corridor, I approach a small open space with some shops and a café and see a man drinking water in the shade of a tall tree. That is forbidden in public spaces during Ramadan. It shows people can rest and drink at this hot time of the day in this café. To the right side of the open space there is a shop which sells particular pattern fabrics and cloths which traditionally belong to Isfahan city. On the left side there are public toilets for women and men and a tap with water to drink and wash with. In front of the open space is the café where I sit to drink a cup of tea and the environment of the café is very cosy. There are two young ladies who are very friendly with the shopkeeper, which shows they often come here.

(21) Walking along the bazaar corridor, it is crowded with people, mostly women shopping, walking and window shopping in the afternoon. The corridor is full of lamps; some are turned on but others, which are more colourful, are kept for special occasions.

(22) Walking along the bazaar corridors, I enter a side corridor which is at right angles to the main corridors around the square. The noise level is high, with the familiar sounds of craftsmen hammering copper sheets to make traditional dishes and hand crafts. Watching some craftsmen at work, I see that one of them is wearing ear muffs to protect his ears from the noise. The end of the corridor is an open space and there are traditional copper hand crafts.

(23) Walking along the bazaar corridor, it is interrupted by the street which crosses the square. People are crossing the street without any traffic lights.

(24) Walking along the bazaar corridor, bollards and steps prevent motorcycles from entering the bazaar corridor.

(25) Continuing to walk along the bazaar corridor leads to an open space called "Qeysarie" entrance which is one of the main entrances of the Isfahan Bazaar. Cloths are hung up for sale and decorate the bazaar corridor.

(26) Walking along the bazaar corridor, the "Qeysarie" entrance of the bazaar is approached from inside. The high roof and beautiful dome appear to be in a poor state of repair. However, light from above brightens the traditional fabrics displayed below. There are many people, mostly women.

(27) Walking along the bazaar corridor, soldiers are seen standing in a group. Other people are shopping. Colourful shoes are on display.

Walk along Open Space

"Walking along Open Space" is the other walking strategy that had been done along the four elevations inside the open space of the square to find out the relevant variable.
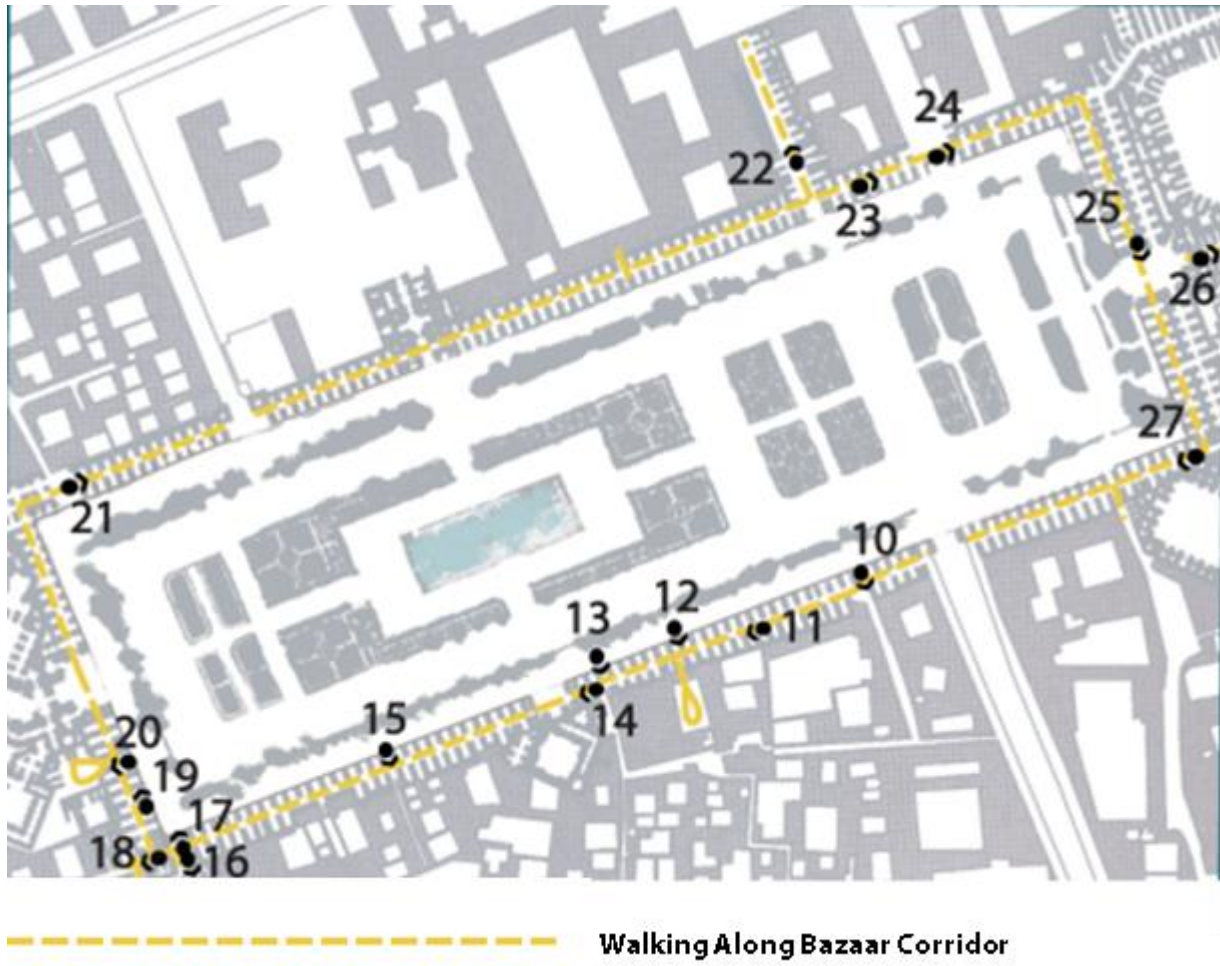
Figure 26: "Walking Along Open Space" strategy direction and the location of the photos captured (no.28 to 45) during this strategic walk. Source: The base of map (Tehran University, 2009)

The results of this strategic walk are photos no.28 to 45. These photos have also been explained by the researcher.

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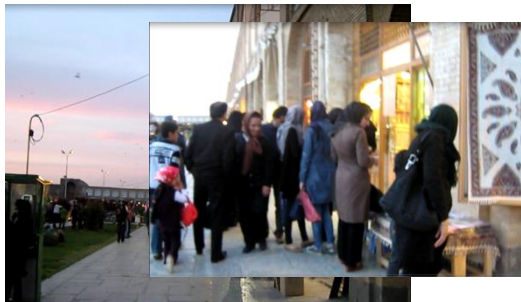
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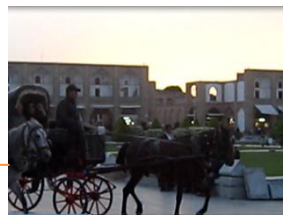
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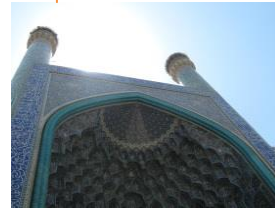
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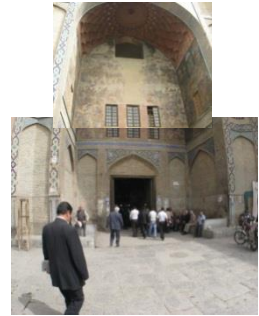
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(28) Walking along the open space of the square, the folded sun shades are opening. The bush and the small tree cannot be used as shade. Two people sit under the shade to protect themselves from the sun. The bin helps to keep the area clean from rubbish. A family are taking souvenir photos.

(29) Walking along the open space of the square, the only fountain on this side of the square seems to be closed at the moment (Ramadan month). However, at this time of the year (summer), it should have been used very often by people. The lamps on the path seem to be very useful for safety at night time because they make the steps very clear.

(30) Walking along the open space of the square, it is night and I am walking in the other sections of the square when I see a crowded point where people have gathered. It was empty when I was walking during the afternoon. It is one of the ice cream shops that

are well known even in the city. The shop is going to be busier during the night.

(31 Coming out of the bazaar corridor and walking across the open space of the square, the views open out to the other side of the square where the Ali Qapu is located. There are flood lights and a post box.

(32) Some people, most of them women, are walking, shopping and window shopping. A public telephone kiosk is occupied.

(33) Whilst walking across the square, some young women are sitting on the lawn reading a book while some people prefer to sit on the steps.

(34) Walking along the open space of the square, I can hear the noise of men playing football who even have small goal posts. There is the noise of horses and carts on the stone floor of the square and the historic polo gates which seem to need more consideration to keep. There are people sitting on the edging.

(35) Coming out of the bazaar corridor and walking along the open space of the square, I see one of the main architectural masterpieces in the square: Imam Mosque. The mosque dominates the sky line and it is one of the main focal points in the square. All of the steps and levels around the mosque are being used to sit, rest, take souvenir photos and observe other people and the square. Different colours of the square facades and the mosque contrast with the square walls, a masterpiece of tile works with religious colours. The high walls of the square give good shade on the steps. There is an empty paddling pool in front of the mosque where children play.

(36) Walking along the open space of the square there is an open view to the opposite side of the square. People gather around the fountains which have been turned on. The paddling pool, flood lights, and historic polo gate need some protection from erosion.

(37) As it is close to evening people come to the open space more and take shelter from the sun under awnings and the square is going to be busier. There is a post box and a bin.

(38) Walking along the open space of the square, the women are trying to protect themselves from the sun by using their scarves for shade.

(39) Walking along the open space of the square, well-kept flowers are separated from pedestrians by chains and bollards. There are shops selling different traditional goods. An entrance seems to lead to an open space.

(40) Walking along the open space of the square, I see a crowded area in front of one of the shops. It is an ice cream shop with high quality products and it is well-known in the city. People need to be in the queue to have ice cream.

(41) Walking along the open space of the square, the pedestrian pathway is populated in the evening time. The pathway leads to the bollards which run between pedestrians and the cars on the street. I see people on the other side of the bollards. The level of noise is high from the cars.

(42) Walking along the open space of the square, looking at the opposite side of the square where cars can cross. The green space among the cars works as a roundabout. The green space seems emptier than the other green spaces of the square.

(43) Walking along the open space of the square, there are unauthorised motorcycle parks and sun shades of shops.

(44) Walking along the square's open space, I see the main bazaar entrance "Qeysarie" from the square, unauthorised motorcycle parks, temporary sun shade and the main arch of the entrance with a wonderful ancient painting that seems to need repair and maintenance. The steps are a good place to sit for people and some carpet traders.

(45) Enter the square by the other entrance which connects the square and the surrounding residential areas by a bazaar corridor where the shops have closed.

A further type of strategic walk used is "walking across". This involves crossing the main space of the square to find out how people use the open space of the square and what variable attracted people more in this part of the square.
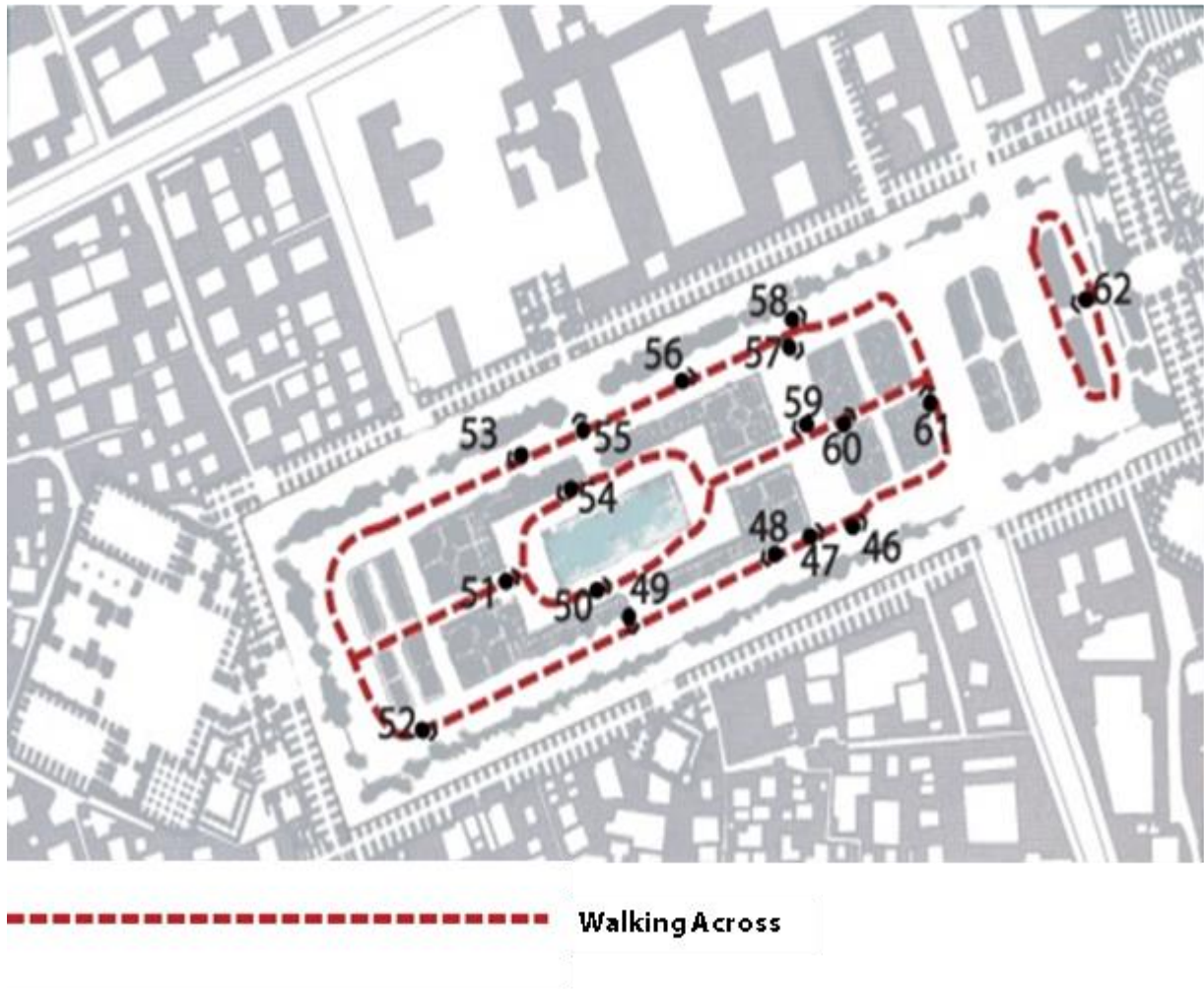
Figure 27: "Walking Across" strategy direction and the location of the photos captured (no.46 to 62) during this strategic walk. Source: The base of map (Tehran University, 2009)

As a result of the "walk across" strategy, the photos no. 46 to 62 have been produced and described by the researcher.

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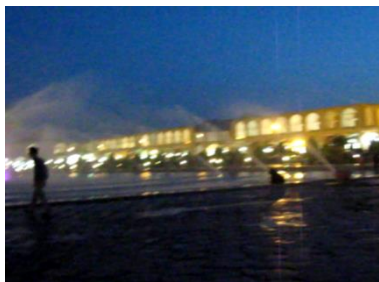
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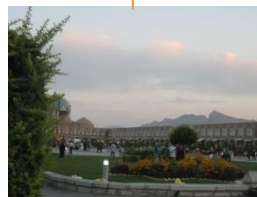
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(46) Walking across the open space of the square, as the weather is getting cool and pleasant the square becomes busier. The people who want to stay longer usually spread rugs and others sit on the edges. There are many families, women and children. The lights are on.

(47) Walking across the open space of the square. We see the bicycle station kiosk and children and teenagers renting bikes, buses crossing the street and fences which separate the pavement from the street.

(48) Walking across the open space of the square, the sides of the path are indicated by narrow green spaces and different levels and steps. The path ahead is neat, tidy and paved (without any steps). There are street lights to illuminate the path at night. There are no trees along the path to protect from the sun, which is needed on summer afternoons.

(49) Turning left during the walk across the open space of the square, we see the Sheikh Lotfollah mosque from about the middle of the square. The different colours of the facades around the square and the mosque itself make the mosque prominent. It is a masterpiece of tile works with religious colours and one of the main focal points. The steps and levels in front of the mosque are used by people to sit, rest and observe the square. The high walls of the square provide ample shade on the steps.

(50) Walking across the open space of the square, a paddling pool with fountains seems pleasant in the hot and dry weather. There are lights around the paddling pool and stone benches located all around it. There are no people around the paddling pool at noon but in the evening a lot of people can probably be seen there.

(51) Walking across the square, the sky is dark now. All

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the shops are turning on their lights. The light in the square seems to be enough. The weather is pleasantly cool near the paddling pool with the fountains turned on.

(52) The Sun has gone down and the sunshades are folded. The weather is cool after a hot day. People can choose to sit anywhere and some have spread a rug on the lawn.

(53) Walking along the open space of the square, it is close to evening. More people come to the open space and shelter below the shops awnings. The square is becoming busier. There is a post box and a bin.

(54) Walking down across the open space of the square, approaching the paddling pool. Drinking water taps and fountains are turned on. There are stone benches around the paddling pools to sit. Low level lamps make the area around the paddling pool more illuminated. There is greenery and lawn, and a sense of inclusion in the middle of the square.

(55) Walking along the open space of the square, the other focal, Ali Qapu, is not crowded as much as other focal points because there are no places to sit and observe the square. It has beautiful wooden windows, wide steps to reach the palace and a temporary ticket kiosk.

(56) Walk across the square on a wide, paved pathway which is good enough for walking.

(57) Walking across the square as the weather is cooling, carts, horses and coaches are getting ready to work. We can see more families during the afternoon sitting on the edges and lawns.

(58) Walking across the square, we can see people sitting and settling on their rugs on the floor. A man stretches out and two contemporary kiosks are seen on both sides of the pathway. On the right side is the police station which makes the square more secure. On the left side is the municipality kiosk, run by the Town Hall for the Bazaar area.

(59) Walking across the open space, the afternoon weather is pleasant. People are standing around the paddling pool. People are standing in groups and there are more families and children. There are well-kept plants and flowers. People are mostly in family groups and children are standing in the queue to get on the carts.

(60) Walking across the open space of the square, people pass along the pathway. Some families sit on the lawns.

(61) Whilst walking across the square, people are walking to the other side of the square. The parking spaces for rental bicycles seem to be empty now. Nearing the street, cars pass the square. Fences and bollards run between the people and the cars. A woman tries to catch a private car as a taxi.

(62) Watching the square from this point, I can see three main focal points. There is a sense of inclusion in the square. The ancient stone polo gates do not seem to shut perfectly and need some protection against erosion. An advertisement pillar as a new element in the square seems unused these days.

Driving Through

The researcher needed to experience the only car access route (the street which crosses the square) in Naghsh-e-Jahan Square. Because taking photos whilst driving was difficult, the researcher preferred to record film during the driving. It also gave her more time to choose suitable photos rather than driving several times through the street. I fixed the camera on a tripod and made it stable in the car and then turned on the camera and recorded film when the car was crossing the square through this main route. The result is a film from which some photos have been captured by Ashampoo Software (the software that helps to capture photos of films by just one click).

Figure 28: "DrivingThrough the Route" direction and the location of the photos taken during the driving (no.63 to 67). Source: The base of map (Tehran University, 2009)

The panorama photos (no.63 to 67) were produced by snapping (with the support of Ashampoo Software) from the films recorded during the drive through the square. The researcher has explained them.

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(63) Driving into the square, the entrance appears to be like a gate and views open out onto the square. There is a gate on each side of the road and trees form an arch overhead.

(64) On entering the square there is confusion as to which way to go because of several temporary traffic signs. Flower boxes are used to support pedestrian pathways. Another gate is visible to exit from this point. The green space works as a roundabout.

(65) The view of another part of the square where three main buildings are located. The police station was temporarily housed in a caravan at the time of driving but was later replaced by a permanent kiosk, which was seen when walking across the square. There is a temporary municipality kiosk relevant to the Bazaar area which is now a modern kiosk and there is an unauthorised car park. It is possible to feel the sense of inclusion by the square.

(66) Approaching the exit gate, pedestrians cross without any traffic lights. There is an unauthorised taxi park.

(67) After exiting the square, the view opens out onto the crowded street which is one of the two main streets leading to the square.

Conclusion

This section of the study has got several photos and descriptions which have produced rich data. Section 6.4 has been allocated to outlining how these kinds of data will be categorized and analysed. Chapter 7 of this study interpret the data collected by the walking strategies.

6.3.3 Conversation

As was highlighted in section 3.3.7 of the research methodology, one of the methods to find out the users' points of view is conversation. This approach helped to get an insight into people's opinions and feelings. Through conversation the researcher can learn about people's experiences, feelings, hopes and opinions about the world in which they live (Kvale, 2007, p. 1).

6.3.3.1 Semi-Structured interview

Semi-structured interview was chosen as a methodology to collect information about people's feelings and opinions about the Naghsh-e-Jahan Square. The approach of this study fell more within semi-structured interview because participants can put extra comments and narrative responses which are helpful to emerge new data and nodes.

6.3.3.2 Interviewees

The interviewees belonged to three groups of people: residents of Isfahan city (people who have lived in Isfahan for at least 5 years), shopkeepers (people who work in the square as shopkeepers) and tourists (Iranian tourists who come from other Iranian cities to visit Isfahan city and to experience the square). Every group comprised six people, with equal female and male participants.

	Females	Males
Shopkeepers of Naghsh-e-Jahan Square	3	3
Residents of Isfahan	3	3
Tourists of Naghsh-e-Jahan Square	3	3

Figure 29: The interviewees' groups

The researcher tried to interview people from all the different job ranges in the square. She could interview craftsmen and shopkeepers but she could not manage to arrange interviews with official and governmental employees in the square so unfortunately she missed this group in my interviews.

Furthermore, all interviews were conducted anonymously and the researcher, because of some ethical considerations, did not even ask the names of the interviewees. However, during the transcription, analyses and interpretation the interviews definitely needed a name for every interviewee. Consequently, the researcher herself put name for every interviewee. Therefore the naming method of the interviewees is "T" for tourists, "S" for shopkeepers, "R" for residents, "F" for

female interviewees and "M" for male ones. Also, for every group there are three people so the numbers make every interviewee different.

6.3.3.3 The Process of Interviews

Whilst walking around the square and the bazaar corridors, the researcher tried to approach the people who were working and walking there. The researcher tried to find three female and three male people who worked in the square, three female and three male Isfahanian residents who were in the square and three male and three female tourists. Because the researcher settled in a hotel close the square, catching up with them was not difficult. She just had to ask whether they had been in the square during their trip or not.

After finding an interviewee and understanding whether he/she was any of the mentioned groups, the researcher tried to approach them by giving an oral introduction of the project, introducing herself and handing out the information sheet. The information sheet (translated into Farsi) includes two sides. On one side there is a very concise explanation of the project, aimed at participants with limited literacy (page no. 2). On the other side more detailed and comprehensive information is provided (page no. 1). Both sides aim to explain the research in simple language and clarify the objectives of the research and the reasons why we are asking for their input (see appendix no.2).

Also, the researcher stated that the interviews were anonymous and without any photography of the interviewee. The researcher did not need to identify the participants by name and address. Moreover, the method for recording the data from the interviews was taking notes and recording from their hand during drawing with their permission. After all the explanation had been given to every interviewee, only the participants that were completely sure that they wanted to participate took part.

After approaching the person and knowing whether he/she was in any of the mentioned groups, the researcher introduced herself to the person and asked him/her to participate in the interview. In Iranian context it is easy to ask somebody to do an interview by giving an oral introduction of the project, especially when the interviews are anonymous and without any photography. Also, the researcher approached the interviewees directly in the field and gave an oral introduction of the project. An indication of the time needed was put on the questions and it was decided whether each participant would like to take part. As explained above, only the participants that were completely sure that they wanted to participate took part and the method for recording the data from the interviews was taking notes and recording from their hand during drawing with their permission.

The interview sequences started with the initial questions of the semi-structured interview. The interviewees firstly responded to the questions with the fixed answers and then put any extra comments for each question. Although not all of them put comments, the obtained comments are still very useful.

The second part, which was the drawing, was offered to all participants after finishing the first part which was the text. The interviewees were asked to document their perception of the square so they were requested to produce and present a map of this square and show the important buildings and the route that they often use get into the square. In this part, they could choose to write, draw or paint. Every participant who agreed to complete this part was given accessories such as blank paper, several colours of pencils, pastels and markers, a ruler etc. to use for her/his drawing. In this part of interview I requested the permission of the participants to record film and take photos during their painting or drawing. Some of them allowed me to record film or take photos. Having some photos and films is helpful for the researcher to remember the process of drawing or painting which is useful to make the narratives behind this kind of visual document.

Although the researcher tried to convince the participant that they did not need to have any skills in painting, drawing and art, only some of the participants agreed to produce this document material and most of them were the younger people.

Transcription

The researcher did not use any recording devices during the first part of the interviews because it could help to make the interviewees trust the researcher more. The interview notes are in Farsi and then the researcher translated them into English. All the interviews were entered into an Excel data base file that helped the author to analyse the data more easily. Also, it gave the researcher the opportunity to classify and compare the data (see section 6.4.2).

6.3.3.4 Visual material

This part of the study, which is one of the main parts of the analysis of subjective perspectives, was conducted during the interviews (refer to section 3.3.6). By this part of the interview, the researcher had found out the interviewees' perception of the square. Also, it was useful to understand what people think in their mind, what is important, attractive or even forgotten and it helps to find out people's expectations of the place.

This part of the interview was asked of every interviewee but only some of them agreed to draw and some of them stated that they were not expert in this respect and did not have enough confidence, despite the fact that the researcher tried to convince them that they did not need any

artistic skills for painting and drawing. Out of the eighteen interviewees, only seven of them agreed to produce visual material for this study. The following words and maps come from some of the selected visual materials. The rest of them are in appendix no.4 to 7.

The interviewee "RM2"

I was walking in one of the alleys connected to the square. I decided to knock on one of the doors and gave myself the opportunity to talk to one of the people who live around the square. After knocking on one of the doors I started by introducing myself and handing out the information sheets to the man who opened the door and I continued by explaining the research aims. He agreed to complete my interview and fill in my questions as well as putting some comments and explanation. He is a married man (aged about 31-45) who has lived around the square for a long time (more than 20 years) with his family. He was born and grew up in Isfahan city and knows this city as his hometown. Our conversation took place in front of the door of his house which is located in one the main alleys of the square. It was afternoon and the alley was quite busy. After finishing part one of the interview and him preferring the rectangle shape for every square (refer to interview no. RM2, Q 37) I asked him to draw his perception and the significant buildings of the square for me and also I explained that I would like to find out what opinion of the square he had in his mind, what is important, attractive or even forgotten. I asked him to allow me to use the camera and record film during his drawing as recording film and then transcribing later was easier for me than taking notes. He kindly agreed to draw and I gave him all the accessories which I took with me during all the interviews. Then I started to record a film of his hands and his conversation. He just chose a black pencil and easily drew the square's map as a rectangle and also the different alleys and entrances. The next stage was showing the important buildings of the square and he started with the Qesarieh Entrance which is the main bazaar entrance from the square. He rotated the paper and on the opposite side of the Qesarieh Entrance he drew the Imam Mosque. Before drawing the other main buildings, he drew the Bazaar corridors and added the paddling pool in the middle of the square. He rotated the paper to the left side and drew Ali Qapu Palace near the displayed Bazaar corridor then on the opposite side the Sheikh Lotfollah Mosque. Next he showed the route that he mostly uses to get into the square from his house and finally he drew a line around Ali Qapu to highlight that as his favourite building although he mentioned during his drawing he adored all the buildings and believing that all of them are masterpieces.
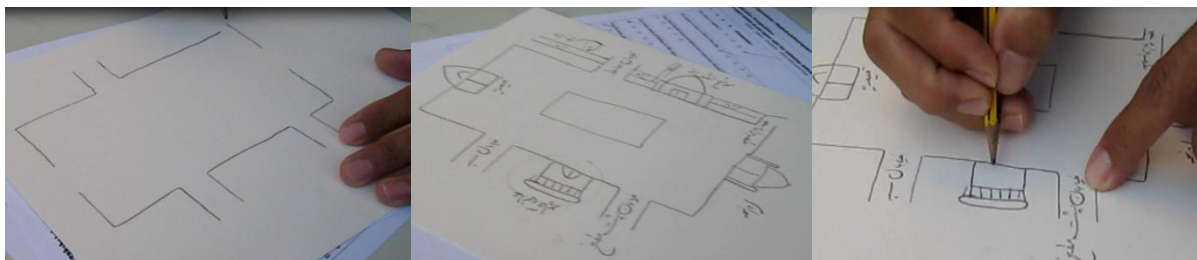
Figure 30: The images taken while drawing "RM2"

1) Qeysarieh

2) Bazaar

3) Hafez Street

4) Sheikh Lotfollah Mosque

5) Imam Mosque

6) Ali Qapu Palace

7) Sepah Street
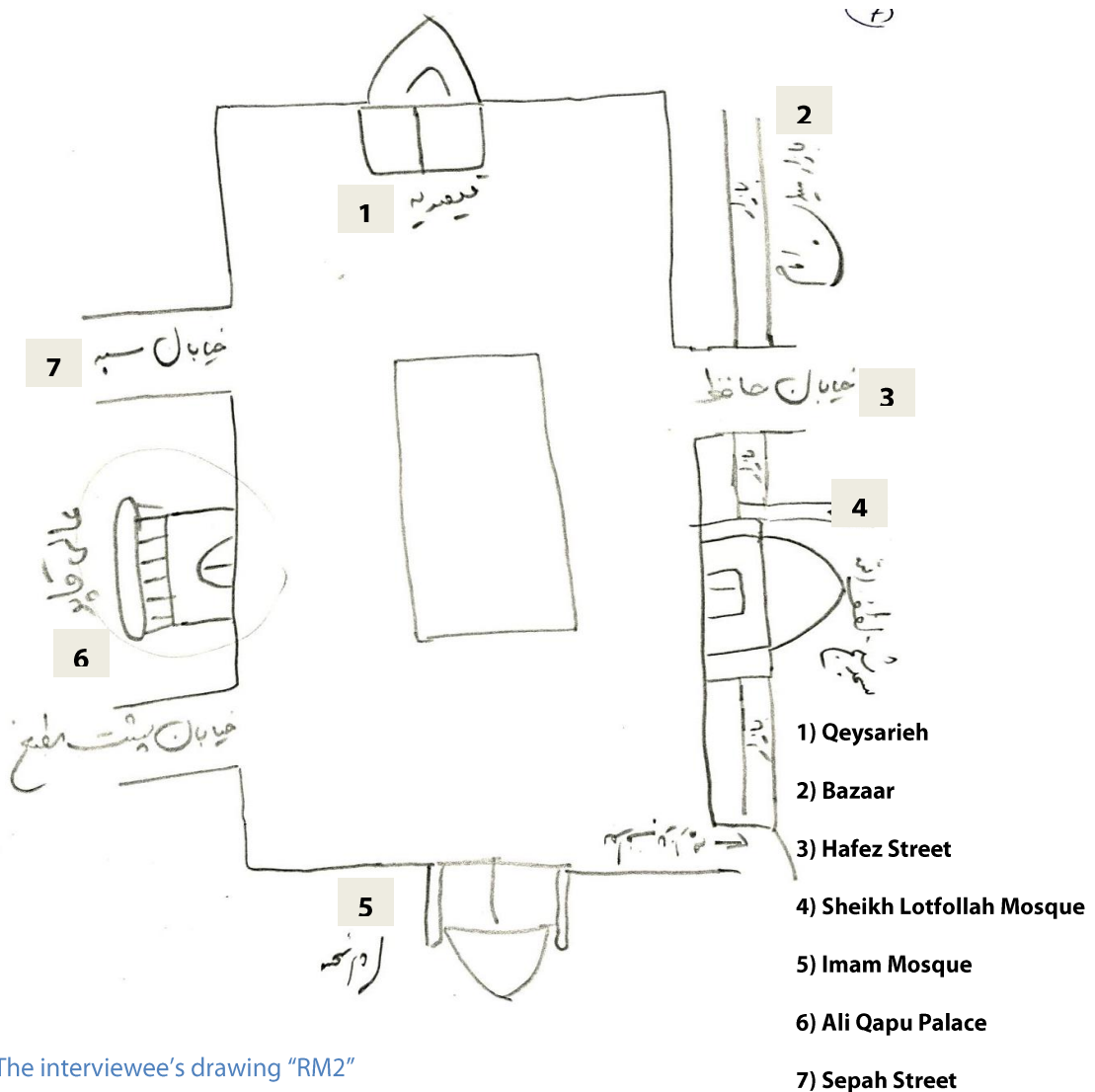
Figure 31: The interviewee's drawing "RM2"

The Interviewee "TF1"

During my trip to Isfahan city I stayed in a hotel near Naghsh-e-Jahan Square. It gave me good opportunities to catch some tourists to participate in my interview. When I was in the hotel's restaurant in the morning having my breakfast I knew that almost all of the hotel guests were coming to this restaurant to have the free breakfast the hotel. During breakfast time I observed people and tried to approach them after finishing their breakfast. I knew they might not do the interview at that time but at least maybe I could make an appointment with them. I started to talk to a friendly woman (aged over 60) and introduced myself and handed out an information sheet to her. As I predicted, she agreed to complete my interview at night.

At night I came back to the hotel and met her in the hotel's lobby. We started with section one of the interview and she said she considered the rectangle shape as the best shape for all squares. After finishing section one I asked her to complete the second part and draw her conception of the square for me. She kindly agreed to draw for me but she said that she would draw at the end of the night in her room and that I could take it back in the morning. I gave her my pencil case and the paper.

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She used the different coloured markers to show the details and tried to use similar colours. I can see all the focal points in this drawing: the paddling pool, street, cars, bazaar corridors, some entrances, trees, benches, different levels and even the till works. The main thing that makes this drawing more distinctive is that all the detail that she shows. Also, she told me that she likes Sheikh Lotfollah Mosque more than the other places in the square.
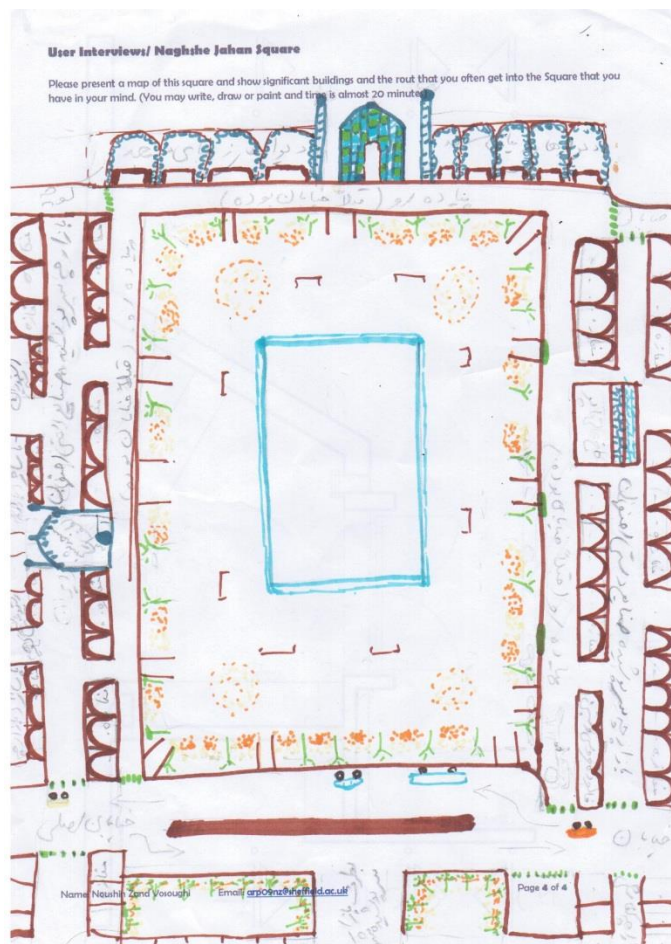
Figure 32: The interviewee's drawing "TF1"

The Interviewee "TF2"

"Zahra" was another woman that I met during my stay at the hotel. She seemed quite religious and came to Isfahan with her little boy. After introducing myself and giving her the information sheet, she agreed to complete my interview and she mentioned that her father was originally from Isfahan. She said that she loved this city and would like to give her opinion about the best Iranian masterpiece "Naghsh-e-Jahan". After finishing section one of the interview and selecting the rectangle form for every square (refer to interview no. TF2, Q 37), I offered her the second part of the interview. She was convinced to draw the square for me without any recording or photography and I agreed to take notes during her drawing. She started by drawing a rectangle, the street and then illustrated the Imam mosque. During her drawing she

talked about this mosque and mentioned that this was the best place in this square and it made her remember God. She knew the tile works as the main part of this mosque and explained that the pattern of the tile works was inspired by heavenly plants. Also, she took the height of the mosque entrance is a sign of God's greatness. She tried to show the details of the tile work. Then she located Sheikh Lotfollah mosque with tile works details in her map and said it is the other masterpiece after Imam Mosque. After Sheikh Lotfollah Mosque, she illustrated Ali Qapu palace without any colour. Then she moved on to the details and drew arcs around the square to show the shops. She tried to indicate some of the shops with signs and also she showed me one of the famous ice cream shops. Additionally, she depicted two horse and carts and she said that her son loves them. She also showed the paddling pool and fountain.
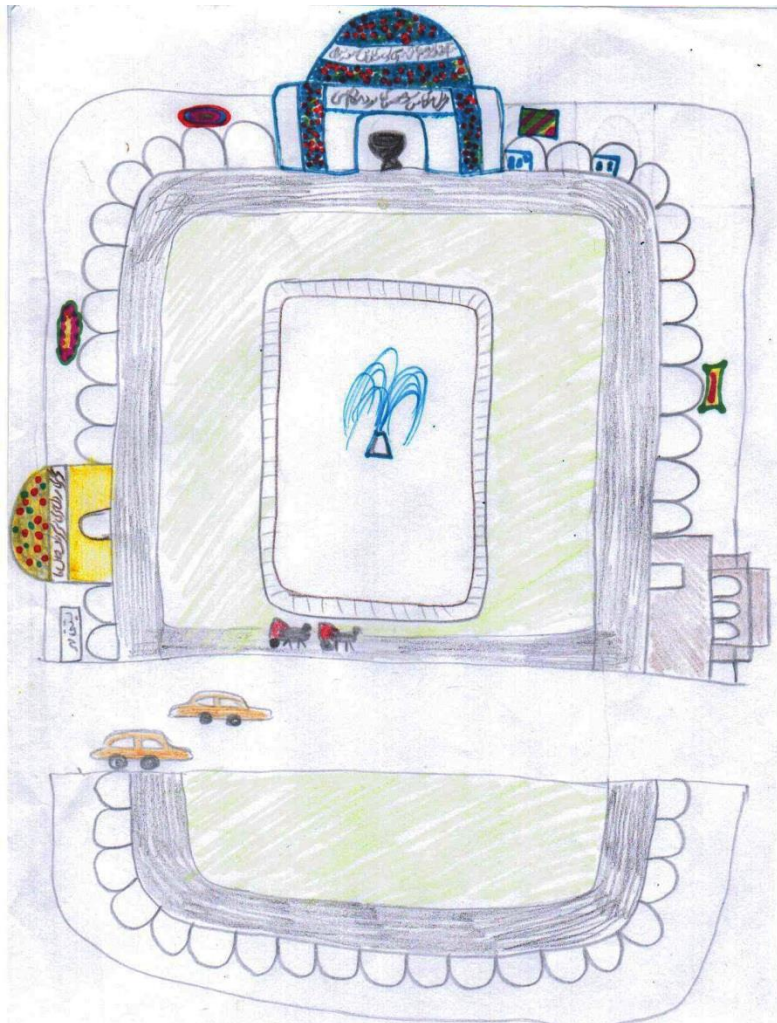
Figure 33: The interviewee's drawing "TF2"

Conclusion

The interviews produced rich data in two different types - text and visual material. All of the obtained data have been categorized and analysed. The next section is going to outline all the processes of data analysis of this part of study.

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6.4 Data Analysis Process by Nvivo9 Software

One of the main stages of this study is analysing the data. This section of the study is allocated to analysing the collected data from multiple methods which is about the contemporary condition of the square.

In this research, the collected data appeared as words, photos and drawings which came from different methods such as interviews and observation (walking strategy and driving) and this section of the study aims to highlight how to organize, categorize and display the data by using Nvivo 9 Software (see also section 4.1).

6.4.1 Nodes

Making nodes is the first stage of organizing and categorizing the data before codifying the collected data. The definition of the nodes has been developed in stages throughout the research (Figure 1in section 4.1.1). After the project research questions and objectives, literature review, prototyping data coding manually and piloting Nvivo coding, final nodes came out (see Figure 34 to 37).

The nodes are categorized according to:

"**Uses and Activities**" (shopping, driving and listening to music, collective entertainment, relaxing, observing and walking, catching public transportation and taxis, using the square as a through fare, meeting friends and undertaking collective recreations, business and official work, participating in political events, participating in religious manifestations, participating in cultural activities and children's activities and events); "**Facilities**" (walkability, sit-ability, sun and shelters, children's play and activities, trees and greenery, paddling pools, attractiveness, cafés and restaurants, basic needs of the disabled, elderly or children with proper access, safety and efficiency for pedestrians and public transport users, efficient communities to join for different age groups, occasions for families to come together and other facilities); "**Subjective Perspectives**" (legibility, easy to find in the city, important place in people's memories, sense of belonging, arranging an appointment with strangers, safety, significant functions, social network groups and community notice boards, form of the square and what opinion of the square people keep in their mind, what is important, attractive or even forgotten and also might be useful to find people's expectations) and "**Built Fabric**" (focal points and anchors, civic, religious and historic buildings, change in level and steps, surface and fittings, entrances and access, variety and colour and visual enclosure)

NODE/USES & ACTIVITIES	SUB-NODES	LITERATURE	METHODS
Exploring the current function of Naghsh-e-Jahan Square by understanding common activities and uses by different groups of people	**Shopping**	Jones(1999),(Woodcraft et al.(2011)	Refer to; INT, Q 5- Walking 0- VIS 3.3.6
	Driving and listening to music		Refer to; INT, Q6
	Collective entertainment, relaxing, observing and walking	Carmona and Tiesdell (2007), Whyte (1980)	Refer to; INT, Q 7- Walking 3.3.5.1- VIS 3.3.6
	Catching public transportation and taxis		Refer to; INT, Q 8
	Using the square as a through fare		Refer to; INT, Q 9
	Meeting friends and undertaking collective recreations	Holland et al. (2007), PPS(2000)	Refer to; INT, Q 10- Walking 3.3.5.1- VIS 3.3.6
	Business and official work	Khatam(2013), "مینیاتور", (2013)	Refer to; INT, Q 11
	Participating in political events		Refer to; INT, Q 12
	Participating in religious manifestations		Refer to; INT, Q 13
	Participating in cultural activities	Woodcraft et al. (2011)	Refer to; INT, Q 14
	Children's activities and events	Silverman et al.,(2005), Casey (2007)	Refer to; INT, Q 15

Figure 34: The structured nodes "Function" (Uses and Activities), Literature and Methods to achieve them

NODE/FACILITIES	SUB-NODES	LITERATURE	METHODS
Finding out what facilities the Naghsh-e-Jahan Square provides for its users	Walkability	OCED (2011), Crain (2012), Koohsari et al., (2013)	Refer to; INT, Q 16- Walking 0- VIS 3.3.6
	Sit-ability	Carmona and Tiesdell (2007), Mexi and Tudora, (2012)	Refer to; INT, Q 17 - Walking 0- VIS 3.3.6
	Sun and shelters	Mexi and Tudora, (2012)	Refer to; INT, Q 18- Walking 0- VIS 3.3.6
	Children's play and activities	Refer to some kind of children activities and playing	Refer to; INT, Q 19
	Trees and greenery	Sustainable Cities Institute (2011)	Refer to; INT, Q 20- Walking 0- VIS 3.3.6
	Paddling pool	Wudu (2013)	Refer to; INT, Q 21- Walking 0- VIS 3.3.6
	Attractiveness	Ezmale (2012), Elsayed (2008)	Refer to; INT, Q 22
	Cafés and restaurants	Lennard (2008)	Refer to; INT, Q 23- Walking 0- VIS 3.3.6
	Basic needs of disabled, elderly or children with proper access	OCED (2011)	Refer to; INT, Q 24- Walking 3.3.5.1- VIS 3.3.6
	Safety and efficiency for pedestrians and public transport users	OCED (2011)	Refer to; INT, Q 25- Walking 0- VIS 3.3.6
	Efficient communities to join for different age groups		Refer to; INT, Q 26
	Occasions for families to come together	Lennard (2008)	Refer to; INT, Q 27
	Other facilities		Refer to; Walking 0- VIS 3.3.6

Figure 35: The structured nodes "Facilities", Literature and Methods to achieve them

NODE/SUBJECTIVE PERSPECTIVES	SUB-NODES	LITERATURE	METHODS
Investigating what people feel in the Naghsh-e-Jahan square presently	**Legibility**	Lynch (1960), Wekerle and Whitman (1995), Elsayed (2008)	Refer to; INT, Q 28- Walking 0- VIS 3.3.6
	Easy to find in the city	Kelly and Kelly (2001)	Refer to; INT, Q 29
	Important place in people's memories	Ernst (2012), Trigg (2012)	Refer to; INT, Q 30
	Sense of belonging	Anant (1966),Maslow and Frager (1987), M Smith, (2011)	Refer to; INT, Q 31
	Arranging an appointment with strangers	PPS (2000), Lennard (2008)	Refer to; INT, Q 32
	Safety	Maslow (1968), Lang (1994), Elsayed (2008), PPS(2000), Wekerle and Whitman (1995)	Refer to; INT, Q 33 & Q 34- Walking 0- VIS 3.3.6
	Significant functions	Lennard (2008)	Refer to; INT, Q 35
	Social network groups and community notice boards	Woodcraft et al., (2011)	Refer to; INT, Q 36
Understanding people's perceptions about the square	**Form of the square**	Lennard (2008)	Refer to; INT, Q 37
	What opinion of the square people keep in their mind, what is important, attractive or even forgotten and also might be useful to find out people's expectations		Refer to; INT, Q 38- VIS3.3.6

Figure 36: The structured nodes "Subjective Perspectives", Literature and Methods to achieve them

NODE/BUILT FABRIC	SUB-NODES	LITERATURE	METHODS
Exploring the built fabric of the Naghsh-e-Jahan Square	Focal points and anchors	Lennard (2008)	Walking 0- VIS 3.3.6
	Civic, religious and historic buildings		Walking 0- VIS 3.3.6
	Changes in level and steps	Lennard (2008)	Walking 0- VIS 3.3.6
	Surface and fittings	Lennard (2008)	Walking 0- VIS 3.3.6
	Entrances and access	PPS (2000), Lennard (2008)	Walking 0- VIS 3.3.6
	Variety and colour	PPS (2000)	Walking 0- VIS 3.3.6
	Visual enclosure	Lennard (2008)	Walking 0- VIS 3.3.6

Figure 37: The structured nodes "Built Fabric", Literature and Methods to achieve them

After this stage of study the nodes were entered into Nvivo Software (see Figure 38).

Figure 38: The structured nodes after being entered into Nvivo 9 Software

6.4.2 Analysing the Interviews

After making nodes in Nvivo 9 Software, the interviews were entered into this software as one of the sources of data. It was easier to enter and analyse the interviews as a data set file, and consequently the researcher put the interviews in an Excel file. The Excel file of the interviews helped to tabulate the questions and interviewees' responses; also all the questions were turned into nodes (every node is a symbol of interview questions) (see section 4.1.3). It is beneficial to compare the interviewees' responses and comments by having them on one page. Also, it was easier to enter in Nvivo 9 Software as a data set.

As mentioned in interview section 3.3.7, every interview question was replied to with given fixed responses with rating scales as well as having room for any comments and points of view. As a result, the fixed responses (with rating scales) worked as a similar format to a questionnaire. Although the approach to this study and interviews is qualitative in this part of the study, a quantitative approach has been chosen to analyse this part of the interviews. A quantitative method of data analysis is useful to the researcher who is trying to draw meaningful results from the qualitative data (Abeyasekera, 2005, p. 1). The fixed responses of the interviews have been entered into Excel Software to produce some graphs which contributed to interpreting and conveying the data more easily (see chapter 6 interviews results).

The interviews have been entered in Nvivo 9 Software and then coded in the existed nodes. Figure 39 shows the interview data set as a source of collected data in Nvivo 9 Software.

Figure 393: The interview data set as one of the sources after being entered into Nvivo 9 Software

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The next step of the study after coding all the interviews in Nvivo 9 Software is moving on to the next section which is visual data analyses.

6.4.3   Analysing the Visual Materials

In this study visual methodology was conducted by taking photos and films during the walking strategies and by participants' drawings in the second part of the interviews. This section is going to address the ways of analysing these visual documents.

In order to analyse the visual materialism the visual evidence needs to be transferred into verbal knowledge.Accordingly, to transfer the photos into textual knowledge, the first step of analysing visual data (photos taken and interviewees' drawings) in this study was conducting a regular order to write proper captions for every photo and drawing (see section 4.1). In this regard, the photos and drawings were numbered and the drawings are linked to the interviewees' numbers (see section 4.1).

The photos and drawing have been broken down into their constituent elements (Leeuwen and Jewitt, 2000, p.15) and every mentioned constituent element has got a caption and then all the captions have been coded against the existing nodes in Nvivo 9 Software. Also, it had been tried to reduce the written text to an introductory statement (Banks, 2011, p.145) because it is helpful to codify in the nodes in Nvivo 9 Software. Figure 40 shows that photo no.49 was coded against different nodes.
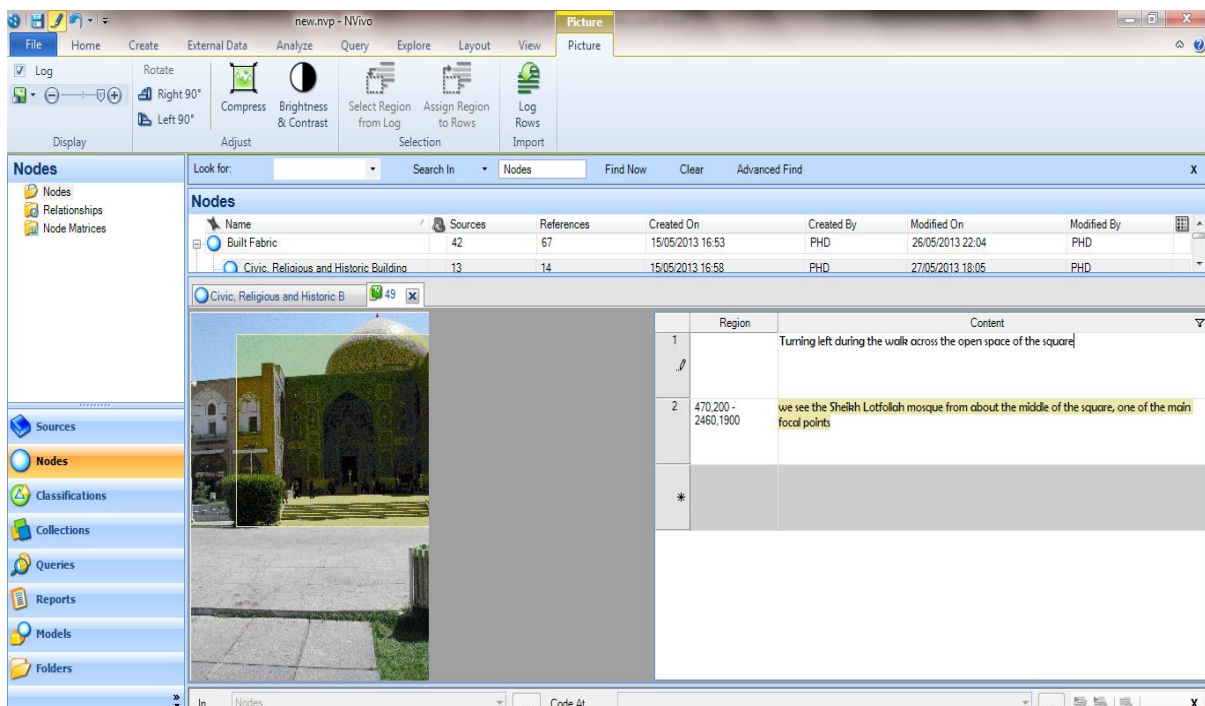
Figure 40: Coding a photo as one of the data sources in the existing nodes of the study.

Conclusion

This chapter first affords some brief information about the history of Naghsh-e-Jahan Square, showing the process of change, and then describes its present condition. This includes the data collected through the walking strategy and subsequent conversations. All the coded data from Naghsh-e-Jahan Square present conditions stemming from the walking strategies and interviews. They have been coded against the existing nodes with the support of Nvivo 9 Software. Moreover, they have all been collected in one file for the purposes of data analysis and interpretation. The next chapter (chapter 7) is dedicated to these two processes.

CHAPTER 7: DATA ANALYSIS AND INTERPRETATION

This chapter gathers and interprets the collected data about the present condition of Naghsh-e-Jahan Square. This part of the study explains the analysis and findings of the case study which was done by walking strategies and interviews. This chapter seeks to address the definition of the nodes to analyse and interpret the interview findings and walking strategies findings and finally gives a summary of findings about every node.

As a result every section (node) comprises four parts:

Part one: Node Definition gives explanations and definitions of the nodes which have been developed in stages throughout the research and they are also taking into consideration of existing literature and the Iranian context.

Part two: Interview Findings contains the outcome of the interviews which are related to a specific node (they are categorised and coded by support of Nvivo 9 software see section 6.4.2). As explained in section 4.1 the fixed responses have been put in Excel Software and the related comments to every question have been coded against the related node in Nvivo 9 Software. As a result the out puts are a graph for fixed responses and some coded comments which are explained and interpreted in every section. This part of study has been considered as people's voices by the researcher.

Part three: Walking Strategy Findings. If Interviews can be considered as people's voices, so the walking strategy reports reflect the researcher voices. The data gathered during the walking strategies (see section 6.3.2) have been categorised and coded against relative nodes (by support of Nvivo9 see section 6.4). Then the outcomes are discussed and interpreted for every node.

Part four: the final part of every section is a Summary of Findings, which explains and reflects an overall analysis of every node. This discussion explores the main findings from this study. This section can also reflect and highlight the most interesting and significant findings from the research and how they related.

7.1 Uses and Activities

Activities are the main reasons for people to come to a place and they can make the space unique and special (Project for Public Spaces, 2000, p. 19). Gehl Architects (2004) divides pedestrian activities in public places into three groups: necessary, optional (urban recreation) and social activities.

The activities and uses which are taking place in Naghsh-e-Jahan Square considered in this study are: shopping; driving and listening to music; collective entertainment; relaxing, observing and

walking; catching public transportation like taxis and buses; using the square as a through fare; meeting friends and undertaking collective recreations; business and official work; participating in political events; participating in religious manifestation; participating in cultural activities and children's activities. All these mentioned activities and uses are discussed in the following sections.

7.1.1 Shopping

7.1.1.1 Definition

Consumers may shop to meet their needs or as entertainment or recreation (e.g., Bellenger and Korgaonkar, 1980; Kowinski, 1985; Babin, et al., 1994) cited in (Jones, 1999). Shops can also be considered as one of the social infrastructure elements which communities almost need in order to flourish (Woodcraft et al., 2011).

As Iranian traditional town squares are a main part of the Bazaar system (see section 5.9) the Bazaar shops continue around the square and they always are surrounded by shop units. Shopping is always one of the main attractions that draw people to bazaars and town squares. Although shopping can help the bazaar economically, the bazaarian (shopkeepers and retailers) themselves make communities in town squares which are a necessary premise for a place to thrive (see section 5.9). Naghsh-e-Jahan Square can be considered as a traditional Iranian shopping centre where one can find every type of heritage handcrafts from Isfahan city. Shops in this study are those around the square and those located in the Bazaar corridor around the square.

Because in Iranian culture buying souvenirs is very common and Iranians would usually bring back something special for their relatives and friends from any city where they travel this square is a good place for tourists to visit a historic architectural masterpiece and become familiar with the city's culture as well as buying some souvenirs. As a result the benefits of shopping in Naghsh-e-Jahan Square in addition to meeting needs may be entertainment, recreation, getting familiar with the culture of the city, buying something special from the city as a souvenir and visiting a historic place.

Shopping is one of the uses and activities occurring in the square. This study used two methodological approaches to collect data about shopping: interviews and walking strategies. The collected data are analysed and discussed in this section. The analyses are the results from Excel and Nvivo 9 Software.

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7.1.1.2 Interviews Findings

After asking Q5 (How often do you use the square for Shopping?) of the 18 interviewees, the fixed responses have been put in Excel Software and the comments related to this question have been codified in Nvivo 9 Software. The following conclusions can be drawn from this stage of the study (see Figure 1).

Responses to Q5 in the interview confirm that the majority of interviewees (66%) do engage in some form of shopping activity while visiting Naghsh-e-Jahan Square, while none of them does no shopping at all.
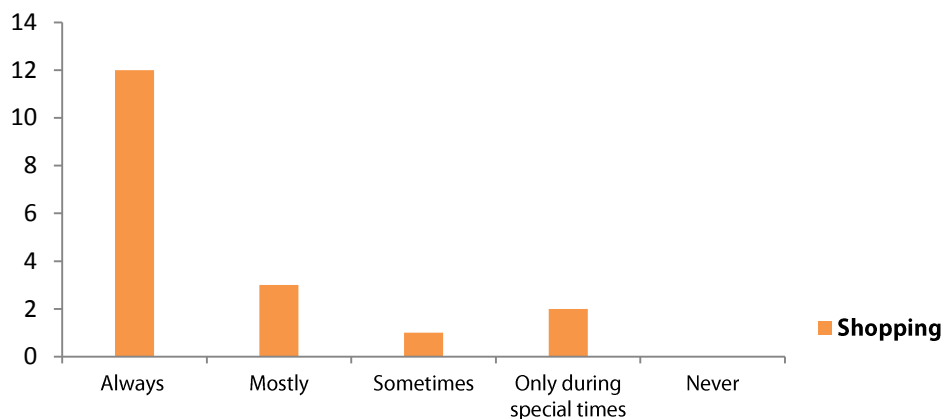
Figure 1: Use of square for Shopping

The comments that interviewees made for this question are:

Some interviewees love shopping in the square.

"Always, I love the shops" (TF1-Q5)

"Always, I love shopping because I love traditional and handmade crafts" (TF2-`Q5)

People know this place as one of the best places to buy gifts and traditional handcrafts.

A male shopkeeper (SM2) knows a good place to buy gifts:

" Always, If I want to buy a gift, definitely I come here." (SM2-Q5)

The Bazaar around the square is interesting for an interviewee.

"Always , I love Bazaars around the square." (RF3-Q5)

Also, other interviewee complained about the shops around the square which are more expensive rather than bazaar shops. In Iran, the shops in bazaars are mostly cheaper than other shops in cities. As bazaar shops are usually working as wholesale shops, whenever people want something

cheap they will look for it in bazaar shops. On the other hand, some people do not think bazaars are suitable for luxury items. But overall in Iran the price of goods depends on the location and the quality of the shop. Consequently, shops around the square have better conditions in terms of location and it may influence the price of goods.

"Always, specially Bazaar not the shops around the square. They are quite expensive." (RM2-Q5)

In contrast a young female (RF2) resident who comes to the square with her mum was complaining about the lack of clothes shops for young people which may be more attractive for this age.

"Only during special times with my mum to buy some handcrafts, the shops have not got something fashion or smart. " (RF2-Q5)

Another interesting point which one of the interviewees (RM1) refers to is that coming to the square can be a habit formed from childhood.

"Mostly, in my childhood especially I came here for shopping and now it can be a habit to buy some special traditional things" (RM1-Q5)

Also a male interviewee (TM2) finds shopping in this square more interesting for his wife rather than himself.

"Only during special times, my wife is more interested."(TM2-Q5)

In this study, as mentioned before (section0 6.3.3.4), seven interviewees (RM2, SF1, SF2, SF3, TF1, TF2 and TM1) agreed to draw sketches. All the different parts of drawings were coded against the nodes. The other important point that can be seen in these drawings is that 5 interviewees (but not SF3 and SF1) drew the shops (the shops in bazaar corridor around the square and the square itself). It may mean that shops are significant in their conception of the place and they know these shops as one of the main parts of the square, as can be seen in Figure 2.
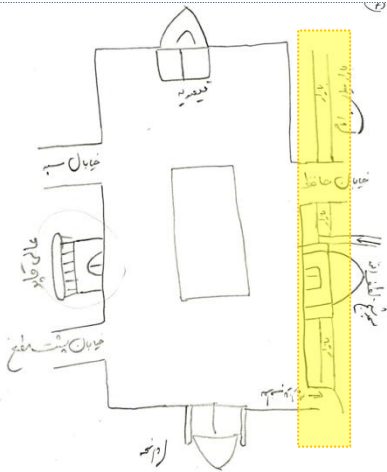
"he drew bazaar corridors"

See interview (RM2) section 6.3.3.4

"bazaar corridors and shops"

See interview (TF1) section 6.3.2.4
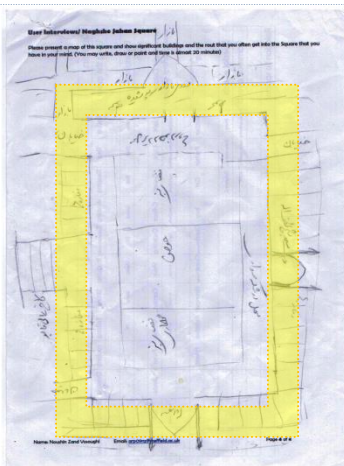
"Then he showed the shops, bazaar corridor"

See interview (TM1) appendix no.7
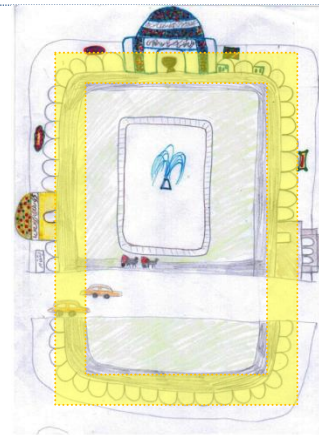
"Then she moved on the details and drew the arcs around the square to show the shops. She tried to make permanent some of the shops with signs and also she showed me one of the famous Ice Cream shops"
See interview (TF2) section 6.3.2.4
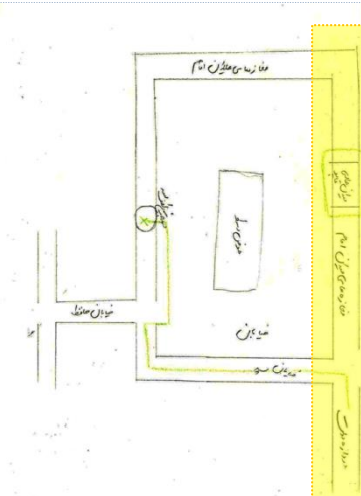
"the shops located in Bazaar corridor around the square"

See interview (SF2) appendix no.5

Figure 2: The interviewees' drawings with coded elements in "Shopping" node

Overall, it can be found that all the interviewees experienced shopping in this square and most of them love to buy things there, although one of the young interviewees found that Naghsh-e-Jahan Square does not cater for her shopping needs (young fashion).

7.1.1.3 Walking Strategy Findings

This section reports findings in relation to shopping through the walking strategies approach. The researcher reported what she saw while walking. From the data gathered through walks (see6.3.2) fifteen photos were coded against the shopping node. All the words in quotations are the researcher's voice during the walking which are relevant to shopping and coded in Nviovo 9.

What can be seen and found out from every photo is the condition of shopping in the square and researcher's word and reports try to explain the photos. As shown below in Figure 3.

"..there are a lot of stalls full of traditional goods which attract people although the design of the shops is not modern"

Photo no 14; (see Walking along Bazaar corridor section 6.3.2.3 0)

"Clothes are hung up for sale and decorate the bazaar corridor"

Photo no 25; (see Walking along Bazaar corridor section 0)

"Shops and shade attract people"
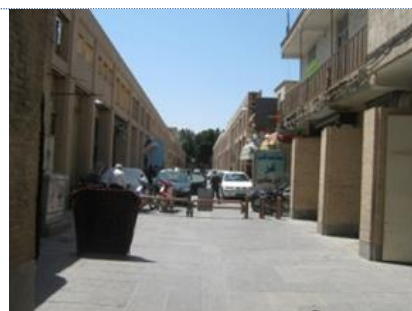
Photo no 17; (see Walking along Bazaar corridor section 0)

"…there are adjoining market units on both sides of the way which mostly sell traditional sweets, carpets and paintings"

Photo no 2; (see Walking toward section0)

"To the right side of the open space there is a shop which sells particular patterned fabric and cloth which is traditionally belongs to Isfahan city."

Photo no 20; (see Walking along Bazaar corridor section 0)

"..crowded with people, mostly women shopping, walking and window shopping in the afternoon"

Photo no 21; (see Walking along Bazaar corridor section 0)

"The end of the corridor is an open space and traditional copper hand crafts"

Photo no 22; (see Walking along Bazaar corridor section 60)

"Walk towards the square on one side of the way are adjoining market units"

Photo no 3; (see Walking toward section0)

"Other people are shopping, Colourful shoes are on display"

Photo no 27; (see Walking along Bazaar corridor section 60)

"However, light from above brightens the traditional fabrics displayed below"

Photo no 26; (see Walking along Bazaar corridor section 0)

"The open space is well set out with a display of traditional Isfahanian hand crafts around"

Photo no 11; (see Walking along Bazaar corridor section 60)

"Some people most of them women, are walking, shopping and window shopping"

Photo no 32; (see Walking along open space section 0)

"I see a crowded area in front of one of the shops, an ice cream shop with high quality products and well-known in the city"

Photo no 40; (see Walking along open space section 60)

"Where the shops have closed"

Photo no 45; (see Walking along open space section0)

"Shops selling different traditional goods"

Photo no 39; (see Walking along open space section0)

Figure 3: Photos taken while walking referring to "Shopping" node

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As can be seen from walking strategy analysis, the shops in this square are prospering. In particular the shops around the square (in bazaar corridor and square itself) are busy and some of the shops which are located in side street corridor of the bazaar are closed (see photo no.45). The number of customers is high during the evening in summer which shows the shops are successful.

7.1.1.4 Summary of Findings about Shopping

Naghsh-e-Jahan Square is surrounded by shop units and the town square is organised by the shops. As a result, the shops can be very important in this square. Although these shops do not supply every day basic items, they can cater for other needs which people. Shopping have not always mean meeting needs as it may be considered such as recreation and entertainment (Jones, 1999).

In Naghsh-e-Jahan Square the majority of the shops are selling important cultural handicrafts retail (see section 7.1.7). These days you can find these items in most Iranian houses even in foreign countries. Most Iranians use heritage crafts as status symbols. There is a high demand for this kind of cultural artifact and this makes these shops thrive economically.

As mentioned before, in Iranian culture it is very common for people to bring souvenirs from cities they travel to and buying Isfahanian traditional handcrafts can be a good reason to draw tourists there (see interviews TM1, TM2, TF1, TF2 and TF3 Q5). Maybe after they come to visit the historic context they are encouraged to buy something.

While these shops are helping the square to be more liveable, at the same time they are taking benefit from being located in this rich historic context. The historic context is attracting Iranian and international tourists. Consequently, the shops and the square have a beneficial mutual relationship.

These shops and being part of the bazaar also make this square one of the economic centres and enhance the business activity in Isfahan city. Although during recent years Iran has suffered from economic recession and from having no international tourists, the shops and this square are still full of people.

7.1.2 Driving and Listening to Music

7.1.2.1 Definition

Driving and listening to music is one of the recreational activities which take place in Iran. This recreational activity, which is very common among young people, happens in public urban spaces

particularly streets. This activity is very common in streets that do not have heavy traffic. For example some of the streets in Tehran, the capital of Iran are known for this activity. Although the government has always attempted to prevent them from taking part in this activity, young people choose this activity to find a girl or boy friend. During driving and listening to music young people try to show off their cars and themselves to attract the attention of the opposite gender.

As Naghsh-e-Jahan Square has a street which passes through the square, it may be expected that this recreational activity happens there. As a result this activity has been considered and studied in Naghsh-e-Jahan Square.

7.1.2.2 Interviews Findings

As mentioned in the previous part, there is a street which passes through the square where this activity might happen. The researcher asked question no.6: How often do you use the square for Driving and Listening to Music? (Q6). All interviewees refused to do this activity in this square and reasons that they mentioned are:

Driving and listening to music may be a difficult activity in every street even. One interviewee (SF1) even considered it is impossible.

"I do not choose this square to drive, it is impossible" (SF1, Q6)

Another interviewee (SM1) mentioned the reason for not choosing this street is heavy traffic.

 "Because of heavy traffic, I do not use the square for driving or even passing space. These two streets (Hafez and Sepah) are really crowded by cars mostly" (SM1, Q6)

A male resident (RM2) did not need a car in this area and maybe he uses public transportation or walking to come to the square.

"In fact I do not need" (RM2, Q6)

Furthermore, 5 of 7 interviewees who drew a map for this study have clearly drawn the street which crosses the square. As these drawings show interviewees' perceptions of the place, so the following drawings (see Figure 4) show that this street is known as one of the main parts of this square by the majority of interviewees.

Although the interviewees have seen and accepted this street as part of the square, they did not find this street suitable for driving and listening to music. They may like to take part in other activities rather than driving.

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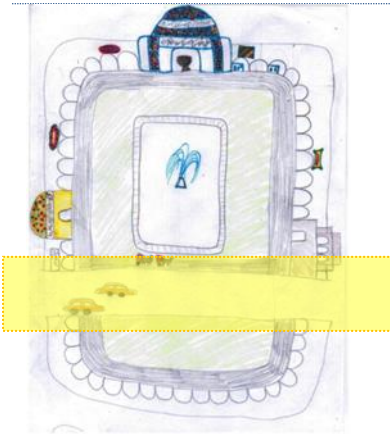
"the street and cars"

See interview (TF2) section 0
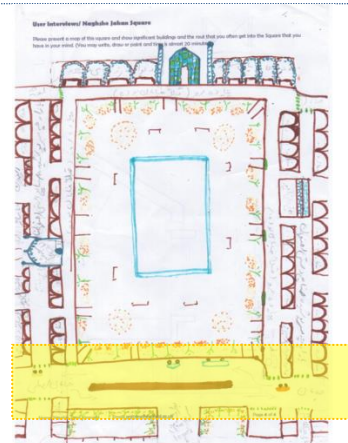
"the street and cars"

See interview (TF1) section 0
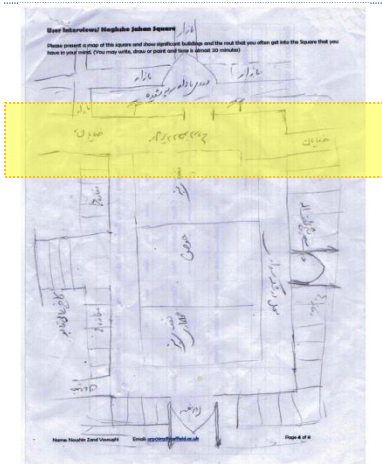
"The street"

See interview (TM1) appendix no.7
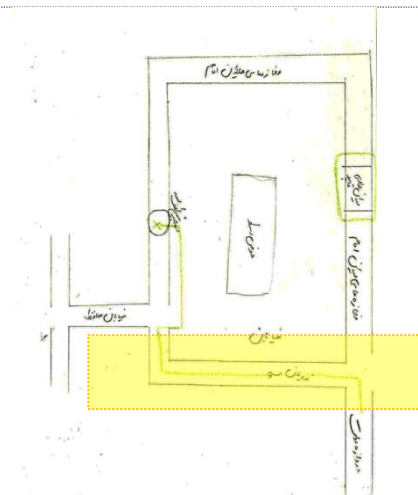
"She started to draw and the first element that she drew was the street which crosses the square"

See interview (SF2) appendix no.5
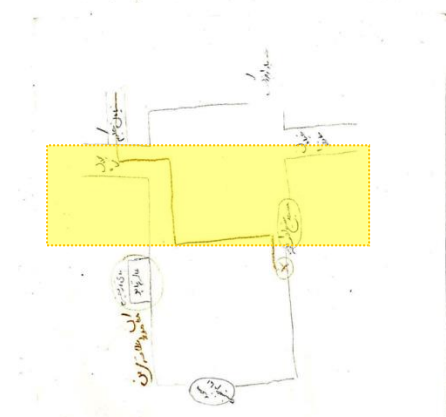
"started from Sepah Street which goes across the square"

See interview (SF1) appendix no.4

Figure 4: Interviewees' drawings coded under "Driving and Listening to Music" node

7.1.2.3 Walking Strategy Findings

The researcher could not find any evidence of this activity in this square during her walking and driving strategies. The cars just pass through the square and maybe the Police Station in the square inhibits people somehow (refer to photo no.65 in section 60).

7.1.2.4 Summary of Findings about Driving and Listening to the Music

Existence of cars in this square can have advantages and disadvantages. As the street which passes through the square connects two main streets of the city so this street always has cars, 24 hours a day. As a result the presence of cars can make the space liveable and more secure and give the square evening life. On the other hand, the fact that people do not use this square for driving and listening to music can be considered as a good point by the researcher because the appearance of a lot of cars is not welcome and pedestrians must be the first priority.

7.1.3 Collective Entertainment, Relaxing, Observing and Walking

7.1.3.1 Definition

Collective entertainment, relaxing, observing and walking refer to the sociability aspect of an urban space such as town squares. Collective entertainments in urban public spaces can help people to connect with others to socialise and communicate. For instance, in the history of Naghsh-e-Jahan Square this place was used for the sport of polo and there is evidence that these kinds of entertainments are almost completely missing from Iranian public spaces. Although in Iran as a Muslim country there are a few limitations in relationships between men and women, there is still some potential to run a number of recreational activities.

Relaxation is distinguished from comfort by the level of release it involves and also it is a more developed state with body and mind at ease (Carmona and Tiesdell, 2007, p.231). Although Whyte (1980) has revealed that many users of urban public spaces and town squares look for liveliness and demand life in a city, in Iranian traditional town squares people also seek spaces to relax after shopping in the bazaar. Naghsh-e-Jahan Square in particular can be a place for visiting and it may work as a big museum to display the history of the city and even Iran. Thus, people need places to relax during their time of visiting and shopping in the square.

7.1.3.2 Interviews Findings

Question no. 7 (Q7: How often do you use the square for Collective entertainment, relaxing, observing and walking?) was asked of the interviewees. Figure 5 illustrates the response that interviewees gave.
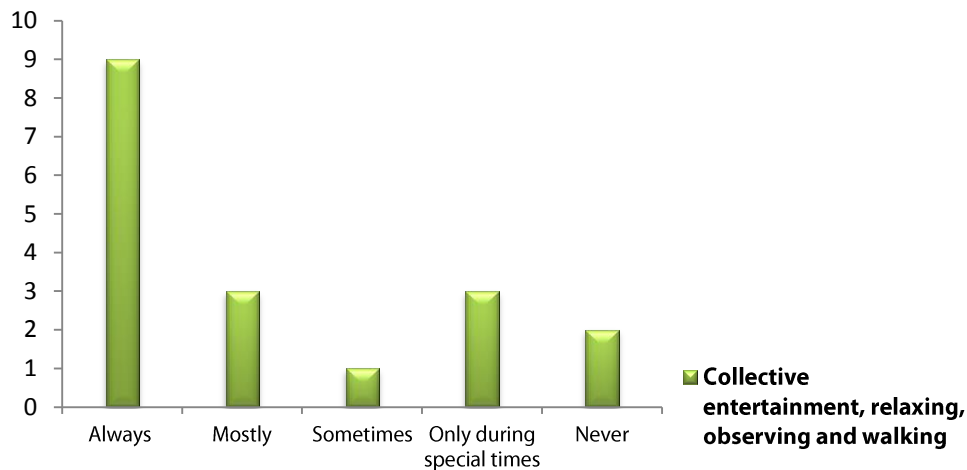
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It is apparent from Figure 5 that 50% of respondents "Always" come to the square for collective entertainment, relaxing and observing and walking and only 11% of interviewees "Never" use Naghsh-e-Jahan Square for these kind of activities.

One of the male tourists (TM2) stated that:

"Always, we come here every night during our stay" (TM2, Q7)

This demonstrates that they do not want to lose any chance to enjoy the square at night. Also, the word "Night" indicates the best time for using the square.

A male resident (RM1) who lives in Isfahan city mentioned they come to the square for these activities "only during special times" with their guests from other cities.

"Only during special times, that we have got guests from other cities" (RM1, Q7)

In contrast, a female resident "Never" uses the square for these activities as she prefers a quiet place.

"Never, generally I hate busy places I love cosy and quiet places" (RF2, Q7)

But the interviewed shopkeepers have different ideas about using the square for these reasons. A female shopkeeper (SF1) uses the square for these reasons "only during special times" because she has to do her job and does not have time for these kinds of uses.

"Only during special times, I am quite busy with my job in the square" (SF1, Q7)

The other female shopkeeper (SF2) "mostly" comes to the square for these activities often on Friday (which is the weekend in Iran) and especially she mentioned with her "family".

"Mostly, I am usually coming to the square every Friday with my family" (SF2, Q7)

Furthermore, from one of the drawings that a female tourist produced for this study, two cariages can be seen. They can be considered as collective entertainment as they journey around the square. The interviewee (TF2) drew two carriages showing that they are in her conception of the square; also she mentioned that her son loved them (see Figure 6).
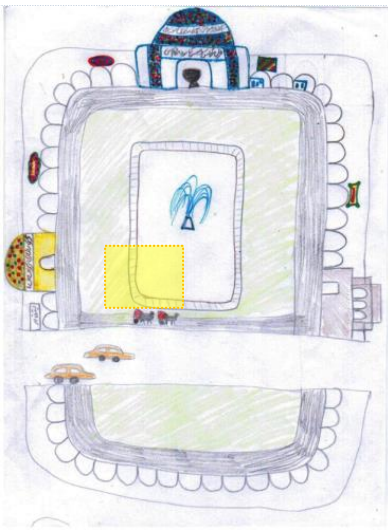
"She also depicted two carts and horse to display the carts way also, she said my son loves them"

See interview (TF2) section 0

Figure 6: Interviewees' drawings coded under "Collective Entertainment, Relaxing, Observing and Walking" node

Although one of the interviewees (RF2) preferred a quiet place rather than this populated square, being popular and feeling the presence of other people is the nature of a town square. However this popular place has got some quiet places as well (see walking strategies findings in following part).

7.1.3.3 Walking Strategy Findings

This section reports relevant findings about "collective entertainment, relaxing, observing and walking" during walking strategies. From the data gathered through walks 11 images were coded against the"collective entertainment, relaxing, observing and walking" node by the support of Nvivo9. Figure 7 shows images related to this node and researcher's explanation during the walking strategies.

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"seeing a man drinking water in the shade of tall tree. That is forbidden in public spaces during Ramadan. It shows people can rest and drink at this hot time of the day in this café"

Photo no 20; (see Walking a long Bazaar corridor section 0)

"In front of the open space is the café where I sit to drink a cup of tea and the environment of the café is very cosy. There are two young ladies who are very friendly with the shopkeeper, which shows they often come here"

Photo no 20; (see Walking a long Bazaar corridor section 0)

"some young women sit on the lawn and read a book"

Photo no 33; (see Walking along open space section70)

"All steps and levels around the mosque are being used to sit, rest, take souvenir photos and observe other people and the square"

Photo no 35; (see Walking along open space section0)

"the steps and levels in the front of the mosque are used by people to sit, rest and observe the square. The high walls of the square provide ample shade on the steps"

Photo no 49; (see Walking across section0)

"as the weather is going to be cool carts, horses and coaches are getting ready to work"

Photo no 57; (see Walking across section0)

"We can see more families during the afternoon sitting on the edges and lawns*

Photo no 57; (see Walking across section0)

"people mostly in family groups and children standing in the queue to get on the carts"

Photo no 59; (see Walking across section 60)

"parking lots for rental bicycles seem to be empty now"

Photo no 61; (see Walking across section0)

"we can see people sitting and settling on their rugs on the floor. A man stretches out"

Photo no 58; (see Walking across section0)

Figure 7: Photos taken while walking with coded elements in "Collective Entertainment, Relaxing, Observing and Walking" node

From walking strategies it can be seen how people are using the square for collective entaertainment, relaxing, observing and walking. It seems that people like to get on the carts and rent bicycles in the square see photos no 57, 59 and 61. People also sit and settele on rugs and

stages (see photos no. 33, 49 and 58). They are observing the square and people as well as relaxing.

Although the square itself is popular , there are some places for people to have a quiet time. A cosy café which is located in one of the attached open spaces to the square is a good place to rest and drink even during Ramadan month (the month when Muslims fast) see photo no 20.

7.1.3.4 Summary of Findings about Collective Entertainments, Relaxing, Observing and Walking

Naghsh-e-Jahan Square as a public open space should have some activities to meet people needs for entertainment, relaxing, observing and walking. Naghsh-e-Jahan is a place which is working as a big museum and shopping centre as part of a bazaar so it may need some places for other activities such as collective entertainments, relaxing, observing and walking. These kinds of activities help visitors to stay longer in the square.

The results of the interviews indicate that all the interviewed tourists come to the square for these activities. Even one of the tourists (TM2) mentioned that they come to the square every night during their stay in Isfahan city. Half of the interviewed residents come to the square for these activities "Always" and one of them (RF2) who responded "Never" explained that she loves a cosy and quiet place which may not be a specific feature for a public urban space. However, Naghsh-e-Jahan Square does have some quiet and cosy places where even in Ramadan (when people are strictly forbidden to eat and drink in public spaces) people can eat and drink (see photo no. 20).

In Nghsh-e-Jahan Square carts and bicycle are other entertainments for visitors. Photos no. 59 and 61 demonstrate that these entertainments seem to attract people of all ages. One of the interviewees (TF2) even drew the carts on her map that may show how they are an important part of her drawing; also she commented that her son loves them.

As mentioned before, in Iran there are a few limitations in relationship between men and women in public spaces (because of Islam) but some potential for recreational activities can be seen in Naghsh-e-Jahan Square. Being in family or same gender groups may facilitate collective and recreational activities (see photos no. 33 and 35). Although even mixed gender groups can be seen in urban public spaces, people especially the youth know how to manage these kinds of interactions and at least they should be expected to receive some notifications by governmental officials.

As mentioned in the first part of this section, relaxation can put body and mind at ease (Carmona and Tiesdell, 2007, p.231). In Naghsh-e-Jahan Square there are plenty of spaces to sit and rest from which the most of square is observable (see photo no. 49). The places for sitting are of different kinds. For instance, people can sit and settle on their rugs on the floor which is common in Iranian culture (see photo no. 58). It helps visitors to feel more relaxed.

As a result it can be seen from interviews and walking strategies analysis people are using Naghsh-e-Jahan Square for these activities.

7.1.4   Catching Public Transportation and Taxis

7.1.4.1   Definition

Catching public transportation, bus and subway, is the other kind of use of some popular public urban spaces. As most of popular public urban spaces have access to public transportation and commonly include some stations, in Iran finding stations for public transportation especially bus and subway is an issue that may draw people to some particular places. Although catching taxis is not very difficult in every public space there are still needs for some taxi ranks. As Naghsh-e-Jahan Square is a central urban public space in Isfahan city we can expect that it is one of the points for catching public and private transportation as this point of the city has very good access to other parts of the city.

7.1.4.2   Interview Findings

Figure 8 shows the fixed responses of the interviewees to question no.8 (Q8: How often do you use the square for Catching Public Transportation and Taxi?).

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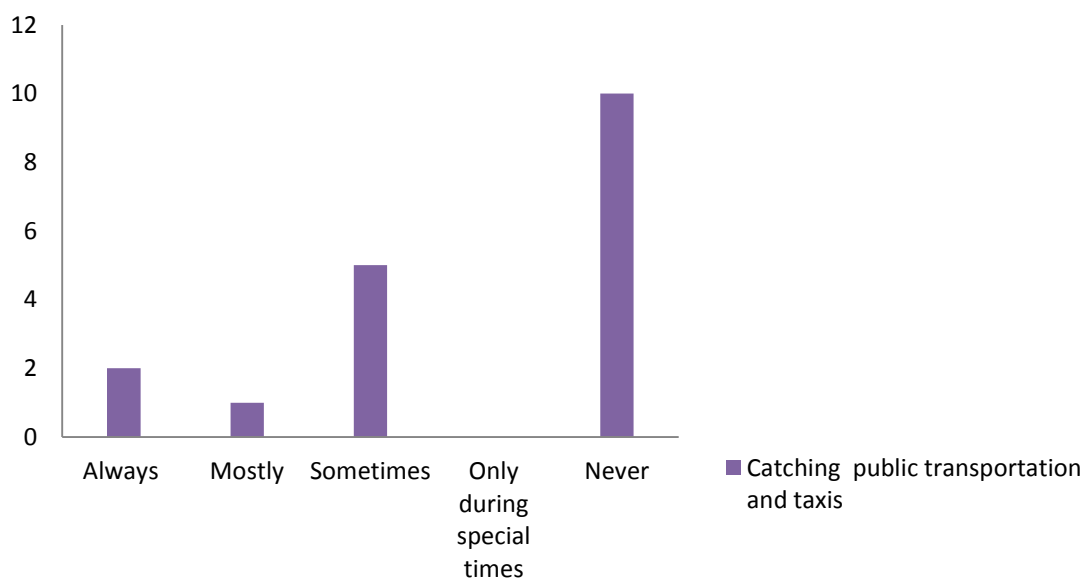
The main result to emerge from the Q8 is that the majority of the interviewees (55.5%) "Never" used Naghsh-e-Jahan Square to catch the public transportation and taxi while only (11%) of the interviewees "Always" used the square for catching public transportation and taxis.

The interesting point is that the individuals (SF3 and SM2) who responded "Always" to this question are the shopkeepers who have to come to this square daily. They find it easy to catch these kinds of transportation.

As one of the female shopkeepers (SF3) stated:

"Always, this square is good to access everywhere." (SF3, Q8)

A male shopkeeper mentioned that:

"Always, I can go everywhere from here by public transportation." (SM2, Q8)

Another interviewed female shopkeeper who responded "Sometimes" admitted that:

"Sometimes, there are good services for public transportation in this square." (SF2, Q8)

As can be seen from the next comments, even tourists who used the square for this reason "Sometimes" consider Naghsh-e-Jahan Square as a good point to access to other parts of city by public transportation and taxi:

"Sometimes, it is a good place to catch a taxi; it is the centre of the city and has access to the entire city." (TF3, Q8)

"Sometimes, if we have time we will take a taxi from the square rather than the Hotel it will be cheaper." (TM1, Q8)

On the other hand, all interviewed Isfahan city residents "Never" used Naghsh-e-Jahan Square to catch public transportation and taxis and they gave the reason that they use their own cars. They made the following comments:

"Never, I am always using my own car."(RM1, Q8)

"Never, we use our car." (RM2, Q8)

Overall, these findings suggest that Naghsh-e-Jahan Square can be a good point to catch public transportation and taxis in Isfahan city. Although the majority of the interviewees (55.5%) and also all the interviewed resident do not use this square for this reason, Naghsh-e-Jahan Square has the potential to be one of the accessible centres of the city.

7.1.4.3 Walking Strategy Findings

This section reports findings in relation to "Catching Public Transportation and Taxis" obtained through the walking strategies approach. The researcher reported what she saw while walking. From the data gathered through walks only one image was coded against the "Catching the Public Transportation and Taxi" node. Figure 9 shows the image related to this node and the researcher's explanation during the use of walking strategies approach.

The photo shows a woman trying to hire a private car as a taxi. It is common in Iran for some private cars to work as taxis (mostly illegal).

"a women tries to catch a private car as a taxi "

Photo no 61; (see Walking across section 0)

Figure 9: Photo taken while walking with coded elements in "Catching Public Transportation and Taxis" node

Overall, it can be seen from the walking strategies result that there are not many people who use Naghsh-e-Jahan Square for catching public transportation and taxis, but it may be possible in the streets around the square.

7.1.4.4 Summary of Findings about Catching Public Transportation and Taxi

It is apparent from the results that most of the people do not use the square itself as place to catch public transportation and taxis, although they admitted Naghsh-e-Jahan Square is a good point for these kinds of uses. On the other hand, the only street which crosses the square is not supposed to be a place for public transportation and taxi. But as this square is located in one of the central points of the city where people can connect to the rest of the city, the streets which lead to the square may have good potential for transport stations.

7.1.5   Using the Square as a Passing Space

7.1.5.1 Definition

Using the square as passing space is one of the different kinds of use which is very common in most urban public spaces. Particularly the people who live in residential areas around public urban spaces sometimes have to pass the urban public space to reach other places. This may happen for residents who live around Naghsh-e-Jahan Square as well. On the other hand, a successful public space can be a space that people stay in and choose as a destination.

7.1.5.2 Interview Findings

Figure 10 shows interviewees' fixed responses to question no.9 (Q9: How often do you use the Square as a through fare?).
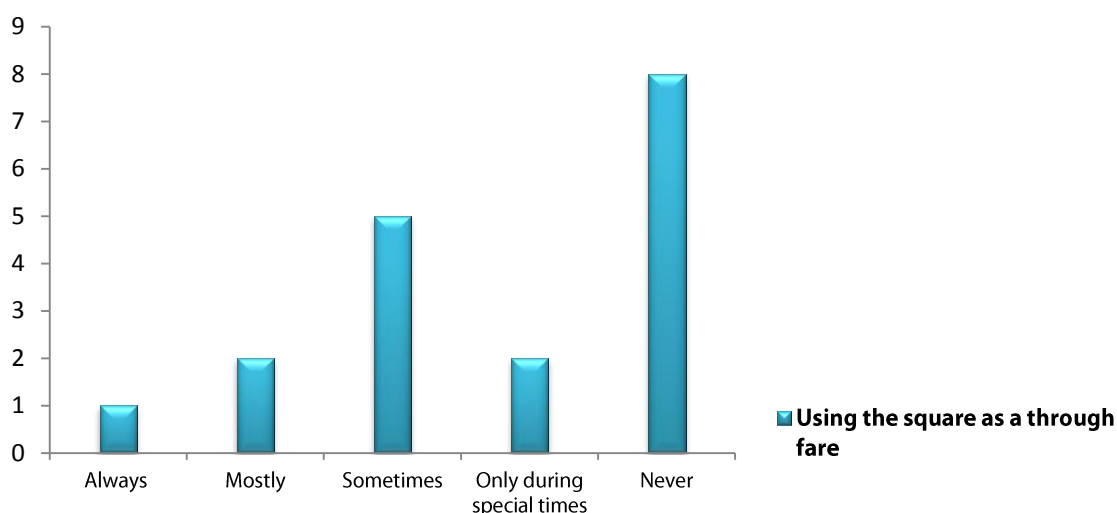
Figure 10: The results of Q9 in interview

Over half of the interviewees (55.5%) have experienced Naghsh-e-Jahan Square as a through fare, although one of them "Always" uses the square for this reason. Naghsh-e-Jahan Square is located in the centre of Isfahan city and may be used as a passing space to reach other important buildings of the city; as the following comments indicate:

"Only during the special times, whenever I am going to Shekar Shekan Cross Road, I have to pass this square and I really enjoy it." (SF2, Q9)

"Mostly, to go to the Art College I always pass this square." (TF3, Q9)

"Only during special time, to go other historic places, we should pass the square and it is enjoyable." (TM1, Q9)

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It can be find out from the comments that two of the interviewees (SF2 and TM1) do not just pass through the square but also enjoy passing this place.

On the other hand, the rest of interviewees (44.5%) considered they have "Never" used the square as passing space. This may show that Naghsh-e-Jahan Square has more potential to be destination space.

7.1.5.3 Walking Strategy Findings

The researcher could not find any related issue about this node while applying walking strategies. As a result for this node only the findings of interviews have been taken into account.

7.1.5.4 Summary of Findings about Using the Square as Passing Space

It is better that the urban public spaces are chosen as a destination rather than being just a through fare. As there are a lot of civic buildings and the bazaar around this square, people going to the other points in the city may use Naghsh-e-Jahan Square as a passing space. Although, more than half the interviewees experienced the space as a passing space, they enjoyed passing the square and that means they did not just use Naghsh-e-Jahn Square as a through fare, they also enjoyed it as a destination (refer to the comments by SF2 and TM1).

7.1.6 Meeting friends and Undertaking Collective Recreations

7.1.6.1 Definition

Urban public spaces allow people to meet in planned and unplanned ways, to communicate with others and people of different sex, ages and abilities can be in the same place at the same time, allowing people to evaluate the characteristics of urban public space and their own relationship with it (Holland et al., 2007, p. ix).

When people see, meet and greet their friends and feel comfortable interacting with other people, they feel a stronger sense of place or attachment to the place that fosters these types of social interactions (Project for Public Spaces, 2000, p. 19) .

These interactions include relationships such as: family shopping, cultural groupings, local social connections (for instance, unplanned or planned meetings with friends and work colleagues) and groups meeting through common interest for example, walking groups)(Holland et al., 2007, p. ix). As mentioned in previous sections, there are some limitations for young women and men to meet in public spaces but people know how to manage their meetings and relationships.

7.1.6.2 Interview Findings

Question no. 10 (Q7: How often do you use the square for Meeting Friends and Undertaking Collective Recreation?) was asked of the interviewees. Figure 11 illustrates the fixed responses that interviewees gave.

Responses to Q10 in the interview confirm that half of interviewees (50%) do engage in some form of "Meeting Friends and Undertaking Collective Recreations" in Naghsh-e-Jahan Square, while 50% of the interviewees "Never" used the square for this activity.
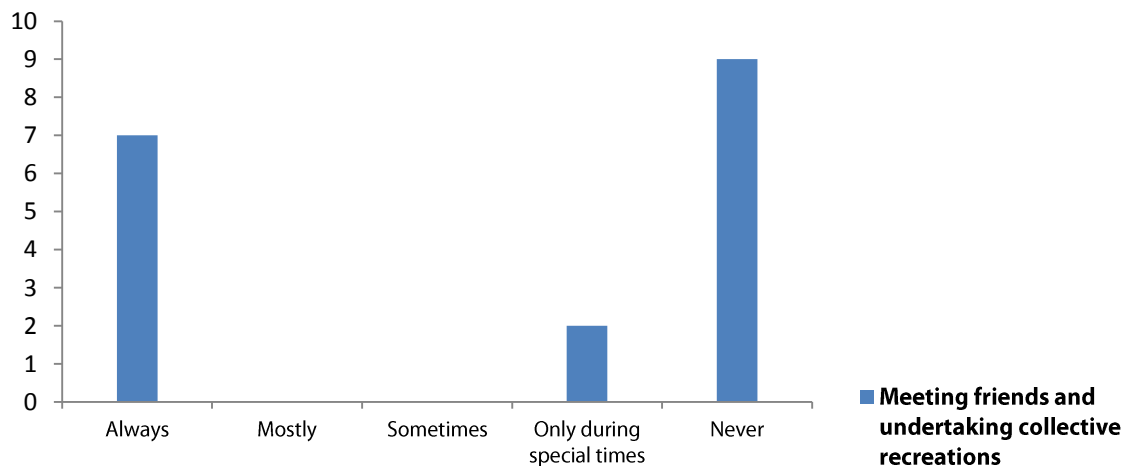
Figure 11: The results of Q10 in interview

An interesting point that emerges from the responses to this question is that more than 83% of the interviewed residents "Never" use this square for "Meeting Friends and Undertaking Collective Recreations". They stated that they use other places instead.

An interviewed female resident (RF2) preferred cafes to meet her friends:

"Never, we commonly go to some special cafes." (RF2, Q10)

Another interviewed female resident (RF3) mentioned that she meets her friends in parties:

Never, we go to each other houses and organise some parties (RF3, Q10)

Also, a male resident interviewee (RM3) who is the only one to reply "Only during special times" stated that he does not enjoy the place that much:

Only during special times, in the past I went to the square a lot but now I do not enjoy it that much (RM3, Q10)

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However, half of the interviewed shopkeepers come to the square to meet their friends and enjoy collective recreation. This shows that they are more interested than the interviewed residents.

In contrast, it can be seen from the interviews that more than 66% of the tourists "Always" used Naghsh-e-Jahan Square to meet their friends and undertake collective recreation, although they are strangers in the city and finding their friends may be difficult for them. As can be found out from the comments of two interviewed female tourists (TF1 and TF2):

"Always, if we could arrange with our friends". (TF1, Q10)

"Always, we do if we could arrange with our friends." (TF2, Q10)

In addition, two of interviewed tourists (TF3 and TM2) who responded "Always" explained that they usually try to come to Isfahan city with their friends or fellow travellers. They know Naghsh-e-Jahan Square as a place to meet their friends and undertake collective recreation with them.

"Always, I usually manage to come to Isfahan with my friends and the best point to meet is Naghsh-e-Jahan Square, every night during our trip we try to come here."(TF3, Q10)

"Always, because we have often fellow traveller." (TM2, Q10)

The only interviewed tourist (TM3) who replied "Never" explained that he has no reason as he does not havefriends in Isfahan city.

"Never, I do not have any friends in this city."(TM3, Q10)

7.1.6.3 Walking Strategy Findings

No any evidence for meeting friends and undertaking collective recreation was collected during walking strategies because the researcher did not talk with people during walking strategies to find out more about this part of the study. So the findings of this node come from the interviews results.

7.1.6.4 Summary of Findings about Meeting Friends and Undertaking Collective Recreation

Meeting friends and undertaking collective recreation is one of the activities that were expected to be taken place in Naghsh-e-Jahan Square because of its having some facilities, being in accessible location in Isfahan city and being well-known by people.

The results of the interviews show that half of the interviewees have chosen Naghsh-e-Jahan Square for "Meeting Friends and Undertaking Collective Recreation". Surprisingly, the interviewed

residents were not interested in using the square for these activities. This may reveal that people prefer other spaces such as their house and cafes to meet their friends. But on the other hand Naghsh-e-Jahan Square is the choice of interviewed tourists for these activities which can show that the place still attracts tourists for these kinds of activities.

7.1.7 Business and Official Work

7.1.7.1 Definition

One of the activities that draw some people to urban public spaces is business and official work. Traditional Iranian squares are mostly a part of a bazaar and the bazaar is one of the main economic centres of Iranian cities, so there are several different varieties of business opportunities in Naghsh-e-Jahan Square. Jobs in the square include: crafts people, governmental employees and shopkeepers (retailers) and the craftsmen might be retailers as well.

Employment in the Square:

Crafts people: the people who make heritage crafts which originally belong to Isfahan city. These crafts, such as Minakari, Monabatkari, Ghalamzani crafts, Miniature paintings and Ghalamkar textiles, are produced and traded in the square every day.

Some samples of these handcrafts have been identified:

Ghalamzani is carving some patterns on metals such as silver, copper and gold.

Miniature painting; in the Isfahan Style of Miniature painting the human figure is more common
It may be painted on walls or paper

Khatam kari; art forms made by decorating the surface of wooden articles with delicate pieces of wood, metal and woods of different colour in precisely cut geometrical shapes. These works include doors and windows, mirror frames, Quran boxes, inlaid boxes, pen and penholders, lanterns and inlaid ornamented shrines

These traditional jobs are thriving in this square as old fashioned handcrafts are still popular and expensive in Iran. These kinds of heritage crafts might be found in every Iranian modern house as status symbols. They are always in great demand.

Governmental employees: There are a few different governmental and official jobs in this square as well. For example the people who work in the Imam, Sheikh Lotfollah Mosques and Ali Qapu Palace museums; also, individuals who work as police officers and other governmental and official works belong to this group.

Furthermore, bicycle and carriage tour are the other entertainments that are common in this square. The customers are adult and children and mostly the tourists.

Shopkeepers (retailers): Shopkeepers and retailers are one of the main groups of people who work in the square. As this square is surrounded by shops and also bazaar corridors which are full of shops consequently this group (shopkeepers and retailers) is the most popular job in the square. Moreover the shops are one of the main points that draw people to the square and many people use the square for shopping (refer to section 7.1.1).

7.1.7.2 Interview Findings

Question no. 11 (How often do you use the square for business and official work?) explored the economic aspect of the square. As mentioned in section0 six of the interviewees are people who work as shopkeepers in Naghsh-e-Jahan Square. Because they use Naghsh-e-Jahan Square as their work place so, they will definitely respond "Always". Consequently the researcher did not consider the interviewed shopkeepers' responses. For this question only two groups (interviewed Residents and Tourists) have been taken into account.

Figure 12 shows that 91.5% of the interviewees "Never" come to Naghsh-e-Jahan Square for business and official work.

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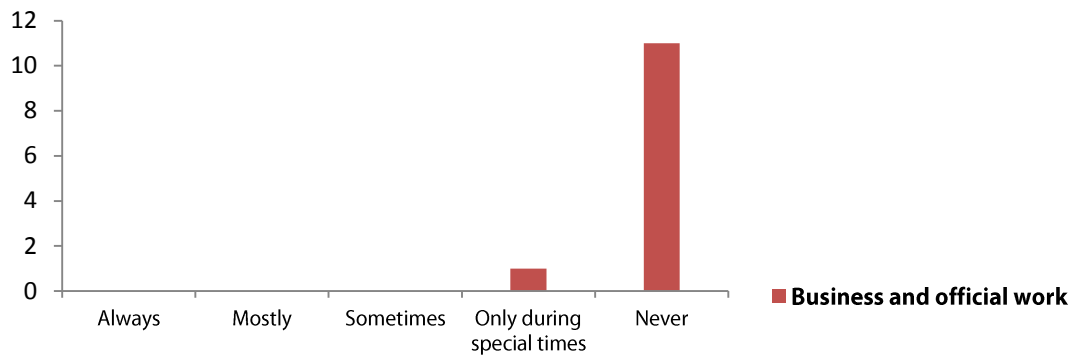
Figure 12: The results of Q11 in interview

The only Interviewee who is a male resident of Isfahan city (RM3) stated that:

"Only during special times, in the past the square was a good place to trade we arranged our appointments there and, in addition to making money, it was fun." (RM3, Q11)

This statement may refer to the problematic economic condition of Iran, where people are suffering from international sanctions.

7.1.7.3 Walking Strategy Findings

This section reports relevant findings about "Business and Official Work" found while applying walking strategies. From the data gathered through walks 6 images were coded against "Business and Official Work" node by the support of Nvivo 9. Figure 13 shows related images to this node and researcher's explanation during the walking strategies.

"There is a small window in the wooden door at the left side of the mosque that is used to sell tickets to visitors of the mosque"

Photo no 13; (see Walking a long Bazaar corridor section0)

"to make traditional dishes and hand crafts"

Photo no 22; (see Walking a long Bazaar corridor section0)

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"We see the Bicycle Station kiosk, children and teenagers renting bikes"

Photo no 47; (see Walking across section 0)

"as the weather is going to be cool carts, horses and coaches are getting ready to work"

Photo no 57; (see Walking across section 0)

"On right side is the Police Station which makes the square more secure"

Photo no 58; (see Walking across section 0)

"On the left side the Municipality Kiosk run by Town Hall for the Bazaar area"

Photo no 58; (see Walking across section 0)

Figure 13: Photos taken while walking with coded elements in "Business and Official Work" node

The results emerging from the walking strategy data is that there are several business and official works in Naghsh-e-Jahan Square which employ many people. Shopkeepers are not usually only retailers, most of them are crafts people who produce heritage crafts (see photo no. 22).

The other jobs and businesses in the square are related to recreational activities such as rental bicycles (see photo no.47) and cart riding (see photo no.57). Also there are some official job belonging to the government such as people who sell the tickets for three historic buildings; Ali Qapu Palace, Imam and Sheikh Lotfollah Mosques (see photo no.13), police officers working in Police Station of Naghsh-e-Jahan Square (see photo no.58) and the clerks working in Municipality Kiosk (see photo no. 58).

Because these businesses have engaged some people in the square, so to some extent this square created job opportunities for people. As a result it may help the square to be more useful for Isfahan city to thrive more economically.

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7.1.7.4 Summary of Findings about Business and Official Work

Although the interviewees do not use Naghsh-e-Jahan Square for business and official work, the square can be still considered as an economic centre in Isfahan city. In the past Isfahanian people used Naghsh-e-Jahan Square to trade and make money but these days they do not come to the square for this reason apart from the shopkeepers in the Bazaar.

This cannot be considered as a weakness of this square as life styles have changed and on the other hand this place is working as a main historic place in Isfahan city. Consequently, the majority of people who come to Naghsh-e-Jahan Square to visit can be considered as consumers who are not making money from this place. However Naghsh-e-Jahn Square is working as a job creating place that can give opportunities for finding jobs in Isfahan city.

7.1.8   Participating in Political Events

7.1.8.1   Definition

Politicians' speeches and popular protests held in the square are considered as political events. Naghsh-e-Jahan Square is always the main point for political gatherings in Isfahan city. All the Iranian politicians arrange their speeches in Naghsh-e-Jahan Square. Also in 2009 the centre of popular protests against the election result was Naghsh-e-Jahan Square (Figures 14 and 15).

Figure 14: Political protest, Source: (Yari, 2009)   Figure 15: Political protest, Source: (Yari, 2009)

These two photos show one of the political events in which people are protesting against the government in Naghsh-e-Jahan Square, in 2009.

7.1.8.2   Interview Findings

Question no.12 (Q12: How often do you use the square for Participating in Political Events?) was asked of the interviewees. Also, the researcher made the question clear and referred to two kinds of events: Political Speeches and Political Protests. Although the researcher asked the question to

the interviewees anonymously and tried to obtain their trust, this question is controversial in Iran and the Figures 14 and 15 which are related to four years ago are in contrast to the interviewees' responses. As can be seen from the Figure 16 about 89% responded that they "Never" participated in these kinds of events. Only about 11% of them "Sometimes" participated in political events.
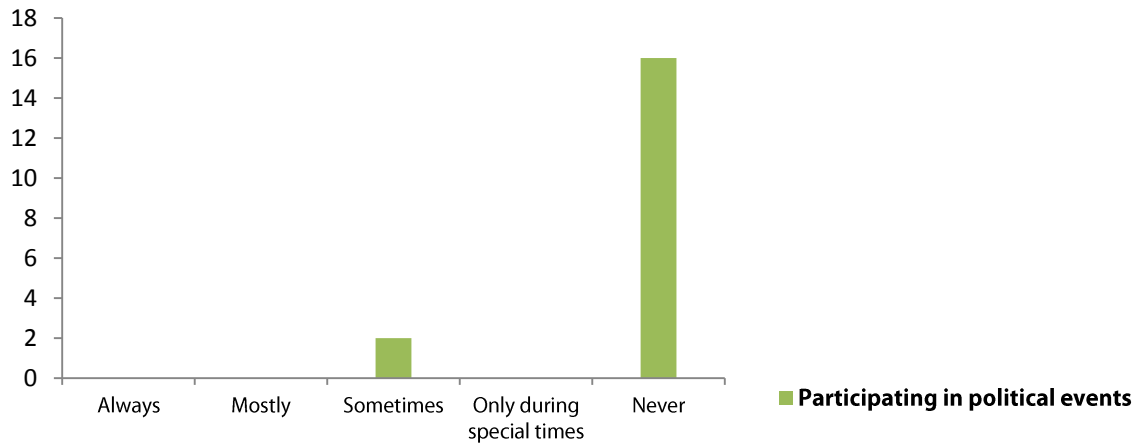
Two interviewees (TF2 and TF3) expressed their comments about participating in political events very cautiously. One interviewed female tourist (TF2) who gave a comment did not mention about protest events at all.

"Sometimes, but you know these kinds of events are occasional and it must be difficult for tourist to catch one of them." (TF2, Q12)

Another interviewed female tourist (TF3) mentioned Politicians' speech in her comment directly without talking about protests in Naghsh-e-Jahan Square.

"Sometimes, this square is a place for all Politicians to come for their speech, if my stay coincides with some of these occasions, I will attend." (TF3, Q12)

7.1.8.3 Walking StrategyFindings

During the days that the walking strategy was completed no political events happened in Nghsh-e-Jahan Square. Consequently the researcher could not take any photos herself to show as evidence. Thus, the discussions about this node are on the basis of interview findings.

7.1.8.4 Summary of Findings about Participating in Political Events

Naghsh-e-Jahan Square has hosted several governmental affairs over the centuries (see section6.2.5 and this continues until the present. As it can be seen from Figures 14 and 15 this

place has been a gathering centre for people to protest or even to visit Politicians. Although after the political events of 2009 people are more cautious about their protest, Naghsh-e-Jahan Square can still be considered as the centre of these kinds of events. On the other hand, the Politicians still choose Naghsh-e-Jahan Square as a place for their speeches. In addition to having enough open space for people as a town square, being inclusive can also help Naghsh-e-Jahan Square to be a proper choice for these kinds of events.

7.1.9   Participating in Religious Manifestations

7.1.9.1   Definition

Religious manifestations are events that happen in every Iranian city annually. These occasions occur during special Islamic months of the year. Some of them are religious festivals and celebrations and some are mourning ceremonies. Both types of occasions take place in Naghs-e-Jahan Square.

Religious Manifestations always happen at two different scales. **Firstly**, in Iranian cities in every Mohalla (district) has its Board of Mourning which is a group of people who attend Mourning Board voluntarily (without any salary and just as an offering to Allah). Every board of Mohalla runs its ceremonies in the local mosque or Tekieh (a Tekieh is a small mosque that opens in every ceremony). Sometimes there are even competitions among different district of a city to run these kinds of ceremonies better.

Secondly, the city Mourning Board is a big board and is usually composed of bazaarin of the city and the main location of this group is the bazaar of the city and town square. The Mourning Board of every Mohalla usually moves from the Mohalla to the Bazaar which is mostly located in the centre of every city.

Figure 17 shows the time table of religious events during the year of 2013. As every Persian and public calendar has 10 days more than the Islamic calendar, so these events will move back 10 days every year.

2013

| January | February | March | April | May | June | July | August | September | October | November | December |

12 Day, 2 January, 30 Safar
The death of Reza the eighth Imam of Shiaa, who was killed in Mashhad one of Iranian Cities.

29 Day, 19 January, 17 Rabi al-Awwal
The birthday of Mohammad prophet is one of the main celberation of Muslims.

25 Farvardin,14 April, 3 Jumada al-Thani
The death of Fatemeh the daughter of the muslim prophet.

11 Ordibehesht,1 May, 20 Jumada al-Thani
The Birthday of Fatemeh the daughter of the muslim prophet.

3 Khordad, 24 May,13 Rajab
The Birthday of Imam Ali the first Imam of Shiaa

17 Khordad,7 June, 27 Rajab
Mabaas the eid, Mohammad first revelation is one of the biggest Eid for Muslims.

3 Tir, 24 June,15 Shaaban
The Birthady of Imam Mahdi the final Imam of Shiaa

8 Mordad, 31 July, 21 Ramadan
The death of Imam Ali, the first Imam of Shiaa

18 Mordad, 9 August,1 Shawwal
Eid al-Fitr that marks the end of Ramadan Month

24 Mehr,16 October, 10 Dhu al-Hijjah
Eid-e- Qurban clebrate is celeberated by Muslim to honour the willingness of the prophet Ibrahim

2 Aban, 24 October,10 Dhu al-Hijjah
Eid of the pond of Khumm, is the day that Shiaa beleives Mohammad the prophet appointed Imam Ali as his heir and successor

22 & 23 Aban,13 & 14 November,9 & 10 Muharram
Tasua and Ashoora, The death of third Imam of Shiaa Hossein who had a fight for Islam in Shiaa beliefs

2 Day, 23 December, 20 Safar
Arbaeen is Shiaa observance that occure 40 day after Ashoura

10 Day, 31 December, 28 Safar
The death of Mohammad the prophet of Islam

Persian Calendar

Public Calendar

Islamic Calendar

Celebration Events

Mourning Events

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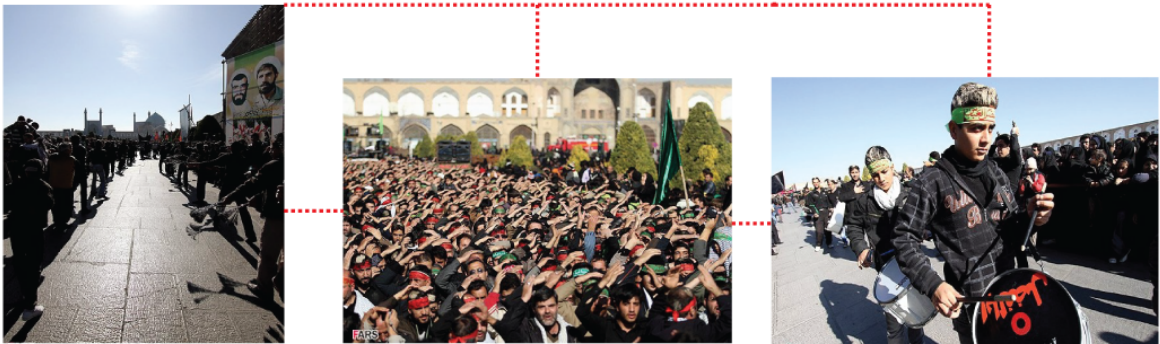
Figure 17: The time of religious events during the year of 2013. The source of attached photos is (Niko maram, 2012).

7.1.9.2 Interview Findings

The researcher asked Question no.13 (Q13, How often do you use the square for Religious Manifestations?) of the interviewees. The following conclusions can be drawn from this stage of the study (see Figure 18).

As shown in Figure 18 the majority of interviewees (66.6%) do not engage in any form of Religious Manifestations in Naghsh-e-Jahan Square at all, while less than 28% of them "Always" use Nagsh-e-Jahan Square for this purpose.
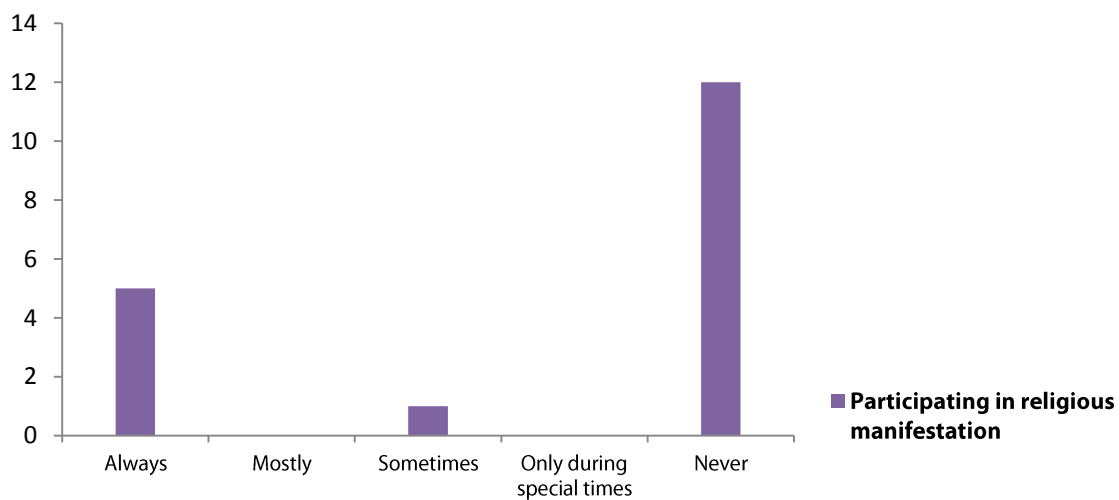
Figure18: The results of Q13 in interview

Surprisingly, the most striking result to emerge from the data is that the majority of interviewed shopkeepers (more than 83%) "Never" use Naghsh-e-Jahan Square for Religious Manifestations that are held there annually. However, shopkeepers as bazaarian should be the majority of people who attend and run these kinds of ceremonies in Naghsh-e-Jahan Square. They gave some reasons in their comments:

A male interviewed shopkeeper (SM1) who "Never" participates in the religious manifestations that take place in Naghsh-e-Jahan Square explained that:

"Never, there are a lot of religious events here but I have never attended them. Most of the participants are soldiers forced to come." (SM1, Q13)

Another interviewed male shopkeeper (SM2) stated that:

"Never, I prefer to go in religious group that exists in our district." (SM2, Q13)

The only interviewed male shopkeeper (SM3) who "Always" participates in Religious Manifestations in Naghsh-e-Jahan Square mentioned that:

"Always, for Friday prayers in Imam Mosque and other formal ceremonies in religious aspects." (SM3, Q13)

One of the interviewed female residents (RF3) prefers their local Tekieh to participate:

"Never, in the past I came here but know I prefer the Tekieh in our district which is really good place for religious ceremonies." (RF3, Q13)

About interviewed tourists one of them (TM1) raised a new point that as a tourist she prefers to visit the square itself rather than the religious manifestations:

"Never, it must be so busy and we come to the square to visit the square itself and during the busy time it is not possible."(TM1, Q13)

The other two interviewed tourists (TF2 and TF1) stated that they will or may attend if there is any kind of religious manifestations during their settlement in Isfahan city:

"Always, I will go for every religious ceremony but again if there is." (TF2, Q13)

"Sometimes, if there is a religious ceremony that time I will attend." (TF1, Q13)

7.1.9.3 Walking Strategy Findings

During the days that the walking strategies are completed by the researcher no religious events took place in Naghsh-e-Jahan Square. As a result this part of the study does not include any images taken by the researcher and consequently the discussions about this node are on the basis of interview findings alone.

7.1.9.4 Summary of Findings about Participating in Religious Manifestations

As most public urban spaces, especially town squares, have always been the places for religious manifestations, so Naghsh-e-Jahan is one of the main places in Isfahan city to host these kinds of activities. Although the interviews show that nowadays people are not as interested in participating in religious manifestations as the past, there is evidence that Naghsh-e-Jahan Square is still one of the main centres for religious manifestations. In Iran there are many people who may not be so religious but they really believe in running and participating religious manifestations but the problem is that sometimes local places can host people for religious manifestations better than the main public urban spaces. On the other hand, Naghsh-e-Jahan Square has very good potential to improve these kinds of activities and maybe the shopkeepers (bazaarian) need to

strengthen their communities to encourage running and participating in religious manifestation more.

7.1.10 Participating in Cultural Activities

7.1.10.1 Definition

Cultural activities create a sense of shared history and opportunities to meet other residents (Woodcraft et al., 2011, p. 26). Activities such as handcraft exhibitions, street theatre, Norooz celebration (Iranian New Year, the first day of spring when people commonly celebrate for two weeks), or even some religious ceremonies can sometimes be considered as cultural activities in Iranian culture. These kinds of activities operate in urban open public spaces.

As there are usually some cultural activities in Iranian public urban spaces, question no.14 referred to participating in cultural activities. In Naghsh-e-Jahn Square the only cultural activity which takes place, apart from the religious ones, is handicraft exhibitions, and because the square itself includes handcrafts shops this may be considered as a permanent exhibition. On the other hand, Naghsh-e-Jahan Square is a historic place and the government tries to look after it; consequently, this may be the reason for not encouraging any more Iranian cultural activities in Naghsh-e-Jahan Square.

7.1.10.2 Interview Findings

Figure 19 shows interviewees' fixed responses to question no.14 (Q14: How often do you use the square to participate cultural activities?).

It can be seen from Figure 19 that 66.6% of the interviewees do engage in "Participating in Cultural Activities" in Naghsh-e-Jahan Square, while more than 27% of the interviewees "Never" used the square for this activity.
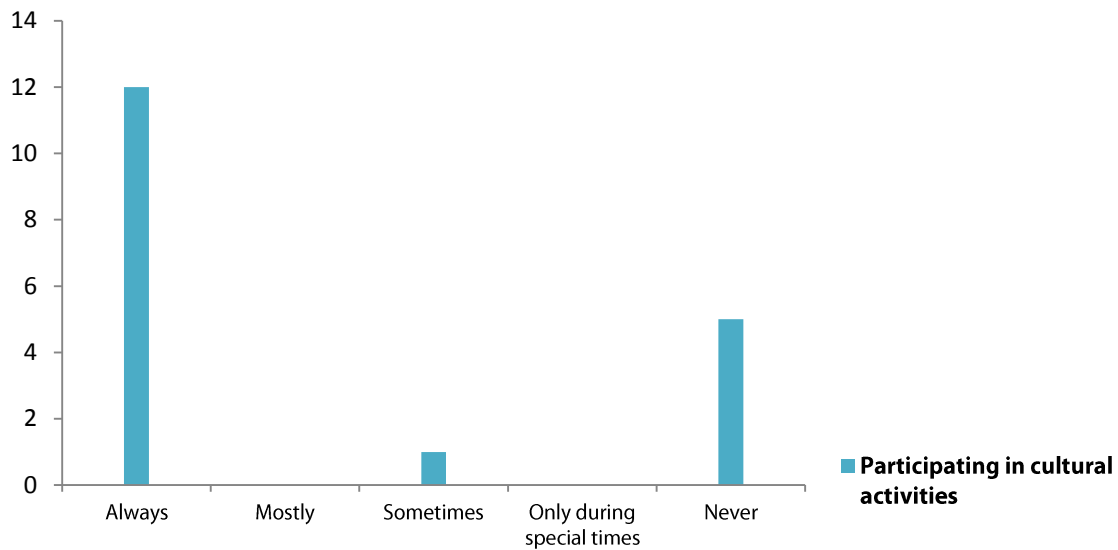
Figure 19: The results of Q14 in interview

The interviewed shopkeepers who come to the square daily stated that they "Always" participate in cultural activities. An interviewed female shopkeeper (SF1) mentioned that:

"Always, if you can consider some handcrafts exhibition as cultural activities, I do." (SF1, Q14)

The other interviewed male shopkeeper (SM1) considered the town square itself as a cultural exhibition:

"Always, this square itself is a historical and cultural exhibition." (SM1, Q14)

Interviewed residents are the group who mostly "Never" participated in cultural activities. The interviewed male resident explained that:

"Never, it never happened for me, but if I have an opportunity I will attend." (RM1, Q14)

The interviewed tourists mostly liked to participate in cultural activities in Naghsh-e-Jahan Square but they complained that finding these kinds of activities is difficult and that they are rare. As a female tourist (TF1) indicated that:

"Always, I really love to go but they are not frequent." (TF1, Q14)

The other male tourist (TM2) cited that:

"Always, we are so lucky if we can find them."(TM2, Q14)

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The only interviewed male tourist (TM3) who responded "Never" put the following comment that:

"Never, I am not aware of them." (TM3, Q14)

Overall, the interviewees liked to participate in cultural activities in Naghsh-e-Jahan Square but the main problems were that these kinds of activities are not very common there and maybe they are not aware of them.

7.1.10.3 Walking Strategy Findings

The researcher could not find any cultural activities to participate in during the days that she was applying walking strategies. As there is no evidence collected by the researcher, the analysis about this node is on the base of interviews findings and results.

7.1.10.4 Summary of Findings about Participating in Cultural Activities

The other activities that were expected to occur in Naghsh-e-Jahan Square are cultural activities. It can be seen from the interviews that people are mostly interested in participating in cultural activities. But most of them complain about a lack of these kinds of activities; however Naghsh-e-Jahan Square as a historic centre can be a proper place to introduce and accommodate people for cultural activities. Although on the basis of interviews this place itself is an appropriate space to show Iranian culture, Naghsh-e-Jahan Square can be used and helped to improve the quality and quantity of Iranian cultural events and activity.

The only cultural event and activity that interviewees refered to was handcraft exhibitions. This shows that there is no other cultural activity that these people, even the interviewed shopkeepers, are aware of. Another problem that is that necessary to consider is that the interviewed residents are not aware of cultural activities that may show the need for information boards for Naghsh-e-Jahan Square.

7.1.11 Children's Activities and Events

7.1.11.1 Definition

Children need opportunities to understand themselves as individuals and in relation to peers and their community. Furthermore, they are striving for independence and struggling with rejection or acceptance of culture and traditional aspects around them (Casey, 2007, p. 3). Children's actions in public urban spaces can be divided into two categories **formal** and **informal**. **The formal** one is related to children's activities that are run by government and the communities including

children's arts exhibitions, theatres, fairs, any recreational activities and group play which can draw children into public urban spaces. These activities sometimes need some mobile facilities.

The informal category in this study involves playing which can be organised by children or their parents themselves. This kind of action "child play" is mostly physical. Children's play is one of their most fundamental ways of participating in community life and environments (Casey, 2007, p. 7).

As children's actions draw children into public urban spaces thus according to (Silverman et al., 2005, p. 12)

> "...most mixing across social groups takes place between children. It is these contacts – in nurseries, playgroups, schools and in public spaces – that provide opportunities for adults to meet and form relationships. Children provide a common ground and shared interest between people in different tenures."

Children actions can be considered as one of the main factors to improve social sustainability in public urban spaces.

7.1.11.2 Interview Findings

The question no.15 (Q15: How often do you use the square for "Children Activities and Events"?) was asked of the interviewees. Figure 20 illustrates the fixed responses that interviewees gave.
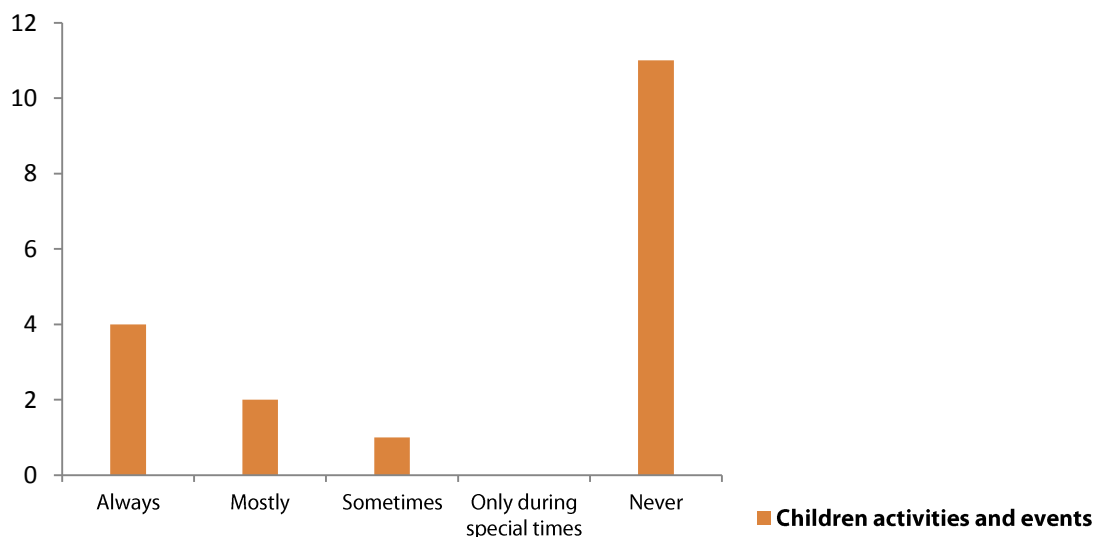
Figure 20: The results of Q15 in interview

More than 61% of the interviewees "Never" used Naghsh-e-Jahan for some kinds of children's activities and about 22% "Always" used the square for these activities.

Unexpectedly, more than 83% of the interviewed shopkeepers "Never" used Naghsh-e-Jahan Square for children's activities and events. Also more than 66% of the interviewed residents "Never" used Naghsh-e-Jahan Square for children's activities and events. The only interviewed male resident (RM2) who responded "Always" stated that:

"Always, I always take my family to the square. It is a good place to observe." (RM2)

Surprisingly, the interviewed tourists were the most interested group in attending some kind of children's activities and events. An interviewed female tourist (TF3) cited that:

"Always I bring my children here although there is not any particular entertainment for them at least they can see the history of the country." (TF3)

7.1.11.3 Walking Strategy Findings

During the days that the walking strategies were applied there were no children's activities and events in Naghsh-e-Jahan Square. This section does not comprise any images and the relevant results about this node are based on interview analysis.

7.1.11.4 Summary of Findings about Some Kinds of Children Activities and Events

Children's activities and events should usually be common in every public space to draw children and their families there. Naghsh-e-Jahan Square is one of the main public urban spaces in Isfahan city and therefore should host children for these kinds of activities and events.

It can be seen from the interview results that people are not very interested in using the space for children's activities and events as the interviewees mostly responded that they "Never" used Naghsh-e-Jahan Square for these purposes, although as one of the interviewees (TF3) mentioned Naghsh-e-Jahan Square can be a proper place at least to show the history, culture and architecture of Iran. It may be boring for children to learn about the history of Naghsh-e-Jahan Square without having entertainments and fun.

Parents themselves can use Naghsh-e-Jahan Square for their children's activities but it may be complicated to run children's events without governmental support. It can be predicted that people will not use the square for children's activities and events while there are no organised children's events in the square.

7.2 Facilities

The planning, design and maintenance of public facilities for workable public urban spaces is fundamental to regeneration and making shared places accessible to everybody (Holland et al., 2007, p. 52). There are specific reasons to draw people to every urban public space and also there are some reasons to encourage people to stop there. Furthermore, a big pause may provide a new resource for using again(Carmona and Tiesdell, 2007b, p. 230). Existence of facilities in town squares can pull people there.

In this study the following characteristics are considered as the main facilities; there is also an empty space for other facilities which the researcher may add during the research. These facilities are: walkability; sit-ability; sun and shelters; children's activities; children playing; trees and greenery; paddling pool; attractiveness; cafes and restaurants; basic needs of disabled, elderly or children with proper access; safe and efficient for pedestrian and public transport users; efficient communities to join for different age group; occasions for families to come together and other facilities.

7.2.1 Walkability

7.2.1.1 Definition

Walking is the most essential form of mobility and it is also inexpensive and offers many health benefits. The liveability (see section 2.3.4) of a city is closely related to people being out and about on foot for different purposes such as access to urban services and other activities in urban spaces that are called "sojourning" (OCED, 2011, p. 7).

In this research walking does not mean a functional act of getting to a destination on foot but it is the journey that matters (Crain, 2012), the journey through, where people can see and be seen. Walking and "sojourning" in urban public spaces are the activities that improve liveability and sustainability of cities by connecting people (OCED, 2011, p. 7); furthermore, in a space like Naghsh-e-Jahan Square which is surrounded by shops walking can bring economic benefits to retailers and crafts people. On the other hand, the factors such as characteristics of the routes can influence use of public urban spaces for walking (Koohsari et al., 2013, p. 1).

7.2.1.2 Interview Findings

Figure 21 shows the fixed responses of the interviewees to question no.16 (Q16: To what extent do you agree with the following statements?).

Responses to Q16 in the interview confirm that the majority of interviewees (more than 72%) "Strongly Agree" and "Agree" with the statement of "Good for Walking", while (about 22%) "Disagree" and "Strongly Disagree".
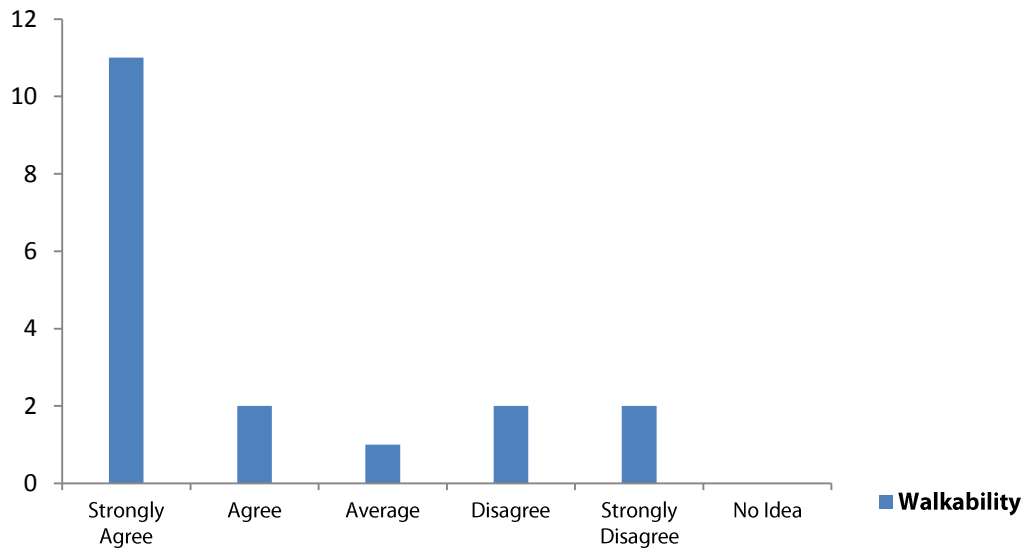
Figure 21: The results of Q16 in interview

One of the interviewed female shopkeepers (SF1) stated:

"Strongly Agree, Walking in this square is excellent especially during evening and night." (SF1, Q16)

The other interviewed female shopkeeper (SF2) commented:

"Strongly Agree, Especially during mornings." (SF2, Q16)

The two comments above show that people consider the weather conditions in Isfahan city and especially during the summer.

An interviewed male resident (RM1) mentioned that:

"Agree, but the time is important for me." (RM1, Q16)

Another interviewee (SF3) commented:

"Agree, during tourist's season this square is not good place to walk, it is too busy to move." (SF3, Q16)

An interviewed male tourist (TM1) made the following comment:

"Average, the place it is not good enough for only walking, you should walk and visit the shops and historic place as well." (TM1, Q16)

An interviewed female tourist (TF2) added eating ice cream during walking:

"Strongly Agree, walking and eating ice cream." (TF2, Q16)

Two other interviewees (RF2 and RF3) said the reason for responding "Disagree" with the statement of "Good for Walking" is the busy atmosphere of Naghs-e-Jahan Square.

"Disagree, it is busy to walk." (RF2, Q16)

"Disagree, walking in such a busy place is difficult." (RF3, Q16)

Overall, the season and the time of day for being busy or cold for interviewees are important.

7.2.1.3 Walking Strategy Findings

This section reports relevance findings about "Good for Walking (Walkability)" during the use of walking strategies. From the data gathered through walks (see 6.3.2) six photos were coded against "Walkability" node by the support of Nvivo 9. Figure 22 illustrates relevant images for this node and researcher's explanations during the walking strategies.

"..crowded with people, mostly women shopping, walking and window shopping in the afternoon."

Photo no 21; (see Walking a long Bazaar corridor section 0)
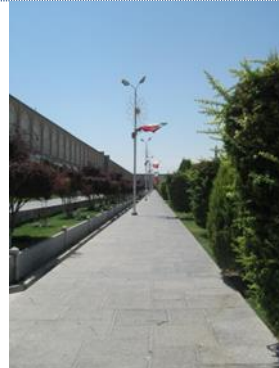
"The path ahead is neat, tidy and paved (without any steps)"

Photo no 48; (see Walking across section 0)
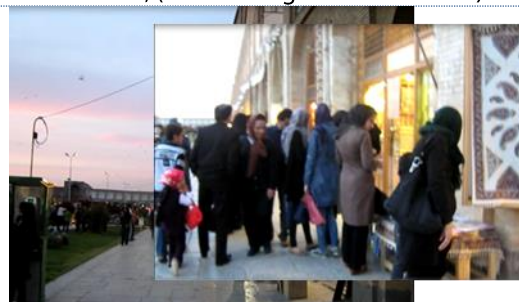
"on a wide paved path way good enough for walking"	"…Some people most of them women, are walking, shopping and window shopping"
Photo no 56; (see Walking across section 0)	Photo no 32; (see Walking along open space section 0)
"people passing along the path way, some families sit on the lawns."	"..people walking to the other side of the square"
Photo no 60; (see Walking across section 0)	Photo no 61; (see Walking across section 0)

Figure 22: Photos taken while walking with coded elements in "Walkability" node

From the walking reports it can be seen thatthe square itself has got good potential for walking, having paved pathways (see photos no. 56,48 and 60) which can improve the quality of walking in the square. On the other hand, people are not only walking but they are also shopping, window shopping and observing people and the square (see also the comment of TM1,Q16 interview finding).

As can be seen from the photos, some pathways are quite empty of people and some are crowded with people. It happens because the times of taking photo were different. Photos no. 48 and 56 were taken in the afternoon (hot time of day in summer) and photos no.32, 60 and 61, which are crowded with people, during the evening of a summer day.

Furthermore, people mostly walk in bazaar corridor around the square during hot or cold weather conditions (see photo no. 21).

7.2.1.4 Summary of Findings about Walkability

Walkability is one of the facilities nodes which have been considered in this study. It can be understood from the interviews and walking strategy results that Naghsh-e-Jahan Square is a good place for walking. On the basis of interviews, Naghsh-e-Jahan may not always be chosen by visitors to walk because of the weather conditions, time or being busy. About weather conditions Naghsh-e-Jahan Square has bazaar corridors around which can help the visitor during bad weather conditions. It is clear that during different times of day Naghs-e-Jahan Square works differently and on the other hand, the presence of people, especially tourists, can also be different

during the year. During some holidays the space may be crowded with tourists and walking can be difficult.

But the main points are that people themselves can manage their time to come to the square and Naghsh-e-Jahan Square has good facilities such as: several paved pathways for walking and also the presence of people and being busy may be considered as success characteristics.

7.2.2 Sit-ability

7.2.2.1 Definition

According to Carmona and Tiesdell (2007, p.231), the possibility of sitting is one of the most significant relevant factors of comfort in urban public spaces. In addition "people like to sit where there are places for them to sit"(Whyte, 1988, p. 433). Public urban spaces as well as other facilities need places for relaxation and rest or places to sit and observe other people and the environment.

The places to sit in urban public spaces can be divided into two kinds of sitting: formal seats and informal seats. Benches and steps designed steps for sitting are the formal seats and the other places that people themselves manage to sit and rest such as the lawns or floors are informal ones. As sitting on the floor is very common in Iranian culture when people want to spend a period of time in a place they will spread a rug to settle and stay. Spreading a rug and settling in a place is very usual in Iranian public urban spaces, especially during summer evenings.

Naghsh-e-Jahan Square as a public urban open space needs places to sit, rest and observe the historic environment which is commonly full of tourists. On the other hand, to choose the place to sit the factors such as location, shelters, views, distances and design of the bench can be influential (Mexi and Tudora, 2012, p. 367).

7.2.2.2 Interview Findings

Question no.17 (Q17: To what extent do you agree with the following statements? "There are enough places to seat in the square.") was asked of the 18 interviewees. The following results have been drawn from this stage of the study (see Figure 23).

Figure 23 shows that all of the interviewees (100%) "Strongly Agree" and "Agree" with the statement that "There are enough places to sit in the square."
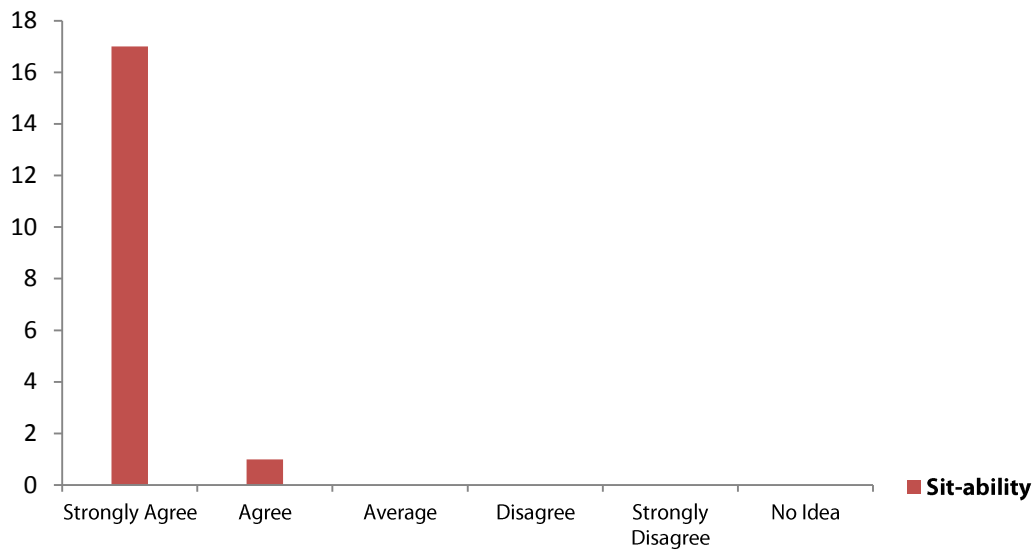
Then the researcher tried to find out which kinds of places the interviewees prefer to sit. They prefer to sit on the benches, lawn and steps and levels respectively. An interviewed male shopkeeper (SM2) stated:

"Strongly Agree, if I was alone I choose a bench but with family I prefer the lawn." (SM2, Q17)

Another interviewed male shopkeeper commented:

"Strongly Agree, I usually use the benches because my family and do not stay in the square for a long time." (SM3, Q17)

Overall, interviewees like to sit in Naghsh-e-Jahan Square and they prefer benches for short stays and lawns for staying a long time with their families. Morever, one of the interviewees (TF1) did not forget to draw the benches as important elements in her drawing (see Figure 24).
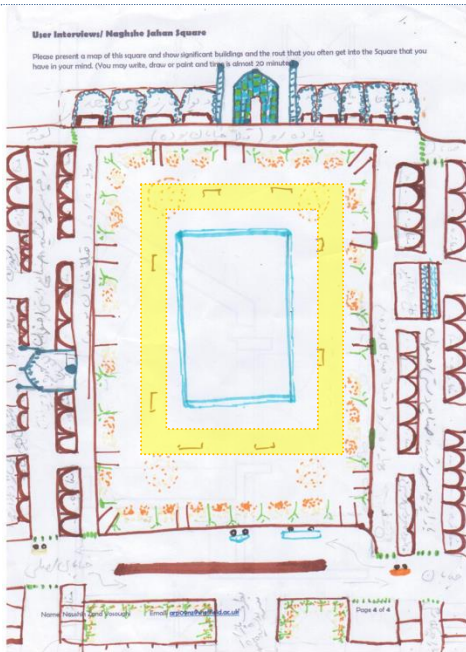
"benches"

See Interview (TF1) section6.4.3

Figure 24: The interviewees' drawings with coded elements in "Sit-ability" node

7.2.2.3 Walking Strategy Findings

This section reports relevant findings about "enough places to sit (Sit-ability)" during walking strategies. The results of data gathered through walks are 14 photos which were coded against "Sit-ability" node by the support of Nvivo 9. Figure 25 shows relevant photos of this node and how the researcher explained them.

"..seeing a man drinking water in the shade of a tall tree. That is forbidden in public spaces during Ramadan. It shows people can rest and drink at this hot time of the day in this café."

Photo no 20; (see Walking along Bazaar corridor section0)

"some young women sit on the lawn and read a book.. some of the people prefer to sit on the steps"

Photo no 33; (see Walking along open space section 0)

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"people sitting on the edging"

Photo no 34; (see Walking along open space section 0)

"All steps and levels around the mosque are being used to sit, rest, take souvenir photos and observe other people and the square"

Photo no 35; (see Walking along open space section 0)

"The people who want to stay longer usually spread rug., Others sit on the edges"

Photo no 46; (see Walking across section 0)

"the steps and levels at the front of the mosque, are used by people to sit, rest and observe the square. The high walls of the square provide ample shade on the steps"

Photo no 49; (see Walking across section 0)

"stone benches located all around the paddling pool"

Photo no 50; (see Walking across section 0)

"The weather is cool after a hot day. People can choose to sit anywhere and some have spread a rug on the lawn"

Photo no 52; (see Walking across section 0)

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"There are stone benches around the paddling pools to sit"

Photo no 54; (see Walking across section 0)

"the other focal point of the square, Ali Qapu, is not crowded as much as other focal points because there are no places to sit and observe the square"

Photo no 55; (see Walking across section 0)

"we can see people sitting and settling on their rugs on the floor. A man stretches out"

Photo no 58; (see Walking across section 0)

"We can see more families during the afternoon sitting on the edges and lawns"

Photo no 57; (see Walking across section 0)

"people passing along the pathway. Some families sit on the lawns"

Photo no 60; (see Walking across section 0)

"people sit on the steps"

Figure 25: Photos taken while walking with coded elements in "Sit-ability" node

It is apparent from the photos that the square has many places for people to sit and seating places are diverse. People can choose to sit on lawn (see the photos no. 33, 52, 58 and 60), on the benches (see photos no. 50 and 54) and on the step, levels and edges (see photos no. 7, 34, 35, 46 and 57).

Some of the people spread their rugs on the lawn which show they would stay longer in the square.

7.2.2.4 Summary of Findings about Sit-ability

According to PPS (n.d.) "Seating that is accessible, comfortable, well-maintained, and located in the right places is critical to successful place making". The most striking results to emerge from the interviews and walking strategy are that Naghsh-e-Jahan Square has enough places to sit. Furthermore, the square has diversity of seating places that people can choose according to their needs and also the seating places are available in every part of the square.

As it is apparent from the walking strategy that people have different options to choose from. For example, people who are in a family or group may mostly sit on the lawn or even spread a rug to settle for a longer time. They can even choose which part of the square to sit and observe. Another main point is that seating spaces are enough for visitors who want to sit.

7.2.3 Sun and Shelters

7.2.3.1 Definition

A shelter might be needed against bad weather especially the summer sun in urban public open spaces which are located in hot and dry climates as in most parts of Iran.

A shelter may be built artificially or naturally; an artificial shelter may be a canopy or umbrella and natural shelters are made by trees or other plants that can offer shade (Mexi and Tudora, 2012, p. 369)

7.2.3.2 Interview Findings

Question no. 18 (Q18: To what extent do you agree with the following statements? "This place is good for sheltering from the sun or bad weather.") was asked of the 18 interviewees to find out

their views about Naghsh-e-Jahan Square in relation to conditions of sun and shelter. Figure 26 shows the results of this question.
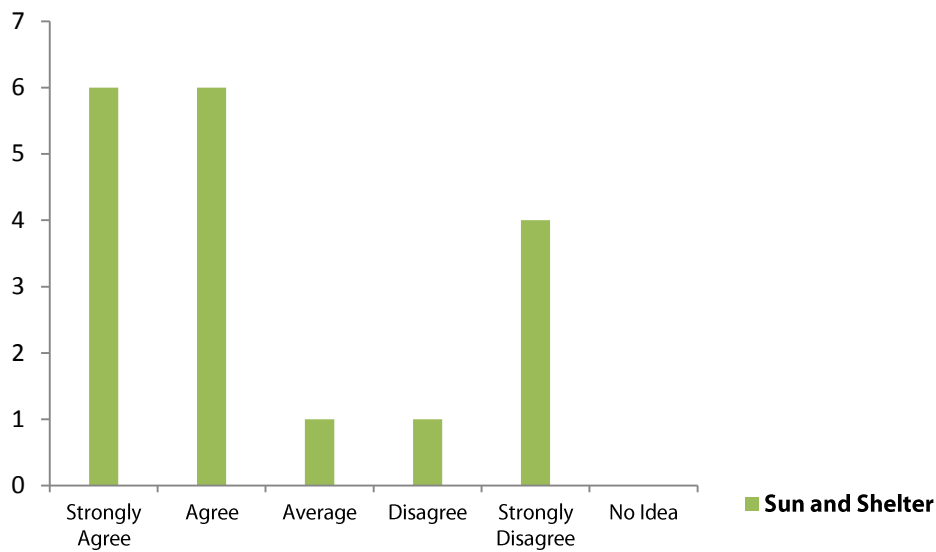
Figure 26: The results of Q18 in interview

Q18 in the interview illustrates that 66.6% of the interviewees "Strongly Agree" and "Agree" with the statement that "This place is good for sheltering from the sun or bad weather." However about 27.7% "Disagree" and "Strongly Disagree".

For example, one of the interviewees (SF3) who "Strongly Agrees" with the statement commented that the bazaar corridor can support people during bad weather conditions added:

"Strongly Agree, during the bad weather bazaar corridors are good shelters." (SF3, Q18)

One of the female interviewed shopkeepers (SF2) who "Agree" with the statement cited that:

"Agree, people cannot use the middle of square during noon." (SF2, Q18)

Two of the interviewees (SM2 and RF1) who "Strongly Disagree" believed the square needs some shelter and trees to make shade:

"Strongly Disagree, this square really needs some shelter." (SM2, Q18)

"Strongly Disagree, it needs trees." (RF1, Q18)

The other interviewees who "Strongly Disagree" with the statement explained that:

"Strongly Disagree, during some ceremonies people have to use umbrellas to shelter from the sun." (RM2, Q18)

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Although the majority of people consider the bazaar corridor around the square as a good shelter during bad weather conditions, one of the interviewees explained that square is horrible around noon.

"Strongly Disagree, it is horrible during the middle of the day." (TM3, Q18)

7.2.3.3 Walking Strategy Findings

This section reports coded findings about "Sun and Shelter" during walking strategies. From the data gathered through walks 13 photos were coded against "Sun and Shelter" node by the support of Nvivo 9. Figure 27 shows the coded photos and the researcher's explanations during the walking strategies.

"Shops and shade attract people"

Photo no 17; (see Walking along Bazaar corridor section 0)

"..seeing a man drinking water in the shade of a tall tree. That is forbidden in public spaces during Ramadan. It shows people can rest and drink at this hot time of the day in this café."

Photo no 20; (see Walking along Bazaar corridor section 0)

"More people come to the open space and shelters below the shops' awnings. The square is becoming busier"

Photo no 53; (see Walking across section 0)

"The Sun has gone down and the sunshades are folded"

Photo no 52; (see Walking across section 0)

"…the folded sun shades are opening, the bush and the small tree cannot be used as shade. Two people sit in the shade protecting themselves from the sun."

Photo no 28; (see Walking along open space section 0)

"The high walls of the square give good shade on the steps"

Photo no 35; (see Walking along open space section 0)

"…as it is close to evening people come to the open space more and take shelter from the sun under awnings and the square is going to be busier"

Photo no 37; (see Walking along open space section 0)

"…the women are trying to protect themselves from the sun by using their scarves for shade."

Photo no 38; (see Walking along open space section 0)

"…sun shades of shops"

Photo no 43; (see Walking along open space section 0)

"…the weather is getting cool and pleasant the square becomes busier."

Photo no 46; (see Walking across section 0)

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"…temporary sun shade"

Photo no 44; (see Walking a long open space section 0)
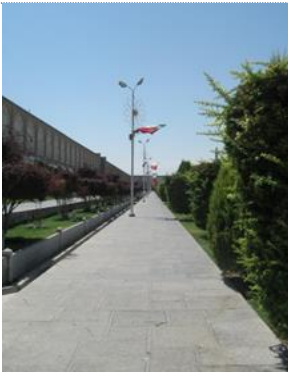
"There are no trees to protection from the sun along the path, which is needed in summer afternoons"

Photo no 48; (see Walking across section 0)

"…good shade."

Photo no 5; (see Walking toward section 0)

Figure 27: Photos taken while walking with coded elements in "Sun and Shelter" node

As can be seen from the photos on a hot summer's day Naghsh-e-Jahan Square needs some shelters. The shops use awnings to protect their stores and goods from the sun (see images no. 28, 37, 52, 53 and 43) and the high walls around the square also make shade (see photo no.35). But there is no shelter or tree to protect people from the midday sun during the summer. People themselves make a shelter to protect themselves from the sun (see photo no. 38). Although there is green space with tall trees and good shade around the square that visitor can use during summer (see photo no.5) the middle of the square is unusable in summer around noon.

7.2.3.4 Summary of Findings about Sun and Shelters

Shelters are the other node considered in this study. In most Iranian cities during the hot seasons (from the middle of spring until the end of summer) protection from the sun is one of the main issues that should be considered in public urban spaces. This issue may influence people's daily life as in most Iranian cities people try to stay at home during the middle of the day and the afternoon in summer and come outside during the evening.

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But a city like Isfahan, as a tourist city, needs to be more alive rather than being empty during the hot time of summer. By doing the interviews and walking strategies, it was found that there are some shelters such as high walls around the square, the attached green space and bazaar corridor around the square. These kinds of shelter may meet people's needs for shelter somehow, but there may still exist some solutions such as temporary shelters to satisfy more people in this regard.

7.2.4   Children's Play and Activities

7.2.4.1   Definition

Children's play is one of the main ways to participate in social life and on the other hand the quality of environment has a significant role in enhancing possibilities for play and also supporting children in the place (Casey, 2007, p. 7).

As children's actions draw children to public urban spaces, according to (Silverman et al., 2005, p. 12) they have a fundamental role in improving social sustainability in public urban spaces (for further information see section 7.1.11).

7.2.4.2   Interview Findings

Question no.19 (Q19: To what extent do you agree with the following statements? "This place is good for children playing and activities.") refers to the existence of the facilities for children in Naghsh-e-Jahan Square. This question was asked of the interviewees to find out how satisfied people are fulfilment with "Children's Play and Activity" in Naghsh-e-Jahan Square.
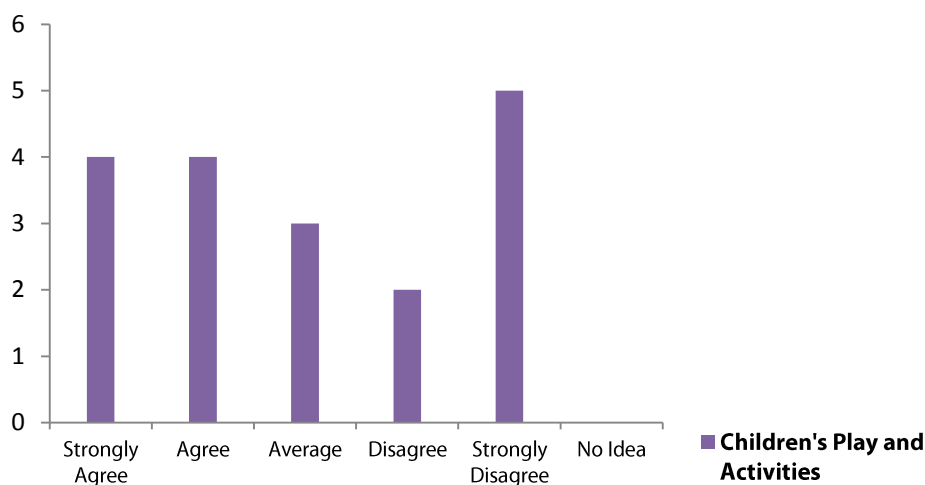
Figure 28: The results of Q19 in interview

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Figure 28 demonstrates interviewees' opinions about this node of the study. It can be seen from Figure 28 that more than 44% responded "Strongly Agree" and "Agree" , more than 38 % replayed "Disagree" and "Strongly Agree" and 16.6% chose "Average" for this statement.

An interviewed male resident (RM2) commented that:

"Strongly Agree, the open space with lawn is lovely for children." (RM2, Q19)

Two interviewed female tourists (TF1 and TF2) explained the facilities of Naghhs-e-Jahan Square for children as:

"Strongly Agree, most of the children who I know love to come here eating ice cream and having fun." (TF1, Q19)

"Strongly Agree, my son loves the square, he can use carts, bicycle and his roller skate and also he likes to run, jump and roll on the lawns." (TF2, Q19)

The only drawback that an interviewed female resident mentioned about children playing and activities in Naghsh-e-Jahan Square is:

"Strongly Agree, the open space is safe for them just sometimes so busy." (RF1, Q19)

One of the interviewees who responded "Average" to this statement suggested that:

"Average, it needs to make the square safer for children in aspects of cars, carts and bicycles but the open spaces are nice for them." (TM1, Q19)

On the other hand an interviewed male tourist who "Strongly Disagree" with "Children Playing and Activities" believed that:

"Strongly Disagree, it should not be a place for children playing." (RM1, Q19)

Also two of interviews (TM1 and TF1) drew cart tracks and carts in their drawings which shows that they know them as a part of the square (see Figure 29).
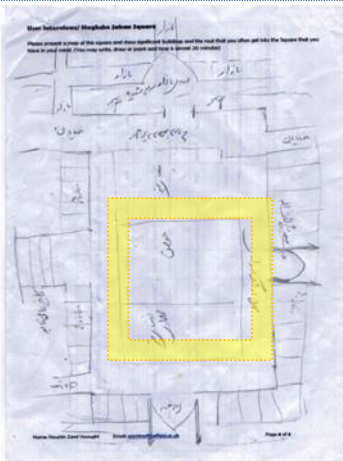
"illustrated the carts way"

See interview (TM1) appendix no.7
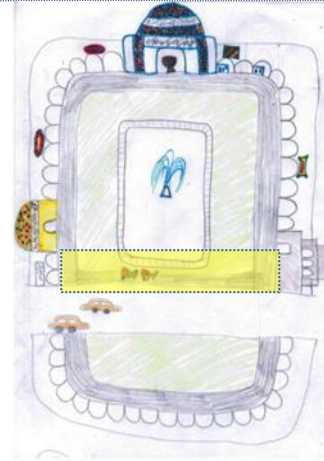
"She also depicted two carts and horse to display the carts way also, she said my son loves them"

See interview (TF1) section 0

Figure 29: The interviewees' drawings with coded elements in "Children Playing and Activities" node

The interviews results show that interviewees mostly know Naghsh-e-Jahan Square as "a good place for children playing and activities", although some of the interviewees "Strongly Disagree" and "Disagree" with this.

7.2.4.3 Walking Strategy Findings

This section illustrates and explains coded images about "Good for Children Activities and Playing" during walking strategies. From the data gathered through walks seven photos were coded against "Good for Children's Activities and Playing" node with the support of Nvivo 9. Figure 30 shows coded images of this node and the researcher's description during the walking strategies.

"..children ride their bikes"

Photo no 1; (see Walking toward section 0)

"I can hear the noise of lads playing football.They even have small goal posts"

Photo no 34; (see Walking along open space section 0)

"The bicycles can be seen even in this populated area"

Photo no 13; (see Walking along Bazaar corridor section 0)

" We see the Bicycle Station kiosk, children and teenagers renting bikes"

Photo no 47; (see Walking across section,0)

"as the weather is going to be cool carts, horses and coaches are getting ready to work"

Photo no 57; (see Walking across section,0)

"people mostly in family groups and children standing in the queue to get on the carts"

Photo no 59; (see Walking across section,0)

"..parking lots for rental bicycles seem to be empty now"

Photo no 61; (see Walking across section,0)

Figure 30: Photos taken while walking with coded elements in "Children Playing and Activities" node

As can be seen from the photos there are many children who seem to be enjoying Naghsh-e-Jahan Square (see photo no.59). There are some facilities such as; rental bicycles and carts (see photos no. 47,57 and 61) but children themselves lead on group games like football (see photo no.34).

Although some children with rental bicycles sometimes seem to be interrupting other people (see photos no. 1 and 13), they can still be considered as kinds of children's activities.

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7.2.4.4 Summary of Findings about Children Activities and Playing

Children as a part of a society should have activities to engage in and some facilities for playing in public urban spaces. These kinds of facilities can be various in every public urban space. In Naghsh-e-Jahan Square there are some facilities for children's activities and playing. The interviewees mentioned facilities such as the open space with lawn for jumping, running and rolling, carts, bicycle and one of them even considered an ice cream shop as a fun place for children. However, some of them disagree with the statement and one of them even believes this place should not be for children.

Although children seem to be happy in Naghsh-e-Jahan Square, there is still much potential for children's activities and playing in this square. Naghsh-e-Jahan can be a place to show the history and culture of Iran to children who can use this place as much as adults. Consequently Naghsh-e-Jahan Square may need more organised facilities for children as well as adults to attract them.

7.2.5 Trees and Greenery

7.2.5.1 Definition

According to Sustainable Cities Institute (2011) trees and plants have many benefits such as:

- Improving air quality, by mitigating air pollution and greenhouse gases
- Reducing the urban heat island effect: large areas of asphalt and concrete trap the heat of the sun and reflect it back into the environment, thereby raising the temperature in surrounding areas. Trees in and around urban environments provide the shading necessary to limit the heat island effect
- Reducing heating and cooling costs for building, by providing shade and wind barriers

Trees and greenery can improve the liveability (see section 2.3.4) of urban open public spaces. They are natural shelters which provide shade and make the space more attractive.

Furthermore, Naghsh-e-Jahan Square used to have tall trees that the government cut down during previous decades because they believed the tall trees had covered and hidden the historic elevatiosn. The researcher added this question to the interviews to find out how pleased people are with the present condition of the square in relation to trees and greenery.

Question no.20 (Q20: To what extent do you agree with the following statements? "There are enough trees in the square.") was asked of the interviewees to find out how pleased people are with greenery and trees in Naghsh-e-Jahan Square. The following conclusions can be drawn from this stage of the study (see Figure 31).

Figure 31 illustrates that half of the interviewees 50% "Strongly Agree" with the statement that "There are enough trees in the square.", however about 27% were "Disagree" and only about 5.5% "Strongly Disagree". Also about 16.6% responded "Average" for this statement.
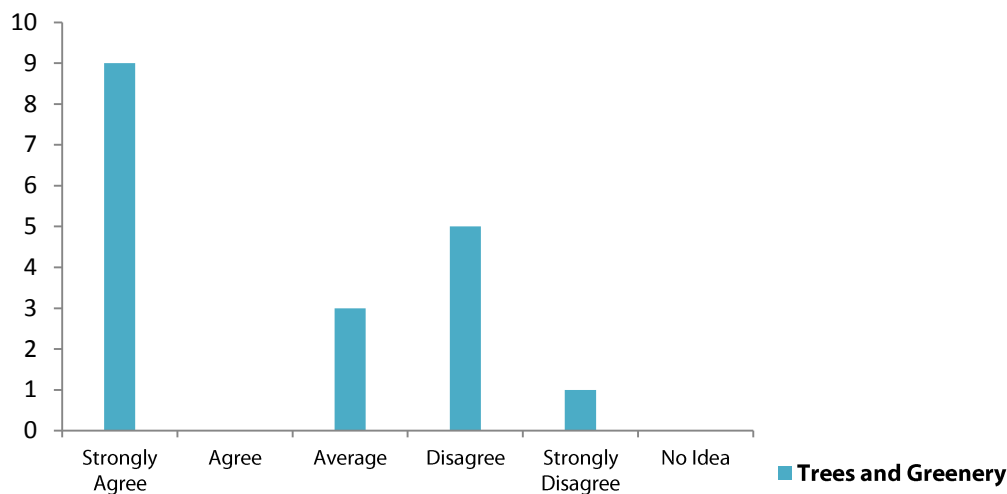
Figure 31: The results of Q20 in interview

As mentioned in the previous section the square previously had tall trees which people can still remember. It can be said interviewees have experienced both conditions of the square (with trees and without trees), so interviewees were asked to state their opinion about "Trees and Greenery".

As can be seen from the following comments, some of the interviewees who responded "Strongly Agree" to this statement explained that Naghsh-e-Jahan Square with tall trees did not have good views of the buildings and enough room and also some of them explained that the trees made Naghsh-e-Jahan Square dark.

"Strongly Agree, the trees will make the square dark." (SF3, Q20)

"Strongly Agree, I have experienced this square with a lot of trees; it was not good the trees had taken all the buildings views." (SM1, Q20)

"Strongly Agree, buildings can be more visible now." (SM2, Q20)

"Strongly Agree, I would like to have good view to every corner of the buildings around the square." (TF2, Q20)

"Strongly Agree, although the trees are beautiful the square needed more room." (TM1, Q20)

An interviewed female shopkeeper (SF2) had the opinion:

"Strongly Agree, This is not a park; there are a lot of parks around." (SF2, Q20)

Other interviewees replied "Average" (RM3 and TF3). Although they are not sure about the question they commented:

"Average, the beautiful trees were cut." (RM3, Q20)

"Average, when I watch old photos of this square when had got tall and beautiful trees, I like that time more." (TF3, Q20)

Another interviewed male tourist (TM3) who "Strongly Disagree" with the statement said that:

"Strongly Disagree, it needs more tall trees." (TM3, Q20)

It can be found that the majority of the interviewees accepted the present condition of the square in respect to "Trees and Greenery". Also, from the interviewees' drawings (TM1 and TF1) it can be understood that plants and greenery have been considered as important in Naghsh-e-Jahan Square.
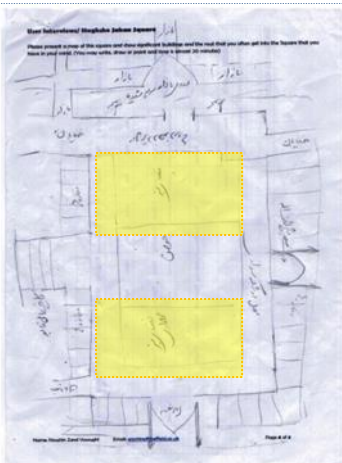
"green spaces"

See interview (TM1) appendix no.7
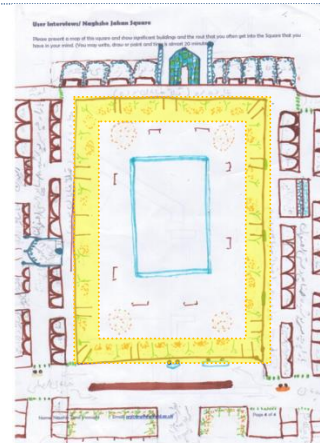
"trees and plants"

See interview (TF1) section 0

Figure 32: The interviewees' drawings with coded elements in "Trees and Greenery" node

7.2.5.3 Walking Strategy Findings

This section reports the findings about "Trees and Greenery" during walking strategies. The results of data gathered through walks are eight photos which were coded against "Trees and Greenery" node with the support of Nvivo 9. Figure 33 shows the coded photos of this node with the researcher's explanations during the walking and driving.

"the sides of the path are indicated by narrow green spaces and different levels and steps"

Photo no 48; (see Walking across section 0)

"flower boxes "

Photo no 3; (see Walking toward section 0)

"Walk toward the square through a green open space with tall trees"

Photo no 5; (see Walking toward section 0)

"there is a gate on each side of the road and trees form an arch overhead"

Photo no 63; (see Driving section 0)

"well-kept flowers are separated from pedestrians by chains and bollards

"The green space among cars works as a roundabout, the green space seems

Photo no 39; (see Walking along open space section 0)

emptier than the other green spaces of the square"

Photo no 42; (see Walking along open space section 0)

"well-kept plants and flowers"

Photo no 59; (see Walking across section 0)

"flower boxes are used to support pedestrian path way, the green space works as a roundabout"

Photo no 64; (see Driving section 0)

Figure 33: Photos taken while walking with coded elements in "Trees and Greenery" node

As can be seen from the walking strategy results Naghsh-e-Jahan Square is in a good condition with respect to greenery and flowers (see photos 3, 39, 48, 59 and 64).

7.2.5.4 Summary of Findings about Trees and Greenery

"Trees and Greenery" have always been one of the important points in public urban spaces especially in hot and dry Iranian cities. Similarly, Naghsh-e-Jahan Square they can bring many advantages for the place. As mentioned above in the previous decades there were many tall trees that people still remember and they can still compare two conditions of the square (with and without tall trees).

It can be seen from the results of interviews and walking strategies that the square is in good condition in respect to greenery. Although the open space of Naghsh-e-Jahan Square needs more shade, bazaar corridors and the park attached to the square can to some extend make up for the shortage of trees. On the other hand cutting down tall and old trees can be controversial in a dry area like Isfahan. This needs more discussion as unfortunately it is common in Iranian urban planning and design.

7.2.6 Pool

7.2.6.1 Definition

Water, in addition to being one of four holy elements (with soil, wind and fire) in Iranian ancient culture, is an important element in Islamic culture as well. There is a shallow pool in every mosque to make Ablutions (the Islamic procedure for washing parts of the body using water, typically in preparation for formal prayers, there is also an emphasis on being clean and washing regularly in Islam.

Water always has a significant role in Iranian public urban open spaces. The existence of water in public urban open spaces can make the weather cool by offering moisture to the hot and dry climate which exists in most Iranian cities. It brings liveliness and attractiveness to spaces which are mostly surrounded by buildings. It can draw children to the space as recreational point although adults, particularly women, should not enter the water. Sitting near water is an Iranian pastime during hot summer evenings.

There are three different pools in Naghsh-e-Jahan Square and the shallow pool located in the middle of Naghsh-e-Jahan Square is the one which the interviewees were asked about.

7.2.6.2 Interview Findings

The researcher asked question no.21 (Q21: To what extent do you agree with the following statements? "The paddling pool is pleasant.") to the interviewees to find out how pleased people are pleased with "Pool" in Naghsh-e-Jahan Square. Figure 34 has been produced from the fixed responses.

Graph 20 shows that more than 83% of the interviewees "Strongly Agree" and "Agree" with the statement of "The pool is pleasant.", however just one of the interviewees (TM3) "Strongly Disagree" with the statement.
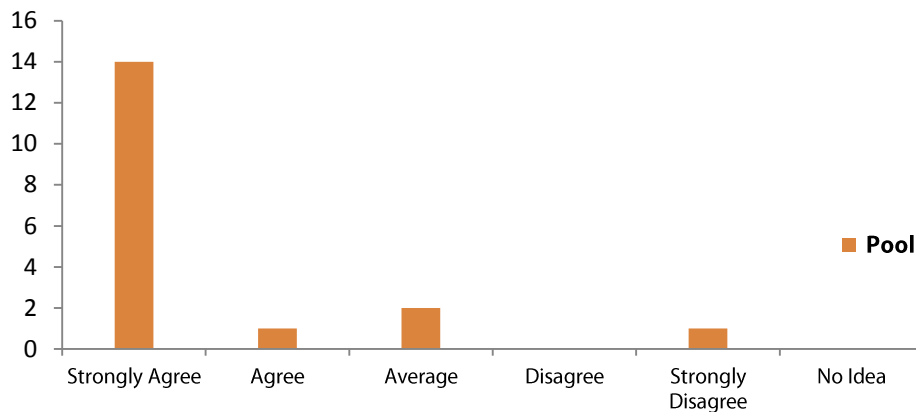
The interviewees who responded "Strongly Agree" also put some comments that show their reasons.

An interviewed female shopkeeper (SF3) who "Strongly Agree" with the statement cited that:

"Strongly Agree, it is nice and cool, in the past international tourist went into the water." (SF3, Q21)

One of the interviewees (SM1) who responded "Strongly Agree" has memories from his childhood in this part of the square:

"Strongly Agree, about 15 years ago I played in the paddling pool." (SM1, Q21)

The other interviewed male shopkeeper (SM3) who is a mature man loves the pool and the reflection of the buildings in the water at night. He also remembered the time before the pool had been built in Naghsh-e-Jahan Square.

Strongly Agree, I love to watch the building reflection in the water at night, I remember when there was not this paddling pool in the square and it really needed it." (SM3, Q21)

The other interviewed male resident (RM2) who "Strongly Agree" with the statement mentioned:

"Strongly Agree, it is one of the most beautiful parts of the square, especially since it is not deep for children." (RM2, Q21)

An interviewee (TF2) who replayed "Average" for this statement explained that:

"Average, it is good but not comparative with other elements in the square you know we can find this kind of pool easily in every park but we cannot find these kinds of buildings somewhere else." (TF2, Q21)

The only interviewees (TM3) who responded "Strongly Disagree" cited that:

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"Strongly Disagree, now it is not attractive rather than before." (TM3, Q21)

The majority of the interviewees like the pool in middle of the square. Although this pool was constructed about 40 years ago and can be considered as an additional element in Naghsh-e-Jahan Square (see SM3, Q21 comment), all the interviewees know this pool as a part of the square. Even 6 out of 7 interviewees who produced drawings for this study drew the pool as one of the main part of Naghsh-e-Jahan Square (see Figure 35).
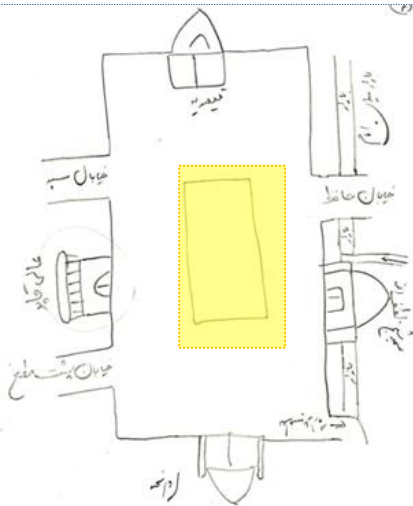
"..added the paddling pool in the middle of the square"

See interview (RM2) section 0
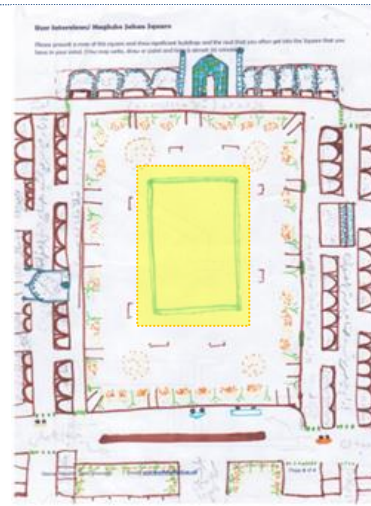
"paddling pool"

See interview (TF1) section 0
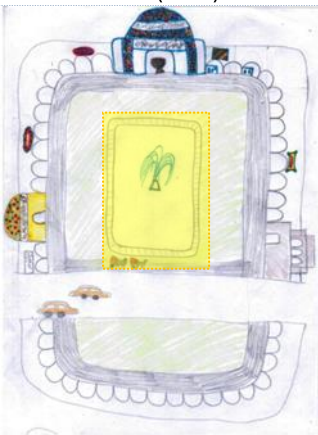
"Paddling pool and the fountain"

See interview (TF2) section 0

"He turned on Paddling pool"

See interview (TM1) appendix no.7
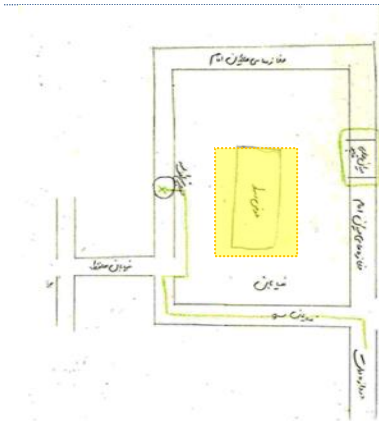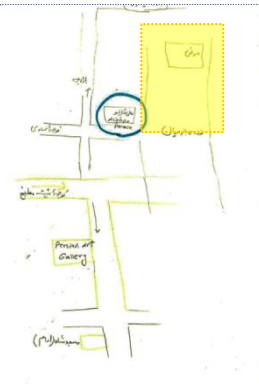
| "paddling pool" | "The next stage was drawing the open space of the square and paddling pool" |
| See interview (SF2) appendix no.5 | See interview (SF3) appendix no.6 |

Figure 35: The interviewees' drawings with coded elements in "Paddling Pool" node

7.2.6.3 Walking Strategy Findings

This section reports the gathered results about "Paddling Pool" by walking strategies. There are 7 images coded against "Pool" node from the data gathered through walks with the support of Nvivo 9. Figure 36 shows the coded photos and the researcher's explanations during the walking strategies.

"paddling pool is not very clean"

Photo no 9; (see Walking into section0)

"An empty paddling pool in front of the mosque where children play"

Photo no 35; (see Walking along open space section 0)

"People gather around the fountains which have

"…a paddling pool with fountains seems pleasant

been turned on in the paddling pool"	in the hot and dry weather"
Photo no 36; (see Walking along open space section 0)	Photo no 50; (see Walking across section 0)
"The weather is pleasantly cool near the paddling pool with the fountains turned on"	"people stand around the paddling pool, people standing in groups, more families and children "
Photo no 51; (see Walking across corridor section 0)	Photo no 59; (see Walking across section 0)

Figure 36: Photos taken while walking with coded elements in "Paddling Pool" node

As can be seen from the photos no. 9 and 35 there are two more pools in the square, one of which is empty (photo no. 35). This pool, which is located in front of Imam Mosque, was previously used for prayers for "Vudu". The other pool, located in front of Qeysarie Entrance, is not shallow and is not very clean and does not seem very pleasant for people (see photo no.9). From the relevant images to it can be understood that the pool in the middle of the square is most pleasant for visitors.

7.2.6.4 Summary of Findings about Paddling Pool

The pool is one of the significant elements in Naghsh-e-Jahan Square. From the interviews and walking strategy it can be understood that additional to making the space climatically cool and pleasant, the pool has a recreational aspect for people as well.

Furthermore, as mentioned before, in Iran as an Islamic country there are some limitations for women. Consequently women cannot use the pool and even the men cannot go to the middle of the pool. But children can use the pool especially during the summer. In addition, this pool is not deep and children can enter it safely.

7.2.7 Attractiveness

7.2.7.1 Definition

There is no particular definition of attractiveness in urban public spaces and attractiveness can depend on local criteria which are related to local people. The criteria and factors influencing attractiveness for specific places and people are interpreted differently and the necessity to consider the regional differences is there emphasized (Ezmale, 2012, p. 122).

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In this study attractiveness can be defined as the criterion which may attract and draw people to the town square. Some programs based on people's needs and appropriate management programs to organise attractive events and activities in the public space; also providing choices for sitting, walking and other activities, the presence of other people, security, favourable image of community life or meeting other needs such as; food, drink, shelter from the natural elements, rest (Elsayed, 2008, p. 46) and historical attractiveness can be considered as some factors to make the space more attractive for people.

7.2.7.2 Interview Findings

Question no. 22 (Q22: To what extent do you agree with the following statements? "This place is beautiful and attractive.") was asked of the interviewees to find out that how attractive Naghsh-e-Jahan Square is for the visitor. Figure 37 has been set out to illustrate the fixed response.
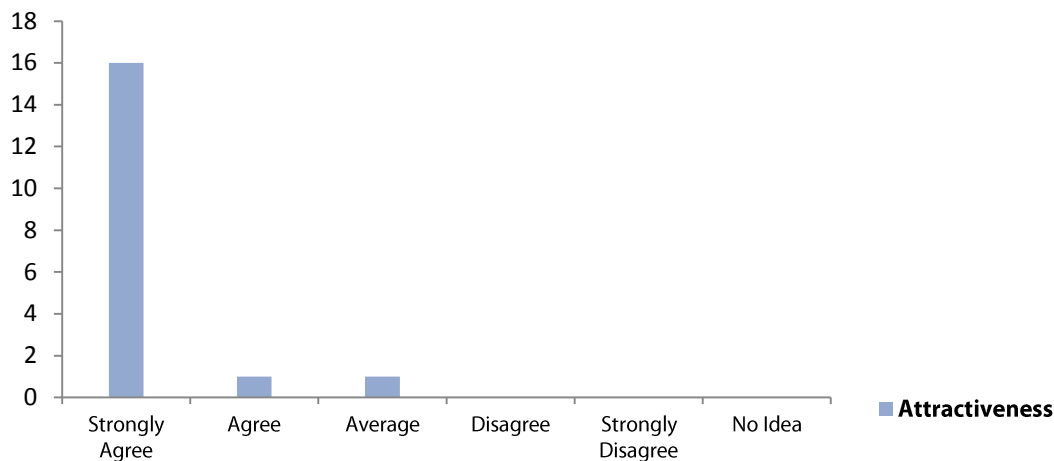
Figure 37: The results of Q22 in interview

The results of the interviews confirm that about 89% of the interviewees "Strongly Agree"; while none of them respond "Strongly Disagree" or "Disagree". The comments also show they admire Naghsh-e-Jahan Square:

"Strongly Agree, it is a masterpiece." (TM1, Q22)

"Strongly Agree, to me Isfahan is nothing without this square." (SF2, Q22)

An interviewed female resident (RF2) who "Agree" with the statement cited that:

 "Agree, it needs more cleaning." (RF2, Q22)

The only interviewees who responded "Average" mentioned that:

"Average, compared with the past it is not that attractive." (RM3, Q22)

It can be found out from the interviews Naghsh-e-Jahan Square is beautiful and attractive for themand the majority of them admire the square.

7.2.7.3 Walking Strategy Findings

As every part of Naghsh-e-Jahan Square is beautiful and attractive for the researcher as an architect, she tried to suspend her opinion about "Attractiveness" during the walking strategies and asked interviewees to judge about this node. Thus, the discussions about this node are on the basis of interview findings.

7.2.7.4 Summary of Findings about Attractiveness

From the interview results it can be understood that the interviewees know Naghsh-e-Jahan Square as a beautiful and attractive place. In addition to having most of the facilities such as sit-ability, walkability and so on, Naghsh-e-Jahan Square attracts visitors because of its history Isfahanian handicrafts.

7.2.8   Cafes and Restaurants

7.2.8.1 Definition

Cafes and restaurants in addition to bringing a commercial dimension to public urban spaces, can meet people's other needs. Restaurants and cafes can meet the needs of people for refreshments during their journey in a public urban space by providing a place to sit, rest, eat and drink. Sometimes restaurants and cafes can be a well-known point in public urban spaces for people to meet and arrange appointments. Lennard (2008, p. 53) believes cafes and restaurants can enhance a square's attractiveness and provide people with legitimate reasons to linger. In Iran it is very common to go out to have an ice cream or a cold juice with family or friends during summer afternoons, so in this study ice cream shops which mostly sell juices as well can be considered in this group in this study.

7.2.8.2 Interview Findings

Question no.23 (Q23: To what extent do you agree with the following statements? "Cafes and Restaurants are enough and pleasant." refers to the existence of the facilities for visitors in Naghsh-e-Jahan Square. This question was asked of the interviewees to find out how please people are with "Cafes and Restaurants" in Naghsh-e-Jahan Square.
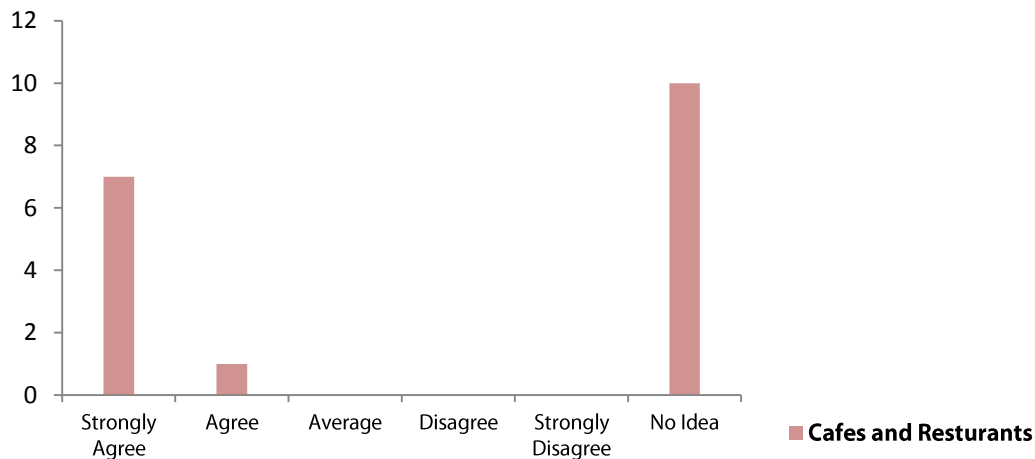
Figure 38: The results of Q23 in interview

Response to question no.23 show that more than 44.5% of the interviewees "Strongly Agree" and "Agree" with the statement that "Cafes and Restaurants are enough and pleasant." However the majority of the interviewees (55.5%) responded "No Idea". The results show the majority of interviewees did not know or experience the cafes and restaurants in Naghhs-e-Jahan Square.

An interviewed female tourist (TF3) who responded "Strongly Agree" explained that she is pleased with the cafes but the problem was that for a stranger finding them may not be easy:

"Strongly Agree, the café is really different, it gives me amazing feeling, the traditional drinks in traditional environment, also, it is not easy to find in the square but because I was with Isfahanian person, I could find it easily." (TF3, Q23)

An interviewed male tourist (TM1) liked the traditional ones more:

"Strongly Agree, specially the traditional ones are more attractive although they serve modern food as well." (TM1, Q23)

An interviewee (TM2) who replied "Strongly Agree" said that:

"Strongly Agree, if we can consider ice cream shops in this group they are really good but busy during the night." (TM2, Q23)

An interviewed male shopkeeper (SM3) explained:

"Agree, I have never used them but I know where they are." (SM3, Q23)

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The majority of the interviewees responded "No Idea" to this statement and one of them (SF2) made the following comment that shows going to cafés and restaurant is not the main purpose of coming to Naghsh-e-Jahan Square:

"No Idea, I do not come here for cafes and restaurants." (SF2, Q23)

About this statement the interviewees had two different opinions: agreement and having no idea. Having "No Idea" means they do not come to the square for this reason and it is also common in Iranian culture to bring food from home to the public spaces for a longer stay.

In addition, one of the interviewees (TF2) who produced a drawing for this study showed prominently the ice cream shop in her drawing (see Figure 39).
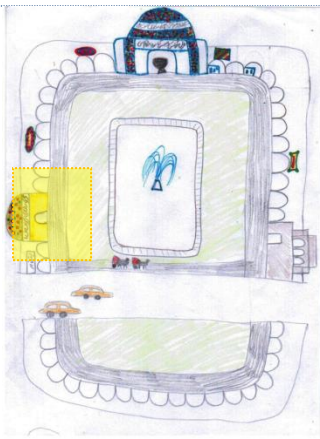
"Then she moved on the details and drew the arcs around the square to show the shops. She tried to make prominent some of the shops with signs and also she showed me one of the famous Ice Cream"
See interview (TF2) section 0

Figure 39: Interviewees' drawing with coded elements in "Cafés and Restaurant" node

7.2.8.3 Walking Strategy Findings

This section reports relevant coded photos about "Cafes and Restaurants" during walking strategies. The results of data gathered through walks are four images which were coded against "Cafes and Restaurants" node. Figure 40 shows the coded photos of this node and how the researcher explained them during walking strategies.

"In front of the open space is the café where I sit to drink a cup of tea and the environment of the café is very cosy"

Photo no 20; (see Walking along Bazaar corridor section 0)

"It is one of the ice cream shops that are well known even in the city, the shop is going to be busier during the night"

Photo no 30; (see Walking along open space section 0)

"I see a crowded area in front of one of the shops, an ice cream shop with high quality products and well-known in the city."

Photo no 40; (see Walking along open space section 0)

"an open space with a traditional restaurant"

Photo no 11; (see Walking along Bazaar corridor section 0)

Figure 40: Photos taken while walking with coded elements in "Cafes and Restaurant" node

As can be seen from the walking strategies there are restaurants, cafes and ice cream shops in Naghsh-e-Jahan Square which seem to be busy, especially the ice cream shops. The photos show people are using these kinds of places in the square.

7.2.8.4 Summary of Findings about Cafes and Restaurant

Cafes, restaurants and ice cream shops are considered as part of the main facilities in Naghsh-e-Jahan Square in this study. They can cause people to stay longer in the square. In addition to meeting people needs they can be considered as fun aspects of the place. As can be seen from the interviews and walking strategies, people are using cafes, restaurants and especially ice cream shops. Although more than half of the interviewees responded "No Idea" to this statement, cafes, restaurants and ice cream shops have plenty of customers.

7.2.9 Basic Access Needs of Disabled People, Elderly or Children

7.2.9.1 Definition

A large proportion of the pedestrian population includes children, elderly people and people with mobility-related impairments (OCED, 2011, p. 9). Although these groups are the most vulnerable groups of pedestrians they are not well placed or equipped for making their needs known to urban policy-makers and designers and often they suffer from lack of support in urban public spaces (OCED, 2011, p. 9).

Basic needs for these groups of pedestrians can be met by making safe and supportive environments. Factors such as paving, constructing ramps, making all spaces for disable and older accessible and giving higher priority and space to pedestrians rather than cars can improve conditions for this group of pedestrians.

7.2.9.2 Interview Findings

Question no.24 (Q24: To what extent do you agree with the following statements? "There are basic needs of disabled, elderly or children with proper access.") was asked of the interviewees to find out how pleased people are with" Provision for Basic Needs of Disabled, Elderly or Children with Proper Access" in Naghsh-e-Jahan Square. The following conclusions can be drawn from this stage of the study (see Figure 40).
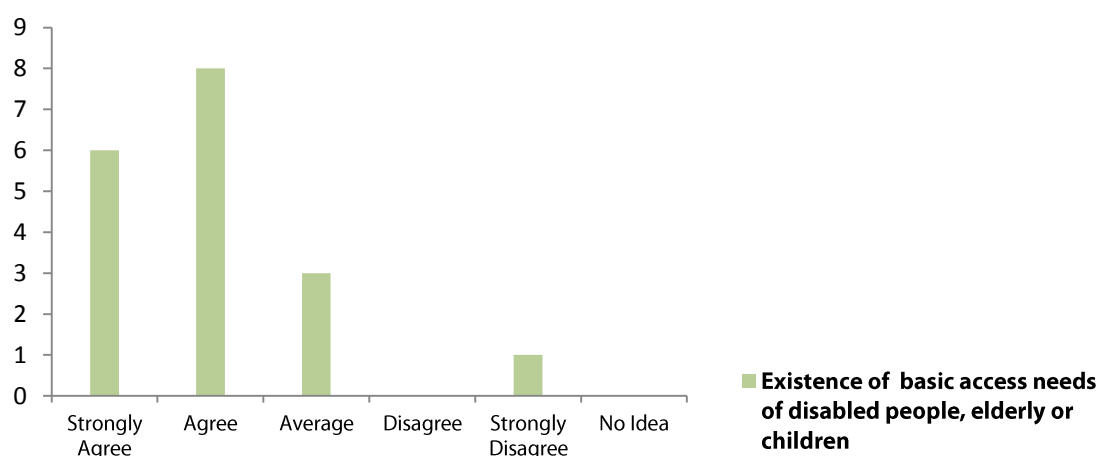
Figure 40: The results of Q24 in interview

Figure 40 shows that 77.7% of the interviewees "Strongly Agree" and "Agree" with the statement of "There are basic needs of disabled, elderly or children with proper access.", while only one out of 18 interviewees responded "Strongly Disagree". Also about 16.6% of the interviewees responded "Average" for this statement.

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An interviewed male shopkeeper (SM3) cited that:

 "Strongly Agree, there have been facilities for them for about 15 years ago." (SM3, Q24)

Another male shopkeeper (SM1) pointed out:

"Agree, in bazaar corridors there are not any places to sit and rest for this kind of people." (SM1, Q24)

Two of the interviewees (TF3 and TM1) who responded "Average" stated that:

"Average, I think in my country you cannot find any place where they think about disabled people." (TF3, Q24)

"Average, the square needs these kinds of facilities more but maybe because of being historic it is difficult to add." (TM1, Q24)

Another tourist male (TM2) who replied "Average" said:

"Average, it is better than other urban spaces in my country." (TM2, Q24)

Overall the interviewees were pleased with the provision although there was no disabled person among the interviewees.

7.2.9.3 Walking Strategy Findings

This section reports the findings about " Provision for Basic Needs of Disabled, Elderly or Children with Proper Access" during walking strategies. The results of data gathered through the walks are 4 images which were coded against this node by the support of Nvivo 9. Figure 41 shows the coded photos of this node with the researcher's explanations during the walking.

"the steps without any ramp"

Photo no 1; (see Walking toward section 0)

"Wheelchairs cannot enter"

Photo no 10; (see Walking along Bazaar corridor section 0)

"An old woman is trying to pass the bollards with her big bundle"	"Unfortunately, they do not allow access for wheelchairs"
Photo no 11; (see Walking along Bazaar corridor section 0)	Photo no 12; (see Walking along Bazaar corridor section 0)

Figure 41: Photos taken while walking with coded elements in "Basic Needs of Disabled, Elderly and Children" node

It can be understood from the walking strategy photos that there are some access problems for disabled and elderly people and maybe children because of the bollards that are supposed to protect the square from vehicles. Although the bollards can sometimes prevent vehicles from entering the square, they also block access for wheelchairs (see photos no.10 and 12). It can be seen from photo no.11 that it is difficult for an old women to pass the bollards with her big bundle. The researcher also found some stairs without ramps (see photo no.1).

7.2.9.4 Summary of Findings about Basic Needs of Disabled, Elderly or Children with Proper Access

From the interview results it can be seen that the interviewees are pleased with these kinds of facilities. But the coded photos from the walking strategy showed that there are some problems that some disabled, elderly people and children may suffer from. Overall, in Iran Naghsh-e-Jahan Square is a good place for this aspect compared with other public urban spaces but it still needs some improvement.

7.2.10 Safe and Efficient for Pedestrian & Public Transport users

7.2.10.1 Definition

Insecurity has a major impact on the decision to walk for pedestrians(OCED, 2011, p. 9). Making a secure and car-free place can encourage people to use public urban spaces more for walking. Giving priority and more space to pedestrians in public urban spaces, providing easy, safe, well-maintained and secure pedestrian access to public transport, making urban public spaces car-free areas, and introducing parking policies to discourage over-use of cars in urban public spaces can

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all make an urban public space more safe and efficient for pedestrians and public transport users (OCED, 2011, p. 12). Furthermore the quality of routes can encourage people to come to urban public spaces on their foot.

7.2.10.2 Interview Findings

The researcher asked question no.25 (Q25: To what extent do you agree with the following statement? "This place is safe and efficient for pedestrian & public transport users.") of the interviewees to find out how pleased people are with this statement in Naghsh-e-Jahan Square. Figure 42 has been produced from the fixed responses.

Figure 42 shows that more than 77% of the interviewees "Strongly Agree" and "Agree" with the statement that "This place is safe and efficient for pedestrian and public transport users.", However just about 16.6% of the interviewees "Strongly Disagree" with the statement.
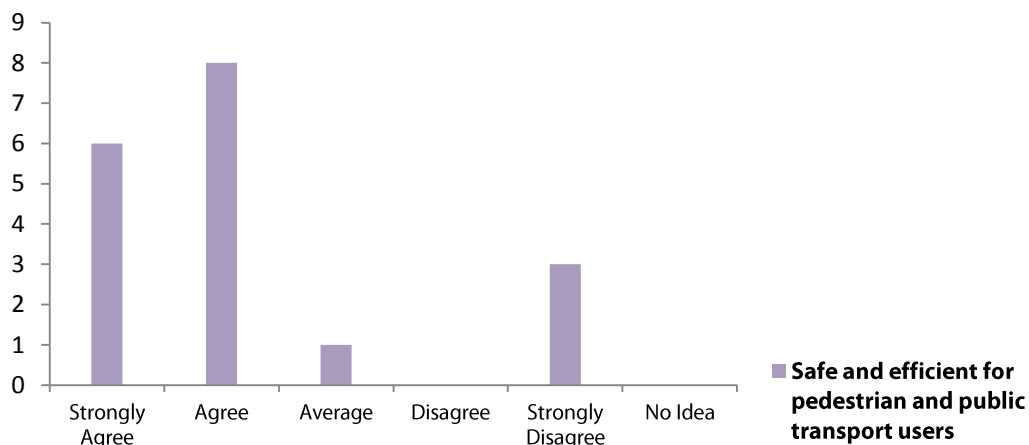
Figure 42: The results of Q25 in interview

One of the male shopkeeper interviewees (SM3) who responded "Strongly Agree" with the statement commented:

"Strongly Agree, another good point is that there is not any robbery by motorcycles in the square because they cannot get into it." (SM3, Q25)

An interviewed male shopkeeper (SM1) stated that:

"Strongly Agree, just the area which cars are crossing is dangerous for pedestrians and needs more facilities." (SM1, Q25)

Three interviewees (SF2, TF2 and TM1) who replied "Agree" said:

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"Agree, Bicycles are not safe for pedestrians." (SF2, Q25)

"Agree, it is not good enough for children." (TF2, Q25)

"Agree, the street part neesd some facilities for pedestrians." (TM1, Q25)

Another two interviewees who answered "Strongly Disagree" with the statement explained their reasons:

"Strongly Disagree, because of bicycles and carts." (RF2, Q25)

"Strongly Disagree, especially the part that cars can pass because it is a main street." (RF3, Q25)

After reviewing the interview results it can be found that the interviewees are mostly pleased with this statement. Although some of them referred to some problems such as bicycles, carts and lack of facilities for the pedestrians who passed along the main street which passes through the square, overall Naghsh-e-Jahan Square is successful in controlling cars.

7.2.10.3 Walking Strategy Findings

This section reports the results about "safe and efficient for pedestrian and public transport users" collected by walking strategies. There are 15 images coded against "safe and efficient for pedestrian & public transport users" node from the data gathered through walks by the support of Nvivo 9. Figure 43 shows the coded photos and the researcher's explanations during the walking strategies.

"bollards prevent vehicles from entering the pedestrian path"

Photo no 1; (see Walking toward section 0)

"bollards prevent vehicles from entering the square"

Photo no 2; (see Walking toward section 0)

"Bollards prevent car access"

Photo no 3; (see Walking toward section 0)

"Bollards and fences again prevent vehicles from entering the square"

Photo no 10; (see Walking along Bazaar corridor section 0)

"an entrance protected by bollards"

Photo no 11; (see Walking along Bazaar corridor section 0)

"the bollards again prevent vehicles from entering the square"

Photo no 12; (see Walking along Bazaar corridor section 0)

"The bicycles can be seen even in this populated area"

Photo no 13; (see Walking along Bazaar corridor section 0)

"People are crossing the street without any traffic light"

Photo no 23; (see Walking along Bazaar corridor section 0)

"bollards and steps prevent motorcycles from entering the bazaar corridor"

Photo no 24; (see Walking along bazaar corridor section 0)

"the path way leads to the bollards which run between pedestrians and cars on the street, I see people on the other side of the bollards"

Photo no 41; (see Walking along open space section 0)

"bicycles"

Photo no 6; (see Walking into section 0)

"bus crossing the street and fences separate the sidewalk from the street"

Photo no 47; (see Walking across section 0)

"nearing the street cars passing the square, fences and bollards run between people and cars"

Photo no 61; (see Walking across section 0)

"pedestrians cross without any traffic light"

Photo no 66; (see Driving section 0)

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"flower boxes are used to support pedestrian path way"

Photo no 64; (see Driving section 0)

Figure 43: Photos taken while walking with coded elements in "Safe and Efficient for Pedestrians and Public Transport users" node

It was observed during the walking that Naghsh-e-Jahan Square is successful in protecting itself from cars, although there is a main street which passes through the square. The bollards prevent the cars and motorcycles from entering the square in some parts (see photos no, 1, 2, 3, 12, 24 and 41).

But there are still some problems such as bicycles, which can circulate in every part of the Square (see photos no.13 and 6), and carts. The main street which passes through the square has also many problems with lack of facilities such as pedestrian crossings and traffic lights (see photos no. 66 and 41).

7.2.10.4   Summary of Findings about Safe and Efficient for Pedestrian & Public Transport users

After reviewing the interviews and walking strategies it can be understood that Naghsh-e-Jahan Square has been protected in its main part from entering cars. Bollards in some part of the square are helpful although sometimes they themselves block some people's way (see section 7.2.9). Naghsh-e-Jahan Square also needs to improve some facilities for pedestrians in the street part and control rental bicycle and carts riding areas. Overall, Naghsh-e-Jahan Square as an open public space can successfully protect pedestrians in its car free part.

7.2.11 Efficient Communities to Join for Different Age Groups

7.2.11.1 Definition

The existence of some communities to join can encourage people to use places more and even in better ways. In traditional Iranian bazaars and squares, which are the main focus of this study, there are always some efficient communities which belong to specific guilds. The people who join

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these communities are often crafts-men and retailers. There is a need for efficient communities to join for people using the space.

7.2.11.2 Interview Findings

Question no.26 (Q26: To what extent do you agree with the following statements? "There are some efficient communities to join for different age groups.") was asked of the interviewees to find out how much people know about this statement in Naghsh-e-Jahan Square. Figure 44 shows fixed responses.

Question no.26 shows that more than 61% of the interviewees responded "No Idea" to the statement of "There are some efficient communities to join for different age groups.", however there is just one interviewee who replied "Agree" with the statement. About 27.7% of the interviewees answered "Strongly Disagree" and "Disagree" with the statement. There is no one who responded "Strongly Agree".
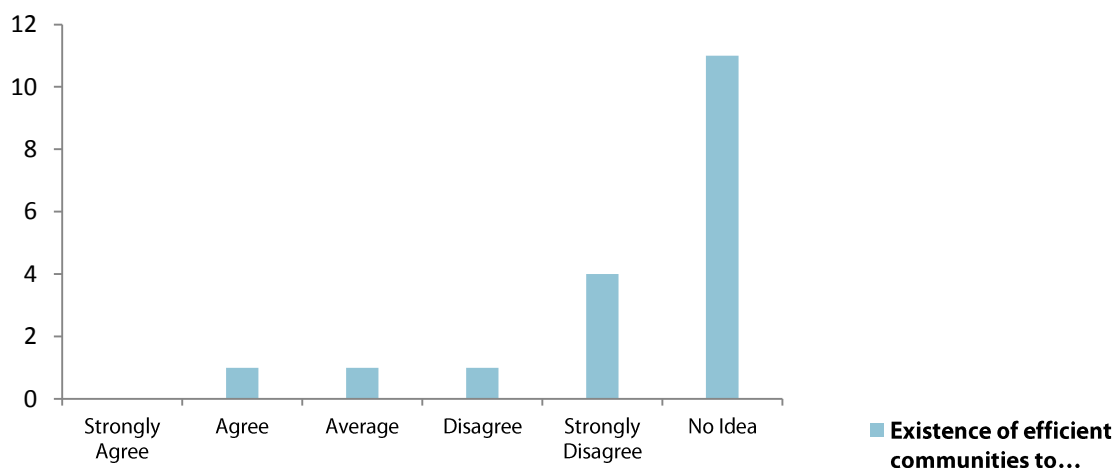
Figure 44: The results of Q26 in interview

An interviewed male shopkeeper (SM1) who was the only one that responded "Agree" said:

"Agree, every hand craft has got a community that shopkeepers join." (SM1, Q26)

Another interviewed (SF3) who answered "Average" stated:

"Average, people who work here have got good relationships but there is not any specific community to join." (SF3, Q26)

Overall, the majority of the interviewees did not have any idea which means that if there are any communities in Naghsh-e-Jahan Square people are not aware of them.

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7.2.11.3 Walking Strategy Findings

The researcher could not find anything related to this node during walking strategies. As a result, for this node only the findings of interviews have been taken into account.

7.2.11.4 Summary of Findings about Efficient Communities to Join for Different Age Group

As mentioned in section5.9.3 Bazaarians (the people who work in the Bazaar) always have some communities called "Guilds" which the shopkeepers, retailers and producers who have traded same merchandise can join. In the past there were a lot of communities in Iranian bazaars such as; guilds, religious and even political communities. These days there are still guilds and religious communities which shopkeepers, producers and retailers should join.

As can be seen from the interviews, existing communities are not known to all the interviewees and this can be considered as a weakness. However the existence of different communities can improve social sustainability (see section 2.3).

7.2.12 Occasions for Families to Come Together

7.2.12.1 Definition

The presence of some occasions and events based on families' needs can draw people and families in particular to spaces. The existence of families in urban public spaces can improve the security of the space and make a place more sociable and friendly. Some people consider religious ceremonies as family' occasions and in some aspects maybe they can be. These kinds of ceremonies can attract some religious people, although there are a lot of non- religious people who believe in religious ceremonies. But this question is refers to the occasions and festivals which "display skills and strength, balance and teamwork, grace and stamina." (Lennard, 2008, p. 27) and also can attract all groups of people with different ideas.

7.2.12.2 Interview Findings

Question no.27 (Q27: To what extent do you agree with the following statements? "There are some occasions for families to come together.") was asked of the interviewees to find out the existence of "Occasion for Families to Come Together" in Naghsh-e-Jahan Square. The following conclusions can be drawn from this stage of the study (see Figure 45)

Figure 45 shows that "No Idea" is the most frequent response (33.3%) for this question and about 22.2% of the interviewees responded "Average" for this statement.
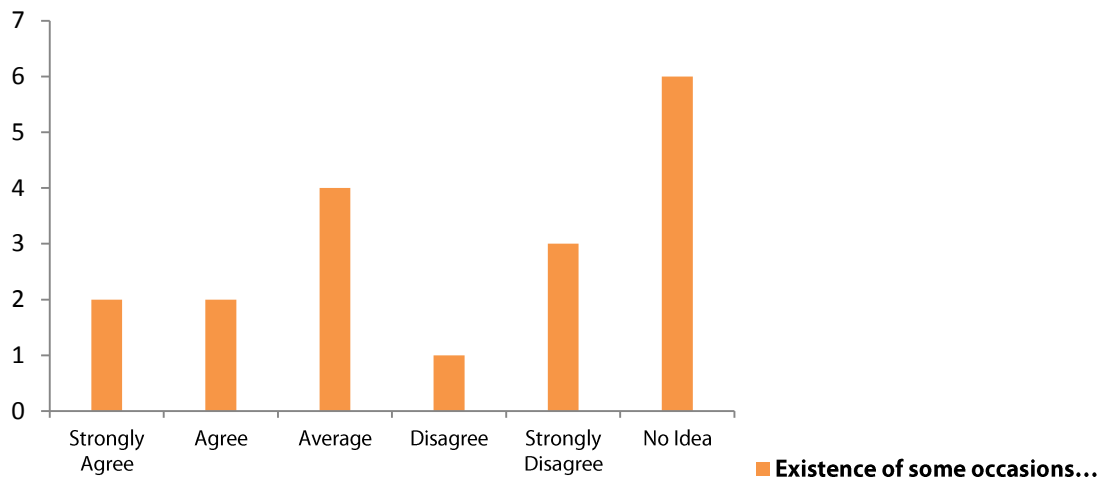
Figure 45: The results of Q27 in interview

The interviewed male tourist (TM1) who responded "Strongly Agree" to the statement said:

"Strongly Agree, most people come here with their families." (TM1, Q27)

One of the interviewed female residents (RF1) who responded "Agree" to the statement explained that:

"Agree, when some TV personalities come to the square you can see a lot of families." (RF1, Q27)

An interviewed male resident (RM2) considered religious and political ceremonies as these kinds of occasions:

"Average, religious or political ceremonies are nice." (RM2, Q27)

While, the interviewees (RF2) who replied "Strongly Disagree" stated that:

"Strongly Disagree, there are only religious and political events there." (RF2, Q27)

From the walking strategies it can be found out that the interviewees mostly responded "No Idea" which shows that they are not aware of these kinds of occasions. It may reveal that these kinds of occasions may not be very common. The only occasion that was mentioned during the interviewees was the presence of some TV personalities in Naghsh-e-Jahan square which drew families there.

7.2.12.3 Walking Strategy Findings

During the days that the walking strategies have been done by the researcher no occasion for families to come together occurred in Nghsh-e-Jahan Square. As a result this part of the study does

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not include any images taken by the researcher and consequently the discussions about this node are on the basis of interview findings.

The existence of family occasions in Naghsh-e-Jahan Square can draw families there and consequently, improve social sustainability of the place. As the square is mostly full of families, there may be other facilities which draw them in Naghsh-e-Jahan Square. On the basis of interviews results if there are some kinds of these occasions, it seems the interviewees are not aware of them.

The family occasions that the interviewees refer to were religious and political and the presence of TV characters at ceremonies in Naghsh-e-Jahan Square. In this study religious and political events are not considered in this part of study (for political and religious events see sections 7.1.8 and 7.1.9. Therefore there were no special family occasions (except the presence of TV characters) which where run by government and people.

7.2.13 Other Facilities

During the walking strategies the researcher found some facilities that were not considered in interview questions. As was mentioned in research methodology (section 3.4) the researcher could add new nodes during the data collection process. Consequently the following nodes; Cleanliness, Lighting, Public Toilets and Drinking Water have been added to the Facilities section as other facilities.

7.2.13.1 Cleanliness

Definition

Cleanliness and good maintenance can be considered as one of the factors of comfort in a place (PPS, 2000, p. 89). Finding a place clean can be a sign that there is somebody who cares about or feels responsibility for the place, which shows that people feel a sense of belonging and keep the place clean.

Furthermore, security of a place can increase by daily cleaning, preventative maintenance of physical facilities and appointing someone to be in charge of it (PPS, 2000, p. 89).

Walking Strategy Findings

The first node that the researcher could add during the walking strategies was "Cleanliness". There are 4 photos which have been coded against this node (see Figure 46).

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"..bins"

Photo no 5; (see Walking toward section 0)

"The bin helps to keep the area clean from rubbish"

Photo no 28; (see Walking along open space section 0)

"bin"

Photo no 37; (see Walking along open space section 0)
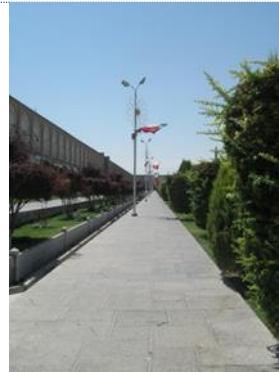
"…The path ahead is neat, tidy and paved (without any steps)"

Photo no 48; (see Walking across section 0)

Figure 46: Photos taken while walking with coded elements in "Cleanliness" node

As it can be seen from the walking strategies photos (Figure 46) Naghsh-e-Jahan Square seems tidy and clean and there are bins every few meters around the square.

Summary of Findings about Cleanness

Naghsh-e-Jahan Square as a populated urban public space seemed to be clean during the walking strategies. There are bins every few meters in Naghsh-e-Jahan Square and they help to keep the space clean.

7.2.13.2 Lighting

Definition

Lighting can clarify the layout of an urban public space by focusing on walkways, entrance and focal and gathering points. Moreover, by improving night time legibility it encourages the evening use and enjoyment of a place.

In Iran because of the climate conditions evening use of public spaces is in high demand and lighting can be one of the main factors which can draw people to the place.

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Lighting is the second facility that the researcher considered in this study as a new node. There are 12 coded images against "Lighting" (see Figure 47).

"..a simple lamp makes the display attractive"

Photo no 14; (see Walking along Bazaar corridor section 0)

"A big roof light and also a few colourful decoration lamps catch the eye and attract people to the shops"

Photo no 18; (see Walking along Bazaar corridor section 0)

"The corridor is full of lamps, some are turned on but others, more colourful are kept for special occasions"

Photo no 21; (see Walking along Bazaar corridor section 0)

"However, light from above brightens the traditional fabrics displayed below"

Photo no 26; (see Walking along Bazaar corridor section 0)

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"The lamps on the path seem to be very useful for safety at night time because they make the steps very clear"

Photo no 29; (see Walking along open space section 0)

"..flood lights"

Photo no 31; (see Walking along open space section 0)

"All the shops are turning on their lights, the light in the square seems to be enough"

Photo no 51; (see Walking across section 0)

"flood light"

Photo no 36; (see Walking along open space section 0)

"The lights are on"

Photo no 46; (see Walking across section 0)
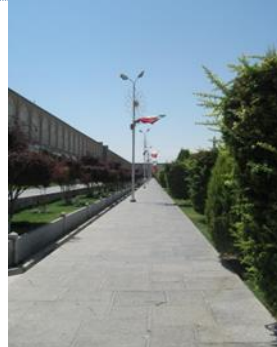
"There are street lights to illuminate the path at night"

Photo no 48; (see Walking across section 0)

"lights every few meters"

Photo no 5; (see Walking toward section 0)

"Low level lamps make the area around the paddling pool more illuminated"

Photo no 54; (see Walking across section 0)

Figure 47: Photos taken while walking with coded elements in "Lighting" node

There are different kinds of lighting in Naghsh-e-Jahan Square. One of them is the lights which are turned on during darkness (see photos no 29, 31, 54, 5, 48, 46, 36 and 51) and they illuminate the

open space of the square. They are located every few meters and at different heights. The second types are indoor lamps which are used to make the bazaar corridor useable during the nights (see photos no.14 and 51). The third are coloured lights which will sometimes be turned on even during the day. They are mostly used in bazaar corridors shops and they will be turned on during the special days of the different ceremonies (see photos no. 18 and 21). Another way to make the indoor space more illuminated in a traditional way is roof lights (see photos no. 18 and 26).

Summary of Findings about Lighting

From the walking strategies it can be found that there are various lights which are used in Naghsh-e-Jahan Square. The square is illuminated after the dark and this can help to keep people more in the square especially during the summer nights.

7.2.13.3 Public toilets

Definition

Another facility that can be found in public urban spaces is public toilets. Public toilets help people to stay longer in an urban public space. They are needed by every age group of people (children and adults). The researcher found public toilets in Naghsh-e-Jahan Square in two different places.

Walking strategy Findings

During walking strategies the other new node that the researcher could add was public toilets as a facility in Naghsh-e-Jahan Square. There are two images which were coded against this new node (see Figure 48).
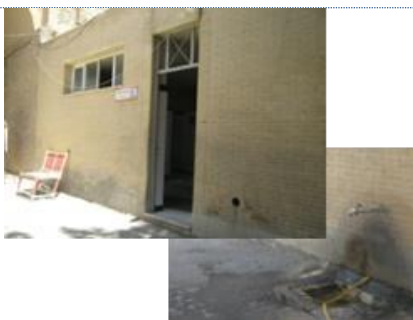
"..On the left side there are public toilets for women and men"

Photo no 20; (see Walking along Bazaar corridor section 0)

"The sign shows the location of the public toilets"

Photo no 8; (see Walking into section 0)

Figure 48: Photos taken while walking with coded elements in "Public Toilets" node

The researcher could find two public toilets in Naghsh-e-Jahan Square during the walking strategies (see photos no. 20 and 8). Although it seems difficult to find them without walking all

around the square, it is possible to ask the shopkeepers who are familiar with the square to find out.

Summary of Findings about Public Toilets

Although the public toilets in Naghsh-e-Jahan Square did not seem in high level of sanitary standards, they could meet people's needs. The good point was they are located in different parts of the square which can cover the entire square. There was another issue which was that finding them was not that much easy and sometimes it was necessary to ask the shopkeepers how to reach them.

7.2.13.4 Drinking Water

Definition

Drinking water is a facility needed in public urban spaces especially during the hot days of summer. In Iranian public urban spaces it is very common to have taps or fountains with drinking water. During the walking strategies the researcher discovered drinking water in Nagsh-e-Jahan Square and consequently, "Drinking Water" was considered as a new node for this study.

Walking Strategy Findings

During the walking strategies some places for drinking water could be found. There are 4 coded images against "Drinking Water" node in this study (see Figure 49).

"..a tap with water to drink and wash"

"…the only fountain on this side of the square seems to be closed at this moment (Ramadan month). However, at this time of the year (summer) it should have been used very often by people"

Photo no 20; (see Walking along Bazaar corridor section 0)

Photo no 29; (see Walking along open space section 0)

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"Drinking water taps and fountains are turned on"   "…a fountain with cold water "

Photo no 54; (see Walking across section 0)   Photo no 9; (see Walking into section 0)

Figure 49: Photos taken while walking with coded elements in "Drinking Water" node

It can be understood from the walking strategies results that there are two kinds of drinking water in the square: fountain and tap water. The fountains have cold water (see photos no. 29 and 9) and tap water may not be cold but it is drinkable (see photos no.54 and 20).

Summary of Findings about Drinking Water

From the walking strategies results it can be seen that there are some sources for drinking water. The taps with drinking water mostly are used for washing rather than drinking and the fountains with cold water are used for drinking. It is clear that the numbers of the fountains are not enough for the entire square. On the other hand, during the hot summer because of Ramadan all the fountains were closed which is not fair for children at least.

7.3 Subjective Perspectives

Subjective perspectives are involved experiences, feelings, beliefs, and desires and they can also be the collection of perceptions, experiences, expectations, personal or cultural understandings and beliefs specific to a person. In this research the relevant subjective perspectives in Naghsh-e-Jahan Square comprised the following nodes: legibility, Easy to find in the city, Important place in people's memories, Sense of belonging, Arranging an appointment with strangers, Safety, Significant functions, Social network groups and community notice board, Form of the Square and the final question is what aspect of the square people keep in their mind, what is important, attractive or even forgotten and also might be useful to find people's expectations of the space. As the part of "Subjective Perspectives" in this study is on the basis of people's conception of the place, consequently the results are based on interview findings.

7.3.1 Legibility

Definition

Lynch (1960, p. 2) describes legibility as the ease with which residents and visitors understand the layout of a place. In a legible place people make their way easily. Many kinds of cues are used to identify and structure the environment such as: land marks, colours, shape, light, motion or other senses such as smell and sounds (Lynch, 1960, p. 3). Furthermore, legibility can help a space to feel safer (Wekerle and Whitman (1995) cited by Elsayed (2008, p. 59).

Interviews Findings

Question no. 28 (Q28: To what extent do you agree with the following statements? "This place is legible.") was asked of the interviewees to find out how much Naghsh-e-Jahan Square has legibility. The fixed responses of the interviewees produced Figure 50.
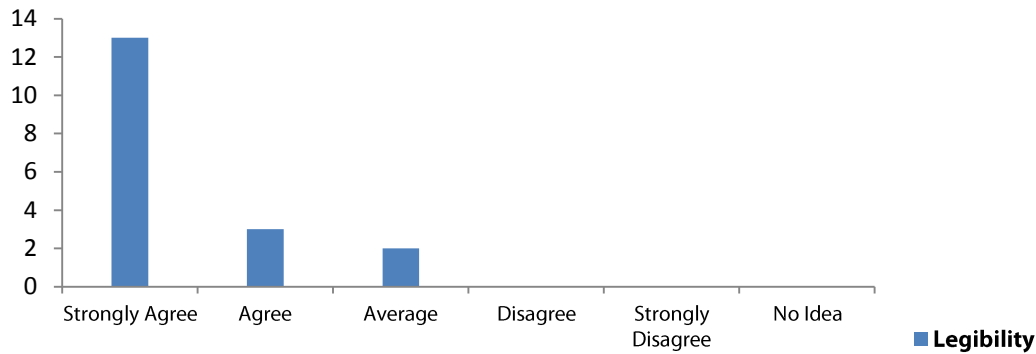
Figure 50: The results of Q28 in interview

Figure 50 that the majority of interviewees (72.2%) responded "Strongly Agree" to the statement and the rest of them (27%) stated "Agree" and "Average" for this statement. None of them replied "Disagree" and "Strongly Disagree".

Three of the interviewees (SF1, TM3 and SF3) cited that the square itself is legible but the bazaar corridors are sometimes confusing.

"Strongly Agree, the legibility of the square is excellent but some parts of Bazaar are complicated." (SF1, Q28)

"Strongly Agree, but the bazaar makes me sometimes confused." (TM3, Q28)

"Agree, the square is alright but the bazaar corridors are complicated." (SF3, Q28)

The other interviewed male tourist (TM1) who responded "Strongly Agree" stated that:

"Strongly Agree, it is because of the style of the square." (TM1, Q28)

Another interviewed male tourist (TM2) who replayed "Agree" to the statement commented that:

"Agree, these prominent building located four sides of the square are really helpful to give you directions." (TM2, Q28)

Overall, the interviewees know Naghsh-e-Jahan Square as a legible place where people can easily find their way.

Summary of Findings about Legibility

From the interview findings it can be understood that the interviewees confirmed the "Legibility" of Naghsh-e-Jahan Square. The reasons of "Legibility" that they explained are; the form of the square and existence of four main and different buildings (Imam Mosque, Sheikh Lotfoallah

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Mosque, Ali Qapu Palace and Qeysarieh Entrance) located in four sides of the square. These building can work as land mark to find direction in the square.

7.3.2 Easy to Find in the City

Definition

Although these days way-finding is not as difficult as before there are many devices such as maps, navigators and even presence of the others, "successful cities will be those that connect people, movement and places efficiently"(Kelly and Kelly, 2001, p. 7). The location of a public urban space in cities can be crucial for orientation.

Interviews Findings

After asking Q29 (To what extent do you agree with the following statements? "This square is easy to find in the city. ") of the 18 interviewees, the following conclusions can be drawn from this stage of the study (see Figure 51).
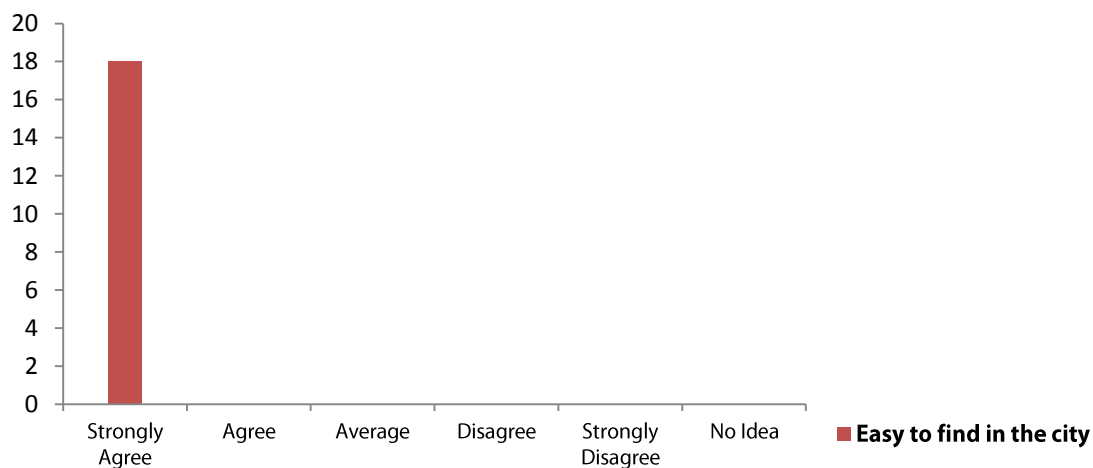
Figure 51: The results of Q29 in interview

Surprisingly, all the interviewees (100%) responded "Strongly Agree" to the statement. One of the interviewees (SF3) commented that:

"Strongly Agree, it is the centre of the city and all ways ended to this square." (SF3, Q29)

The responses of this question confirm that Naghsh-e-Jahan Square is easy to find in Isfahan city.

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It can be seen from the interview results that all the interviewees and even the tourists who are not familiar with Isfahan city did not have any problem to find the square. It can depend on the location of Naghsh-e-Jahan Square which is the centre of Isfahan; also the streets and signs which guide people may be effective as well.

7.3.3 Hearing some Narratives and memories about the square (Important place in people's memories)

Definition

Memories are not always private sections of our lives. Places can be containers for memories (Ernst, 2012, p. 42). As we have relationships with the places that surrounded us unavoidably, over time places structure and shape our sense of self (Trigg, 2012, p. 1). Having a memory of a place shows us the role of the place in our everyday life. Also the memories we acquire of a place are assumed as values that are vital (Trigg, 2012, p. 1) and they help to enhance the sense of belonging to a place.

Interviews Findings

Question no.30 (Q30: To what extent do you agree with the following statements? "You have heard some narrative and memories about this place. ") was asked of the interviewees. Figure 52 shows the results of the fixed responses.

Q30 in the interview reveals that all the interviewees (100%) responded "Strongly Agree" and "Agree" with the statement, which means that Naghsh-e-Jahan Square is important in their memories.
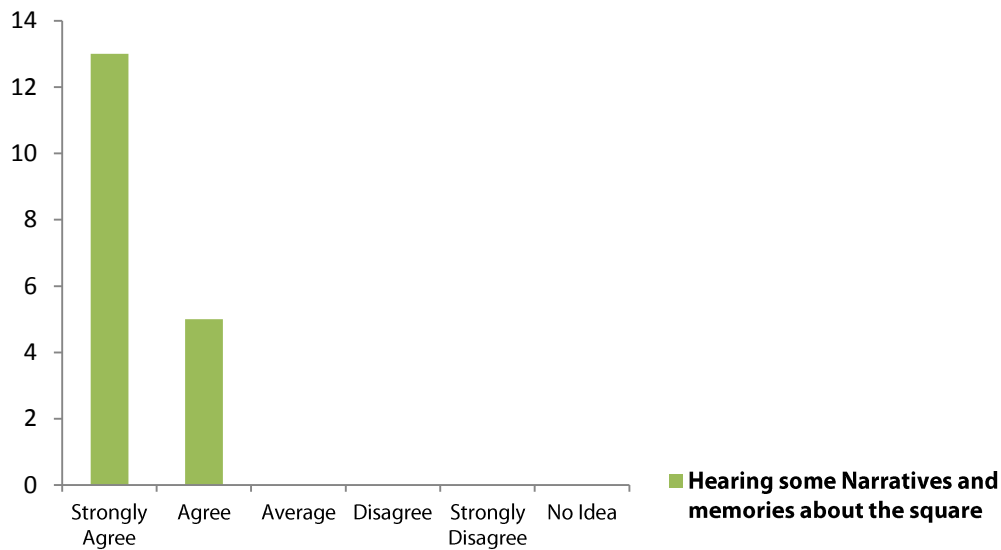
About this question (Q30) the interviewees made some comments which brought to their mind related memories to Naghhs-e-Jahan Square. Some of them (RF1, SM3 and TF2) have got memories from childhood:

"Strongly Agree, I have many memories from when I was a child, I came here with my family and cousins to eat ice cream and get on the carts." (RF1, Q30)

"Strongly Agree, when I was high school student, my classmate and me came to the square to speak with tourists in order to improve our English language and also we prayed in the mosque every noon." (SM3, Q30)

An interviewed male shopkeeper (SM2) who responded "Strongly Agree" explained his memories and complained about the present condition of Naghsh-e-Jahan Square:

"Strongly Agree, I have been here about 40 years I have seen and experienced a lot of events in this square such as; political events and we saw a lot of tourists in the past but now nothing." (SM2, Q30)

Even the interviewed tourist (TF2) who was not living in Isfahan city has some memories about Naghsh-e-Jahan Square:

"Strongly Agree, I often come to Isfahan and I have got a lot of relevant memories with my family and relevant." (TF2, Q30)

As shown by the interviews and comments, the interviewees have memories of Naghsh-e-Jahan Square. The interviewees have different memories from their childhood and adulthood.

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The interview results confirm that Naghsh-e-Jahan Square is an important place in people's memories. All the interviewees have memories about the square. Even the tourists who may not come regularly to the square have memories in Naghsh-e-Jahan Square. It shows the place is valuable (Trigg, 2012, p. 1) for the visitors.

7.3.4   Sense of Belonging

Definition

The need for belonging is one of the main human needs. Maslow and Frager (1987) believe that sense of belonging is a subjective feeling of being a part of a social system. Anant (1966) believes that the more people consider their needs are being met in a place or community, the more people feel a sense of belonging (cited by M Smith, 2011, p. 48). Therefore meeting needs such as safety, legibility and having influence and voice in the space can enhance and improve the sense of belonging. A sense of belonging is a significant element in increasing and maintaining people's relationship with one another and also contributes to people's well-being (Hagerty, Williams, Coyne, & Early, 1996; McLaren & Challis, 2009; Steger & Kashdan, 2009 (cited by M Smith, 2011, p. 49))

If people in Naghsh-e-Jahan Square experience a sense of belonging they feel responsibility for the place. Consequently social interactions improve and even people even try to keep the space in high quality condition.

Interviews Findings

Question no.31 (Q31: To what extent do you agree with the following statements? "You feel sense of belonging in this square") was asked of the interviewees to find out the existence of "Sense of Belonging" to Naghsh-e-Jahan Square. The following conclusions can be drawn from this stage of the study (see Figure 53).

Figure 53 illustrates that all the interviewees (100%) responded "Strongly Agree".
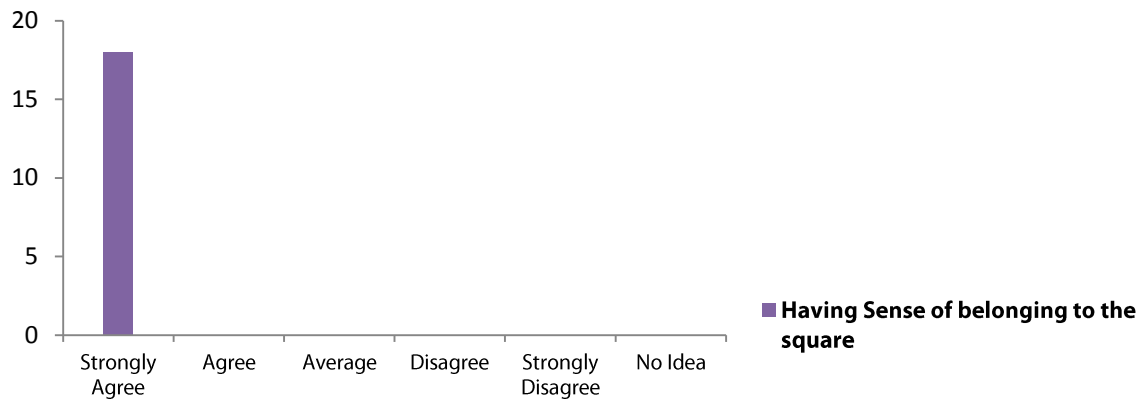
Even the interviewed tourists (TM1 and TM3) who do not live in Isfahan city as Iranians feel a sense of belonging:

"Strongly Agree, every Iranian has this feeling in this square." (TM1, Q31)

"Strongly Agree, I feel proud here." (TM3, Q31)

Surprisingly, all the interviewees feel a sense of belonging to the square.

Summary of Findings about "Sense of Belonging"

The results of the interviews show all the interviewees answered "Strongly Agree". When the interviewees a feel sense of belonging to the square it reveals that Naghsh-e-Jahan Square meets their needs (M Smith, 2011, p. 48). Also having a Sense of belonging enhances social sustainability by improving social interactions.

7.3.5 Arranging an appointment with new aquaintances

Definition

Selecting a place to arrange an appointment with other people can show many constructive aspects of the place. PPS (2000, p. 92) considers that one of the main indications of sociability (see section 2.3.5) of the place is: Whether people arrange appointments with others in the place. Lennard (2008, p. 216) also believes that arranging to meet other people in a place demonstrates the existence of facilities such as enough place to sit, restaurants and hospitality in the place.

Additionally, choosing Naghsh-e-Jahan Square as a place to arrange an appointment with new acquaintances may be representative of a sense of pride, belonging and even that the place is accessible and well known.

The researcher asked question no.32 (Q32: To what extent do you agree with the following statements? "You arrange an appointment with new acquaintances in this place.") to find out how much people arrange their appointments in Naghsh-e-Jahan Square. Figure 54 is shows the responses to this question.

Figure 54 shows that the majority of the interviewees (66.6%) answered "Strongly Agree" and "Agree" to this statement, while about 16% of the interviewees responded "Disagree" and "Strongly Disagree".
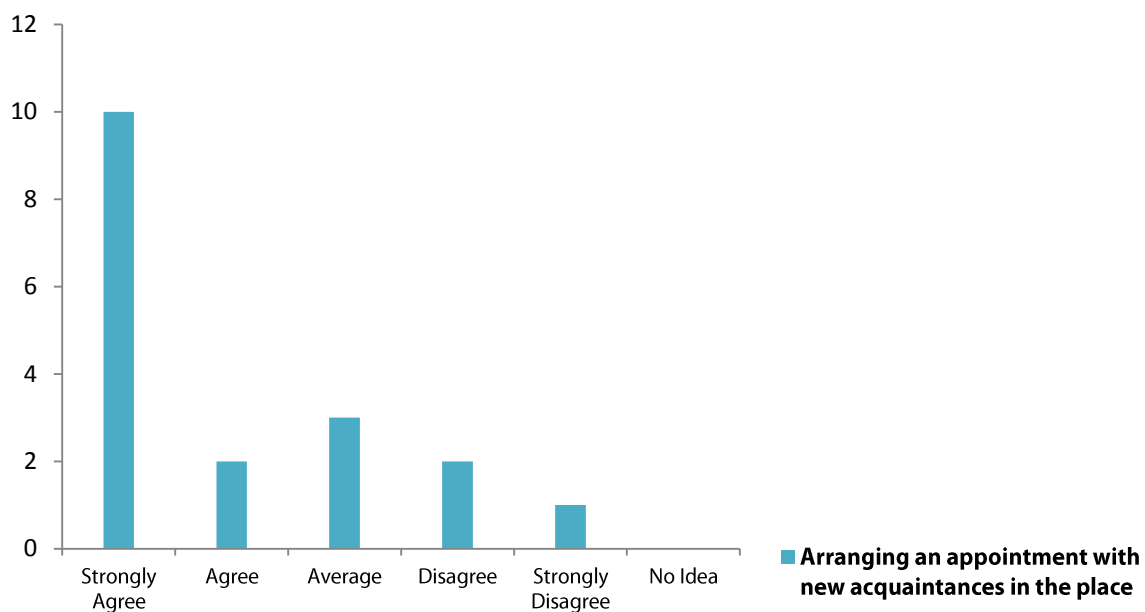
Figure 54: The results of Q32 in interview

An interviewed female shopkeeper (SF2) stated that:

"Strongly Agree, I think everybody knows this square and also it is easy to find in the city." (SF2, Q32)

Other interviewees (SM2 and RM2) considered having an excellent environment and being a lively place as the main reasons:

"Strongly Agree, the environment is excellent." (SM2, Q32)

"Strongly Agree, it is good and lively place." (RM2, Q32)

In contrast, two interviewees (TM3 and RF3) who replied "Average" to the statement explained the reasons:

"Average, I like to make appointments in a more private place." (TM3, Q32)

"Average, because it is busy place." (RF3, Q32)

Overall, the majority of the interviewees chose Naghsh-e-Jahan Square as a place to arrange their appointments with new acquaintances. They like the environment of the square and also being well-known is another reason to choose it.

Summary of Findings about "Arranging an Appointment with new acquaintances"

From the results of the interviews it can be found out that the interviewees mostly choose Naghsh-e-Jahan Square to arrange an appointment with new acquaintances. The interviewees who liked to come to the square for this purpose explained the reasons: fist, everybody knows the square in the city or even in the country and second, being lively with an excellent environment. In contrast, some interviewees who responded "Average" gave the reason that the square is busy and they need a more private place. In general Naghsh-e-Jahan Square can be considered as a place for people to arrange an appointment with people you do not know well.

7.3.6 Safety

Definition

Feeling secure is one of significant people's needs in public urban spaces (Maslow 1968 & Lang, 1994 (cited by Elsayed (2008, p. 53)). PPS (2000, p. 17) considers safety as one of the main factors of human comfort in public urban spaces. Security can also encourage recreational activities to occur(Elsayed, 2008, p. 49) which improve a space and make it more liveable.

Security can be divided into two groups of physical and psychological needs; the physical one is includes feeling safe from criminal assaults and different kinds of accidents and psychological security is having control in a space which can be provided by knowing the environment (Elsayed, 2008, p. 58).

The "Visibility" of a surrounding environment, streets and roads and being seen by other people is mentioned by Giles-Corti et al., (2005, p.171), Wekerle and Whitman (1995) and Crowe (2000) (cited by Elsayed, (2008, p. 58)). "Legibility" of the space is provided by knowing, understanding the space and being aware of the environment by the user (Wekerle and Whitman (1995) cited by Elsayed, (2008, p. 58), also refer to section 7.3.1. Providing adequate "Lighting" can enhance visibility and legibility of the space and encourage evening use of the space which can help the space to be more secure (Elsayed, 2008, p. 59). "Evening Use" existence of evening use can be considered as one of the main factors that demonstrate security in the space (PPS, 2000, p. 88).

"Existence of women, children, elderly and families" can also display the level of security of the space (PPS, 2000, p. 88) and "Aesthetic factors" such as cleanness and tidiness, maintenance and care and undamaged amenities can enhance the sense of safety and security by improving the image of the space (Wekerle and Whitman, 1995 cited by Elsayed (2008, p. 59).

On the other hand security is mainly related to people's perception of security and it depends on who the users are. In Iranian culture the safety of a space can be mostly revealed by the presence of people during the evening and night. Furthermore, as in Iranian Muslim culture women are not allowed by male relatives to stay outside generally after dark, another safety measurement may be the rate of women's presence in public urban spaces. Although this issue is now less important in Iranian society and women are going to be more independent, this factor may still be significant especially among young women. As a result, there are two following questions (Q33 and Q34) which refer to the "Safety" of Naghsh-e-Jahan Square.

Staying Alone in the Square
In this study "Staying Alone in the Square" is considered as one of the sub nodes that refer to the "Safety" of Nagsh-e-Jahan Square.

7.3.6.1.1   Interviews Findings
The researcher asked the question no.33 (Q33: To what extent do you agree with the following statements? "You stay in this square alone.") of the interviewees to find out how safe Naghsh-e-Jahan Square is considered to be. Figure 55 shows fixed responses of the interviewees.

Figure 55 shows that more than 77% of the interviewees responded "Strongly Agree" and "Agree" to this statement, however only about 11% answered "Disagree" and "Strongly Disagree" to the statement of "Staying Alone in Naghsh-e-Jahan Square".
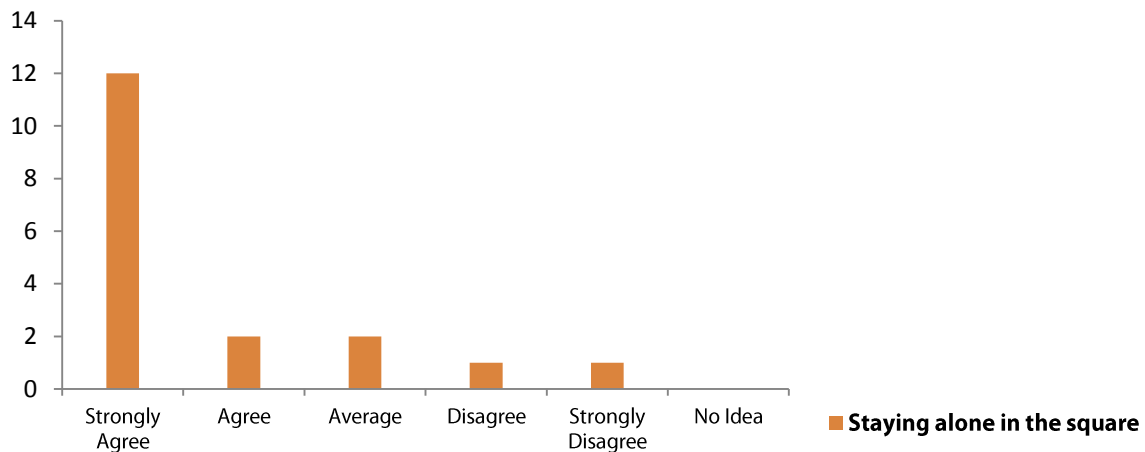
Figure 55: The results of Q33 in interview

Although the majority of the interviewees stayed in the square alone, there are even two interviewed males (RM3 and TM1) who prefer not to stay alone in Naghsh-e-Jahan Square.

"Agree, I like to stay with my friends." (RM3, Q33)

"Average, I preferred to stay with my family and friends." (TM1, Q33)

Two interviewed female residents (RF1 and RF2) stated that:

"Average, I can stay late just with my family and friends but during the evening I am ok to stay alone." (RF1, Q33)

"Strongly Disagree, I do not like to come to this kind of place alone, I will come with my friend." (RF2, Q3)

The interviews show that the majority of the interviewees considered Naghsh-e-Jahan Square as a safe place.

7.3.6.1.2   Summary of Findings about "Staying Alone in the Square"

The interviews show that most of the interviewees stay alone in the square which shows the safety of Naghsh-e-Jahan Square.

You (male) allow your female relatives stay in this square alone

In this study "You (male) allow your female relative stay in this square alone" is considered as another sub node that refers to the "Safety" of Naghs-e-Jahan Square. Question no.34 was asked only of the male interviewees. Although this question made some of the interviewed females protest, this culture is still very common in Iran.

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The researcher asked the question no.34 (Q34: To what extent do you agree with the following statement? "You (male) allow your female relatives to stay in this square alone. "of the interviewees to find out how safe Naghsh-e-Jahan Square is considered to be. Figure 56 shows fixed responses of the interviewees.

Figure 56 shows that more than 66% of the interviewees responded "Strongly Agree" and "Agree" to this statement, while only about 33% answered "Disagree" to the statement.
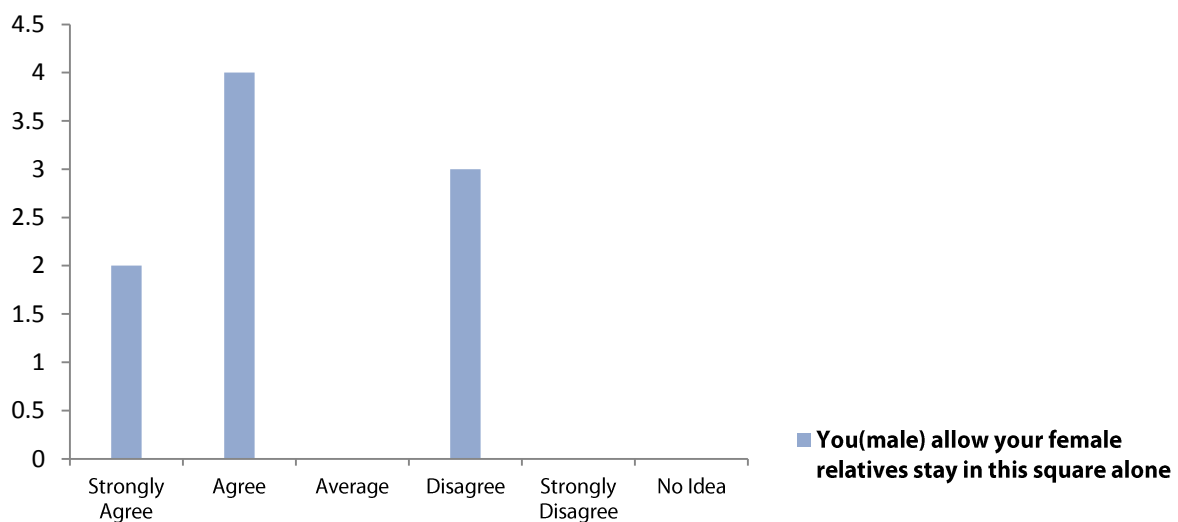
Figure 56: The results of Q34 in interview

An interviewed male tourist (TM1) stated the reason of being safe is that:

"Strongly Agree, the tourists and presence of different people make a safe place." (TM1, Q34)

Three other interviewees (RM2, TM2 and SM1) knew the place to be safe during special times:

"Agree, I allow them until 11 during nights." (RM2, Q34)

"Agree, until 9 P.M I will allow them." (TM2, Q34)

"Agree, not during the weekends and holiday, the square gets so busy with strange people."(SM1, Q34)

Another interviewee (SM3) considered the reason for the safety of the square is the Police Station and also he referred to an interesting point that allowing female relative to stay out depends on family culture:

"Agree, here is safe there is police station but to me it depends on family culture not the condition of the place." (SM3, Q34)

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Another male interviewee mentioned that:

 "Disagree, I will not allow my family to stay here late not just here but anywhere." (SM2, Q34)

Overall, the interviewees mostly allowed their female relatives to stay in the square alone which means that the square is safe.

7.3.6.1.4   Summary of Findings about "Allowing the Female Relatives Stay in the Square Alone" (for male)

From the interviews it can be seen that the interviewees mostly accepted Naghsh-e-Jahan Square as a safe place, although some of the male interviewees believed that being safe depends on the time. One of the interviewees considers the presence of other people and Police Station as the reasons of being safe. Although as one of the interviewees (SM3, Q34) commented it can depends on family's culture to some extent, in general people consider Naghsh-e-Jahan Square as a safe place.

7.3.7   Significant functions

Definition

Providing powerful reasons for people to come to squares on a regular basis is one of the influential issues which can improve squares (Lennard, 2008, p. 218). The existence of any significant function which can draw people to the space can be considered as a positive aspect. One of the main functions (uses) which always draws people to traditional Iranian squares is shopping. As the traditional Iranian square is always part of a bazaar, it has taken advantage of bazaar attractions to be more liveable.

Interviews Findings

Question no. 35 (Q35: To what extent do you agree with the following statements?" There are significant functions to draw you here.") was asked of the interviewees to find out the existence of significant functions to draw people in Naghsh-e-Jahan Square. The fixed responses of the interviewees produced Figure 57.

Figure 57 shows that the majority of interviewees (83.3%) responded "Strongly Agree" and "Agree", while the rest of them (about 17%) answered "Average" to the statement. Also, no one replied "Disagree" and "Strongly Disagree" to this statement.
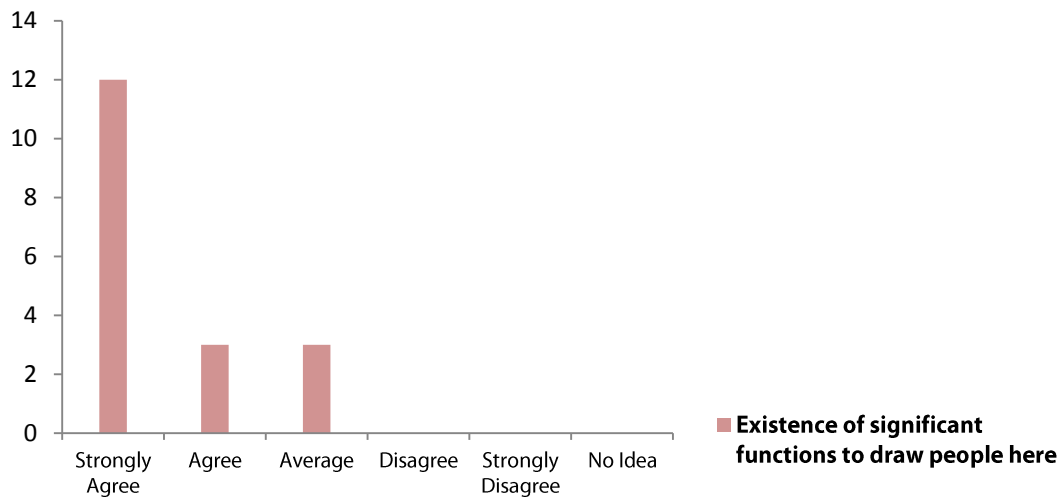
Figure 57: The results of Q35 in interview

The interviewees' comments show that there are several significant functions that draw people to Naghsh-e-Jahan Square. One interviewed female shopkeeper (SF1) stated:

"Strongly Agree, we usually come here to buy "Gaz" (a traditional sweet)." (SF1, Q35)

Another female shopkeeper (SF3) added:

"Strongly Agree, I come to the square to buy hand crafts and see international tourists." (SF3, Q35)

An interviewed male shopkeeper (SM1) explained why his mother comes to the square for, specific reasons:

"Strongly Agree, for example my mum buys spices and some handcrafts only from this square." (SM1, Q35)

Another interviewed male shopkeeper (SM3) stated that the Bazaar itself can be the main reason:

"Strongly Agree, the main Isfahan Bazaar are here and Bazaars always have got something that you cannot find anywhere else." (SM3, Q35)

The interviewed tourists (TF2, TM2, TF3 and TM1) cited the historical building and hand-crafts as the main reasons to come to the square:

"Strongly Agree, there are a lot of functions, visiting historical buildings and shopping." (TF2, Q35)

"Strongly Agree, visiting the historic building, every time I feel it is the first time." (TM2, Q35)

"Strongly Agree, hand crafts can draw me here." (TF3, Q35)

"Strongly Agree, there are a lot of functions, historical building are the main." (TM1, Q35)

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The interview results show that there are some functions that draw people to Naghsh-e-Jahan Square.

Summary of Findings about "Significant Function"

Every public urban space needs to provide some significant functions to draw people there. From the interviews it can be seen that Naghsh-e-Jahan Square also has these kinds of functions. In addition to some attractive aspects like historical building and some special goods such as hand-crafts, Naghsh-e-Jahan Square benefit from being a part of Isfahan Bazaar. As one of the interviewees (SM3) mentioned, bazaars always have something special that you cannot find anywhere else. In general, it can be said there are some special and significant functions that are successful in drawing people to Naghsh-e-Jahan Square.

7.3.8   Social Network Groups and Community Notice Boards

Definition

Residents need to have a say in shaping and improving their environment (Woodcraft et al., 2011, p. 37.) Social network groups and community notice boards give an opportunity to residents to express their thoughts and sometimes share their feelings about the space. Neighbourhood websites, community media, Community Facebook groups, Community noticeboards and newsletters (Woodcraft et al., 2011, p. 38) can be considered as social network groups and community notice boards. In Naghsh-e-Jahan Square some Community Face book groups exists.

Interviews Findings

Question no. 36 (Q36: To what extent do you agree with the following statements? "This place has got social network groups and community notice board.") was asked of the interviewees to find out the "Social Network Groups and Community Notice Board" in Naghsh-e-Jahan Square. The fixed responses of the interviewees are shown in Figure 58.
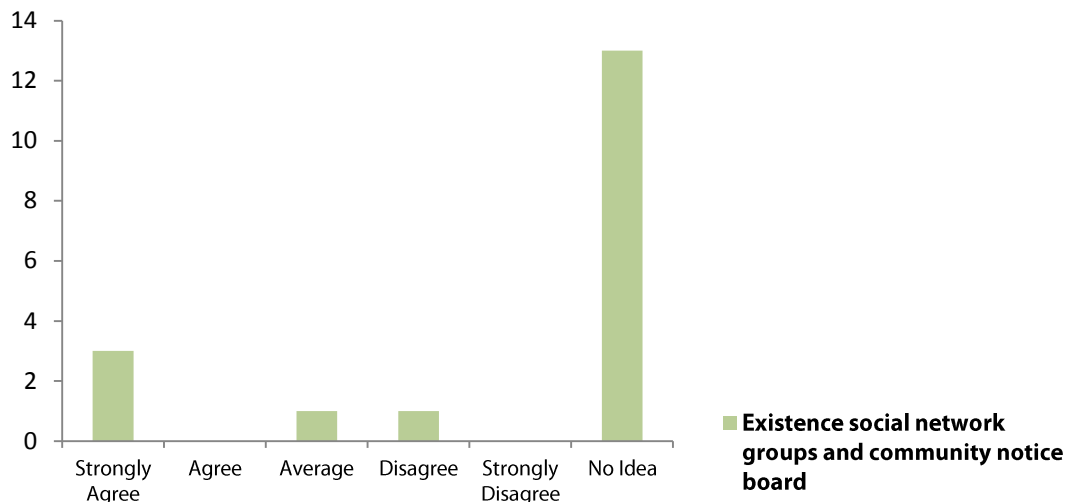
Figure 58: The results of Q36 in interview

The majority of interviewees (72.2%) responded "No Idea", however 16.6% of the interviewees answered "Strongly Agree".

The interviewees who responded "Strongly Agree" (TF2, TM1 and TM3) mentioned the Facebook page as the main social network group:

"Strongly Agree, there are some pages in Facebook and other internet pages." (TF2, Q36)

"Strongly Agree, there is a Facebook page that I like." (TM1, Q36)

"Strongly Agree, Facebook page." (TM3, Q36)

On the other hand, another interviewee who replied "Disagree" stated that:

"Disagree, there is a Facebook page but I am not a member because you cannot be active there with your real name." (RF2, Q36)

The interview results show that there are some internet websites and a Facebook page that belong to Naghs-e-Jahan Square. If there are any other community notice boards the interviewees are not aware of them which means that they are not well-known enough.

Summary of Findings about "Social Network Groups and Community Notice Board"

From the results of the interviews "Social Network Groups and Community Notice Board" in Naghs-e-Jahan Square have no significant role to improve social sustainability. Although 16.6% of the interviewees mentioned Facebook pages and internet websites as social network groups, in

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Iran not everybody has access to the internet and Facebook (as Facebook is still filtered by the government). Consequently, a Facebook page is not a public page in Iran.

On the other hand, there may exist some notice boards but the researcher during her research could not find them and the interviewees were not aware of them. As a result, it can be said that the Social Network Groups and Community Notice Boards need to be established or improved in Naghsh-e-Jahan Square.

7.3.9   Form of a Square

Definition

Town Squares come in all kinds of shapes in different parts of the world. The shape of a town square in addition to aesthetic aspects can be influential in attracting people. Lennard (2008, p. 47) believes that linear spaces cannot encourage people to stay and they mostly enhance movement.

Traditional Iranian squares are mostly in the shape of rectangles and squares. Consequently it may be necessary to know which shape the interviewees prefer and this also shows how pleased they are with the current shape of Naghsh-e-Jahan Square.

Interviews Findings

The researcher asked question no.37 (Q37: The best form of square that you like is…) to the interviewees to find out how far the interviewees are pleased with the form of Naghsh-e-Jahan Square. The responses of the interviewees are shown Figure 59.

Figure 59 demonstrates that the most favourite form of a square is "Rectangle", after that "Oval" and then "Circle. No one chose the "Pentagon" shape for a square.
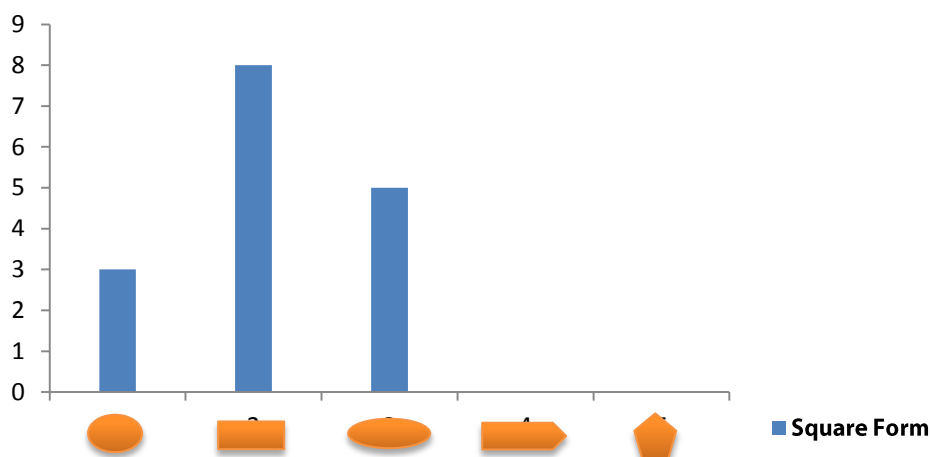
Figure 59: The results of Q37 in interview

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The results of the interviews in this regard show that the interviewees are mostly pleased with the form of Naghsh-e-Jahan Square.

Summary of Findings about "Form of a Square"

As can be seen from the interviews, the interviewees preferred "Rectangle" which is the shape of Naghsh-e-Jahan Square. This form of square can be one of the best where people can gather. It can be contrasted with the linear form of the Bazaar corridors which encourage people to move and not to stay.

7.4   Built Fabric

Built fabric is a very relevant factor to the architecture of a place which in this study has been explored by walking strategies (see section 6.3.2). This part of study tries to review physical and architectural elements and components from a mostly architectural point of view during the walking strategies. Also, in some sections the second part of the interviews, the produced visual materials which illustrate interviewees' perceptions of Naghsh-e-Jahan Square have been considered. In this study the relevant factors of built fabric are: Focal points and Anchors, Civic, religious and historic buildings, Change in level and steps, Surface and fitting, Entrances and access, Variety and colour and Visual enclosure.

7.4.1   Focal Points and Anchors

Definition

People naturally like to gather where other people are present, so they need anchors to pause or focal elements around which to cluster (Lennard, 2008, p. 59). Elements such as sculptures with steps, ledges or benches that provide resting place (Lennard, 2008, p. 59) with the ability to observe can be considered as focal points and anchors.

Focal points and anchors in Naghsh-e-Jahan Square are some of the objectives that are considered in this study. As the square has four main buildings (Imam Mosque, Sheikh Lotfollah Mosque, Ali Qapu Palace and Qeysarieh Entrance) which are located on four sides of Naghsh-e-Jahan Square, consequently, before doing the interviews and walking strategies it was expected that they can work as the focal points and anchors in Naghsh-e-Jahan Square.

Interviews Findings

On the basis of second part of the interviews which addressed interviewees' conceptions of Naghsh-e-Jahan Square (see section 6.4.3), the interviewees produced 7 drawings Figure 60 shows these 7 visual materials. As the interviewees were asked to draw what they have in their mind from the square, it can be seen which buildings are important for them.
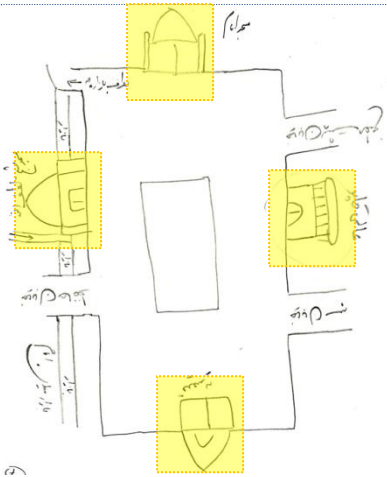
"The next stage was showing important buildings of the square and he started with Qesarieh Entrance which is the main bazaar entrance from the square. He rotated the paper into the left side and drew Ali Qapu Palace near the displayed Bazaar corridor. He rotated the paper and in the opposite side of the Qesarieh Entrance drew the Imam Mosque then in the opposite side the Sheikh Lotfollah Mosque"

See interview (RM2) section 0
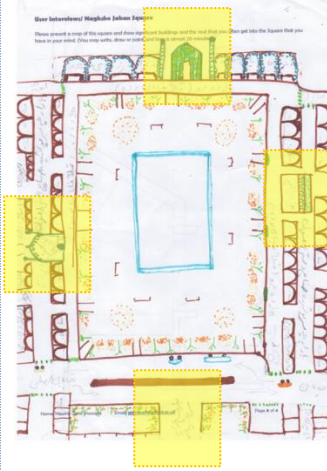
"all the focal points"

See interview (TF1) section 0
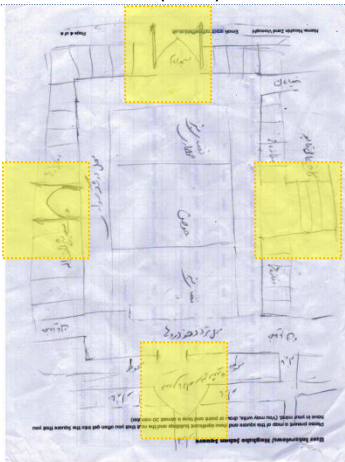
"depicted Imam Mosque, Ali Qapu Palace, Qesarieh Entrance, Sheikh Lotfollah Mosque"

See interview (TM1) appendix no.7
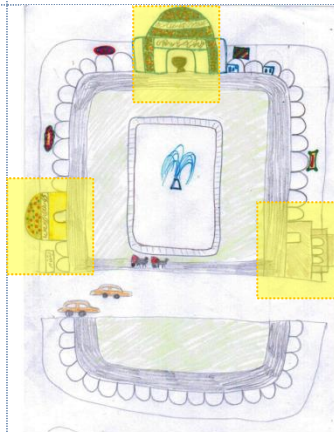
"After Sheikh Lotfollah Mosque she illustrated Ali Qapu palace without any colour. Then she located Sheikh Lotfollah mosque with tile works details in her map and said it is the other masterpiece after Imam Mosque"

See interview (TF2) section 0

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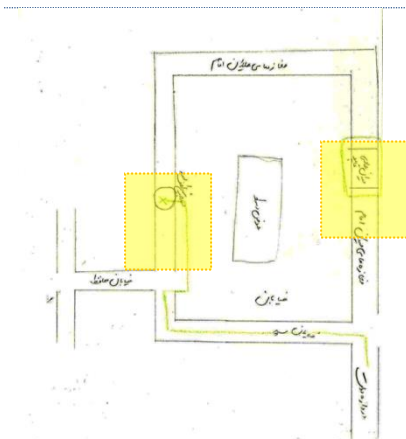
"Ali Qapu Palace, she illustrated Sheikh Lotfollah Mosque"

See interview (SF2) appendix no.5
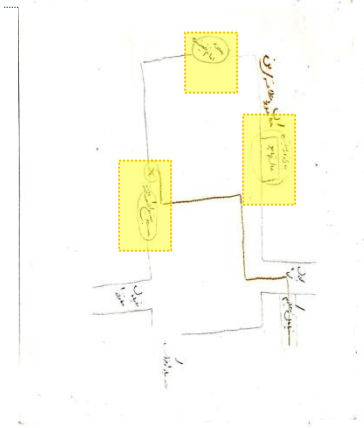
"She drew respectively Ali Qapu, Imam Mosque and Sheikh Lotfollah Mosque"

See interview (SF1) appendix no.4
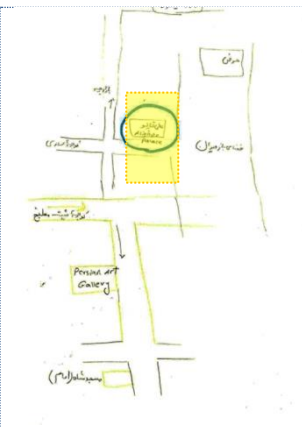
"She started by drawing a small rectangle as Ali Qapu Palace"

See interview (TF3) appendix no.6

Figure 60: The interviewees' drawings with coded elements in "Focal Points and Anchors" node

It can be seen from the visual materials that the square has four focal points and anchors located on four sides of the square. All of the interviewees drew "Ali Qapu Palace" as a main building. After that "Sheikh Lotfollah Mosque was the second one that interviewees drew, the "Imam Mosque" was third and finally the last was "Qeysarieh Entrance".

Three out of seven of the interviewees who drew for this study referred to all four focal points. The results of the interviews show that these main buildings of the square are important in the interviewees' minds.

Walking Strategy Findings

This section reports the findings about "Focal Points and Anchors" during walking strategies. The results of data gathered through the walks are 12 images which were coded against this node by

the support of Nvivo 9. Figure 61 shows the coded photos of this node with the researcher's explanations during the walking.

"approaching the square open space and one of the main buildings of the square, Sheikh Lotfollah mosque is located on the left side"

Photo no 13; (see Walking along Bazaar corridor section0)

"we see the Sheikh Lotfollah mosque from about the middle of the square, one of the main focal points"

Photo no 49; (see Walking across section 0)

"we see an entrance to the corner of the square which leads to the Imam Mosque side"

Photo no 17; (see Walking along Bazaar corridor section0)

"I see one of the main architectural masterpieces in the square Imam Mosque. The mosque dominates the sky line and it is one of the main focal points in the square"

Photo no 35; (see Walking along open space section 0)

"the views open out to the other side of the square where the Ali Qapu is located"

"..the other focal point of the square Ali Qapu is not crowded as much as other focal points

Photo no 31; (see Walking along open space section 0)

because there are no places to sit and observe the square"

Photo no 55; (see Walking across section 0)

"focal point of Imam Mosque"

"Three main buildings or focal points of the square can be seen"

Photo no 6; (see Walking into section 0)

Photo no 9; (see Walking into section 0)

"watching the square from this point seeing three main focal points"

Photo no 62; (see Walking across section 0)

"three main buildings are located"

Photo no 65; (see Driving section 0)

"see Sheikh lotf allah Mosque as a focal point on the opposite side" Photo no 7; (see Walking into section 0)	" Steps are a good place to sit for people and some carpet traders" Photo no 44; (see Walking along open space section 0)

Figure 61: Photos taken while walking with coded elements in "Focal Points and Anchors" node

As can be understood from the walking strategies, there are four buildings that are located on each side of the square that can attract people. These historic buildings work as museums now. Most of them are obvious from all corners of the square even when driving (see photos no. 62 and 65).

The focal buildings are different and attractive which draws people (see photos49, 39 and 35). Although the "Qeysarieh Entrance" seems to need maintenance (see photo no.44), it can attract the Bazaarian more. The other point is that there are levels and steps in front of these building (except "Ali Qapu Palace" (see photo no. 55)) which invite people to sit, rest and observe the square (see photos. No 35, 49 and 44).

Summary of Findings about "Focal Points and Anchors"

From the interviews and walking strategies it can be found that the square has four focal points and anchors (Imam Mosque, Sheikh Lotfollah Mosque, Ali Qapu Palace and Qeysarieh Entrance) which draw and invite the visitors. Although they may have different power to attract people, for example although "Ali Qapu Palace" has no places for people to gather and sit, it is the building that all the interviewees drew in their drawings. In contrast, although the "Qeysarieh Entrance" which is the entrance of the main bazaar has space for people to gather and sit with a pool in front, it did not stay in interviewees' minds as much as other focal points. In general, the square has these focal points and anchors for people to gather and every public urban space needs focal points.

7.4.2   Civic, Religious and Historic buildings

Definition

The existence of some important buildings in town squares can improve the liveability of the place by drawing people there. Naghsh-e-Jahan Square can be considered as one of the places which includes the main buildings of the city. The buildings such as Ali Qapu Palace (one of the King's house), Imam Mosque (the main Mosque of city), Sheikh Lotfollah Mosque (King's Mosque) (refer to section 6.2.1 and the bazaars are located around this square and they may be considered as

civic, religious and historic buildings. Finding out the present conditions of these buildings was one of the aims of this study which was achieved by my walking strategy.

Walking Strategy Findings

One of the objectives that the researcher looked for during the walking strategies was finding "Civic, Religious and Historic Buildings" in Naghsh-e-Jahan Square. In this regard there are 15 photos which have been coded against "Civic, Religious and Historic Buildings" node (see the Figure 62).

"..historic elements polo gates which seem to need more consideration to their upkeep"

Photo no 34; (see Walking along open space section 0)

"Different colours of the square facades and the mosque give contrast in the square walls, a master piece of tile works with religious colours"

Photo no 35; (see Walking along open space section 0)

"historic element polo gate needs some protection from erosion"

Photo no 36; (see Walking along open space section 0)

"…on the other side there is the Islamic art and culture research centre"

Photo no 3; (see Walking toward section 0)

…"the main arch of the entrance with a wonderful ancient painting seems to need repair and maintenance."

Photo no 44; (see Walking along open space section 0)

"..a masterpiece of tile works with religious colours, the different colours of the facades around the square and the mosque itself make the mosque prominent"

Photo no 49; (see Walking across section 0)

"On right side is the Police Station which makes the square more secure"

Photo no 58; (see Walking across section 0)

"..we see the Sheikh Lotfollah mosque from about the middle of the square, one of the main focal points"

Photo no 49; (see Walking across section 0)

"the other focal point of the square Ali Qapu is not crowded as much as other focal points because there are no places to sit and observe the square, Beautiful wooden window "

Photo no 55; (see Walking across section 0)

"On the left side the Municipality Kiosk run by Town Hall for the Bazaar area"

Photo no 58; (see Walking across section 0)

"…ancient stone polo gates do not seem to shut perfectly and need some protection against erosion"

Photo no 62; (see Walking across section 0)

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"The Police Station was temporarily housed in a caravan at the time of driving but was later replaced by a permanent kiosk, seen when walking across the square"

Photo no 65; (see Driving section 0)

"…temporary Municipality Kiosk relevance to Bazaar area which is now a modern kiosk"

Photo no 65; (see Driving section 0)

Figure 62: Photos taken while walking with coded elements in "Focal Points and Anchors" node

It can be seen from the coded photos that there are several civic, religious and historic buildings in Naghsh-e-Jahan Square. Naghsh-e-Jahan Square as a historic place is full of historic elements that make the square work as a big museum as well as being a town square. As can be seen from the photos no.34, 36 and 62 the ancient stone polo gates which are considered as historic elements do not seem to shut perfectly and need some protection against erosion. There are also two historic and religious buildings (Imam and Shekh Lotfollah Mosque) in the square (see photos no. 35 and 49). The main arch of the Qeysarieh Entrance with a wonderful ancient painting seems to need repair and maintenance (see photo no.44). The other historic masterpiece "Ali Qapu" which is now a museum with proper views over all the square for the visitor can be considered as another historic building in Naghsh-e-Jahan Square (see photo no.55).

Additionally, there are some new buildings in and attached to the square. The Islamic art and culture research centre (photo no.3) as a civic building is one of them and two new temporary kiosks for the Municipality Kiosk for the bazaar area and the Police Station(see photo no.65).

Summary of Findings about "Civic, Religious and Historic Building"

From the walking strategy results it can be understood that the square has several valuable civic, religious and historic buildings which can draw people there. Consequently they can help the square to be more socially sustainable.

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7.4.3 Change in Levels and Steps

Definition

As cars and other vehicles cannot cross the steps and levels this enables pedestrians to use them for siting. The levels and steps in public urban spaces are popular places to sit, rest and observe the passing crowed.

Conversation can take place on the steps and levels as people walk slowly and stop every few stairs to make a point (Lennard, 2008, p. 59). They can also be considered to enhance the aesthetic aspects of spaces and make a space articulate to different parts and sections.

Interviews Findings

There is some visual material from the second part of the interviews which illustrates "Change in Level and Steps" (see Figure 63).
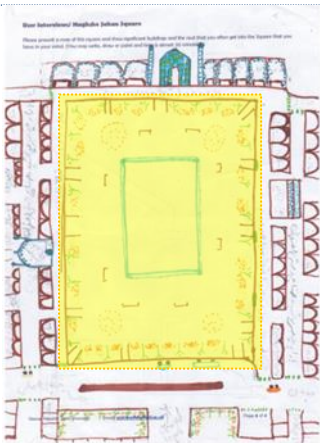
"..different levels"

See interview (TF1) section0

Figure 63: The interviewees' drawings with coded elements in "Change in Levels and Steps" node

As can be seen from the drawing (TF1) the interviewee shows the level and steps in the open space of the square. Although they are not in the exact place, the point is that she noted them in her drawing.

Walking Strategy Findings

There are 10 coded images against "Change in Levels and Steps" node which have been found out by walking strategies (see Figure 64).

"..bollards and steps prevent motorcycles from entering the bazaar corridor"

Photo no 24; (see Walking along Bazaar corridor section 0)

"The lamps on the path seem to be very useful for safety at night time because they make the steps very clear"

Photo no 29; (see Walking along open space section 0)

"some of the people prefer to sit on the steps"

Photo no 33; (see Walking along open space section0)

"All steps and levels around the mosque are being used to sit, rest, take souvenir photos and observe other people and the square"

Photo no 35; (see Walking along open space section0)

"Steps are a good place to sit for people and some carpet traders"

Photo no 44; (see Walking along open space section0)

"..the sides of the path are indicated by narrow green spaces and different levels and steps"

Photo no 48; (see Walking across section 0)

"..the steps and levels in the front of the mosque, are used by people to sit, rest and observe the square. The high walls of the square provide ample shade on the steps"

Photo no 49; (see Walking across section 0)

"…wide steps to reach the palace"

Photo no 55; (see Walking across section 0)

"people sit on the steps"

Photo no 7; (see Walking along open space section0)

"the step is not in a good condition"

Photo no 8; (see Walking along open space section 0)

Figure 64: Photos taken while walking with coded elements in "Change in Levels and Steps" node

From the walking strategies it can be understood that the square has got many change in level and steps. The levels and steps in open space of the square make the space suitable for different actions (see photos no. 29, 33 and 48). These steps and levels are mostly used by the visitors for sitting (see photos no. 33, 35, 44, 49 and 7) and sometimes help to prevent the motorcycles from entering the space (see photo no. 24). Some of the wider steps are used to reach special places like main buildings (Ali Qapu Palace, Imam Mosque and Sheikh Lotfollah Mosque (see photo no. 55).

Summary of Findings about "Change in Levels and Steps"

From the walking strategy results, changes in levels and steps in Naghsh-e-Jahan Square can be seen. They help the space articulated for different actions. Furthermore, in some places steps are used to reach the main buildings (Ali Qapu Palace, Sheikh Lotfollah and Imam Mosque) and they can enhance the magnificence of the main buildings around the square. They contribute aesthetically to the square.

In addition, for a popular place like Naghsh-e-Jahan Square which needs a lot of spaces for visitors to sit, these steps provide a different kind of place to sit. Although some of them need maintenance and repair, they can still invite the visitor to sit and observe the place.

7.4.4 Surface and Fitting

Definition

As traditional Iranian town squares are mostly surrounded by buildings, the façades around the squares can be very influential to make the space more attractive. Lennard (2008, p. 45) believes that "the building façade is the face of the building", consequently it can be friendly or hostile, open or closed like a person's face.

Before entering a place we encounter the surface and façade of the building and it can be the first impression that a place gives to visitors.

Interviews Findings

On the basis of the second part of the interviews which addressed interviewees' conceptions of Naghsh-e-Jahan Square, there are 2 visual materials that referred to "Surface and Fitting" node.

"..it makes her remember god and she knew the tile works as the main part of this mosque and explained the pattern of the tile works has been inspired by heaven plants and also the height of the mosque entrance is the sign of god's greatness, she tried to show the details of tile works, Then she located Sheikh Lotfollah mosque with tile works details in her map and said it is the other masterpiece after Imam Mosque"
See interview (TF2) section 0
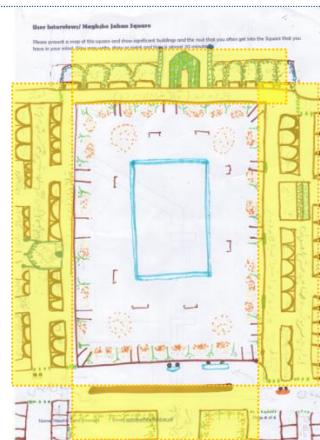
"the till works"

See interview (TF1) section 6.3.2.4

Figure 65: The interviewees' drawings with coded elements in "Surface and Fitting" node

From this part of the interviews it can be found that two of the interviewees (TF1 and TF2) engaged with more details which are related to "Surface and Fitting" of the square. In particular, they tried to illustrate the tile works of the square. One of the interviewees (TF2) during her drawing explained the religious patterns of the tiles as heaven and also she cited the height of the entrance of the mosque as a sign of god's greatness. It shows the surface and fitting of the square is important in their minds.

Walking Strategy Findings

The other objective that the researcher looked for during the walking strategies was "Surface and Fitting" in Naghsh-e-Jahan Square. There are 8 coded images in this regard against "Surface and Fitting" node (see Figure 66).
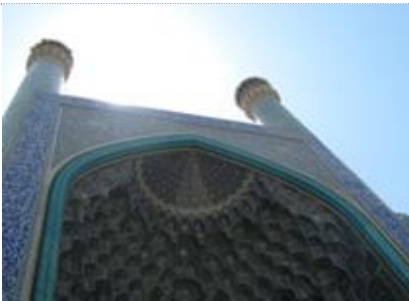
"Different colours of the square facades and the mosque give contrast in the square walls, a master piece of tile works with religious colours"

Photo no 35; (see Walking along open space section 0)

"…a masterpiece of tile works with religious colours. The different colours of the facades around the square and the mosque itself make the mosque prominent"

Photo no 49; (see Walking across section 0)
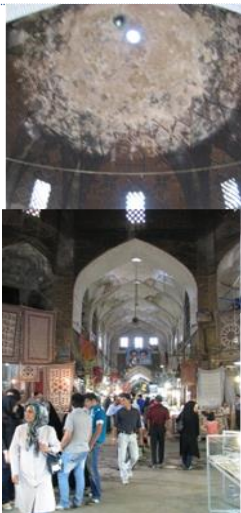
"The high roof and beautiful dome appear to be in a poor state of repair"

"…the main arch of the entrance with a wonderful ancient painting seems to need repair and maintenance"

Photo no 26; (see Walking along Bazaar corridor section 0)

"Beautiful wooden window"

Photo no 55; (see Walking across section 0)

Photo no 44; (see Walking along open space section 0)

"The mud brick walls appear to be in a poor state of repair"

Photo no 16; (see Walking along Bazaar corridor section 0)

"The Police Station was temporarily housed in a caravan at the time of driving but was later replaced by a permanent kiosk, seen when walking across the square"

Photo no 65; (see Driving section 0)

"…temporary Municipality Kiosk relevance to Bazaar area which is now a modern kiosk"

Photo no 65; (see Driving section 0)

Figure 66: Photos taken while walking with coded elements in "Surface and Fitting" node

The walking strategies images illustrate that Naghsh-e-Jahan Square has mostly historic and religious facades. The existence of the religious buildings (Imam and Sheikh Lotfollah Mosque) with masterpiece of tile works make the square surface and fitting prominent (see photos 35 and 49).

There are different surfaces in Qeysarieh Entrance part which need maintenance and repair (see photos no.26 and 44) but they are still historically attractive. Some parts of the square entrance surfaces are also in a poor state of repair (see photo no.16). Although "Ali Qapu Palace" has

different surface and fitting from religious buildings, it is the other masterpiece of historic architecture.

Naghsh-e-Jahan Square also has two temporary small building which are located in the square without dominating the historic palace (see photo no. 65).

Summary of Findings about "Surface and Fitting"

From the interviews and walking strategy results it can be found that Naghsh-e-Jahan Square has very good surface and fitting. Even the places which need more maintenance are in reasonable conditions. The surface and fitting of the square can enhance the aesthetic aspects.

7.4.5 Entrances and Access

Definition

Access is one of the most relevant factors which are needed to improve the sociability of a space. Every public urban space should have public transit, pedestrian and bicycle access. Public transit access at least can prevent squares from domination by cars and parking lots. Traffic makes squares in hospitable, particularly for children and the elderly; removing cars in addition to increasing economic turnover enhances residents' experiences of the architectural heritage (Lennard, 2008, p. 67).

PPS (2000, p. 23) believes a designed entrance through which the interior space is visible can invite people in and on the contrary a dark and narrow entrance keeps people out. Furthermore, entrances should be highly visible to increase casual use by passersby (PPS, 2000, p. 23).

Interviews Findings

In the second part of the interviews which addressed interviewees' conceptions of Naghsh-e-Jahan Square three visual materials were produced by the interviewees showing the "Entrances and Access" of the square (see Figure 67).
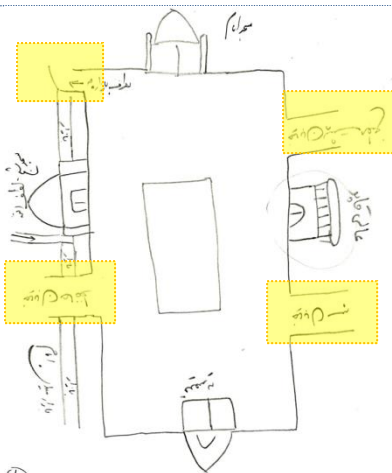
"…different leaded alleys and entrances"

See interview (RM2) section 0
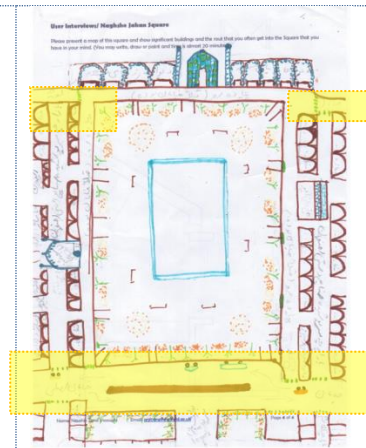
"some entrances"

See interview (TF1) section 0

"one of the pedestrian entrances"

See interview (TM1) appendix no.7

Figure 67: The interviewees' drawings with coded elements in "Entrances and Access" node

From this part of the interviews it can be seen that the interviewees noted the pedestrian access. Although most of them illustrated the main street which passes through the square, pedestrian access in this node is more concentrated.

Walking Strategy Findings

From the walking strategies findings there are 12 coded photos against "Entrances and Access" node. The coded photos illustrate the pedestrian "Entrances and Access" of Naghsh-e-Jahan Square (see Figure 68).

"..arriving at one of the main entrances, views open out; the square can be seen from the arch"

Photo no 1; (see Walking toward section 0)

"the other entrance which connects the alley of residential surrounding areas with the square, it seems the entrance used to be wider and the new shop makes this entrance narrow"

Photo no 15; (see Walking along Bazaar corridor section 0)

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"…an open space called "Qeysarie" entrance which is one of the main entrances of Isfahan Bazaar"

Photo no 25; (see Walking along Bazaar corridor section 0)

"…there is the other entrance from the alley leading to surrounding residential areas"

Photo no 10; (see Walking along Bazaar corridor section 0)

"approaching a local entrance which is an intersection of the residential area and the square"

Photo no 12; (see Walking along Bazaar corridor section 0)

"..the view opens out onto one of the main pedestrian entrances"

Photo no 2; (see Walking toward section 0)

"..the view opens out to the other main entrance"

Photo no 3; (see Walking toward section 0)

"see the main bazaar entrance "Qeysarie" from the square"

Photo no 15; (see Walking along Bazaar corridor section 0)

"…see the main bazaar entrance "Qeysarie" from the square"

Photo no 44; (see Walking along open space section 0)

"the entry appears to be like a gate and views open out to the square, there is a gate on each side of the road and trees form an arch overhead "

Photo no 63; (see Driving section 0)

"Walk into the square from Qeysarie entrance of bazaar"

Photo no 9; (see Walking into section 0)

"…another gate is visible to exit from this point"

Photo no 64; (see Driving section 0)

Figure 68: Photos taken while walking with coded elements in "Entrances and Access" node

Walking strategies findings show that Naghsh-e-Jahan Square has several entrances and access. Some of the accesses are the main entrances of the square for pedestrians (see photos no.1, 2 and 3). The other entrances are the local entrances which are the intersections of the residential areas and the square (see photos no. 10, 12 and15). The local entrances are mostly used by local people. The main bazaar entrance "Qeysarieh Entrance" (see photos no. 44 and 9) is also considered as one of the main pedestrian entrances.

As there is a street which passes through Naghsh-e-Jahan Square, this street makes two entrances for pedestrians as well as cars.

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The results of interviews and walking strategy show that Naghsh-e-Jahan Square has several entrances and accesses which are all used by people. Although there is car access to the square, it does not interfere with the pedestrians' access to Naghsh-e-Jahan Square.

7.4.6   Variety and colour

Definition

A successful public urban space should offer some degree of diversity in its physical features, activities and uses (PPS, 2000). Variety in physical features of squares can improve the attractiveness and beauty of the place. Variety in functions, uses and activities can also draw different groups of people to squares. Offering a varied environment with a range of colour, texture, shape and use (PPS, 2000) can make the space more liveable.

Variety in functions should be sought in Naghsh-e-Jahan Square. As there are many activities and uses in the square, this variety and colour should be found in physical features of the square. Different kinds of building with different colours and function can attract more people there.

Interview Findings

The second part of the interviews shows that there are two visual documents in the interviewees' drawing which illustrates the "Variety and Colour" in Naghsh-e-Jahan Square. The related drawings are displayed in Figure 69.
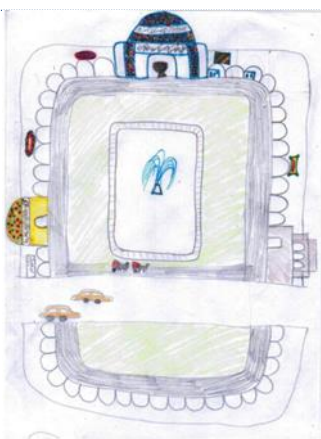
"it makes her remember god and she knew the tile works as the main part of this mosque and explained the pattern of the tile works has been inspired by heaven plants and also the height of the mosque entrance is the sign of god's greatness, she tried to show the details of tile works, Then she

"The main thing making this painting more distinctive is the every detail that she points out"

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located Sheikh Lotfollah mosque with tile works details in her map and said it is the other masterpiece after Imam Mosque"

See interview (TF2) section 0 | See interview (TF1) section 6.3.2.4

Figure 69: The interviewees' drawings with coded elements in "Variety and Colour" node

As the relevant drawing materials show, two interviewees illustrated the different colours of Naghsh-e-Jahan Square. Although the researcher limited all interviewees to draw and even gave them different colouring pens and markers, only these two interviewees (TF1 and TF2) decided to use the colours. It cannot be said that the others did not note the colours; it may be because of their lack of self-confidence in drawing. They showed three of the focal buildings (AliQapu Palace, Imam and Sheikh Lotfollah Mosque) in different colours.

Walking Strategy Findings

There are 6 coded photos against "Variety and Colour" which have been taken by the researcher during the walking strategies. Figure 70 displays the relevant photos.

"Different colours of the square facades and the mosque give contrast in the square walls, a master piece of tile works with religious colours"

Photo no 35; (see Walking along open space section 0)

"…a masterpiece of tile works with religious colours. The different colours of the facades around the square and the mosque itself make the mosque prominent"

Photo no 49; (see Walking across section 0)

"Beautiful wooden window"

"…the main arch of the entrance with a wonderful ancient painting seems to need repair and

Photo no 55; (see Walking across section 0)

maintenance"

Photo no 44; (see Walking along open space section 0)

"The Police Station was temporarily housed in a caravan at the time of driving but was later replaced by a permanent kiosk, seen when walking across the square"

Photo no 65; (see Driving section 0)

"…temporary Municipality Kiosk relevance to Bazaar area which is now a modern kiosk"

Photo no 65; (see Driving section 0)

Figure 70: Photos taken while walking with coded elements in "Variety and Colour" node

From the walking strategy results it can found that the square buildings have variety and colours. The images no. 35 and 49 show the Imam and Sheikh Lotfollah Mosques have got tile works which give Naghsh-e-Jahan Square variety and colour. Although "Ali Qapu Palace" and "Qeysarieh Entrance" do not have different colours from the square now, the elevation forms of this building give the square variety in form and shape (see photos no. 44 and 55). On the other hand, there are new constructions (see photos no.65) that have recently been built in Naghsh-e-Jahan Square. Although they have a different style from the square, they are working with that without dominating the traditional space.

Summary of Findings about "Variety and Colour"

From the results of walking strategies and interviews it can be found that physical features of Naghsh-e-Jahan Square have variety and colours. Especially the main buildings of the square have different colours and styles.

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7.4.7 Visual enclosure

Lennard (2008, p. 43) explains "the sense of inclusion, the feeling that one is a member of the neighbourhood". Furthermore, visual enclosure as a factor to improve the sense of belonging as being inside the square surrounded by continues building walls with the sky as ceiling makes people feel temporarily at home and enhances the citizen's sense of belonging (Lennard, 2008, p. 44).

Visual enclosure is a factor that has mostly existed in Iranian traditional squares as they usually are surrounded by buildings and shop units. As visual enclosure can focus attention of the users and activities within the square (Lennard, 2008, p. 44) it is important to know to what extent visual enclosure exists in Naghsh-e-Jahan Square .

Walking Strategies Findings

One of the objectives that the researcher looked for during the walking strategies was finding "Visual Enclosure" in Naghsh-e-Jahan Square. In this regards there are 3 coded photos against "Visual Enclosure" node (see Figure 71).

"sense of inclusion in the middle of the square"

Photo no 54; (see Walking across section 0)
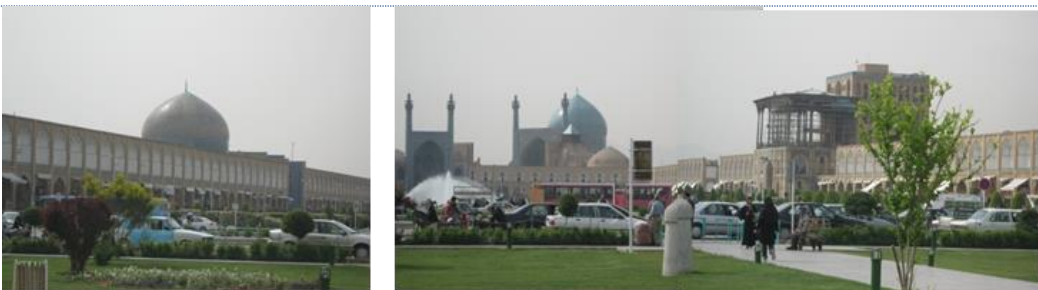
"sense of inclusion by the square"

Photo no 62; (see Walking across section 0)

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"feeling the sense of inclusion by the square"

Photo no 65; (see Driving section 0)

Figure 71: Photos taken while walking with coded elements in "Visual Enclosure" node

From the walking strategies and driving results there are two panoramic photos no.62 and 65 that can illustrate the sense of inclusion by the square. This sense is even stronger in the middle of the square (see photo no. 54).

Summary of Findings about "Visual Enclosure"

Naghsh-e-Jahan Squre has been surrounded by buildings and shops as can be seen from walking strategies results. The visitors can feel the sense of inclusion by Naghsh-e-Jahan Square in every part of the square. It can give more sense of belonging to the space and also make the visitor concentrate on the square more.

Conclusion

This chapter of the study analyses and interprets the collected data concerning the current condition of Naghsh-e-Jahan Square. Four main nodes and their sub-nodes are identified to achieve the research aims and objectives, including the development of the research questions and their methodological approach.

The research, therefore, employs a qualitative exploratory case study approach that uses collected data from semi-structured interviews and walking strategies to analyse and interpret how Naghsh-e-Jahan Square meets people's needs today. This is one of the main objectives of the study. All the objectives (nodes) defined in the context of Naghsh-e-Jahan Square as well as all the collected data derived from the walking strategy and conversations are interpreted. In the next chapter (chapter 8) where the overall conclusion will be discussed.

CONCLUSION

This chapter provides space to reflect on this study and seeks to outline a summary of the obtained results and conclusions through the study. This chapter has been divided into five parts. The first part is a summary of findings and results, the second part gives a restatement of aims, the third section explains the limitations of the study, the fourth part suggests some further research and the final section is allocated to theoretical and practical implications of the current research.

8.1 Summary of Findings and results

This study was an attempt to develop a deeper insight and better understanding of approaches to the traditional Iranian Square "Naghsh-e-Jahan". This thesis set out to explore critically this successful traditional square in Iran as a case study to identify the main characteristics of this square. The research questions were: What lessons can be learnt from a critical investigation of a well-established and thriving traditional Iranian square "Naghsh-e-Jahan"? And does Naghsh-e-Jahan Square have any role in making Isfahan city more socially sustainable?

The process of exploring was on the basis of two main parts: historical and contemporary conditions of Naghsh-e-Jahan Square (see chapter0).

The historical investigation about Naghsh-e-Jahan Square revealed how the square has worked during the centuries and how these changes provided a response to the emergence of a new series of people's needs (see section6.2).

The second part of the study was about the contemporary condition of the square and explored how people are using Naghsh-e-Jahan Square today and also investigated which structured criteria of social sustainability are emerging in this square (see section 6.3). The structured criteria of social sustainability were based on the theoretical development of the study (see literature review chapter 0 and section 2.3 in particular). They developed during this study (see Figure 37 to 40 in chapter 6) and made the nodes of the research.

The collected data from present conditions of Naghsh-e-Jahan square have been coded against the nodes of the study in chapter 0. This chapter of the research revealed which uses and activities exist in the square, what facilities can be found in the square to meet people's needs, what people think about the square and how the square fulfils their psychological needs (subjective perspectives) and finally what physical elements and variables exist in Naghsh-e-Jahan Square.

This final chapter summarises the case study findings and extracts the conclusions arising from the nodes in chapter 0, which are considered here as the major results.

The analysis and interpretation of the collected data about the present condition of Naghsh-e-Jahan Square showed the uses and activities in Naghsh-e-Jahan Square (see section 0).
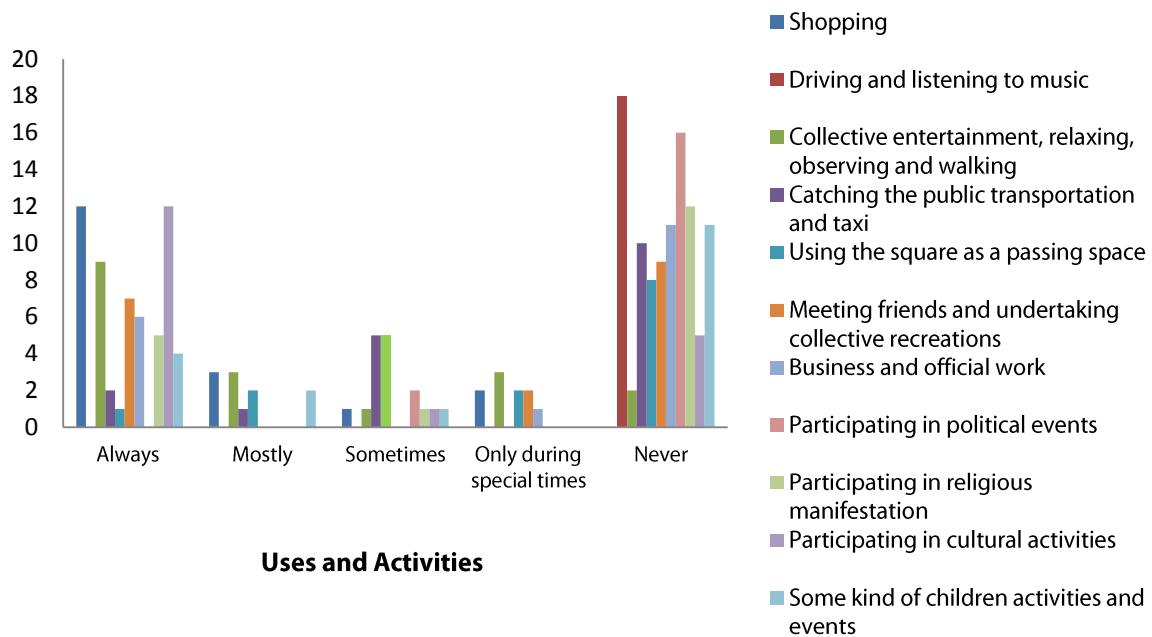
Figure 1: Uses and activities in Naghsh-e-Jahan Square

The walking strategies and interview findings demonstrated that shopping was the most common of the uses and activities that people enjoyed in Naghsh-e-Jahan Square. After that, cultural events were the other activities that people most liked to participate in, but the problem was they do not often take place.

One of the uses and activities which people never engaged in was driving and listening to music. It can be considered as a good point in preventing traffic in such a historic place. In general, there are several uses and activities which are drawing people into the square, although they may still be improved more.

The data analysis and interpretation of current condition of facilities in Naghsh-e-Jahan Square are illustrated below (see section 7.2).
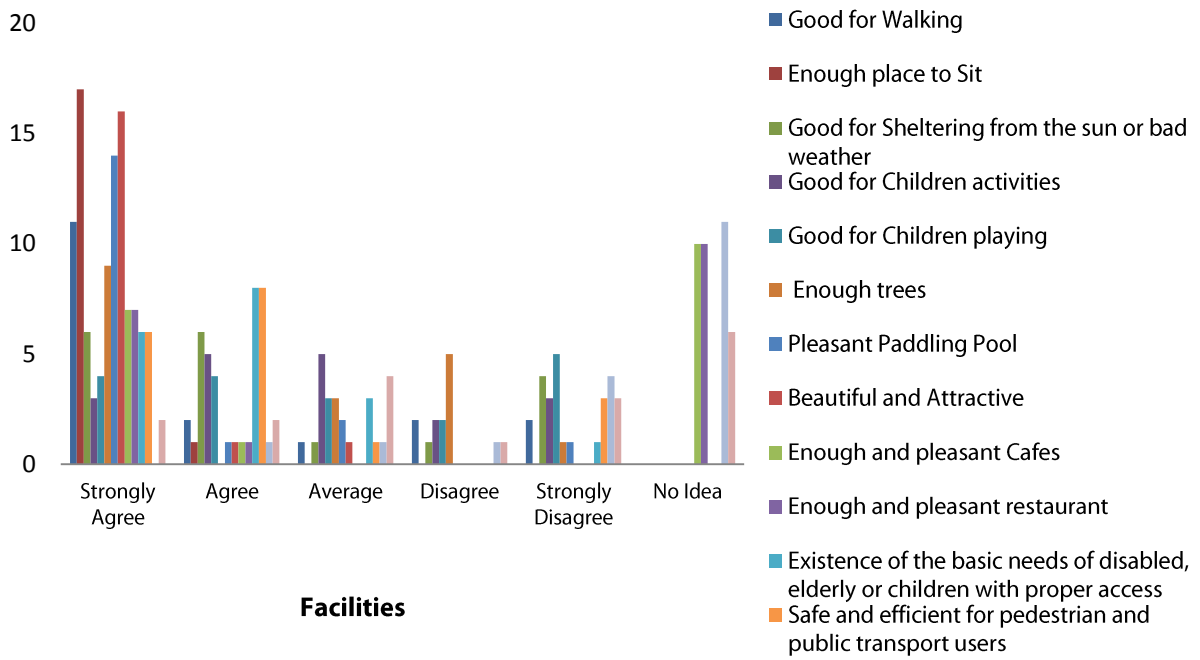
Figure 2: Facilities in Naghsh-e-Jahan Square

Although some of the facilities such as existence of efficient communities to join for different age group and existence of some occasions for families to come together in the square have been ignored and need to be improved, the square's facilities can meet people's common needs.

The analysis and interpretation of the collected data on the present condition of Naghsh-e-Jahan Square revealed subjective perspectives as shown below (see section 7.3).
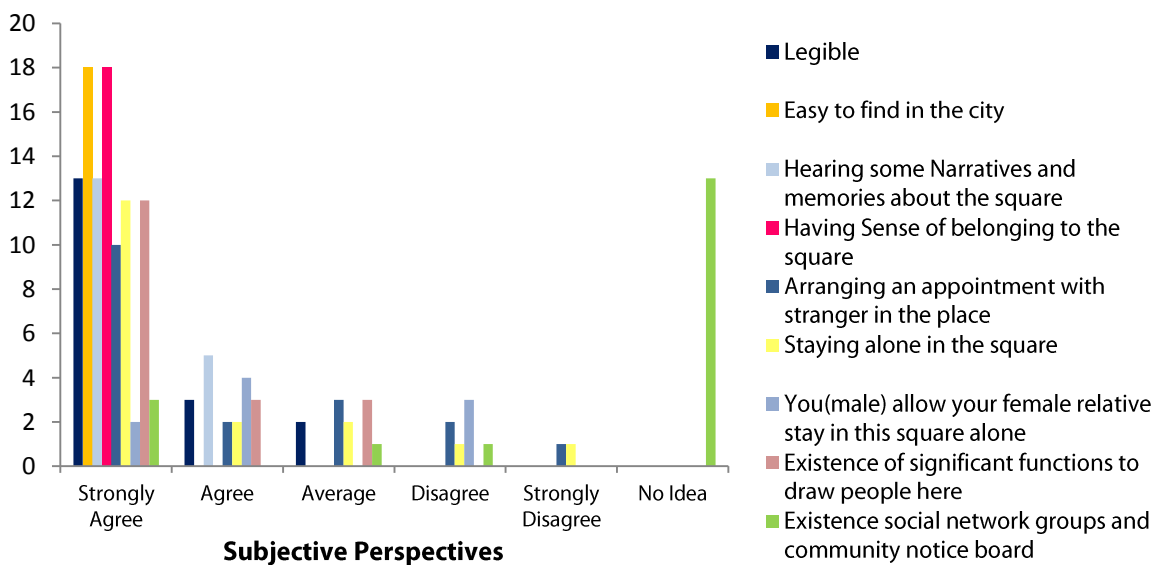
Figure 3: Subjective Perspective in Naghsh-e-Jahan Square

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The square meets the subjective perspective of its users, except for the existence of social network groups and community notice boards which would help the users by having influence, voice and news about the square, which is the only considered subjective perspective that needs to improve.

For data analysis and interpretation of the current condition of the built fabric in Naghsh-e-Jahan Square see section7.4. The walking strategies showed all the considered built fabric aspects: focal points and anchors, civic, religious and historic buildings, change in levels and steps, surface and fitting, entrances and access, variety and colours and visual enclosure are in very good condition in Naghsh-e-Jahan Square.

The results and findings about the current condition of Naghsh-e-Jahan Square revealed that the square can be used as a model to design new squares in Iran. There are many characteristics in Naghsh-e- Jahan Square which can be used in other Iranian squares. Also, Naghsh-e-Jahan Square as a social, economic, cultural and political centre has a role in making Isfahan city more socially sustainable.

8.2   Restatement of Aims

A quick review of the research questions and comparison with the achieved results will help to produce a clear conclusion. In brief, the main research questions were:

Q1) What lessons can be learnt from a critical investigation of well-established and thriving traditional Iranian square "Naghsh-e-Jahan"?

Q2) Does Naghsh-e-Jahan Square have any role in making Isfahan city more socially sustainable?

In order to answer the main questions the following questions have been addressed as the objectives of this study.

Q1:

A) How was Naghsh-e-Jahan Square being used during the centuries?

Objective (Q1, A): Developing understanding of how Naghsh-e-Jahan square developed historically

Methods: Via analysing the historical documents and plans obtained from official government sources. Understanding the changes helped to find how the square adapts with people' newly

emerging needs (also addressing and overlapping the second research question) (see section 3.3.1).

Outputs: In order to get familiar with the context of the study firstly, the chapter 0 discusses about the history of Iranian cities and public urban spaces and then Iranian Town Square (History and Evolution); secondly, to find out how Naghsh-e-Jahan Square developed historically refer to section 6.2 Naghsh-e-Jahan Square (History and Evolution).

B) How is Naghsh-e-Jahan Square used today? (This question also overlapped Q2 of the research)

Objective (Q1, B): Exploring the current function of Naghsh-e-Jahan Square by understanding common activities and uses by different groups of people, at present

Methods: By interviewing three different groups of people (refer to interview section3.3.7 3.3.7.2) also through walking strategies done by the researcher while taking photos and recording films as visual materials (see section3.3.5).

Outputs: To see the data relevant to this objective refer to section6.3.3, also see section 6.3.2to find out the interpretation and analysis of the collected data section0

Objective (Q1, B): Finding what facilities the Square provides for its users, at present

Methods: By interviewing with three different groups of people (refer to interview section3.3.7 also through walking strategies done by the researcher while taking photos and recording films as visual materials (see section 6.3.2)

Outputs: To see the data relevant to this objective refer to section 6.3.3, also see section6.3.3 to find out the interpretation and analysis of the collected data section7.2

Objective (Q1, B): Exploring the built fabric of Naghsh-e-Jahan Square, at present

Methods: Via Walking Strategies (see section0)

Outputs: To see the data relevant to this objective refer to section6.3.2, also see section 7.4 to find out the interpretation and analysis of the collected data

Objective (Q1, B): Investigating what people feel in the town squares, at present

Methods: Through the direct method of conversation with the people who attended the semi-structured interviews described in Interview section3.3.7 to find out their emotions in the squares and understand their needs

Outputs: To see the data relevant to this objective refer to section 6.3.3, also see section7.3 to find out the interpretation and analysis of the collected data

Objective (Q1, B): Understanding people's perceptions about the square (what is important, attractive or even forgotten about the square and also finding out people's expectations)

Methods: By the direct method of conversation the interviewees have been asked to draw their perceptions of the square after finishing the semi-structured interviews (see section3.3.7)

Outputs: To see the data relevant to this objective refer to section 0, also see chapter 7 to find out the interpretation and analysis of the collected data

Q2:

A) What is the definition of sustainability and particularly social sustainability?

Objective (Q2, A): Defining sustainability, focusing on social sustainability

Methods: Through using the literature review and exploring common aspects of urban sustainability and public open spaces in city

Outputs: See literature review chapter0 and in particular section2.3 to find the definition of social sustainability

B) What are the criteria of social sustainability for public urban spaces?

Objective (Q2, B): Define a set of criteria of social sustainability in urban design

Methods: By using the existing literature review and considering the chapter on the concept of social sustainability (see section 2.3.2) also structured frame work of nodes which overlapped Q1 as well

Outputs: See section 2.4 to find out the theoretical improvement of the criteria for social sustainability

Objective (Q2, B): Evaluating and validating relevant factors of social sustainability

Methods: Developing a framework on the basis of existing literature on social sustainability and indicating significant dimensions and relevant variables which are likely to be important in helping to design a square (see sections2.4 and 4.1.1)

Outputs: See Figure 37 to 40 in chapter 7

C) What criteria of social sustainability can be addressed in Naghsh-e-Jahan Square?

Objective (Q2, C): Mapping how Naghsh-e-Jahan square can improve Isfahan city against the criteria for social sustainability

Methods: Via using the designed social sustainability framework Figure 37 to 40 in chapter 6 and exploring the current condition of Naghsh-e-Jahan Square (by Walking strategies, Visual methods, Interviews and drawings by the way, parts of these methods overlapped and addressed the first research question) see section 6.3.

Outputs: See chapter 0

All the main questions, sub-questions, objectives, methods and outputs are tabulated in Figure 4 and 5.

Research Question	Sub-Questions	Objectives	Methods	Outputs
Q1) What lessons can be learnt from a critical investigation of well-established and thriving traditional Iranian square "Naghsh-e-Jahan"?	A) How was Naghsh-e-Jahan being used during the centuries?	Developing and understanding of how Naghsh-e-Jahan square developed historically	Via analysing the historical documents and plans obtained from official government. Understanding the changes help to find how the square adapts with emerging new people's needs (also addressing and overlapping the second research question) (see section 3.3.1)	See chapter 5and section5.2 of the study to find out the history of Naghsh-e-Jahan Square and the process of change
	B) How is Naghshe Jahan Square used today?	Exploring the current function of Naghsh-e-Jahan Square by understanding common activities and uses by different groups of people	By interviewing three different groups of people refer to interview section 3.3.7 also through walking strategies 0 that were done by the researcher while taking photos and recording films as visual materials	Refer to section6.3 to see the data obtained in this part of the study, also see section0 to find out the interpretation and analysis of the collected data
		Finding what facilities the Square provides for its users	By interviewing three different groups of people refer to interview section 3.3.7.2 also through walking strategies 3.3.5.1 that were done by the researcher while taking photos and recording films as visual materials	Refer to section 6.3to see the data obtained in this part of the study, also see section 7.2 to find out the interpretation and analysis of the collected data
		Exploring the built fabric of Naghsh-e-Jahan Square	Via Walking strategies 3.3.5.1 also by considering the existing documents (such as plans, maps and photos)	Refer to section 6.3to see the data obtained in this part of the study, also see section 7.4to find out the interpretation and analysis of the collected data
		Investigating what people feel in the Naghsh-e-Jahan Square (subjective Perspective), presently	Through direct method of conversation with the people who attended the semi-structured interviews that are described in Interview section 3.3.7.2 to find out their emotions in the squares and understand their needs	Refer to section 6.3 to see the data obtained in this part of the study, also see section 7.3to find out the interpretation and analysis of the collected data
		Understanding people perceptions about the square (what is important, attractive or even forgotten about the square also finding out people expectations)	By direct method of conversation the interviewees were asked to draw their perceptions of the square after finishing the semi-structured interviews 3.3.7.2	Refer to section 6.3to see the data obtained in this part of the study, also see section0 to find out the interpretation and analysis of the collected data

Figure 4: The main question no.1, the sub-questions, the objectives, methods and outputs of the study related to this question

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Research Question	Sub-Questions	Objectives	Methods	Outputs
Q2) Does Naghshe Jahan Square have any role in making Isfahan city more socially sustainable?	A) What is the definition of sustainability and particularly social sustainability?	Defining sustainability, focusing on social sustainability	Through using the literature review and exploring common aspects of urban sustainability and public open spaces in the city	See literature review chapter 0and in particular section 2.3
	B) What are the criteria of social sustainability for public urban spaces?	Define a set of criteria of social sustainability in urban design	Again by using the existed literature review and considering the section on the concept of social sustainability 2.3.2	See section2.3 and4.1.1to find out the theoretical improvement of the criteria for social sustainability
		Evaluating and validating relevant factors of social sustainability	Developing a framework on the basis of existing literature on social sustainability and indicating significant dimensions and relevant variables which are likely to be important in helping to design a square	See Figure 37 to 40 in chapter 6
	C) What criteria of social sustainability can be addressed in Naghsh-e-Jahan Square?	Mapping how Naghsh-e-Jahan square can improve Isfahan city against the criteria for social sustainability	Via using the designed social sustainability framework Figure 37 to 40 in chapter 6 and exploring the current condition of Naghsh-e-Jahan Square (by Walking strategies, Visual methods, Interviews and drawings by the way, parts of these methods might overlap and address the first research question)	See chapter 7

Figure 5: The main question no.2, the sub-questions, the objectives, methods and outputs of the study related to this question

Answers to the research questions are now summarised.

Q1) What lessons can be learnt from a critical investigation of well-established and thriving traditional Iranian square "Naghsh-e-Jahan"?

Naghsh-e-Jahan Square is successful in addressing the changes in society by adapting itself to be more inclusive for all people. The square modified itself for different kinds of people's needs during the centuries.

The lessons which can be learnt from Naghsh-e-Jahan square in this study are:

First, there are several uses and activities for people in Naghsh-e-Jahan Square which draw people there. The existence of uses and activities (shopping, collective entertainment, relaxing, observing

and walking, catching public transportation and taxis, using the square as a passing space, meeting friends and undertaking collective recreations, participating in political events and some kinds of children activities and events) help the square to be functionally useful for people.

Second, Naghsh-e-Jahan Square is a very hospitable place that by offering different kinds of facilities (walk ability, sit ability, sun and shelters, children's activities and playing, trees and greenery, paddling pool, attractiveness, cafes and restaurants, meeting basic needs of disabled, elderly or children with proper access, safe and efficient for pedestrian & public transport users and other facilities; cleanness, lighting, public toilets and drinking water) encourages users to stay more happily there.

Third, the special built fabric of Naghsh-e-Jahan Square (focal points and anchors, civic, religious and historic buildings, change in level and steps, surface and fitting, entrances and access, variety and colour and visual enclosure) is attracting users, visitors and tourists. Naghsh-e-Jahan Square provides a historic, religious and economic environment for its users.

Fourth, Naghsh-e-Jahan Square fulfils the subjective perspectives of people in different aspects of legibility, is easy to find in the city, an important place in people's memories, offers a sense of belonging, a place for arranging an appointment with strangers, safety, significant functions, social network groups and community notice board and form of the square.

Q2) Does Naghsh-e-Jahan Square have any role in making Isfahan city more socially sustainable?

Mapping Naghsh-e-Jahan Square against relevant factors of social sustainability: uses and activities, facilities, built fabric and subjective perspectives (which have been investigated in the first question as well) revealed Naghsh-e-Jahan Square as a social sustainable centre which has a role in making Isfahan city more socially sustainable.

8.3   Further Research

This study was an investigation that produced interesting findings. It outlined many areas that would create further investigations. As described in abstract of the study has some limitations and all of them can be turned into research questions and further investigations.

For example, further study could go into greater depth and details about female or parent and child users of the traditional squares in Iran. Furthermore, different age groups such as young and old people could be potential interviewees in future research. Also the other kinds of public urban

spaces such as shopping centres which are very populated these days in Iran can be taken into account by the methodological approach of this study.

8.4   Theoretical and Practical Implications of the Current Research

The role of traditional Iranian town squares in making cities more socially sustainable has rarely been studied in the Iranian context. This study only provided a starting point for improving all kinds of public urban spaces to enhance social sustainability in different cities of Iran. Therefore, this study's theoretical implications can be useful in different parts of Iranian cities.

Also, the methodological approach of this study can also be used for every urban public space or even different areas of cities which need to improve their social sustainability. The methodology of this research could also illustrate to other Iranian researchers the benefits of employing a wider range of qualitative and quantitative data from a variety of sources. At the same time, it could be representative of multiple methods and revealed how different methods can merge to obtain the results. Furthermore, it can show how to analyse large quantities and different kinds of data against the nodes of the study by using supportive softwares like Nvivo 9.

In practical aspects, the results of this study can assist urban planners and decision makers in that it provides information to assist them in developing and designing new public urban spaces and especially town squares in Iran. From the lessons of Naghsh-e- Jahan Square, other developers and urban planners can consider this square as a model from which to plan future town squares in Iran country. This study has also practical implications to improve the quality of existed traditional Iranian town squares. This study develops a framework for social sustainability. Consequently this research can be useful for urban designers who try to enhance social sustainability in every urban area in Iran.

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APPENDIX

"The traditional Iranian Square as a model for social sustainable urban design"

About this research

This research is a doctoral project at the University of Sheffield in UK. This project has been approved by the university ethical committee and the researcher is working according to UK research ethics code of conduct.

All material collected handled anonymously and recording will be destroyed after transcript. Any analyses of data collected will be carried out anonymously and will therefore be impossible to track the identity of participants.

Town squares evaluates as social, economical and political centres in the cities that have been existed for centuries and created because of human needs. A town square is an open area traditionally found in the heart of a town used for community gatherings.

Town squares are the spaces for all people and also an integral part of cities structure and in Iran, there is today a shortage of such spaces.

It cannot be said that the public spaces are declining in Iran but it is necessary to improve their quality.

There are not many kinds of contemporary town squares in Iranian cities.

Town squares in Iranian cities have been replaced by other public spaces (e.g. Shopping malls)

Aims

This study aims to develop a new understanding of traditional Iranian squares based on how they are and have been used and how they affect people's lives.

Some of many questions being raised in this argument: why and how are some Iranian town squares used for new needs and activities? Do they have any role to help cities improve their quality of life? What characteristics should new town squares have?

Why are we asking for your input?

You will participate in this study as someone who has experienced the square as a user. This research aims to find out how the square meets your needs in following aspects:

- Social activities
- Making a sense of belonging and pride
- Economic activities
- Environmental aspects

Why participate?

By taking part this interviews you will be contributing to a study that might help to create better new public urban spaces in Iran.

Contact information

If you need further information please contact:

Researcher: Noushin Zand Vosoughi Postgraduate student

University of Sheffield School of Architecture

E-mail arp09nz@sheffield.ac.uk Tel +44(0)1142630103

Supervisor: Dr. Cristina Cerulli, Lecturer

University of Sheffield School of Architecture

1

"The traditional Iranian Square as a model for social sustainable urban design"

About this research

This research is a doctoral project at the University of Sheffield in UK. This project has been approved by the university ethical committee and the researcher is working according to UK research ethics code of conduct.

All material collected handled anonymously and recording will be destroyed after transcript. Any analyses of data collected will be carried out anonymously and will therefore be impossible to track the identity of participants.

This town square is one of the main parts of this city. But today people are using the places such as shopping malls more than the squares, so, we need to improve its quality and also know how we can design a new one.

Aims

We aim to understand how this square is working and how it affects your life and what characteristics do you expect the squares has got.

Why are we asking for your input?

We are asking you, because you are one of the users in this square and we would like to know how you find this place.

Why participate?

By taking part this interviews you will be contributing to a study that might help to create better new public urban spaces in Iran.

Contact information

If you need further information please contact:

Researcher: Noushin Zand Vosoughi Postgraduate student

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E-mail arp09nz@sheffield.ac.uk Tel +44(0)1142630103

Supervisor**:** Dr. Cristina Cerulli, Lecturer

University of Sheffield School of Architecture

E-mail   c.cerulli@sheffield.ac.uk Tel +44(0)1142220334

استفاده از میدان های سنتی ایرانی به عنوان الگو در طراحی شهربا پایداری اجتماعی

در مورد این پژوهش

این پژوهش یک پروژه دکترا در دانشگاه شفیلد در بریتانیا است. این پروژه توسط کمیته اخلاقی دانشگاه تایید شده است و پژوهشگر بر طبق کد کمیته اخلاقی بریتانیا تحقیقات را انجام می دهد.

تمام اطلاعات جمع اوری شده بدون اسم به کار گرفته می شود وصدای ضبط شده شما بعد از تبدیل به متن از بین خواهد رفت. هر گونه تجزیه و تحلیل داده های جمع آوری شده به صورت ناشناس انجام خواهد شد و بنابراین پیگیری هویت شرکت کنندگان غیر ممکن است.

میدان های شهری به عنوان مراکز اجتماعی، اقتصادی و سیاسی در شهرها ارزیابی میشوند که برای رفع نیازهای اجتماعی انسان ها برای قرن ها وجود داشته و مورد استفاده قرار می گیرند.

میدان شهری فضای رو بازی است که به طور سنتی در قلب یک شهرایرانی قرار دارد. میدان شهری فضایی برای همه مردم می باشد و همچنین بخشی جدایی ناپذیر از ساختار شهر و در ایران امروز کمبود چنین فضاهایی وجود دارد.

این را نمی توان گفت که فضاهای عمومی در شهر ایرانی رو به کاهش است اما انها نیاز به بهبود کیفیت دارند.

انواع بسیاری ازمیدان های شهری معاصر در شهر های ایرانی وجود ندارد.

اهداف پژوهش

هدف این پژوه توسعه درک تازه ای از میدان های سنتی ایران بر اساس آنکه چگونه مورد استفاده قرار می گیرند و چگونه بر زندگی مردم تأثیر می گذارند می باشد.

برخی از پرسش های بسیاری که در این بحث مطرح شده : چرا و چگونه برخی میادین سنتی ایرانی برای نیازها و فعالیت های جدید مورد استفاده قرار می گیرند؟ آیا آنها نقشی در بهبود کیفیت زندگی درشهرها دارند؟چه ویژگی هایی میدان های شهری جدید باید داشته باشند؟

چرا از«شما» درخواست همکاری داریم؟

شما در این پژوهش به عنوان کسی که این میدان را تجربه کرده است شرکت خواهید کرد. هدف از این تحقیق اینست که چگونه این میدان نیاز های ذیل را برای شما برآورده می کند:

• اجتماعی

• حس تعلق و غرور

• اقتصادی

چقدر مشارکت شما در این پژوهش مفید می باشد؟

با شرکت کردن در این مصاحبه شما به مطالعه ای کمک خواهید کرد که هدفش بالا بردن کیفیت فضاهای عمومی شهری جدید در ایران است.

اگر به اطلاعات بیشتری نیاز دارید

با ما تماس بگیرید

محقق : نوشین زندوثوقی, دانشجوی دکترا, دانشگاه شفیلد دانشکده معماری

E-mail arp09nz@sheffield.ac.uk تلفن : ۴۴۱۱۴۲۶۳۰۱۰۳+

استاد راهنما : دکتر کریستینا کرولی , دانشگاه شفیلد دانشکده معماری

E-mail c.cerulli@sheffield.ac.uk تلفن : ۴۴۱۱۴۲۲۲۰۳۳۴+

در مورد این پژوهش

این پژوهش یک پروژه دکترا در دانشگاه شفیلد در بریتانیا است. این پروژه توسط کمیته اخلاقی دانشگاه تایید شده است و پژوهشگر بر طبق کد کمیته اخلاقی بریتانیا تحقیقات را انجام می دهد.

تمام اطلاعات جمع اوری شده بدون اسم به کار گرفته می شود و صدای ضبط شده شما بعد از تبدیل به متن از بین خواهد رفت. هرگونه تجزیه و تحلیل داده های جمع آوری شده به صورت ناشناس انجام خواهد شد و بنابراین پیگیری هویت شرکت کنندگان غیر ممکن است.

این میدان شهری، یکی از بخش های اصلی این شهر است. اما مردم امروزه از اماکنی مانند مراکز خرید بیش از این میدان شهری استفاده می کنند. بنابراین، ما باید کیفیت آن را بهبود بخشیم و همچنین می خواهیم بدانیم که چگونه می توان یک میدان جدید طراحی کرد.

اهداف پژوهش

ما می خواهیم بدانیم که این میدان چگونه کار می کند؛ چه تأثیری بر زندگی روزمره شما داردو چه انتظاراتی از این مکان دارید؟

چرا از«شما» درخواست همکاری داریم؟

ما از شما تقاضای همکاری داریم ، زیرا شما یکی از کاربران این میدان هستید و ما می خواهیم بدانیم که شما در مورد این مکان چه میدانید؟

چقدر مشارکت شما در این پژوهش مفید می باشد؟

با شرکت کردن در این مصاحبه شما به مطالعه ای کمک خواهید کردکه هدفش بالا بردن کیفیت فضاهای عمومی شهری جدید در ایران است.

اگر به اطلاعات بیشتری نیاز دارید

با ما تماس بگیرید

محقق : نوشین زندوثوقی, دانشجوی دکترا, دانشگاه شفیلد دانشکده معماری

E-mail arp09nz@sheffield.ac.uk   تلفن : ۴۴۱۱۴۲۶۳۰۱۰۳+

استاد راهنما : دکتر کریستینا کرولی , دانشگاه شفیلد دانشکده معماری

E-mail   c.cerulli@sheffield.ac.uk   تلفن : ۴۴۱۱۴۲۲۲۰۳۳۴+

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	Comments:
Participant's background **1) What is the gender?** Male☐ Female ☐ **2) What is the occupation?** Employed☐ Employed in the square☐ Unemployed☐ Shopkeeper☐ Student ☐ Homeworker☐ **3) How old are you?** 19-30 ☐ 31-45☐ 46-60☐ 60+☐ **4) What is your situation in the city?** Resident of the city ☐ Tourist☐	

Section 1

Function

What do you do in the square? To what extent do you agree with the following statements?

1)Always   2)Mostly 3)Sometimes   4)Only during special times   5)Never

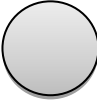| Uses and Activities:	Comments:
5) Shopping ☐ 6) Driving and listening to music ☐ 7) Collective entertainment, relaxing, observing and walking☐ 8) Catching public transportation and taxis ☐ 9) Using the square as a passing space ☐ Others: 10) Meeting friends and undertaking collective recreations ☐ 11) Business and official work ☐ 12) Participating in political events ☐ 13) Participating in religious manifestation ☐ 14) Participating in cultural activities ☐ 15) Some kind of children activities and events ☐ Others:	

User Interviews/ Naghshe Jahan Square
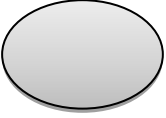
Facilities

To what extent do you agree with the following statements?

1)Strongly Agree   2) Agree   3) Average   4)Disagree   5)Strongly Disagree

	1	2	3	4	5	Comments:
16) This place is good for walking.	☐	☐	☐	☐	☐	
17) There are enough places to seat in the square.	☐	☐	☐	☐	☐	
18) This place is good for sheltering from the sun or bad weather.	☐	☐	☐	☐	☐	
19) This place is good for children activities and playing.	☐	☐	☐	☐	☐	
20) There are enough trees and greenery in the square.	☐	☐	☐	☐	☐	
21) The paddling pool is pleasant.	☐	☐	☐	☐	☐	
22) This place is beautiful and attractive.	☐	☐	☐	☐	☐	
23) Cafes and Restaurants are enough and pleasant.	☐	☐	☐	☐	☐	
24) There are basic needs of disabled, elderly or children with proper access.	☐	☐	☐	☐	☐	
25) This place is safe and efficient for pedestrian & public transport users.	☐	☐	☐	☐	☐	
26) There are some efficient communities to join for different age group.	☐	☐	☐	☐	☐	
27) There are some occasions for families to come together to this square.	☐	☐	☐	☐	☐	

Subjective Perspectives:
To what extent do you agree with the following statements?
1)Strongly Agree   2) Agree   3) Average   4)Disagree   5)Strongly Disagree

	1	2	3	4	5	Comments:
28) This place is legible.	☐	☐	☐	☐	☐	
29) This square is easy to find in the city.	☐	☐	☐	☐	☐	
30) You have heard some narrative and memories about this place.	☐	☐	☐	☐	☐	
31) You have sense of belong to this square.	☐	☐	☐	☐	☐	
32) You arrange an appointment with a stranger in this place.	☐	☐	☐	☐	☐	
33) You stay in this square alone.	☐	☐	☐	☐	☐	
34) You (male) allow your female relative stay in this square alone.	☐	☐	☐	☐	☐	
35) There are significant functions to draw you here.	☐	☐	☐	☐	☐	
36) This place has got social network groups and community notice board.	☐	☐	☐	☐	☐	

37)The best form of square that you like is.

Section 2

38) Please present a map of this square and show significant buildings and the rout that you often get into the Square that you have in your mind. (You may write, draw or paint and time is almost 20 minutes)

Appendix no.4: Interviewee's Drawing "SF1"

When I was walking in the bazaar corridor around the square, I found out that some of the shopkeepers are female. I was encouraged to talk to them and I went into one of the shops. I visited a young woman named Tahereh (age group 19-30) and I started to talk to her in her shop. She works as a seller in a confectionary shop where sells the traditional Isfahanian sweet Gaz and she was one of the first female shopkeepers that I interviewed. She considers Isfahan as her home town as she was born and grew up in this city. All the conversation took place in her shop. The shop was almost empty in the morning even though it is located in the bazaar corridor. After a brief introduction about myself and the objective of my project, I gave her the information sheets and she took a quick look and agreed to take part in my interview. We completed the interview (section 1) and she chose the rectangle as the best square shape. I invited her to participate in the second section of my interview and she was persuaded to draw for me without any problem. Also, she allowed me to record a film of her hands. I offered her my pencil case to use and she selected a pencil and started from Sepah Street which is across the square. She drew Ali Qapu, Imam Mosque and Sheikh Lotfollah Mosque as the main buildings of the square. However, she did not represent anything about Qesarieh Entrance. She just showed the main bazaar on that side. She showed the way she enters the square by drawing an orange line and finally she drew a line around Ali Qapu to mark her favourite place.

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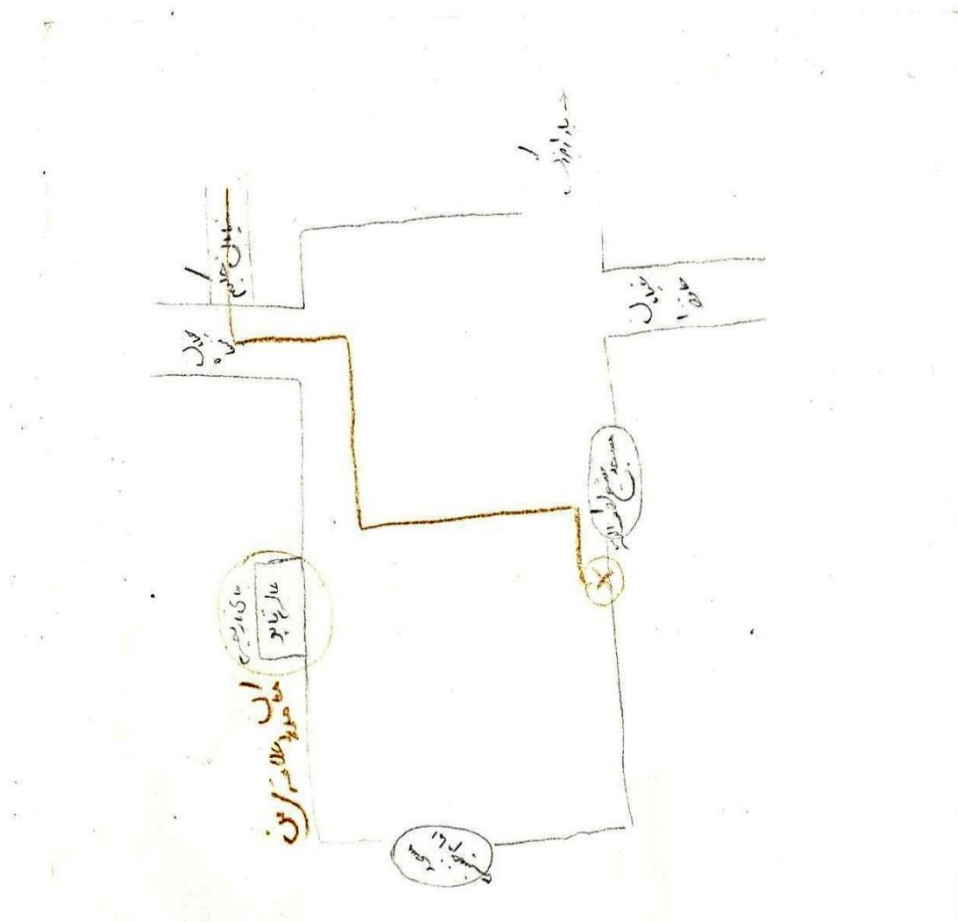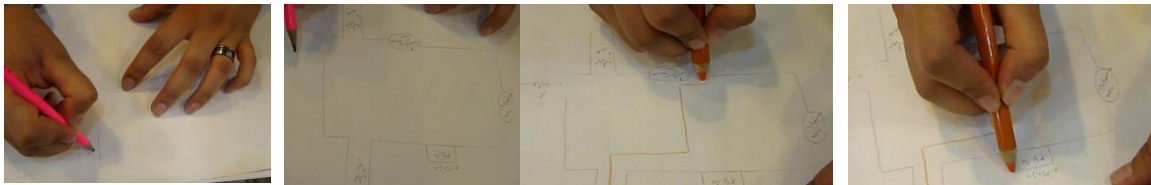
Appendix no.5: Interviewee's Drawing "SF2"

I saw another Gaz shop (a traditional Isfahnian sweet) where another female shopkeeper worked. I entered and found that there were no customers there and the seller was alone. I started to talk with her and introduced myself and handed out the information sheet. She greeted me enthusiastically as she said she was an architecture student and she added that she has to work as a seller to pay her tuition fees. She, "Samanehis" (age group 19-30), is one of the residents of the city who belongs to one of the famous Isfahanian families. The shop is one of the old shops selling Gaz in the bazaar corridor. Because the shop was empty of customers, it was an opportunity for me to do my interview in a nice, quiet environment. After finishing part one of the interview, she chose the oval shape for every square. I presented her with the second part of the interview and she passionately accepted to draw her perception of the square for me. I gave her a piece of paper and my pencil case. Before starting to draw, she picked up the ruler. I tried to convince her that she did not need to draw an engineering plan and that she could use free hand but she preferred to use the ruler. She started to draw and the first element that she drew was the street which crosses the square and after that she illustrated Sheikh Lotfollah Mosque, the paddling pool, Ali Qapu Palace and the shops located in the bazaar corridor around the square. In the next stage, she showed me with a green pencil the way that she enters the square every day and finally she drew a line around the Ali Qapu Palace to mark her favourite place. The main point was she did not mention anything about the other focal points (Imam Square and Qesariyeh Entance). Also, she did not draw the whole square.
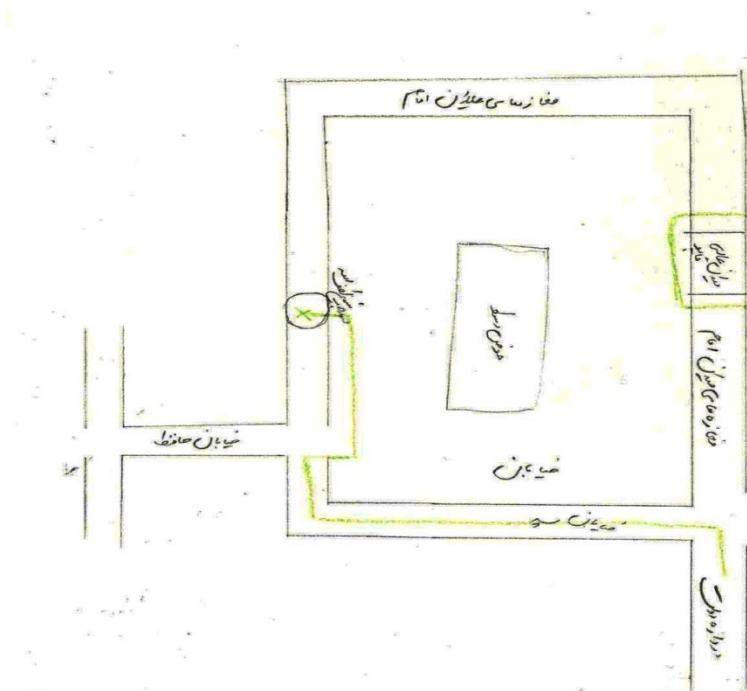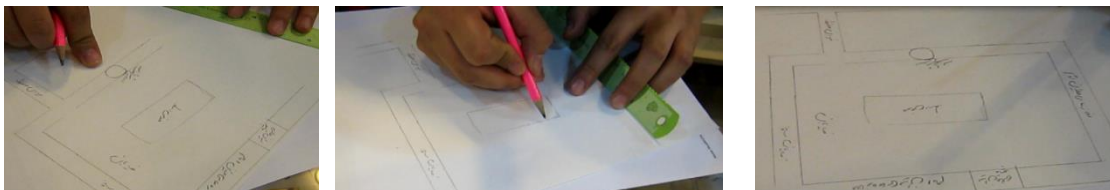
Appendix no.6: Interviewee's Drawing "SF3"

When I was walking down the Ali Qapu side of the bazaar corridor, which leads to Imam Mosque, I saw a Persian Art Gallery sign which guided me to a big shop. The shop displays many beautiful miniature paintings. I met a woman who was colouring a miniature painting carefully in one of the corners of the gallery and a man who was working as the manager behind a desk to respond to the customers. I tried to approach the woman and talk with her as she was painting. I introduced myself and gave her the information sheet. I asked her to complete my interview if she had the time. Fatemeh (age group 19-30) is a single girl who works in the Miniature art gallery located in the bazaar corridor. She is from Shiraz but she has lived in Isfahan for more than five years. She paints miniatures and also works as an English language interpreter in the gallery. She agreed to respond to my questions and I started with section one of the interview. She selected oval shape for every square and after finishing part one of the interview, I asked her to draw her conception of the square for me. She accepted and I gave her the paper and pencil case. She started by drawing a small rectangle as Ali Qapu Palace and illustrated a crossway. The next stage was drawing the open space of the square and the paddling pool. To show me her entrance route, she chose a green pencil and drew a crossway which leads to the Persian Art Gallery where she works. Then she displayed another focal point, Imam Mosque, at the edge of the page on the corner of another crossway. Finally, she used a blue marker to draw a blue line around her favourite place: the Ali Qapu Palace.

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Appendix no.7: Interviewee's Drawing "TM1"

One man who agreed to complete my interview was a tourist that I visited in a hotel. He travelled to this historic city and Naghsh-e-Jahan was the place that he visited on the first day of his arrival. He has got a lot of old friends in Isfahan and also enjoyed visiting them. He and his family went to the square every night during their trip. He chose the rectangle form for every square. After finishing section one of the interview, I asked him to draw his perception of the square for me and he kindly and confidently accepted. I gave him the paper and my pencil case. He did not want me to record or take photos of his drawing and so I started to take notes of his statements during his drawing. He just used black pencil and drew a rectangle and depicted Imam Mosque, Sheikh Lotfollah Mosque, Ali Qapu Palace and Qesarieh Entrance. Then he showed the shops, the bazaar corridor, the street and one of the pedestrian entrances. He added the paddling pool, green spaces and finally illustrated the carts way. He stated that he loves and admires Sheikh Lotfollah Mosque more than the other buildings.

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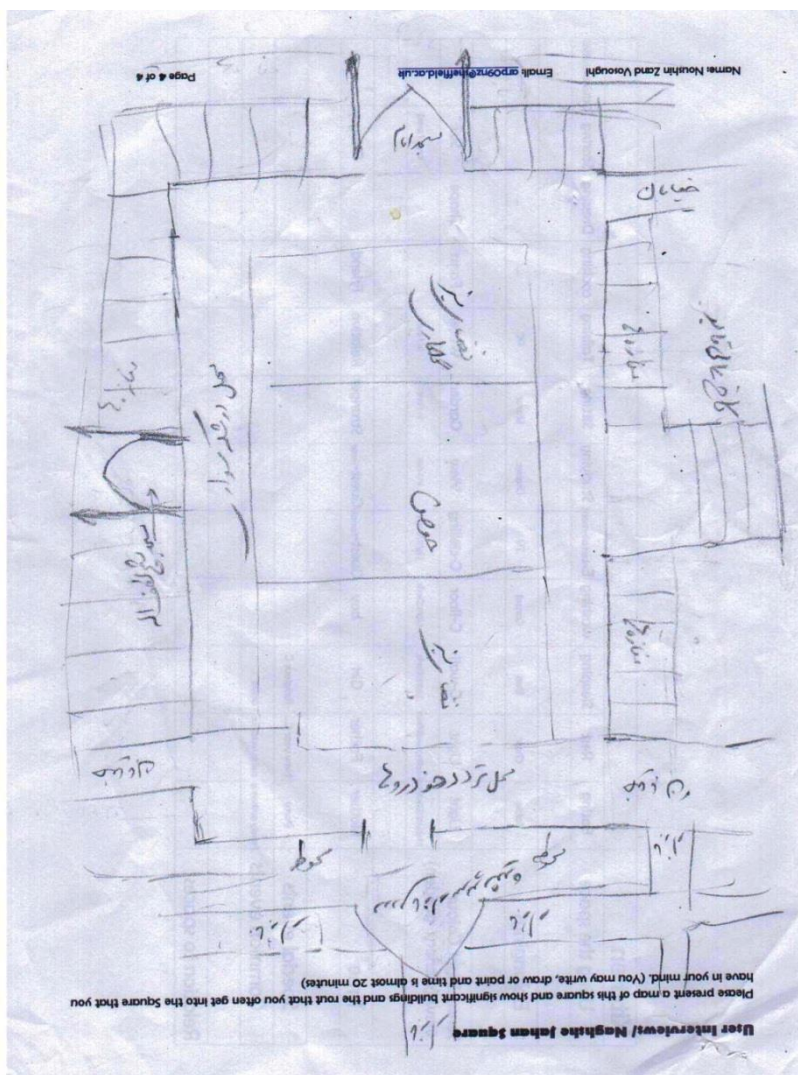
University Research Ethics Application Form For Staff and Postgraduate Researchers

This form has been approved by the University Research Ethics Committee (UREC)

Tick as appropriate

Complete this form if you are a **member of staff or a postgraduate research student** who plans to undertake a research project which requires ethics approval via the University Ethics Review Procedure.

✓

or

Complete this form if you plan to submit a **'generic' research ethics application** (i.e. an application that will cover several sufficiently similar research projects). Information on the 'generic' route is at: http://www.shef.ac.uk/ris/other/gov-ethics/researchethics/approval-procedure/review-procedure/generic-research-projects.html

PLEASE NOTE THAT YOUR DEPARTMENT MAY USE A VARIATION OF THIS FORM: PLEASE CHECK WITH THE ETHICS ADMINISTRATOR IN YOUR DEPARTMENT

This form should be accompanied, where appropriate, by all Information Sheets / Covering Letters / Written Scripts which you propose to use to inform the prospective participants about the proposed research, and/or by a Consent Form where you need to use one.

Further guidance on how to apply is at: http://www.shef.ac.uk/ris/other/gov-ethics/researchethics/approval-procedure/review-procedure

Guidance on the possible routes for obtaining ethics approval (i.e. on the University Ethics Review Procedure, the NHS procedure and the Social Care Research Ethics Committee, and the Alternative procedure) is at: http://www.shef.ac.uk/ris/other/gov-ethics/researchethics/approval-procedure/ethics-approval

Once you have completed this research ethics application form in full, and other documents where appropriate, check that your name, the title of your research project and the date is contained in the footer of each page and email it to the Ethics Administrator of your academic department. Please note that the original signed and dated version of 'Part B' of the application form should also be provided to the Ethics Administrator in hard copy.

Ethics Administrators are listed at: http://www.shef.ac.uk/ris/other/gov-ethics/researchethics/approval-procedure/review-procedure/3.1-3.1.2.html

Date:16/1/2012
Name of applicant: Noushin Zand Vosoughi
Research project title: The traditional Iranian square as a model for sustainable urban design

1

University Research Ethics Application Form

I confirm that I have read the current version of the University of Sheffield

✓

'Ethics Policy Governing Research Involving Human Participants, Personal Data and Human Tissue', as shown on the University's research ethics website at: http://www.shef.ac.uk/ris/other/gov-ethics/researchethics/index.html

Part A

A1.   **Title of Research Project: "The traditional Iranian square as a model for sustainable urban design"**

A2.   **Contact person (normally the Principal Investigator, in the case of staff-led research projects, or the student in the case of supervised-postgraduate researcher projects):**

Title: Mrs   First Name/Initials: Noushin   Last Name: Zand Vosoughi
Post: 26 Halamshire Road Fulwood, Sheffield   Department: Architecture
Email:arp09nz@sheffield.ac.uk   Telephone: 0114 2630103

A2.1.   Is this a postgraduate researcher project?
       If yes, please provide the Supervisor's contact details:
Dr. Cristina Cerulli, School of Architecture, Arts Tower, Western Bank, University of Sheffield, Conduit Rd, Sheffield

Tel: 44 114 2220315 Email: c.cerulli@sheffield.ac.uk

A2.2.   Other key investigators/co-applicants (within/outside University), where applicable:

Please list all (add more rows if necessary)

Title	Full Name	Post	Responsibility in project	Organisation	Department

A3.   **Proposed Project Duration:**

Start date: April 2010   End date: June 2012

A4.   **Mark 'X' in one or more of the following boxes if your research:**

	involves *no* access to identifiable personal data **and** *no* direct contact with participants

	involves adults with mental incapacity or mental illness

Date:16/1/2012   2
Name of applicant: Noushin Zand Vosoughi
Research project title: The traditional Iranian square as a model for sustainable urban design

	involves prisoners or others in custodial care (e.g. young offenders)
	involves children or young people aged under 18 years
	involves using samples of human biological material collected before for another purpose
	involves taking new samples of human biological material (e.g. blood, tissue) *
	involves testing a medicinal product *
	involves taking new samples of human biological material (e.g. blood, tissue) *
	involves additional radiation above that required for clinical care *
	involves investigating a medical device *

If you have marked boxes marked * then you also need to obtain confirmation that appropriate University insurance is in place. The procedure for doing so is entirely by email. Please send an email addressed to insurance@shef.ac.uk **and request a copy of the 'Clinical Trial Insurance Application Form'.**

University Research Ethics Application Form

It is recommended that you familiarise yourself with the University's Ethics Policy Governing Research Involving Human Participants, Personal Data and Human Tissue before completing the following questions. Please note that if you provide sufficient information about the research (what you intend to do, how it will be carried out and how you intend to minimise any risks), this will help the ethics reviewers to make an informed judgement quickly without having to ask for further details.

A5.   Briefly summarise:

i.   The project's aims, objectives:
(this must be in language comprehensible to a lay person)

Low quality of the public space is one of the reasons that have detrimental impact on the quality of social life. Therefore, meaningful public spaces are needed to enhance various social interactions and exchange of ideas among different members of the societies; in addition, they allow people to learn more about each other. Public places are the relationships between individual and social instruction. Town squares in Iranian cities have been places in which people can take part in social interaction, cultural exchange, economic activities and political events which can be shared by different socio_economic and cultural groups of people. Some authors argue that the public place has always been "the place for people to meet and greet each other, a place to exchange information about the city and society, a place where important events were staged."(Gehl & Gemzoe 2008, p.10)
However town squares are spaces for all people and also a main part of the structure of cities and today the lack of them is completely obvious. On the other side, some of the old town squares are working for people and they are civic elements that help people to know the cities better. In addition, they are alive and attractive for people. Some of many questions being raised in this argument: why are some Iranian town squares used for new needs and activities? Do they have any role to help cities improve their quality of life? What characteristics should

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new town squares have? Do new Iranian town squares have any role in making cities more sustainable?

ii. The project's methodology:
(this must be in language comprehensible to a lay person)

This research is based on a multiple case study methodology where a case study is looked at in relation to three secondary case studies and existing literature. "A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident." (Yin 2003, p.13)

The case study method was chosen because it allows to combine and integrate understandings rooted in literature review and analyses of diverse data. To describe and identify the characters of town squares this study will produce a rich picture based on a range of qualitative and historical data. The case study method has the benefit of being suitable for contemporary cases as well as historic ones and successful case studies commonly comprise both these aspects (Francis 1999, p.16) and this research is aiming to learn from both to inform future design of new squares or adaptation of existing squares. There are both traditional and contemporary town squares in Iran that people are still using. For this reason a methodology based on case studies being equally appropriate for both contemporary and traditional squares was chosen. This will provide an opportunity to investigate traditional and contemporary squares that are still in use and to compare them. The case studies identified are two traditional squares: Naghshe Jahan and Ganj Ali Khan and two contemporary squares built after 1920: Haft Hoz and Azadi.

Investigation, assessment, comparing with other squares and analysis of the case studies should be done in different aspects; so, this research will be conducted in multiple methods: qualitative and historical data. Moreover, the methodology of this research is on the bases of the literature review. Referring to the literature review can help to find the criteria that are looked for.

Data collection of this case study will be conducted by two methods: interpretive-historical for historical background of the square and qualitative methodology.

Because case study method is intended to investigate physical, historical, social and institutional location (Denscombe 2003, p.37), thus, it is started with interpretive-historical research to find how and why this square is built and for what reason this place had been used by people and government, also, the main objective which will be achieved in this section is finding the squares process of changes during the centuries. Although data collection for case studies can be conducted by many source of evidence, this research will focus on six important ones that Yin (2003) names: "documentation, archival records, interviews, direct observation, participant-observation, and physical artifacts."

Qualitative methodology: are more appropriate to find values and attitudes about open spaces due to the fact that some approach are basis on the context of people daily lives; thus, methodological approaches are needed that can reveal the depth of feelings and emotions that people have in the environment(Burgess et al. 1988, p.456). In this section it is necessary to know what people to do in the Squares and the social interaction, community, why people are there, what kind people use them, how town squares are expected by people should be studied.

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Observation: is considered as a main type of data collection for the section of qualitative studies. According to (Sanoff 1991, p.77)observation and behavioural mapping is a method to describe what people do in an environment. Direct observation gives opportunities to get first hand information of the case study and to record the data as it is shown (Creswell 2008). There are three main reasons to use direct observation for this study: firstly, finding how the square is used, secondly, providing information on where people walk and stay, thirdly, what activities they do there as part of their daily life or for recreational purpose (Gehl Architects 2004, p.71). Moreover, recording visitors according to their age, sex, at times education, whether visiting alone or in a group, what they do, when they come there and where part of the town square they prefer to be, additionally, information on the weather conditions, the seasons, date, time of a day and special ceremony days should be recorded (Bradley & Millward 1986, p.3). In observation methods individuals are considered as objective for observation and the source of information for study are people's spontaneous behaviour and continuous activities (Razzaque 2009, p.27). Several types of observation methods are used to collect the data such as: trace measure, behavioural mapping, counting, interviews and questionnaires to measure people' feelings (Spaces 2000, pp.99-113).

Counting is a method to collect the numerical data about people or vehicles. It can be useful to finding which places are more interesting and it makes easy compare different places. Counts can provide important data and information if comparisons are made (Spaces 2000, p.104). In this study counting will be done especially about social population by sitting in different points of the square preferably in four corner of the square to observe the whole square, additionally, it should be done in the same hours of a day and night.

Trace measure: the traces that are leaved by people when they use a place should be measured by two ways: physical evidence and erosion traces (Razzaque 2009, p.29). Recording the traces is a good manner to find out the activities that cannot understand by observing.(Spaces 2000, p.108)

Interviews and questionnaires: Denscombe (2003, p.145) remarks that "questionnaires rely on written information supplied directly by people in response to questions asked by researcher". Additionally, he divided the information gathered into two categories: facts and opinions. Factual information such as age, sex, address and etc., are not much in the way of judgment, opinions, attitudes, beliefs etc. can be needed to reveal information about people's feeling and values. The questions should allow people to give their ideas; also, the types of questions in both interviews and questionnaires can be divided into three groups:

Use: who uses the space, when they would like to use and for what reasons

Ideas, attitudes and problems

Suggestions: asking people how to improve the space (Spaces 2000, p.111).

Beside, this section (interviews and questionnaire) will only do for the people who come to the Square.

Finally, the data that is achieved by observation, interviews and questionnaires will be analysed by triangulation against each other, and against literature review of this study.

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A6.   What is the potential for physical and/or psychological harm / distress to participants?

In this study there are not any personal or sensitive aspects and consequently, it will not be expected any distress, psychological harm or bother for participants during the research process. There are, however, cultural issues to be addressed regarding behaviour in public in relation to gender. This issue is largely resolved by the fact that the main researcher is female, which in the specific Iranian cultural context enables engagement with all genders.

A7.   Does your research raise any issues of personal safety for you or other researchers involved in the project? (especially if taking place outside working hours or off University premises)

No. the interviews with people will take place during the working hours of the square and the interviews can be done like a friendly chat with consent of the interviewees. So, it is clear that the research will not contain any issues related to personal safety, neither for the researcher nor for interviewees in this research.

If yes, explain how these issues will be managed.

A8.   How will the potential participants in the project be:

i.   Identified?

The research will involve the users of the square and shopkeepers in these places. The interviewees and questionnaires should be identified by sex and age.

ii.   Approached?

The researcher will introduce herself to people (users of the squares) who accept to do interview and questionnaires. In Iranian context it is easy to ask somebody to fill questionnaire or doing interview with giving an oral introduction of the project especially when the interviews and questionnaire are anonymously and without any photography. Also the researcher will also approach directly in the field and given an oral introduction of the project. A two side information sheet will be produced and offered to participant. On one side there will be a very concise explanation of the project, aimed at participants with limited literacy (page no 2), on another side more detailed and comprehensive information will be provide (page no1).

iii.   Recruited?

During the first meeting with shopkeepers and also with users of the square, researcher will explain the research project to all participants. A project information sheet will also be given to participants (translated in Farsi). By the way, adequate time will be put on asking questions and deciding whether each participant would like to take part. Only the participants that are completely sure that want to participate will take part.

A9.   Will informed consent be obtained from the participants?

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YES ☑ NO ☐

If informed consent or consent is <u>NOT</u> to be obtained please explain why.
Further guidance is at: http://www.shef.ac.uk/ris/other/gov-ethics/researchethics/policy-notes/consent

Doing the interviews and filling the questionnaire show the participants intend to take part through accepting to be interviewed and to fill questionnaire.

A9.1. This question is only applicable if you are planning to obtain informed consent:
How do you plan to obtain informed consent? (i.e. the proposed process?):

A10. What measures will be put in place to ensure confidentiality of personal data, where appropriate?
During the first meeting with every the participants the aims and objectives of the study will be explained in depth and a project information sheet will be handed out. All of the participants will be given an adequate amount of time to consider whether they would like to participate or not. As, the interviews and questionnaires will be done anonymously even the researcher does not need to identify the participants by name and address, also, there is not any taken photo of the participants.

A11. Will financial / in kind payments (other than reasonable expenses and compensation for time) be offered to participants? (Indicate how much and on what basis this has been decided)

YES ☐ NO ☑

A12. Will the research involve the production of recorded media such as audio and/or video recordings?

YES ☑ NO ☐

A12.1. This question is only applicable if you are planning to produce recorded media:
How will you ensure that there is a clear agreement with participants as to how these recorded media may be stored, used and (if appropriate) destroyed?

In this study researcher will require audio recordings to record data from interviews. Before every interview a project information sheet will be handed out and also the objectives and aims of the project will be explained in depth then participant will be asked to sign the consent form and the information sheet, attached, will be translate into the local language Farsi (A two side information sheet will be produced and offered to participant. On one side there will be a very concise explanation of the project, aimed at participants with limited literacy (page no 2), on another side more detailed and comprehensive information will be provided (page no 1)). As all interviews will be done anonymously and the researcher does not need to identify the

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participant by name and address so audio recording only helps the researcher to review and transcribe the interviews. All the audio-recorded material will be destructed after transcribing. All the stages of recording, transcribing and destructing the interview files will be discussed by the participants.

Guidance on a range of ethical issues, including safety and well-being, consent and anonymity, confidentiality and data protection are available at:
http://www.shef.ac.uk/ris/other/gov-ethics/researchethics/policy-notes

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University Research Ethics Application Form

Part B – The Signed Declaration

Title of Research Project: "The traditional Iranian square as a model for sustainable urban design"

I confirm my responsibility to deliver the research project in accordance with the University of Sheffield's policies and procedures, which include the University's '*Financial Regulations*', '*Good Research Practice Standards'* and the '*Ethics Policy Governing Research Involving Human Participants, Personal Data and Human Tissue'* (Ethics Policy) and, where externally funded, with the terms and conditions of the research funder.

In signing this research ethics application form I am also confirming that:

- The form is accurate to the best of my knowledge and belief.

- The project will abide by the University's Ethics Policy.

- There is no potential material interest that may, or may appear to, impair the independence and objectivity of researchers conducting this project.

- Subject to the research being approved, I undertake to adhere to the project protocol without unagreed deviation and to comply with any conditions set out in the letter from the University ethics reviewers notifying me of this.

- I undertake to inform the ethics reviewers of significant changes to the protocol (by contacting my academic department's Ethics Administrator in the first instance).

- I am aware of my responsibility to be up to date and comply with the requirements of the law and relevant guidelines relating to security and confidentiality of personal data, including the need to register when necessary with the appropriate Data Protection Officer (within the University the Data Protection Officer is based in CiCS).

- I understand that the project, including research records and data, may be subject to inspection for audit purposes, if required in future.

- I understand that personal data about me as a researcher in this form will be held by those involved in the ethics review procedure (e.g. the Ethics Administrator and/or ethics reviewers) and that this will be managed according to Data Protection Act principles.

- If this is an application for a 'generic' project all the individual projects that fit under the generic project are compatible with this application.

- **I understand that this project cannot be submitted for ethics approval in more than one department, and that if I wish to appeal against the decision made, this must be done through the original department.**

Name of the Principal Investigator (or the name of the Supervisor if this is a postgraduate researcher project):
Dr. Cristina Cerulli

If this is a postgraduate researcher project insert the student's name here:

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Noushin Zand Vosoughi

<u>Signature</u> of Principal Investigator (or the Supervisor):

<u>Date</u>:

Email the completed application form and provide a signed, hard copy of 'Part B' to the Ethics Administrator (also enclose, if relevant, other documents).

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Noushin Zand Vosoughi
School of Architecture
University of Sheffield

Stephen Walker

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17th February 2012

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Dear Noushin

PROJECT TITLE: The traditional Iranian square as a model for sustainable urban design

On behalf of the University ethics reviewers who reviewed your project, I am pleased to inform you that on 17.02.2012 the above-named project was unconditionally **approved** on ethics grounds, on the basis that you will adhere to the following document that you submitted for ethics review:

- University research ethics application form (dated 16.1.2012)
- Participant information sheets (English and Farsi)

We would recommend that you read further into the advice on conducting research in public places, which covers approaches to working with verbal consent: **Research in Public Contexts and with Groups** (see http://www.shef.ac.uk/ris/other/gov-ethics/ethicspolicy/policy-notes/consent/public-contexts-groups).

If during the course of the project you need to deviate significantly from the above-approved document please inform me since written approval will be required. Please also inform me should you decide to terminate the project prematurely.

Yours sincerely

Stephen Walker
Ethics Administrator