Suez Canal University
Faculty of Engineering
Department of Architectural
Engineering & Urban Planning

LANDSCAPE AS A TOOL TO ENHANCE BEHAVIOURAL RESPONSE AND ACTIVITIES IN HISTORIC URBAN PARKS

AN EVALUATIVE METHODOLOGY – ALAZHAR PARK

Thesis Submitted By

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IN PARTIAL FULFILLMENT FOR THE
DOCTOR OF PHILOSOPHY DEGREE IN ARCHITECTURE

Port Said, Egypt
April 2010

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اللهم لك الحمد حتى ترضى ولك الحمد اذا رضيت
ولك الحمد بعد الرضا

To all those without whom this thesis might not have been written, and to all my teachers and professors, from past and present, in great appreciation for their inspiration and passion for knowledge

To my parents, brothers, wife and precious boys . . .

Acknowledgement

My most sincere thanks and gratitude to Allah Almighty, first and foremost. Then I would like to thank my advisory committee for their contribution to my research and their willingness to review my dissertation.

To my advisor **Dr. Mustafa Abd ElHafeez**, head of the Architectural and urban planning department in Port Said at Suez Canal University, my deepest gratitude for your continuous guidance, support, especially in the final steps to form the thesis. Special thanks to **Dr. Sahar Attia,** Prof of planning and urban design in the faculty of Engineering – Cairo University, for her support and comments that always kept me on the right path since I was a student in Cairo university, with her continuous guidance I became who I am.

I gratefully acknowledge the support of **Dr. Essam Badran**, professor of urban design and vice dean in faculty of engineering Ismailia, his remarks were always very helpful especially in the thesis revision.

Last but not least, **Dr. Noha Nasser**, professor of urban design in Birmingham City University in Birmingham, UK, your valuable advises and care during my two years study in UK helped me a lot to build the main structure of the research.

Most of all, I thank my family for their love and support. My little boys, Abdullah and Mustafa, and my wife, she made it possible for me to find time to write. I am also thankful to my parents for their encouragement to finish what I started.

To my beloved country Egypt, the most wonderful country in the world, always in my heart and soul.

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Introduction

- Scope of Research
- Problem Definitions
- Research Objectives
- Research Hypothesis
- Research Methodology
- Research Contents

Introduction:

"Yet parks provide much benefit to the public. Not only are parks important for city dwellers in terms of contact with nature and aesthetics satisfaction, but they also may provide health and restorative effect"

(Ulrich, 1992)[1]

Recently, we can notice that many international conferences[2] and organizations[3] are focusing on the idea of how we can understand the real meaning of space, and how we can build a computer data base for all the urban spaces in the city before trying to deal with it, to establish a collective view about the main general problems, reaching the local criteria for each case.

On the other hand, there was a great concern about human aspects in the urban spaces, and how it affect the design process for any open space, which should appear in the stage of assess user needs and desires, and trying to locate the reflecting activity area for this needs.

Inside the spaces, landscape plays an important public role in the cultural, ecological, environmental and social field; it also contributes to the formation of local cultures. Moreover, landscape is an important part of the quality of life for people everywhere, and designing the landscape is an endless process of movement and change, which responds to environmental conditions and human activities[4].

Therefore, the purpose of this research is to analyze the relation between the historical landscape of open parks in old districts within the city and activities and behaviour occurring inside it, and how we can develop it by the comprehensive use of landscape elements in the space.

The research will focus on how the local and non local users of the space perceive the historic landscape, and how it affects their behaviour and activities in the open space within the 3 levels of interaction relation between human and open space that can be described as follow (Altman, 1996)[5]:

- What people do in the Environment?
- What people do to the Environment?
- What people feel about the Environment?

Scope of research:

Considering the academic and practical studies in the scientific researches which deal with the open space in Egypt, three main Levels can be listed:-

- **First Level / documentation**

It deals with the open space at all its levels, starting from city till we reach the small cluster, and also the functional levels; this level focus on the development in open spaces within different time periods.

- **Second level / role of open space in the development and urban growth**

This level focuses on the role of governmental and non-governmental organizations in developing the quality of urban spaces. Meanwhile, it deals also with the concept of community sharing towards the space. In this level the space is considered one of the most effective tools forming and developing the urban context around it.

- **Third level / the social and cultural aspects**

This level is the most one that affect form and contents of the open space, and is considered also the complicated and overview level in dealing with the open space, because we have to connect between symbolism and emotional aspects with the physical and touchable component of open spaces. This level contains two directions: -

  - Offering methods and tools to understands the relation between social and human aspects and the formation of the open space, or the architectural products in general.
  - Suggesting programs and frameworks for activation of the social and cultural contents of the open spaces.

The research is concerned with the third Level of dealing with the open spaces, especially in open parks within the old historic zones, for its importance in connecting with the surrounding environment that reflects on problem definition and the research objectives.

Problem definition:

"Public urban parks are an important aspect of the urban environment. Urban parks are community assets in that they provide a convenient venue for active and passive recreations, as well as enhancing the image and perceived value of neighborhoods and residences alike"

(Solecki, 1995)[6]

Open parks can play a very important role in developing and enhancing the human behaviour and activities for all the users, especially the local users within the surrounding area, although it was rarely discussed before about the relation between the landscape design of the parks and how it influence the type of activities happening inside it.

Hence, the main problem that we deal with is the absence of sensibility of the human and social aspects, and how much it affects the form and historic landscape design of the urban parks. Therefore, the open space (especially urban parks) is considered as the most motive to direct and enhance the human behaviour in it.

Also we face the problem that we don't have the right methodology, which we can use whenever we deal with the design of open parks or redesign existent ones, especially in touristic old cities. In order to reach the perfect use for the place, and in its turn will achieve the sustainable development, and stress the visual old image of the space, and some how helps us to predict the changes of human behaviour related to the new landscape design of the space.

In the vision of Cairo 2050, there is main three main axis to be achieved, which is (Cairo as international city - Green city – Connected city). Towards the second axis of that vision, Cairo to be a green city, the expansion in the locating of parks to the ancient urban cluster, which are concentrated near areas of historical character on the Al-Azhar Park. This shows the urgent need for the presence of the appropriate methodology for dealing with those areas, both for the design of urban spaces developed or amendment in the existing open areas.

Research objectives:

The main goal of this research is to reach an integrated coinage for the open parks in the historical old cities. This coinage can offer the reasonable explanations for the relation between historic landscape design and the behaviour and activities inside the space.

Also, the research aim to examine the process and factors affecting the development and perception of landscape taking El-Azhar Park in Egypt as a main case study, and some international examples of urban parks located around the world. That main goal can be achieved through a group of secondary objectives: -

- Reviewing all the different definitions for historic vernacular / designed landscape, and cultural landscape.
- Determining the main factors, which affect the human activities and behaviour.
- Reviewing all the trials to understand human behaviour, especially Computer based trials for modelling human behaviour inside urban spaces.
- Analyze the effect of history on urban parks located in historic cities.
- Investigating the landscape perception and identifying the factors, conditions that influence response to it, and evaluating different perception among user group with park landscapes.
- Discovering the symbolic values for the urban parks in the old historic parts in the cities, and how much it reflects the nature of life and activity.
- Establishing general guidelines for the design of historic landscape in urban parks inside the cities.
- Developing a comprehensive evaluative methodology of historic landscape design in historic parks.

In the research process, some questions will be addressed to achieve these goals: -

- What are the most likely activities always happening within the open urban parks?

- What is the meaning of historic landscape, and how people understand it?
- What relationship (if any) exists between public perception of urban parks historic landscape, and the type of activities and behaviour taking place in it?
- Can we systematically evaluate and measure the influence of historic landscape design in open parks on people behaviour?

Research hypothesis:

In order to affirm the research goals, the main hypothesis of the research is: -

"Historic urban parks play a very important role in forming the nature of behaviour and activities. Therefore, it is not only an urban component in the city tissue. But it is the place, which holds the nature of human life, and by reusing of the landscape design inside it, we can develop and direct the activities and behaviour in the best way according to the society and place characteristics"

Research methodology:

Towards achieving the main goal and objectives, and also testing the hypothesis, the research relies on the sequential and different methodologies, such as: -

- **The theoretical approach (Part 1)**

The research focuses on the theoretical backgrounds for each element in the study, such as: -

- Urban parks in the city. The different types / ways of classification and definitions.
- The different approaches for the behaviour and activities that happen in the open spaces, and the main factors affecting them.
- Review the important design criteria and approaches for historic landscape design by the designers and planners in general, and how to evaluate it.

- **The analytic approach (Part 2)**

The research aims to connect between the elements of theoretical study, in order to reach: -

- General review of historic landscape, guidelines for a comprehensive use of landscape elements in old historic open spaces.
- Discussing the different types of behaviour and activities that happened in the park, and addressing the principles to make parks accessible to the community.
- Analyzing the relationship between landscape design and developing human behaviour in open spaces.
- Discussing the idea of experiential landscape and analyzing its components to apply it in the practical study as a part of the proposed evaluative methodology.

- **The practical approach (Part 3)**

In order to reach an overview coinage can offer the reasonable explanations of relation between the urban parks and its elements with the behaviour and activity inside it, especially in the touristic old zones in the urban tissue, the research will present the case study in both Egypt, Cairo (Al-Azhar Park) and samples chosen historic parks around the world as an example for the historic zones in the city.

Then, it will end by applying the evaluative methodology on Al-Azhar Park in Cairo, to come to conclusions.

- **The evaluative model and recommendations**

This chapter will introduce an evaluative model to use later on any urban park, followed by testing this model on Al-Azhar Park, then addresses main recommendations for Al-Azhar Park and generally to urban parks landscape design.

Fig 1 shows the main three parts of the research, and the contents of each part, and how it all collaborates to achieve the main goal of the thesis.

Main Goal

Develop an evaluative model that can offer an integrated coinage and examine the relation between using the historic landscape elements in urban parks located in historic cities, and enhancing the behaviour in the space according to place character.

Part (1) Theoretical Approach

Chapter one
- Understanding the development of urban parks through time (as a model), and Exploring the different ways of classification for urban parks.
- Defining the different benefits of urban parks.

Chapter Two
-Exploring the different terminology that describes the types of landscape.
- Defining the different points to evaluate historic landscape.

Chapter Three
- The different definitions of human behaviour and activities.
- Defining ways of measuring and evaluating human behaviour.

Part (2) Analytical Approach

Chapter Four
-Exploring the main guidelines of landscape for the urban parks.
- Understanding the comparative analysis of parks design.

Chapter Five
- Addressing the different types of positive and negative activities which happen in the urban parks.
- Discussing the different user groups that use the park.

Chapter Six
- Analyzing the basis of people's perception to the landscape.
- Discussing the concept of experiential landscape.

Part (3) Practical Approach

Chapter Seven
- Analysing and evaluating international examples of historic parks.

Chapter Eight
- Introduction to the case study and evaluative methodology.

Chapter Nine
- Apply the evaluative methodology on Alazhar Park, to reach conclusions.

Chapter Ten
- Final evaluative model and recommendations.

Fig 1: The research methodology and contents

Research contents:

- **The theoretical approach (Part 1)**

Chapter 1: Urban Parks in the City

This chapter will start with the historical background and social context for urban park in the city, followed by reviewing several classification schemes for urban parks according to many criteria's which are used in several locations. In the chapter, the research will try to classify the different roles for the urban parks inside the city into some points. By the end of this chapter it will reach the main framework *to* measures park system success.

Chapter 2: Landscape Design with History

In order to understand the scope of research for the study, this chapter will identify some terminologies and definitions for the historic landscape and some terminologies which will be used later in the thesis. In this chapter, some different ways will be reviewed in which landscape embodies knowledge; it offers two contrasting evaluations of the significance of landscape as a way of knowing.

By the end, the research will review some principles for an inclusive historic landscape in open spaces; also it will mention the main items to evaluate historic designed landscape.

Chapter 3: Human Behavior and Activities

This chapter is the last of the three chapters forming the theoretical approach; it aims to review all the studies about pedestrian behaviour and movement in open spaces which is influenced by the environment.

The chapter will review the definitions for behaviour and pedestrian activities, going through the different factors affecting human behaviour, then ending by introducing the different trials to simulate human behaviour and activities in open spaces.

- **The analytic approach (Part 2)**

Chapter 4: Design Guidelines of Urban Parks Landscape

Chapter 4 is the result of interaction between urban parks and landscape design; it starts with analyzing how parks can be categorized according to its landscape.

Later in the chapter the research will come across the parks planning and its landscape design guidelines, then explaining the comparative analysis of park design to be used later in case study.

Chapter 5: Users and Activities in Urban Parks

This chapter is the correlation between users activities and urban parks, it starts with addressing human needs in urban parks, followed by explaining the main factors influencing whether people use urban parks or not. Through this chapter, research will analyze the main principles to make parks accessible to the community, and what are the user groups and classification.

Chapter 6: Landscape Perception and Preferences

Chapter 6 will focus on the relation between landscape design and human behaviour and how people perceive it and react, and discuss the major theories in landscape and behaviour. In this chapter, the research will discuss the basis of people attitudes and perception, and then it will explain the idea of experiential landscape which will be used on the practical study to produce behavioural maps which can explain people's behaviour and their perception of historic landscape elements.

- **The practical approach (Part 3)**

Chapter 7: International Examples of Successful Urban Parks

This chapter presents some international examples of urban parks in historic context, and evaluates it according to the points mentioned before in the theoretical and analytical chapters. The chosen urban parks examples to study and evaluate are distributed as follows:-

North America (Central Park - Prospect Park - Battlefields Park)

Europe (Hyde Park - Regents Park - St James's Park - Bos Park - Tiergarten Park - Parc Guell)

Asia and Australia (Beihai Park - Kings Domain Park)

Chapter 8: Cairo parks and evaluative methodology

This chapter will discuss the idea of urban parks and garden spaces in greater Cairo, and how it is developing through time, and then the research will list some examples of urban parks and green spaces in Cairo in order to draw the limitation of application study and explain the methodology being used to select the chosen case study.

The main points will be discussed in this chapter can be listed as below:

- History of Parks and Green Spaces in Greater Cairo
- Case Study Selection
- Towards an Evaluative Methodology

Chapter 9: Case Study of Al-Azhar Park

In this chapter, the research will apply the evaluative methodology on Al-Azhar Park in Cairo, in order to draw an experiential landscape map for the park to understand users behaviour towards historic landscape elements, later, the research will reach some conclusions from the study to be followed by recommendation in chapter 10, which helps to redesign the park for a better future interaction with the users. The chapter will go through some points to reach these goals, which are:

- Al-Azhar Park, History and Location.
- Is the park accessible to the community?
- Comparative analysis of Al-Azhar park design.
- Evaluation of Designed Historic Landscape.
- Reading the Experiential Landscape in Al-Azhar Park.
- Drawing Experiential Landscape Map (CDTA).
- Conclusions of park evaluation.

- **The Evaluative model and recommendations**

Chapter 10: Evaluation Model and Recommendations

After the practical study and evaluation of the experience of Al-Azhar Park in Cairo using the proposed evaluative methodology in chapter 8, this chapter will crystallize the outcomes in a form to be used locally on Al-Azhar Park and generally when it is needed to evaluate the performance of any urban park. The points will be discussed in this chapter will be as followed:

- Evaluation model for urban parks.
- Recommendations for Al-Azhar Park.
- General recommendations.
- Implications for future studies.

Fig 2: explain the connection between the main three chapters in the theoretical approach, and how it is connected to establish the analytical approach, and at by the end it suggests the evaluative model to use on urban parks.

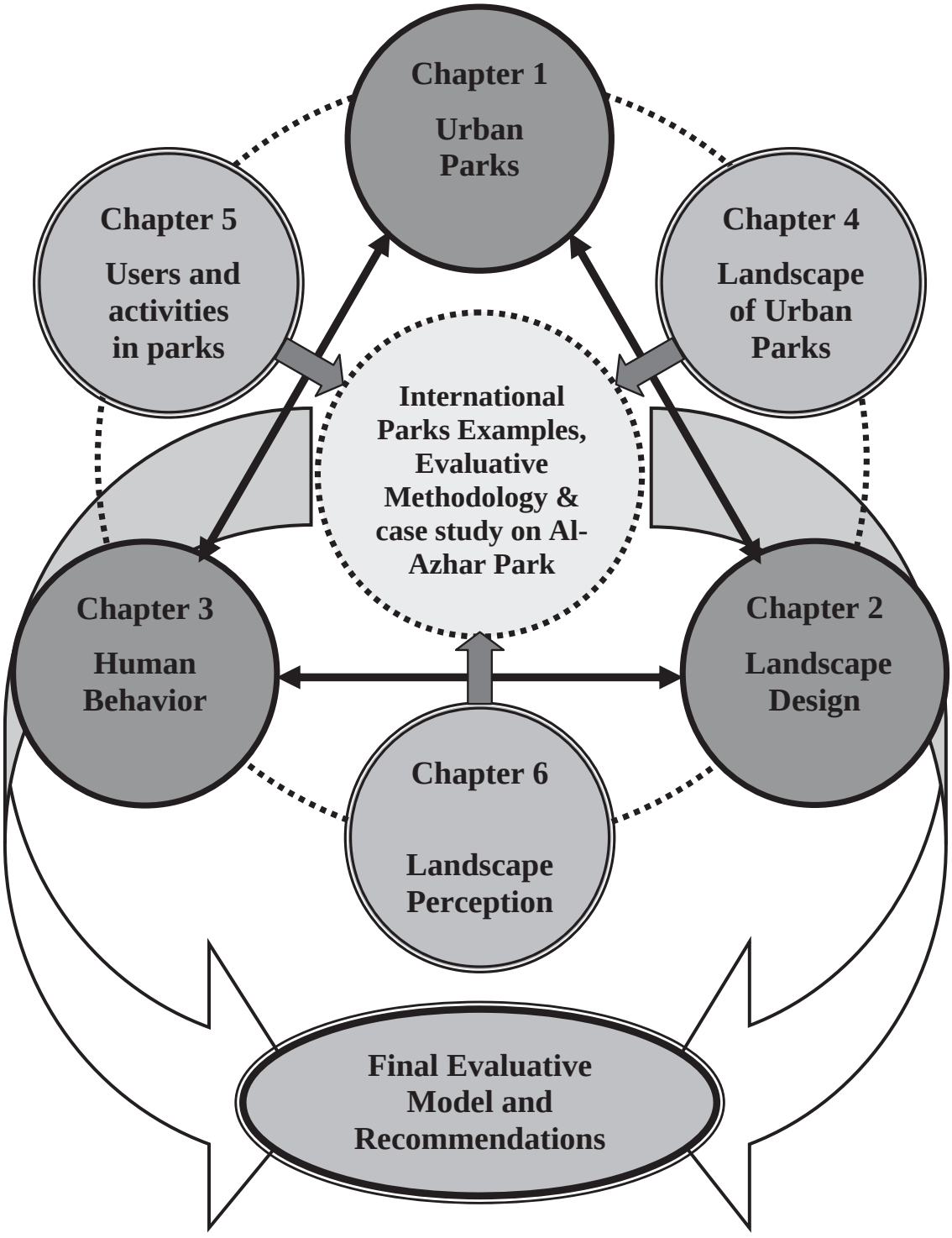

Fig 2: The relation between theoretical, analytical and practical approach of the thesis

Footnotes

[1] Ulrich, Roger S. (1992c). "The Influences of Passive Experiences with Plants on Human Well Being and Health." in Diane Relf (Ed.) *the Role of Horticulture in Human Well-being and Social Development*, Portland, OR: Timber Press.

[2] Some of these conferences are:

www.cresson.archi.fr/AMBIANCE2008.htm, the International symposium, creating an Atmosphere. 10-12 September 2008. France.

www.urbanlife2005.com, International Conference for Integrating Urban Knowledge and Practice, Gothenburg, Sweden, 29th May to 3rd June.

www.urbanparks08.org, International Urban Parks Conference, September 21 - 23, 2008, Pittsburgh, Pennsylvania.

[3] Some of these organizations are:

www.cnp.org.uk, Council for National Parks Home Page, the National Parks of England and Wales.

www.gardenhistory.org.uk, United Kingdom Data Base of Historic Parks and Gardens.

www.nps.gov, The American System of National Parks.

www.pps.org/upo, Project for Public Spaces, Resources for Parks, Plazas and Squares.

[4] Harvey, Shela. (2003). the cultured landscape, Designing the environment in the 21st century. Paris, France. Marcela Eaton.

[5]Altman, I., & Ginat, J. (1996). Polygamous families in contemporary society. New York: Cambridge University Press.

[6] Solecki, W., & Welch, J. M. (1995). Urban parks: green spaces or green walls?, Landscape and Urban Planning, 32(2), 93-106.

Chapter 1

Urban Parks in the city

Historical background and social context

Parks classification systems

The role of urban parks in the city

Measures of an excellent urban park system

Summary and conclusion

1. Urban parks in the city

The purpose of this chapter is to define and narrow the research questions and problems. Since the objectives of the research are to provide an understanding of the factors that influence human behavior inside the Urban Park, and to explore the main guide lines of the Park's patterns, the literature review is divided into the following five sections:

1. Historical background and social context.
2. Parks classification systems.
3. The role of urban parks in the city.
4. Measures of an excellent urban park system.
5. Summary and conclusions.

Urban parks are one of the most significant contributions that the profession of landscape architecture has made to society.[1] According to OXFORD English dictionary, the parks are a large public garden in town used for recreation.

1.1. Historical background and social context

According to Springgate[2], parks are peaceful, tranquil, beautiful spaces to which people are intrinsically attracted. Historically, urban parks emerged from public spaces that were used as grazing land in cities or towns.

Evidence from Western Europe in the 17th century and New England towns in the United States, shows that inhabitants set aside lands near their towns, cities, or villages for the common use of their citizens. The citizens used these areas, or "commons" to graze livestock, and hold the animals before selling them or using them in the village or town [3]. Over time, these grazing lands became important spaces in the city as people started to use them for other purposes.

1.1.1. The definition of an urban park

Historically, urban parks have evolved from pieces of land set aside informally for grazing, into multi-purpose urban spaces for recreation, escape and social gathering.

This evolution of the uses and purposes of urban parks makes an established definition of the term impossible. Another reason why the definition varies is because it overlaps with general park terminology.

According to Cranz[4], particularly in the United States, the definition of "urban park" became problematic after it became a government institution service. She argues that, today, the word "park" is applied.

The most famous definition of urban park was provided by Frederick Law Olmstead who defined the urban park as "a naturalized passive retreat" [5]. A park is "a pleasure garden where masses unable to flee overcrowding, disease and foul air, could find near their home a bucolic agrarian environment" [6].Olmsted's definition has been widely used all over the world, particularly in the United States from the mid 1800's to the early 1900's.

Professions other than Landscape Architecture, particularly those interested in the concept of space and place, also have defined the urban park. For example, Solecki and Welch[7], both urban geographers, expanded the definition to "landscape features that serve many functions as providers of passive and active recreation, environmental benefits and wildlife habitats".

However, Yuen's[8] definition of an urban park as "any public area of land set aside for aesthetic, educational, recreational or cultural use by the public amidst essentially urban surroundings" is the most suitable for use in this research.

Yuen provides a comprehensive definition of "urban park," encompassing lands that are located in urban areas and are set aside for public uses, including recreation, aesthetic appreciation, and cultural and educational fulfillment. His definition correlates with open space planning regulations in Egypt, which require that open spaces must be designated as a specific land use.

It is relevant for this research, as Alazhar Urban Park has been designated by the Aga Khan Development Network as a public space for a specific use (open space) in the middle of an urban area.

1.1.2. Historical background

Parks have a long history before being developed into the green oasis' we are used to. Just like achievements in architecture and art relate to power and wealth, parks in their initial form consisted of agriculture fields.

Like all features belonging to the rich the gardens became a subject of finesse and details and before long they developed into a place of pleasure for the senses instead of agricultural purposes.

History shows that the uses of urban parks have changed to match the needs of their societies and cities. For example, a change in lifestyle might increase concern for health and fitness, meaning more people might come to parks for exercise[9]. Therefore, demands for different recreation areas and activities will affect park planning and design. Urbanization, on the other hand, means more people will be in the city, creating substantial demand for open spaces, family activities, and programs for the elderly and children.

The city parks are a phenomena originating from the 19th century when they would serve as counterbalance to the heavy industrial areas that popped up all over European and North American cities. England was the first European country to develop heavy industry and therefore also the first great city parks.[10]

The rest of Europe followed. The cities experienced great expansion, people moved into the cities searching for work and living conditions worsened and became extremely poor. Epidemics, political revolutions and suffering were the result. The green parks adopted the function as "green lungs", enabling the city to breath again, and constituted both a physical and mental relief from the grey and unhealthy environment the industrialization brought upon people.

In the western world, the modern concept of the urban park started in the early 19th century, during the Industrial Revolution. At this early stage, planners recognized that urban parks were important features that could improve the quality of urban life, which declined during the rapid industrialization of this time.

Parks became places to escape from the stresses of chaotic industrial cities. The idea swept the United States, England, and mainland Europe. Cities in Sweden, Denmark, and Holland started to develop urban parks to improve the quality of their cities[11].

Vondel Park, first urban park in Amsterdam. 1984 (Google Earth)

Victoria Park, one of the first parks in London. 1983 (www.wikipedia.org)

Figure 1-1: Examples of the first trials of urban parks around the world

During this time, parks were often built to serve multiple motives, which usually included:

> "A philosophy of social reform to improve the physical and moral welfare of the working class, a utilitarian belief in the value of open spaces and recreation for labor productivity and the dampening of social unrest, a romantic desire to bring back nature into the cities, a sense of civic pride and a psychology of social hygiene"[12]

In addition to rapid industrialization, mass urban migration was another factor that stimulated the growth of urban parks. Crowded urban spaces, due to an influx of people massively degraded the quality of urban life. Planners began to see urban parks as places that could increase the tranquility and comfort of urban life by providing a space for citizens to escape from the squalor and stress that characterized much of their daily routine.

Thus, parks served as places of recreation and leisure. In the late 19th century, urban parks started to be developed at public expense13, when the social reform of the working population in Britain paved the way for early legislation providing open spaces in cities and towns.

Since the 19th century, urban parks have transformed American and European cities. They have not only enhanced and beautified the urban environment, but also have become "important structural components in the shaping of urban form"[14].

According to Galen Cranz[15], the history of urban park in USA can be divided into four main stages, which is:

- The pleasure ground (1850 – 1900) – Central park
- The reform park (1900 – 1930) – Harrison park
- The recreation facilities (1930 – 1965) – Aquatic park
- The open space system (1965 and after) – Paley park

Central park, New York

Harrison park, Chicago

Aquatic Park, San Francisco

Paley Park, New York

Figure 1-2: Samples of main four stages for urban park development in USA[16]

1.2. Parks classification system

This point will review several classification schemes for urban parks which used in several locations, followed by evaluation of each method. As shown in Figure 1-3.

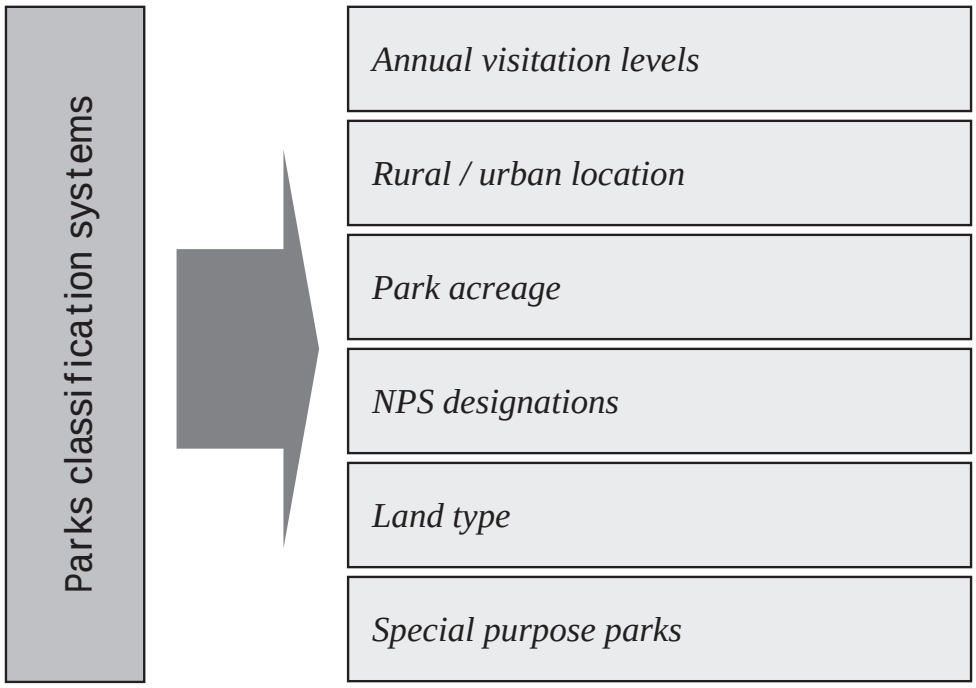

Figure 1-3: different types of parks classification

1.2.1. Annual Visitation Levels

One of the most obvious classification methods for parks is to categorize them by their annual visitation levels. Based on the distribution of visitation levels it could be a suggested classification for annual visitation levels.[17]

1.2.2. Rural / Urban Location

Another way to classify parks is to define them as either in an urban environment or a rural environment. A location is defined as urban if it is located within 50 miles of urban areas or cities, all parks not classified as urban would be considered rural.[18]

Figure 1-4 shows an example for each of rural an urban park to highlight the main difference.

Rural Park of Anaga, Spain

Regent's park, London

Figure 1-4: An example of rural and urban parks (www.peoplespark.org)

1.2.3. Park Acreage

Parks may also be differentiated by their total land area, since this may affect visitation characteristics (like length of visit), According to this way of classification[19] parks could be divided into:-

- ***Mini parks***

A facility designed to provide recreational opportunities for a small area within a neighborhood. Generally, a mini-park is designed for young children, however in some cases it may be designed for aesthetic purposes. Less than 1 acre is the recommended minimum size to provide adequate buffer space and diversity of uses.

- ***Neighborhood parks***

The neighborhood park is designed to serve the recreational needs of children 6-15 years of age, as well as adults, pre-schoolers, and seniors. The area should be around 1-10 acre, 5 acre optimum.

- ***Community parks***

This park is designed to serve a wide variety of needs for youths and adults in both active and passive recreation. Facilities for sports fields, open turf areas, playgrounds, picnic areas, and off-street parking could include restrooms and related facilities. The area should be around 10-50 acre.

- ***Regional parks***

Open space areas characterized by significant natural resources which provide passive recreation opportunities for both the local population and the surrounding metropolitan area; small portions of a regional park might be allocated to fulfill neighborhood park requirements. The area should be around 50-200 acre.

- ***Metro parks***

Metro parks have potentials for a wide range of users; they serve active and passive recreation needs and provide for cultural activities as well. However, principle role of these parks is to preserve ecologically unique areas and to provide places to observe and learn about nature. The area should be over 200 acre.

In Figure 1-5, some of the different types for parks divided by its acreage

Paley Park – Mini Park, New York

Bryant Park – neighborhood park, New York

Al-Azhar Park – Regional Park, Egypt

Central park – Metro Park, New York

Figure 1-5: Examples for parks classified by its acreage (www.pps.org)

1.2.4. NPS designation

Another classification is National Park Service (NPS)[20] designation. There are seven different designations used for National Park Units in California: National Park, Preserve, Historic Park, Historic Site, Recreation Area, Seashore, and Monument.

Because seven classifications would be somewhat unwieldy to deal with for this study, these seven types of park units were combined to make four classes.

These classes, with the number of Park units within California in each classification indicated in parentheses, include:[21]

- Historic Park/Site (four),
- Monument (five),
- Park/Preserve (nine),
- Recreation Area/Seashore (four).

1.2.5. Land type

Land type may also be a useful classification. In terms of the park unit's location, it is identified as land, desert, water, or land/water. This classification may help to clarify access issues, seasonality of visitation, location relative to large population centers, and other factors.

1.2.6. Special purpose parks

This category addresses a wide variety of special places or facilities, which focus on locally unique or significant natural, historical, or cultural resources. They can be individual sites, or part of large parks. Special purpose parks include the following:-

- ***Cultural or historical parks***

Parks is accessed by pedestrian via walkways, sidewalks, promenades or trails around and through the site. These park sites are established primarily to present and preserve cultural or historical theme for public education and enjoyment.

Figure 1-6 shows an example of this type of parks, the culture park for children in Cairo, and Park De La Villette in Paris as an example of Science Park.

- ***Ecological / natural parks***

Natural areas, wildlife preserves and other park reserves are intended for both conservation and public enjoyment access to environmentally sensitive areas maybe restricted to protect vegetation or wild habitat. Site development is limited and strictly passive.

- ***Plaza / square parks***

They are usually highly developed, smaller sites located within the central city. Most feature intensive hardscape or softscape type development. Many have been established for commemorative purposes.

Park De La Villette, Paris – Science park (www.cite-sciences.com)

Cultural park for children, Cairo (www.touregypt.net/featurestories/childpark.htm)

Figure 1-6: Examples of special purpose parks

1.2.7. Evaluation of various classification schemes

After reviewing the different classification schemes for urban parks, Table 1-1 shows the weakness and strength for each method.

Table 1-1: Weakness and strength of classification methods for parks (Researcher)

Classification	Strengths	Weakness
Annual Visitation Levels	Parks with higher visitation levels expected to have more congestion, which leads to different ITS applications	Little correlation with other Park characteristics, such as location and size.
Rural / Urban Location	Urban Parks may have fewer overnight stays, more regular visitors.	With only two classes, there is too much diversity within classes
Parks acreage	May reflect activities of visitors, also have some correlation with location and size	Doesn't correlate well with all other ways, except annual visitation level
NPS Designation	Objective definitions based on NPS; has transferability beyond California. Correlates well with location, size and overnight visitation	Doesn't correlate well with visitation
Land Type	May reflect activities of visitors, also have some correlation with location and size	Classes are not well defined, Subjective, and Doesn't correlate well with visitation
Special purpose parks	Very good method to understand the purpose of landscape design elements and form in general.	Doesn't correlate well with park acreage

1.3. The role of urban parks in the city

Numerous studies have demonstrated the ability of natural places to positively influence individual well-being. Even brief views of nature have been found to speed recovery from surgery[22], and enhance one's ability to function effectively[23]. The research will try to classify the different roles for the urban parks inside the city into some points as followed:-

1.3.1. Community revitalization

Parks are one of the most important components of the city; they can serve a wide group of users. They also can function as a conscious tool of revitalization.

Successful parks also allow the user to relax and get away from daily life while providing engaging elements such as vegetation and scenic views[24]. In addition, these parks provide opportunities for more active uses, such as picnics, community events, and general recreation. Finally, successful parks allow people to explore their surroundings.

Figure 1-7: The urban park as community revitalization (**www.peoplespark.org**)

1.3.2. Community engagement

Parks support community engagement by providing residents with a venue for participation in and attachment to their communities. They also provide a sense of place and offer essential life-enhancing qualities that aid community and individual well-being.

By understanding the community benefits of parks, decision makers can develop constituencies that can sustain their urban park systems over time.[25]

For example, a study by Human-Environment Research Laboratory at the University of Illinois found that the greener space in cities, the more that residents use public space and know each other.

The researchers also found that relationships between neighbors are made stronger by the mere presence of vegetation. Compared to residents living near barren spaces, those closer to green spaces enjoy more social activities, have more visitors, know more of their neighbors, and have stronger feelings of belonging. [26]

1.3.3. Economic development

Open spaces and parks are a good financial investment for a community. And by understanding the economic impacts of parks it can help decision makers to better evaluate the creation and maintenance of urban parks.

The benefits of high quality parks and green spaces are not just aesthetic; they are economic, social and environmental, with complex interrelations between these issues. But it is their potential to offer a wide range of economic benefits, which is the concern of this report, from helping to attract an economically active workforce to the community, to attracting inward investment and enhancing local property values.[27]

1.3.4. Create saver neighbourhoods

It has been proved now that green spaces may foster crime and illegal activity; evidence now exists that the opposite may be true. When adjacent to residential areas, green spaces have been shown to create neighborhoods with fewer violent and property crimes and where neighbors tend to support and protect one another.[28]

Finally, in one of Cabe Space Studies of urban parks and safety in the city, they studied some cases in England, the case studies in this study link the decline in condition of the park and the loss of facilities with a decline in use and an increase in vandalism, it appears quite clear which came first. The parks were in decline and failing to meet customer expectations long before anti-social behavior started to become the dominant characteristic.[29]

1.3.5. Green infrastructure

Just as growing communities need to upgrade and expand their built infrastructure of roads, sewers, and utilities, they also need to upgrade and

expand their green infrastructure, the interconnected system of green spaces that conserves natural ecosystem values and functions, sustains clear air and water, and provides a wide array of benefits to people and wildlife. Green infrastructure is a community's natural life support system, the ecological framework needed for environmental and economic sustainability.[30]

In their role as green infrastructure, parks and open space are a community necessity. By planning and managing urban parks as parts of an interconnected green space system, cities can reduce flood control. Parks can also protect biological diversity and preserve essential ecological functions while serving as a place for recreation and civic engagement.

Figure 1-8: Al-Azhar park in Cairo Egypt, green infrastructure in Cairo

(www.akdn.org)

1.3.6. Help children learn

Childhood is a holistic process, different for each individual child. Many children do not learn effectively exclusively within a classroom. They need alternative, hands-on learning environments to match their varied learning styles.

City parks, greenways, and naturalized school grounds can be a crucial antidote to these unhealthy trends. They can motivate young people to learn through the natural environment (which includes learning about the natural environment), bringing environmental education into the

mainstream of state-mandated instructional programs. The informal learning, non formal programs, and formal instruction associated with parks can reinforce each other.[31]

Figure 1-9: The urban park as a tool to help children learn [32]

1.3.7. Improve public health

Beyond the recreational opportunities offered by parks, a lot of studies shows that contact with the natural world improve physical and psychological health[33]. An extensive study published in 2001 in the Netherlands set out to determine the link between green space and health. The study overlaid two extensive databases, one with health information on more than 10,000 residents of the Netherlands, and the other a land use database covering every 25-by-25-meter square in the nation, allowing researchers to know which people lived near city parks, agricultural land, and forests and nature areas.

1.3.8. Art and culture programs

Urban parks have always been an important setting for arts and cultural programs. During the late 19th century, parks commonly hosted musical events. By the beginning of the 20th century, dance, theatre, and even the new medium of film began to be represented in parks programming.

Today, there is a tremendous flowering of artistic and cultural activity in urban parks, from large-scale performing arts festivals to long-term residencies with arts organizations. Parks and the arts have become

mutually beneficial: the arts can play an essential role in revitalizing a park, and parks in turn can help solve problems faced by artists and arts organizations.[34]

Since parks are the democratic spaces of a city, where communities can come together to express their identities, the marriage of parks and the arts makes perfect sense. Parks can be a vital place for the cultural expression of a community and a city.

Main space – Al-Azhar Park, Egypt
Source (Researcher)

Celebration in park, Stavanger, Norway
Source (G5 Symposium Talk)

Figure 1-10: The park as a place for a lot of cultural events

1.3.9. Promote tourism

Public parks are often the “engine” that drives tourism in many communities. In a simplified tourism model, visitors use some mode of transportation to leave their homes and travel to attractions, which are supported by various kinds of services, such as hotels/motels, restaurants, and retailing.

Most of the time, the desire to go to a destination on a pleasure trip is stimulated by its attractions. Many of these attractions are located in parks; while some parks are themselves attractions.

This leads to the conclusion that in many communities, parks drive the tourism industry.[35]

1.3.10. Smart growth

Parks are commonly thought of as the venue for “fun and games,” but that is only one role they play in a metropolitan environment. Urban parks, which broadly include parkland, plazas, landscaped boulevards, waterfront promenades, and public gardens, significantly define the layout, real estate value, traffic flow, public events, and the civic culture of our communities. With open spaces, our cities and neighborhoods take on structure, beauty, breathing room, and value.

Public understanding of the pivotal role that parks play in enhancing the quality of life in our cities is growing, along with an understanding of the links between the qualities of city parks and sprawling growth on the fringe of cities. City parks are an important element of smart growth that addresses both the public’s need for green space and the role of green space in mitigating higher development density.[36]

The smart growth concerns of the public create opportunities for both public agencies and private foundations to leverage support for smart growth, “by making and “re-making” city parks that both strengthen urban cores and protect the fringe.

1.4. Measures of an excellent urban park system

Great cities are known for their great parks, and one measure of any city's greatness is its ability to provide recreation, natural beauty, and signature open spaces for its citizens.

Successful parks pay dividends for cities — building civic pride, increasing tourism and economic investment, and contributing to health and quality of life. But while most of us think we know a great park when we see one, until recently we have lacked a framework for understanding how cities create and support successful parks.[37]

This part helps to create that framework *to* measures of park system success first introduced in Peter Harnik's *Inside City Parks* in 2000.[38]

These items can be listed as shown in Figure 1-11, followed by an explanation for each one.

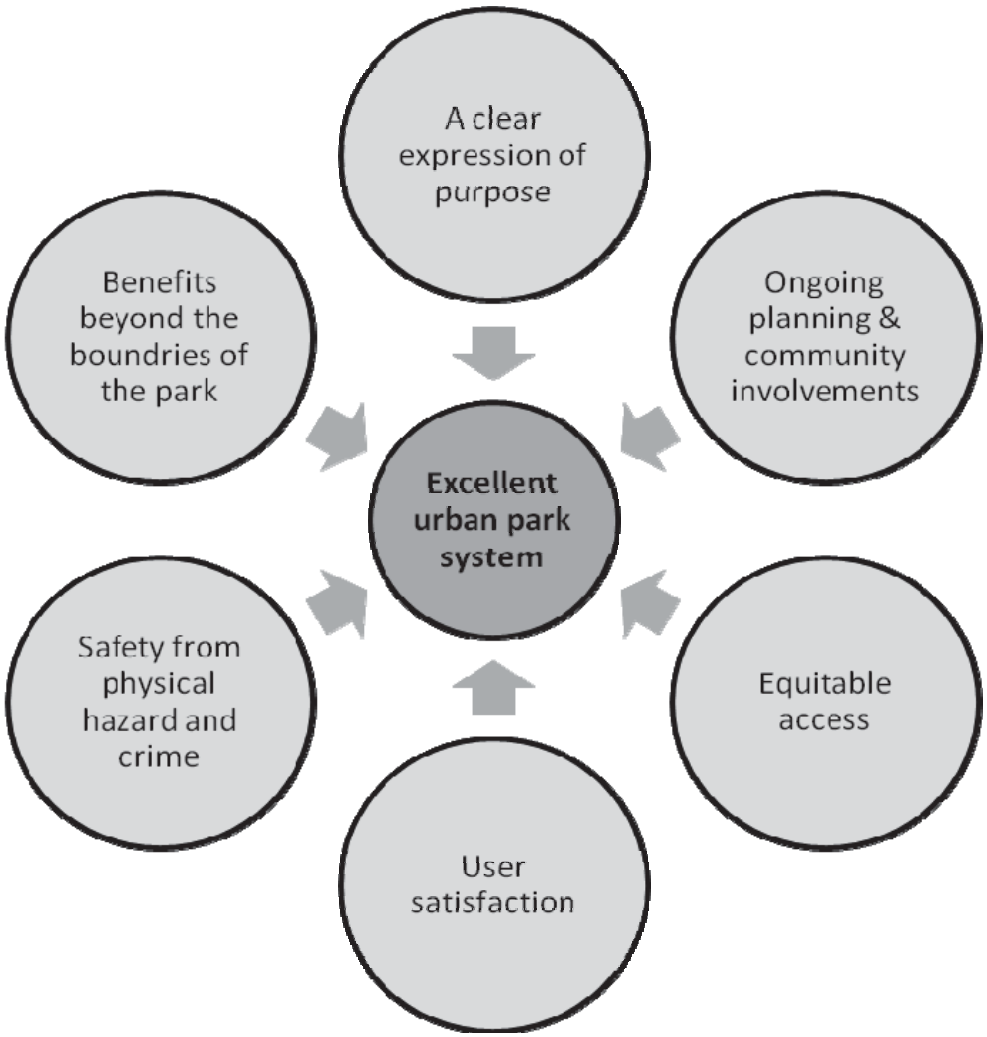

Figure 1-11: Items to measure an urban park system (adapted by researcher)

1.4.1. A clear expression of purpose

Most big-city park agencies have a legislative mandate and a mission statement, but about 20 percent of them have not formally defined their core services. A failure to develop this definition and to periodically check whether it is being followed can lead to departmental drift due to political, financial or administrative pressures.[39]

On the other hand, having a strong concept of mission and core services can stave off pressures to drop activities or pick up inappropriate tasks.

1.4.2. Ongoing planning & community involvements

Any city park system needs a master plan. A plan is more than an "intention." It is a document built upon a process, demonstrating a path of achievement, and expressing a final outcome. The ideal master plan should have, at the least, the following elements:[40]

- An inventory of natural, recreational, historical and cultural resources.
- A needs analysis.
- An analysis of connectivity and gaps.
- An analysis of the agency's ability to carry out its mandate.
- An implementation strategy (with dates), including a description of other park and recreation providers' roles.
- A budget for both capital and operating expenses.
- A mechanism for annual evaluation of the plan.

1.4.3. Equitable access

The excellent city park system is accessible to everyone regardless of residence, physical abilities or financial resources. Parks should be easily reachable from every neighborhood, usable by the handicapped and challenged, and available to low-income residents.[41]

Cities should also assure park access by a wide range of challenged persons, including the elderly, infirm, blind and those confined to wheelchairs.

1.4.4. User satisfaction

Knowing the level of park use requires measuring it, not only for an estimate of a gross total but also to know users by location, by time of day, by activity and by demographics. And finding out the satisfaction level requires asking questions, not only of users but of non-users as well.[42]

This topic will be discussed with more details in chapter 5 in the thesis, which deals with different user groups and kinds of activities.

1.4.5. Safety from physical hazard and crime

To be successful, a city park system should be safe, free both of crime and of unreasonable physical hazards — from sidewalk potholes to rotten branches overhead. Park departments should have mechanisms to avoid and eliminate physical hazards as well as ways for citizens to easily report problems.[43]

1.4.6. Benefits beyond the boundaries of the park

The value of a park system extends beyond the boundaries of the parks themselves. In fact, the excellent city park system is a form of natural infrastructure that provides many goods for the city as a whole[44], such as:

- Cleaner air, as trees and vegetation filter out pollutants by day and produce oxygen by night.
- Cleaner water, as roots trap silt and contaminants before they flow into streams, rivers and lakes.
- Reduced health costs from sedentary syndromes such as obesity and diabetes.
- Improved learning opportunities from “outdoor classrooms”.
- Increased urban tourism based on attractive, successful parks, with resulting increased commerce and sales tax revenue.
- Increased business vitality based on employer and employee attraction to quality parks.
- Natural beauty and respite from traffic and noise.

1.5. Summary and conclusion

The literature review in this chapter has informed the research design by providing a working definition of the term “urban park”.

For the purpose of this research, each point were discussed in the chapter will be narrowed to the main items[45] to be used in the research, as shown in Figure 1-12.

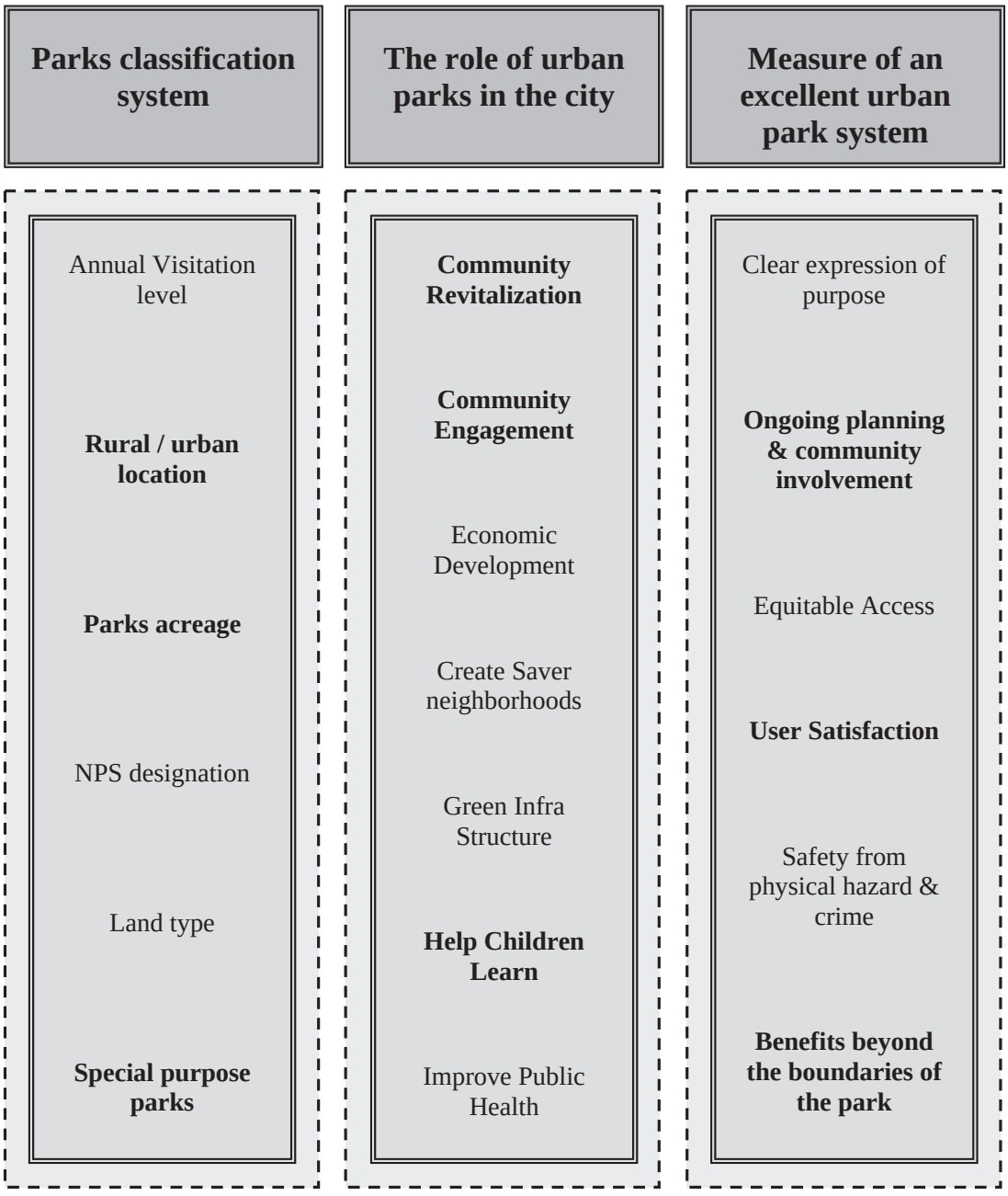

Figure 1-12: Summary of chapter 1

Footnotes

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[45] The bold text within the figure shows the main criteria will be used to study the urban parks in the research.

Chapter 2

2. Landscape Design with History

2. Landscape design with history

The purpose of this chapter is to lay the foundation for some terms which will be used in the thesis, the term landscape will be discussed and some related terms in order to create a better coinage for human interaction with landscape.

In this chapter, some different ways will be reviewed in which landscape embodies knowledge; it offers two contrasting evaluations of the significance of landscape as a way of knowing. Figure 2-1

Hence, landscape understanding can be seen as an integral part of modern science, culture and society. As such it has the advantage of being familiar, largely unquestioned, and linked to other forms of conventional knowledge about the environment. On the other hand, landscape knowledge can be used as the basis for a critique of aspects of modem life.

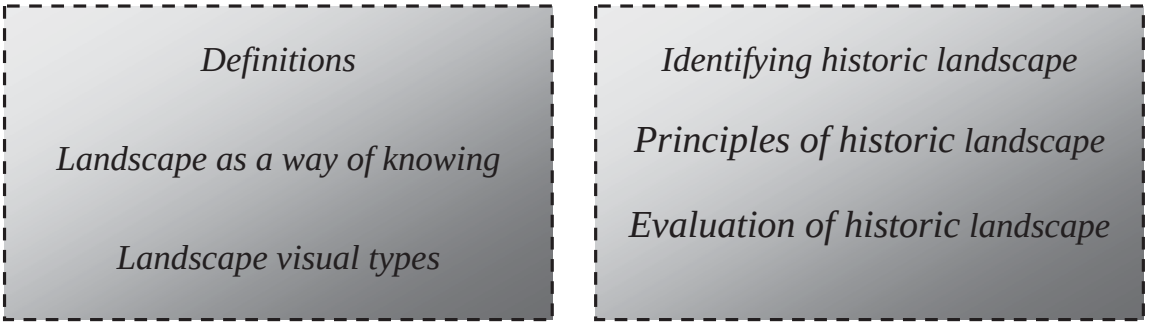

Figure 2-1: Contents of chapter 2

2.1. Definitions

2.1.1. Landscape

According to OXFORD[1], the definition of landscape is a view of prospect of natural inland scenery, such as can be taken in at a glance from one point of view

The etymology of the term landscape has been researched extensively in the literature, it is believed by some that the terms landskift, landscipe or landscaef entered Britain some time after the 5th century[2], these terms referred to a system of human-made spaces in the land, spaces such as fields with boundaries though not necessarily defined by fences or walls, it also referred to a natural unit, a region or tract of land such river valley or range of hills.

Contemporary definitions of landscape by nature conservancy organizations stress the presence of nature process that should be fostered; they reflect some misgiving about the role of humans, and an aversion against the role and presence or technology and urbanization[3].

2.1.2. Landscape architecture

Landscape architecture is a professional expression of landscape understanding; it draws on all the forms of landscape knowledge outlined above, with the particular emphasis depending upon individual landscape architects. Their backgrounds and education, and the situation in which they are practicing[4].

The term landscape architecture was invented by Gilbert Laing Meason[5] in 1828. 'Landscape architecture' is now recognized by the International Labour Organization and represented by the International Federation of Landscape Architects (IFLA).

According to the ASLA[6], the roots of the profession began in the early development of outdoor space waned in the medieval period, and was revived in renaissance villas, gardens and piazzas.

The title landscape architect was first used by Frederick Law Olmsted, who began the profession in North America; his projects included the late 1850s design of New York City's central park[7].

Before the 1960s, landscape architecture had two foundations (art / aesthetics – technology), after 1960s, Design with Nature for McHarg[8] played a major role in bringing natural system into the landscape architecture foundation. Figure 2-2

The profession has growing concerns for addressing diversity of cultural perceptions and value systems, hence, some curricula are embracing human systems as a fourth design foundation[9]. Figure 2-2

2.1.3. Landscape and culture

What we call culture or civilization refers to the human capacity to create, to invent or discover new and original applications and to make surrogates[10].

The Cultural Landscape concept first appeared among geographers for whom geography was divided into physical and social geography and who needed a conceptual tool to describe land including man-made land and objects such as houses, lines of communication, and cities[11].

Cultural landscape is a syndrome containing numerous aspects, but most of all cultural landscape highlights the life values of the people who act in it and for whom it is their homeland[12]. To them the landscape is not only a physical entity; it also has an intellectual content. Memories, myths, and ideas relating to the land are linked both to the culture and to the land as a physical entity.

Interest in historic landscapes—or cultural landscapes as they are often termed overseas—has grown in recent years, stimulated by the World Heritage Convention and, to a lesser extent, an interest in broadening the scope of historic heritage conservation beyond traditional architectural preservation[13]. This term will be discussed in more detailed in 2.4.

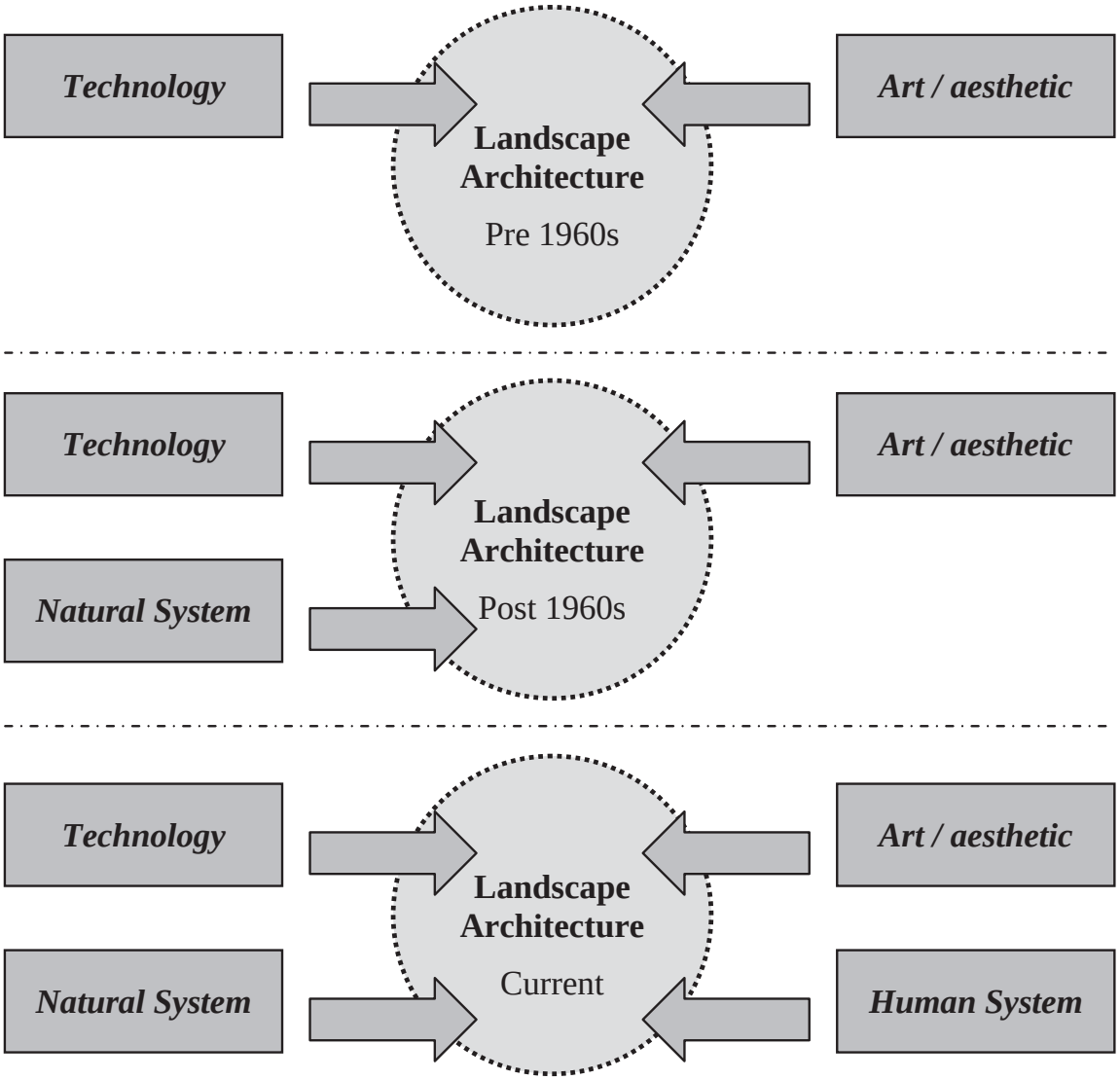

Figure 2-2: Development of landscape architectural Design foundations (adapted)[14]

2.2. Landscape as a way of knowing

There have been several classifications of landscape as a way of knowing. According to Tom turner[15], he identified three main categories as followed:-

- The artists landscape (scenery).
- The geographers landscape (a tract of land).
- The designers landscape (a planned park or garden).

Edward Ralph[16] identified six meanings of landscape, also linked to different disciplines, which is:-

Landscape as object	features in an area
Record of history	townscape
Meaning of environment	ideology or ownership

These dimensions are not mutually exclusive, but provide a framework for different ways of knowing landscape. Shown in Figure 2-3

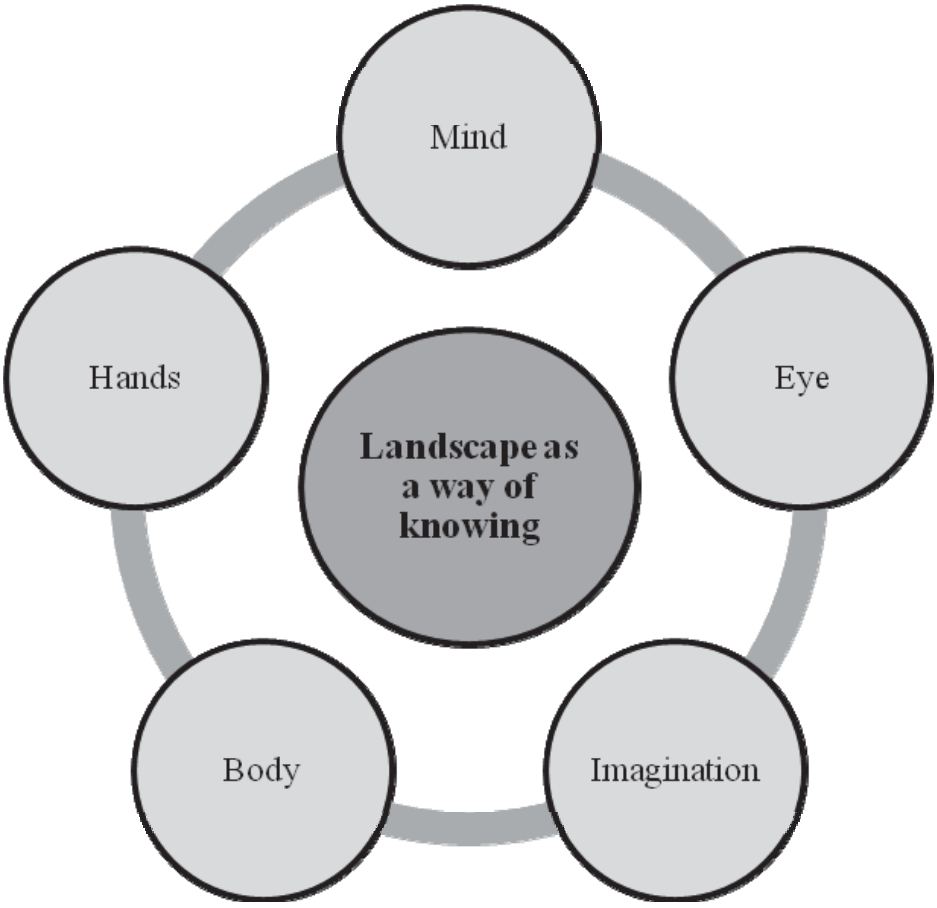

Figure 2-3: The different ways of knowing landscape (the researcher)

2.2.1. Landscapes of the mind

One of the most conventional ways of knowing through landscape is as a synthesis of conceptual knowledge about land; an account of landscape describes how we understand the character of an area of land, in a biophysical sense: its form, how it functions, and what this can tell us as a record of past natural and human activity.[17]

2.2.2. Landscapes of the eye

The idea that landscape is what we see constitutes a second way of knowing about the world through landscape. There are several variations. Popular meanings of landscape include a picture of land, a view from a particular point, or as scenery, and the picturesque qualities of land[18].

This way of knowing emphasis's visual perception and includes a concern for landscape esthetics, that is what we like about particular landscapes, and why.

Figure 2-4: Landscapes of the eye, New Zealand[19]

2.2.3. Landscapes of the Imaginations

In contrast to the interpretation of landscape as the visual environment seen by all people, some theorists argue that landscape is a socially specific, and frequently privileged, hence the idea of landscape as a form of knowledge can be only understood within its social and historical context, and in turn of nature of this knowledge informs us about the relationships between people and land[20]. Figure 2-5

2.2.4. Landscapes of the body

Landscapes of the mind emphasis mental abstraction, landscapes of the eye focus upon perception, while landscapes of imagination emphasis the way socially imagined landscapes shape our understanding; some scholars argue instead that landscape is primarily a way of knowing the world through grounded, everyday experience. For example, Jackson has highlighted the cultural values and knowledge about the world expressed within the vernacular landscape of America[21].

2.2.5. Landscapes of the hands

Jackson drew in particular upon the etymology of landschaft in his conception of landscape as a composition of man made spaces on the land[22]. He focused upon landscape made through the everyday activities of people living in communities.

Landscapes of the hand are not only expressions of particular convention. They can also be the site of experimentation and exploration. During the 1940s and till 1990s, the garden has been an important vehicle for theoretical debate and challenge.[23]

Landscapes of the Imagination Oxford City (the researcher)	landscape of the hands Street reconstruction

Figure 2-5: Examples of landscapes of the Imaginations and hands [24]

2.3. Landscape visual types

According to Vroom Meto[25], the landscape is comprised of a typology consisting of five types, used to describe and organize the physical attributes and historic context of the campus open space system. The order of the types below reflects the chronology of their development.[26]

Rustic type

The original landscape character, featuring native plant dominance, rustic character, low maintenance requirements, and relating to neoclassical or rustic architecture.

Natural type

A landscape that appears natural in the surroundings, but has been altered. Native or indigenous plant dominance, low maintenance requirements

Picturesque type

The picturesque Olmsted-style landscape of rolling pastoral lawns, informal mixed tree borders, mixed exotic and native plants, high maintenance requirements, and not directly related to particular architectural styles.[27]

Neoclassical type

Rigid architectural landscape framing neoclassical and Beaux-Arts campus buildings, with typically exotic plants selected to enforce the architectural styling and moderate to high maintenance requirements.

Urban type

Typically exotic landscape plantings in contemporary, geometric urban plazas and parks, popular as places of interaction, with building form dominant and moderate maintenance requirements. As shown in Figure 2-6 , Kew Gardens in London.

Natural type of landscape, Italy (www.equality.ws)

Picturesque type of landscape, Disney land in USA (www.equality.ws)

Urban type of landscape, Kew gardens in London (the researcher)

Figure 2-6: The different types of visual landscape

2.4. Identifying historic landscape

Historic landscapes are places that, through their physical characteristics and features, reflect the interaction of human beings with the environment. They may be associated with a historically significant activity, event or person, or otherwise manifest the values or traditions of a culture.[28]

Sometimes called cultural landscapes or heritage landscapes, historic landscapes often incorporate both natural resources, such as vegetation, bodies of water and topographical characteristics, and human-made features, such as buildings, monuments and path systems. In order to understand the scope of research for the study, we have to identify some terminologies and definitions for the historic landscape,

2.4.1. UNESCO definition

UNESCO says that[29], cultural landscapes represent the 'combined works of nature and of man' designated in Article 1 of the World Heritage Convention. The term 'cultural landscape' embraces a diversity of manifestations of the interaction between humankind and its natural environment'. UNESCO sees three main categories of cultural landscape.

Designed landscape

It is the landscape designed and created intentionally by people, such as gardens, parkland landscapes etc.

Originally evolved landscape

Which results from an initial social / economic / administrative and / or religious imperative and which has developed its present form by association with an in response to its environment; such landscapes reflect that process of evolution in their form and component features.
There are 2 sub-categories under this type, a ***relict landscape***, in which the evolutionary process came to an end in the past, and a ***continuing landscape*** which retains an active social role in contemporary society closely associated with the traditional way of life, and in which the evolutionary process is still in progress.

Associative cultural landscape

Places with powerful religious, artistic or cultural associations with the natural element but where material cultural evidence may be insignificant or non-existent.

2.4.2. US National Park service definition

In the early 1980s, the National Park Service identified four types of historic landscapes: sites, vernacular landscapes, ethnographic landscapes, and designed landscapes.

For the purposes of cultural resources survey identification, landscapes can now be divided more simply into two basic types: **designed** (consciously created to reflect a design theory or aesthetic style) or **vernacular** (developed or evolved through function or use), by answering the question of *why* a landscape looks as it does. Sites and ethnographic landscapes can be identified as a subset of either a vernacular or a designed landscape.[30]

A historic landscape may include a grouping of resources such as topographic features, vegetation, water features, buildings, structures, objects, and sites. Designed landscapes and historic sites can be small, while rural vernacular landscapes are usually larger. The definitions of the four original NPS types can be useful in the process of identifying and analyzing a resource.

Historic designed landscapes

Present a conscious work of creation. They were designed or laid out according to design principles or in a recognized style or tradition and may be important in the field of landscape architecture. Aesthetic values play a significant role in assessing designed landscapes.
A designed landscape should represent an important principle, theory, or style of landscape design. Integrity can be judged by reference to original design, noting intrusions and missing elements, keeping in mind the dynamic nature of living vegetation.

Figure 2-7: Botanical Gardens in Birmingham, sample of historic landscape (www.birminghambotanicalgardens.org.uk)

Historic vernacular landscapes

This type evolved through use. They have been shaped by human activities or occupancy and reflect the physical circumstances and cultural character of daily lives. They generally contain large acreage and a proportionately small number of buildings and structures.[31]

Figure 2-8: Shields Etheridge Farm, a typical rural vernacular landscape

(www.ahlp.org)

Ethnographic landscapes

Contain natural and cultural resources that people associated with these features define as heritage resources. Although they must consist of tangible properties, these landscapes may possess significant intangible qualities more likely to emerge in the course of conducting research and interviews and less easily recognized on the ground.

Historic sites

These sites are significant for their association with a historic event, activity or person. Where the location itself possesses historic, cultural, or archeological value. They are usually small-scale, relatively simple landscapes, although substantial archeological resources or extensive areas where historic events occurred may cover larger areas. They can be either designed or vernacular in origin, either individual landscapes or components of larger landscapes.

Table 2-1 indicates some of the types of properties which might be found to be historic landscapes under the NPS categories of sites or districts.

Table 2-1: The different types of properties related to historic landscape [32]

Historic Designed Landscape	Historic Vernacular Landscape	Ethnographic Landscape
Parks, park systems	Farms or ranches	Ethnic neighborhoods
Estates, residential grounds		Traditional cultural properties
Parkways, designed scenic highways	Recreation sites	Culturally significant topographic features
Botanical gardens, arboreta	Battle fields	Culturally significant plant communities
Zoos, zoological parks	Rural communities	Large ceremonial sites
Commercial / industrial parks or tracts		
Planned communities, civic design plans		
Commemorative and memorial parks		
Cemeteries, churchyards		

2.5. Principles of an inclusive historic landscape

2.5.1. Easy to use

This principle relates to how easy it is for people to get to and around a historic designed landscape, and use its facilities. The main issues usually concern transport, entrances, paths, toilets, seating and information. Improvements may involve physical adaptation such as relaying uneven paving or providing an alternative, shorter route around a site[33].

2.5.2. Comfortable

Comfort relies on a network of facilities including toilets, food, help points and seating. Comfort is important for all visitors, particularly those who tire easily and need to rest more often. Providing seating and shelter enables older or disabled people to explore a longer historic route or to pause to absorb information.

2.5.3. Offers choice

This is one of the most important aspects of an inclusive landscape. It ensures that visitors can decide how they want to use and enjoy it. For example, some people will visit independently, others with family, friends or as part of a group. It is important to provide for all of these.

2.5.4. Safe

Safety is a fundamental issue. Health and safety policies and practices must address the needs of all visitors, staff and volunteers. Feedback from visitors and volunteers will help identify problems that might be overlooked by routine checks.[34] Issues include emergency evacuation procedures, and how these are communicated to people with different disabilities. Safety checks should take account of temporary work and how it might impact on access.

2.5.5. Embraces diversity

An inclusive approach sees diversity as an opportunity to find creative design and management solutions. It relies on adopting positive approaches in all aspects of design and management. This includes staff and volunteer recruitment, events management, landscape design and management, education programs and ongoing maintenance.[35]

Figure 2-9: Steps at Brodsworth Hall in Yorkshire, significant element of the design. Easy to Access and safe. [36]

2.6. Evaluation of designed historic landscape

To qualify for the National Register, a designed landscape must have significance as one of the designed historic landscape types listed above 2.4, and retain integrity of location, design intent, setting, materials, workmanship, feeling, and association

Determining the significance of a designed landscape depends upon conducting a systematic investigation of the history, purpose, social significance, qualities, associations, and physical characteristics of the property and using this information to establish whether or not the landscape is an exemplary representative of one of the types listed above. A typical landscape investigation should accomplish the following: [37]

2.6.1. Obtain information

In this stage, we have to collect information about the specific example of landscape gardening, planning, and/or design through documentation of its history and collection of available plans and photographs. Conduct site visits to identify the historic characteristics of the design intent of the landscape.[38]

An evaluation of a designed historic landscape should begin with compiling a general description and history of the property including:

- Dates of design and construction;

- Names of owners, landscape architects, designers, and administrators.
- Identification of construction techniques, methods, and plant materials.
- Landscape style.
- Existing and previous uses with the dates of these uses identified.
- The acreage and existing boundaries of the original tract and any subsequent additions or reductions.

2.6.2. Analyze Characteristic Features

Next, we need to determine the characteristic features that the property must possess to be a good representative of its type, period, or method of design or construction, and how it relates to the development and philosophy of its designed landscape type.

For example, when we are approaching a park designed in the American Romantic style may be looking for an emphasis on natural scenery and native plant materials, a lack of formal design, and a curvilinear circulation system and other characteristics generally associated with such parks.[39]

2.6.3. Significance

Many designed historic landscapes will be eligible because of their associations with significant events and trends. For example, the creation of designed landscapes has historically been associated with social movements. The historic designs for parks, suburbs, and playgrounds have direct links, in many cases, to the social issues of their times.

The researcher might feel certain that a landscape is eligible, but careful documentation and a clearly articulated statement of significance based on the historic context will be necessary to justify that conclusion. While more than one property can be eligible within the same historic context, the evaluation should include a comparison with any other properties that may exist within that context.

According to National Register Criteria[40], an eligible historic landscape must meet one or more of:-

- Be associated with events that have made a significant contribution to the broad patterns of our history.
- Be associated with lives of persons significant in past.
- Embody the distinctive characteristics of a type, period, or method of construction, or possess high artistic values.

2.6.4. Integrity

Landscapes which appear to meet the National Register criteria must also retain integrity. Assessing a landscape's integrity can be difficult when it involves a dynamic and complex interrelationship of cultural and natural resources.

The elements of integrity must still apply, as with all historic properties, but special considerations have been identified to address the nature of changes to landscapes.[41]

Essential elements for integrity

Integrity is the ability of a property to convey its significance. The seven aspects of integrity are location, design, setting, materials, workmanship, feeling, and association.[42]

The strength of historic landscape characteristics and the nature, extent, and impact of changes since the period of significance are important factors to consider in making the final decision about integrity.

The landscape's setting–the environment or surroundings outside the property boundaries–must also be assessed as an element of integrity.

Special consideration

In evaluating the integrity of historic landscapes, certain aspects may be more difficult to assess or they may present particular issues that should be considered.

Vegetation

Vegetation is generally very important to landscapes. Vegetation and the inherent characteristics of growth and evolution in plant materials present different issues related to change and integrity from those of buildings and structures.

Continuing use
Change is often an inescapable part of a landscape. Natural processes may bring changes from plant growth, death, or succession; weathering; erosion; or soil deposits from flooding.

Integrity vs. conditions
Both integrity and condition must be addressed. Integrity is lost when a landscape's important features are removed or altered, or when intrusions disrupt the landscape. Integrity can be maintained despite weathering or deterioration as long as essential physical features remain, although the condition could be poor.

2.6.5. Comparison with other properties

In developing the historic context for the landscape, a geographic area, theme, and period of significance should be established.[43] Comparison with other properties will generally take place within that area, theme, and period.

In other words, if an agricultural landscape is evaluated in the context of citrus growing in Riverside County from 1880 to 1920, it should be compared to other citrus growing areas in that geographic area from the same period.[44]

Figure 2-10: Buckingham palace in London, a good example of designed historic landscape [45]

2.7. Summary and conclusion

In this chapter, some definitions have been discussed to clarify the purpose of the research, such as landscape, landscape architecture, culture landscape and historic landscape.

For the purpose of this research, each point were discussed in the chapter will be narrowed to the main items to be used in the research[46], as shown in Figure 2-11.

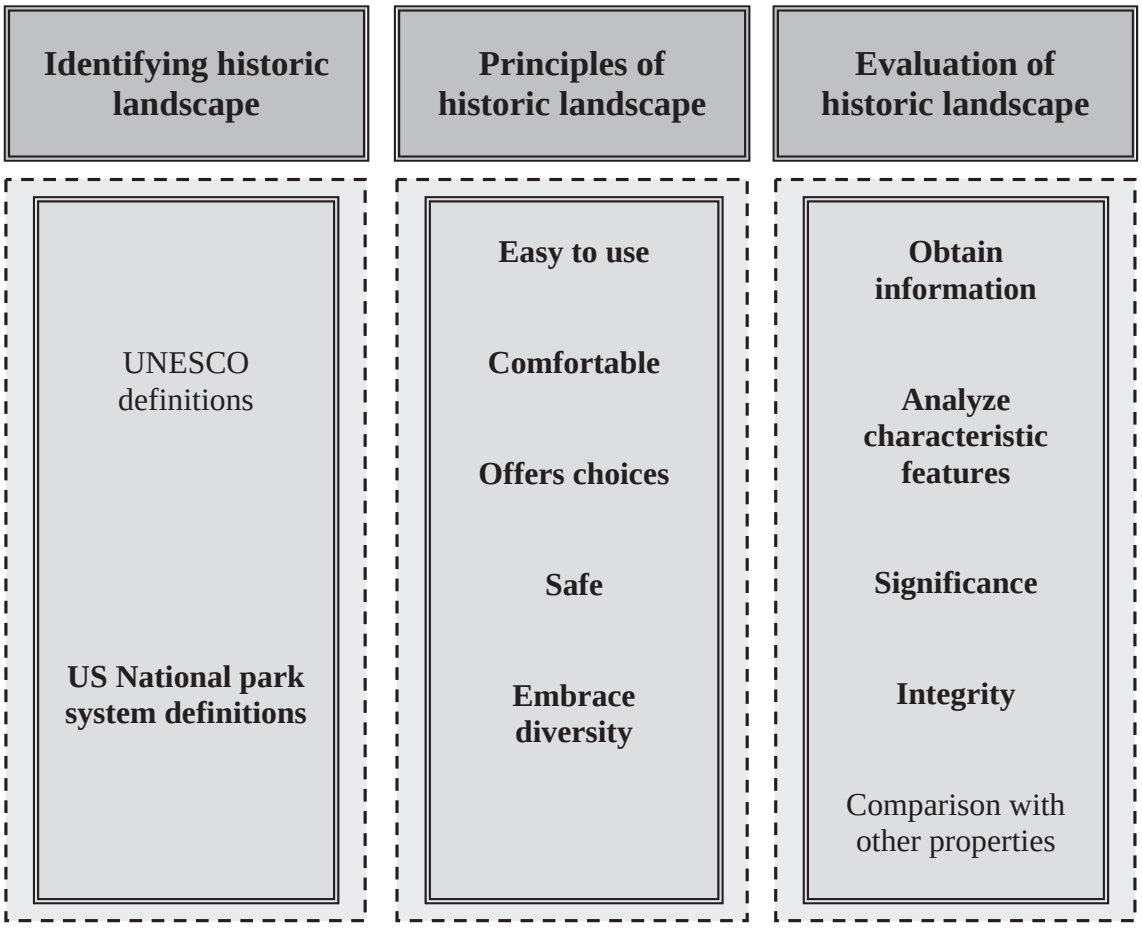

Figure 2-11: Summary of chapter 2

Footnotes

1 Vroom, Meto J. (2007). Lexicon of garden and landscape architecture. Publisher of architecture, Basel. Boston. Berlin. page 177.

2 Jackson, J. B. (1984). *Discovering The Vernacular Landscape*. New Haven, London: Yale University Press.

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12 Harvey, Shela. (2003). the cultured landscape, Designing the environment in the 21st century. Paris, France. Marcela Eaton.

13 Putting Historic Landscape Preservation on Solid Ground. (2005). Department of Conservation and Recreation, USA.

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[22] Jackson, J. B. (1994). A sense of Place, A Sense of Time. New Haven, London: Yale University Press.

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[25] Vroom, Meto J. (1997). Images of an ideal landscape and the consequences for design and planning. Ecological design and planning. John Willey. New York.

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[45] www.jasonhawkes.com, a collection of aerial photos taken by Jason Hawkes.

[46] The bold text within the figure shows the main criteria will be used to study the landscape in the research.

Chapter 3

Human Behavior and Activities

3. Human behaviour and activities

> *"Ninety-one per cent of people believe that public parks and open spaces improve their quality of life. However, one in five people thinks that it is 'not worth investing money in the upkeep and maintenance of local parks and public open spaces because they will just get vandalised'.2 Public opinion is therefore squarely behind taking positive action where anti-social behavior does occur in parks and green spaces "*
>
> *(Cabe, 2003, Decent Parks Decent Behaviour)* [1]

The Knowledge of what people need in the space and how they act inside it, was always the big challenge for creating better public places, where people can develop their social life and enjoy the suitable environment for creative activities.

This chapter is to review all the studies about pedestrian behaviour and movement in open spaces which is influenced by the environment.

3.1. Behaviour Definition

'Behaviour' is a word with many different definitions - everybody has their own idea about exactly what it means, and there is probably no such thing as an absolute definition of the word. According to Disc[2], behaviour is defined as the sum of all a person's varying response styles to varying stimuli.

To the ancient Greeks[3], the ways in which a person behaved were an integral part of their general health. They believed that the body contained four fundamental liquids[4] (called *humours*) based on the four elements of fire, air, water and earth. When one of these humours became dominant over the others, it was thought to affect the person's mood and general approach.

Figure 3-1 shows the main four elements affecting human behaviour according to ancient Greeks.

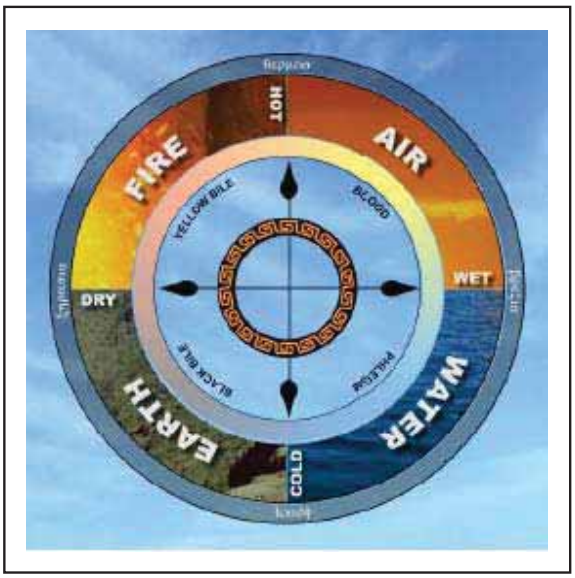


Figure 3-1 : The four elements which affect human behaviour according to ancient Greeks [5]

According to the English dictionary[6], the human behavior is the aggregate of the response or reactions or movement made by an organism in any situation. Taking into consideration the urban environment used by the human, the behavior inside this spaces refers to how much people adapts with the open space.

Human behaviour can be divided into three main levels according to Kevin Weldall[7], which is:-

- Knowledge
- Feelings
- Reaction

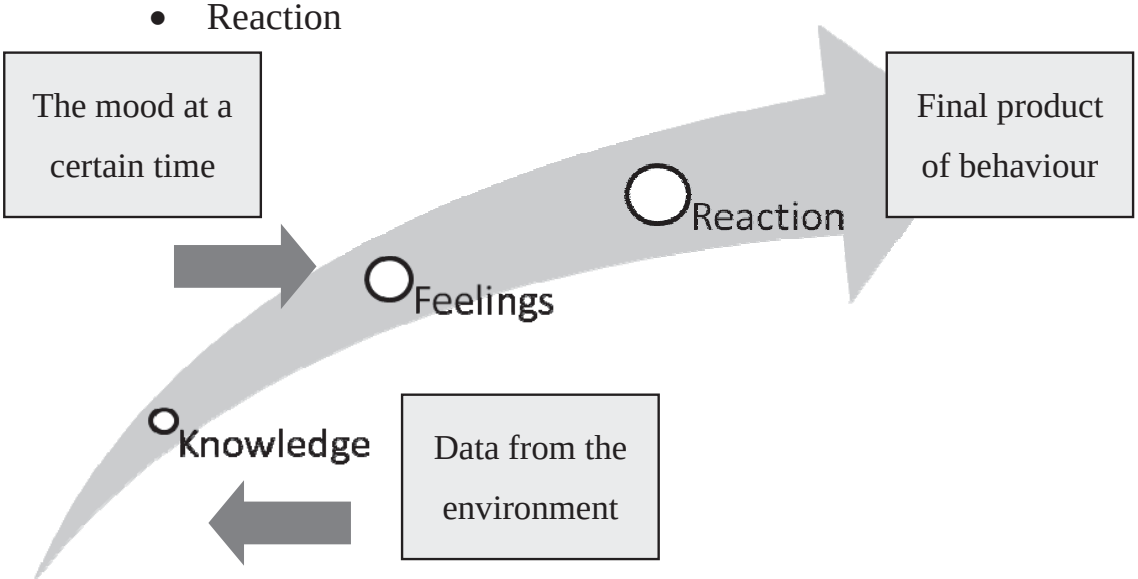


Figure 3-2: The main levels of human behaviour according to Kevin Weldall (adapted by the researcher)

3.2. Factors affecting human behaviour

3.2.1. Environment

The behaviour inside the urban environment is called Human Spatial Behaviour according to J. Doglas[8]. He describes the different levels of interaction between the build environment and human.

Doglas suggested that every one have his needs from the surrounding environment (the city he lives in, the street holds his unit), and every one needs affect strongly his spatial behaviour.

3.2.2. Physical and sociological personal criteria

The other item with the big influence on human behaviour is the physical and sociological criteria for every person. Talcott parsons[9] mentioned a group of items which influence the basic motives for human behaviour, which is:

- ***Physiological Subsystem***

The natural form for every human, his power and constrains which affect his actions, such as:

(Age – Sex – physical features)

- ***Cultural Subsystem***

Include values, traditions and believes that form groups and societies[10], these subsystems gives each group its own character, even in the outer look for people.

- ***Social Subsystem***

The way that each society connected together within its own culture, affect the role that each person plays either inside or outside his group. Hence, big cities give the chance for the social traditions to disappear, and allow new values to grow, with more freedom[11].

- ***Personality Subsystem***

It is what every one favour, and his opinions, these subsystems makes the reaction of the person towards the surrounding environment unique, although it could be restricted to everyone nature and culture.

3.3. Different Types of Behaviour

In this context, the research classifies behaviors in two types: individual (adaptive) behavior and social behavior.

3.3.1. Individual Behaviour

According to Gerhenson[12], it can be understood by distinguishing several layers: vegetative, reflex, reactive, motivated, reasoned, and conscious.

This is the type of behaviors based intellectual as higher levels involve higher and more complex cognition. Note that the behavior hierarchy presented here is intended to be widely applicable to motion behavior. It is not well suited for other types of actions, for example conversational behaviors which may require a different structure.

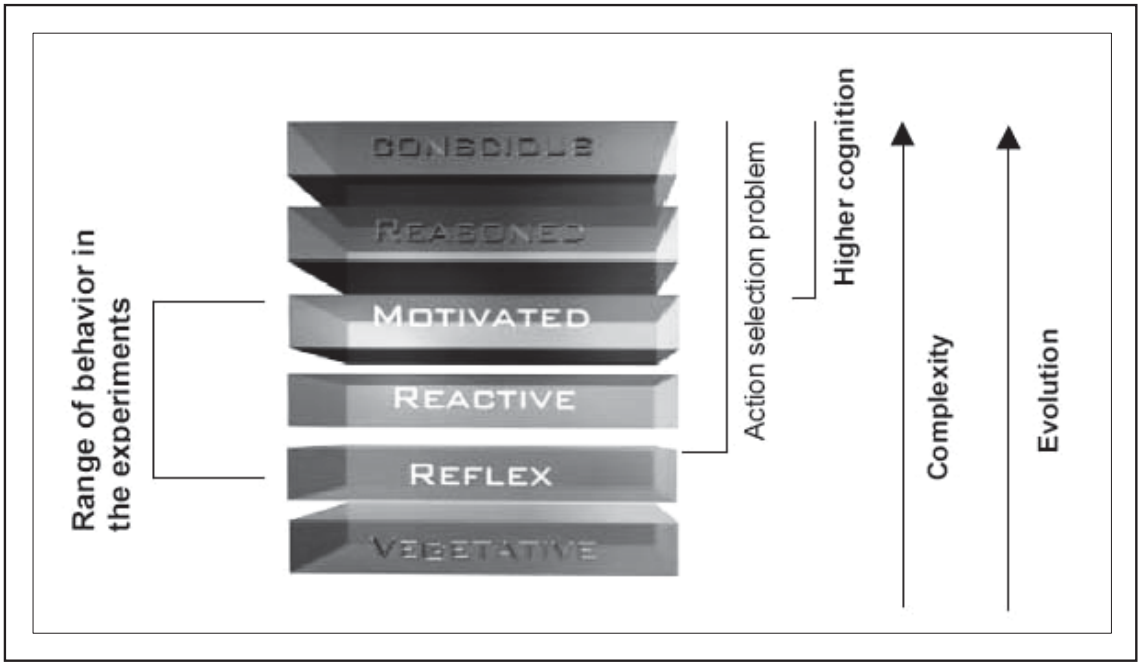


Figure 3-3: Hierarchy of individual behavior
(Gerhenson, 2001)

To briefly overview the character of each layer, we will start from the less intelligent and less complex behavior.

Vegetative behaviors are those that are in an organism by default, such as breathing, heart beating, metabolizing, etc. They can be seen as implicit, internal behaviors and are not noticed by an observer.

This lowest layer of behaviors does not affect our understanding how individuals react to the environment, therefore it will not be modeled.

Reflex behaviors are action-response based behavior, such as the response to being burned, which is to immediately move the injured part from the heat. In motion behavior, this layer in probably the most important since every higher behavior level needs the reflex behavior to execute actions, making an individual moves. Some theories call this layer of behavior "motor" (Blumberg and Galyean, 1995)[13] or "locomotion" (Reynolds, 1999)[14]. The action at this level does not require any input – external perception and internal state of motivation – for executing the movement action.

Reactive behaviors are the next layer overlaid on the reflex action. This level of behavior shows complete dependence of "external perception" (McFarland, 1981)[15] such as when we see the obstacle get in our way, we pick another way to avoid that obstruction. Reactive behavior (Reynolds calls this level, "steering behavior") works as path and speed determination, expressing concepts like: "go left", "go right", "go fast", or "stop". Then it signals the inputs to the lower layer, reflex, to execute the action.

Motivated behaviors involve action selection and are more complex. This behavior depends on internal state of motivation and the external stimuli that correspond to the needs inside. For example, when we feel hungry we need food. In this case, motivated behavior selects the action, "search for food" and sets a goal, "food". The goal will be sent as an input to the reactive level, which in turn will decompose the goal into a series of simple sub-goals and determine a path. Then the reactive level sends the signal to the reflex level to execute the action.

Note that emotion can also be seen as a state of motivation. In order to study how an individual interacts with elements in its environments, at least, we need to focus on a range of reflex, reactive, and motivated behaviors (Figure 3-4).

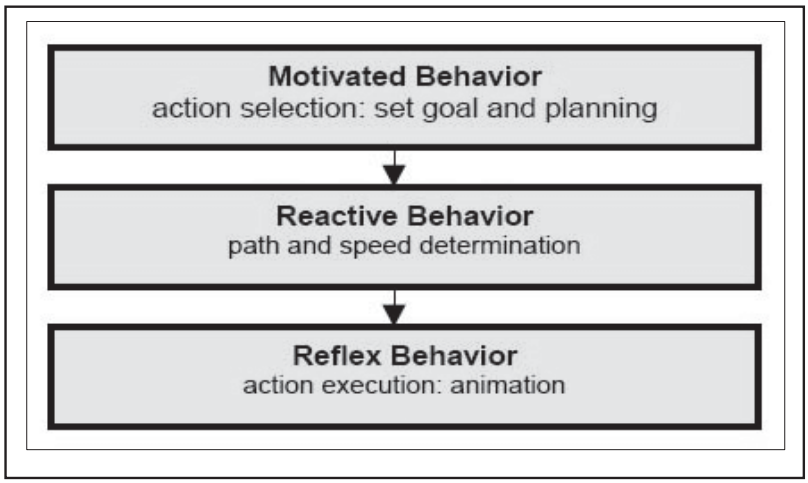


Figure 3-4: A hierarchy of motion behaviors

(Gerhenson, 2001)

Reasoned and Conscious behaviors involve more intelligent behaviors. They require concepts and logic in selecting action. The conscious level represents more complex thinking process before sending signals down to the less complex levels to execute actions. Conscious and reasoned behaviors are on the top of this hierarchy and both represent high cognition level of behavior, which mean they have the ability to recognize the layout of spaces, like those people who are familiar with the environment.

3.3.2. Social behaviour

It is an interaction of individuals sharing a moment in a same space. Pedestrians are members in societies (not just a population) because they interact not only with elements in space but also with other people as well, whether they intend to or not. Pedestrian social behaviors can range from perceiving or being aware of each other to having a conversation or any form of communication.

Figure 3-5: Trafalgar Square in London, one of the places that hold many kinds of social behaviour for pedestrian. [16]

3.4. Pedestrian activities

This point will review the definition for pedestrian activities, followed by classification for these activities.

3.4.1. Definitions

The research mean by pedestrian activities in the urban design field, the motions and interaction between the user and environment within the space, which is a very important element and should be taken into consideration in the process of designing the open spaces, because it should affect all the design criteria.

Rob Krier[17] described the activities which take place in the open space as the things which done by people outside the home space, in which they use the open space, like going to work or shopping or entertaining. According to Halprin[18], he names all the activities as the life of the city.

3.4.2. Activity Classification

Halprin[19] Divided the activity in the cities into two main types, which is:-

- ***Public activities***

Which occurs in the public squares and open spaces, and the big open parks and shopping areas in the city centre, and mostly this type of activity happened on the river or sea fronts, or big fountains.

- ***Individual activities***

It is that type of activity in which the person needs more privacy, quite, and some times to be alone.

In general, open spaces is a mix of both types, which create the main challenge in the formation of the open spaces, as the main goal in all the big cities is to create dynamic environment all the day that include all types of activities[20].

3.5. Patterns of activities

Jan Gehl[21], a Danish architect, has written interestingly about the patterns of pedestrian life in a book, ***Life between Buildings***. He simplifies and divides outdoor activities in public spaces in a city into three categories, each of which places very different demands on the physical environment:

(Necessary *activities - Optional activities - Social activities).*

3.5.1. Necessary activities

Include those that are more or less compulsory, such as going to work, shopping, waiting for a bus or a person, running errands. Among other activities, this group includes the great majority of those related to walking. Because the activities in this group are necessary, their incidence is influenced only slightly by the physical framework[22].

These activities will take place throughout the year, under nearly all conditions, and are more or less independent of the exterior environment. The participants have no choice.

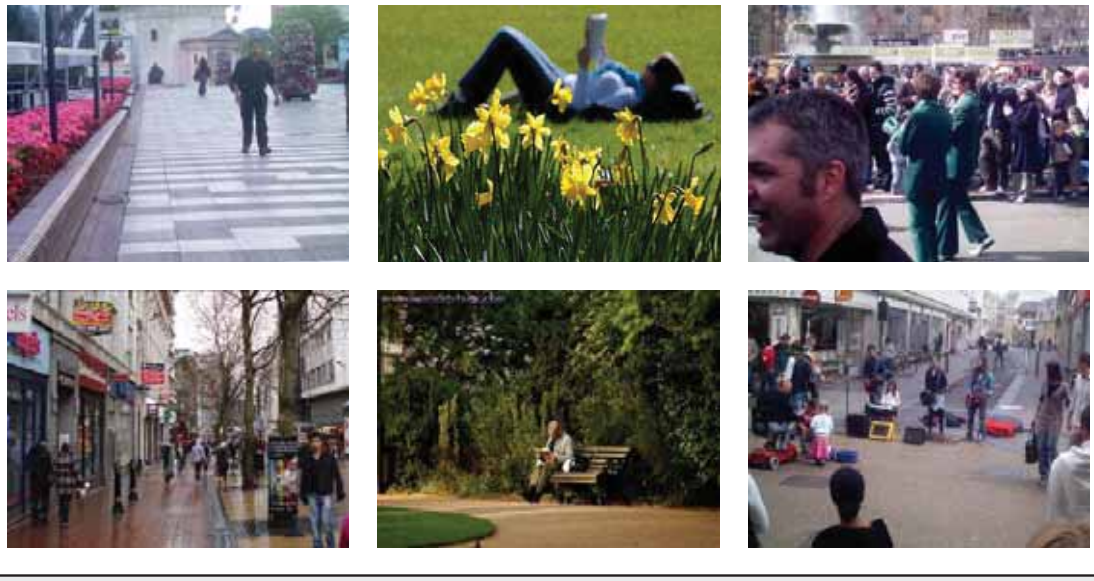
3.5.2. Optional activities

That is, those pursuits that are participated in if there is a wish to do so and if time and place make it possible – are quite another matter. This category includes such activities as taking a walk to get a breath of fresh air, standing around enjoying life, or sitting and sunbathing. These activities take place only when exterior conditions are optimal --when weather and place invite them[23].

This relationship is particularly important in connection with physical planning. In other words, these activities are especially dependent on exterior physical conditions.

3.5.3. Social activities

It is all activities that depend on presence of others in public spaces. Social activities include children at play, greetings and conversations, communal activities of various kinds, and finally – as the most widespread social activity – passive contacts, that is, simply seeing and hearing other people[24].



Necessary activities Birmingham city center, UK	Optional activities park in Oxford, UK	Social activities London city center, UK

Figure 3-6: Different types of activities happened in the open spaces (The researcher)

These activities could also be termed as "resultant" activities because social activities occur spontaneously, as a direct consequence of people moving about and being in the same spaces. This implies that social activities are indirectly supported whenever necessary and optional activities are given better conditions in public spaces[25].

According to Gehl[26], a social activity takes place every time two people are together in the same space. To see and hear one other, to meet, is in itself a form of contact, a social interaction. The actual meeting, merely being present, is furthermore the seed for more comprehensive forms of social activity.

This connection is important in relation to physical planning. Although the physical framework does not have a direct influence on the quality, content, and intensity of social contacts, architects and planners can affect the possibilities for meeting, seeing, and hearing people[27].

According to Figure 3-7, when the quality of outdoor environment is good, optional activities occur with increasing frequency. Furthermore, as level of optional activity rise, the number of social activities usually increases substantially.

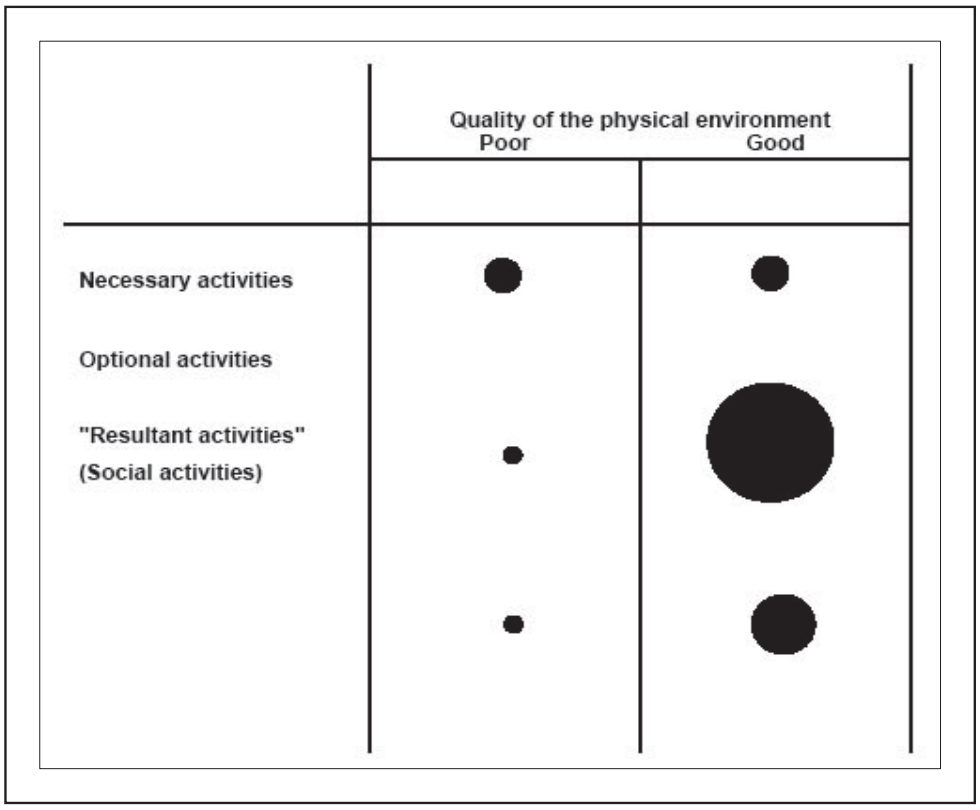


Figure 3-7: The relation between quality of physical environment and type of activities inside it [28]

3.6. Simulating pedestrian behaviour and activities

In recent years there has been a growing interest in understanding Human behavior, including that of pedestrians. In many large-scale simulations pedestrians are an integral part of the transportation system. Early attempts at modeling pedestrian flows were followed three different approaches:

1) Descriptions of how pedestrian move and congregate have provided statistical data for the distribution of queues. These models have been used to predict volumes on street segments from linear relationships estimated by regression[29].

However, these models do not adequately describe interaction effects and these flow measurements analyses must be performed for special situations. Moreover, these queuing models do not explicitly account for the concrete geometry of pedestrian environments.

2) More formal approaches based loosely on analogies with fluids, gas kinetics, and other physical flow systems have been proposed and tested in 1970s.

Henderson[30] suggested that pedestrian crowds can be described by the equations of *fluid-dynamics*. However, his approach implicitly assumes energy and momentum to be collision invariant which is obviously not the case for pedestrian interactions.

3) The most common approach has been based on adaptations of spatial interaction models, often in their discrete choice rather than any force form. Timmermans and others[31] (1999) have developed a model for the route choice behavior of pedestrians that depends on their demands, city entry points, and store locations.

The predictions made by simulating pedestrian flows from individual trips, however, must then be scaled back to more aggregate units if they are to be generalized spatially. These models also do not take into account the effect of pedestrian interactions.

3.6.1. Space syntax

Bill Hillier and Julienne Hanson's (1984)[32] studied historic cities and found that their organic development led to remarkably similar street patterns. These, they argued, were not a function of the economics of market forces but of simple social arrangement related to how people prefer to use cities.

This 'space syntax' is a set of techniques to describe and analyze spatial configurations in relation to human socio-economics.

A network of pedestrian paths can be described as a hierarchy, such that more centrally located path segments are more likely to host more people (Figure 3-8), all other things being equal. The space syntax model in particular involves a nonnumeric transformation of space and suggests that at least some of the variation in pedestrian presence in a network can be explained by topology[33].

However, space syntax does not take account of real differences in size of blocks as well as varying perceptions of time and distance in different spatial configurations.

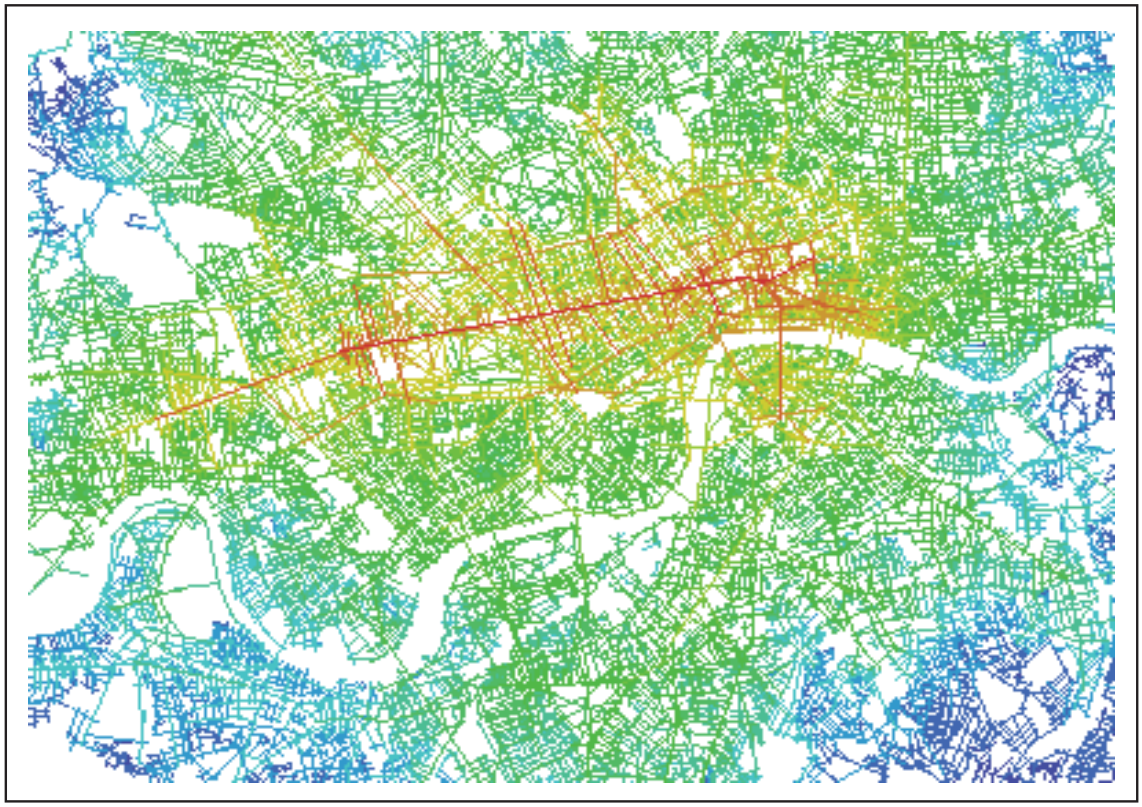


Figure 3-8: Axial map of central London

(www.spacesyntax.org)

3.6.2. The Social Force Model

In connection to fluid-dynamics, Helbing, Monar, and Schweitzer (1994)[34] proposed research on the micro simulation of pedestrian crowds. This "social force model" of pedestrian dynamics describes the influence of environment and other pedestrians on individual behavior.

However, the social force is not exerted on pedestrian, but rather describes the concrete motivation to act, fluctuating in different situations. The social forces are different from forces in physics that the effect of social forces come about not by momentum transfer but information exchange via complex mental, psychological and physical processes.

Social force models have simulated pedestrian dynamics with a large number of interactions. These proposed models describe many observed phenomena and very realistically demonstrated emergence of spatio-temporal patterns of collective behavior[35]. They have demonstrated the development of lanes, oscillatory changes (Figure 3-9), and roundabout traffic at intersections (Figure 3-10).

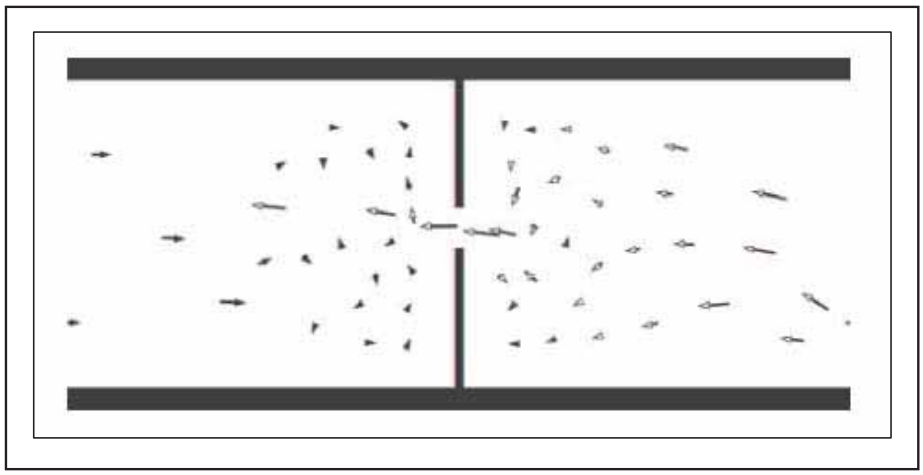


Figure 3-9: A moment of two pedestrian groups trying to pass a narrow door. If one person has been able to pass the door, others with the same desired walking direction can follow easily
(Helbing, 1994).

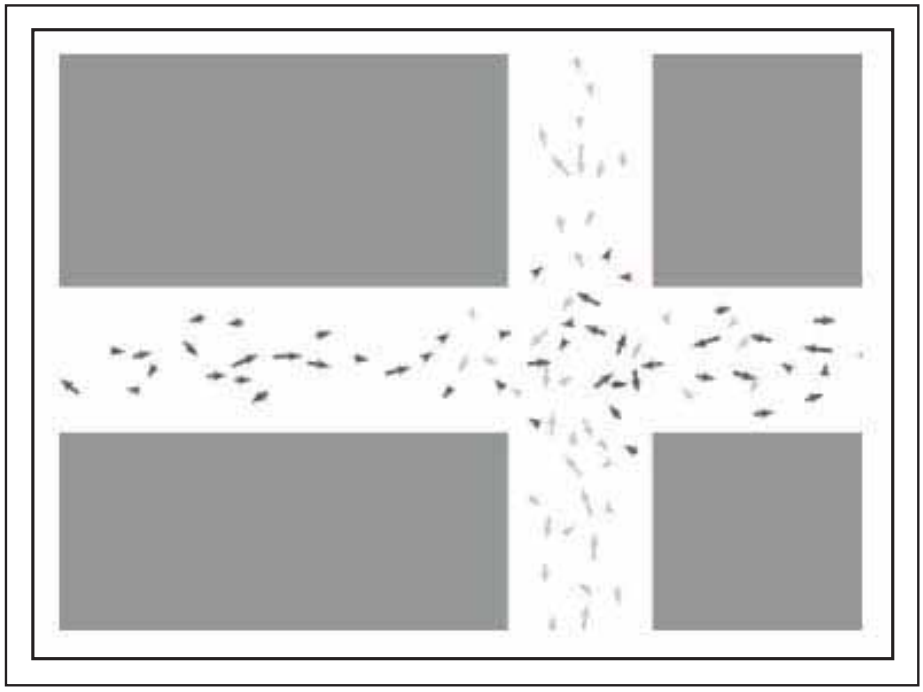


Figure 3-10: Crowded intersection for roundabout traffic for certain time
(Helbing 1994)

3.6.3. SIMPED: Simulating pedestrian flows in a virtual urban environment

SIMPED is part of the Virtual Environment for Urban Environments (VENUE) project (by CASA[36], Center of Advances Spatial Analysis, and University College of London).

It aims to provide a suite of computer tools for urban design and planning using Geographic Information System (GIS) as a basic platform. In connection to their research on local movement using agent-based simulation (Batty, Jiang, Goodwin, 1998)[37], the SIMPED simulation tests whether morphological structure has some impact on pedestrian movement.

To achieve this goal, a virtual environment with virtual humans is constructed using multi-agent simulation, built upon Starlogo (Resnick, 1994)[38], a programmable environment that provides computational tools for exploring complex phenomena.

Agents in SIMPED have speed (up / down), heading directions (0-360), and movement (forward / backward). Objects in the simulated environment represents significant places in real environment such as church, hotels, monuments, etc (Figure 3-11).

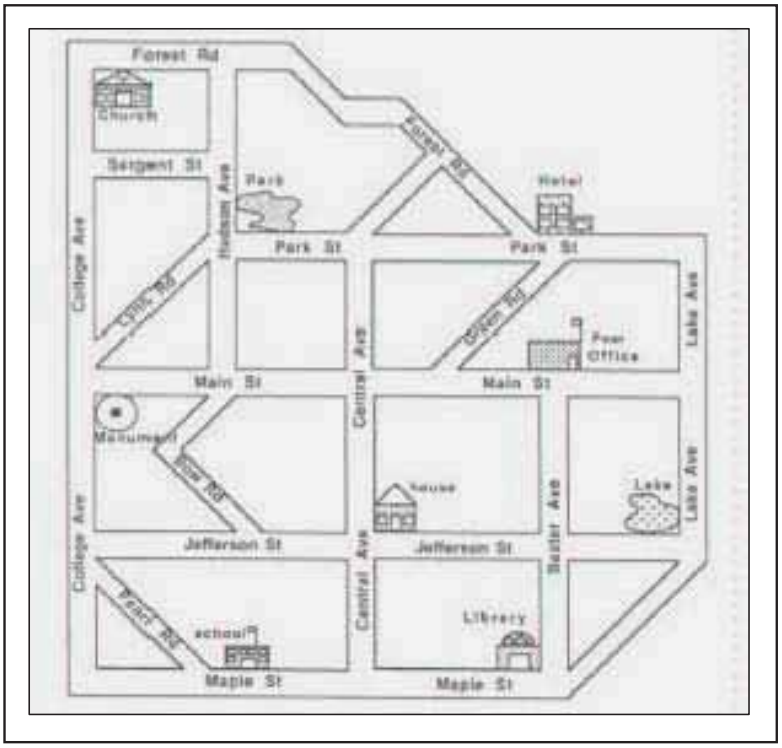


Figure 3-11: An urban environment representing significant places (Jiang, 1999)

There are two different modes of simulation; walk randomly and walk purposely. Although SIMPED has shown that multi-agent simulation can provide a valuable tool for urban study, the results at this stage seem inconclusive[39].

This model, so far, is based on a kind of local interaction, that is, their virtual pedestrians can only see one step ahead and they have no ability to improvise behaviors. This can be seen in their simulation result (Figure 3-12); all pedestrians tend to cluster in their individual "being set" destination. This work, so far, may not be sufficient to model pedestrian behavior in urban environment (Jiang, 1999)[40].

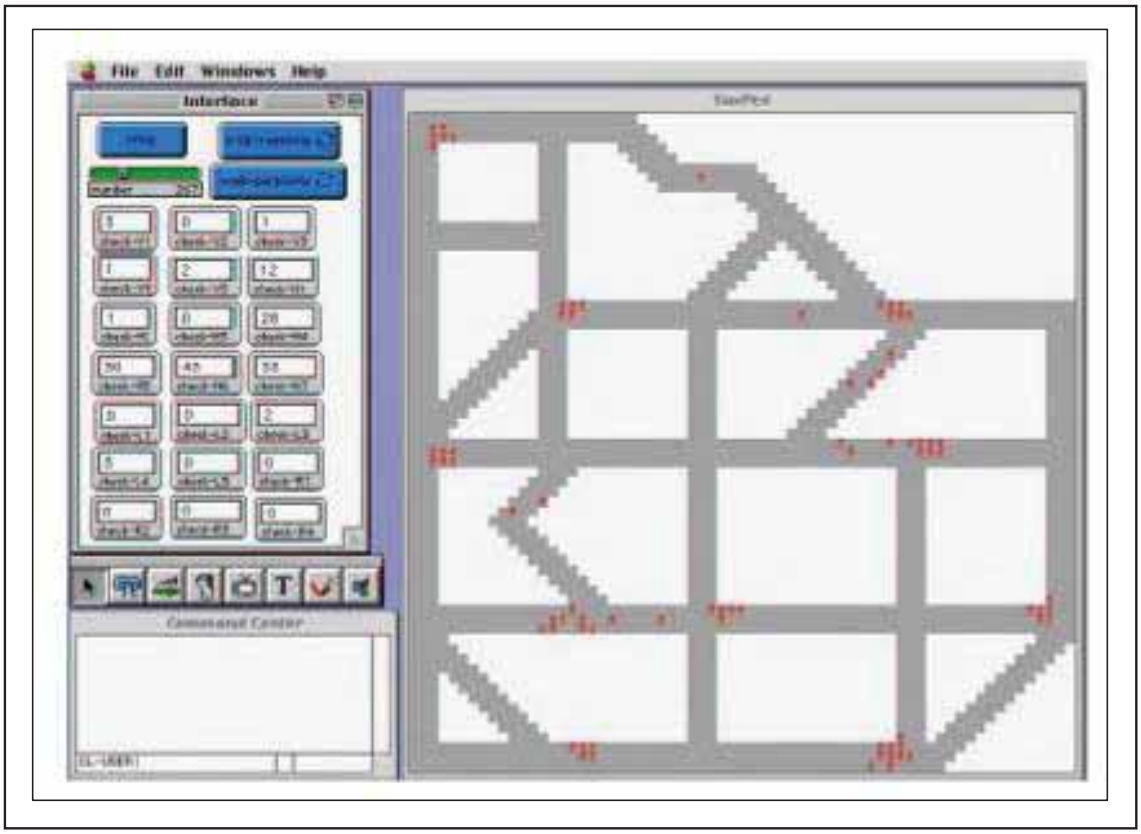


Figure 3-12: A snapshot of simulation of pedestrian moving purposely (Jiang, 1999)

3.7. Summary and Conclusion

The literature review in this chapter has informed the research design by providing a working definition of the terms “Human Behavior – Pedestrian Activities”,

For the purpose of this research, some point were discussed in the chapter will be narrowed to the main items to be used in the research[41], as shown in Figure 3-13.

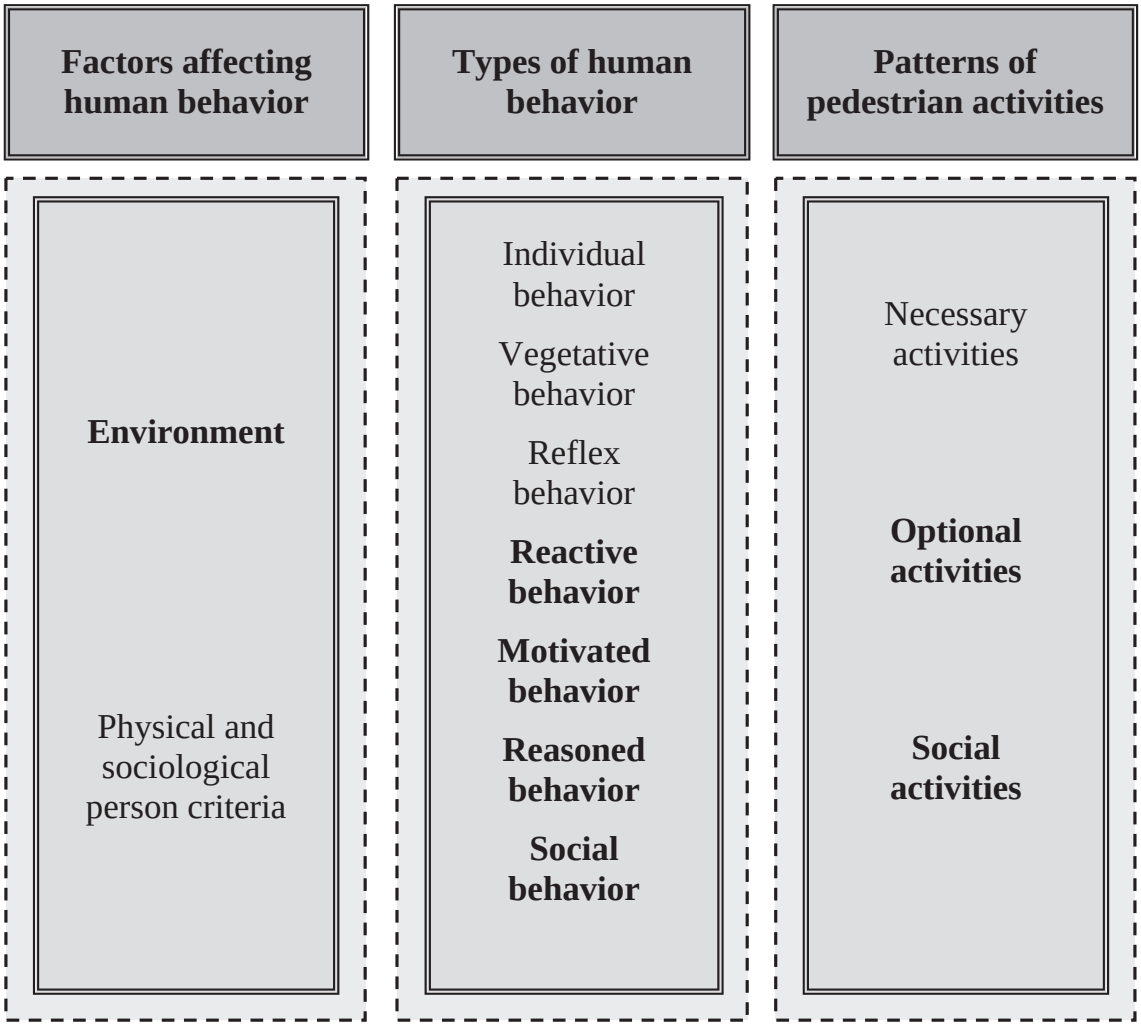


Figure 3-13: Summery of chapter 3

By the end of this chapter, some trials for simulating pedestrian behavior and activities were discussed, in order to understand the further steps of the research regarding human behavior in historic urban parks.

Footnotes

[1] Decent Parks? Decent Behavior? (2003). Cabe, Planning Officers Society.

[2] DISC (The Original Internet Profiling Solution, Offering a Unique and Extraordinary Insight into Human Behaviour).

[3] The Greeks who first attempted to describe human behavior in any kind of scientific way.

[4] www.discusonline.com, the Original Internet Profiling Solution, Offering a Unique and Extraordinary Insight into Human Behaviour.

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[41] The bold text within the figure shows the main criteria will be used to study the human behaviour in the research.

Chapter 4

Design Guidelines of Urban Parks Landscape

Parks and landscape

Parks planning and landscape design guidelines

Comparative analysis of park design

Summary and conclusion

4. Design guidelines of urban parks landscape

The visual appearances and attractiveness of town and cities is strongly influenced by its green space. A high quality build environment, building, roads and public spaces can't alone ensure that a town or city is attractive or appealing place to live and work.

Thus, the landscape of parks and green spaces contribute as much to the quality of the urban environment as good architecture. Landscape is the meeting place of culture and environment, the places what we see is infused with meaning past & present, engendering memories and feeling.

This chapter is to analysis the different landscape design guidelines for urban parks, and review all the different types of urban parks according to its landscape, by the end of this chapter the research will reach some points to clarify how urban parks can be analysed and evaluated to know how much it succeeded to achieve the designer thoughts, and to what extend it is matching with the users needs.

4.1. Parks and landscape

Parks can be categorized many different ways[1]. Size, use, location, and historic value are just some of the distinctions that are used to determine if the inventory of parks meets the needs of the users.

Many parks do not fall neatly into one category. For example, the National Mall[2] is a monumental open space (Figure 4-1), historic for its architecture and designed historic landscape as well as the significant events that have occurred on it. It also serves as an educational resource and a place of active recreation and contemplative reflection for both residents and visitors.

Figure 4-1: National mall park in Washington, USA [3]

Most parks can be placed into one of the following categories (according to its landscape):

- Monumental and designed landscape parks.
- Natural parks.
- Waterfront parks.
- Historic parks.

4.1.1. Monumental and designed landscape parks

Designed landscape parks are the squares, circles, and triangles associated with the L'Enfant City as green landscaped areas. These areas provide oases for pedestrians in both neighborhoods and downtown areas, and settings for existing and future monuments and memorials with ornamental plantings[4].

These urban park areas are often small parks and designed landscapes with fountains, monuments, memorials, and other features of civic art. (Figure 4-2)

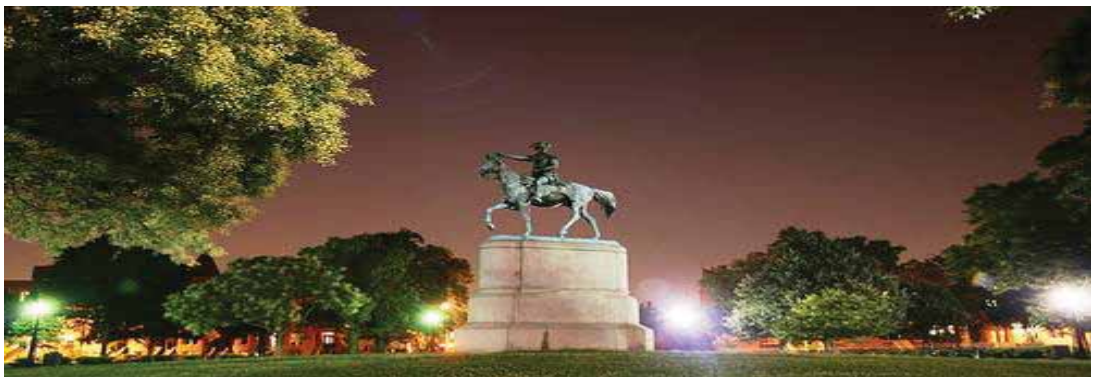


Figure 4-2: Stanton park (Washington, USA) – Monumental park [5]

Monumental parks and landscapes provide settings for public buildings, monuments, and memorials. They create and enhance pedestrian spaces; they showcase ornamental plants; and they are used for displays, cultural activities, passive recreation, and controlled active recreational activities[6].

The National Mall (Figure 4-1) is perhaps the most significant example of a monumental park, and several planning issues must be addressed to ensure its future integrity as a national gathering place for civic celebrations and demonstrations, and as a place of recreation and education[7].

4.1.2. Natural parks

Natural parks include open space that is primarily forest or wetland, rather than designed landscape, and is typically preserved for its scenic, ecological, or topographical qualities rather than, or in addition to, particular historic significance[8]. Prince William forest park is an example for this type of parks in USA.

Recreational uses such as hiking, driving for pleasure, biking, horseback riding, and picnicking should be permitted, to the extent that environmental qualities of the park are not adversely affected.

The borders of the park should receive special protection from adjacent development that could cause erosion or adverse visual impacts[9].

Whisby Natural Park is one of the examples for natural parks in UK; it is opened in 1989, located in Whisby city near the east coast in England. (Figure 4-3)

4.1.3. Waterfront parks

Over the last few centuries, the economic importance of the urban waterfront has come full circle: beginning with successful city centers reliant on the booming shipping industry, leading next to a decline as businesses generally moved inland, followed by the more recent efforts to revitalize and reconnect the urban waterfront[10].

This type of parks is a mix between forest natural and designed landscape, the waterfront park in Saltburn coast of UK is one of the good examples for this type of parks, it is located in the North West cost near Middleborough city. (Figure 4-3)

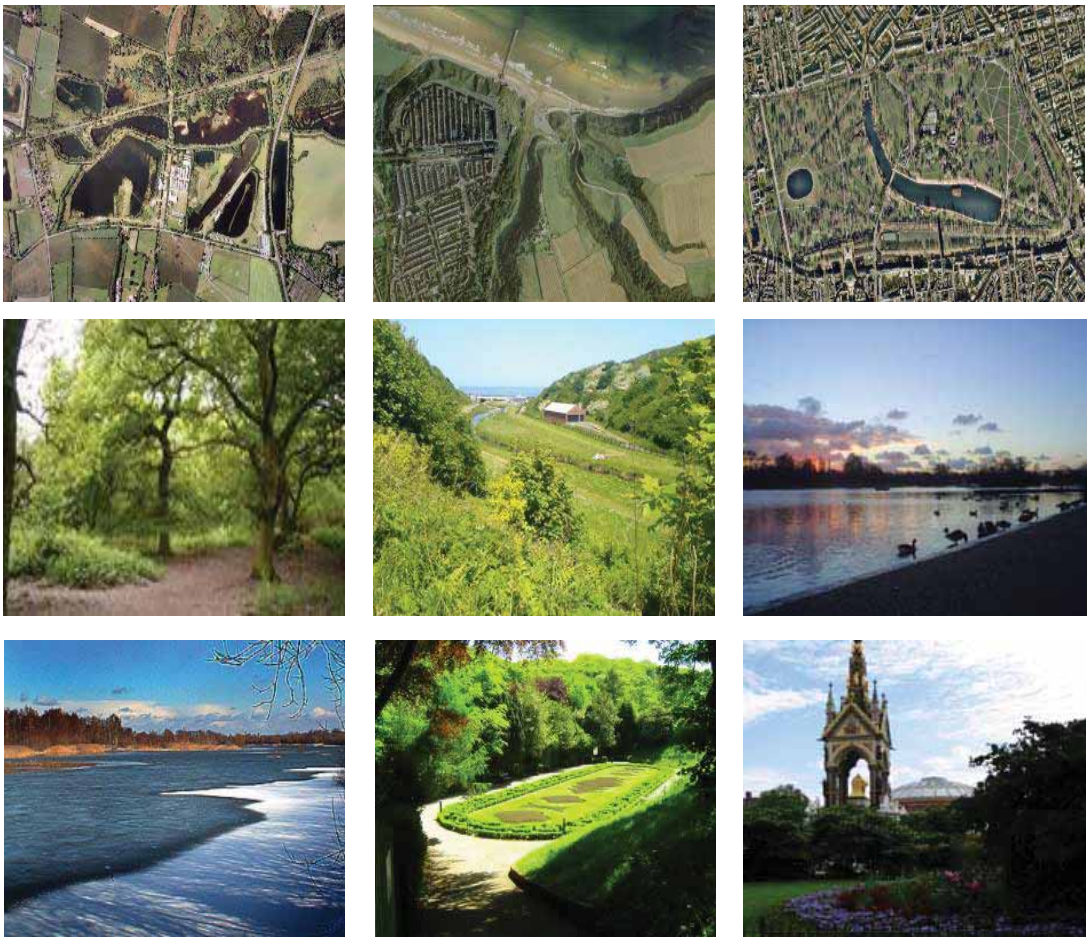
4.1.4. Historic parks

Historic parks are important legacies of national, historic, architectural, and landscape significance. Special efforts should be taken to respect their integrity while providing for the interpretation of their history. Ancillary uses, such as access, and visitor and multi-purpose activities should not detract from the historical value of these sites[11].

Master or management plans for the park and local development plans for areas adjacent to the park should be coordinated to ensure the application of appropriate land uses and development standards for the surrounding areas[12].

Hyde Park is one of the largest historic park in central London, England and one of the Royal Parks of London, famous for its Speakers' Corner. It is one of London's finest historic landscapes covering 142 hectares (350 acres). It was created to satisfy a royal passion for hunting. But over the years it became a place where people have pursued many other pleasures. 13

Hyde Park became a venue for national celebrations. In 1814 the Prince Regent organized fireworks to mark the end of the Napoleonic Wars, in 1851 - during Queen Victoria's reign - the Great Exhibition was held and in 1977 a Silver Jubilee Exhibition was held in honor of Queen Elizabeth It's 25 years on the throne. [14]



Natural Park Whisby, UK	Waterfront Park Saltburn, UK	Historic Park Hyde Park, London, UK

Figure 4-3: Examples of the different types of parks according to its landscape (www.googleearth.com, pictures by the researcher)[15]

4.2. Park planning and landscape design guidelines

Urban parks are one of the most significant contributions that the profession of landscape architecture has made to society. In order to understand the main guidelines for landscape design, the research will study some points which form together the general coinage to analysis the design process for urban parks landscape.

4.2.1. Parkscape

The visual environment is a very important issue to most park users; this visual experience can be enhanced by coordinating all aspects of the park development.

Some guidelines for Parkscape can be addressed as followed:

- ***Enhancement of desirable attributes***
  - A planned sequence for visual experience for all roads and trails.
  - Odors are also important is park planning, pleasing odors can be provided by special planting[16] and by taking advantage if existing natural elements.

- ***Screening undesirable areas***
  - Undesirable areas such as maintenance buildings should be surrounded by screens of planting to achieve a pleasant view for park users[17]. (Figure 4-4)

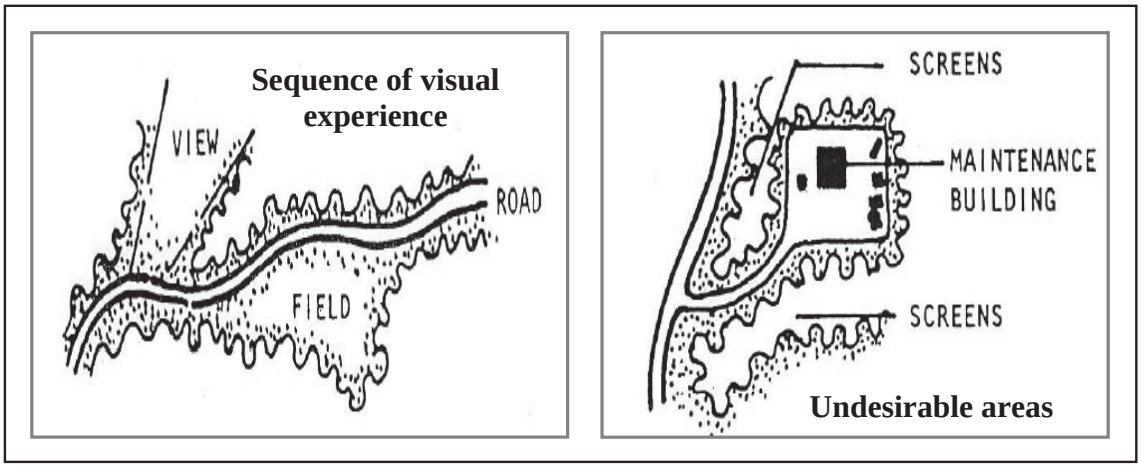


Figure 4-4: Using parkscape to deal with desirable and undesirable areas in the park [18]

- ***Consideration for noise abatement***
    - The basic methods for noise abatement are landuse planning and sound barriers; location of building in the park can be used as a good sound barriers
    - Noise compatible uses, such as interior park roads, parking lots, park maintenance, utilities, should be placed in areas subject to excessive noise.

4.2.2. Plants

Plants are valuable for their aesthetics and ecological qualities. Trees are often the most conspicuous form of vegetation in a park, and help to form the spaces for enjoyment and recreation.

Mcpherson[19] found that appropriate selection of long-lived trees makes a major difference in carbon levels in the air.

Some guidelines for plants can be addressed as followed:

- Consider planting a range of trees species to promote aesthetic appeal, improve habitat quality and reduce diseases[20].
- Select trees and other plants that are tolerant or urban condition, especially pollution and long lived in the particular location[21].
- When placing plants in urban parks, it is important to create a good growing environment, thus soil testing is needed to understand the condition of urban soil in a park[22].

Cassia Fistula

Delonix Regia

Washingtonia Filifera

Figure 4-5: Some trees species can be used for aesthetic appeal [23]

4.2.3. Signs

Signs are a necessary part of the total circulation system of any park, and, as such, they should be effective aids to the public in understanding and enjoying their visits to the park. All signs in a park should be united in character and relate to the total design theme of all park facilities[24].

Signs layout in the park must be planned well; in general, Good Park planning can help reduce the number and kinds of signs needed. There are some factors to be considered in signs system layout, such as:

- Visual distance and reaction time (number of feet needed between reader and sign increases as speed increases)[25].
- All sign components used in the construction of signs should be readily available and long lasting, and should be easily fabricated and maintained[26].

4.2.4. Climate and air

Park use is deeply affected by the weather, time of day and season. However, the design for urban parks, especially the use of trees, can moderate air temperature. Based on a literature review, Smith[27] concluded that there are six natural mechanisms by which gaseous air contaminates are removed from the atmosphere, which is:

- Soil absorption.
- Absorption by rock.
- Chemical reaction in the atmosphere.
- Absorption by water bodies.
- Rainout and washout.
- Foliar absorption by vegetation.

To achieve the ideal reaction of nature towards landscape elements on climate and air level, some guidelines should be followed, such as:

- Buffer activity areas from polluted streets, sitting areas and playground should be set back beyond the polluted zone more than 45 meter[28].
- Create small sun pockets, while it is important for plant trees to share for both people and paving, some sunny areas are needed for outdoor warmth on colder days[29].
- Maximize tree canopy, even if it is thin, based on a study of the urban heat island in Atlanta (a thin but well designed canopy of trees is likely to be more thermally efficient than a dense cluster) [30].

4.2.5. Safety

Safety is a very important issue in parks in several ways, particularly crime and fear of crime. For that both vegetations and park structure need to be carefully designed and managed for safety.

Thus, Spaces in urban parks should be designed to reduce situations that are perceived as threatening. Lines of sight and inter-visibility of one space with another need careful consideration. Exits should be visible and long corridor spaces with no alternative ways out should be avoided[31].

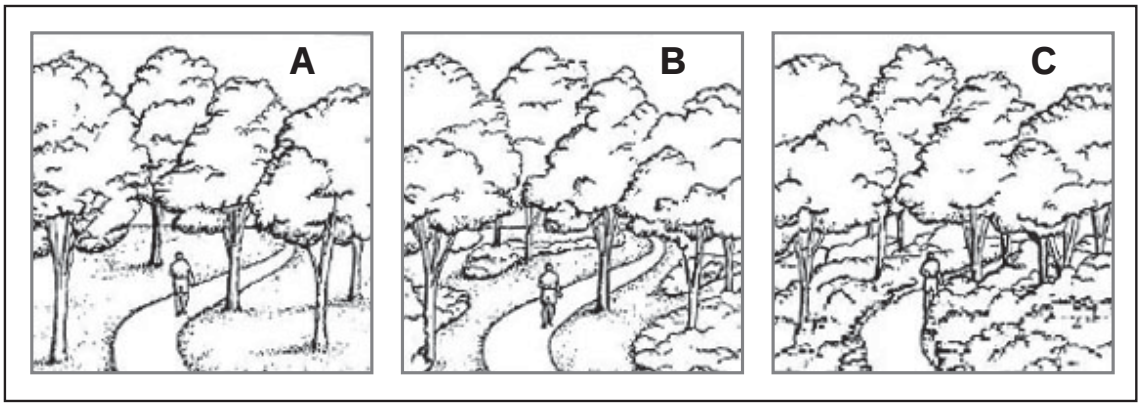


Figure 4-6: The effect of densely planted areas on safety – Case A much safer [32]

Some guidelines for safety can be addressed as followed:

- Lighting is a complex issue in parks, it is very important to light areas that are intended for night time use, but it can be misleading and dangerous to light areas not intended for use especially if they are isolated[33].
- Carefully consider child safety, and balancing the need to protect them with developmental aims. For that it is important to use the right surfacing under play equipments[34].

Figure 4-7: Children's playground in USA – good example of using the right safe material [35]

4.2.6. Roads and parking

The movement of cars to and through a park and parking lots is a major item in a park development. Many forms of transportations within a park area are possible, such as tramways, monorails, buses, etc. these various types of circulation systems should be kept separated where possible to avoid conflicts[36].

Parking lots in the park system should be located to be within 120m of the activity which are intended to serve. Where possible, parking area should be screened from roads and activity area[37]. (Figure 4-8)

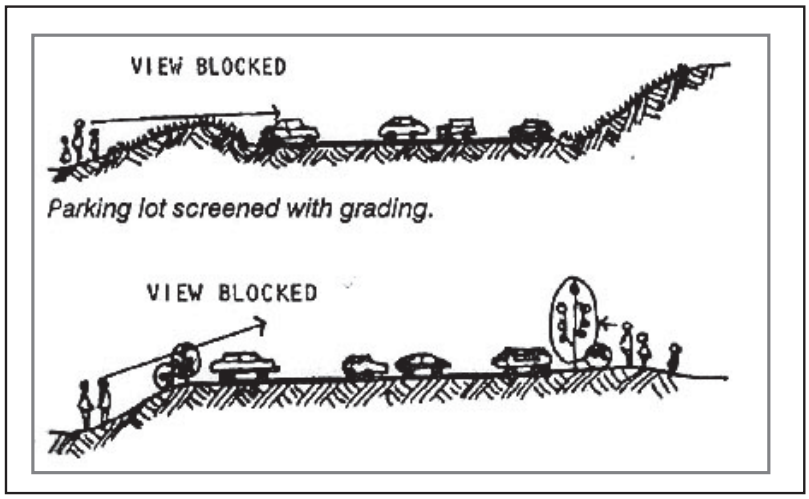


Figure 4-8: An example of parking lot screened with plants in a park [38]

4.2.7. Play Area and Play Fields

Play areas in the park should be developed for various age levels, and designed to meet the ability and interest of the intended users. Where possible, play areas for the different age groups should be separated because they are not compatible[39].

Figure 4-9: Children play area in bannon creek park in Sacramento city [40]

Some guidelines of play areas for young ages can be addressed as followed:[41]

- Locate out of general traffic patterns, but still close to areas of adults activities.
- Provide benches for supervising adults.
- Keep separate from older play areas.
- Locate in partial sun, in northern climate.

4.2.8. Administration and service area

All parks need some type of service area, the size and complexity of a service area increases as the size of park increase. There are some factors to be considered when we deal with service areas location in a park, such as:

- It is desirable to have a separate entrance for the service area from public roads.
- Screening from roads and use areas.
- Storage space, both inside buildings and outside.

Parks with a heavy attendance, or parks which are located at a considerable distance from park systems headquarters, will normally need administrative facilities. Normally these facilities are adjacent to a public road, and generally before any visitors' entrance to permit park business to be handled easily. Administration and maintenance facilities in a park are frequently located within a short walking distance from each other (100m).

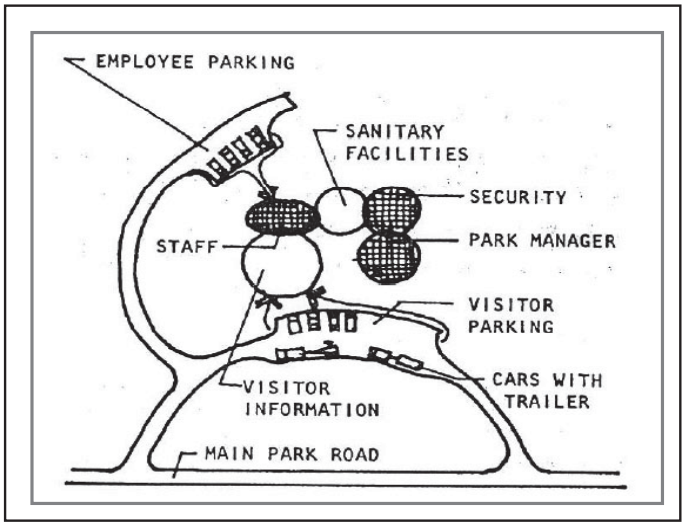


Figure 4-10: The relation between administration area and public contact in parks

4.3. Comparative analysis of parks design

Landscape architecture is a profession comprising craftsmanship, theory and artistic sense. The main objective for this point is to contribute to the formation of theories of landscape design and highlight the notion of it, this is can be done by means of a comparative design analysis, through the intellectual decomposition and examination of park designs.

This analysis covers all the stages of designs, and touches upon as many of the considerations that have influenced the design as possible, this is can be done through four steps as followed: [42]

- Park as a graphic composition.
- Layout and spatial coherence.
- Design strategies.
- Styling of the design.

4.3.1. Park as a graphic composition

According to Baljon[43], The park design – before it represents a park – is a flat surface of lines, areas and colors, whose arrangement is experienced and interpreted as painterly.

Thus, the design is decomposed into points, lines and planes. These first lines revealed in the analysis are to be viewed as construction lines or regulating lines that direct the composition. This system can be developed or extracted from the wider surroundings.

It is important though not to see the drawing merely as a pattern of lines, but it must also view as interplay between surfaces and the intersections arising from both.

The sketches in this stage of analysis are an exploration of the graphic composition. This analysis shows which parts of the plan are distinguished in the ground plan.

As in Figure 4-11, the analysis of Parc de la Villette shows a connecting area from north to south over the canal contains the main buildings in the park, this produces two sections, the western section in linked to the city, and the eastern section refers to the outside. A square field is intermediary between the museum building and the Grande hall, and is linked through its alignment to the canal[44].

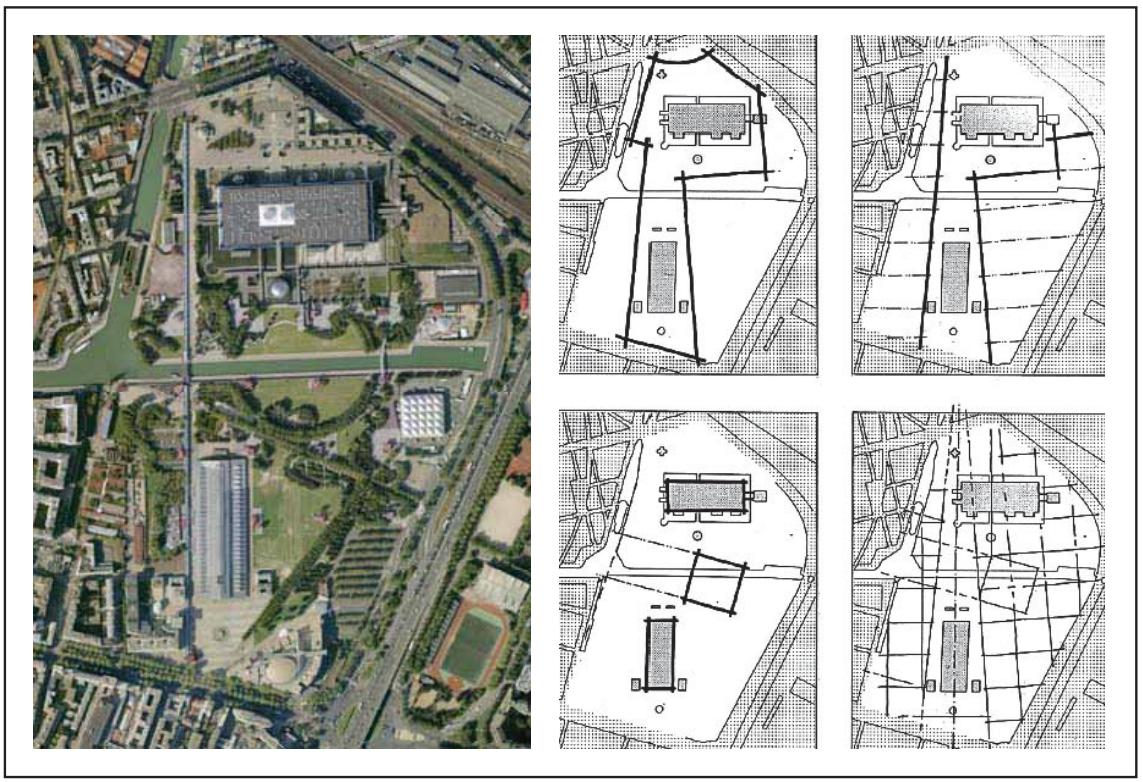


Figure 4-11: Sketches to analysis Parc De La Villette as a graphic composition [45]

(Park layout from www.googleearth.com)

4.3.2. Layout and spatial coherence

After investigating the park design by means of decomposing points, lines and plans, the analysis continues by considering the following question (*What is the significance of the graphic composition for the spatial functioning of the park?)*

For the purpose of this study, six components have been distinguished to understand the meaning, which are[46]:

Access

How the park and its surroundings linked? Linkage is important in creating a functional coherence between the inside and outside[47].

Organization

How are the functions combined and distributed over the site, and how are they connected to form an internal functional coherence?

Anchoring

The spatial context of the park is examined by considering its position in relation to the city and the spatial coherence between what lies inside and outside[48].

Openness

Specialty can be considered by asking in what way the spatial continuity and the visibleness of the main dimension and the landmarks contribute to the park internal spatial coherence. Every park layout will result in greater density, and this will have far-reaching effect[49].

Articulation

This point can be approached by considering in what way the interaction between volume and space contribute to the internal spatial coherence. The main spatial organization often consists of a type of hierarchy, dominance or centrality[50].

Character

Architecture is related to the coherence (both mutual and in relation to what exists and to the surroundings) of images, atmospheres and meaning. Thus, the perception of the form also contains the possibility of assigning meaning and of symbolism[51].

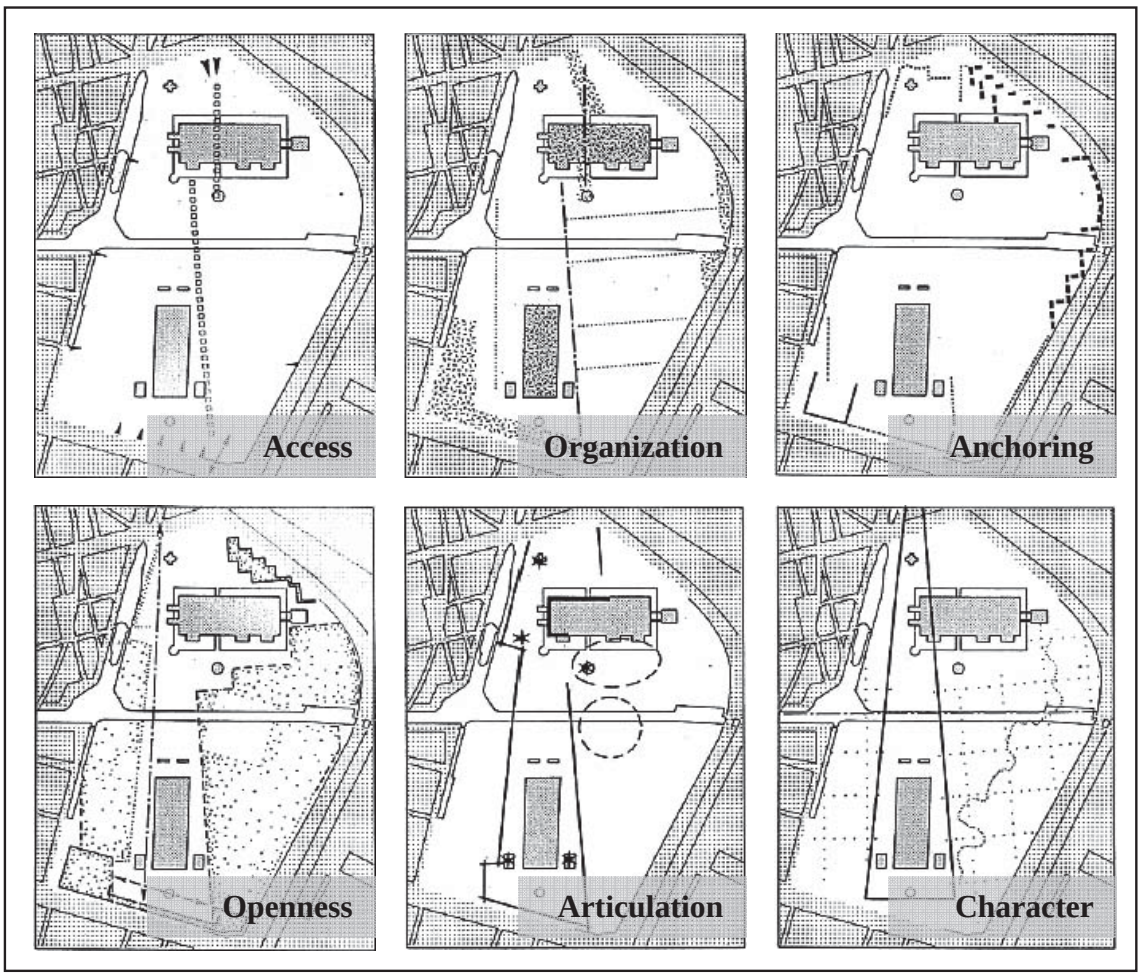


Figure 4-12: Layout and spatial coherence of Parc de la Villette [52]

4.3.3. Design strategies

In this stage of analysis, we study the way the end result has been affected. This involves ascertaining the designer's design philosophy (the ideas, ideals, and intentions that direct the designer approaches to the design[53].

Every design strategy can be excessively employed or maximized, as a result of which other strategies are considered subordinate or irrelevant; often there is a combination of many strategies.

4.3.4. Styling of the design

The first three stages of parks layout analysis concern the spatial characteristics of plan coherence, the arrangement of the elements in the park, and the way in which these elements are combined.

The considerations observed in these stages don't determine the final design. A translation of the situational characteristics and of the principles behind the design takes place whereby the spatial structure is materialized in design.

The styling scheme is based on a division into three archetypes of landscape architecture (classicism, landscape style and modernism)[54].

Classicism

The design of the park can be developed along a monumental spatial axis. The axis is often strung between buildings and an object at the rear of the park, and finally expands to form of vista across landscape elements far into the surroundings[55].

Landscape Style

In the development of the urban park, the landscape style occupies a prominent place. Scenes associated with the landscape style were adopted in the building of the first public parks in the 19th century[56].

Modernism

In addition to classicism and the landscape style, the modern movement can be regarded as a historical, and thus archetypal, style. The park plan must be of a practical simplicity, lucid and sensitive, and above all not showy, but restrained, detached and subtle[57].

4.4. Summary and conclusion

The analytical review in this chapter has discussed some points to evaluate the relation between urban parks and its landscape, starting with the different types of parks according to landscape styles, and the general guidelines for park planning and landscape, and then it is ended by a comparative analysis of parks landscape design.

For the purpose of this research, each point were discussed in the chapter will be narrowed to the main items[58] to be used in the research, as shown in Figure 4-13.

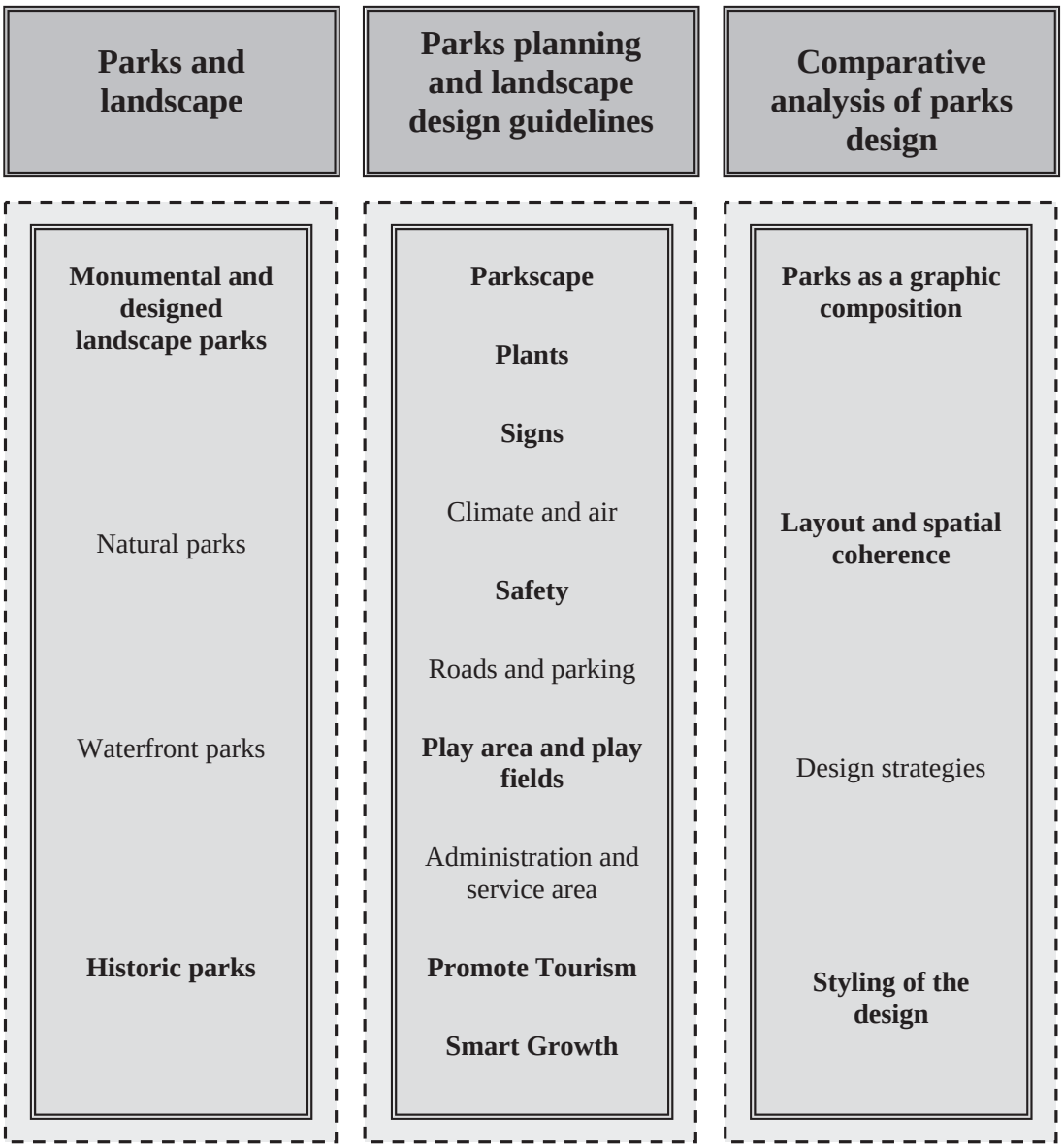


Figure 4-13: Summary of chapter 4

Foot notes

[1] The Different approaches for parks classification were discussed in chapter 1.

[2] Officially established in 1965, National Mall and Memorial Parks protects some of the older park lands in the National Park System, located in Washington - USA.

[3] www.nationalmall.org, the official partner of the national park service for the national mall, in Washington USA.

[4] Park, People and Places: Making Parks accessible to the Community. (2005). Urban Land Institute.

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[13] www.gardenhistory.org.uk, United Kingdom Data Base of Historic Parks and Gardens.

[14] www.royalparks.gov.uk, Royal Parks, London's Personal Space.

[15] All the pictures had been taken in UK parks by the researcher.

[16] Special planting for nice odors like (pine, other evergreens, flowering plants).

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[44] www.cite-sciences.com, Parc de la Villette.

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[58] The bold text within the figure shows the main criteria will be used to study the urban parks landscape in the research.

Chapter 5

Users and Activities in Urban Parks

Human needs in urban parks

Factors influencing whether people using urban parks

Principles to make parks accessible to the community

Parks users, class and classification

Activity and location characteristic in urban parks

Summary and conclusion

5. Users and activities in urban parks

Understanding the reasons for human behaviour is an effective tool for designers of public spaces because people's preferences will ultimately determine if a space is successful and, therefore, will determine the effectiveness of the design[1].

This chapter will focus on the relation between urban parks and different user groups, and all kinds of activities that appear through this interaction.

5.1. Human needs in urban parks

According to Yuen's[2] study of the development of urban open spaces in Singapore, problems exist because:

> *"They were to serve the most direct and explicit needs of the population (as a place to sit, stroll and play) without regard for more eclectic interests. Thus, though individual needs may be different; all groups were given the same bland park design. Park construction generally proceeded without regards for the needs of local users or differences in topography"*

Given the problem above, it is essential to understand human needs in order to plan and design successful urban parks.

5.1.1. According to Maslow categories

Maslow[3] breaks down human needs into six categories:

- Physiological (e.g., food and shelter).
- Safety-security (protection from danger).
- Affection belonging (need to belong to a group or community).
- Esteem (need to be recognized).
- Self-actualization (fulfillment of potential).
- Cognitive-aesthetic (need to learn and to appreciate beauty).

Maslow suggests that if the lower needs cannot be met, the highest needs cannot be reached at all. Physiological needs are the lowest, but the most important, because they are the strongest and serve the very basic needs of humans.

5.1.2. According to motivation theory

From the perspective of leisure research, Driver and others[4] claims that people's needs are derived from motivations to seek benefits for engaging in leisure activities. He bases his claims on expectancy-valence theory, which states that:

> *"Behavior in the work place is a function of both ability and motivation. Motivation was viewed as a hierarchy of instrumental and terminal experience. Instrumental expectancies describe the relationship between effort and performance outcome. Instrumental expectations are important because they lead to terminal expectancies that are valued, long-term personal goals"*

Based on this assumption of motivation theory in the workplace, Driver and Manfredo[5] suggest that "recreation activities are behavioral pursuits that are instrumental to attaining certain psychological and physical goals"

Driver further argues that if we know how to attain these psychological and physical goals, we can provide a better planning and management tool for recreation areas. To further understand how to attain psychological and physical goals,

Drivers and others developed preference scales to identify people's motivations or desired psychological outcomes in engaging in wilderness (including urban wilderness). The scale is known as the Recreation Experience Preference (REP).

5.1.3. According to Carr

Carr and others[6] propose that urban public spaces must meet five basic needs of people: (Comfort, relaxation, passive engagement with the environment, active engagement with the environment, and discovery)

They argue that these needs should be “examined not only because they explain the use but also because use is important to success.

Comfort

Comfort can be categorized by its physical, social, or psychological components. Physical comfort measures how people react physically with an environment.

For example, seating that considers physiology and climate conditions, such as shade, might provide a high degree of physical comfort.

Relaxation

Carr and others state that “Relaxation is a more developed state with body and mind at ease” .Relaxation occurs when people engage not only in passive areas, but also in active and noisy ones.

For example, while trees, greenery, and contained water, such as a lake, are associated with passive relaxation, people also consider certain sounds, such as waterfalls and wind, elements that offer relaxation.

Passive engagement with the environment

Passive engagement with the environment could lead to a sense of relaxation but it differs in that it involves the need for an encounter with the setting, albeit without becoming actively involved.

Observation is a passive engagement activity. It includes watching people’s activities, watching program activities such as sports, and observing natural environments.

Active engagement with the environment

On the other hand, active engagement involves contact with people. It includes socializing, in terms of talking with others and engaging in recreational activities. It is noted that, while senior citizens might be comfortable talking to each other, adults might engage in recreational activities, and children play in a playground. The form of active engagement also differs across culture.

Discovery

Discovery is the last need in Carr and others[7] list of needs in urban public spaces. It is closely associated with exploration. In their Information Processing Theory, Kaplan[8] explains that people are information hungry creatures. Therefore, the need for exploration is essential for their survival.

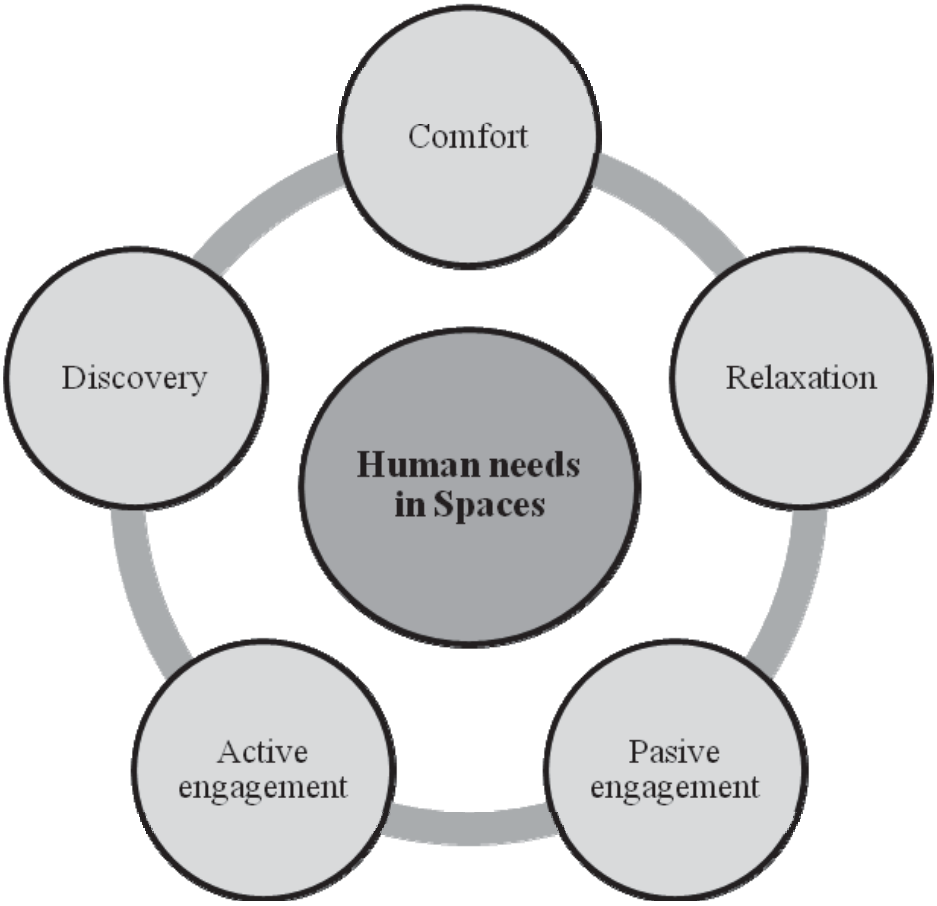


Figure 5-1: Human needs in open spaces according to Carr [9]

5.2. Factors influencing whether people using urban parks

When people choose to use urban parks to meet their needs may be influenced by a number of physical, social and cultural factors. Four factors have been identified as potential influences on whether people use urban parks.

These factors are social class, accessibility, sense of welcome / surrounding context, and sense of territoriality.

5.2.1. Social class

According to Rapoport[10], the use of spaces varies among different user groups. These variables can include gender, race, income, and life cycle. Edwards[11] studied recreation behavior and found differences in patterns of recreation attributable to social class.

Walker and Kielcott[12] support his finding by claiming that "Members of a class tend to have similar lifestyles, educational background, kinship network, consumption pattern, work habits and beliefs". This is a reason why people seek out people with similar interests and similar lifestyles in a similar type of place.

Gottdiener[13] supports the relationship between spatial quality and class by noting that "spatial relation is social relation that is defined by culture and class". Walker and Kielcott[14] suggest that social classes should be defined by six social characteristics:

- Income.
- Education level.
- Occupation.
- Gender.
- Culture.
- Age.

5.2.2. Accessibility

In this section, urban parks have to be generalized with urban open spaces and parks in general because there are very few studies pertaining only to accessibility of urban parks. This generalization is justified by the broad definition of urban parks "a public land put aside for public used amidst essentially urban surrounding" that this research uses[15].

One of the key issues in designing urban parks is accessibility. It is an important factor in opening a public space to diverse users. Mckenzie[16] defines public spaces as those that are usually open and have unrestricted access from all adjacent spaces.

For a space to have unrestricted access, it must display certain physical, visual, and social characteristics.[17]

5.2.3. Sense of welcome and context

A sense of welcome is closely related to visual access, social access and surrounding context. Visual access is important to make people feel free to enter a space[18].

Frank and Paxton[19] and Newman[20] explain that visual access is important for public spaces, especially to prevent fear of crime and undesired activities. This especially is true among women and children. Another type of psychological access is symbolic access or social access. Symbolic access means that there are signs that indicate who is welcome and who is not welcome in the parks[21]. The sign might be in the form of a cultural symbol or the presence of security personnel.

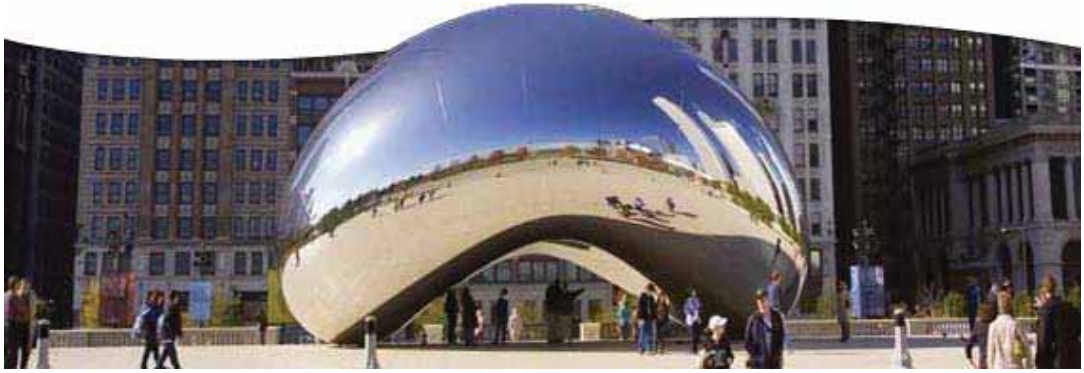


Figure 5-2: Millennium Park in Chicago, great sense of welcome [22]

5.2.4. Sense of territoriality

Sommer[23] provides a definition of territory as "an area controlled by an individual, family, or other face to face collectively". Walmsley[24] further notes that "Human territoriality is best thought of as the learned response to small-scale environments that satisfies basic needs for security and identity", and that it is culturally driven.

There are many classifications for human territoriality. Walmsley classifies territoriality into four groups: intimate, personal, social, and public. On the other hand, Porteous[25] classifies territoriality into three categories: microspace, mesospace, and macrospace.

All of these classifications are based on home - where people live, and their location. According to Porteous, territoriality varies with culture, age, sex, affinity, social influence, personality, and environment. A sense of territoriality provides security, identity, satisfaction, and stimulation.

5.3. Principles to make parks accessible to the community

It is important to view parks not in isolation, but as integral parts of the community fabric. Parks are places for fun, recreation, but they often play a pivotal role in community vitality and renewal. Some principles can be addressed to make parks accessible to the people, such as:

- Make no small plans.
- Ensure Effective Community Involvement.
- Design for the Place and its Users.
- Create Programs for Diverse Users.

5.3.1. Make no small plans

A great parks system starts with a vision and a plan—both of which require periodic updates. The vision sketches the park's role in the community from the present into the future, describes the park's assets, and indicates how the park can serve diverse residents and visitors. To keep sight of the big picture, the park system should also have its own master plan, which will reflect both the anticipated neighborhood uses and how the park fits into the larger municipal park system. The plan should:

- Consider who the park users are (by activity, age, gender, etc.).
- Identify the range of needs.
- Be adaptable to social, economic, and environmental changes.

5.3.2. Ensure effective community involvement

Community involvement makes the park more meaningful to local residents. Active residents, in turn, help ensure good stewardship, meaning that the park will remain an attractive place for active and passive recreation. Area residents can be involved in a wide range of ways: they may serve in an advisory capacity; participate directly in the planning process; help develop park activities; or simply provide general oversight, insisting on accountability and high standards of management[26].

Many city parks engage community volunteers in park projects and programs. Involving local residents in park planning, and programming helps to cultivate support, and an active constituency. Collaborative activities with the school district, such as environmental education programs, also attract children and their families to parks.

Figure 5-3: Community involvement in Alazhar park in Cairo during the construction[27]

5.3.3. Design for the place and its users

Design has an enormous impact on how users experience a park. Good, responsible design yields a beautiful, green, safe, clean park that will exert a strong positive influence on the community. The design of the park should be integrated with surrounding uses and should be accessible and appealing for users with a wide range of ages, backgrounds, interests, and abilities[28].

Features such as lighting, seating (both movable and fixed), restrooms, and food and beverage sales all contribute to the comfort and appeal of a park. Aesthetic considerations should not stop at the park's boundaries: the perimeter of the park and the adjacent sidewalks are gateways, and are also an important part of users' experience.

5.3.4. Create programs for diverse users

Park programs offer community members an opportunity to enjoy parks as a common space, creating social and civic ties. Programs for children and teenagers can help them develop life skills and experience positive social interactions. When residents participate in park programs, they have a greater stake in their parks and in their neighborhoods.

Programs - which can include a wide range of activities, such as nature walks, musical or theatrical performances, swimming lessons, and community gardening - are an opportunity to draw a wide variety of users. The key to excellent park programming is to create a range of activities for different ages and interests throughout the park. A periodic review of park users and their needs helps ensure that the park adapts its activities to changing populations.

5.4. Park users, class and classification

The users of urban parks reflect the Varity in the range of types, groups, and classes they represent. In this point the research will discuss the different approaches to classify the urban park users.

5.4.1. Gender

The first way to address urban park users is according to gender, males and females regardless their age and location form the all number of users.

In a study in Brunswick Park in UK about park users observed during a day of use, 10,250 users use the park this day, 6,114 were male and 4,136 were female, giving an average ratio of male users to female users of 60%: 40 %, in general, this ratio was reflected almost uniformly across all parks[29].

Figure 5-4: The users of Brunswick park in London during the weekend (the researcher)

5.4.2. Age Groups

There is many ways to classify the park users according to age groups, it depends on the research purpose, and according to the research criteria the most suitable age groups is[30]:

- Early years (children): till 15 years.
- Teenage: 15 to 25 years.
- Adults: 25 to 55 years.
- Elderly: over 55 years.

5.4.3. Ethnicity and local users

The last way to classify any park users is according to their location, either they are located around the park area or they are visiting from a distance, both from the same country or foreigners or any ethnic groups living in the country[31].

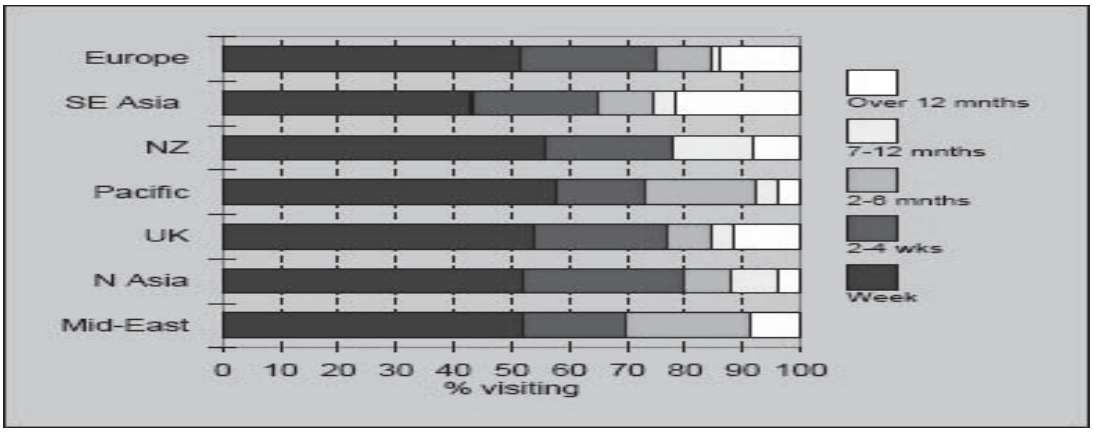


Figure 5-5: Sydney residents visiting the parks divided by origin country [32]

Figure 5-5 shows the study were made in a selected sample of people living in the metropolitan area of Sydney to understand who use Sydney parks, in the figure we notice that the parks users all over Sydney were classified according to their origin country, either they are local users or from abroad.

Group of Indonesian people | local users around the parks

Figure 5-6: The different users in Alazhar park according to their country of origin [33]

Figure 5-6 shows the user groups in Alazhar Park in Cairo according to their country, both local users from around the park and ethnic group of Indonesian people living in Cairo.

5.5. Activity and location characteristics in urban parks

Public Park is one type public space in a city or suburban containing planted trees or grass for recreational, activities, social life, natural systems preservation and conservation, aesthetic purpose, education, as economic assets, or cultural heritage. Public parks provide many different activity opportunities to users or visitors of the park. Various different behavior and preference on park utilization may be formed among different groups of people[34].

The investigation on the availability of public space revealed some user recreational activities patterns that should be taken into account. In this study, the interaction of recreation activity is classified into recreational behavior of location choice and activity involvement.

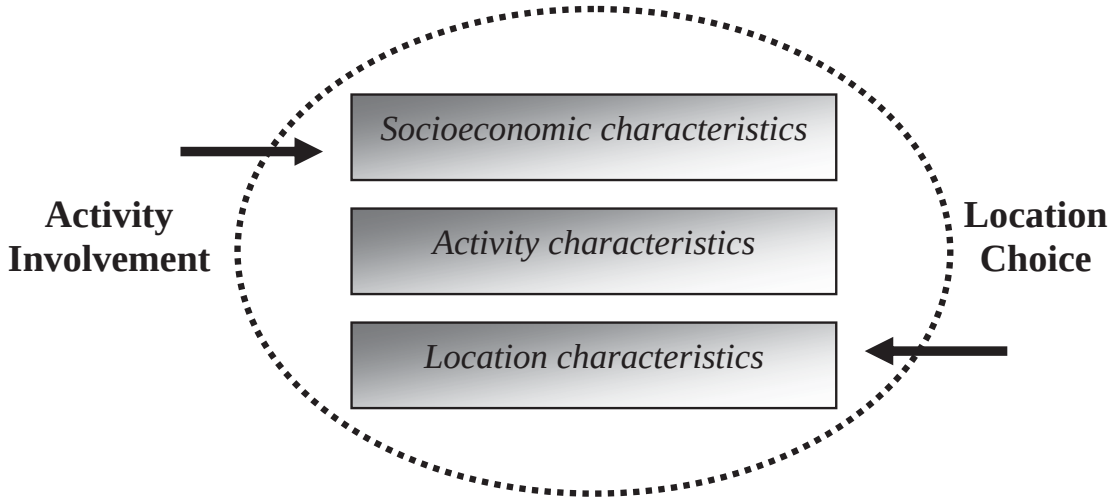


Figure 5-7: Interaction diagram between activity involvement and location selection[35]

5.5.1. Activity Involvement

Public parks provide a mixture of opportunities to visitors, not only the direct benefit to the pleasure of sensory contact with nature but also contribute to the social and cultural meanings to the people in the community. As the results, there are varieties of activities that visitors can engage in at the site. The assessment of activity characteristics and behavior of different group of park visitors may provide useful information to the local city government to develop appropriate policies and management practices.

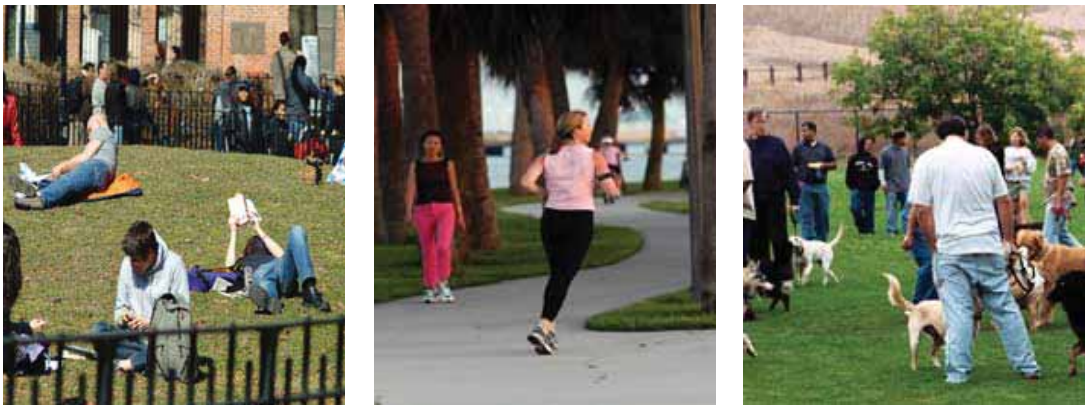
The research will follow Gobster[36] suggestion on park activities classification that group people activities in the park into:

- Passive activity (PA).
- Active individual (AI) activity.
- Active group (AG) activity.

Passive activity is the activity in providing relaxation and recreation or enhancing socializing of park visitors such as meeting friends, reading, etc.

Active individual activity is defined as activity involving a range of sporting activity including both indoor and outdoor activities done individually such as jogging, walking, etc.

Active group activity is similar to active individual activities, but done by team or group of park users playing basketball, football, etc. Other activities not related to recreational purposes are excluded from the valid recreational activities.



Reading Jogging Playing

Figure 5-8: Types of activity involvement in urban parks [37]

5.5.2. Location Choice

The concept of recreational location choice may be considered from the aspect of access to the recreational sites and their attractiveness. Selection of park as recreational location must be established[38].

As pointed out in Hwang *et al*.[39], the interaction between park users and park location is one of the key elements linking park planners and local residents.

Park service can be seen as “point-specific” service in which travel costs, together with time and effort, all tend to increase with distance[40]. The access to recreational location plays a major physical environmental factor on recreational activity participation[41].

The accessibility to park is measured by travel characteristics variables such as travel expense, safety concerns, comfort levels and journey time. Public parks have multiple functions for the community.

Park attractiveness variables include several park characteristics influencing user’s behavior such as frequency of visit, duration, expenditure, and other attributes of park characteristics; and opportunities for users to take part in activities[42].

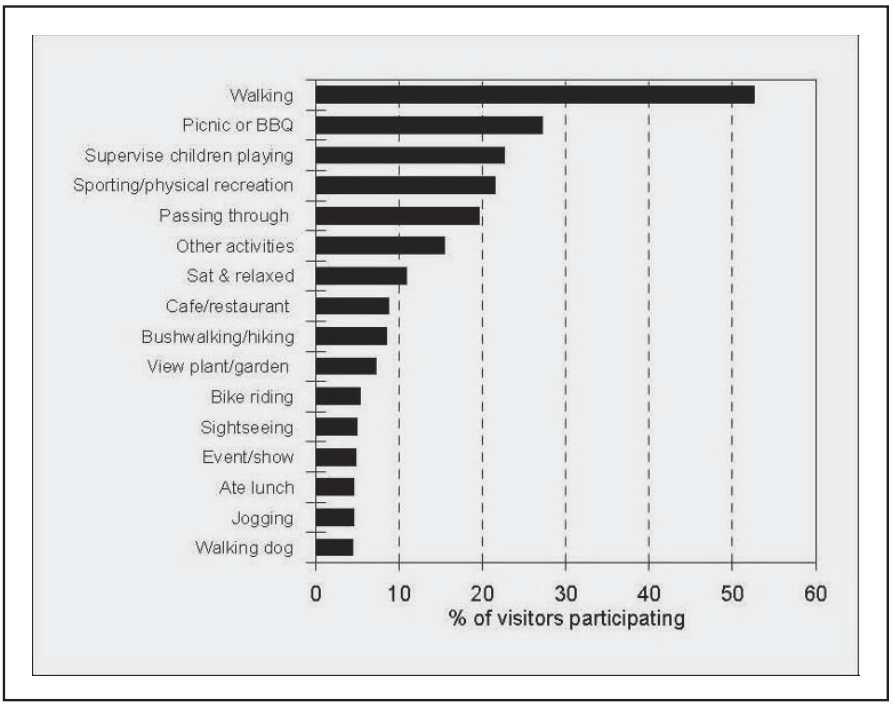


Figure 5-9: Different types of activities in Sydney parks [43]

Figure 5-9 shows the activities visitors engage in when visiting Sydney parks. Informal activities - walking, picnicking and supervising children’s play - dominate.

5.6. Summary and conclusion

The analytical review in this chapter has discussed the relation between urban parks and the different types of activities which appear inside it through the interaction between different user groups.

Regarding the users classification, the most suitable ways will be used in the research are (age groups – Ethnicity and Local Users).

For the purpose of this research, each point were discussed in the chapter will be narrowed to the main items[44] to be used in the research, as shown in Figure 5-10.

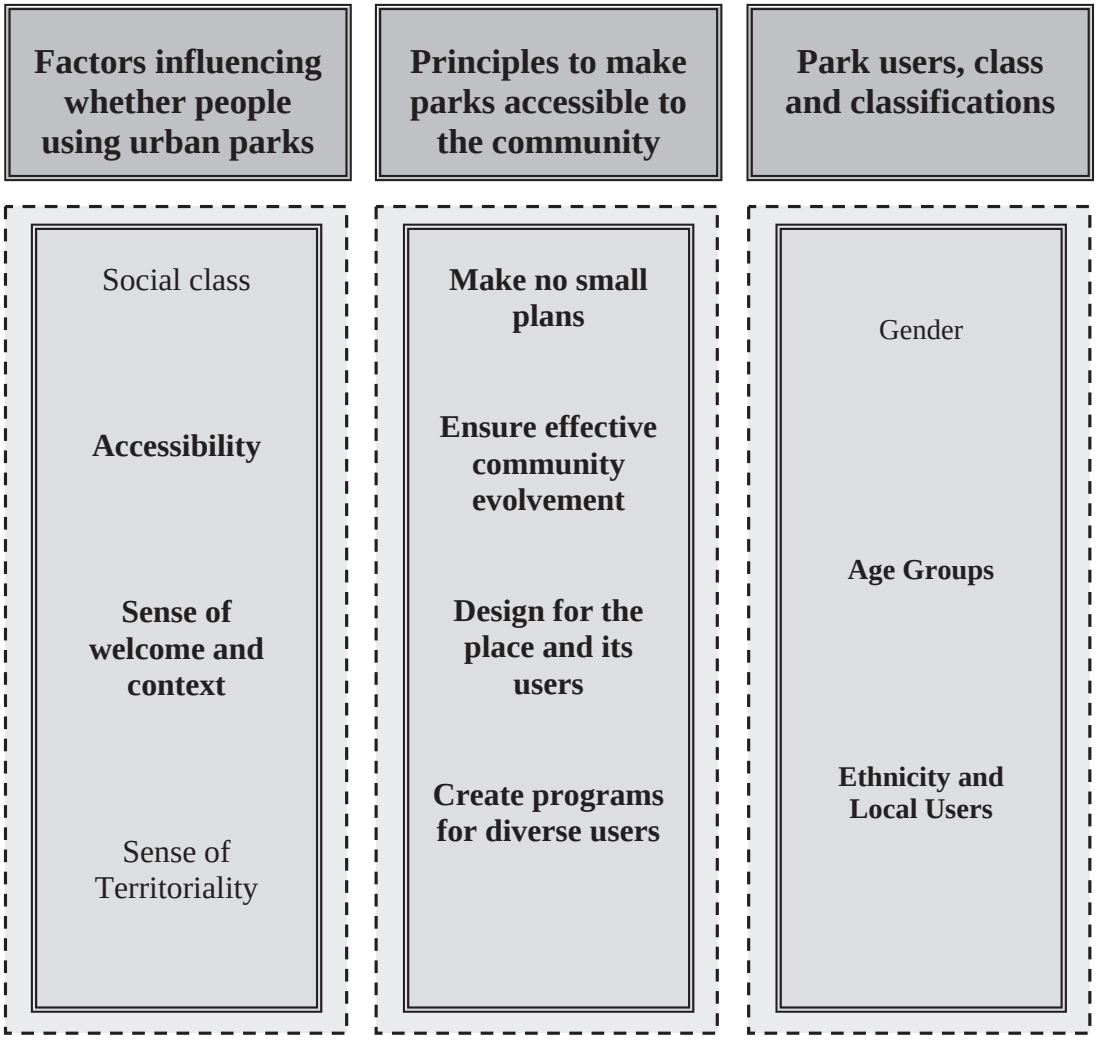


Figure 5-10: Summary of chapter 5

Footnotes

[1] Kruse, Gabriel Andrew. (2006). Take me to The River: Designing the Intimate Waterfront. M.Sc. submitted to dep. Of landscape architecture. College of architecture and urban studies. Virginia.

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[44] The bold text within the figure shows the main criteria will be used to study the activities and users in urban parks within the research.

Chapter 6

Landscape Perception and Preferences

6. Landscape perception and preferences

According to OXFORD[1], perception is the ability to see, hear and become aware of something through the senses; it is a way of regarding, understanding or interpreting something, more like a mental impression.

Ruddell ET all[2] suggest that the major obstacle in landscape perception appears to be a lack of well developed theory to account for the relation between visual preference and the concrete measures of scenic attributes preferred in psychophysics.

Perception itself can be interpreted as[3]:

- General perception, which formed by previous experience and crystallizes into impressions.
- Sensory perception, which is a direct feeling of the space at a point in time. Figure 6-1

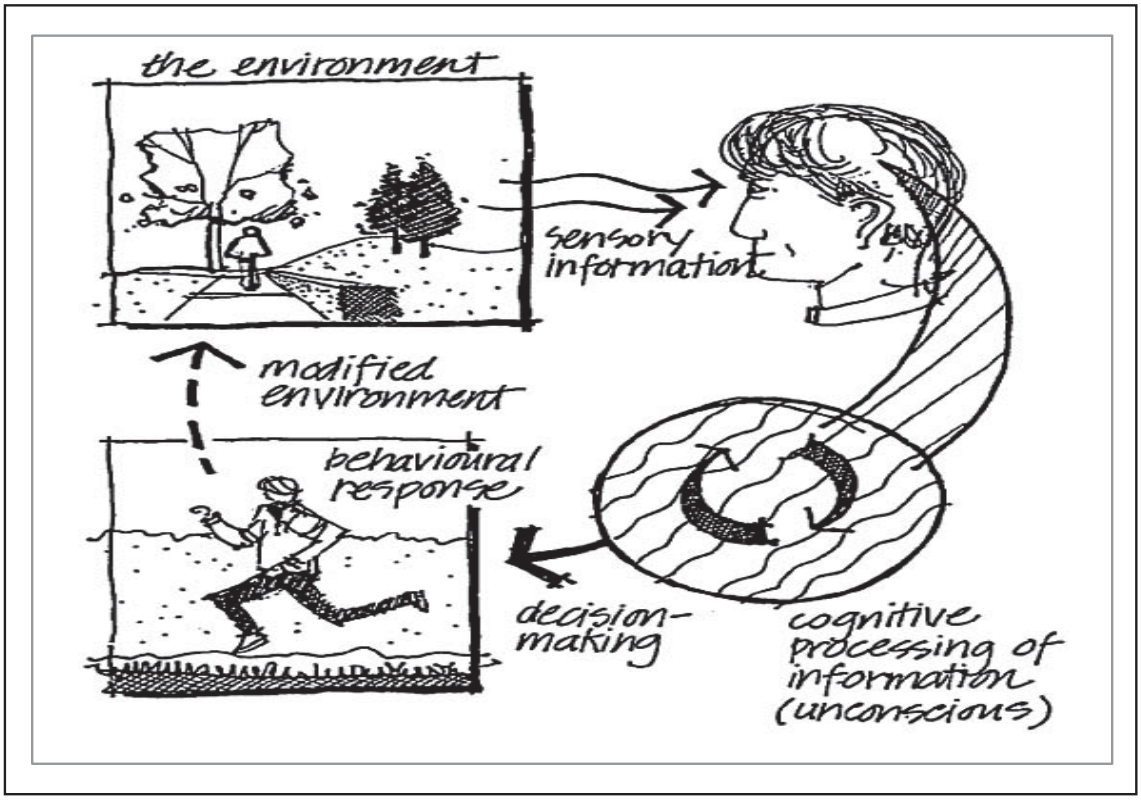


Figure 6-1: The cognitive model of environment perception [4]

This chapter will focus on the relation between landscape design and human behaviour, how people perceive it and react, and discuss the major theories in landscape and behaviour.

6.1. Landscape interpretation

An interpretation is an explanation of the meaning of some object of attention. It also refers to making ideas more understandable. An interpretation may express ones' own understanding of things, for instance, a work of art, a poem, or piece of literature[5].

Meinig[6] was one of the first to explore the observer bias; he states that '*Any landscape is composed not only of what lies before our eyes, but also what lies within our heads*'. He suggests an exercise in which a diverse group of people is taken to a view that includes both city and countryside, and the participants are asked to describe the landscape, and to identify its elements, composition and meaning.

Then Meinig exposes different biases that affect landscape interpretation by discussing ten different perceptions of the viewed landscape. These ten views are listed below, with a visual image for each viewpoint. These images shouldn't be seen as physical settings that express only these meaning, but rather as a tendency of a viewer to perceive these type of image.

6.1.1. Landscape as nature

The purity, power and magnificence of the natural landscape are the vanguards of this view. Human are relegated to a secondary, inconsequential position and are considered the negative influence in a natural landscape of perfection[7].

Such a viewer is ever tempted in his mind's eye to remove man from the scene, to restore nature to her pristine condition, to reclothe the hills with the primeval forest, clear off the settlements, heal the wounds and mend the natural fabric, to imagine what the area is really like. It is an old and deeply rooted view which separates man and nature[8]. Figure 6-2

6.1.2. Landscape as habitat

In such a view, every landscape is a piece of the Earth as the Home of Man. What we see before us is man continuously working at a viable relationship with nature, adapting to major features, altering in productive ways, creating resources out of nature's materials; in short, man domesticating the earth[9].

Every landscape is therefore basically a blend of man and nature. Man may make mistakes, damage nature and thereby himself, but in the long run man learns and nature heals. Thus even when landscape seems to display some maladjustment, it is only a phase in man the domesticate working toward symbiosis, a process he has been engaged in for a million years[10]. Figure 6-2

The most well known proponent of this viewpoint was R. Buckminster[11]. His world games sessions for exploring - spaceship earth's – carrying capacity, and maximizing its ability to sustain cultures, greatly increased our understanding of the landscape as habitat.

Landscape as Nature **landscape as Habitat**

Figure 6-2: Landscape interpretation (as Nature – as Habitat)[12]

6.1.3. Landscape as artifact

In this view, the person sees first of all and everywhere the mark of man in everything. Nature is fundamental only in a simple literal sense: nature provides a stage. The earth is a platform, but all thereon is furnished with man's effects so extensively that you cannot find a scrap of pristine nature. The soils, trees, and streams are not "nature" as distinct from man, they are profoundly human creations: soils altered by plowing, cropping, burning, mulching, fertilizing, draining; forests cut and burned and the whole complex changed by new associations of species; streams silted, channeled, their regime affected by myriad changes in their watersheds[13].

Like the other views, the landscape as artifact viewpoint is a mental construct that has reoccurred at various times in history. However, until recently, because of limited technology, its expression has often been rather localized phenomenon[14].

Figure 6-3: Landscape as Artifact [15]

6.1.4. Landscape as system

In this holistic view the landscape is a system consisting of interdependent subsystems, with elements seen as expression of and cues for understanding. This is a relatively new, rapidly expanding and evolving viewpoint; it began as a reaction to a reductive Newtonian science and to a propensity to study things and pieces rather than seeking understanding of complex interrelationships[16].

Such a view is wholly the product of science, a means of looking inside matter to understand things not apparent to the naked untrained eye. It is a view still in vigorous development, beginning with analysis, disintegrating things into their parts, and turning increasingly to synthesis, putting things together in such a way as to give us a new level of understanding interrelationships[17].

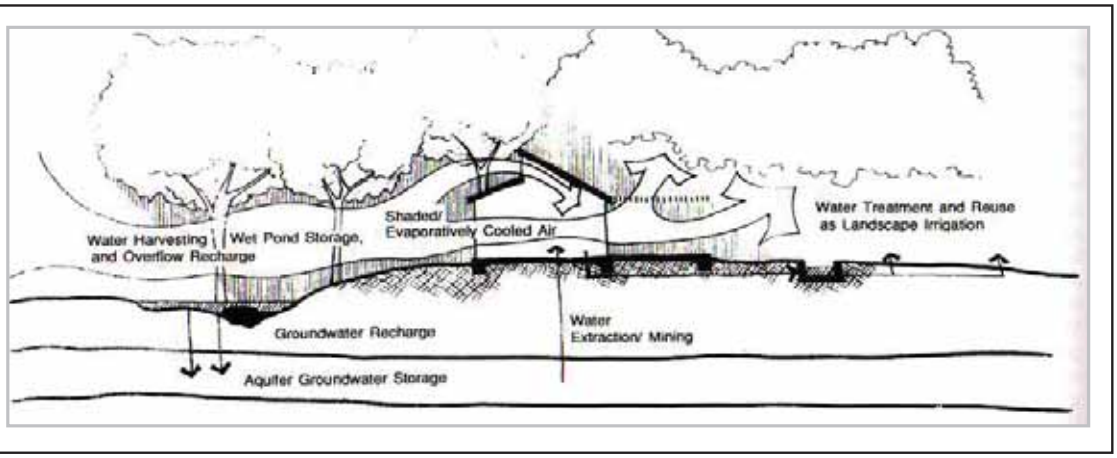


Figure 6-4: Landscape as system [18]

6.1.5. Landscape as problem

This view sees the landscape -Including its natural and human-made elements- as a situation needing correction. The landscape-as-problem view is promoted by education addressing landscape design as functional, infrastructural, behavioral or aesthetic problem-solving[19].

From this viewpoint the landscape designer applies professional skills, scientific knowledge, and aesthetic sensitivity to the correction of environmental ills. Unlike the landscape-as-artifact view that sees value in human expression, this view approach emphasizes the problems these expressions represent. This can be a short-term view (existing situation as problem, little attention to secondary and quaternary problems), or can focus on long-term problem solving[20].

This viewpoint can also create boring landscape that fails to provide the enrichment necessary to sustain the human spirit and promote psychological health[21]. Figure 6-5

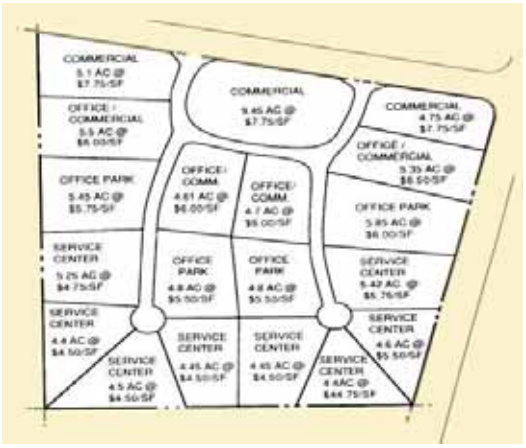
6.1.6. Landscape as wealth

Landscape-as-wealth is based upon the perception that people own land. The primary value of land is its economic worth; all other landscape measures are secondary to investment potential[22].

Such a view of landscape is future-oriented, for market values are always undergoing change and one must assess their trends. Such, obviously, is the view of the speculator, but it is also the view of the developer and is thus akin to that of the landscape designer, for "development" is usually thought of as “improvement" and may involve strong feelings of creativity and of contributing to the benefit of society[23].

This view is clearly the mark of a society which is strongly commercial, dynamic, pragmatic, and quantitative in its thinking and the very landscape itself must reflect such characteristics[24].

Believers in this approach consider economic opportunities and constrains intrinsic to the landscape, and those that can be introduced to affect value. They include both landscape as present wealth, and landscape as future wealth, because the economic value of landscape is a prediction of its future condition, use, and value[25]. Figure 6-5



Landscape as Problem **Landscape as Wealth**

Figure 6-5: Landscape interpretation (as Problem – as Wealth) [26]

6.1.7. Landscape as ideology

In this view, the landscape is seen as a symbol of the values, ideals, and dreams of a culture. People encode and decode landscape meanings about the culture, its underlying philosophies, and its self perception[27].

Just as the scientist looks through the facade of obvious elements and sees processes in operation, so others may see those same elements as clues and the whole scene as a symbol of the values, the governing ideas, the underlying philosophies of a culture[28]. To see landscapes in such terms is to see as a social philosopher and to express a firm belief that broad philosophical ideas matter in very specific ways. It is a view which clearly insists that if we want to change the landscape in important ways we shall have to change the ideas that have created and sustained what we see[29]. Figure 6-6

6.1.8. Landscape as history

The landscape is an enormously rich store of data about the peoples and societies which have created it, but such data must be placed in its appropriate historic context if it is to be interpreted correctly. So, too, the landscape is a great exhibit of consequences, although the links between specific attitudes, decisions, actions, and specific results may be difficult to trace with assurance[30].

The landscape in this view is the complex documentation of the history of natural and human activities in a particular location. In this approach of landscape, every thing is positioned in time and sequence. Settlement patterns, urban form, architectural style, site detail, and all other planned and designed characteristic are means for dating elements, and contributing to the chronology[31]. Figure 6-6

Whereas the landscape-as-system viewpoint seeks to understand the landscape as ecological and human process that build interactive systems, the landscape-as-history view considers these processes structured in time to explain and interpret changes to physical elements as landscape gestures, and thereby to build a more complete historical record[32].

Figure 6-6 Landscape interpretation (as Ideology – as History) [33]

6.1.9. Landscape as place

This phenomenological view sees the landscape as sensual experience, it focuses not on elements, but on the sensual (sound – smell – tactile) gestalt. This view also concentrates on the feel, flavour, and ambiance of place[34]. This view has been influenced by the philosopher Heidegger[35] and the architect Norberg Schulz[36].

This view often held by the geographer, is concerned with the characteristics of places and analysis of how places are organized, structured, and spatially arranged to create the perceived landscape. It is also a value to the environment psychological, who seeks to understand relationships between place and consciousness[37]. Figure 6-7

In this view every landscape is a locality, an individual piece in the infinitely varied mosaic of the earth. Such a viewer begins by being at once comprehensive and naive: by encompassing all and accepting everything he sees as being of some interest[38].

It is landscape as environment, embracing all that we live amidst, and thus it cultivates a sensitivity to detail, to texture, color, all the nuances of visual relationships, and more, for environment engages all of our senses, the sounds and smells and ineffable feel of a place as well[39].

6.1.10. Landscape as aesthetic

There are many levels and varieties to this view, but all have in common a subordination of any interest in the identity and function of specific features to a preoccupation with their artistic qualities. This view places primary emphasis on the artistic quality of landscape features and the landscape as visual scene[40]. Figure 6-7

The landscape-as-aesthetic approach is a cerebral view of the landscape that holds truth and beauty not to be in function or experience, but as some aesthetic ideal. Human involvement with the landscape is intended to be contemplative rather than experiential. The landscape is seen as object, and the scene is detached from human behavior[41].

Landscape as Place **Landscape as Aesthetic**

Figure 6-7: Landscape interpretation (as Place – as Aesthetic) [42]

6.2. The basis of people attitudes and perception

There is a number of items affect people's perception of the world around them and their attitudes about landscape planning and design. The following points are some of these items as a start point to explore culture attitudes and perception.

6.2.1. World views

World views (paradigms) are largely responsible for the way we perceive landscape[43], as well as the difference in landscape meaning discussed in 6.1.

A paradigm is a model of understanding consistently free of significant contradictions, it guides our expectations and helps us to sort, organize, and classify information. Our brain uses paradigms to classify, sort, and process information received by the senses. This paradigm may be personal or cultural, and we each have many different paradigms for different contexts[44].

This view is promoted by Cartesian mindset and educational systems which teach people to see world from the perspective of a specific academic discipline or subject[45].

6.2.2. The nature of reality

Some cultures see an objective, rational reality; others explain the world intuitively and mystically. Hence, America is moving from a reductive, rational and objective view that seeks simplicity and modernist view of universality to postmodern views that embrace diversity and spontaneity. The modern and subsequently postmodern views were widely embraced by designers the second half of this century[46].

Since the 1960s landscape architects has been a leader of embracing complexity, integration, and locally responsive solutions. Landscape architecture has led the design professions in applying the increased understanding made possible by new integrative ecological and systems sciences[47].

While architects embraced modernism, landscape architects pioneered design as systems thinking, resource management, and integration with local dynamics[48].

6.2.3. Relation of thinking, feeling and knowing

Some cultures think and feel in an intimately interconnected manner, with knowledge emerging through this interconnection. Other cultures separate thinking and feeling, some times to the point of seeing the two as antithetical[49].

In the middle of the twentieth century, western culture embraced objective science and rational thought and sought to demystify and demythologize the world. Western culture is now emerging to a new awareness promoted by a subjective science of relativity. This awareness sees art and science as interrelated expressions of an underlying oneness[50].

6.2.4. People - Environment Relationship

According to Berleant[51], nature is not a place apart of us. We have, instead, a continuity of human and natural world. And what we need now is to reconceptualise our world in a way that comes to term with this, for what we do in the environment we do to ourselves. Hence, some people believe that it should form the principal philosophical foundation for landscape architecture and urban design[52].

Perceptions of people- environment relations range from people being dominated by and, therefore, subservient to nature, to people being dominant over and, therefore, master of nature[53]. Figure 6-8

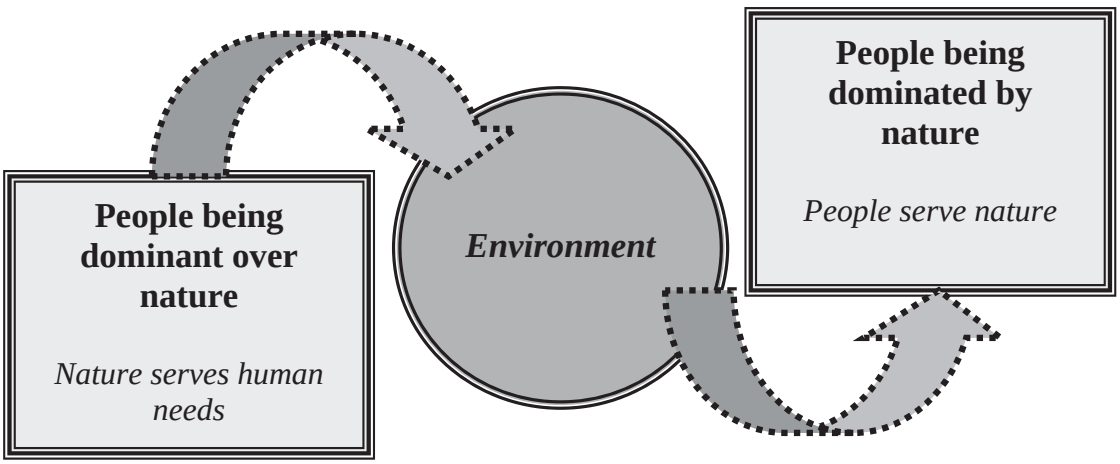


Figure 6-8: Types of perception in people-environment relations (researcher)

The people-environment relationship concept requires a fundamental shift in mind-set away from looking specifically at things to looking at relationships among things. It is a mutually reciprocal relationship of people, their activities, and their physical, social and cultural circumstances within which human and environmental attributes achieve realization through their interaction[54]. Figure 6-9

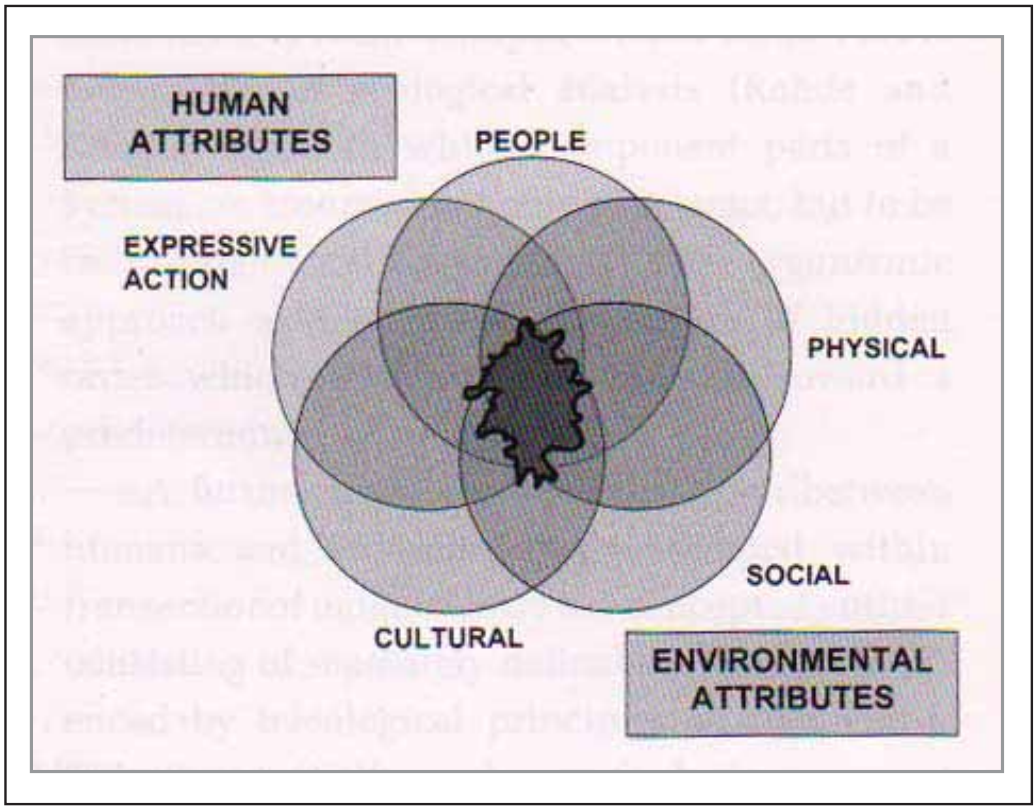


Figure 6-9: A holistic people - environment relationship [55]

6.2.5. Social relationships

This view tends to produce an ever-widening gap between affluent and poor people. It promotes individualistic, over expressions and a visually complex, often nonintegrated culture landscape[56].

Cultures vary in their desired degree of social interaction from private to public. The community that values privacy will establish a system of cues as deterrents or social filters[57]. Figure 6-10

Housing areas in England, transparency between private and public

Housing in KSA, high walls between private and public

Figure 6-10: Different levels of social interactions in housing landscape [58]

6.2.6. Temporal relationships

Landscape is dynamic. All the elements in the landscape are in a continual process of change. There is growth, expansion, weathering, disintegration, decay and renewal. Change is the very substance of things and it is through these changes that we register the passage of time[59].

Some cultures believe in universal rhythms, or dialogues between extremes. In these cultures, decisions address the dialogue of past, present, and future[60]. Perhaps the best known example of rhythmic or cyclical attitudes about time is the eastern concept of yin-yang[61].

Other cultures perceive linear time, or time moving forward. This attitude is somewhat removed from the rhythms and cycles of the physical world. It tends to separate past, present, and future as conceptually different entities to be addressed discretely[62].

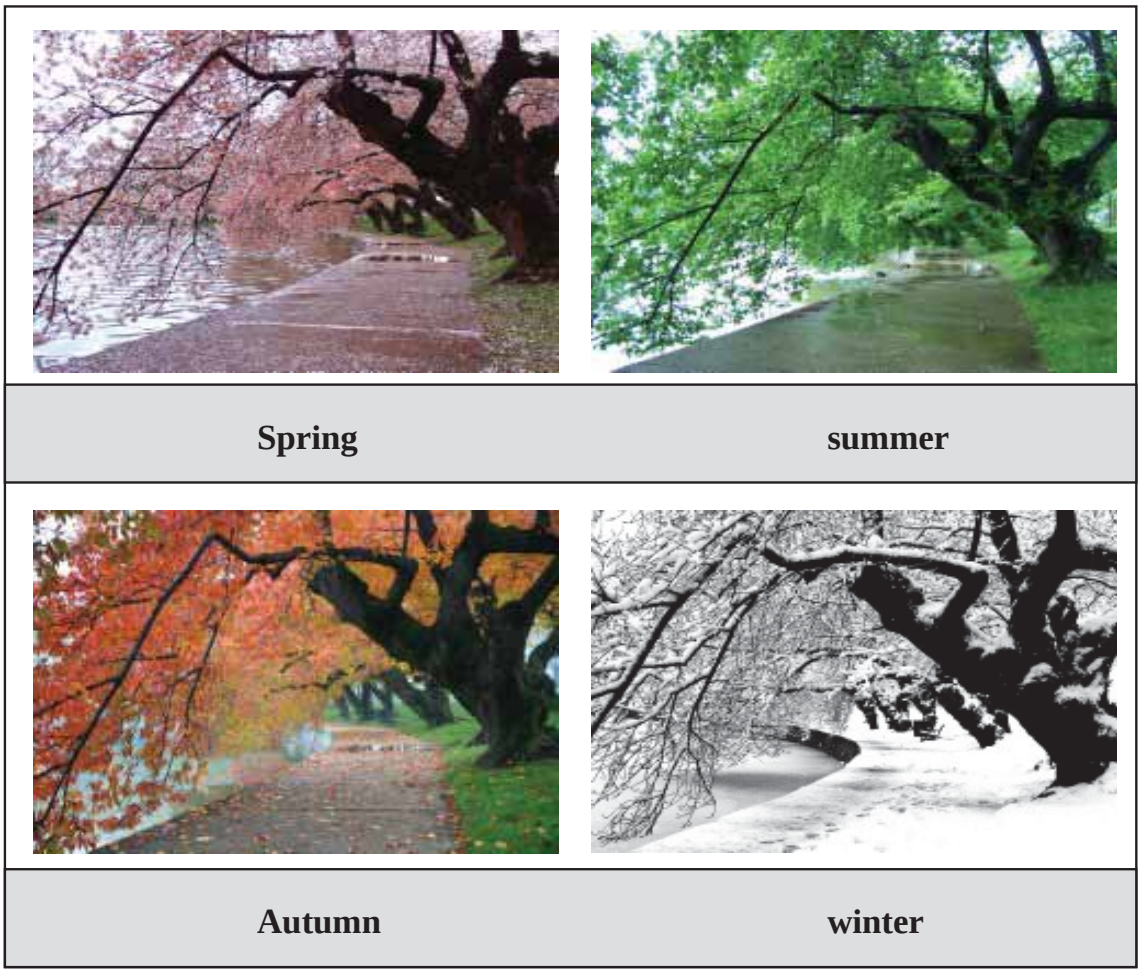


Figure 6-11: Different visual image of landscape according to season [63]

According to Figure 6-11, these visual-poetic shots of Washington capture nature with rich layers of personal and cultural significance.

These chronicles of the agricultural calendar not only evoke atmospheric conditions and times, but can also convey a particular mood or political commentary[64]:

- *Spring* may symbolize the flourishing conditions of a well-ordered space.
- *Summer* may remind us of the vitality and beauty of youth.
- *Autumn* scene can illustrate the wisdom, splendor and color of age.
- *Winter* can imply conditions that are hostile to virtue and talent.

6.3. The concept of experiential landscape

The idea of experiential landscape was discussed by Kevin Thwaites and Ian Simkins[65]. They believe that it is very important to look at the human-environment relation in more depth, setting out its philosophical and theoretical context and then describing some of the methodological components that help us to understand it more. The research will review their approach which being used and examined in open spaces, in order to apply it on urban parks.

6.3.1. Introduction

Few years ago, the environmental physiologists Steven and Rachel Kaplan[66] highlighted the problem. They saw it was that although enlightened design practitioners recognised value and relevance in the research findings of environmental physiology, they simply couldn't translate the research literature into usable recommendations. The solution to this was to appeal to the structure of Alexander's pattern language[67] as a framework with operational potential, and they proposed their own matrix of patterns and themes to present solutions for the design and management.

Experiential landscape is an approach to open spaces analysis and design that stresses social relevance over appearance. One of the implications of this that Kevin Thwaites[68] tend to see a focus on small and some times visually insignificant places, which can be pivotally important to the routine lives of individuals and groups, but maybe more or less invisible against the largest issues of many environmental improvement projects.

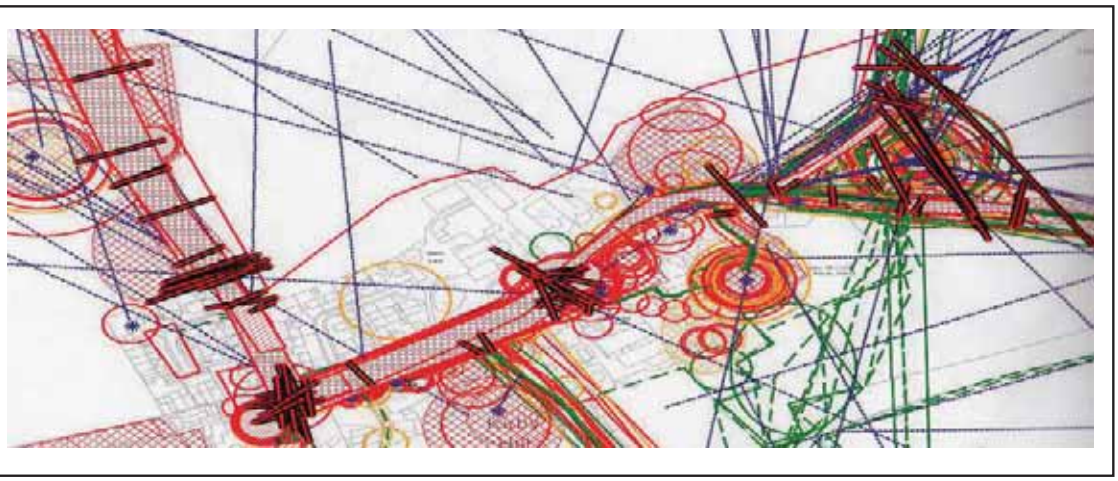
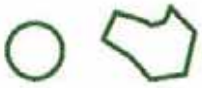


Figure 6-12: the experiential landscape map of a village core[69]

6.4. The vocabulary of experiential landscape

Table 6-1 provide the fundamental basis from which the experiential landscape concept can begin to be explored in the field. The research will try to look more closely at the components as an emergent vocabulary potentially capable of describing the characteristics of experiential landscape.

Table 6-1: Table of CDTA symbols and themes [70] (adapted by Researcher)

Experiential place	type	symbol	description
Center	Social imageability		Red open circle or polygon
	Social interaction		orange open circle or polygon
	Restorative benefit		green open circle or polygon
Direction	Movement		Green dashed line, with a star or arrow
	view		Blue asterix and blue target with dashed line
Transition	Threshold		Two thick and parallel lines
	Corridor – segment - ephemeral		Red polygon hatched in one direction
Area			Purple open polygon

6.4.1. Center

Some of the environmental attributes that seemed to induce the predominant sensation of location it called Center. Hiller and Hanson[71] have associated convex spaces with social potential in residential settings, and they use an adaptation of this to explore the spatial characteristics of the sensation of Center.

Another of the principal attributes of settings that seemed to deliver prominent Center experience was that settings that appeared locationally significant, as opposed to isolating, tended to be close to routes that encouraged passer-by.

The presence of people sitting, waiting, watching, talking and eating either individual or in groups tended to generate strong locational sensations, sometimes it seemed almost irrespective of other environmental qualities[72]. Figure 6-13

Figure 6-13: The corner of Greenacre park in New York and its social meaning for many as a place for socializing and relaxing [73]

The environmental characteristics of centres significant for restorative benefits can be summarised into:

- Separation from distraction.
- Comfort and shelter.
- Provisions for rest.
- Presence of nature (trees – water – natural materials).

Finally, the environmental attributes that is especially associated with centres significant in people's lives because of social interaction include the following:

- Significant convergence of routes.
- Presence of features for waiting.
- Seating in social groupings.
- Presence of features encouraging comments.
- Revealingness (low garden boundaries. Etc).
- Places of arrival, departure.

Figure 6-14 shows the different types represent different ways in which people come to attach significance and value to locations.

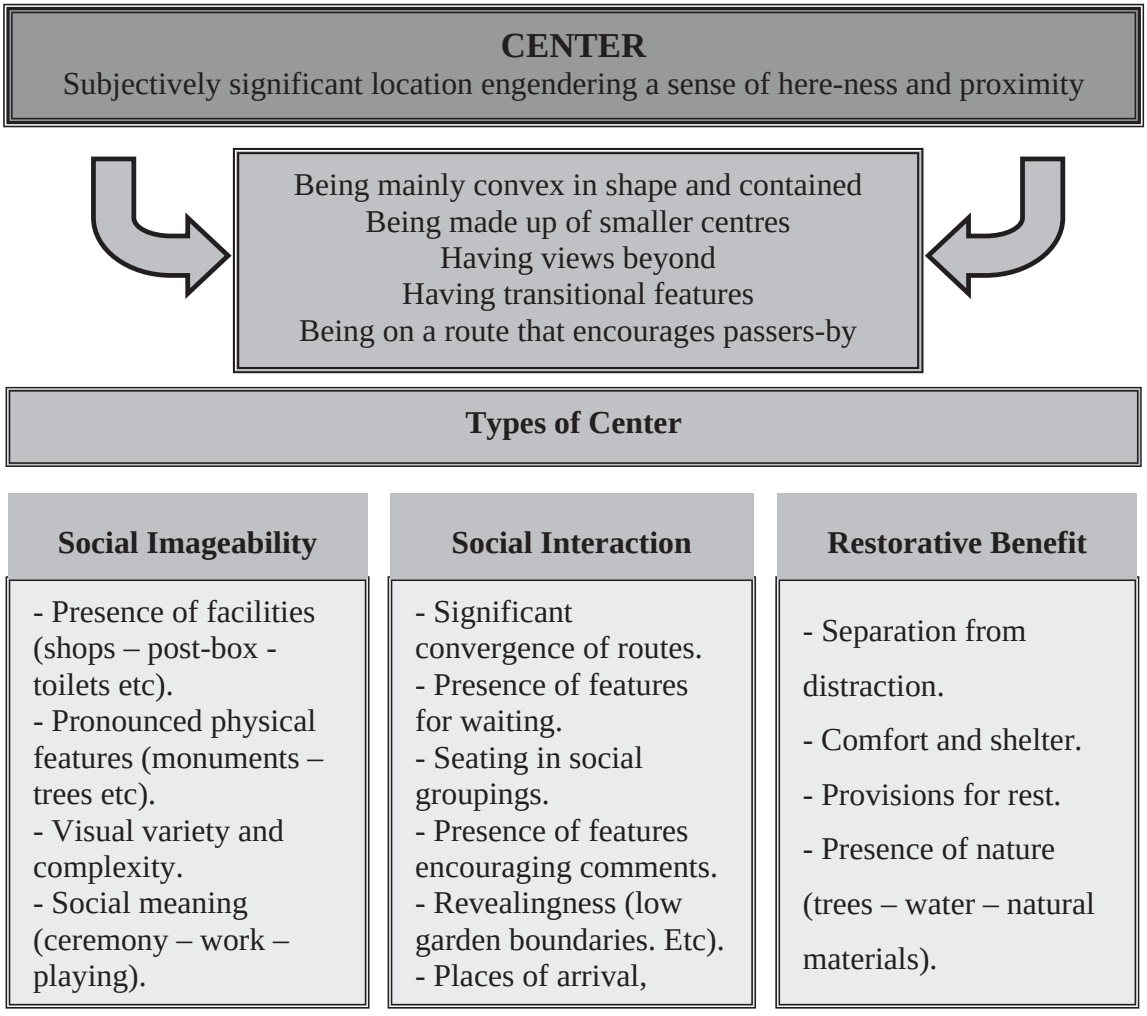


Figure 6-14: Conceptual model for Center (adapted by researcher)

6.4.2. Direction

The discussion about the development of Center characteristics highlighted that centers don't exist in isolation to other kinds of spatial experience. Gordon Cullen[74] understood this relationship when he said in his exploration of the structure of townscape that:

> *"No sooner do we postulate a **here** than automatically we must create a **there**, for you can't have one without the other"*

The explorations of Kevin Thwaites and Ian Simkins[75] showed that sensation of direction can be conceptualised by three interconnecting categories of experience which link together the here and there, which is:

- *Linear containment*, this refers to a general sense of containment that draws attention to a spatial continuity, and this is influenced most by attributes of the enclosing surfaces.
- *Route*, it extends beyond the awareness of a potential continuity to the actual act of going from here to there. In this category, environmental attributes that predominate are those that relate to ease of movement.
- *Anticipation*, it provides the motivation for moving from here to there. Environmental attributes that seem most to stimulate the sense of anticipation include what we see and hear, and what we can imagine. Figure 6-15

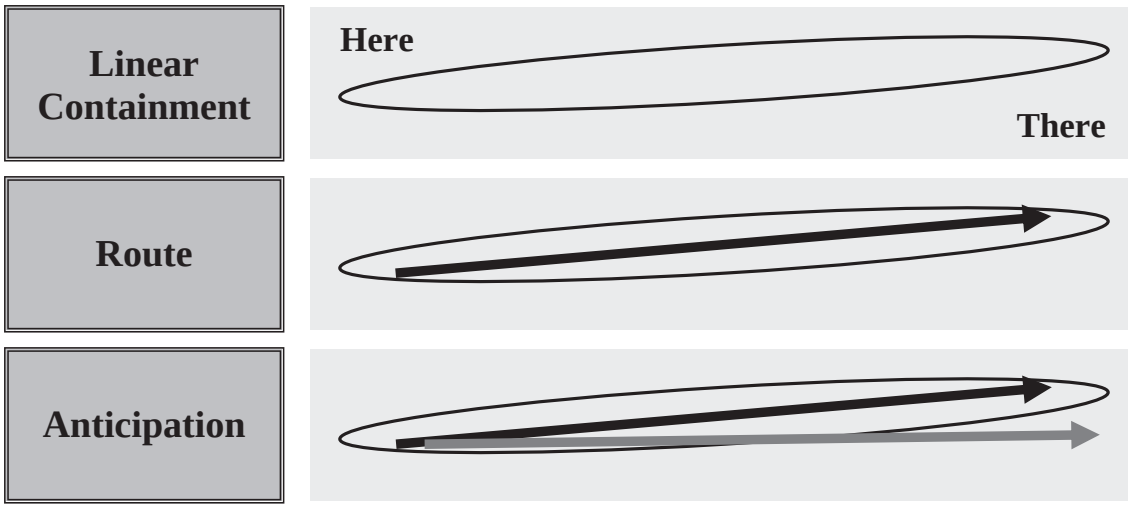


Figure 6-15: The three categories of experience in Direction (the researcher)

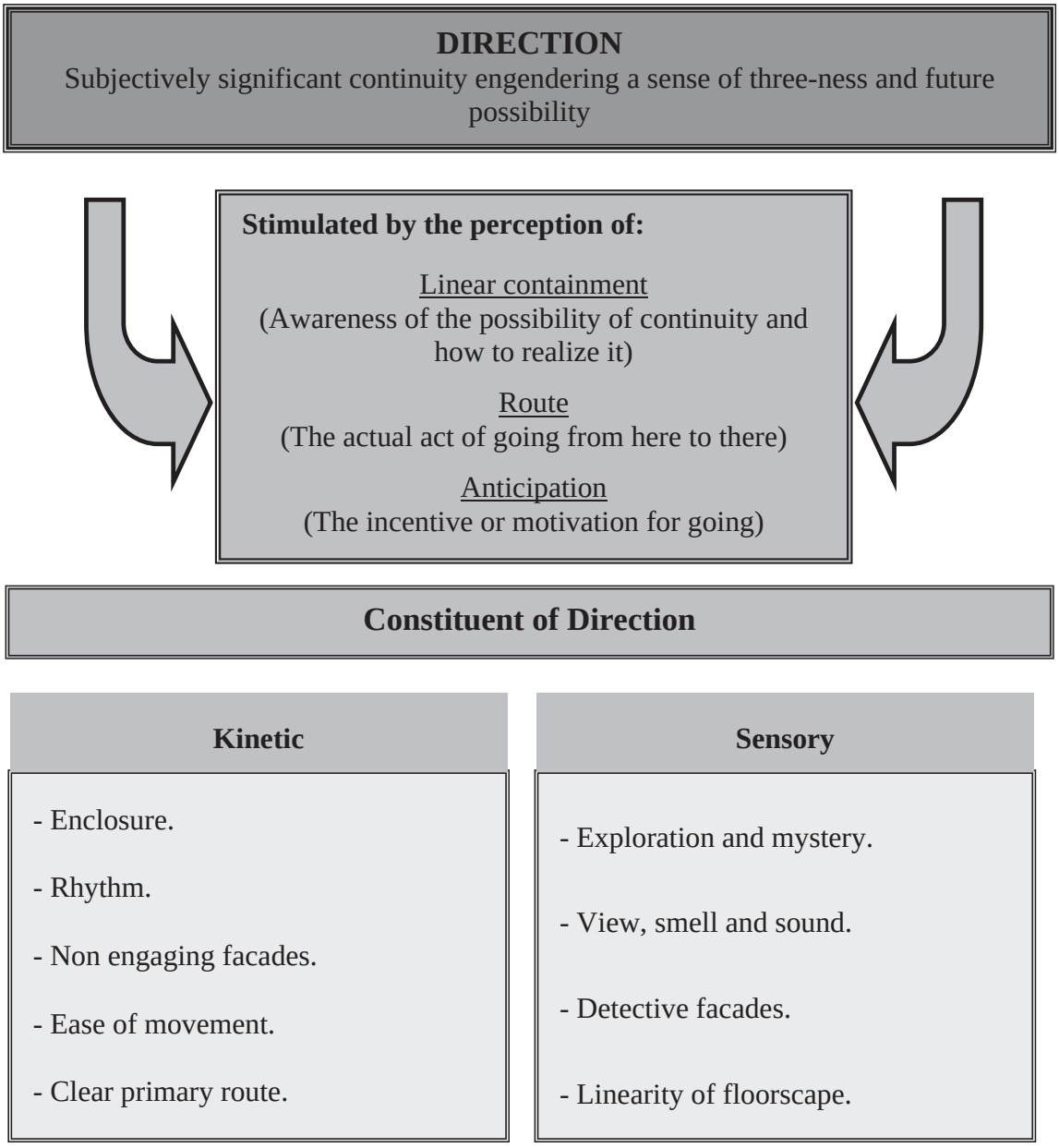


Figure 6-16: Conceptual model for Direction (adapted by researcher)

Figure 6-16 shows the conceptual model for direction, which summarize some important points:

- A sense of perceptual containment can rise in situations where a strong visual focus attracts the attention.
- The route aspect of direction introduces a more dynamic or kinetic experience.
- Anticipation stimulates the prospect of future possibility, visual stimuli appear to predominate but equally a distant sound of smell might introduce the same effect[76].

6.4.3. Transition

The sensation of transition is what allows us to experience difference between adjacent places. This appears to be the view was taken by Norberg-Schulz [77] when he describes transitions as the glue that binds together other spatial components to form a coherent whole.

From Kevin Thwaites and Ian Simkins investigations[78], they have identified four distinguishable types, which are: Figure 6-17

- *Threshold*, the simplest form of transition because it occurs in an instant defined usually by quite an abrupt contrast on either side of it.
- *Corridor* is spatially more expansive than a threshold in that it delivers its transition experience gradually rather than abruptly, it usually takes the form of a restricted and directed passage.
- *Segment*, more complex kind than threshold and corridor. A segment recognizes that sometimes a strong sense of transition might be accompanied by a sensation that there are also locational qualities present as well; segments are usually formed from the overlapping of two adjacent spaces.
- *Ephemeral*, it recognizes qualities of the environment that can generate strong transitional sensations but are not permanent features. These include in particular the transient effects of sun and shade patterns, variations in temperature, and wet to dry in rainy weather.

Threshold Corridor Ephemeral

Figure 6-17: Different types of transitions [79]

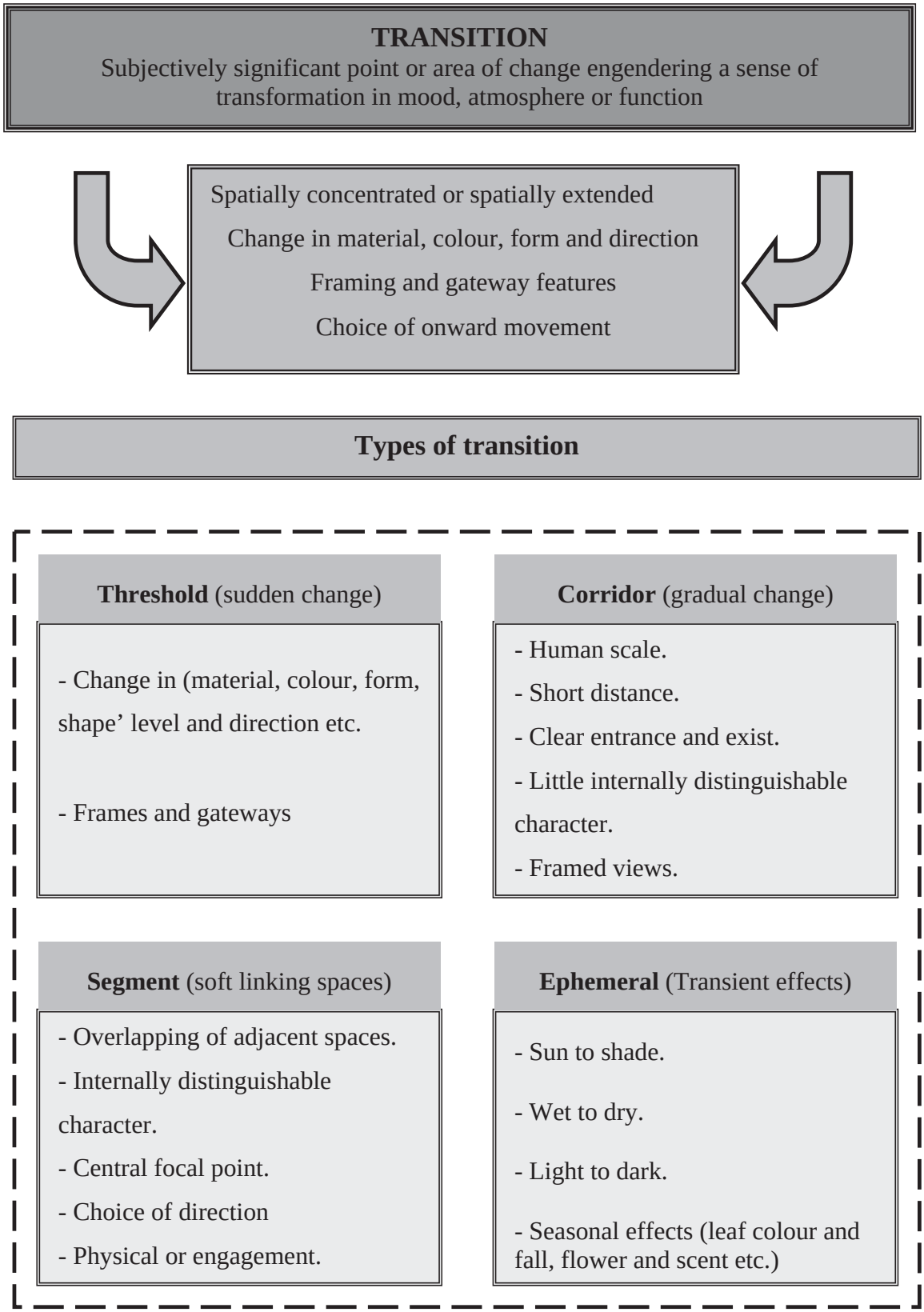


Figure 6-18: Conceptual model for Transition (adapted by researcher)

6.4.4. Area

The last component in the experiential landscape concept is perhaps more general and less tangible than the other three, and it has a different role. Area has a similar characteristic to Center in that areas can be experienced within areas. So just as the sense of location can be strengthened is there is a range of locational experiences in roughly the same place[80]. Figure 6-19 shows the relation between Area and other experiential landscape elements.

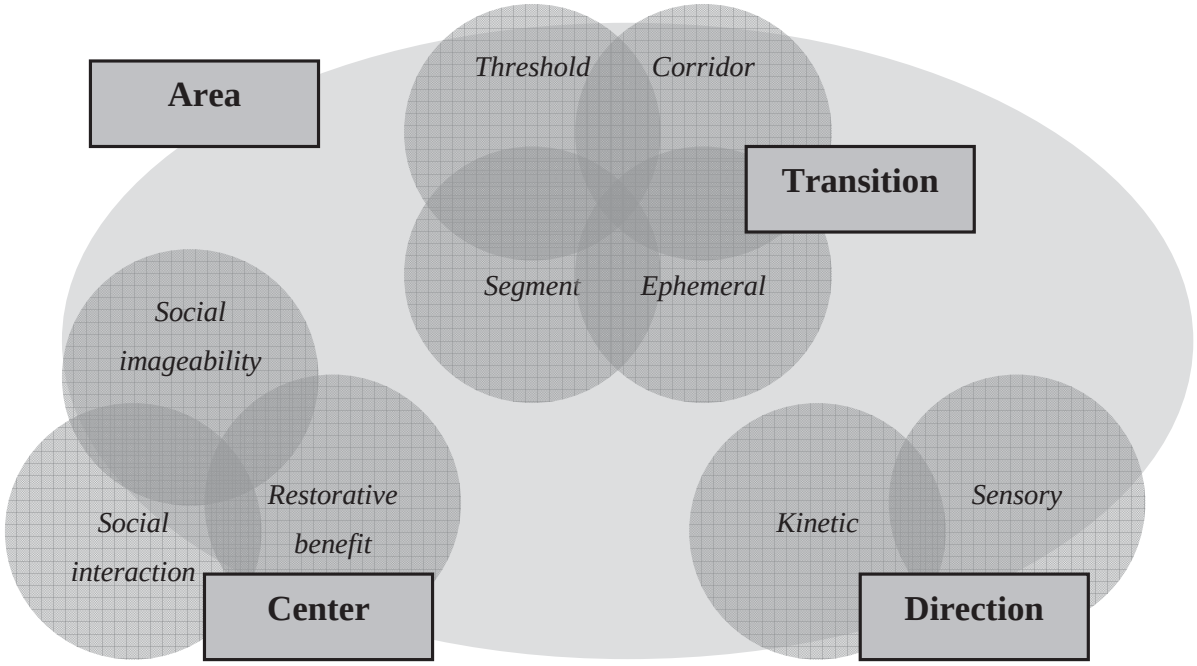


Figure 6-19: Holistic relationship of CDTA (adapted by researcher)

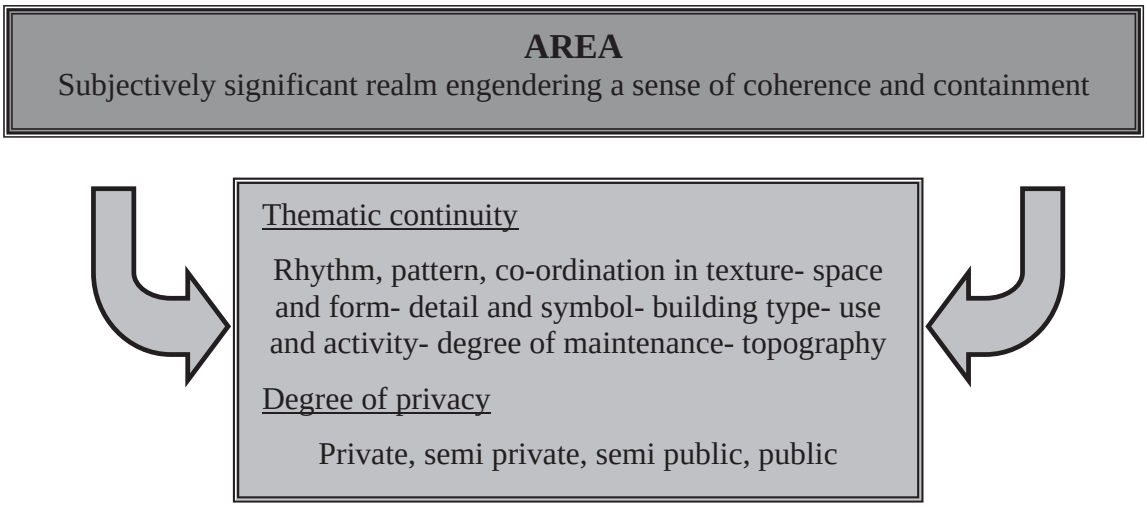


Figure 6-20: Conceptual model for Area (adapted by researcher)

6.5. Reading the experiential landscape

Perception of landscape is not an objective clear in the sense that is already exists out there to be discovered, revealing and then interpreting it is a primarily qualitative pursuit[81].

If 10 trained and experienced landscape or urban design professionals were asked to record their space perceptions of a particular settings they will give ten different answers, even if instructions given to them about how they should interpret the concept of space perception is very precise[82].

In order to answer the question of how we can reveal and read the experiential landscape, there is an approach developed by Kevin Thwaites and Ian Simkins[83] on the idea or layering information drawn from individuals and given a graphical representation.

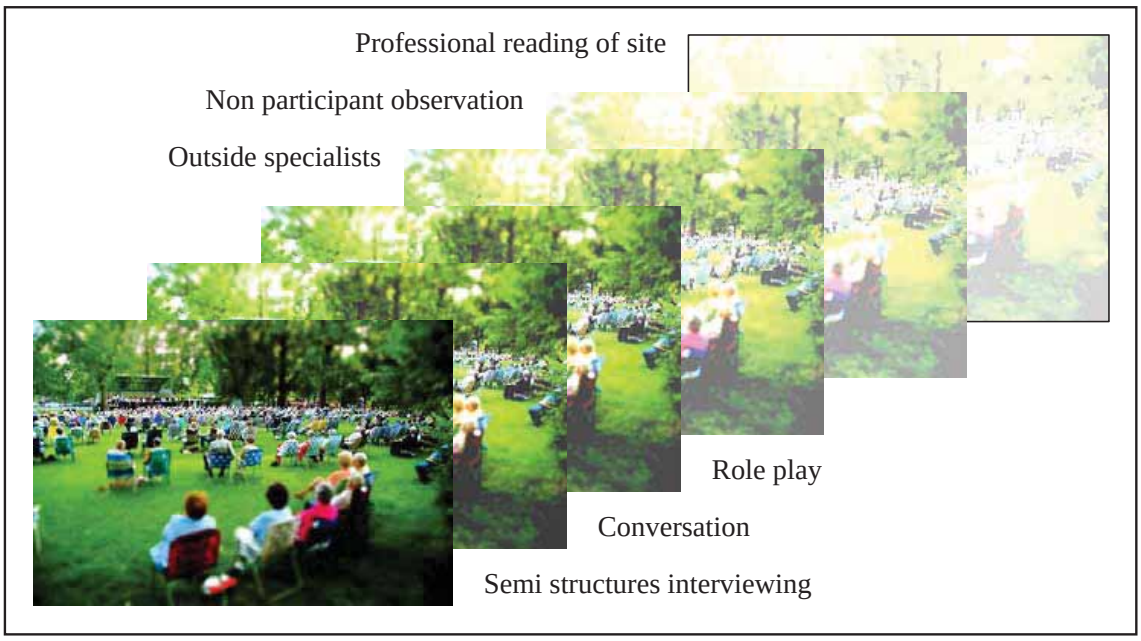


Figure 6-21: Levels of gathering information in experiential landscape

(Researcher)

Figure 6-21 shows the six steps to collect information about experiential landscape which will be discussed. Clarity of resolution and stability of image will grow the higher up the figure one is able to get; in other words, the more to get involved with the people routine the more to get the whole picture more clear and collective.

6.5.1. Professional reading of site

At the most basic level, a professional landscape survey can be considered a scoping, or reconnaissance exercise carried out to give an initial impression of patterns of experiential character[84].

Figure 6-22: Behavioural photography – based mapping and observations in spaces [85]

6.5.2. Non-participant observation

According to Flick[86], This technique involves the passive observation for the activities of groups or individuals with the intention to understand practices, interactions and events which occur in a specific context. It provides access to the cultural mechanisms of a space as well as the spatial relationship that the site users have with their surroundings, and can give detailed insights into the social life and relationships of people.

Observations are usually best carried out throughout a day to appreciate the intricacies and change of pattern of use that occur in response to diurnal and activities based influences. It is usually recorded by taking notes, in text and diagrammatic forms, and sometimes supported by photographs, with focus on behavioral tendencies[87].

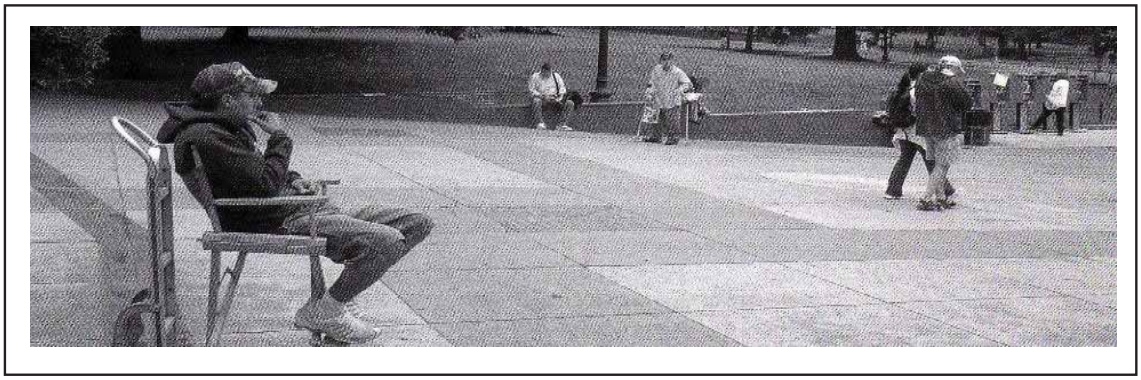


Figure 6-23: Passive observation in urban parks [88]

6.5.3. Outside specialists

The role of this step in the experiential landscape approach essentially has two aspects[89]:

1. First aspect is that experiential landscape map produced as a result of a professional survey has proven to provide a useful benchmark to structure a user group survey.
2. Second aspect to use this method is that there are various circumstances in which it might not be always possible to access a user group to draw meaningful information.

Hillier and Hanson's work[90] showed a relationship between the social functioning of residential settlements and their spatial configurations, by analyzing maps to reveal patterns of specially contained locations and lines of visions they proposed a way of qualifying a social logic of space.

6.5.4. Role-play

In situations where user information is not accessible from personal contact, it could be useful to supplement information derived from other methods by adopting the technique of role playing, but it may not be practical in every situation.

The information arising from a process of role-playing adds considerably to the detail and depth of experiential character revealed about the setting. This is simply because it forces a situation in which participants have to look at the settings through the eyes of some one likely to use it[91].

6.5.5. Conversation

This technique is usually possible in public places, through, to ask some one of the users about some detailed information about the space not always possible by observation of the place[92]. In this method, usually it is unstructured interviews and casual conversations, more friendly discussions about the space to understand the reasons for the existing behavioural patterns.

Figure 6-24 shows a very successful case of using conversations as a tool to understand people's attitude in the park of Boston MA.

Figure 6-24: Occupied and unoccupied seats in the park of Boston MA [93]

In Figure 6-24, the unoccupied seats might be assumed that this place has a strongly directional character in the floorscape. Here there is a similar collection of elements and adjacent path only few yards away, yet this time the benches are always occupied. From speaking with one of the bench occupants revealed that he preferred sitting here for several reasons: there was more room, the path was wider and you didn't feel like you were in the way of people walking along[94].

6.5.6. Semi-structured interviewing

This particular technique is a method frequently used in qualitative research when it is necessary to allow participants to range as naturally and freely as possible in their response to questions.

The way this usually works is to have predetermined topics that guide conversation allowing new questions or insights to evolve as the discussion develops[95].

6.5.7. Information recording

The information gathering stage yields voice recordings and transcribed text, along with supplementary notes, diagrams, that record details of the place perception according to the theoretical principles of the experiential landscape.

This raw material need to be interpreted to term of CDTA, and this is achieved by coding parts of the transcript in relation to their correspondence with how CDTA are defined[96].

6.6. Summary and conclusion

The analytical review in this chapter has discussed landscape interpretation around the world, and what is the basis of people perceptions, then analyzing the concept of experiential landscape and its components CDTA (Center – Direction – Transition – Area).

For the purpose of this research, some point were discussed in the chapter will be narrowed to the main items to be used in the research[97], as shown in Figure 6-25.

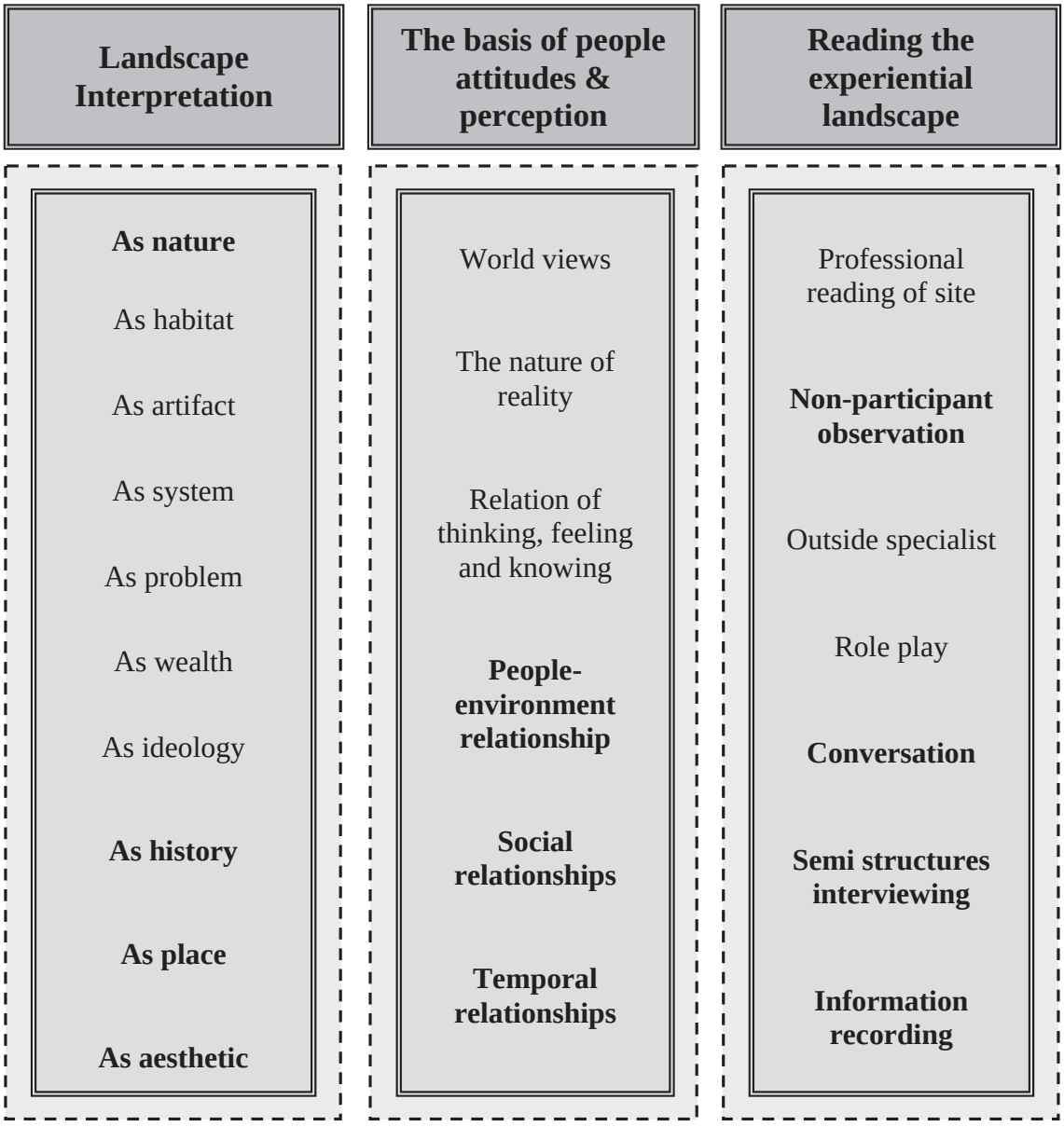


Figure 6-25: Summery of chapter 6

Footnotes

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[97] The bold text within the figure shows the main criteria will be used to study the landscape perception in the research.

Chapter 7

International Examples of Successful Parks

7. International examples of successful urban parks

This chapter will focus on some international examples of urban parks in historic context, and evaluate it according to the points were mentioned before in the theoretical and analytical chapters. Figure 7-1 shows the location of chosen urban parks examples to study and evaluate, they are distributed as followed:-

North America.

Central park	*Prospect Park*	*Battlefields Park*

Europe

Hyde park	*Regents Park*	*St James's Park*
Bos park	*Tiergarten Park*	*Parc Guell*

Asia and Australia

Beihai park	*Kings Domain Park*

North America *Europe*

China, Asia *Australia*

Figure 7-1: Location of chosen international urban parks to study (researcher)

Table 7-1: List of chosen international Parks to study (Researcher)

Country	Park Name	City	Area
USA	Central Park	*New York*	843 acre
	Prospect Park	*New York*	526 acre
Canada	Battlefields Park	*Quebec City*	266 acre
UK	Hyde Park	*London*	350 acre
	Regents Park	*London*	265 acre
	St James's Park	*London*	58 acre
Netherlands	Amesterdamse Bos Park	*Amsterdam*	2310 acre
Germany	Tiergarten park	*Berlin*	545 acre
Spain	Parc Guell	*Barcelona*	45 acre
China	Beihai Park	*Beijing*	177 acre
Australia	Kings Domain	*Melbourne*	89 acre

Table 7-1 shows the list of chosen International Park to study, and name of the city, the area of parks varies between small parks (45 acre – Parc Guell) and metropolitan parks (2310 acre - Amesterdamse Bos Park), all of these parks located within the central area of its city, and holds most of the historical symbols in the area. The samples were chosen with a Varity for year of design, from the oldest parks in Britain to the most recent parks in Australia and Spain, some of these parks were originally used before for another uses like hunting and royal ceremonies (Hyde Park - St James's Park), the other parks were designed to be used as a park from the start (Central Park – King Domain).

The study of these samples will cover some points to draw a whole picture for the park, which are: (history of the park – design concepts – user's characteristics – evaluation of the park).

7.1. Central Park, USA

Central Park is one of the urban wonders of the world, a green oasis in the great concrete, high-rise landscape of New York City. Although it was the first purpose- built public park in North America in 1856, it is so naturally part of the Manhattan environment that many people may not realize it is entirely man-made[1].

This park gave birth to the concept of public land in America; it was designed by rookie landscape architects Calvert Bowyer Vaux[2] and Frederick Law Olmsted[3]. Bryant and Downing are widely acknowledged as the principal advocates of the park.

Figure 7-2: Central park in New York, USA [4]

Just as in the time of Olmsted and Vaux, Central Park is once again a leader in the urban parks movement. The Conservancy model has set new standards of excellence in park care, with parks across the city and around the world replicating the model. While the Conservancy's primary mission is the care of Central Park, helping other parks is a natural extension of our core mission, and improving the quality of life for communities across the city[5].

7.1.1. Design concepts

Central Park was built largely in accordance with the principles and layout established in the Olmsted- Vaux plan. That plan represented a continuation of the social attitudes expressed by Downing[6]. The design of the park had many aspects that would become trademarks of Olmsted's designs. There were winding paths, scenic views and large open areas for people to relax in. the Olmsted- Vaux plan conceived of the park as a place where the city dwellers could find refreshment from the sights and sounds of urban life and enjoy scenery that would seems both limitless and natural[7].

Like most complex works of art, Central park is greater than the sum of its parts. Through its landscape, architecture, and sculpture, we will discover why Central park deserves to be considered to be the most important work of historic American art of the nineteenth century[8].

Figure 7-3: Historic landscape elements in Central Park [9]

7.1.2. User characteristics

Central Park was largely used in the 1860s as a parade ground for the wealthy, although many of the areas surrounding the park were occupied by shanty settlements or farmland. A 1982 user survey recorded 3 million users of whom 500,000 were not from New York, they came mainly alone on the weekends for recreation facilities[10].

The park would provide common ground -particularly on the shared pedestrian paths- on which the interaction of classes would improve civility and inculcate socially acceptable behaviour. Toward this grand aspiration of design, Central park provided the pathways to the American dream[11].

7.1.3. Evaluation of the park

Table 7-2 shows evaluation of Central park in New York, according to the points were discussed before in the theoretical and analytical chapters, and derived from analyzing the previous studies. From the study, it shows that Central park were very successful in expressing user needs, also it occupies most of the social events which happen in New York.

Table 7-2: Evaluation of Central Park (Researcher) [12]

Evaluation points			Pictures
Measure of an excellent urban park system		*A clear expression of purpose*	
		Ongoing planning	
		Equitable access	
		User satisfaction	
		Safety from physical hazard and crime	
		Benefits beyond the boundaries of the park	
Principles of inclusive historic landscape		*Easy to use*	
		Comfortable	
		Offer choices	
		Safe	
		Embrace diversity	
Rules to make parks accessible to people		*Make no small plans*	
		Ensure effective community involvement	
		Design for the place and its users	
		Create programs for diverse users	

7.2. Prospect Park, USA

Prospect Park is the less well-known but more highly praised younger sibling of Central park; both were designed by landscape architects Calvert Bowyer Vaux and Frederick Law Olmsted pioneers of the profession in the United States[13].

Prospect Park occupies a site of 526 acres in north-central Brooklyn. It was built between 1867 and 1873 after many years of advocacy from Protestant ministers and other civic leaders in the fast-growing city of Brooklyn. It is part of a civic complex that includes the Brooklyn Botanic Garden, the Brooklyn Museum, and the main building of the Brooklyn Public Library[14].

Figure 7-4: Prospect park in New York, USA [15]

Prospect Park has several crowd-attracting features. The Bandshell, along Prospect Park West near the Ninth Street entrance, is the site of a popular, summer-long program of outdoor pop music concerts.

On the opposite side of the park, along Flatbush Avenue near the Willink entrance are the Prospect Park Zoo, the Carousel, and the Lefferts Homestead, a historic house museum geared to children. There are six children's playgrounds at different locations along the edges of the park, each relating to the adjacent neighborhood[16].

7.2.1. Design concepts

The park was designed in the pastoral landscape style, which emphasizes calming scenery of meadows and pastures that rise over gentle hillsides, spreading trees, woods in the distance, and ponds and streams nestled in the valleys. Olmsted and Vaux's concept for the park was described by them as to provide a feeling of relief for people escaping from the crowd streets of the town[17].

Olmsted and Vaux sought to keep elaborate flower beds and other artificial planting effects out of their pastoral composition. Still, the park was a horticultural showplace in the natural style that featured flowering shrubs and ornamental trees planted along the paths and drives, at the entrances, and at the numerous bridges and overpasses[18]. Figure 7-5

Prospect Park's major pastoral composition is the Long Meadow, a 90-acre area that occupies much of the west side of the park. Pastoral scenery is also found in the Nether mead, a smaller open area more in the center of the park, and in the clearings and groves around the lake shore[19].

Figure 7-5: Historic landscape elements in Prospect Park [20]

7.2.2. User characteristics

The social life of Prospect Park is both rich and diverse. The park is a site of cultural self-expression for certain groups, including African / West Indian drumming and dancing, Haitian roots music, and an officially sponsored yet very diverse pop music concert program[21].

Much of the action in the park is common to people of different cultural and class backgrounds. Characteristic activities like walking, exercising, watching the ducks, and visiting the playground are well distributed among the different constituencies[22].

7.2.3. Evaluation of the park

Table 7-3 shows evaluation of Prospect Park in New York, according to the points were discussed before in the theoretical and analytical chapters, and derived from analyzing the previous studies. From the study, it shows that Prospect Park were offering activities for different user needs, also the design of the park were extremely adaptable for developing over years.

Table 7-3: Evaluation of Prospect Park (Researcher)

Evaluation points			Pictures
Measure of an excellent urban park system		*A clear expression of purpose*	
		Ongoing planning	
		Equitable access	
		User satisfaction	
		Safety from physical hazard and crime	
		Benefits beyond the boundaries of the park	
Principles of inclusive historic landscape		*Easy to use*	
		Comfortable	
		Offer choices	
		Safe	
		Embrace diversity	
Rules to make parks accessible to people		*Make no small plans*	
		Ensure effective community involvement	
		Design for the place and its users	
		Create programs for diverse users	

7.3. Battlefields Park, Canada

The Battlefields Park is a majestic urban park listed among the world's most prestigious parks.it includes the Plains of Abraham with Des Braves Park, both within Quebec City, and forms one of the few Canadian national urban parks. Its significance lies in the Battle of the Plains of Abraham, the British victory over France, which decided the development of Canada[23].

Established as a park by law on March 17, 1908, it features an interpretive centre and walking trails, and is sometimes used for outdoor concerts, especially during the national festival events. The park contains a collection of about 50 historical artillery pieces scattered about its grounds. It is managed by the National Battlefields Commission[24].

Figure 7-6: Battlefields park in Quebec City, Canada [25]

This park is considered One of Canada's most important historical parks**,** the site of many clashes for supremacy between the French and British Empires, the park is the scene of the 1759 Conquest, which changed the fate of North America. Apart from its historical past, the park is to Quebec what Central Park and Hyde Park are to New York and London: a city park of outstanding value, the lungs of the city[26].

7.3.1. Design concepts

The park is the heart and soul of great historic sites in Canada is the battlefield where the two founding nations of Canada, the French and the English struggled for dominance of the North American continent, the Plains of Abraham[27].

Bordered by the river, the Plains of Abraham is an immense green space comprising over 6,000 trees and bushes. It is a peaceful site, ideal for relaxation, reading and family picnics. Nature lovers will enjoy discovering the paths running from the Cap-aux-Diamants to the Gilmour coast, and others with a passion for gardening will admire the 150 or so species in the Joan of Arc Garden. The many commemorative plaques and monuments scattered across the park will feed your curiosity[28].

Figure 7-7: Historic landscape elements in Battlefields Park [29]

7.3.2. User characteristics

This huge 266 acres playing field offers many cultural and historical activities such as:

(Rallies - cultural days - shows at the Edwin-Bélanger kiosk)

There's something for everyone. Every year, the Plains welcome thousands of people for many public gatherings: Canada Day, St-Jean Baptiste, The Québec Carnival, the Festival d'Été (Summer Festival), and more. One of the activities organised in the park is the anniversary of battles which took place in it, beside some seminars with historians, the presentation of books recounting the writings of soldiers and civilians who lived these events[30].

7.3.3. Evaluation of the park

Table 7-4 shows evaluation of Battlefields Park in Quebec City, according to the points were discussed before in the theoretical and analytical chapters, and derived from analyzing the previous studies. From the study, it shows that the park contain a very effective elements of historic landscape, although its landscape is not totally safe to walk around especially for kids.

Table 7-4: Evaluation of Battlefields Park (Researcher)

Evaluation points			Pictures
Measure of an excellent urban park system		*A clear expression of purpose*	
		Ongoing planning	
		Equitable access	
		User satisfaction	
		Safety from physical hazard and crime	
		Benefits beyond the boundaries of the park	
Principles of inclusive historic landscape		*Easy to use*	
		Comfortable	
		Offer choices	
		Safe	
		Embrace diversity	
Rules to make parks accessible to people		*Make no small plans*	
		Ensure effective community involvement	
		Design for the place and its users	
		Create programs for diverse users	

7.4. Hyde Park, UK

Hyde Park is one of London's most popular and beautiful public parks. Its 350 acres have survived as an open, green landscape. It was a royal hunting park created by King Henry VIII in 1536, when he acquired the property through a trade with the abbots of Westminster. During the next century, its character would change. Hyde Park became a fashionable venue for royal courtiers under the reign of subsequent monarchs and was eventually opened to the general public[31].

Figure 7-8: Hyde Park in London, UK [32]

Public assemblies and demonstrations became frequent in the park, attracting enormous crowds. As this continued, it became clear that some level of organization was needed. Several attempts were made by local authorities to dissuade public assemblies, for fear of the unruly behaviour that the large gatherings sometimes initiated. This was strongly protested and, finally, in 1872, the right of assembly was established in an area of the park, *"Speakers' Corner,"* was set aside as a public-speaking venue[33].

Figure 7-9: Speakers corner in Hyde Park [34]

7.4.1. Design concepts

Hyde Park was created to satisfy a royal passion for hunting. But over the years it became a place where people have pursued many other pleasures. The appearance of the park remained very much the same until 1625 when Charles l became king. He created a circular track called the Ring where members of the royal court could drive their carriages[35].

Many of the striking features seen today in Hyde Park were created in the 18th century by a keen royal gardener, Queen Caroline. In 1728, she took almost 300 acres from Hyde Park to form Kensington Gardens and she separated the two parks with a long ditch[36].

Figure 7-10: Historic landscape elements in Hyde Park (by the researcher)

7.4.2. User characteristics

Hyde Park contains a wide Varity of activities that attract all users, such as playgrounds, Lido Lake swimming, boat hire, tennis Center, and especially the speaker corner which creates diversity in many ways. These Varity of user groups were translates in some landscape elements such as pedestrian paths in the north west side of the park, no matter the users are different they meet together at some points[37].

Figure 7-11: Diversity of pedestrian paths in Hyde Park [38]

7.4.3. Evaluation of the park

Table 7-5 shows evaluation of Hyde Park in London, according to the points were discussed before in the theoretical and analytical chapters, and derived from analyzing the previous studies. From the study, it shows that Hyde Park were very successful in creating programs for diverse users, also it is very easy to explore and has a clear expression of design purpose, which was hunting at the beginning.

Table 7-5: Evaluation of Hyde Park (Researcher)

Evaluation points			Pictures
Measure of an excellent urban park system		*A clear expression of purpose*	
		Ongoing planning	
		Equitable access	
		User satisfaction	
		Safety from physical hazard and crime	
		Benefits beyond the boundaries of the park	
Principles of inclusive historic landscape		*Easy to use*	
		Comfortable	
		Offer choices	
		Safe	
		Embrace diversity	
Rules to make parks accessible to people		*Make no small plans*	
		Ensure effective community involvement	
		Design for the place and its users	
		Create programs for diverse users	

7.5. Regents Park, UK

The Regent's Park is the largest grass area for sports in Central London and offers a wide variety of activities, as well as an Open Air Theatre, the London Zoo and many cafes and restaurants. The Regent's Park we know today is a masterpiece of landscape design and town planning. But for much of its history it was isolated farmland and hunting chase on the wrong side of town[39].

The area was originally part of the vast forest of Middlesex and was called Marylebone Park There were thick woods, particularly going up the slope towards Primrose Hill. But on the lower ground the woods were more open and were perfect for deer. This caught the eye of King Henry Vlll. In 1538, he seized the park from the owner, the Abbess of Barking, and turned into a hunting chase. A ditch and rampart kept the deer in and poachers out. For the next 50 years, it was one of several royal Parks in London where the king or queen entertained visiting dignitaries[40].

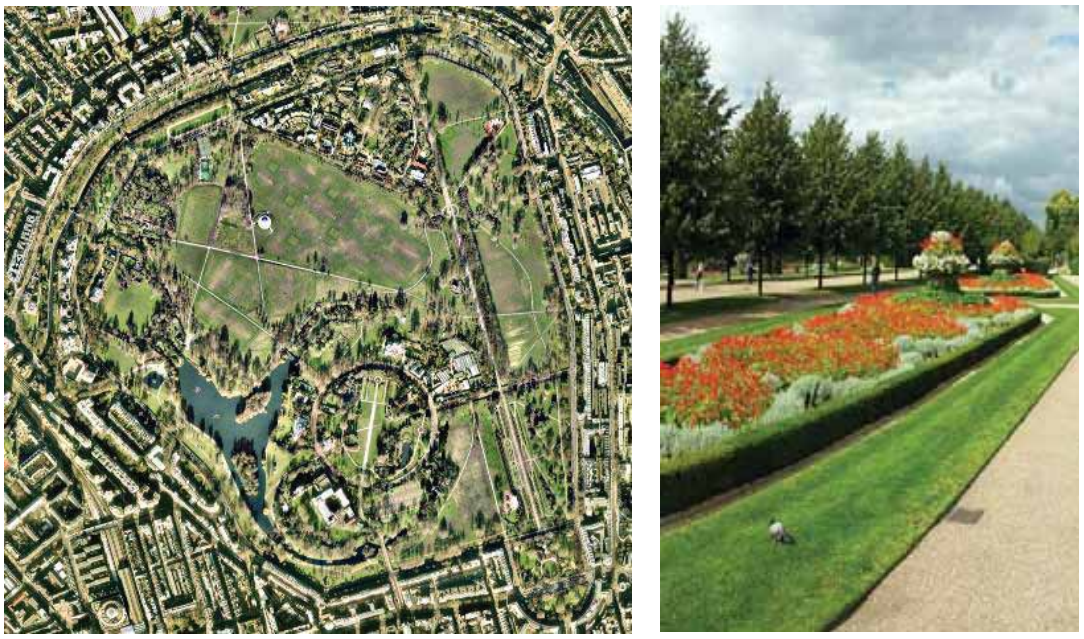

Figure 7-12: Regents park in London, UK [41]

The Park became the home of several organizations like the Zoological Society and the Royal Botanic Society. It wasn't until 1835, during the reign of King George IV, that the general public was actually allowed into the sections of the Park and this was only for two days of the week[42].

7.5.1. Design concepts

John Nash is recognized as the author of designs of Regents Park, he was the first to draw attention to the fact that wealthy landowners prefer to live near an open space, a park where they can ride, drive and walk. His proposal for the park was accepted by the Prime Minister Spencer Perceval in 1811[43].

The principle physical elements of the park are vehicular circulation system, comprising the Outer Circle (4.3 km) and, subtended by the Chester and York roads, the Inner Circle: the broad walk, the boating lake, the isolated gardens within the inner circle, and the Zoo. Despite the various changes that these elements had undergone, they remain much as Nash designed them[44].

Figure 7-13: Historic landscape elements in Regents Park [45]

7.5.2. User characteristics

The royal parks agency undertake annual surveys of the usage of all parks in central London and estimated number of visitors in1997, and they continue to shows the origin of visitors to the central royal parks, which are:

- 32 % local residence
- 35 % Greater London
- 10 % elsewhere in UK
- 22 % Overseas

The result shows that Regents Park is mainly used by local residence and people in greater London; it is effectively a city park made to serve the native people living in London and adjacent to it[46].

7.5.3. Evaluation of the park

Table 7-6 shows evaluation of Regents Park in London, according to the points were discussed before in the theoretical and analytical chapters, and derived from analyzing the previous studies. From the study, it shows that Regents Park were very successful in using the historic landscape elements which related to the peoples live, also it is very easy to explore, but didn't have Varity of programs for diverse users which made it a park mainly for the local users.

Table 7-6: Evaluation of Regents Park (Researcher)

Evaluation points			Pictures
Measure of an excellent urban park system	■	*A clear expression of purpose*	
	■	*Ongoing planning*	
	■	*Equitable access*	
		User satisfaction	
	■	*Safety from physical hazard and crime*	
	■	*Benefits beyond the boundaries of the park*	
Principles of inclusive historic landscape	■	*Easy to use*	
	■	*Comfortable*	
	■	*Offer choices*	
	■	*Safe*	
		Embrace diversity	
Rules to make parks accessible to people	■	*Make no small plans*	
	■	*Ensure effective community involvement*	
	■	*Design for the place and its users*	
		Create programs for diverse users	

7.6. St James's Park, UK

St James's Park is the oldest Royal Park in London and is surrounded by three palaces. The most ancient is Westminster, which has now become the Houses of Parliament, St James's Palace and of course, the best known, Buckingham Palace[47].

The Park was once a marshy water meadow. In the thirteenth century a leper hospital was founded, and it is from this hospital that the Park took its name. In 1532 Henry VIII acquired the site as yet another deer park and built the Palace of St James's[48].

Figure 7-14: St James's park in London, UK [49]

Buckingham Palace is one of the most attractions in the park; it was built in 1702 by the Duke of Buckingham, then it was opened to the Public for the first time in 1993, and it is still also the official London residence of the sovereign. Changing the guard's everyday is what makes the park a point of attraction for international users[50].

Figure 7-15: Changing the Guards at Buckingham Palace, London. UK

(The researcher)

7.6.1. Design concepts

470 years ago, the St James's area was known mainly for farms, woods and a hospital for women lepers. In 1536, King Henry VIII decided to create a deer park conveniently nearby. He acquired land in St James's, put a fence around it and built a hunting lodge that later became St James's Palace. The deer park stayed largely the same until 1603 when James I became king. He drained and landscaped the park. At the west end, near what is now Buckingham Palace, there was a large pool known as Rosamond's Pond.

Later, Architect John Nash created the palace for the king during the 1820s and also redesigned St. James's Park. Nash developed an informal plan for the park, removing all formality in the then-popular "romantic" style. The formal canal was replaced by a more natural-looking lake, known as the "Ornamental Water," which was surrounded by winding paths and informal plantings of flowering shrubs and shade trees[51].

Figure 7-16: Historic landscape elements in St James's Park (the researcher)

7.6.2. User characteristics

While Regents Park, as mentioned in 7.5.2, was a city park targeting local residence, St James's park is more national and international park. In a social study for the origin of visitors in the park, they show that[52]:

- 9 % local residence
- 29 % Greater London
- 23 % elsewhere in UK
- 37 % Overseas

7.6.3. Evaluation of the park

Table 7-7 shows evaluation of St James's Park in London, according to the points were discussed before in the theoretical and analytical chapters, and derived from analyzing the previous studies. From the study, it shows that St James's Park were successful in using the historic landscape elements, also it is very easy to explore by users.

Table 7-7: Evaluation of St James's Park (Researcher)

Evaluation points			Pictures
Measure of an excellent urban park system		*A clear expression of purpose*	
		Ongoing planning	
		Equitable access	
		User satisfaction	
		Safety from physical hazard and crime	
		Benefits beyond the boundaries of the park	
Principles of inclusive historic landscape		*Easy to use*	
		Comfortable	
		Offer choices	
		Safe	
		Embrace diversity	
Rules to make parks accessible to people		*Make no small plans*	
		Ensure effective community involvement	
		Design for the place and its users	
		Create programs for diverse users	

7.7. Amesterdamse Bos Park, Amsterdam

Bos park is probably the largest urban park created during the twenties century anywhere in the world. Like much of the landscape of the Netherlands, it is completely human-made composed of natural elements. The main entrance to the park is about 6 kilometers from Amsterdam central station, which makes it very accessible not only to the local user around the park, but also on the national and international level[53].

The designated area for the park comprised 2310 acres of reclaimed land, lying below sea level, and protected from flooding by human-made dykes. The site was subdivided into hundred of long, think polders about 50 meters wide[54].

Figure 7-17 Amsterdamse Bos park in Amsterdam, Netherland [55]

The Bos Park reflects the fact that in the lower laying area of the Netherlands, distinctions between urban environment and nature environment are artificial. Entire landscape are human-made, they are engineered with great technical efficiency, and then adapted for human use and for the establishment of vegetation and wild life[56].

7.7.1. Design concepts

The Bos Park was created as a result of new ideas about the importance of nature and recreation. Van Eesteren and landscape architect Jacopa Mulder were the key figures behind the design strategy of the park, they travelled to England and Germany to study examples of the two precedents of the parks (the picturesque park – Volks parks), then they develop the concept for the design of this park[57].

The influence of German parks is to be seen in the concentration of activities along as axis, the open air theatre, playing fields and paddling pool. While the influence of English country landscaping can be seen in the rounded woodlands boundaries, the extensive water course and the Rolling Meadows[58]. So, it is appropriate to look at Bos Park as the product of brand new functionalism that turns its back to picturesque and strives for maximum productive efficiency.

Figure 7-18: Japanese Blossom garden in Amsterdamse Bos park [59]

Figure 7-18 shows one of the English influences on Bos Park design as it appear in Japanese Blossom garden south of the park.

7.7.2. User characteristics

The types of park users were connected to the main four types of zones in the park, which are[60]:

- Recreation zone, north and center of the park, physical activities.
- Nature recreation Zone, west of the park, nature leisure seeker.
- Nature zone, south of the park, nature favored over leisure seeker.
- Urban fringe zone, east of the park, human made activities.

7.7.3. Evaluation of the park

Table 7-8 shows evaluation of Amesterdamse Bos Park in Amsterdamse City, according to the points were discussed before in the theoretical and analytical chapters, and derived from analyzing the previous studies. From the study, it shows that the park is very safe to use and explore, and its location is very central and accessible, which makes it more national than a city park.

Table 7-8: Evaluation of Amesterdamse Bos Park (Researcher)

Evaluation points			Pictures
Measure of an excellent urban park system		*A clear expression of purpose*	
		Ongoing planning	
		Equitable access	
		User satisfaction	
		Safety from physical hazard and crime	
		Benefits beyond the boundaries of the park	
Principles of inclusive historic landscape		*Easy to use*	
		Comfortable	
		Offer choices	
		Safe	
		Embrace diversity	
Rules to make parks accessible to people		*Make no small plans*	
		Ensure effective community involvement	
		Design for the place and its users	
		Create programs for diverse users	

7.8. Tiergarten Park, Berlin

The Tiergarten literally means animal garden or garden of beasts, this park is located in the center of Berlin, often referred to the park as the Central park of Berlin comparable to London central royal parks[61].

The park was originally a private park owned by monarchy, and was enclosed for hunting, then subsequently made accessible to the public before being redesigned expressly for free public use[62].

Figure 7-19 Tiergarten park in Berlin, Germany [63]

The Park lies at the heart of Berlin; it is approximately in the geometric Center forming an urban oasis, and part of the excellent provision with areas of recreation landscape and small parks distributed through out the city[64].

Similar to the state functions of St James's park in London (mentioned in this chapter 7.6), the Hohenzollerns funeral processing, marriage cortege and military parade approaches the city from the Tiergarten, entering through the Brandenburg Gate[65].

For many years, however, the park wasn't open to the public. It began its life as the preferred hunting ground for the electors of Brandenburg. It was Friedrich I, the first Prussian king, who opened the park to the general public, providing easy access to the Tiergarten by building roads and thruways[66].

7.8.1. Design concepts

The original purpose of Tiergarten Park was as a royal hunting ground, the geometrical design made by Knobelsdorff [67] reflect that purpose. The design of the park was developed by Lenne and completed in 1814.

Lenne noted that the more progress a people makes in the fields of culture and economic well-being, the more varied and articulated its material and spiritual needs become. His basic concept can be described as[68]:

> *Setting off valuable old trees, and clearing grooves like areas which in some places had become so overgrown with Underwood as to become impassable.*

The width of the park, apart from the western end, is between 800 and 1200 meters, and the natural landform is relatively flat and mostly drains northward to the spree, which runs along most of the northern edge of the park. The south western park of the park drains via Lenne's Landwehr canal into the spree[69].

Figure 7-20: Historic landscape elements in Tiergarten park [70]

7.8.2. User characteristics

It was noted in 1985 that the Tiergarten Park was completely overrun by all berlins, the park remains remarkably popular as a recreation place for less mobile residents of the inner city, particularly Turkish who practice of Barbecuing and playing casual games of soccer in the parks' larger open spaces are some times frowned on by other users of the space[71].

7.8.3. Evaluation of the park

Table 7-9 shows evaluation of Tiergarten Park in Berlin, according to the points were discussed before in the theoretical and analytical chapters, and derived from analyzing the previous studies. From the study, it shows that the park works as a green lung of all the surrounding urban areas, and it always holds the royal events used to happen and most of the big social events.

Table 7-9: Evaluation of Tiergarten park (Researcher)

Evaluation points			Pictures
Measure of an excellent urban park system		*A clear expression of purpose*	
		Ongoing planning	
		Equitable access	
		User satisfaction	
		Safety from physical hazard and crime	
		Benefits beyond the boundaries of the park	
Principles of inclusive historic landscape		*Easy to use*	
		Comfortable	
		Offer choices	
		Safe	
		Embrace diversity	
Rules to make parks accessible to people		*Make no small plans*	
		Ensure effective community involvement	
		Design for the place and its users	
		Create programs for diverse users	

7.9. Parc Guell, Barcelona

Park Guell is a garden complex with architectural elements situated on the hill of el Carmel in the Gràcia district of Barcelona, It was designed by the Catalan architect Antoni Gaudí and built in the years 1900 to 1914. It is part of the UNESCO World Heritage Site "Works of Antoni Gaudí"[72].

The park was originally planned to be a garden city on the estate of Eusebi Guell. Only two houses were built out of the 60 originally envisioned; Gaudi himself lived in one of them from 1906 to 1926, which is now the Casa-Museu Gaudi. The museum has notable examples of furnishings designed by Gaudi and personal memorabilia[73].

The park remained the private garden of the Guell family until the 1920s, when the family handed it over to the municipality to use as a public park. It is one of Gaudi's most colorful and playful works, even though it was never fully completed[74].

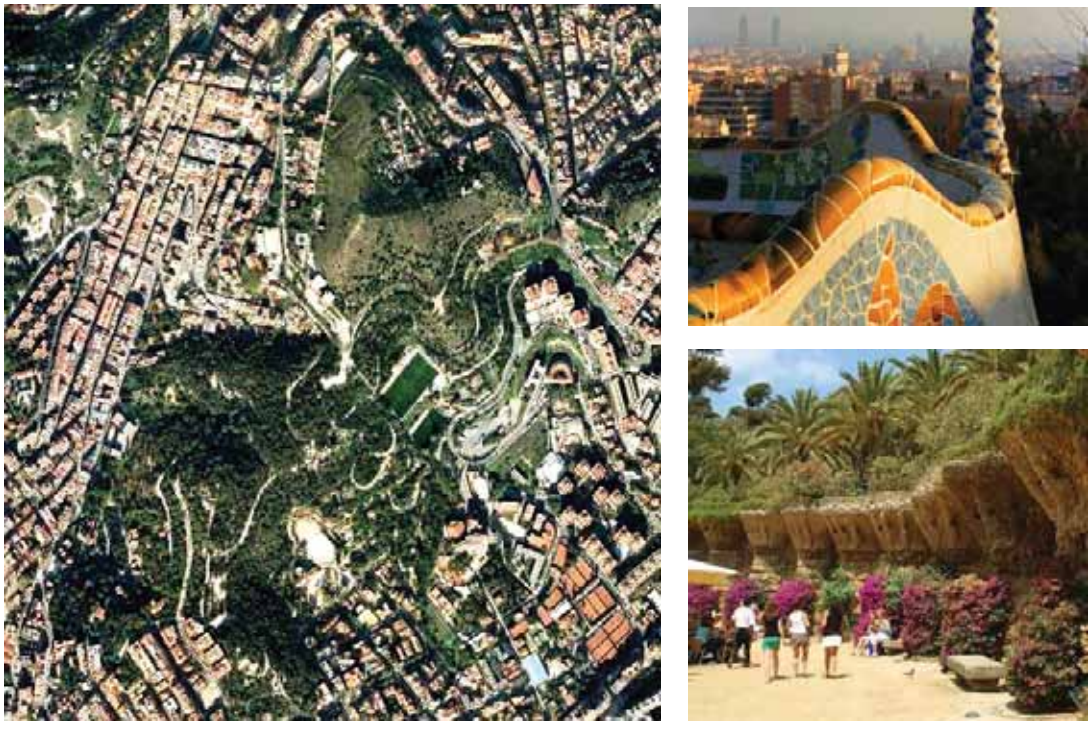

Figure 7-21: Parc Guell in Barcelona, Spain [75]

The park was chosen among the 60 world's great places all around by the PPS organization for what it holds of great architecture style and unique landscape elements[76].

7.9.1. Design concepts

Guell's friend, Antonio Gaudi, was the designer. Both men intended that the project would express the spirit of Catalonia as a potentially independent nation. The park is very popular and has an obscure symbolic content. Shapes and colors were inspired by natural forms which Gaudi, a devout catholic, saw as instances of divine craftsmanship[77].

The park is set into the hills overlooking Barcelona. Serpentine terraces, seats, galleries and arcades run with the mountainside. They are decorated with polychrome mosaics of broken stone, ceramic pots and old tiles. The bright colors might remind one of azuelejo. Figure 7-22

The curved terraces might remind one of Duncombe, the path layout of Buttes Chaumont. But the design has an energetic brilliance which belongs more completely to the twentieth century than any other public park made in Europe during the first half of the twentieth century[78].

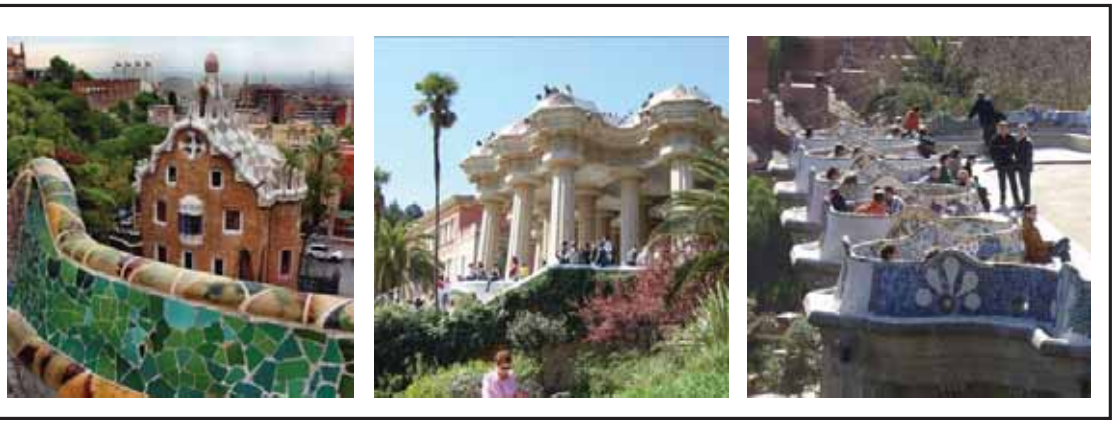

Figure 7-22: Historic landscape elements in Parc Guell [79]

7.9.2. User characteristics

The extraordinary craftsmanship and unusual use of materials and plants throughout the park catch and delight the eye, making Parc Guell one of the great parks of the world. It is also a place which offers opportunities to engage in different activities, including strolling, people-watching, eating at the cafe and meeting friends[80].

Because of the great Varity of activities in the park, it holds a diversity of users not only from the surrounding area, but for all the tourists coming from all around.

7.9.3. Evaluation of the park

Table 7-10 shows evaluation of Parc Guell in Barcelona, according to the points were discussed before in the theoretical and analytical chapters, and derived from analyzing the previous studies. The park is one of Antoni Gaudi's masterpieces; it has a very unique picturesque historic landscape, and adds a great value beyond the boundaries of the park.

Table 7-10: Evaluation of Parc Guell (Researcher)

Evaluation points			Pictures
Measure of an excellent urban park system		*A clear expression of purpose*	
		Ongoing planning	
		Equitable access	
		User satisfaction	
		Safety from physical hazard and crime	
		Benefits beyond the boundaries of the park	
Principles of inclusive historic landscape		*Easy to use*	
		Comfortable	
		Offer choices	
		Safe	
		Embrace diversity	
Rules to make parks accessible to people		*Make no small plans*	
		Ensure effective community involvement	
		Design for the place and its users	
		Create programs for diverse users	

7.10. Beihai Park, Beijing

Beihai Park located in central Beijing, is one of the oldest and most authentically preserved imperial gardens in China. It has a history of 1000 years. Beihai has existed throughout the Liao, Jin, Yuan, Ming and Qing Dynasties. Most of the buildings now standing were constructed during Emperor Qianlong's reign in the Qing Dynasty (1644-1911 A.D.)[81].

Beihai was opened to the public in 1925 and in 1961 it was one of the first important cultural sites placed under protection by the State Council. The park occupies an area of 177 acres including an 88-acre lake. In the garden, pavilions and towers nestle amid the beautiful scenery of lakes and hills, grass and trees. Carrying on the traditions of garden landscaping of ancient China Beihai is a gem of garden art[82].

Figure 7-23: Beihai park in Beijing, China [83]

Most of the present character dates from the 17th century. Beihai is now a public park. There are a number of pavilions on the island and on the shore of the Lake, including the Limpid Mirror Studio, Circular City, Five-Dragon Pavilions, Nine-Dragon Wall and Pavilion for Quiet Meditation[84].

7.10.1. Design concepts

Beihai Park lies to the northwest of the Forbidden City. The focus is on Beihai, the most northerly of the three lakes—called "seas" (*hai*)—that lie roughly north-south along the western side of the Imperial[85].

The design of Beihai Park was inspired by a legendary story. Rising above the East Sea, the story goes, were the three Fairyland Mountains of Penlai, Yingzhou and Fangzhang. There the immortals lived and a miraculous potion for longevity could be found. Both the first emperor of the Qin Dynasty (reigned 211-210 B.c.) and Emperor Wu Di or the Han Dynasty (reigned 140-87 B.C.) sent people over the sea to the mountains in quest of the potion, but all of them failed to find it. Longing for immortality, Emperor Wu Di ordered a large lake, which he named Taiye Lake, dug behind Jianzhang Palace in the capital city of Chang'an. Three islets modeled after the Fairyland Mountains were created in the lake from the earth that was dug out[86].

The Park is composed of Tuancheng (Circulate City), Jionghua Islet, Eastern Shore Scenic Area and North-western Shore Scenic Area, with Jionghua Islet as the Center. The small island is connected with other parts by a stone bridge and ferry boats[87].

Figure 7-24: Historic landscape elements in Beihai Park [88]

7.10.2. User characteristics

The park had a wide range of user groups; most of them are international, because of its central location and history. It is crowded with rowboats in summer, and it freezes over to become a natural ice-skating rink in winter[89]. Beihai Park was successful to deal with the diversity of user groups by creating different programs for each one.

7.10.3. Evaluation of the park

Table 7-11 shows evaluation of Beihai Park in Beijing, according to the points were discussed before in the theoretical and analytical chapters, and derived from analyzing the previous studies.

Beihai Park is now one of the best of China's classical gardens with artificial hills, pavilions, halls, temples and covered corridors today. And it is for sure offers many choices for the visitor.

Table 7-11: Evaluation of Beihai Park (Researcher)

Evaluation points			Pictures
Measure of an excellent urban park system		*A clear expression of purpose*	
		Ongoing planning	
		Equitable access	
		User satisfaction	
		Safety from physical hazard and crime	
		Benefits beyond the boundaries of the park	
Principles of inclusive historic landscape		*Easy to use*	
		Comfortable	
		Offer choices	
		Safe	
		Embrace diversity	
Rules to make parks accessible to people		*Make no small plans*	
		Ensure effective community involvement	
		Design for the place and its users	
		Create programs for diverse users	

7.11. Kings Domain, Melbourne

The Domain was originally reserved from sale by the Superintendent of the Port Phillip District, Charles La Trobe, as a site for a future Government House, being known as 'Government House and its domain'.

Melbourne celebrated its centenary in 1935, and 17 hectares of the Government House grounds were transferred to the public parkland of the Domain to mark the occasion. This area is known as King's Domain. Hugh Linaker's design for the new park was built by workers in a scheme that provided work for the unemployed during the Great Depression[90].

Figure 7-25: Kings Domain park in Melbourne, Australia [91]

The park was established in 1854, extending the Domain Parklands further north-west, it covers an area of 89 acres of lawns and pathways set among non-native and native Australian mature trees, a mixture of deciduous and evergreens[92].

In the 19th century the Kings Domain was managed by the Director of the Botanic Gardens, so many of the trees were planted by Baron Ferdinand von Mueller and later by William Guilfoyle. Around the Domain are scattered memorial statues and sculptures, each with their own story[93].

7.11.1. Design concepts

Kings Domain is part of a larger group of parklands directly south-east of the city, between St. Kilda Road and the Yarra River known as the Domain Parklands, which includes[94]:

- The Royal Botanic Gardens.
- Kings Domain.
- Alexandra Gardens.
- Queen Victoria Gardens.

King's Domain feature mature trees set in extensive lawns, a fern gully, and flower borders along the Government House boundary. The intriguing fern gully is nearly hidden from view and was planted in the 1930s. The spot was originally an old quarry and is now a steeply sloping, landscaped rockery featuring a waterfall and a winding 'crazy paved' path around a picturesque pond[95].

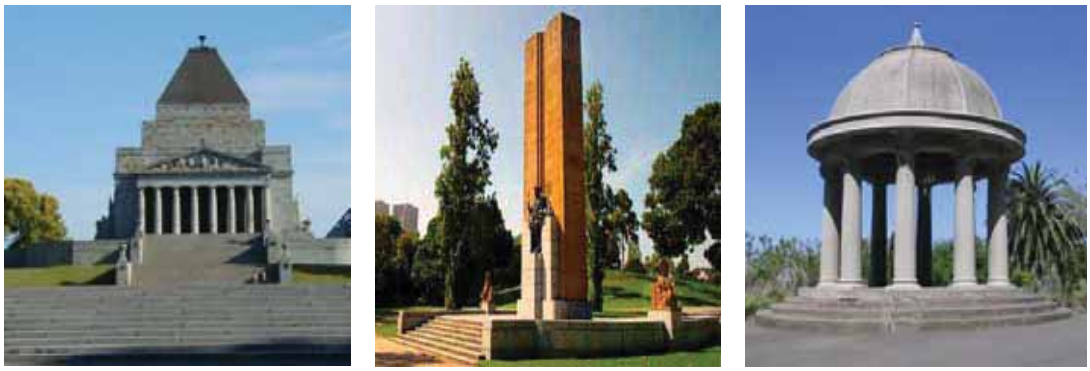

Figure 7-26: Historic landscape elements in Kings Domain Park [96]

7.11.2. User characteristics

The park holds a lot of special features that create programs for diverse users, such as[97]:

- Massive Shrine of Remembrance
- Award-winning Sidney Myer Music Bowl
- The Tan walking and jogging track
- Many other monuments and memorials

7.11.3. Evaluation of the park

Table 7-12 shows evaluation of Kings Domain Park in Melbourne, according to the points were discussed before in the theoretical and analytical chapters, and derived from analyzing the previous studies. The Park has very powerful and memorable landscape images, from the historic buildings surrounded by unique trees, to the post modern theatres, which offer a large Varity for different users.

Table 7-12: Evaluation of Kings Domain Park (Researcher)

Evaluation points			Pictures
Measure of an excellent urban park system		*A clear expression of purpose*	
		Ongoing planning	
		Equitable access	
		User satisfaction	
		Safety from physical hazard and crime	
		Benefits beyond the boundaries of the park	
Principles of inclusive historic landscape		*Easy to use*	
		Comfortable	
		Offer choices	
		Safe	
		Embrace diversity	
Rules to make parks accessible to people		*Make no small plans*	
		Ensure effective community involvement	
		Design for the place and its users	
		Create programs for diverse users	

7.12. Summary and Conclusion

After discussing some of the successful urban parks samples located within historical context, we can summarize the major points in each park as shown in Table 7-13 .

Table 7-13: Summary of chosen urban park samples (Researcher)

Park name		Points of success
	**Central Park** *New York*	Central park were very successful in expressing user needs, also it occupies most of the social events which happen in New York.
	**Prospect Park** *New York*	Prospect Park is offering activities for different user needs, also the design of the park were extremely adaptable for developing over years.
	**Battlefields Park** *Quebec City*	The park contains very effective elements of historic landscape, although its landscape is not totally safe to walk around especially for kids.
	**Hyde Park** *London*	Hyde Park were very successful in creating programs for diverse users, also it is very easy to explore with a clear expression of design purpose.
	**Regents Park** *London*	Regents Park is very successful in using the historic landscape elements which related to the peoples live, also it is very easy to explore.
	**St James's Park** *London*	St James's Park were successful in using the historic landscape elements, also it holds the most royal activities in London city.
	**Bos Park** *Amsterdam*	The park is very safe to use and explore, and its location is very central and accessible, which makes it more national than a city park.
	**Tiergarten park** *Berlin*	The park works as a green lung of all the surrounding areas, and it holds the royal events used to happen and most of the big social events.
	**Parc Guell** *Barcelona*	The park is one of Gaudi's masterpieces; it has a unique picturesque historic landscape, and adds a great value beyond the boundaries of the park.
	**Beihai Park** *Beijing*	It is a classical garden with artificial hills, pavilions, temples and covered corridors. And it is for sure offering many choices for the visitor.
	**Kings Domain** *Melbourne*	The Park has powerful landscape images, from the historic buildings to the post modern theatres, which offer a large Varity for different users.

Footnotes

[1] www.centralparknyc.org, the official site for information on New York City's Central Park, hosted by the Central Park Conservancy.

[2] www.calvertvaux.org, an architect and landscape designer, born in England and lived most of his life in UK.

[3] www.fredericklawolmsted.com, one of the greatest champions of the City Beautiful movement was Frederick law Olmsted. Olmsted was the leading landscape architect of the post-Civil War generation, and has long been acknowledged as the founder of American landscape architecture

[4] www.googleearth.com. Satellite Image for the entire World.

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[23] www.en.wikipedia.org/wiki/The_Battlefields_Park, Wikipedia, the free encyclopedia.

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[30] Low, Setha, ET all. (2005). Rethinking Urban Parks, Public Space and Cultural Diversity. University of Texas Press. USA.

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[94] www.melbourne.vic.gov.au, Melbourne city, ranked as one of the world's most liveable cities.

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Chapter 8

Introduction to Cairo Parks and Evaluative Methodology

History of parks and green spaces in greater Cairo

Different approaches in Cairo to deal with open spaces

Case study limitation

Towards and evaluative methodology

8. Introduction to Cairo parks & evaluative methodology

This chapter will discuss the idea of urban parks and garden spaces in greater Cairo, and how it develops through time, and then the research will list some examples of urban parks and green spaces in Cairo in order to draw the limitation of application study and explain the methodology being used to select the chosen case study. The main points will be discussed in this chapter can be listed as below:

- History of Parks and Green Spaces in Greater Cairo
- Case Study Selection
- Towards an Evaluative Methodology

8.1. History of parks and green spaces in greater Cairo

8.1.1. The Fatimid and medieval period

The city of Cairo was originally founded around a (Bustan), which in modern terminology is the equivalent of Park. When the Fatimid army arrived in 969, its general Jawhar Al-Siqili was charged to establish a new royal city. The general chose an area almost two miles north of Al-Fostat around the Bustan Al-Kafuri and laid out the royal enclave that came to be known as Al-Qahira (Cairo)[1]. Figure 8-1

By time, the Bustan Al-Kafuri was not the only famous garden in the history of Cairo. The adjacency of Nile River allowed the wealthy people that time to establish huge gardens for their recreation. One of the most famous gardens is Sayef El-Islam garden, which lies to the west of Sultan Hassan mosque[2].

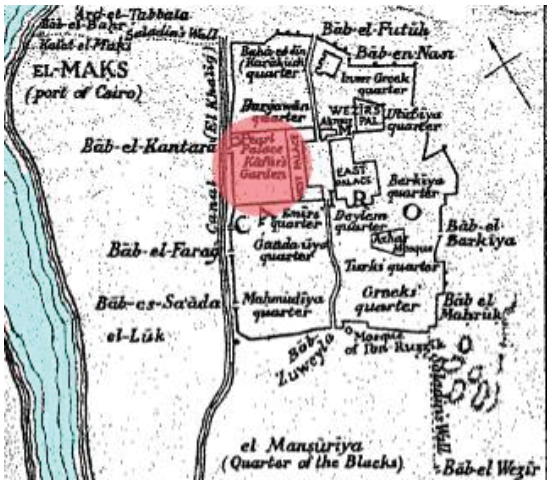


Figure 8-1: Bustan Al-Kafuri and old Cairo City [3]

Another type of open spaces, the Mydan (Square), it was established in the medieval period, especially under the Ayyubids and the Mamluks. Mydan became as essential urban space in Cairo; there were eight of them at one time or another[4]. Figure 8-2

Figure 8-2: View of Citadel Mydan, near El-Sultan Hassan mosque [5]

No large open green space existed in the urban core of Cairo, and to some extent it was true of most of the central Islamic cities between the eighth and nineteenth centuries, this was due in part to the arid climate in most middle Eastern regions, which made the maintenance the irrigation of any green space is difficult and costly procedure. Another reason for this lack lie in the conceptual distinction between private and public space in the traditional city, whereby entertainment and relaxing were kept strictly in private spaces, while public spaces were devoted to business[6].

8.1.2. Nineteenth century development

The situation was partly improved by the new gardens established in the nineteenth century by Muhammad Ali and Sons, these royal gardens endowed with palaces. The first among these palaces gardens was Manial Palace in El-Roda Island[7]. Figure 8-3

Figure 8-3: Garden of Manial Palace in El-Roda Island (Researcher)

In the time of Muhammad Ali, the first regional park was established (Al-Qanater), it served all the people in Cairo district, and used to be one of the most attraction gardens for users in holidays and feasts[8].

In 1837, Muhammad Ali promoted the establishment of a public garden; he decided to transform El-Azbakia square, which was filled with ponds, into a public garden. Followed by his son Ismail, he handle the redesign of the park to Barrillet Deschamps, the famous garden designer in France, and it was reopened in 1872, because of quick growth of the city Center in Cairo, the park shrinked till it became 10 acres[9].

8.1.3. Cairo city in the twentieth century

With very few exceptions, all the gardens built in the ninetieth century didn't last long, mainly because of the urban pressure from growing capital city at the turn of the twentieth century. After the war of 1973, the people were directed to Real Estate Investments, looking for the maximum profit, this affect badly on the green areas in the city[10].

Table 8-1 shows the development of green areas in Cairo from 1983 to 2001 according to Elzamly, it is clear that the increase in green spaces was little in 1983 and 1986, then it started to increase slowly till 1990, after that it got more till it reaches 1.52 person per m2.

Table 8-1: Green area in Cairo and population (1983 – 2001) [11]

Year	Population No.	Green Area m2	Person Ratio m2/Per
1983	5.688.415	5.257.875	0.92
1986	6.007.280	5.431.125	0.90
1990	6.291.693	6.301.400	1.00
1996	6.800.992	8.827.350	1.30
2000	7.109.997	10.335.993	1.45
2001	7.487.851	11.408.875	1.52

8.2. Different approaches in Cairo to deal with urban parks

The awareness of how urban parks and green spaces are important in the city fabric has grown rapidly in start of 21 century, most of the organization in Egypt focused on this issue.

Cairo Cleaning and beautification Agency[12] were established according to Presidential Decree No. 284 in 1983, in order to create different types of programs to increase green areas and public spaces in Cairo. By 2001 the agency succeeded to increase the green area ratio per person from 0.92 in 1983 to be 1.52 in 2001[13].

Generally, there are three main strategies used in Cairo to deal with open spaces inside the built environment, listed as[14]:

- Redesign and Improving of existence parks.
- Reuse of Neglecting Spaces.
- Replace Some Function within the Urban Area.

8.2.1. Redesign and improving of existence parks

The most recent example of this strategy is the improving of the existence 6th October Park in Helwan, with an area of 37 acres and cost 4,200,000 L.E[15]. It was reopened in August 2009; it consists of some recreational buildings with the Japanese style, with a scenery landscape using the Japanese gardening style as well. Figure 8-4

Figure 8-4: Tokyo Garden in Helwan, Redesign of 6th of October Garden [16]

8.2.2. Reuse of neglecting spaces

There are many projects and achievements in the field of environmental strategy for the development and exploitation of neglected spaces, such as:

- The development of garbage dumps in Cairo and turn it into a public park (Al-Azhar Park).
- Forest tree in El-Wafaa We Al-Amal area, which was before a garbage area[17].
- Nile Corniche development project under the supervision of the Tourism Development Authority, which will be completed soon.

Al-Azhar Park before and after the reuse of open space near El-Darassa

Nile Cornish before and after the reuse of the Nile bank

Figure 8-5: Examples of reuse open spaces in Cairo city

Figure 8-5 shows some examples in Cairo to reuse neglecting spaces, and how the project deal with the river bank to form a pleasant area, also in Al-Azhar park – the thesis case study – they change the area into green well designed park to be a successful model for people about how to renovate space.

8.2.3. Replace some functions within the urban area

In the framework of a project to develop the northern sector of the city of Giza, the General Authority for Urban Planning in Cairo prepared an integrated vision for the development of the sector, aimed at exploiting all the ingredients sector, including the airport, which is an important resource is not on the level of the sector and the city of Giza, but rather on the level of the Greater Cairo who are subjected to many pressures that threaten the living environment of the population[18].

In this proposal, 4 urban parks were planned within the sector, one of them (Imbaba Park) is already in the construction phase with an area of 38 acres. Figure 8-6

Figure 8-6: Imbaba Park in Giza, replace of old Imbaba Airport [19]

8.3. Case study selection

This part of the research aims to draw a picture for the open spaces and parks in Cairo, and knows its location and area, in order to choose the case study sample based on the limitations of the study were concluded in the theoretical and analytical chapters.

8.3.1. Open spaces and parks in greater Cairo

According to the study made by Elzamly[20], he listed all the open green spaces and parks in Cairo with all its types, varied between (Housing public gardens – urban parks – large, medium and small spaces). For the research objectives, only urban parks - located in public context – were chosen, with an area from 250 acre to least 9.5 acre.

Table 8-2: List of Urban Parks in Greater Cairo [21]

No.	Park Name	City	Area
1	El-Fostat Park	*Cairo*	250 acre
2	Al-Azhar Park	*Cairo*	74 acre
3	International Garden	*Cairo*	55 acre
4	The Zoo	*Giza*	50 acre
5	Tokyo Gardens	*Helwan*	37 acre
6	Maryland Garden	*Cairo*	29 acre
7	El-Orman Garden	*Giza*	28 acre
8	Children Library Garden	*Cairo*	22 acre
9	Japanese Garden	*Helwan*	10 acre
10	El-Azbakia	*Cairo*	10 acre
11	Fish Garden	*Cairo*	9.5 acre
12	Al-Andalus Garden	*Cairo*	4 acre

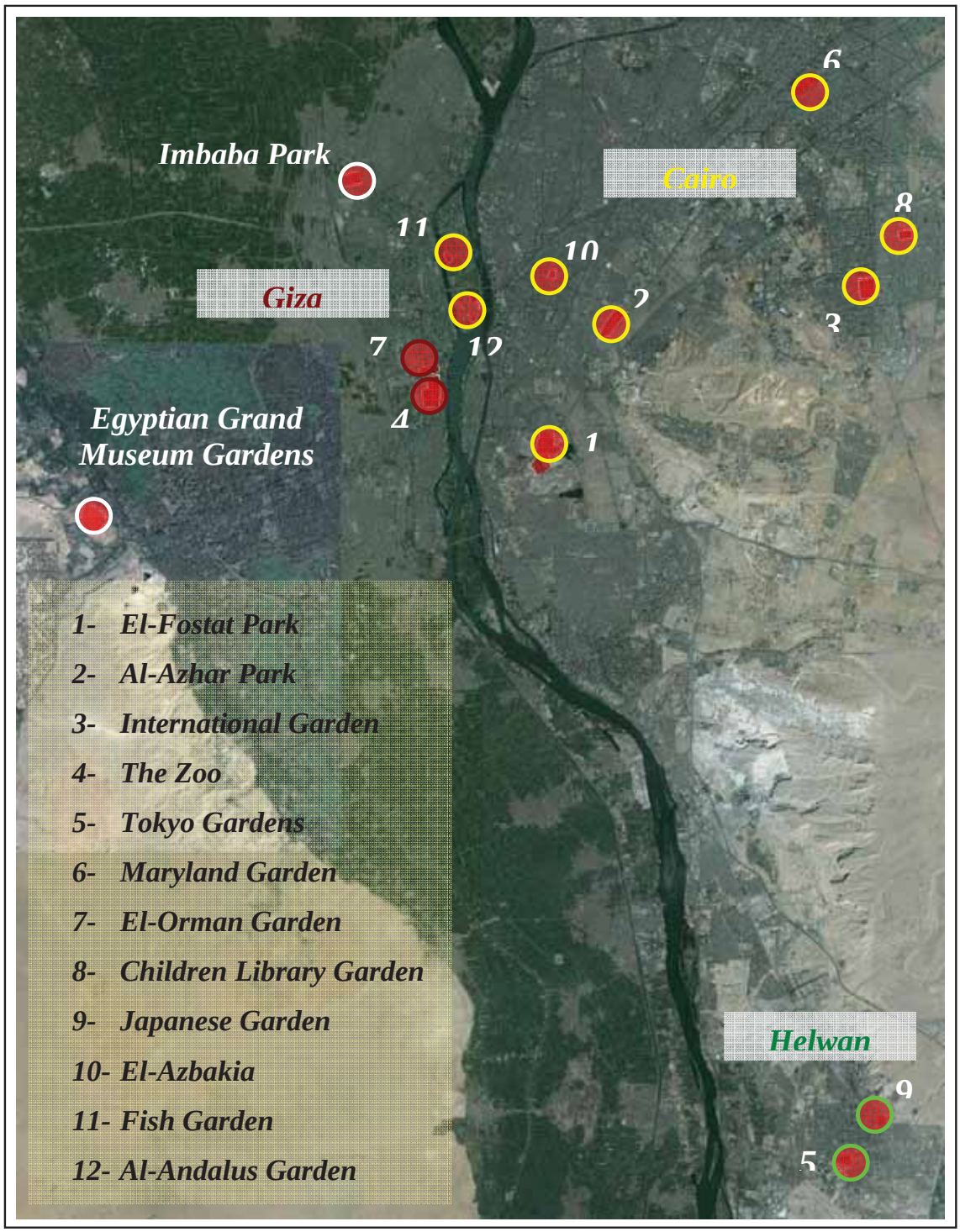


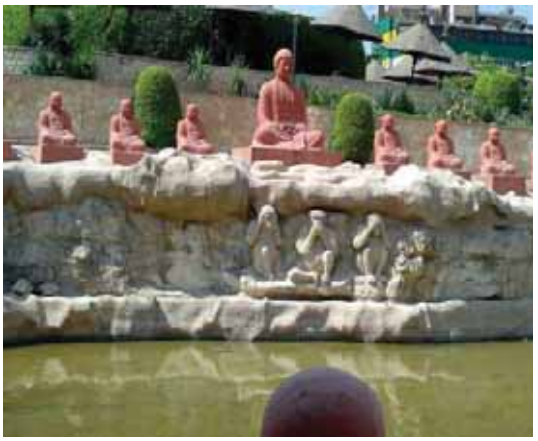
Figure 8-7: distributions of Urban Parks and gardens in Greater Cairo [22]

As shown in Figure 8-7, most of urban parks located around the central Cairo and Giza area, except for the two parks in Helwan (Tokyo gardens – Japanese garden). Also the biggest two parks (El-Fostat park – Al-Azhar park) located in historical context in old Cairo. Figure 8-8 shows some samples of urban parks in greater Cairo.

Al-Andalus Garden

Fish Garden

El-Azbakia Garden



Japanese Garden

Figure 8-8: Pictures for samples of Urban Parks in Greater Cairo (Researcher)

8.3.2. Case study limitation

The evaluative methodology for the research is to implement on urban parks located within historical context, and for the research purpose, Al-Azhar park is the only case study to be tested with this methodology, for these reasons:

- The richness of historic landscape design.
- The unique location, connecting historic urban fabric with modern style of living crossing Salah Salem St.
- Availability of Social studies on the surrounding areas before & after the project, which is important for thesis aim.
- The continuous ongoing planning in it, as the park design keeps developing through time according to people's needs.

8.3.3. Context of case study

The creation of the 74-acre Al-Azhar Park, undertaken in the historic district of Cairo by the Aga Khan Trust for Culture, is proving to be a catalyst for urban renewal in one of the most congested cities in the world. Cairo, with a population of 17 million, has one of the lowest ratios of green space to urban population in the world – an area the size of a footprint per inhabitant, according to one estimate. Al-Azhar Park therefore provides much-needed leisure and recreational space while functioning as a "green lung" in the city[23]. Figure 8-9

The Park project was intended to be a case study for a variety of development challenges, ranging from environmental rehabilitation to cultural restoration. The objective was to create models of development that could be replicated in many other settings, and in particular in the historic cities of the Islamic world. Almost one-third of historic cities on UNESCO's list of world heritage sites are in the Islamic World. Many face pressures similar to those of Cairo[24].

Figure 8-9: Historic Context of Al-Azhar park in Cairo [25]

8.4. Towards an evaluative model

Figure 8-10 shows the proposed evaluative methodology for urban parks as a step for redesign the space in order to achieve the maximum level of interaction between the users and the landscape and enhancing the people's behaviour. This methodology will be explained in details later in this chapter and implemented on El Azhar Park in Cairo to test it.

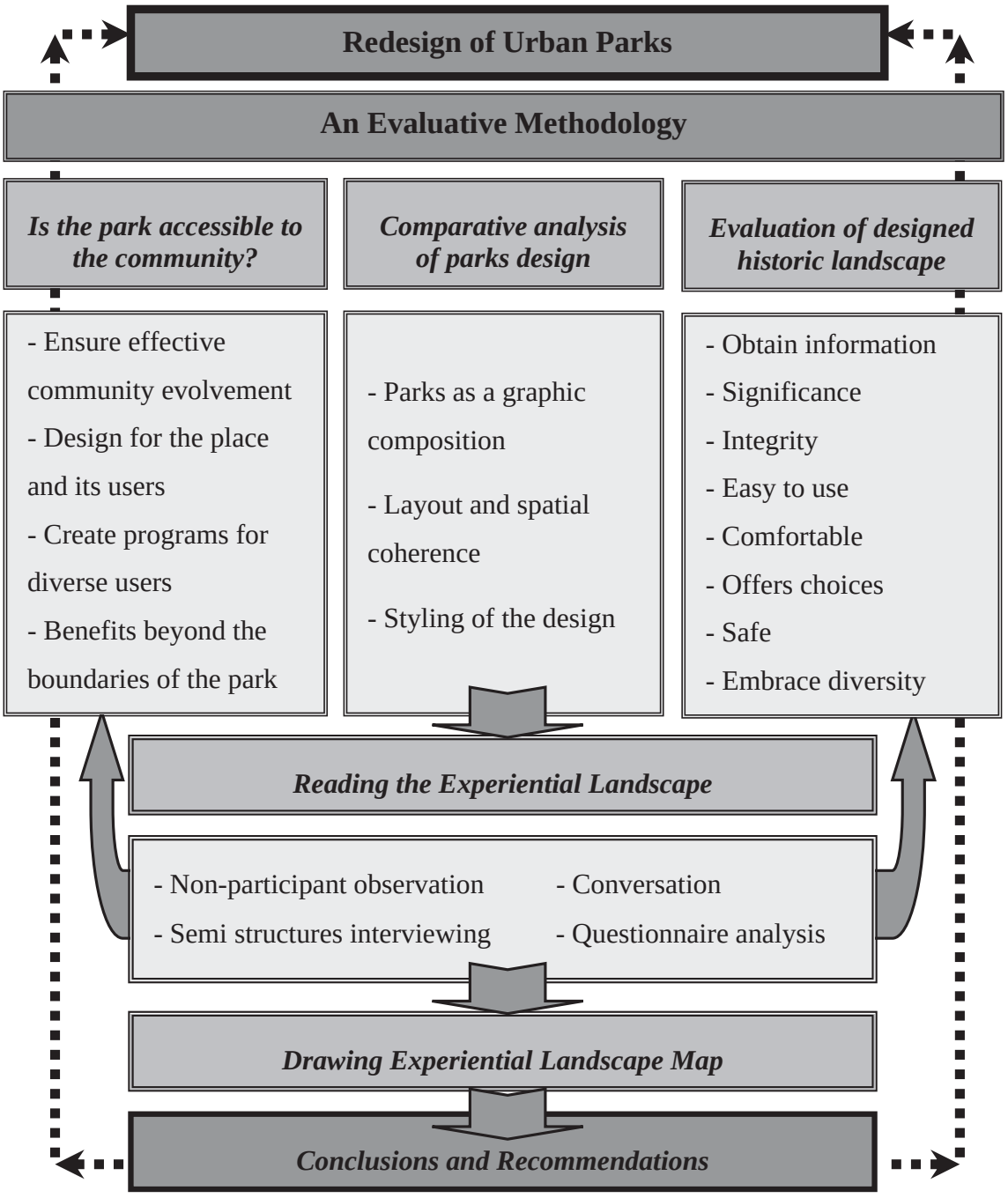


Figure 8-10: Proposed evaluative methodology for Al-Azhar Park

As it appear in Figure 8-10, the evaluative methodology is not one way process, it is all linked together, and the feedback from a certain stages should affect and direct the rest of operation.

From all the information that will be gathered in the first stages, the result will be presented in experiential landscape map for the park showing the main components of it through this vocabulary CDTA :

- Center
- Direction
- Transition
- Area

8.4.1. Is the park accessible to the community?

Urban parks should not be a place for fun and recreation only, it must play a vital role in the community fabric, to test that in the evaluative methodology proposed in the research, there is some points should be explored, which are:

- **Ensure effective community involvement**

Many city parks engage community volunteers in park projects and programs. Involving local residents in park planning and programming helps to cultivate support, and an active constituency.

This point can be tested through meeting with the administration of the park and see how the people were involved through all the stages of park design and after it was finished.

- **Design for the place and its users**

Design has an enormous impact on how users experience a park. Good, responsible design yields a beautiful, green, safe, clean park that will exert a strong positive influence on the community.

The research will investigate this point by examine some features such as lighting, seating (both movable and fixed), restrooms, and food, and see how it contribute to the comfort and appeal of a park. Aesthetic considerations should not stop at the park's boundaries: the perimeter of the park and the adjacent sidewalks and gateways are also an important part of users' experience.

- **Create programs for diverse users**

Programs - which can include a wide range of activities, such as natural walks, musical or theatrical performances, and community gardening - are an opportunity to draw a wide variety of users. The key to excellent park programming is to create a range of activities for different ages and interests throughout the park.

- **Benefits beyond the boundaries of the park**

The value of a park system extends beyond the boundaries of the parks themselves. In fact, the excellent city park system is a form of natural infrastructure that provides many goods for the city as a whole.

To emphasize the effect of park system on the surrounding environment, the research will explore the social and economical levels in the adjacent area of the park before it is constructed, then will examine if it had been changed to the better or not.

8.4.2. Comparative analysis of parks design

The main objective for this point is to contribute to the formation of theories of landscape design and highlight the notion of it; the research can investigate this by means of a comparative design analysis, through the intellectual decomposition and examination of park designs.

- **Parks as a graphic composition**

The research will decompose park design into points, lines and planes. These first lines revealed in the analysis are to be viewed as construction lines or regulating lines that direct the composition. The sketches in this stage of analysis are an exploration of the graphic composition. This analysis shows which parts of the plan are distinguished in the ground plan.

- **Layout and Spatial Coherence**

What is the significance of the graphic composition for the spatial functioning of the park?. To answer the question, the research will explore some components and try to understand the meaning of it.

- **Styling of the Design**

In this point, the methodology will investigate the styling scheme of urban park design, which consists of main three types:

(Classicism - Landscape Style – Modernism)

8.4.3. Evaluation of designed historic landscape

Using the historic landscape elements in the park should be in a way that helps users to achieve their goal from visiting the park; this can be tested through some points:

- **Obtain information**

An evaluation of a designed historic landscape should begin with compiling a general description and history of the property including:

- Dates of design and construction.
- Names of owners, landscape architects, designers, & administrators.
- Construction techniques, methods, and plant materials.
- Landscape style.
- Existing and previous uses.

- **Significance**

Many designed historic landscapes will be eligible because of their associations with significant events and trends. The methodology will explore the main points that eligible designed historic landscape must meet one or more of it, which is:

- Be associated with events that have made a significant contribution to the broad patterns of our history.
- Be associated with lives of persons significant in past.
- Embody the distinctive characteristics of a type, period, or method of construction, or possess high artistic values.

- **Integrity**

The specific features that a designed historic landscape must retain will differ for various landscape types. Such features may include, but are not necessarily limited to, spatial relationships, vegetation, original property boundary, topography / grading, site-furnishings, design intent, architectural features, and circulation system. If, for example, a property is primarily significant because of its internal road circulation, yet the historic road patterns are no longer discernible or have been badly damaged, then the landscape has suffered a loss of integrity.

The features to be evaluated should also be considered in terms of survival, condition, and appropriateness to the original design intent and period of significance. Such features include grading, rock formations, water bodies, road networks, and paths.

- **Easy to use**

This point describe how easy it is for people to get to and around a historical designed landscape The main issues in this survey usually concern transport, entrances, paths, toilets, seating and information. Improvements may involve physical adaptation such as relaying uneven paving or providing an alternative, shorter route around a site.

- **Comfortable**

Comfort is important for all visitors, particularly those who tire easily and need to rest more often. Providing seating and shelter enables older or disabled people to explore a longer historic route or to pause to absorb information. The research will investigate the existence of these elements in the park, and how the users interact with it.

- **Offers choices**

This is one of the most important aspects of an inclusive landscape. It ensures that visitors can decide how they want to use and enjoy it. For example, some people will visit independently, others with family, friends or as part of a group. It is important to provide for all of these.

- **Safe**

To feel safe in the park is very important, safe includes emergency evacuation procedures, and how these are communicated to people with different disabilities. Feedback from visitors and volunteers will help identify problems that might be overlooked by routine checks

- **Embrace diversity**

To design the landscape for all types of users should be the ultimate goal for the designer, the research will try to investigate if the use of historic designed landscape add value and embrace diversity for different kind of users through observation and interviews with users.

8.4.4. Reading the experiential landscape

As mentioned in chapter 6, there is six major steps to read the experiential landscape in open spaces, because of the research limitation there is two steps has been removed, as it needs more than an individual observation, which are (Professional reading of the site - Outside specialist).

The rest of these steps are:

- **Non-participant observation**

This technique involves the passive observation for the activities of groups or individuals with the intention to understand practices, interactions and events which occur in a specific context.

- **Conversation**

This technique is usually possible in public places, through, to ask some one of the users about some detailed information about the space not always possible by observation of the place.

In this method, usually it is unstructured interviews and casual conversations, more friendly discussions about the space to understand the reasons for the existing behavioural patterns.

- **Semi structures interviewing**

The way this usually works is to have predetermined topics that guide conversation allowing new questions or insights to evolve as the discussion develops. Chapter 9 will explain the methods will be used to determine the sample size of users and techniques to analysis the results in order to increase credibility of research.

- **Questionnaire results analysis**

The information gathering stage from the user answers will be analyzed using SPSS program to understand the correlation between each variables used in the questions to investigate people perception to the landscape features in the park. These correlations will be an important indicator to start drawing experiential landscape maps and reaching the conclusions and recommendation for a better performance and behaviour enhancement.

8.4.5. Drawing experiential landscape map

According to Experiential landscape vocabulary explained before in chapter 6, and after gathering all the previous information's in the proposed evaluative methodology, a map will be drawn to present the landscape perception for users in the park. The output map will be like the example shown chapter 6, Figure 6-12.

8.4.6. Conclusions and evaluative model

After analyzing all the previous data from the case study, followed by mapping the experiential landscape for the park, the research will address some conclusions for the evaluative methodology, and propose a future recommendation based on these conclusions to redesign the park, these points will be covered:

- Al-Azhar Park study conclusions.
- Proposed evaluative model.
- Applying the evaluative model on Al-Azhar Park
- Recommendation and development proposals for the park.
- General Recommendations for urban parks design.
- Implications for future studies.

Footnotes

[1] Bianca, Stefano. (2007). Cairo: Revitalising a Historic Metropolis (Aga Khan Trust for Culture) Umberto Allemandes & Co; 2 editions.

[2] Behrens, Doris. (1992). Gardens in Islamic Egypt. W. de Gruyter Press.

[3] Abu-Lughod, Janet L. (1971). Cairo: 1001 years of the City Victorians. Princeton University Press. Princeton, New Jersey.

[4] Bianca, Stefano. (2007). Cairo: Revitalising a Historic Metropolis (Aga Khan Trust for Culture) Umberto Allemandes & Co; 2 editions.

[5] Williams, Caroline. (2002). Islamic Monuments in Cairo – the Practical Guide. The American University in Cairo press, New York.

[6] Bianca, Stefano. (2007). Cairo: Revitalising a Historic Metropolis (Aga Khan Trust for Culture) Umberto Allemandes & Co; 2 editions.

[7] Behrens, Doris. (1992). Gardens in Islamic Egypt. W. de Gruyter Press.

[8] Abu-Lughod, Janet L. (1971). Cairo: 1001 years of the City Victorians. Princeton University Press. Princeton, New Jersey.

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[10] Abu-Lughod, Janet L. (1971). Cairo: 1001 years of the City Victorians. Princeton University Press. Princeton, New Jersey.

[11] Elzamly, Ahmad. (2005). Green Areas in Greater Cairo. Society of Egyptian Geography.

[12] www.ccba.gov.eg, Cairo Cleaning and Beautification Agency.

[13] Elzamly, Ahmad. (2005). Green Areas in Greater Cairo. Society of Egyptian Geography.

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[15] www.ahram.org.eg/Archive/2009/8/31/LAST4.HTM, Al-Ahram Newspaper in Egypt.

[16] www.googleearth.com. Satellite Image for the entire World. Adapted by the researcher.

[17] www.cairo.gov.eg, Cairo Government web page.

[18] Development of the northern sector of the city of Giza and re-use of Imbaba Airport Land – Phase one. (2008). Unpublished report in Ministry of Housing, Utilities and Urban Development in Cairo.

[19] Development of the northern sector of the city of Giza and re-use of Imbaba Airport Land – Phase Two. (2009). Unpublished report in Ministry of Housing, Utilities and Urban Development in Cairo.

[20] Elzamly, Ahmad. (2005). Green Areas in Greater Cairo. A series of geographic research. Society of Egyptian Geography.

[21] The table has been taken from Elzamly, Ahmad. (2005), adapted by the researcher, after adding El-Azhar park, as it was opened in march 2005, the same year of book release.

[22] www.googleearth.com. Satellite Image for the whole World, adapted by the researcher.

[23] www.pps.org/upo, Project for Public Spaces, Resources for Parks, Plazas and Squares.

[24] Al-Azhar Park in Cairo and the Revitalization of Darb Al-Ahmar. (2005). the Aga Khan Trust for Culture.

[25] www.akdn.org/agency/aktc_hcsp_cairo.html, Al-Azhar Park Project in Cairo and the Conservation and Revitalisation of Darb al-Ahmar.

Chapter 9

Case Study of Al-Azhar Park

Al-Azhar Park, history and location

Is the park accessible to the community?

Comparative analysis of Al-Azhar park design

Evaluation of designed historic landscape

Reading the experiential landscape in Al-Azhar Park

Drawing experiential landscape map (CDTA)

Conclusions of Al-Azhar park evaluation

9. Case study and conclusions

In this chapter, the research will apply the evaluative methodology on Al-Azhar Park in Cairo, in order to draw an experiential landscape map for the park to understand user's behaviour towards historic landscape elements. Later, the research will reach some conclusions from the study to be followed by recommendation in chapter 10, which helps to redesign the park for a better future interaction with the users.

The chapter will go through some points to reach these goals, which are:

- Al-Azhar Park, history and location.
- Evaluation of designed historic landscape.
- Is the park accessible to the community?
- Comparative analysis of Al-Azhar park design.
- Reading the experiential landscape in Al-Azhar Park.
- Drawing experiential landscape map (CDTA).
- Conclusions of park evaluation.

9.1. Al-Azhar Park, history and location

The origins of Al-Azhar Park project date to 1984, when the Aga Khan Award for Architecture organized a conference on the subject of:

(The Expanding Metropolis: Coping with the Urban Growth of Cairo)

At that time, the city was confronted by the array of contemporary development challenges faced by many cities, not least population pressures, a decline in the quality of housing and the attendant problems these conditions create. Despite these challenges, the question of how to reconcile conservation and development was a fairly new one[1].

It was clear that Cairo needed more green space. One study found that the amount of green space per inhabitant was roughly equivalent to the size of a footprint. It is one of the lowest proportions in the world[2].

9.1.1. Historical background

When the project of turning a rubble dump into a park that would act as a catalyst for development was first mentioned 20 years ago, it was considered outlandish. At that time, the concept of environmental improvement in cities was limited to planting trees in a few streets. Since then, many cities, notably Barcelona, have transformed neglected areas into vibrant city centers, but in the early 1980s, the concept was still new and untested[3].

In 1992, the Aga Khan Trust for Culture established its Historic Cities Support Programme, to implement urban rehabilitation projects in different parts of the Islamic world. Cairo became its most demanding project, encompassing not only the construction of the Park but the restoration of the 1.5 kilometer section of the Ayyubids wall revealed by the removal of the accumulated rubble[4]. Figure 9-1

It also included the socioeconomic rehabilitation of the neighboring Historic City, which required launching of numerous restoration and community-initiated development projects. The larger area development project became a testing ground, and a case study, for finding solutions to challenges ranging from the technical demands of physical restoration to the equally challenging issues of socioeconomic development[5].

Park site in 1993 *Park site in 2000*

Figure 9-1: Al-Azhar Park Site before and during the construction [6]

The site posed several technical challenges. It had been a debris dump for over 500 years. This required excavation, grading and replacement with appropriate fill. Over 765,000 m3 was taken out of the Park and 160,000 m3 was used as fill elsewhere on site. A further 605,000 m3 was subjected to geotechnical treatment (sieving, washing, etc.) and mixed with 60,000 m3 of special sand and topsoil to enable the site to be covered with a layer of "good" soil from 0.5 to 2.0 meters deep. A total of 1.5 million cubic meters of rubble and soil were moved, which represents over 80,000 truckloads[7]. Figure 9-2

Figure 9-2: Grading in Al-Azhar Park Site to replace the existence soil [8]

When the Park project began in the mid-1990s, only the crenellations of a buried wall were visible. When the wall was excavated to a depth of 15 meters, a 1.5 kilometers section of the historic Ayyubids Wall and towers was revealed in its entire splendor.

The Aga Khan Trust for Culture brought together institutional partners, local non-governmental organizations, municipal institutions, neighborhood representatives, local businessmen and people living and working in the area. A detailed survey of the local population's socioeconomic needs was made and a series of meetings were then held to determine the community's own development priorities. Through consultations with the residents, a list of priorities emerged, including training, sanitation, housing rehabilitation, a need for microfinance, rubbish collection, primary health care and a community centre, among others[9].

9.1.2. Park location and context

The Al-Azhar Park is important for tourists to Egypt because this hilly site is surrounded by the most significant historic districts of Islamic Cairo. This is one of the primary destinations for many visitors to the city, and this new park located in its heart provides many advantages, including a wonderful view of the surrounding area. Figure 9-3

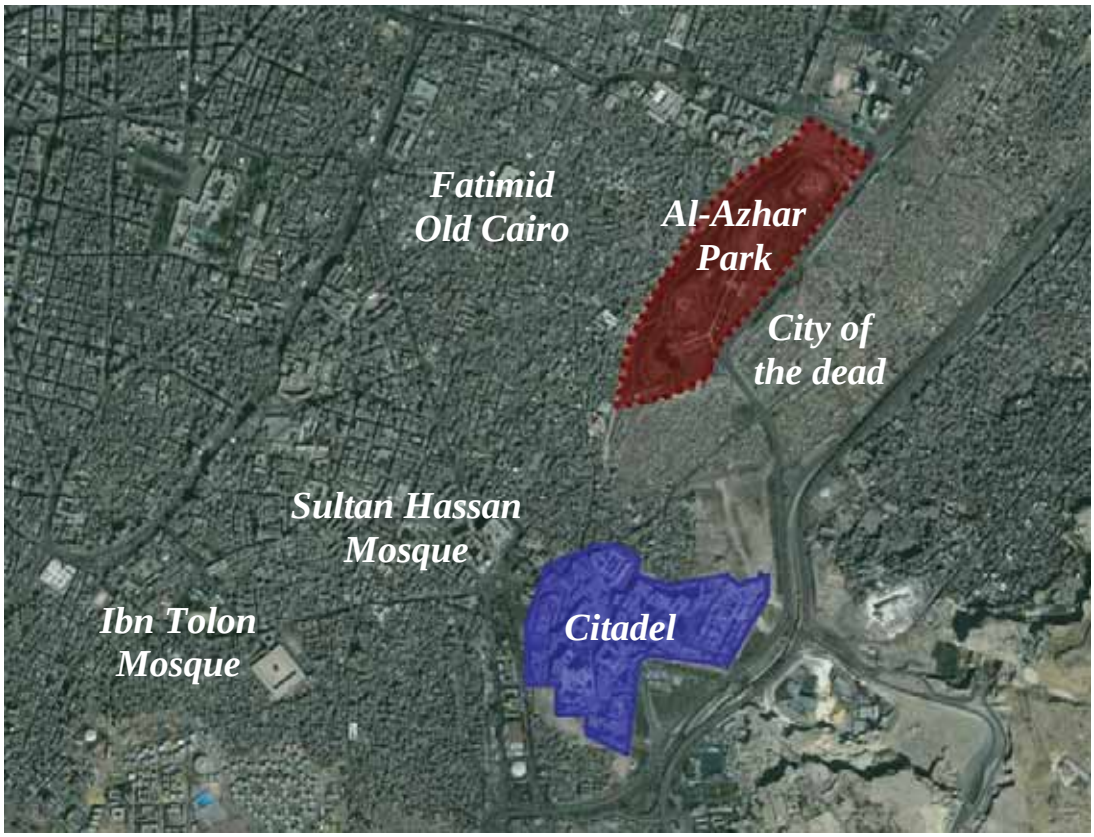


Figure 9-3: Al-Azhar Park Location and local context [10] (adapted by the researcher)

Located on the western side of the park are the old Fatimid city and its extension Darb Al Ahmar, with their wealth of mosques and signalled by a long line of minarets. To the south are the Sultan Hassan Mosque and its surroundings, as well as the Ayyubids Citadel. On the eastern side is the City of the Dead with its many social welfare complexes sponsored by the Mamluk Sultans and dignitaries, which became an area that developed into a dense neighbourhood of its own.

This area was indeed in great need of an open green space. The hilly topography of the site, formed by debris accumulated over centuries, now provides elevated view points dominating the city and offers a spectacular 360° panorama over the townscape of historic Cairo.

9.1.3. Components and main elements

The design of the park contains some main elements formed the whole picture, the location of these elements as shown in Figure 9-4.

Figure 9-5 shows some examples for the design and pictures of the main components of the park, which is:

Hilltop restaurant *main spine*

Lake side café *children's play ground*

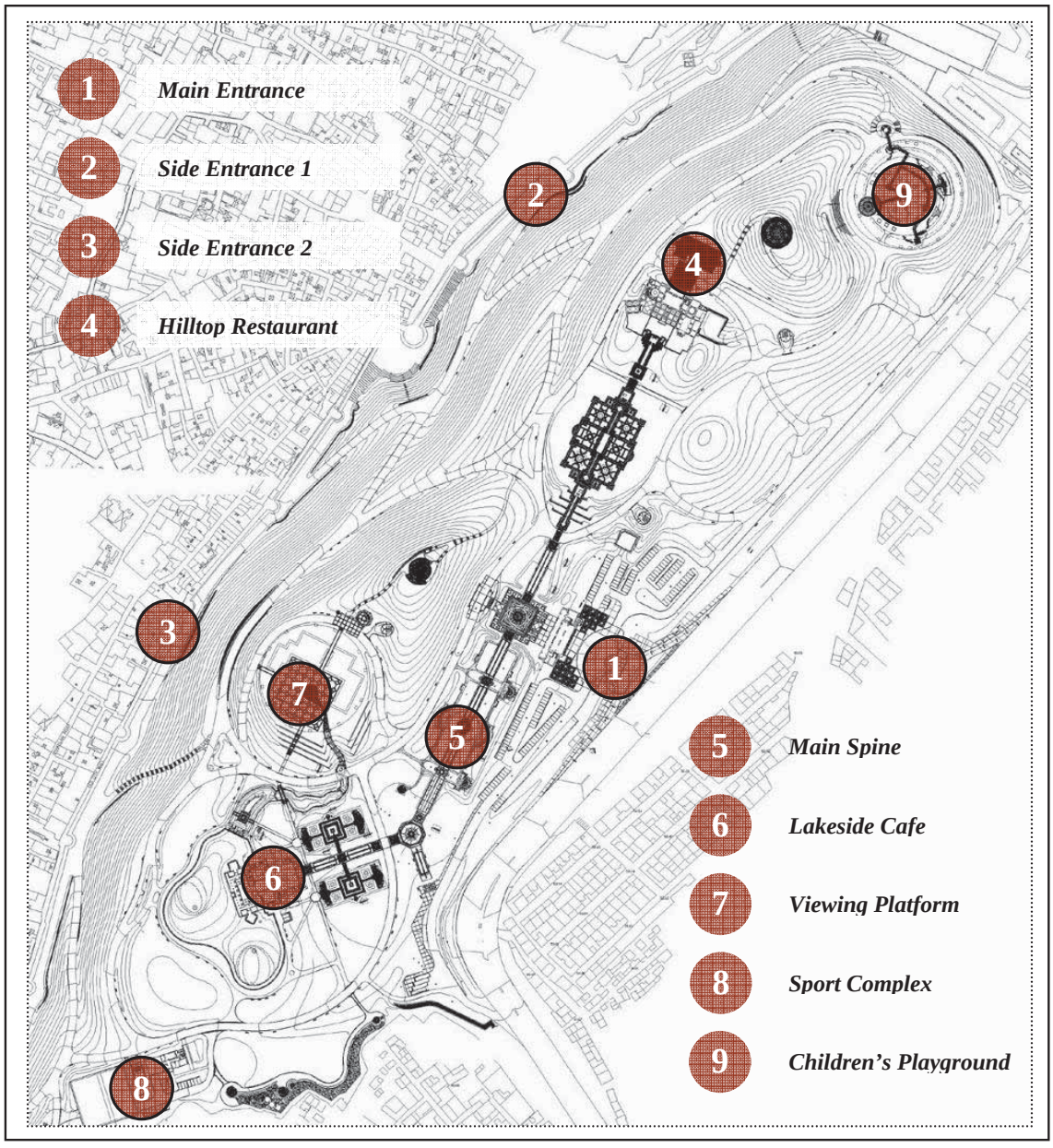
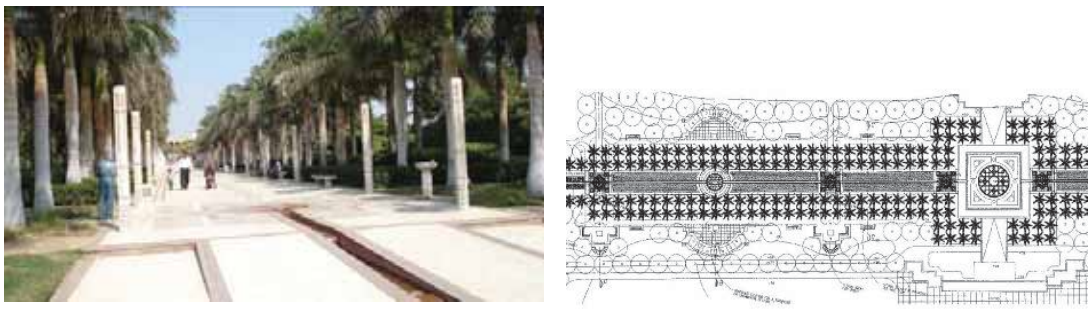
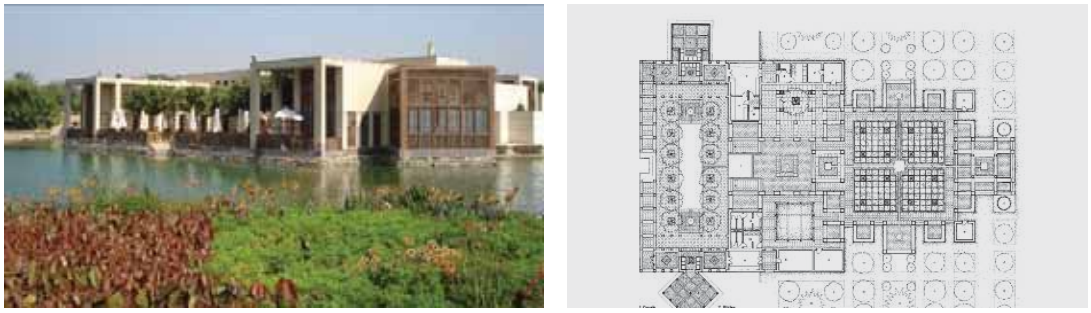


Figure 9-4: Location of main elements in Al-Azhar park (adapted by the researcher)

Hilltop Restaurant



Main Spine



Lake Side Cafe

Children's Playground

Figure 9-5: Main elements in Al-Azhar park [11]

9.2. Is the park accessible to the community?

Al-Azhar Park is a very successful example of how the park can interact with the people and create a feeling of belonging to all the local users at many levels, also through creating many diverse programs to cope with all different kinds of users who want to explore the park and spend a whole day inside it.

The research will explore that through going into some points to confirm that, which is:

9.2.1. Ensure effective community involvement

The most widespread purpose for increasing community involvement in urban parks is related to the gathering of information that will serve to improve strategic development and service delivery. This may be achieved by both indicating successful and failing aspects of current services, and by directing services more closely to the needs of current and potential site users.

A distinction can be seen in terms of whether consultation is a one-way process of information gathering to inform remote decision making, or a genuine two-way dialogue that involves communities in decision making.

The potential for successful involvement of local communities in Al-Azhar Park is related to several factors but most importantly to:

- The culture of the local authority and park service.
- The resources available.
- The type of site, and local capacity.

Through this stage, the research will investigate and evaluate the level of community involvement in park design and upgrading

- **Through design and construction**

During the design and construction stages of the park, many social studies were made to introduce the park to the local community, one of these studies is (100 spontaneous events), where people were gathered in the park and use its facilities before it was completed to test how they react with it, and if they need more activities to be considered. Figure 9-6 and Figure 9-7 shows some examples for local resident’s contribution to park design.

Figure 9-6: Community involvement in the design stage of the park [12]

Figure 9-7: Community involvement in the construction stage in the park [13]

- **After construction**

There are many ways that local people and park users can become involved in the management and maintenance of the Park ranging from practical community activities, health walks, consultation days, community events to attendance at local meetings. After the opening of Al-Azhar Park, the local users were the target for the park administration; this was clear from the events used to take place.

Figure 9-8 shows some examples of early community involvement in the park after it has been opened in late 2004; some of the local users handmade sculptures took place in the park, also a few exhibitions for some crafts for people living around the park.

Sculptures used to be in the park landscaping done by the local users

Exhibitions of some crafts for the surrounding local users

Figure 9-8: Community involvement after the opening of the park [14]

Recently, these local activities are less than before; the park is now only an open green place to enjoy for the local users.

The research will try to investigate the willing of community involvement for the park users later in this chapter through the questionnaire on the selected samples of park users.

9.2.2. Design for the place and its users

It is critical for park design to remain current and to accommodate diverse users. Design options should respond to changes in community needs and in recreation trends. For example, adaptations in park design can address changes in fitness trends or in the demand for facilities such as dog runs or skate parks.

In Al-Azhar Park, the picnic meadow area is a good example of how landscape design can be adapted to all upcoming needs and events which occurs in the park, the great view of this area – both from the lake and historic panoramic view - was a great attraction point for users at all the times, such as: Figure 9-9

- Big social events.
- Formal celebration.
- Weeding parties.
- Festivals and concerts.

An aerial photo for the picnic meadow area near the lake

Mobinil celebration

Orphan day

Figure 9-9: Al-Azhar Park picnic meadow area and all the different activities [15]

Figure 9-10 shows some of the night activities which take place near the lake, this area held many concerts and festivals for famous artists, also in the month of Ramadan is always held tents that work at night for Iftar and Sohour.

Figure 9-10: Night activities which happen in the open space near the lake (researcher)

9.2.3. Create programs for diverse users

Although the park were successful to offer various types of activities for the users, the major age segmentation for the visitors to use the park is adults, with a big difference to children and school visits. Figure 9-11 shows the segmentation for the park.

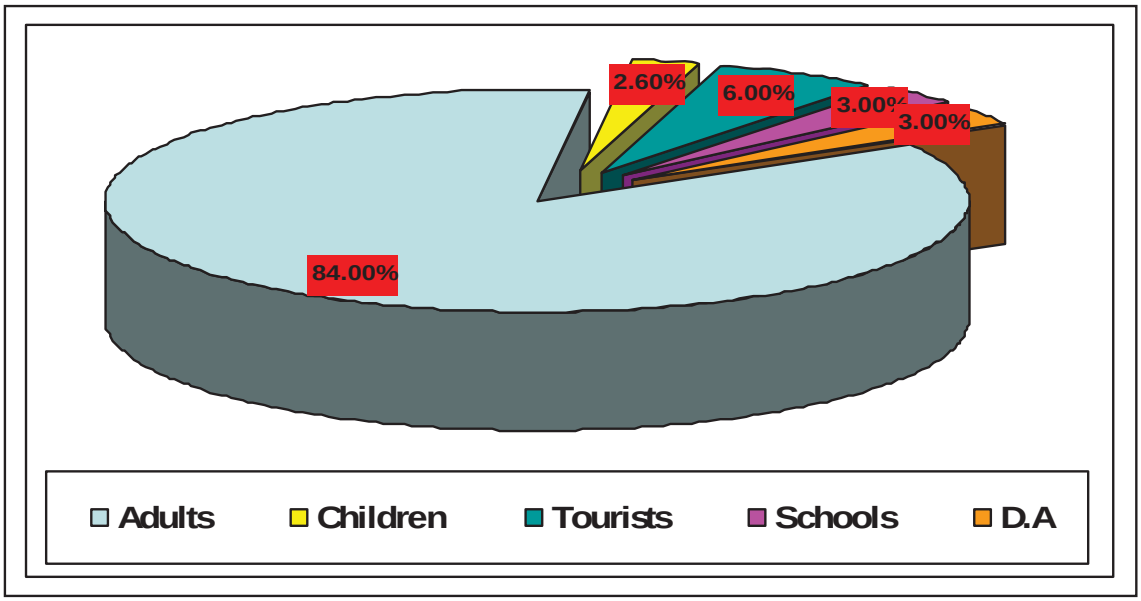


Figure 9-11: Al-Azhar Park visitor's segmentation - 2008 [16]

Among the tourists mix, the park succeeded to attract all various tourists groups from all countries. Figure 9-12

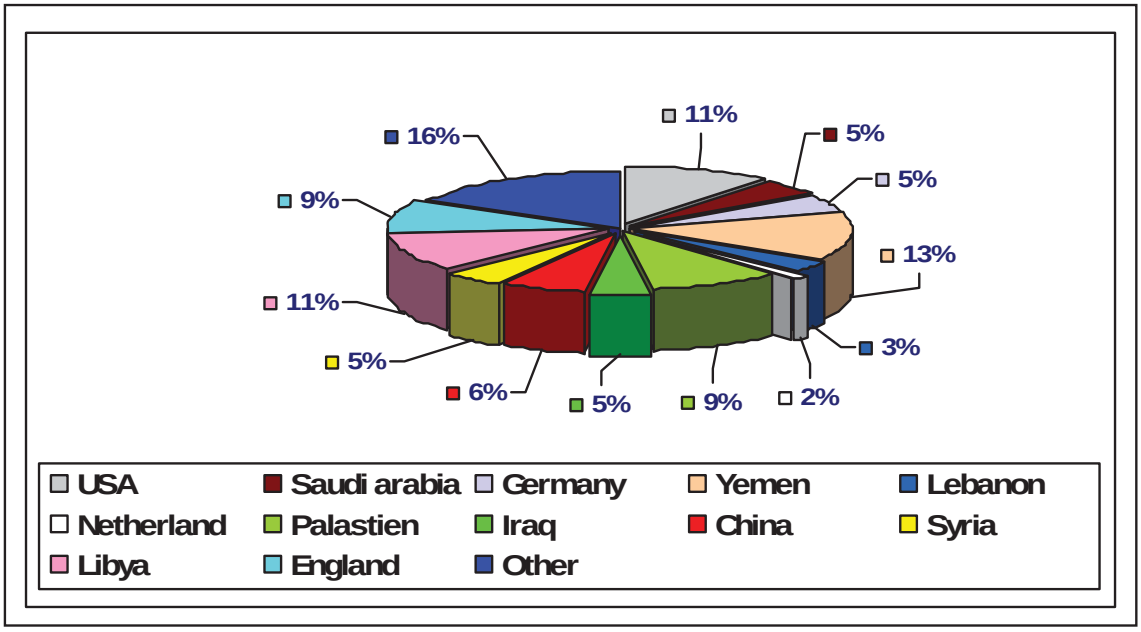


Figure 9-12: Al-Azhar Park Tourists visitors mix - 2008 [17]

9.2.4. Benefits beyond the boundaries of the park

The proposal of AKTC's[18] urban improvement program requires not only simultaneous physical, social and economic actions, but also institutional capacity-building. AKTC has concentrated its efforts in three Action Areas for social upgrade and building renovation, each with its own special character and opportunities: Figure 9-13

- Burg al-Zafar Street and its immediate surroundings.
- Built-up residential fabric in the Aslam neighborhood.
- The Bab al-Wazir area and its extension.

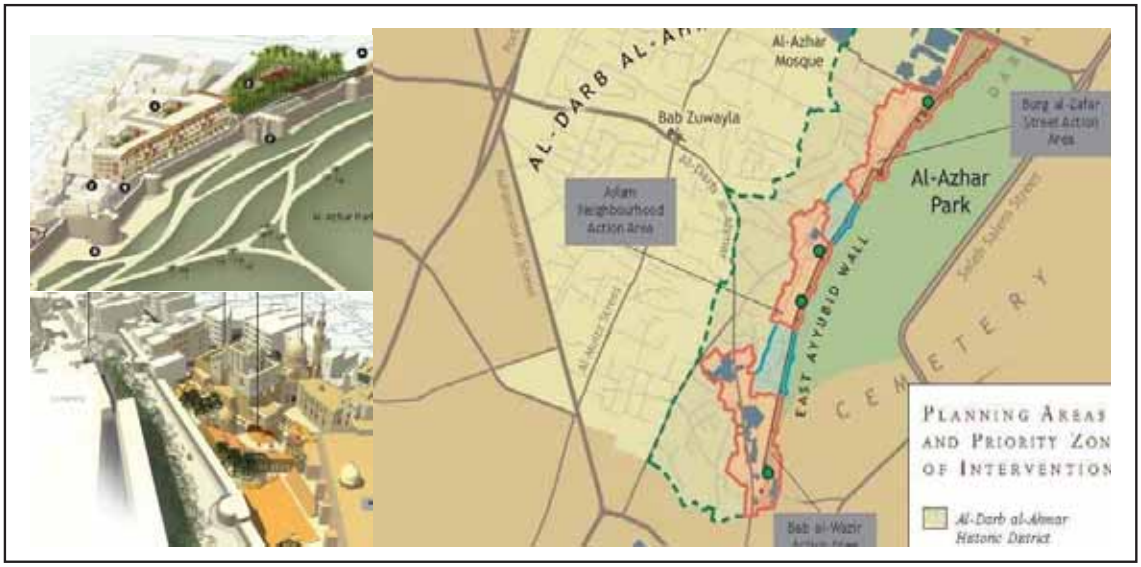


Figure 9-13: Planning areas & priority zones on interventions next to Al-Azhar park [19]

Figure 9-14 shows examples for the three action areas to develop the area attached to the western side of the park; it is one of the biggest benefits of the park beyond the boundaries of the green area.

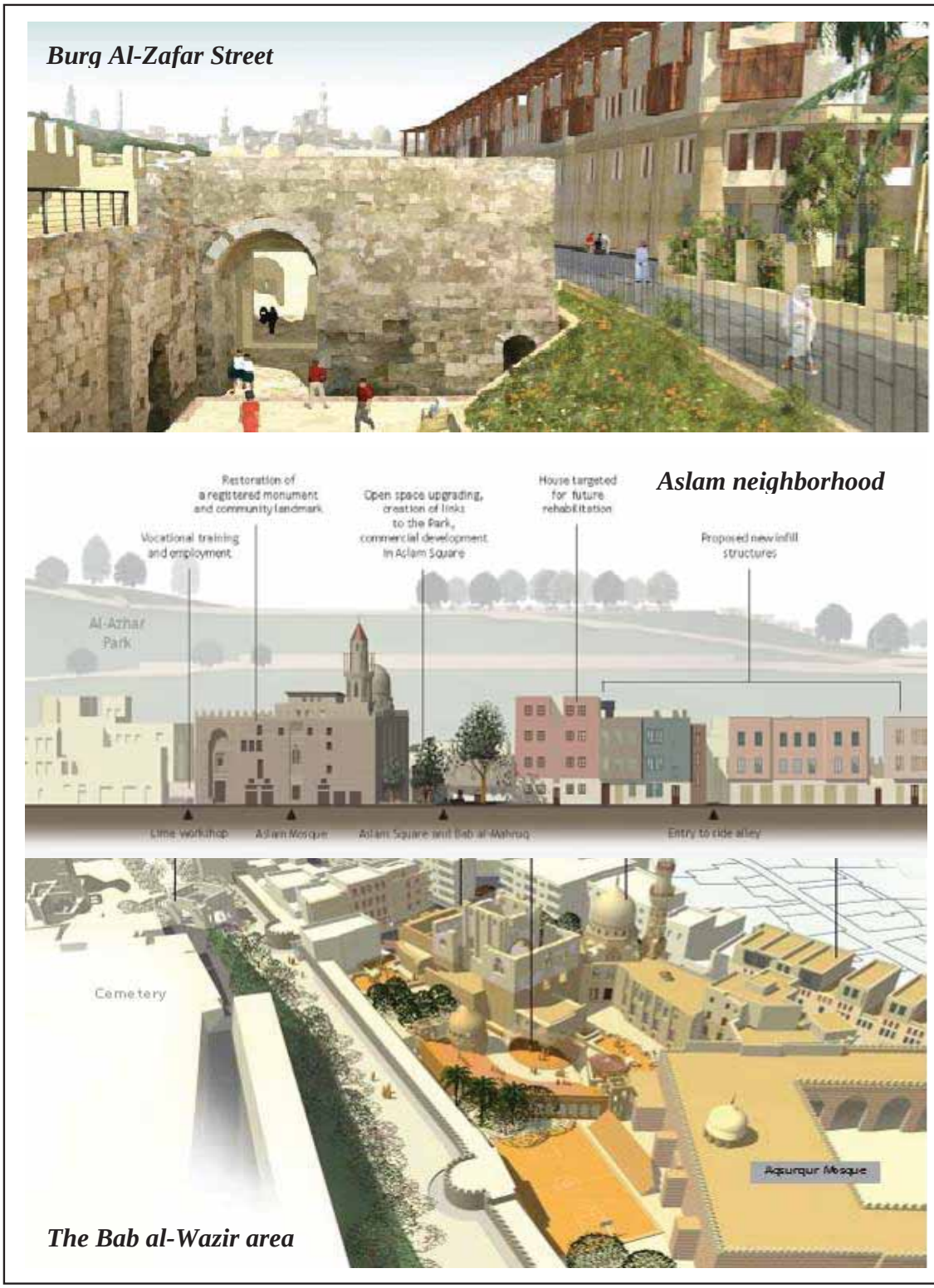


Figure 9-14: Development sketches for the action areas next to Al-Azhar park [20]

One of the other important influences of the park on the surrounding development would be to start in the establishment of Urban Plaza project next to the northern side of the park, with a total cost 136 million Egyptian pounds, the project consists of:

- Historic Cairo Museum 3,500 m^2, 3 floors.
- Commercial Mall, 70 shops.
- Underground car parking 4 floors, 630 cars.

Location and layout of the urban plaza project

Perspectives for the proposed urban plaza project

Figure 9-15: Urban plaza project near next to the northern side of Al-Azhar park [21]

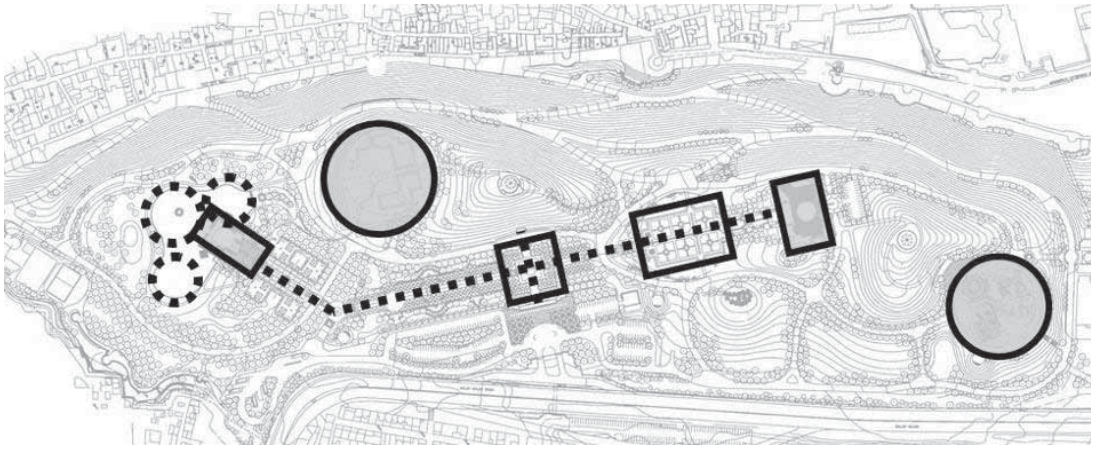
Figure 9-15 shows the location and layout of proposed Urban Plaza project, and some shots for the project. This project is supposed to be open by December 2010, with an entrance from Salah Salem Street and from inside Al-Azhar Park as well.

9.3. Comparative analysis of Al-Azhar park design

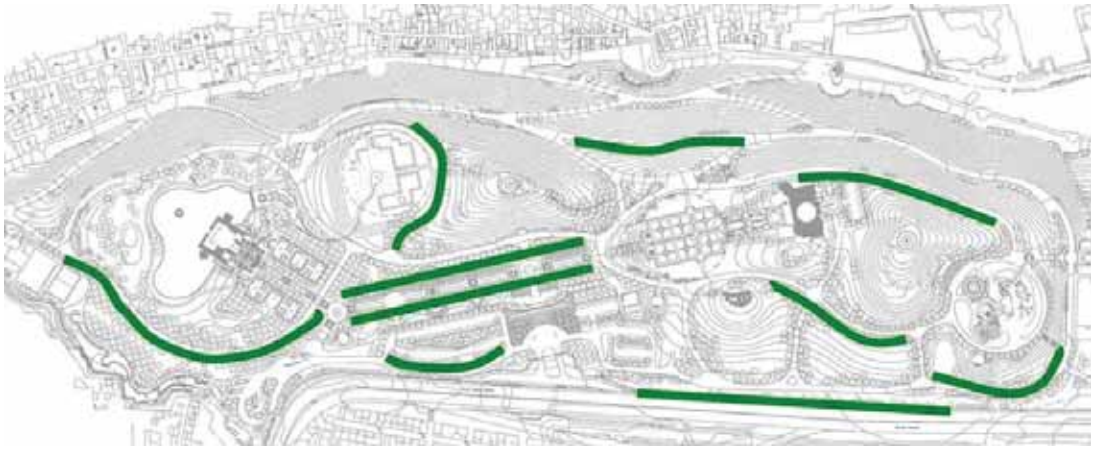
From analyzing Al-Azhar park layout, the results can be summarized into three main points as followed:

9.3.1. Parks as a graphic composition

The sketches of this stage of the analysis shows which parts of the plan are distinguished in the ground plan, the construction lines show that the parts of the plan are attached to the lines and alignment of the location. Layout of Al-Azhar Park has an intensive geometrical scheme; most of the elements are arranged by means of identical alignment of building lines. Trees are stand singly on underlying lines, which are linked to the entrance and to the central points at the edge. Figure 9-16



Building, spaces and paths in the park



Tress distribution in the park

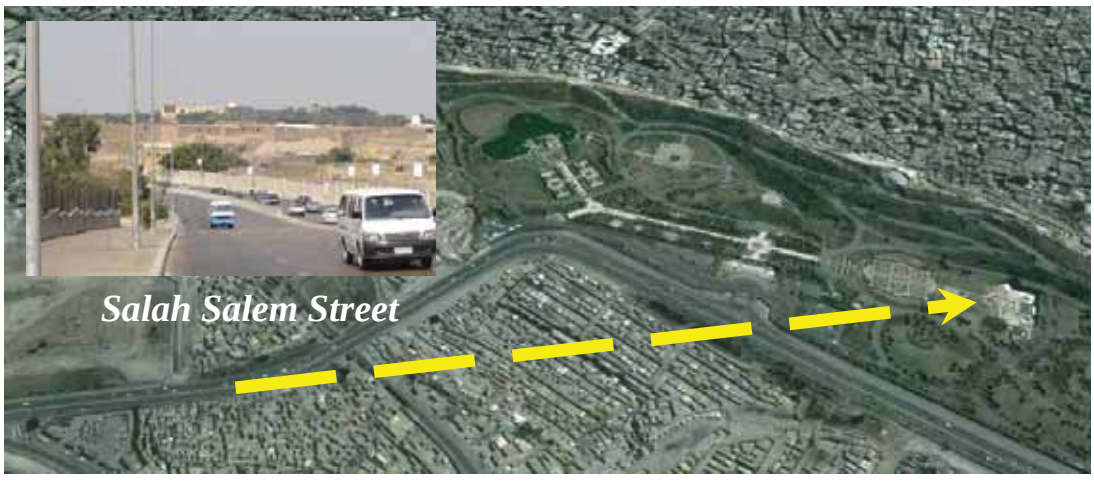
Figure 9-16: Sketches to analysis Al-Azhar park as a graphic composition

9.3.2. Layout and spatial coherence

Design of the park is linked with the surrounding area in a very obvious way, which is clear in designing the main royal promenade of the park to create a strong visual image with the Ayyubids citadel at the end of it. Most of the other functions are distributed in the layout according to the main characteristics of the site, like the viewing platform and how it use the topography of the site to create a strong visual image for the surrounding historical Cairo.

The main access to the park from Salah Salem Street is linked to the location of hilltop restaurant, which created a functional coherence between the inside and outside. Figure 9-17

The royal palm promenade and the vista of Citadel



Locational of main restaurant in the park and its connection with Salah Salem Street

Figure 9-17: Special coherence of Al-Azhar park layout [22]

9.3.3. Styling of the design

The park's conceptual design tends to make maximum and skillful use of the site location, elevated topography and unique vistas overlooking historical Cairo. Generally most of pedestrian paths follow the contours in most areas allowing for comfortable circuits throughout the entire park site.

The Park's site was designed by Sites International, an Egyptian landscape architectural firm. Most features of the Park were based on the traditional use of public spaces in Islamic contexts. This legacy can be seen in a variety of styles from different periods and different regions.

It is reflected in the *bustan*-like orchard spaces, the shaded sitting areas (*takhtaboush*) and the Fatimid archways used in the construction of Park buildings, among other elements. Persian and Timurid elements are also reflected in the water channels and fountains. Specific features of the Park include[23]:

- The royal palm promenade.
- Geometric garden.
- Southern lookout.
- Entrance fountain.
- Children's amphitheatre and stage.
- Southern lookout plaza and kiosk.
- Water cascade garden.
- Lake.
- Orchard.
- Playing fields.
- Historical wall promenade and amphitheatre.

Figure 9-18 shows examples of main landscape features in the park, and it shows the unique landscape style used in the park to create a special character to the place.

Figure 9-19 shade the light on some of the historic landscape elements used in the park, which came from the Islamic heritage used in the surrounding area.

Royal palm promenade

Geometric garden

Children's amphitheatre

Entrance fountain

Southern lookout plaza and kiosk

Water cascade garden

Lake

Historical wall promenade

Figure 9-18: Special landscape features of Al-Azhar park (Researcher)

Drinking points

Bins

Water fountain

Signs

Wood seats

Marble seats

Water features

Islamic flooring patterns

Figure 9-19: Historic landscape elements in Al-Azhar park (Researcher)

9.4. Evaluation of designed historic landscape

Determining the significance of a designed landscape depends upon conducting a systematic investigation of the history, purpose, social significance, qualities, associations, and physical characteristics of the property and using this information to establish whether or not the landscape is an exemplary representative of one of the types listed above. A typical landscape investigation should accomplish the following:

9.4.1. Obtain information

The research will start to evaluate designed historic landscape with compiling a general description and history of the property including:

- ***Dates of design and construction.***

In 1992, the Aga Khan Trust for Culture established its Historic Cities Support Program, to implement urban rehabilitation projects in different parts of the Islamic world. Cairo became its most demanding project, encompassing not only the construction of the Park but the restoration of the 1.5 kilometer section of the Ayyubid wall revealed by the removal of the accumulated rubble.

The construction period of the park took more than 10 years due to unexpected challenges which appeared during it, the excremental opening of the park was late in 2004, followed by the official opening in March 2005.

- ***Names of owners, landscape architects, designers, and administrators.***

The park used to be B.O.T[24] between AKDN and Cairo governorate till 2009. The ownership of Al-Azhar Park now is P.P.P.[25] between Cairo governorate [26] and AKDN[27], it was designed by Sites International, an Egyptian landscape architectural firm. AKDN is the responsible for the park administration under the supervision of Cairo governorate.

The three buildings (Citadel View Restaurant, Lakeside Café and entrance building) were the object of a competition between seven international and Egyptian architectural firms. The Citadel View Restaurant was designed by Egyptian architects Rami el-Dahan and Soheir Farid. The Lakeside Café project was awarded to Serge Santelli, Paris[28].

- ***Construction techniques, methods, and plant materials.***

During the construction of the park, it has been many challenges which appear in the way, which are:

A. The site was before a place for rubbish for all the surrounding area, which is not a suitable soil for either concrete construction or planting, for that all the site soil was replaced as a result of drilling for Al-Azhar tunnel project[29].

B. The existence of the three big water tanks, which must be preserved and isolated very well from the top, and use its space for open activities and light landscape structures. Figure 9-20

C. The restoration of a 1.5 kilometer stretch of the eastern Ayyubid wall, which started in 1999, is to continue until the end of 2007. AKTC has taken the lead in the restoration of the stretch of the Ayyubid Wall abutting the Park with the coordination and approval of the Egyptian Supreme Council of Antiquities.

Geometric garden

Viewing platform

Isolation under children area

Open theatre construction

Figure 9-20: Construction stage in Al-Azhar park [30]

Figure 9-21 shows the conservation techniques used to restore Ayyubid city wall adjacent to the park landscape, which was discovered during the construction of the park.

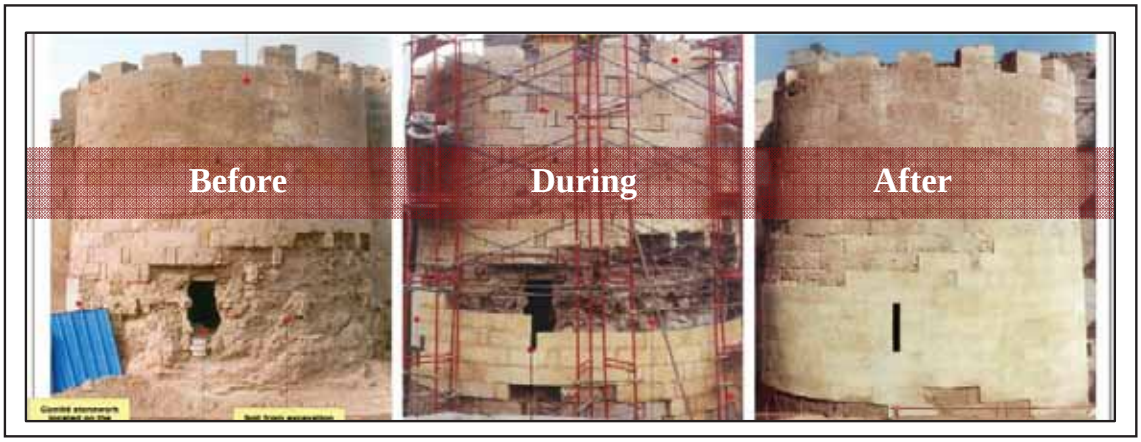


Figure 9-21: Conservation techniques used for Ayyubid city wall Al-Azhar park [31]

The realities of seasonal high temperatures, scant rainfall & desert winds imposed severe conditions on the Park's plants and trees. Specialist plant nurseries were created, both on site and outside Cairo, to identify the best plants and trees for the soil, terrain and climate. The nurseries also carried out the propagation of the necessary plants to furnish the Park – 89 varieties of trees, 51 shrubs, five sorts of grass, 14 climbers, 50 groundcover plants and 26 varieties of succulents. Over 655,000 young plants from cuttings and seed were planted. Most of lawn was planted elsewhere and brought in as turf; it required 4 metric tones of grass seed.

Figure 9-22: The lawn areas and trees in Al-Azhar park and creating shade areas [32]

Perhaps the most interesting local varieties of trees are Sycamores, Zyziphus and four types of Acacia. Other species include the *Cassia smallii* and *Sophoras arizonica* and *japonica* trees[33]. Figure 9-22

- ***Existing and previous uses.***

Previously a municipal rubbish dump (for about 500 years), approximately 80,000 truckload of debris had to be removed before construction started and in the process a 12th century Ayyubid city wall of Cairo that was built during the reign of Salah el-Din, as well as some valuable stones with hieroglyphic texts were uncovered. Figure 9-24

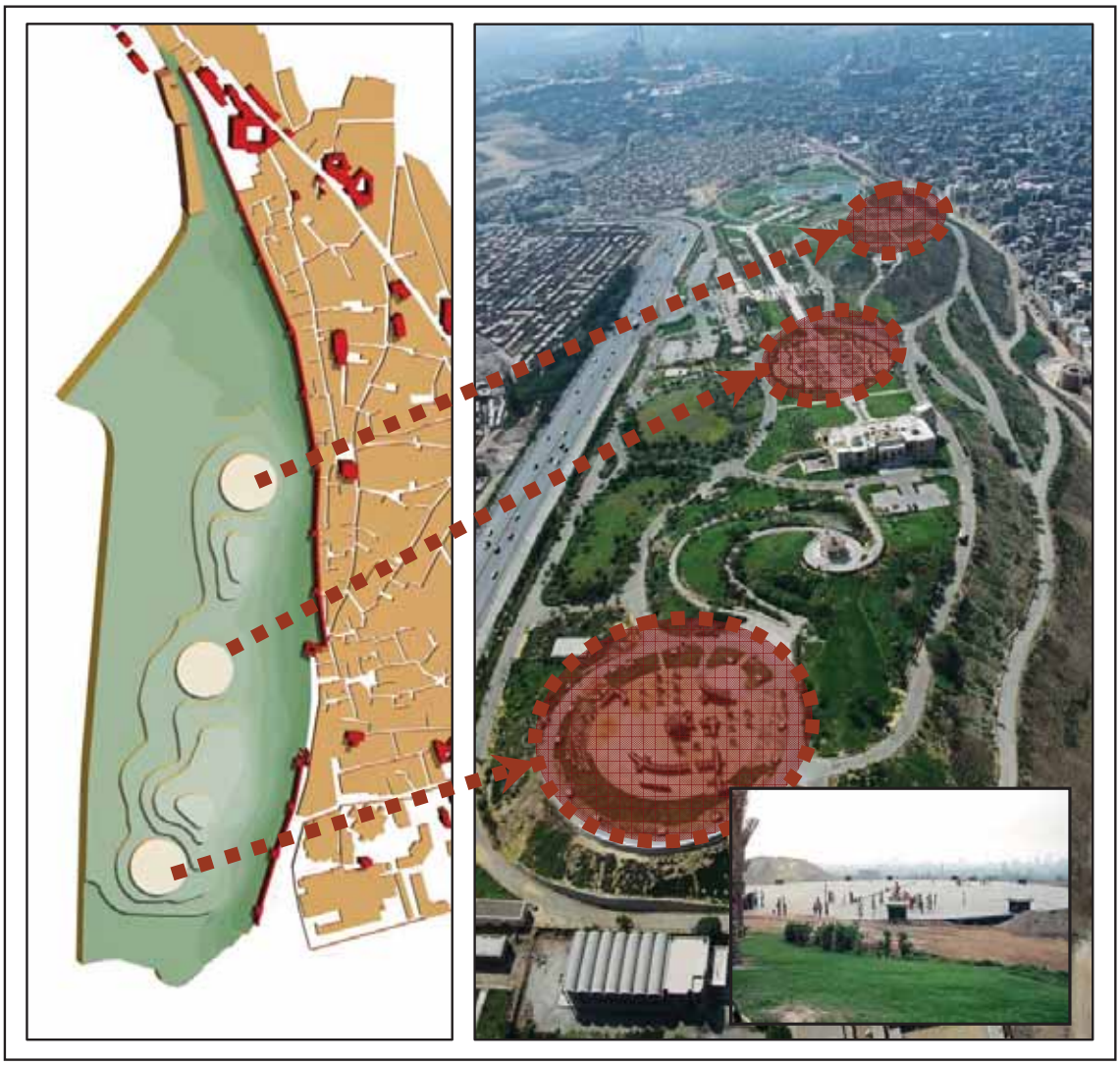


Figure 9-23: The use of existent the three big water tanks in the park site [34]

One of the challenges were in the park design is how to deal with the big water tanks founded in the site, and how the proposed uses will integrate with it. The output as shown in Figure 9-23 was very relevant to the site; all the three spots were used for an open circular space without any heavy structures, which is (children play area – geometric garden – open coffee). Figure 9-23

Figure 9-24 shows the different stages for Ayyubid city wall before starting to build the park, and after uncovering the layers of soil to reach the base of it, which was followed by conservation of this old monument to create a very unique historical promenade at the bottom level of the park, ending with an open theatre near the proposed urban plaza to the north of the children playground.

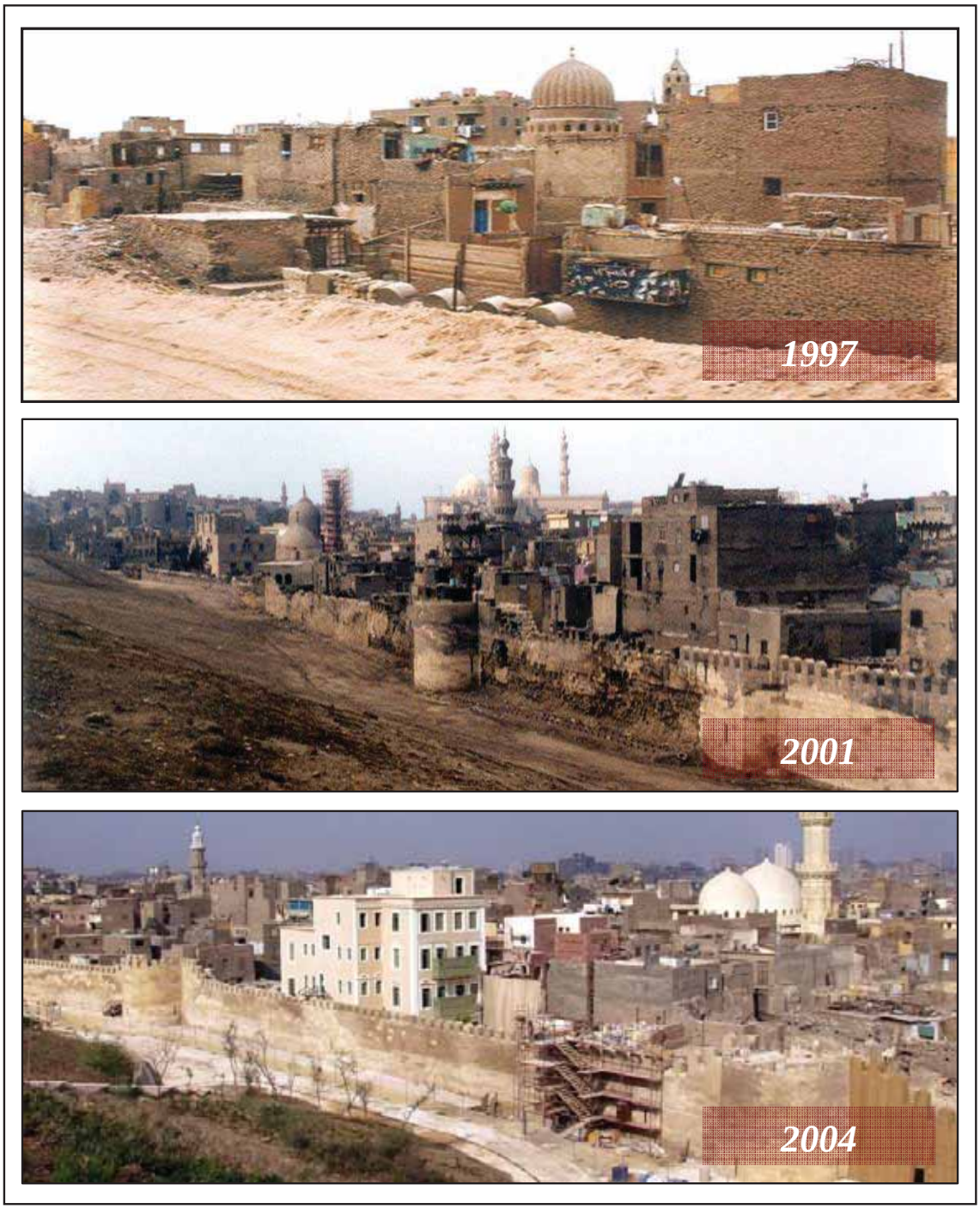


Figure 9-24: The uncovering of Ayyubid city wall during park construction [35]

9.4.2. Significance

To measure the quality of significance for the designed historic landscape in Al-Azhar Park, the research will investigate some points to evaluate it, which are[36]:

A. ***Be*** associated with events that have made a significant contribution to the broad patterns of our history.

B. ***Be*** associated with the lives of persons significant in our past.

C. ***Embody*** the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction. Figure 9-25

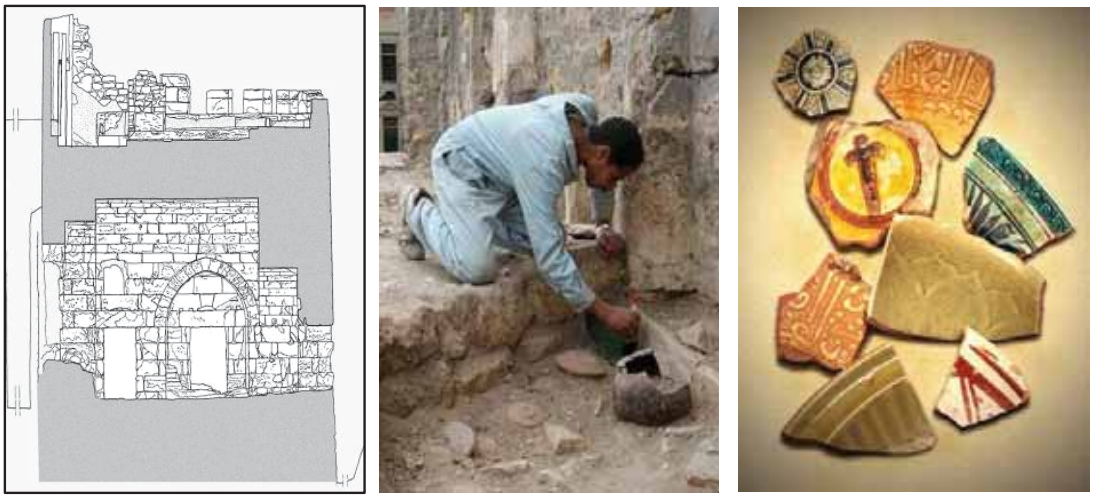
D. ***Have*** yielded, or may be likely to yield, information important in prehistory or history.

Development of landscape image near the hill top restaurant to create a significant scene associated with Islamic culture and lives of people live near the park

Figure 9-25: Evaluating significance in the designed historic landscape in the park [37]

All buildings have masonry bearing walls with a high-sand-content limestone cladding, marble and stone pavements, and marble and ceramic tiles. All the Park buildings rest on piles or rafts. Nearly all materials used are of Egyptian origin, as is all the furniture, mostly made by local carpenters in Darb al-Ahmar.

Figure 9-26 shows some examples for highly skilled craftsmanship and the use of local materials.



The archaeological investigation near tower No. five in the discovered Ayyubid wall next to the park

The Implementation process to restore Ayyubid wall, starting with cutting the local stones from the surrounding area to use it.

Figure 9-26: The presence of highly skilled craftsmanship or use of particular materials in the construction of Al-Azhar Park [38]

9.4.3. Integrity

The clearest evaluation of integrity is based on the presence of identifiable components of the original design. To evaluate the historic integrity of a designed landscape, it is useful to compare the present appearance and function of the landscape to its historical appearance and function. The relationship between present function and that intended or actually in use during the period of significance may also affect the integrity of a designed historic landscape.

In evaluating the integrity of historic landscapes, certain aspects may be more difficult to assess or they may present particular issues that should be considered.

Vegetation

Figure 9-27 shows how it is important to the integrity of landscape to be completed as the design, the royal promenade is completed and identical to the design sketches while the symmetrical gardens near the lake side is not completed yet.

Royale promenade *Symmetrical gardens*

Figure 9-27: Vegetation in Al-Azhar Park between design and construction [39]

Architectural features

The architectural design of buildings in the park has a high level of integrity with the historic landscape features, either designed inside the park or the historic scenery around it. Most of the design vocabularies for the both buildings are derived from the history in old Cairo. Figure 9-28

Figure 9-28: The integrity between architecture features in Al-Azhar Park and historic landscape around it [40]

9.4.4. Easy to use

Table 9-1 list some of the points in the park which investigate the idea of how it is easy for the users to use the park, either from observation or by unplanned conversation with some of the users.

Table 9-1: Evaluating historic landscape in Al-Azhar Park – easy to use (researcher)

From observation	Users conversation
• The park layout has a very strong visual image, and its contour levels helps to make it easier to explore. • The signs are distributed well all over the park, except there are not enough signs in the pedestrian paths near the Ayyubid wall. • It is obvious that Al-Azhar park users are distributed more around the spaces in the day light, while at night they usually likes to be in certain places because of insufficient light in all the layout.	• From asking a few samples of people about what they remember of the park, most of them could recall many of the park zones. • Users are satisfied with the signs; they find it enough because they mostly don't use the area near the historic wall due to feeling unsafe. • Among the chosen sample to ask randomly, most of it feels more comfortable to be in the park around sunset, to avoid high temperature and still enjoying the last of day light.

Figure 9-29 shows some examples of the signs used in the park, either as a location map or directions or some information about the planting used in the park.

Figure 9-29: Samples of the signs used in Al-Azhar park (Researcher)

9.4.5. Comfortable

As a tool for improving the aesthetic and overall safety / comfort of the neighbourhood, the Al-Azhar Park development project includes a microcredit program for neighbouring residents to restore dwellings and improve existing / found new businesses.

Table 9-2 list some of the points in the park which confirm the idea of comfort for the users, either from observation or by unplanned conversation with some of the users.

Table 9-2: Evaluating historic landscape in Al-Azhar Park – Comfortable (researcher)

From observation	Users conversation
• The design of the park took into consideration the handicapped ramps to connect between all the main spaces beside the stairs. • The users from the neighbourhood feel that the park is their own space, it was notices from the way they care about keep it clean after sitting on the grace.	• Users find it more comfortable to use the ramps rather than steps, especially the families with their kids. • From asking local users live in Aldarb Elahmar, they all agree that being in the park feels like they are staying in their home garden.

Figure 9-30 shows some of the ramps used in the park, either in the main entrance or inside the park beside the stairs in the main space by the entrance.

Handicapped ramps *ramps in main entrance*

Figure 9-30: Comfortable historic landscape design in Al-Azhar park (Researcher)

9.4.6. Offers choices

Table 9-3 list some of the points in the park which confirm the idea of offering choices for the users, either from observation or by unplanned conversation with some of the users.

Table 9-3: Evaluating historic landscape in Al-Azhar Park – offers choices (researcher)

From observation	Users conversation
• Some of pedestrian paths in the park are designed to offer choices for the users towards different activity areas. • Seating styles within the park are designed to suit all the different type of users either individuals or families or even large groups, and it is distributes around the park according to the suggested kind of activities to achieve in the space. • Provide different levels of restaurants and points to sell fast food.	• The design of pedestrian paths at some points without using the signs for destination was a reason for some confusion for users. • At some points in the park, the users hope to find different types of seating styles, especially near the lake side, all the seats are not designed for families or groups, only for 2 or three persons allocated near the lake. • The users are happy with all the choices to serve food and drinks along the park areas.

Figure 9-31 shows some examples for pedestrian paths in the park designed to offers choices for the users, while Figure 9-32 highlight the different seating styles in the park to offer all the choices.

Figure 9-31: Pedestrian paths which offer choices for the user in the park (Researcher)

Seats in the main entrance – offer a place for groups to gather

Seats along the main promenade – offer a semi private place for families

Seats near the children play area – offer a place for families to observe children

Seats near the lake – offer a place for small groups to enjoy the scenery

Figure 9-32: Different seating styles distributed in the park to offer choices (Researcher)

9.4.7. Safe

Table 9-4 list some of the points in the park which clarify the idea of safe landscape for the users, either from observation or by unplanned conversation with some of the users.

Table 9-4: Evaluating historic landscape in Al-Azhar Park – Safe (researcher)

From observation	Users conversation
• Along the paths near the slopes beside the Ayyubid wall, the planting trees create an edge for safety.	• Although it is safe to walk along these paths, users don't usually use it because of inappropriate behaviour for Couples users.
• There are some places in the park lack adequate lighting at night, creating a sense of insecurity, especially around the lake.	• The people visiting the park at night always avoid the areas with low lighting and usually use the main paths.
• Because of the incomplete work of landscaping next to the Ayyubid wall, there are some places isolated visually.	• Most of the users don't wish to explore the area near the wall, because they don't feel enough safe in hidden spaces.

Figure 9-33 shows some examples for pedestrian paths in the park designed to increase the safety for the users.

Planting trees to create an edge

hidden paths down to the wall

Figure 9-33: Pedestrian paths near the Ayyubid wall and its relation to safety feeling (Researcher)

9.4.8. Embrace diversity

Creating this park entailed restoring several historical monuments in the adjacent Darb Al Ahmar community and included social programs for this poor, overpopulated neighbourhood, which used to be frequented by drug dealers. These programs include employment, training and healthcare services, and were undertaken with the belief that the people of Cairo are the key to the park's sustainability.

Table 9-5 list some of the points in the park which clarify the idea of embrace diversity for the users, either from observation or by unplanned conversation with some of the users.

Table 9-5: Evaluating historic landscape in Al-Azhar Park – Embrace diversity (researcher)

From observation	Users conversation
• The picnic meadow area near the lake is a good example of how to design a space to hold all diverse kinds of activities. • Distributing the different activities along the park was successful to create the good environment for all kinds of behavioural patterns.	• The lake is always the major likable spot for all users, as it has a good space for different types of gathering. • People are usually using the space according to their preferable activities, either they want to relax, walk or enjoy history.

Figure 9-34 shows some examples for the different types of activities which took place in the park.

Figure 9-34: Diversity in behavioural patterns along the park layout (Researcher)

9.5. Reading the experiential landscape in Al-Azhar Park

The main purpose of producing a composite experiential landscape map is to reveal in diagrammatic form the spatial distribution of certain kinds of human experiences across the space. To draw these maps, the research will start to investigate user's behaviour an interaction with historic landscape features through some steps, which are:

- *Non-participant observation.*
- *Conversation.*
- *Semi structures interviewing.*
- *Questionnaire results.*
- *Questionnaire results correlation.*

9.5.1. Non-participant observation

It is one of the effective ways to record people's behaviour in a space, for the purpose of evaluative methodology in the research, many visits were organized to observe users attitude and reactions in the park spaces, these visits were during all the day times and distributed within normal days and weekends. Figure 9-35

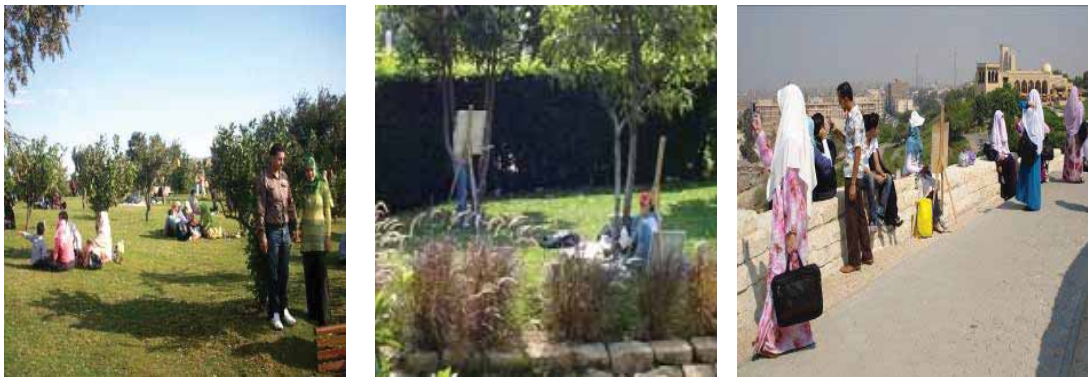


Figure 9-35: Examples for observation visits to the park (Researcher)

9.5.2. Conversation

The performance of park facilities were evaluated through meeting with people and discuss their opinions about it[41], these interviews were unstructured and all around park zones.

The results for both observation and conversation with users were showed previously in this chapter (9.4).

9.5.3. Semi structures interviewing

To investigate the user behaviour and preferences in the park, the research will conduct a questionnaire to apply on the park users. In order to calculate the size of the samples to work on, it was a must to analysis the number of visitors to the park since it was opened late 2004 to 2007, then to predict the number in 2009 based on the available data and expectations from the park administrators.

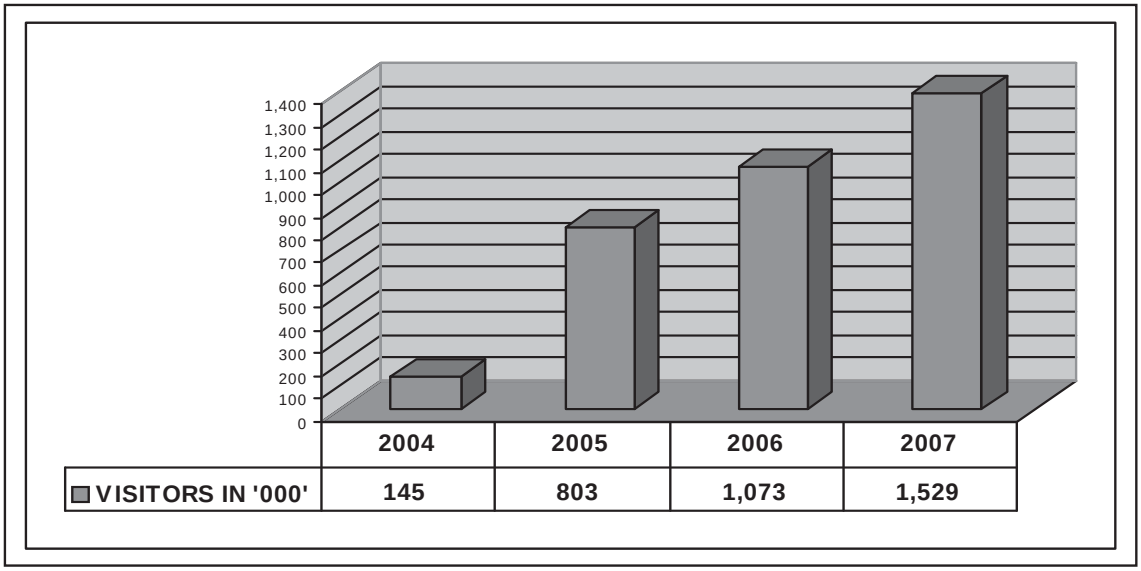


Figure 9-36: Visitors in Al-Azhar park from 2004 to 2007 [42]

Figure 9-36 shows the visitors till 2007, which is 1.529 million people, expected to reach 2,500 million by the end of 2009. Based on this assumption the daily visitors number enter the park is almost 7000 persons, taking in consideration the huge number of visitors in special days like EID and summer weekends.

Table 9-6: Calculating sample size for the questionnaire in Al-Azhar Park [43]

	Average	Chosen
Confidence level	(90-99) %	**95 %**
Population size	7000	**7000**
Margin of error	5-10	**9**
Sample size		**120**

Table 9-6 is the result of using the special software designed to calculate sample size[44], after choosing the other variables in the table the number of sample will be out, these variables are:

- Confidence level[45].
- Margin of error[46].

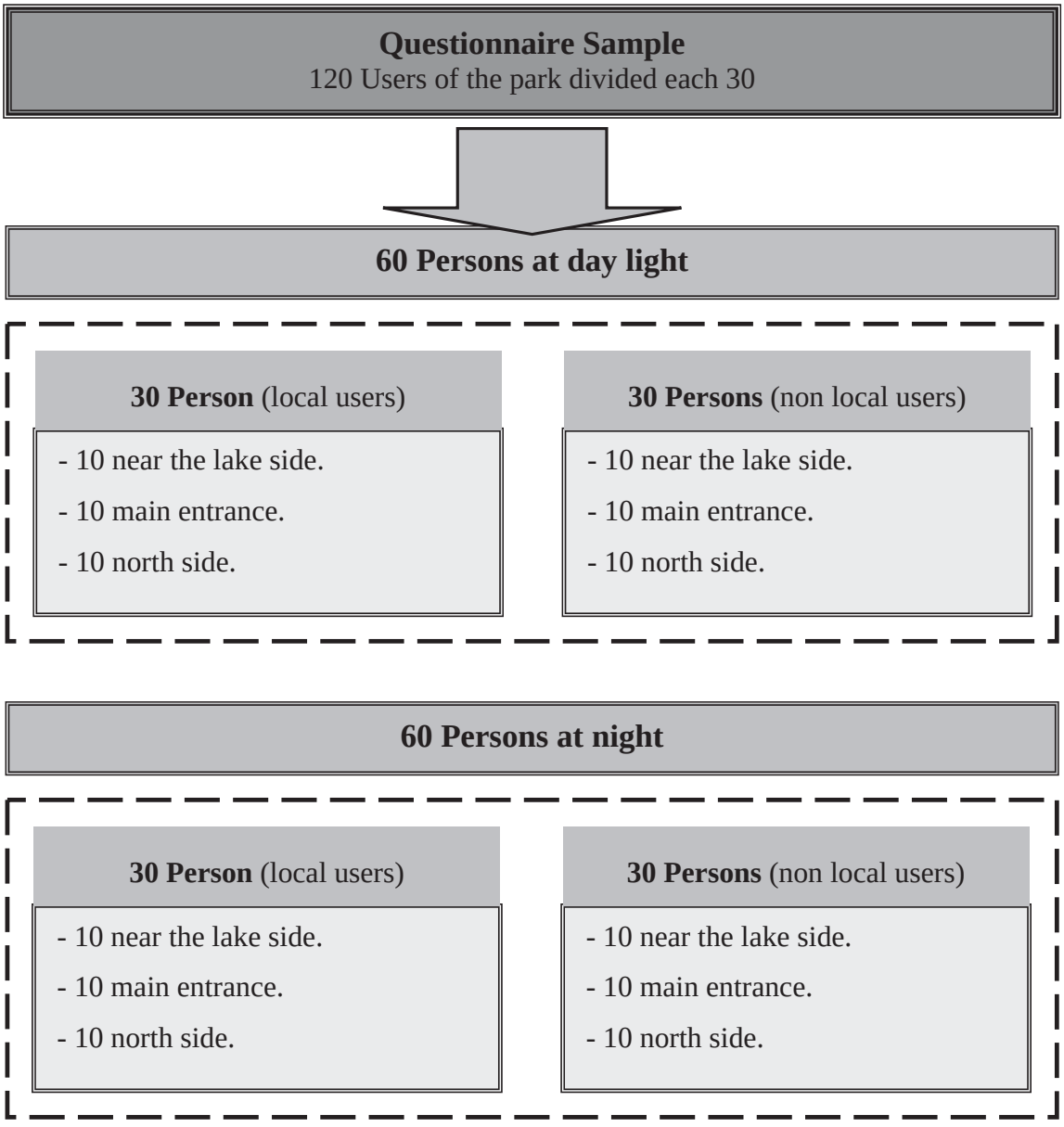


Figure 9-37: Method to choose the questionnaire sample in Al-Azhar Park (Researcher)

Figure 9-37 describe the way used to distribute the 120 sample between local user and non local user, also according to the time of visiting either in the morning or night, and the sample designed to be all around the park layout (lake side – main entrance – north side).

9.5.4. Questionnaire results

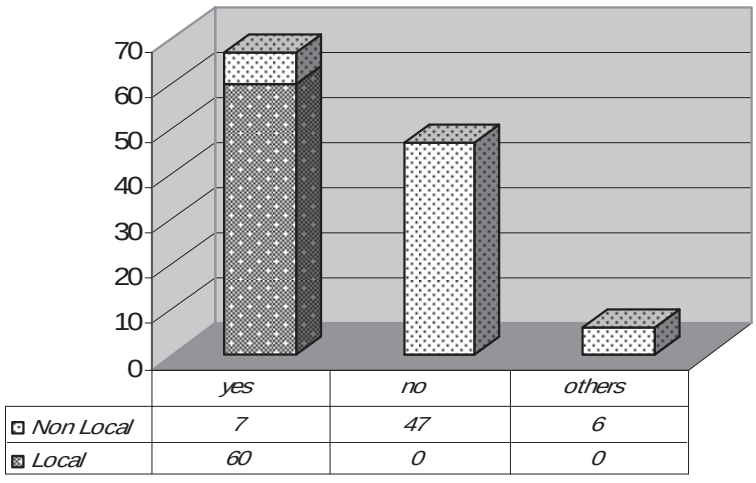
The users survey was divided into five main parts to examine the previous discussed points in this chapter, these parts are[47]:

1. General questions about the park.
2. Park accessibility to the community.
3. Comparative analysis of park design.
4. Evaluation of designed historic landscape.
5. Types of activities inside the park.

- **General questions about the park.**

Table 9-7 shows the results for the first part of these investigations for both local and non local users of Al-Azhar Park, which test some general questions about the park.

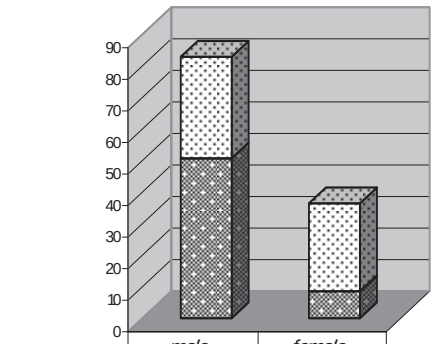
Table 9-7: Results for the general questions included the user's questionnaire in Al-Azhar Park

1 - General Questions	
1.1.	***Do you live near the park?***
Result Chart	
Notes	The sample was distributed among local and non local users to analysis the difference in perception and dealing with historic landscape elements according to cultural background.

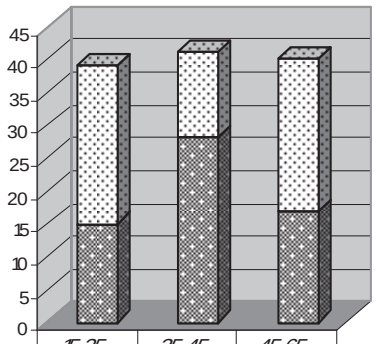
1 - General Questions

1.2. *Please Tick the Relevant Box, gender & age range*

Result Chart



	male	female
Non Local	32	28
Local	51	9



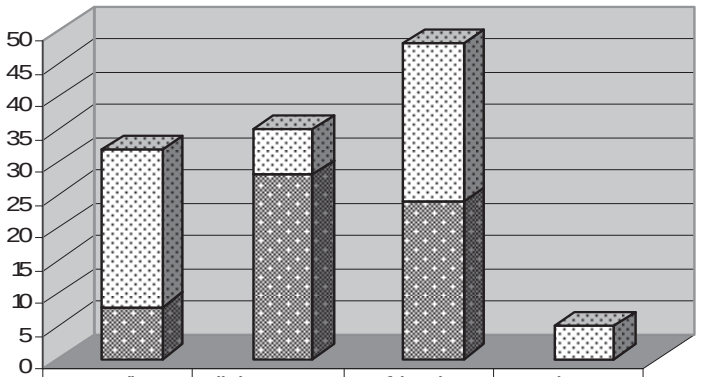
	15-25	25-45	45-65
Non Local	24	13	23
Local	15	28	17

Notes

Were taken into consideration that the sample is distributed between men and women equally whenever possible, particularly in non local users, also in age groups within it.

1.3. *From where you heard about the park*?

Result Chart



	media	living near	friends	others
Non Local	24	7	24	5
Local	8	28	24	0

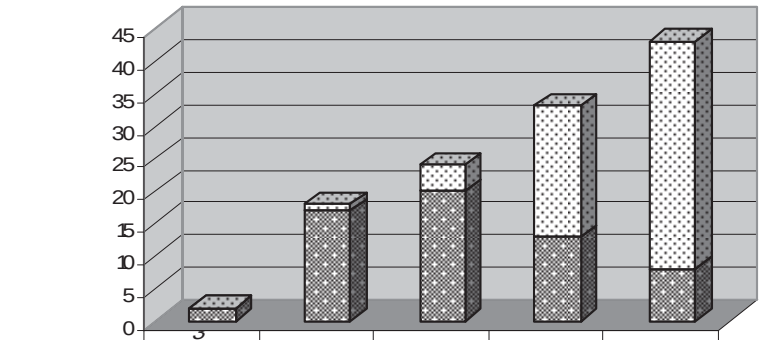
Notes

It is clear in the results that the main source people heard about the park were from friends who visited it before (43.33%), then equally from media or either living near from local users or people passing by the park from Salah Salem street.

1 - General Questions

1.4. How often do you visit Al-Azhar Park average in a year?

Result Chart



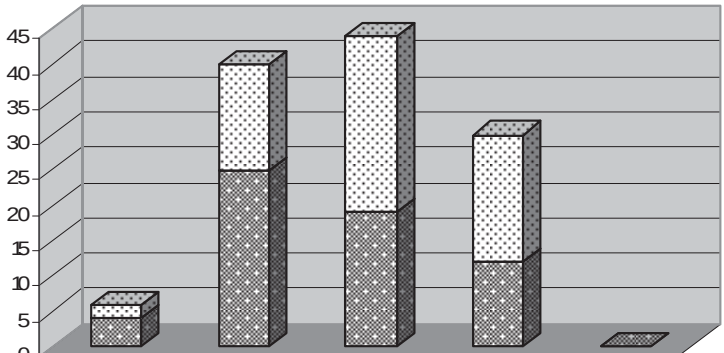
	3 times/week	weekly	frequently	monthly	infrequent
Non Local	0	1	4	20	35
Local	2	17	20	13	8

Notes

35.83% of the sample visits the park infrequent, within the local users 33.33% visit it frequently and 28.33% visit it weekly, and non local users are visiting infrequent or monthly.

1.5. Usually, with whom you come to the park?

Result Chart



	alone	family	friends	all	others
Non Local	2	15	25	18	0
Local	4	25	19	12	0

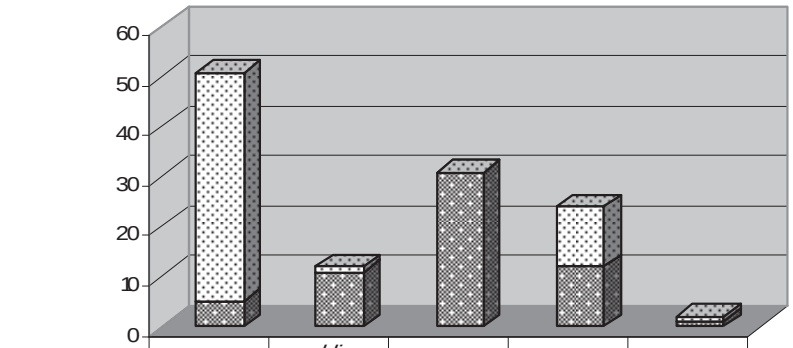
Notes

Both local and non local users usually come to the park with either family or friends, or both of them, very few who come alone, which might show that park don't have much individual activities to cope with their needs.

1 - General Questions

1.6. How do you come to the park?

Result Chart



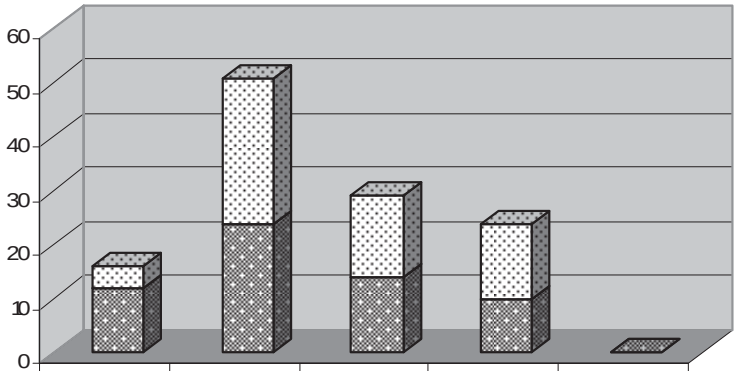
	car	public transport	on foot	taxi	others
Non Local	46	1	0	12	1
Local	5	11	31	12	1

Notes

From the results, local users are mostly come to the park on foot, taxi or public transport. While almost all of non local users are coming by car or taxi.

1.7. At what time in the day you like to visit the park?

Result Chart



	morning	afternoon	at night	it depends	others
Non Local	4	27	15	14	0
Local	12	24	14	10	0

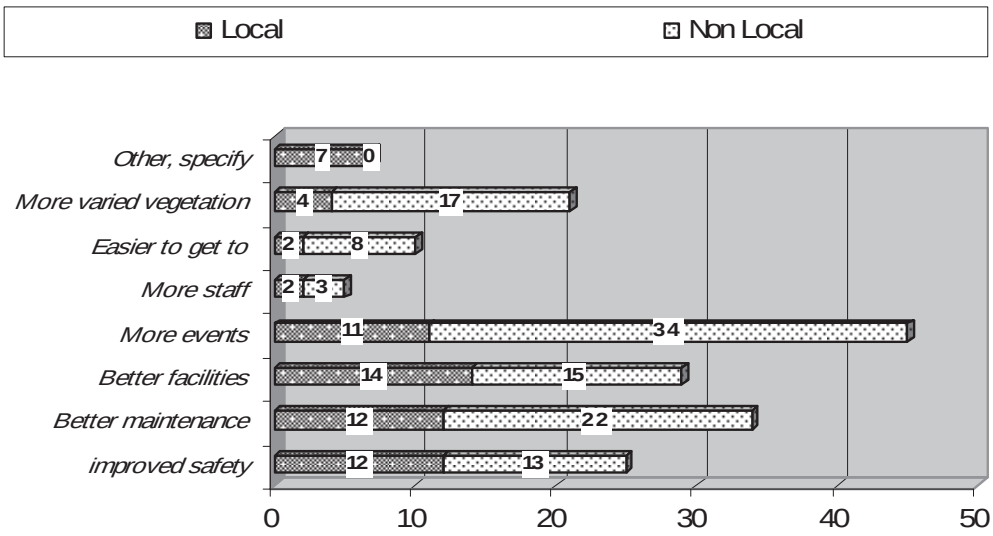
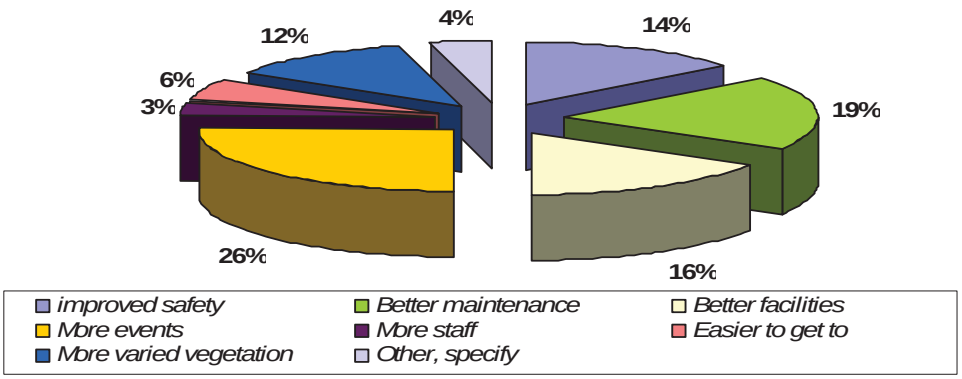
Notes

42.5% of all sample prefer to visit the park at afternoon, it is distributed among local and non local equally, then 24.17% like to visit the park at night. The research will try to investigate the reason later in analyzing the questionnaire.

- **Park Accessibility to the community.**

Table 9-8 shows the results for the second part of these investigations for both local and non local users of Al-Azhar Park, which is related to accessibility of park to the surrounding community.

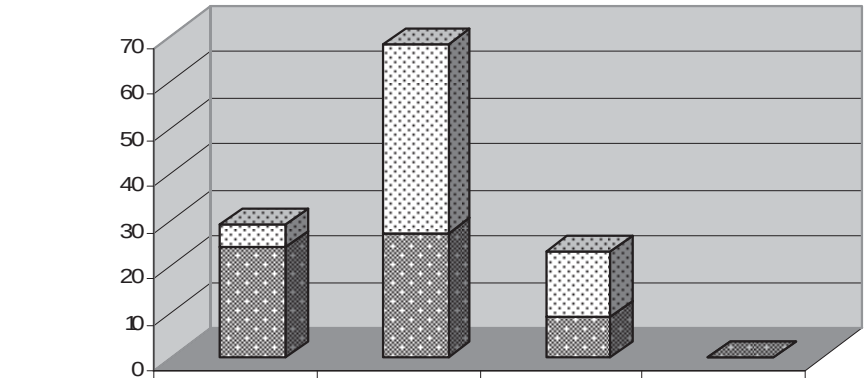
Table 9-8: Results for Park accessibility to the community included the user's questionnaire in Al-Azhar Park

2 – Is the park accessible to the community?	
2.1.	***What would encourage you a lot to visit Al-Azhar Park?***
Result Chart	
Percentage %	
Notes	Almost 60% of locals choose better facilities, improved safety, better maintenance and more events. While the majority of non locals 30.36% pick more events then better maintenance 19.64%.

2 – Is the park accessible to the community?

2.2. What do you think about the entry ticket fees to visit the Park?

Result Chart



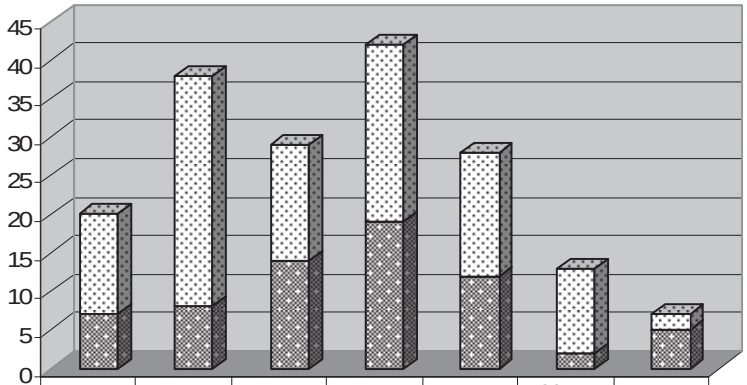
	Expensive	normal	cheap	other
Non Local	5	41	14	0
Local	24	27	9	0

Notes

56.67 % of the sample answer that the ticket price is normal, the majority among this percentage is from Non local users. 24.17 % see it is expensive, almost from local users who come frequently to the park. 19.16 % says it is cheap.

2.3. Types of facilities could encourage you to visit the park?

Result Chart



	Toilets	Restaurants	Shelters	Children play area	Sport area	More information's signs	Other, Specify
Non Local	13	30	15	23	16	11	2
Local	7	8	14	19	12	2	5

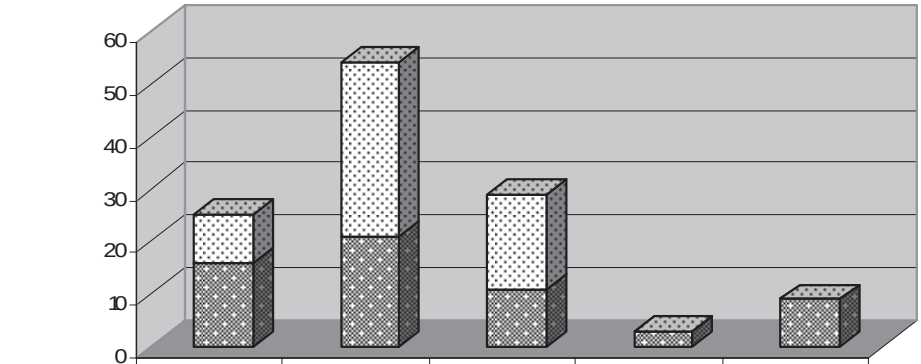
Notes

23.73% choose children play area, divided equally between local and non local users. 21.47% pick restaurants, especially from non local users. 16.38% choose shelters, and15.82% choose sports area, equally from both local and non local users.

2 – Is the park accessible to the community?

2.4. ***Your overall evaluation for the park with its diversity of activities and cultural events?***

Result Chart



	Excellent	Good	Average	Poor	Others
Non Local	9	33	18	0	0
Local	16	21	11	3	9

Notes

45% sees the park is good, 24.17% thinks it is average, while 20.83% of the sample rank the park as excellent. Only 2.5% choose poor, and 7.5% don't know how to evaluate it, all of them are from local users.

2.5. ***What are your suggestions to make Al-Azhar park a better place?***

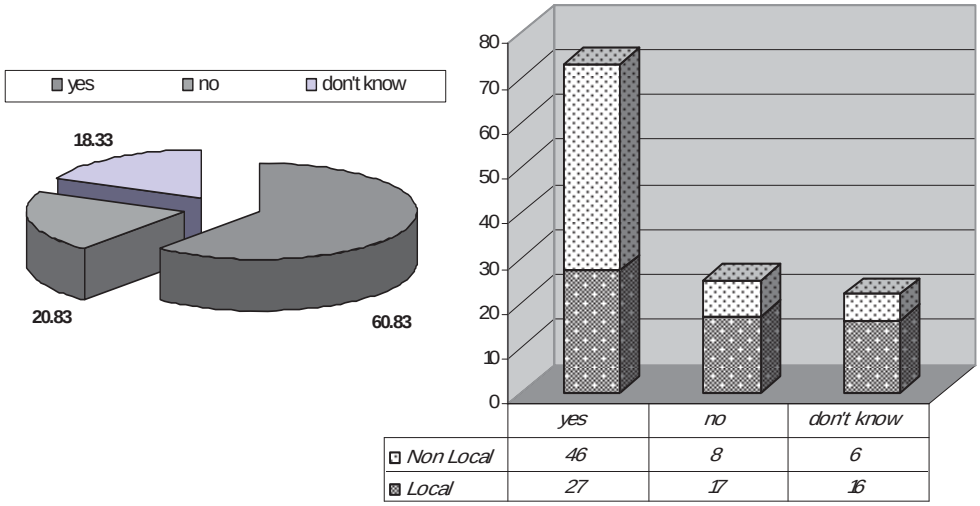
Results

The people suggestions to make the park a better place was mainly focused on some points such as:

- Designing a pedestrian bridge to cross Salah Salem street in front of the main entrance.

- For people who visit the park frequently, they wish if there is a membership entry card for the park.

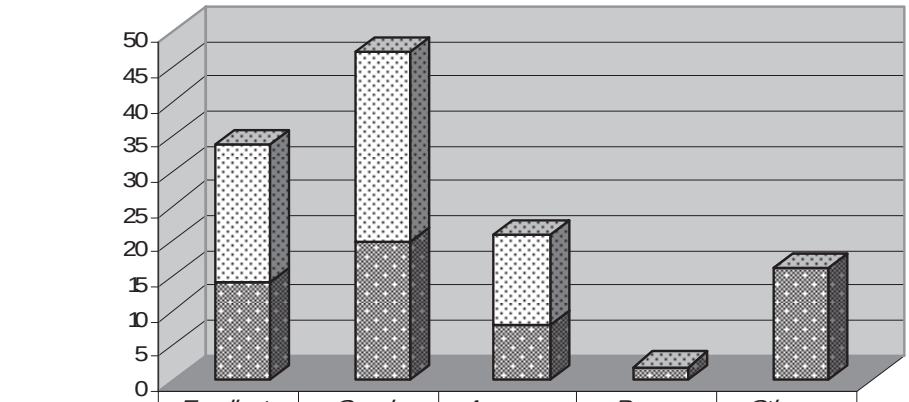
- Connecting the park more to the local community as it was, and organizes exhibitions for local crafts.

2 – Is the park accessible to the community?	
2.6.	***If there is a plan to develop the design of AL-Azhar Park, do you like to share in it? And how?***
Result Chart	 yes / no / don't know Non Local: 46 / 8 / 6 Local: 27 / 17 / 16
Notes	60.83 % of the sample is willing to share to develop the park, while 20.83 % didn't want to be involved, and the rest 18.34 % pick don't know answer. Within the users who choose they want to share in developing the park, the majority were from non local users, and local people were the majority as well from the percentage who choose not to share. People who are willing to share in park developing choose some ways to be involved, such as group questionnaire and conversations, and changing uses in the park zones according to people needs. For users who choose not to participate in park developing, they explain that it is because they don't come to the park frequently, or either they are not interested.

- **Comparative analysis of park design.**

Table 9-9 shows the results for the third part of these investigations for both local and non local users of Al-Azhar Park, which test some aspects for comparative analysis of park design, and how is the users perceive the layout.

Table 9-9: Results for comparative analysis of park design included the user's questionnaire in Al-Azhar Park [48]

3 – Comparative analysis of park design	
3.1.	***What is the best thing you like in Al-Azhar Park?***
Answers	Some of users answers were : • The historic surroundings and how it is matching with the history of the area. • The varied vegetation used in the park. • The area around the lake. • It is the first open space that succeeded to achieve harmonization between the different social classes. • A lot of open green area. • The social activities at night, with the amazing and unique atmosphere.
3.2.	***Your evaluation for the park with its social and historical context?***
Result Chart	

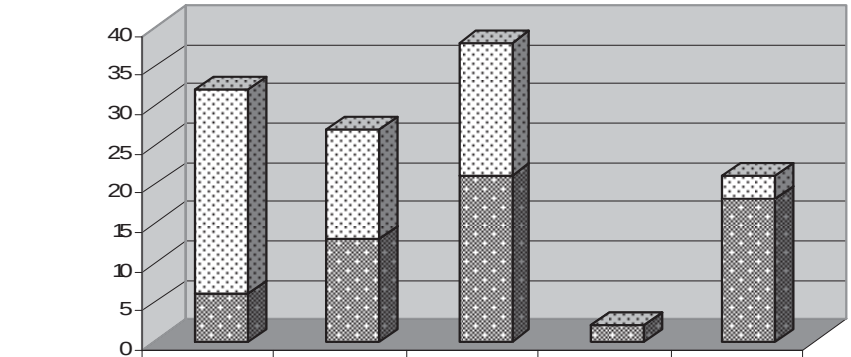
	Excellent	Good	Average	Poor	Others
Non Local	20	27	13	0	0
Local	14	20	8	2	16

Notes	39.17% evaluated the park is Good, 28.33% of sample thinks it is excellent, and 17.50 % answered it is average. While 13.33 % didn't know how to evaluate the park, and only 1.67 % thinks it is poor when it is evaluated with social and historical context.

3 – Comparative analysis of park design

3.3. ***What is most important from the following features to the historic character of the Park?***

Result Chart



	Restaurants buildings	Water features	Using stones	More	Don't know
Non Local	26	14	17	0	3
Local	6	13	21	2	18

Notes

31.67 % believe that using stones what gave the historic theme to the park, and 26.67 % answered it is the architectural character for the restaurants buildings, while 22.50 % choose water features. Yet 17.50 % don't know what is the main reason.

3.4. ***Can you allocate these design components of the park on the following layout?***

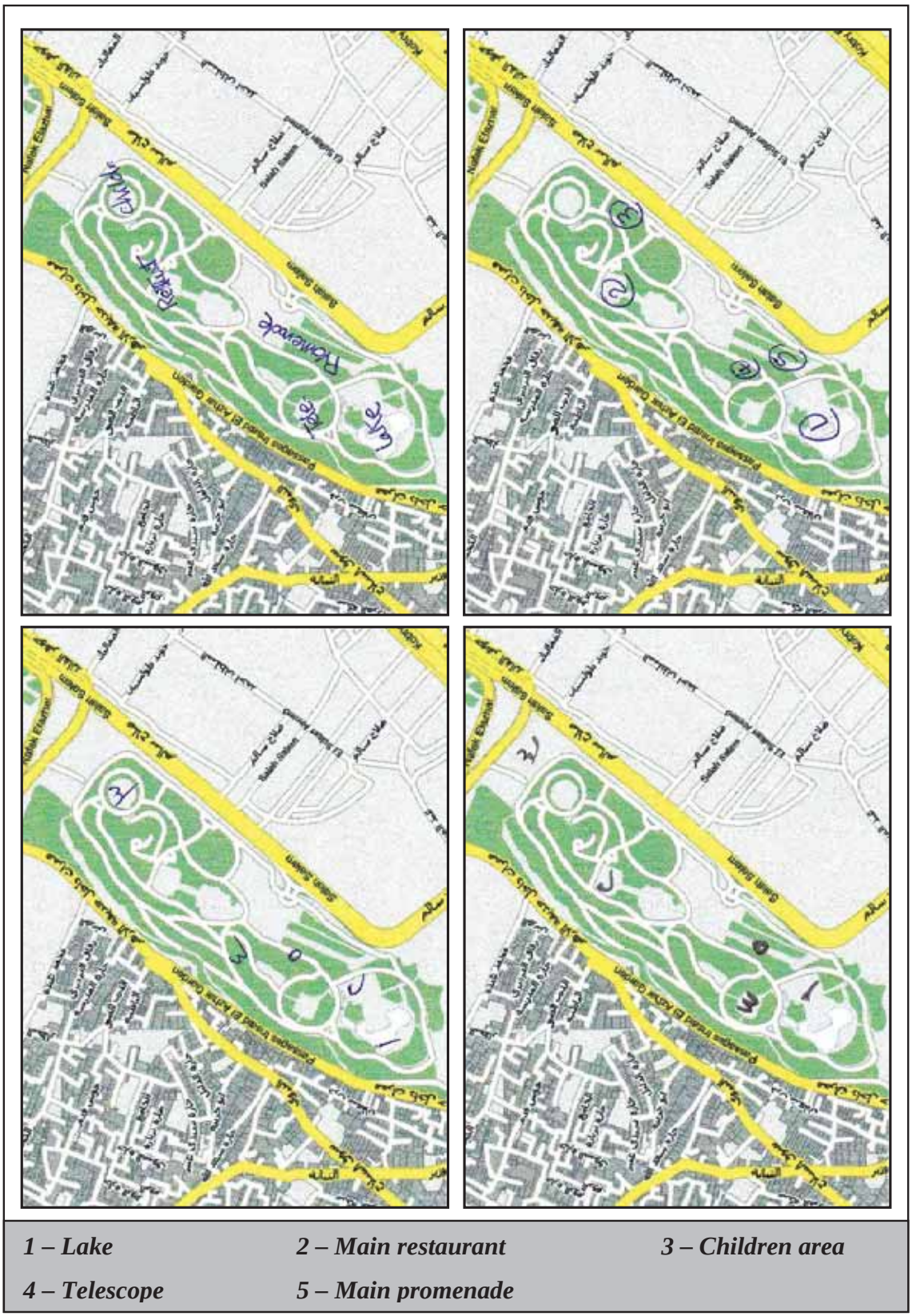
1 Lake **2** Main restaurant **3** Children area

4 Telescope **5** Main promenade

Results

From the users who answered this questions, their outcomes mainly can be addressed in few points:

- The majority among user's replies managed to locate the main promenade and the lake side.
- No one manage to locate the telescope spot in the park layout, although they have been there many times before.
- Only families among the users groups who could allocate the children's play area.
- The main restaurant was easily allocated from a large number of users, although some of them thought that lake side restaurant is the main one.



1 – Lake	***2 – Main restaurant***	***3 – Children area***
4 – Telescope	***5 – Main promenade***	

Figure 9-38: Samples for users answer to allocate some design components of Al-Azhar park on a map

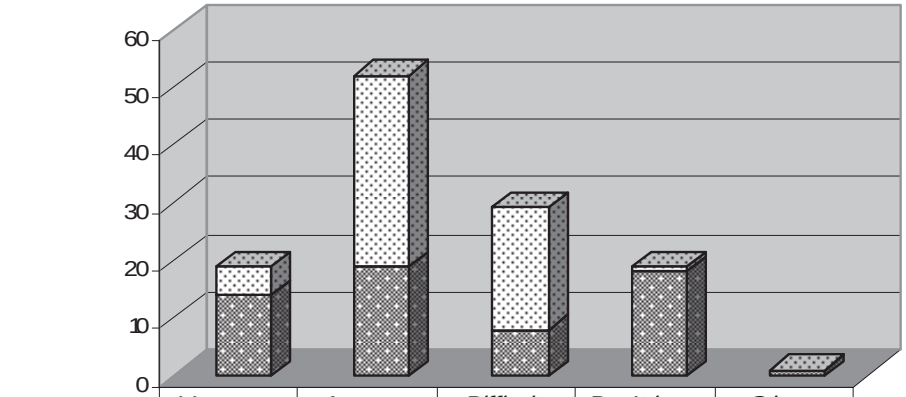
- **Evaluation of designed historic landscape.**

Table 9-10 shows the results for the fourth part of these investigations for both local and non local users of Al-Azhar Park, which evaluate the designed historic landscape elements used in park design, and how is the users perceive and interact with it.

The questions suppose to cover some points in the landscape perception process, which are:

- Exploring historic landscape facilities in the park.
- Seating areas & shelters.
- The most areas within the park they feel safe inside it.
- The most thing missing in the park

Table 9-10: Results for designed historic landscape evaluation included the user's questionnaire in Al-Azhar Park

4 – Evaluation of designed historic landscape	
4.1.	***How much it is easy to explore landscape facilities in the park?***
Result Chart	

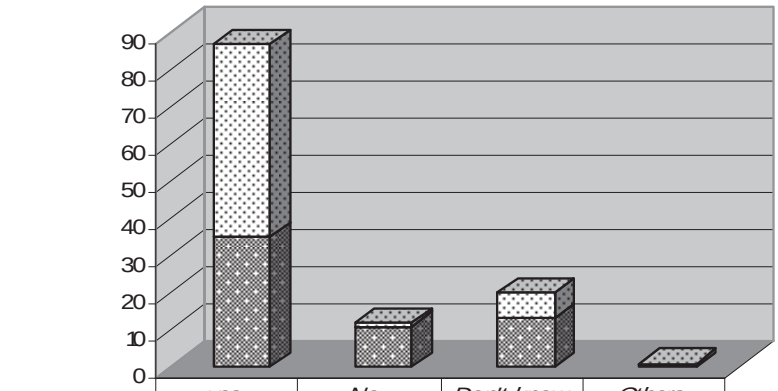
	Very easy	Average	Difficult	Don't know	Others
Non Local	5	33	21	1	0
Local	14	19	8	18	1

Notes	43.33 % choose it is average to explore landscape facilities in the park, and 24.17 % thinks it is difficult, especially among non local users. Meanwhile 15.83 % thinks it is very easy, and only 15.83 % don't know how to evaluate it.

4 – Evaluation of designed historic landscape

4.2. Are there enough seating areas in the park?

Result Chart



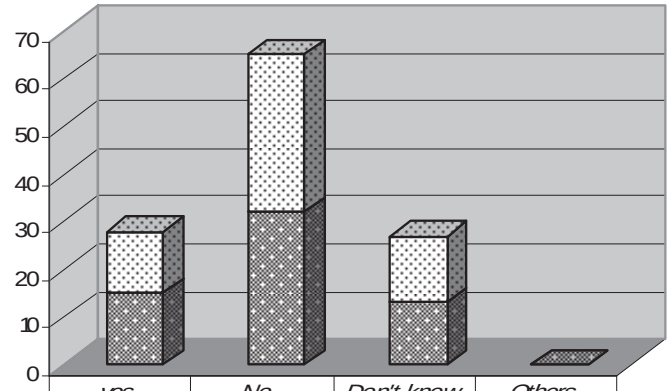
	yes	No	Don't know	Others
Non Local	52	1	7	0
Local	35	11	13	1

Notes

72.50 % from the sample choose the answer YES that the park have enough seating areas, and 10 % pick NO answer, while 16.67 % didn't know the answer. Only one person choose Others, he explained that it is not enough only in Big Weekends.

4.3. Are there enough Shelters in the park?

Result Chart



	yes	No	Don't know	Others
Non Local	13	33	14	0
Local	15	32	13	0

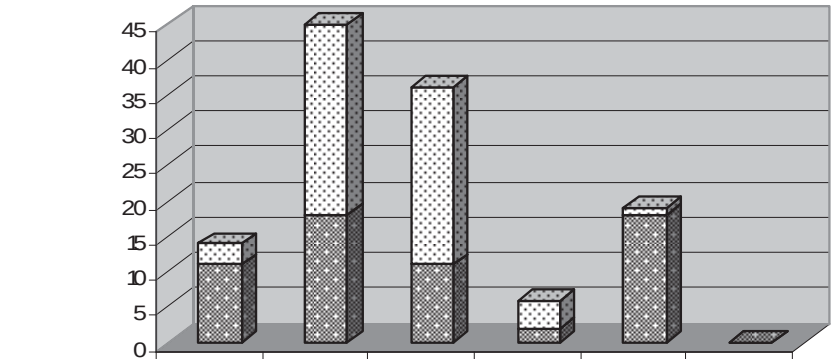
Notes

54.17 % answered that there are not enough shelters in the park, and 23.33 % choose YES answer, while 22.50 % didn't know which answer to pick.

4 – Evaluation of designed historic landscape

4.4. How do you feel about the information signs in the park?

Result Chart



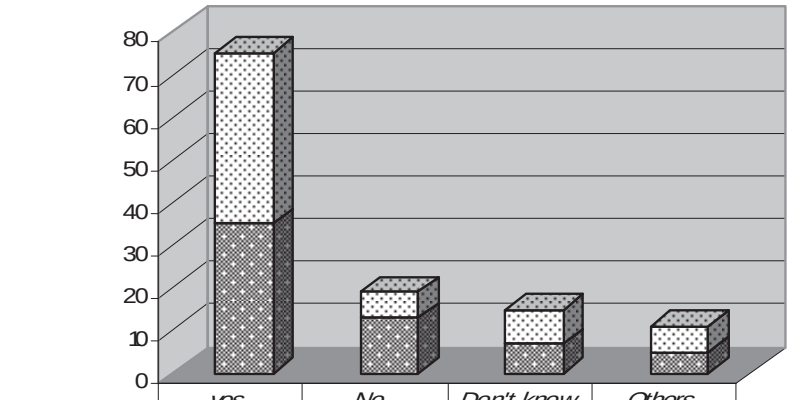
	Very satisfied	Satisfied	Not enough	Not happy	Don't know	Others
Non Local	3	27	25	4	1	0
Local	11	18	11	2	18	0

Notes

37.50 % are satisfied with the information signs in the park, while 30 % thinks it is not enough, and 15.83 % don't know the answer, while 11.67 % are very satisfied with it. Only 5 % are not happy with the information signs around the park.

4.5. Do you feel safe walking around the park?

Result Chart



	yes	No	Don't know	Others
Non Local	40	6	8	6
Local	35	13	7	5

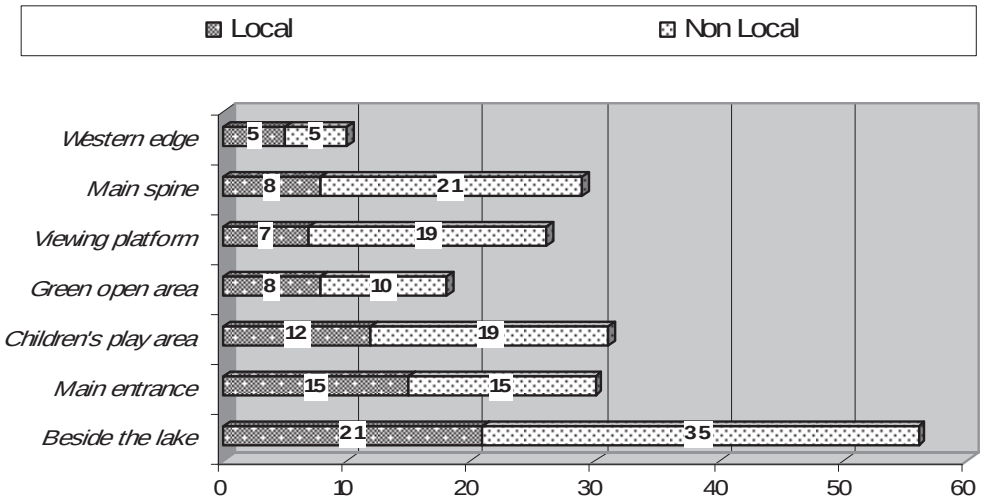
Notes

62.50 % from the user's answers feels safe walking around the park, and 15.83 % don't feel safe, while 12.50 % didn't know the answer. Only 9.17 % choose Others, they explained it that they feel safe all around except on some areas like western edge.

4 – Evaluation of designed historic landscape

4.6. ***If answer Yes to 4.5., what is the most area inside the park you feel safe in it?***

Result Chart



Notes

28 % feels safer beside the lake, 15.50 % choose children's play area, and 15 % pick the main entrance, 14.50 % choose main spine. 13 % feels safe in viewing platform point, while 9 % choose green open area. Only 5 % pick the western edge.

4.7. ***What are the most things you miss in the park?***

Notes

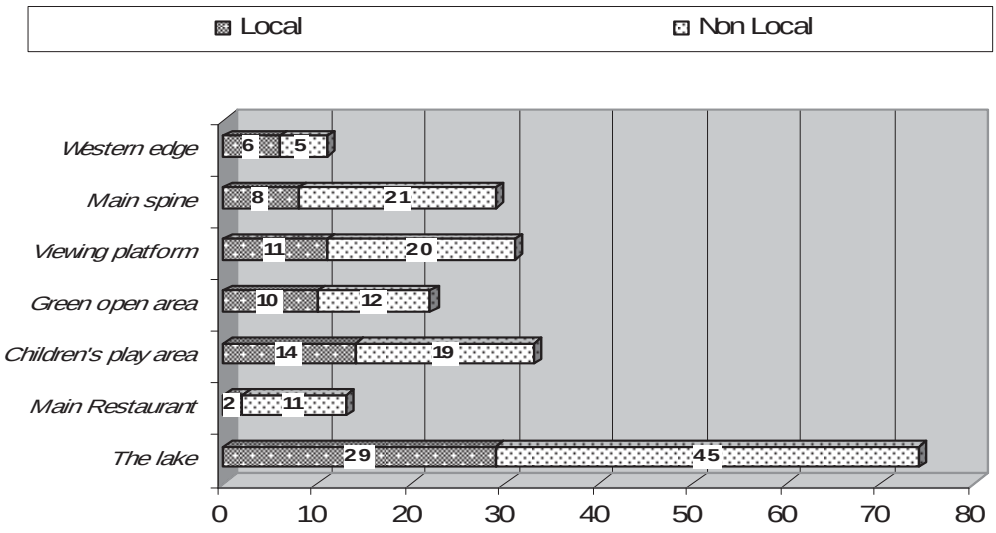
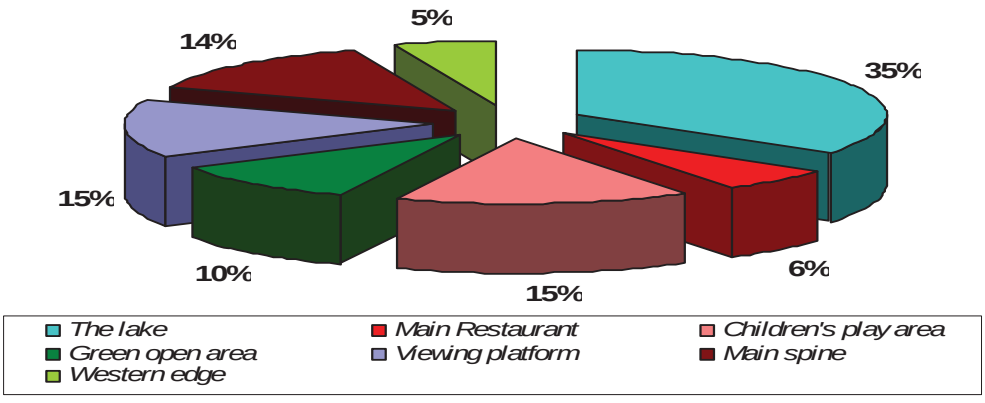
From the users who answered this questions, their outcomes mainly can be addressed in:

- Almost 60 % from the answers choose the Mosque as the main thing they miss in the park.
- 20 % said the absence of walking and bicycle track in the park.
- About 10 % wish it has been more interaction between activities and landscape facilities.

- **Activities inside the park.**

Table 9-11 shows the results for the Fifth part of these investigations for both local and non local users of Al-Azhar Park, which investigate the different activities that took place inside the park, and where is the users located within the park to practice each activity.

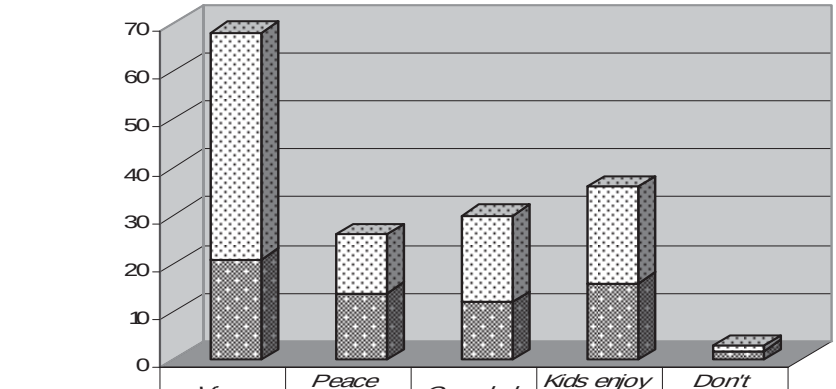
Table 9-11: Results for activity investigations included the user's questionnaire in Al-Azhar Park

5 – Activities inside the park	
5.1.	***Within the park, do you have a favourite location you like to visit?***
Result Chart	
Percentage %	
Notes	About 35 % from the answers goes to the lake, 15 % of people choose children's play area and viewing platform, while 14 % likes the main spine. 10 % enjoy visiting green open area, and 6 % choose the main restaurants, only 5 % choose western edge.

5 – Activities inside the park

5.2. Why is this place your favourite?

Result Chart



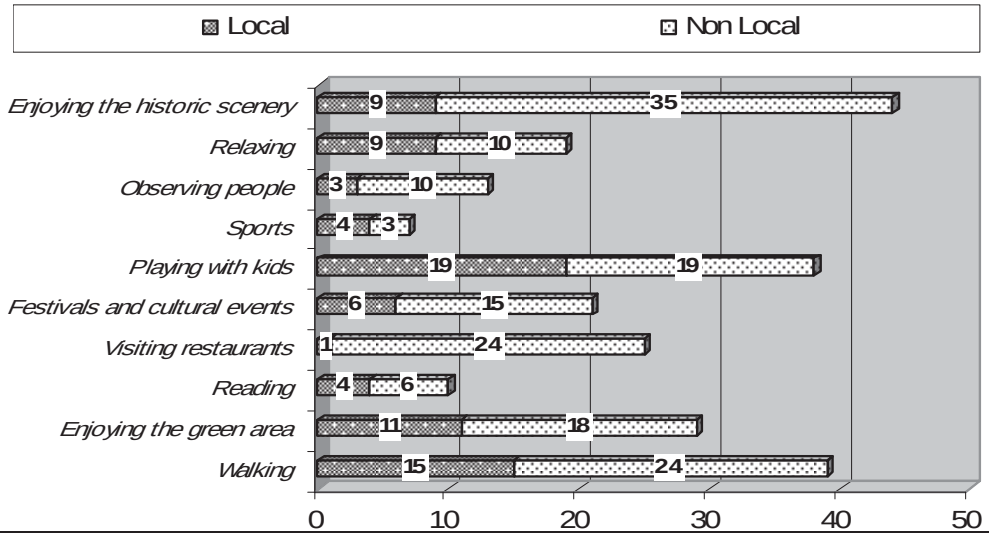
	View	Peace and quite	Crowded	Kids enjoy it	Don't know
Non Local	47	12	18	20	1
Local	21	14	12	16	2

Notes

41.72 % choose the best place for them based on the view, 22 % pick it because kids enjoy it, while 18.40 % thinks because it is crowded. 15.95 % choose peace and quite, only 3 persons didn't know the answer.

5.3. What do you like to do mostly in the park?

Result Chart



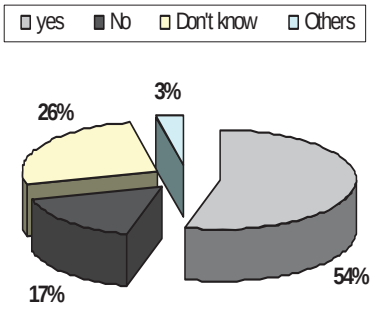
Notes

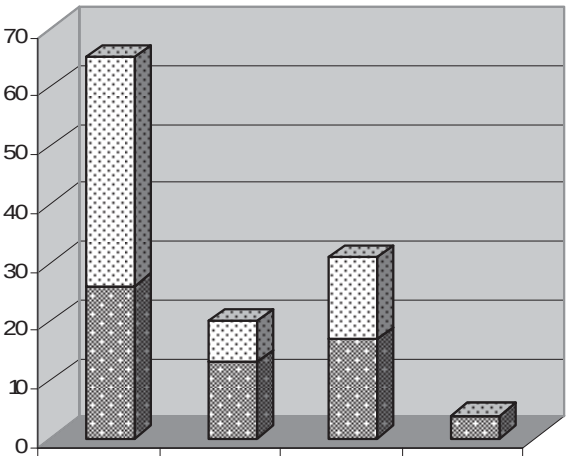
17.96 % likes to enjoy the historic scenery, 15.92 % choose walking, and 15.51 % likes to play with kids. While 11.84 % enjoying the green area, 10.20 % visiting restaurants, 8.57 % choose culture events, 7.76 % relaxing. 12.24 % choose the rest.

5 – Activities inside the park

5.4. Is there any unused area in the park, or has negative activities?

Result Chart





	yes	No	Don't know	Others
Non Local	39	7	14	0
Local	26	13	17	4

Notes

54.17 % thinks there is some unused area in the park, 25.83 % didn't know the answer, and 16.67 % choose No. Only 4 persons who choose others, they explained that some places has negative activities only at night, such as western edge and the green spaces around the children play area at night, because there is not enough lighting or enough staff.

Figure 9-39 shows some examples of the unused areas in the park, either for the western edge or isolated green spaces.

Couples all along the western edge

isolated green areas in the park

Figure 9-39: Samples of the unused areas in Al-Azhar park (Researcher)

9.5.5. Questionnaire results correlation

After displaying the results of the questionnaire which was distributed to the users of Al-Azhar Park, the research will analysis the results more deeply to understand the correlations between some selected questions and each of (age groups – local and non local users – time for visiting the park) by using SPSS [49] program, as shown in Figure 9-40.

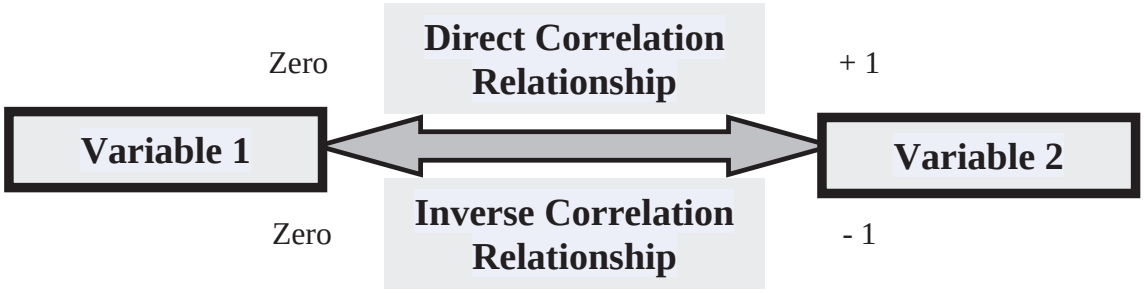


Figure 9-40: Diagram to show the correlation between two variables (Researcher)

- **What would encourage you a lot to visit Al-Azhar Park?**

Table 9-12 shows the strength of relation between elements could encourage people to visit the park and each of age groups, local or non local users and the time of visiting.

Table 9-12: Correlation for the reasons could encourage visitors to come to Al-Azhar Park

	improved safety	Better maintenance	Better facilities	More events	More staff	Easier to get to	More varied vegetation	Other, specify
15-25	-0.268	-0.002	**0.107**	-0.060	-0.056	-0.016	0.102	0.055
25-45	**0.150**	-0.024	-0.078	-0.122	0.026	0.101	-0.101	0.121
45-65	0.116	0.026	-0.028	**0.183**	0.029	-0.085	0.000	-0.176
local	-0.016	-0.133	0.092	-0.274	-0.074	-0.229	-0.314	**0.214**
non local	0.051	0.177	-0.094	0.225	0.089	0.190	**0.259**	-0.200
morning	-0.141	**0.134**	0.008	-0.101	-0.082	-0.030	0.077	-0.098
afternoon	-0.026	-0.129	-0.013	0.065	-0.095	-0.015	**0.225**	-0.070
at night	0.094	0.034	-0.091	0.005	**0.175**	-0.029	-0.209	0.026
it depends	0.051	0.009	0.107	0.000	0.000	0.075	-0.121	**0.142**

- **Types of facilities could encourage you to visit Al-Azhar Park?**

Table 9-13 shows the strength of relation between facilities could encourage people to visit the park and each of age groups, local or non local users and the time of visiting.

Table 9-13: Correlation for types of facilities could encourage people to visit the Park

	Toilets	Restaurants	Shelters	Children play area	Sport area	More information signs
15-25	-0.167	0.101	0.107	-0.472	**0.374**	**0.216**
25-45	**0.149**	-0.150	-0.078	**0.208**	-0.107	-0.138
45-65	0.016	0.051	-0.028	**0.259**	-0.265	-0.076
local	-0.068	-0.357	0.013	0.030	-0.044	-0.297
non local	0.099	**0.298**	-0.014	0.020	0.082	**0.325**
morning	-0.110	-0.214	**0.294**	-0.082	0.073	-0.058
afternoon	0.158	-0.259	-0.013	**0.182**	-0.116	0.080
at night	-0.148	**0.327**	-0.182	-0.169	0.057	0.116
it depends	0.056	**0.152**	-0.039	0.026	0.020	-0.174

- **Overall evaluation for the park and its diversity of activities.**

Table 9-14 shows the strength of relation between evaluation the park with its diversity of activities and each of age groups, local or non local users and the time of visiting.

Table 9-14: Correlation for evaluation for the park and its diversity of activities

	Excellent	Good	Average	Poor	Others
15-25	-0.049	**0.145**	-0.059	-0.111	0.005
25-45	**0.150**	-0.141	-0.037	-0.003	0.062
45-65	-0.102	0.000	0.096	**0.113**	-0.067
local	0.109	-0.134	-0.184	0.138	**0.245**
non local	-0.117	**0.114**	**0.185**	-0.128	-0.228
morning	-0.080	**0.081**	0.008	-0.063	-0.019
afternoon	0.099	-0.110	-0.092	**0.186**	0.139
at night	-0.098	-0.055	**0.182**	-0.090	-0.013
it depends	0.051	**0.124**	-0.088	-0.080	-0.142

- **If there is a plan to develop the park, you like to share in it?**

Table 9-15 shows the strength of relation between evaluation the park with its diversity of activities and each of age groups, local or non local users and the time of visiting.

Table 9-15: Correlation for willing to share in developing the park with age groups and place of living

	yes	no	don't know
15-25	**0.242**	-0.093	0.030
25-45	-0.101	-0.023	**0.030**
45-65	-0.138	**0.116**	0.030
local	-0.192	0.109	**0.146**
non local	**0.282**	-0.243	-0.115

- **Evaluation for the park with its social and historical context.**

Table 9-16 shows the strength of relation between evaluation of the park with its social and historical context and each of age groups, local or non local users and the time of visiting.

Table 9-16: Correlation for evaluation of the park and its social and historical context

	Excellent	Good	Average	Poor	Others
15-25	**0.038**	0.026	-0.039	-0.090	-0.010
25-45	0.054	-0.038	-0.054	**0.181**	0.035
45-65	-0.092	0.012	**0.093**	-0.092	0.035
local	-0.095	-0.139	-0.048	0.112	**0.337**
non local	0.026	**0.161**	0.080	-0.104	-0.315
morning	-0.192	-0.013	0.077	-0.051	**0.207**
afternoon	**0.282**	-0.206	-0.041	0.020	-0.040
at night	-0.053	-0.014	**0.099**	0.079	-0.050
it depends	-0.129	**0.282**	-0.121	-0.065	-0.074

- **What is the most important from the following features to the historic character of the park?**

Table 9-17 shows the strength of relation between the historic landscape features used in the park and each of age groups, local or non local users.

Table 9-17: Correlation for most important from the following features to the historic character of the park

	Restaurants buildings	Water features	Using stones	More	Don't know
15-25	**0.185**	0.095	-0.243	-0.090	0.008
25-45	-0.156	0.033	**0.152**	0.043	-0.054
45-65	-0.027	-0.127	**0.089**	0.046	0.047
local	-0.435	-0.102	0.150	0.112	**0.396**
non local	**0.365**	0.140	-0.143	-0.104	-0.370

- **How much it is easy to explore landscape facilities in the park?**

Table 9-18 shows the strength of relation between the level of exploring landscape facilities in the park and each of age groups, local or non local users and the time of visiting.

Table 9-18: Correlation for how much it is easy to explore landscape facilities in Al-Azhar park

	Very easy	Average	Difficult	Don't know	Others
15-25	0.040	-0.032	**0.107**	-0.106	-0.064
25-45	0.073	-0.063	-0.119	**0.121**	**0.127**
45-65	-0.113	0.095	0.014	-0.016	-0.065
local	0.142	-0.167	-0.263	**0.373**	0.079
non local	-0.161	0.160	**0.265**	-0.348	-0.074
morning	**0.031**	0.003	0.008	-0.036	-0.052
afternoon	-0.142	0.065	-0.052	0.089	**0.107**
at night	**0.182**	-0.140	0.000	0.022	-0.052
it depends	-0.051	-0.058	-0.026	-0.029	-0.065

- **Do you feel safe walking around the park?**

Table 9-19 shows the strength of relation between feeling safe walking in the park and each of age groups, local or non local users and the time of visiting.

Table 9-19: Correlation for the level of feeling safe walking around all the zones in Al-Azhar park

	yes	No	Don't know	Others
15-25	**0.207**	-0.252	-0.047	0.026
25-45	-0.059	0.024	-0.007	**0.076**
45-65	-0.146	**0.226**	0.053	-0.102
local	-0.074	**0.142**	-0.032	-0.019
non local	0.022	-0.114	0.058	0.041
morning	**0.152**	-0.036	-0.148	-0.040
afternoon	**0.109**	-0.050	0.083	-0.215
at night	-0.166	0.022	0.081	**0.158**
it depends	-0.086	0.068	-0.063	**0.130**

- **What is the most area inside the park you feel safe in it?**

Table 9-20 shows the strength of relation between the most area people feel safe within the park and each of age groups, local or non local users and the time of visiting.

Table 9-20: Correlation for the most area people feels safe inside it within the boundaries of the park

	Beside the lake	Main entrance	Children's play area	Green open area	Viewing platform	Main spine	Western edge
15-25	0.095	-0.113	-0.410	0.157	0.067	-0.059	**0.306**
25-45	-0.101	-0.010	0.016	**0.140**	0.005	0.004	-0.090
45-65	0.006	0.122	**0.390**	-0.297	-0.072	0.055	-0.213
local	-0.272	**0.029**	-0.032	-0.017	-0.162	-0.184	0.015
non local	**0.237**	0.010	0.072	-0.098	0.117	0.185	-0.057
morning	-0.125	-0.170	-0.007	-0.096	-0.028	**0.065**	0.059
afternoon	**0.068**	0.049	-0.007	-0.031	-0.002	-0.170	-0.015
at night	0.053	0.079	-0.111	0.035	**0.081**	0.000	-0.029
it depends	-0.035	0.000	0.133	0.082	-0.061	**0.156**	0.000

- **Within the park, do you have a favourite location you like to visit?**

Table 9-21 shows the strength of relation between the most favourite location in the park and each of age groups, local or non local users and the time of visiting, and also with feeling safe in the park zones to investigate if it affects people choices for their favourite places.

Table 9-21: Correlation for the most favourite place inside the park

	The lake	Main Restaurant	Children's play area	Green open area	Viewing platform	Main spine	Western edge
15-25	0.035	0.102	-0.427	0.039	0.078	-0.018	**0.273**
25-45	-0.083	-0.195	0.068	**0.158**	-0.024	0.004	-0.046
45-65	0.048	0.095	**0.356**	-0.198	-0.054	0.014	-0.225
local	-0.262	-0.243	0.001	0.059	-0.109	-0.223	**0.098**
non local	0.211	**0.270**	0.041	-0.160	0.111	0.225	-0.137
morning	-0.195	-0.058	0.033	-0.059	-0.007	0.008	**0.045**
afternoon	0.019	-0.028	-0.114	**0.115**	-0.045	-0.170	-0.098
at night	**0.205**	0.116	-0.086	-0.066	-0.066	0.136	0.023
it depends	-0.077	-0.040	**0.205**	-0.022	0.133	0.058	0.058
Beside the lake	**0.506**	-0.006	-0.154	0.049	0.054	-0.025	0.048
Main entrance	-0.178	**0.170**	0.032	-0.124	0.055	0.169	-0.117
Children's play area	-0.044	-0.144	**0.788**	-0.083	-0.218	0.112	-0.187
Green open area	0.187	-0.146	-0.154	**0.585**	-0.141	-0.074	-0.053
Viewing platform	0.082	-0.053	-0.279	0.012	**0.614**	-0.202	0.183
Main spine	-0.035	0.242	0.132	-0.066	-0.022	**0.636**	-0.179
Western edge	-0.072	-0.008	-0.186	-0.065	0.029	-0.170	**0.636**

It is very clear in the previous table that people choose their location to visit inside the park according to how much they feel safe being in it, also that age group (15-25) prefer the western edge, while the group (45-65) likes the children’s play area.

- **Why is this place your favourite?**

Table 9-22 shows the strength of relation between why the people choose their favourite places in the park and each of age groups, local or non local users and the time of visiting.

Table 9-22: Correlation for why the people choose the most favourite place in the park

	View	Peace and quite	Crowded	Kids enjoy it	Don't know
15-25	0.207	**0.326**	-0.072	-0.454	0.003
25-45	-0.123	-0.038	**0.112**	0.065	0.110
45-65	-0.083	-0.286	-0.041	**0.386**	-0.113
local	-0.407	0.043	-0.049	0.011	**0.138**
non local	**0.352**	-0.132	0.049	0.034	-0.128
morning	-0.107	**0.151**	0.057	-0.096	-0.063
afternoon	**0.152**	0.080	-0.185	-0.011	-0.030
at night	-0.023	-0.155	**0.124**	-0.115	0.034
it depends	-0.073	-0.061	0.048	**0.218**	0.053

- **Are there any unused areas in the park, or has negative activities?**

Table 9-23 shows the strength of relation between the unused areas in the park or has negative activities and each of age groups, local or non local users and the time of visiting.

Table 9-23: Correlation for if there is any unused areas in the park

	yes	No	Don't know	Others
15-25	-0.076	**0.310**	-0.166	-0.030
25-45	0.028	-0.086	0.016	**0.062**
45-65	0.047	-0.221	**0.148**	-0.033
local	-0.148	0.068	0.045	**0.160**
non local	**0.190**	-0.130	-0.045	-0.149
morning	-0.131	**0.153**	0.049	-0.073
afternoon	-0.021	-0.023	**0.032**	0.028
at night	**0.129**	-0.044	-0.155	0.112
it depends	0.000	-0.056	**0.086**	-0.093

- **What do you like to do mostly in the park?**

Table 9-24 shows the strength of relation between what people like to do in the park and each of age groups, local or non local users and the time of visiting.

Table 9-24: Correlation for what people like to do mostly in the park

	Walking	Enjoying the green area	Reading	Visiting restaurants	Festivals and cultural events	Playing with kids	Sports	Observing people	Relaxing	Enjoying historic scenery
15-25	**0.354**	0.065	0.177	0.170	-0.179	-0.472	0.131	0.044	0.235	0.063
25-45	-0.125	0.045	0.037	-0.196	-0.008	0.076	0.046	**0.088**	0.024	-0.147
45-65	-0.226	-0.110	-0.213	0.029	0.186	**0.393**	-0.176	-0.133	-0.258	0.086
local	-0.123	-0.066	-0.107	-0.431	-0.181	**0.078**	-0.002	-0.134	0.050	-0.465
non local	0.099	0.026	0.067	**0.429**	0.215	-0.032	0.019	0.160	-0.021	**0.381**
morning	0.094	-0.050	-0.030	-0.141	-0.181	**0.049**	0.007	-0.058	0.031	-0.146
afternoon	-0.093	0.066	**0.229**	-0.150	0.003	-0.005	-0.142	-0.083	**0.135**	0.010
at night	0.065	-0.046	-0.170	**0.238**	**0.201**	-0.133	-0.057	-0.009	-0.032	0.096
it depends	-0.036	0.010	-0.075	0.051	-0.066	0.107	**0.231**	**0.161**	-0.160	0.009
The lake	0.071	0.005	0.052	0.151	**0.183**	-0.090	0.123	-0.111	0.013	**0.315**
Main Restaurant	-0.013	0.116	0.089	**0.217**	0.122	-0.122	0.142	**0.224**	-0.151	0.180
Children's play area	-0.109	-0.086	-0.186	-0.132	**0.109**	**0.824**	-0.153	-0.095	-0.114	-0.159
Green open area	-0.053	**0.336**	0.091	-0.084	-0.105	-0.045	-0.026	-0.027	-0.029	-0.003
Viewing platform	-0.003	0.023	-0.040	**0.213**	-0.071	-0.279	0.016	0.162	0.109	**0.262**
Main spine	**0.190**	-0.046	-0.170	0.190	0.047	0.076	0.192	**0.242**	-0.085	0.055
Western edge	**0.211**	0.091	0.009	0.050	-0.146	-0.216	0.044	0.075	**0.337**	-0.182

9.6. Drawing experiential landscape map (CDTA)

After investigating all the first steps to explore experiential landscape in Al-Azhar park, the final step in the evaluative proposed methodology for the thesis is to draw the CDTA[50] maps for the park to clarify how the design of landscape affect the behaviour patterns in the park. Each of components will be drawn separately first then a collective map for all the items will be out for a general understanding to the park, these maps include:

- **Center**

In this map, all kinds of people gathering centers will be shown with all each type (Figure 9-41), most of the centers varied between:

Social imageability (ceremony – presence of facilities – physical features)

Social interaction (social group seating – arrival places – low boundaries)

Restorative benefits (presence of nature – rest – rest and shelters)

- **Direction**

In this map, all kinds of people main paths will be shown with all each type (Figure 9-42), the main two kinds of Direction are:

Kinetic direction (enclosure – clear route – rhythm)

Sensory direction (exploration and mystery – smell and sound)

- **Transition**

In this map, all kinds of people transition places will be shown with all each type (Figure 9-43), most of it varied between:

Threshold (frames and gateways –change in colour and material)

Corridor / segment / ephemeral (short distance and framed views – choice of direction and central vocal point – sun to shade, light to dark)

- **Area**

In this map, all kinds of clear areas n the park will be shown with all each type (Figure 9-44), most of the centers varied between:

Physical boundaries (clear walls – landscape features)

Hidden boundaries (social group gathering – topography)

9.6.1. Center

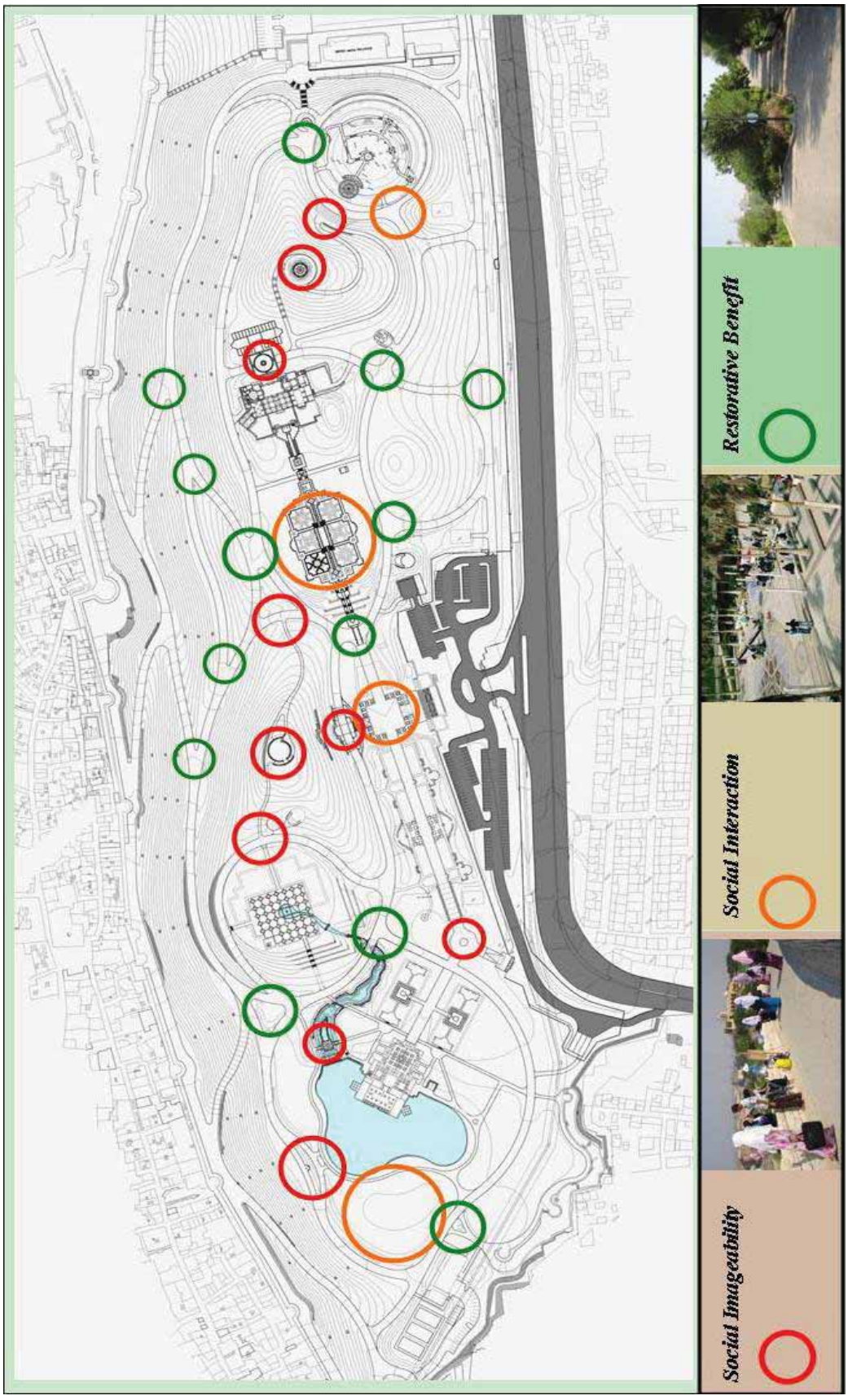


Figure 9-41: Centers for experiential landscape map of Al-Azhar Park

9.6.2. Direction

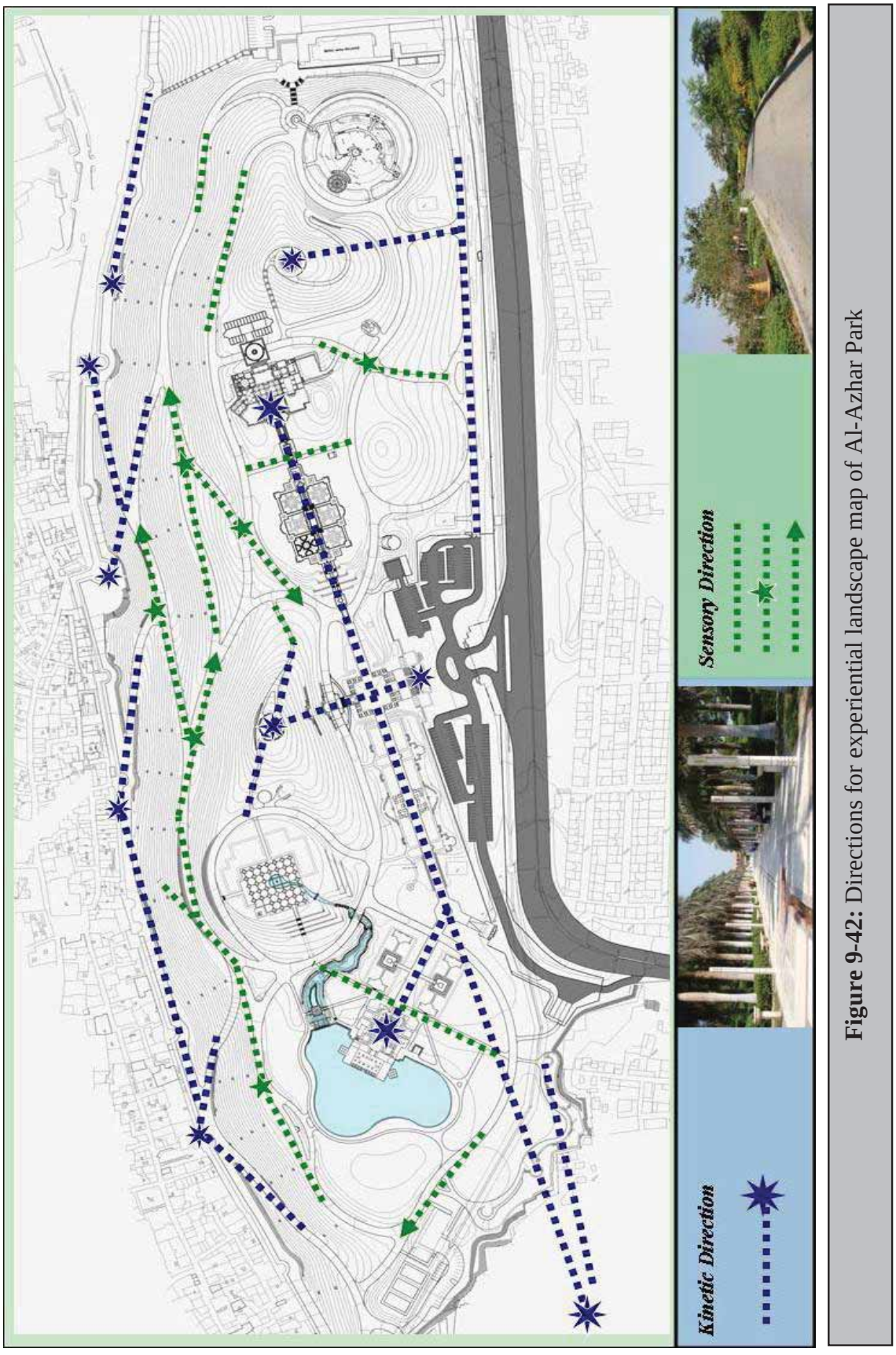


Figure 9-42: Directions for experiential landscape map of Al-Azhar Park

9.6.3. Transition

Figure 9-43: Transition for experiential landscape map of Al-Azhar Park

9.6.4. Area

Figure 9-44: Areas for experiential landscape map of Al-Azhar Park

9.6.5. Collective CDTA Map

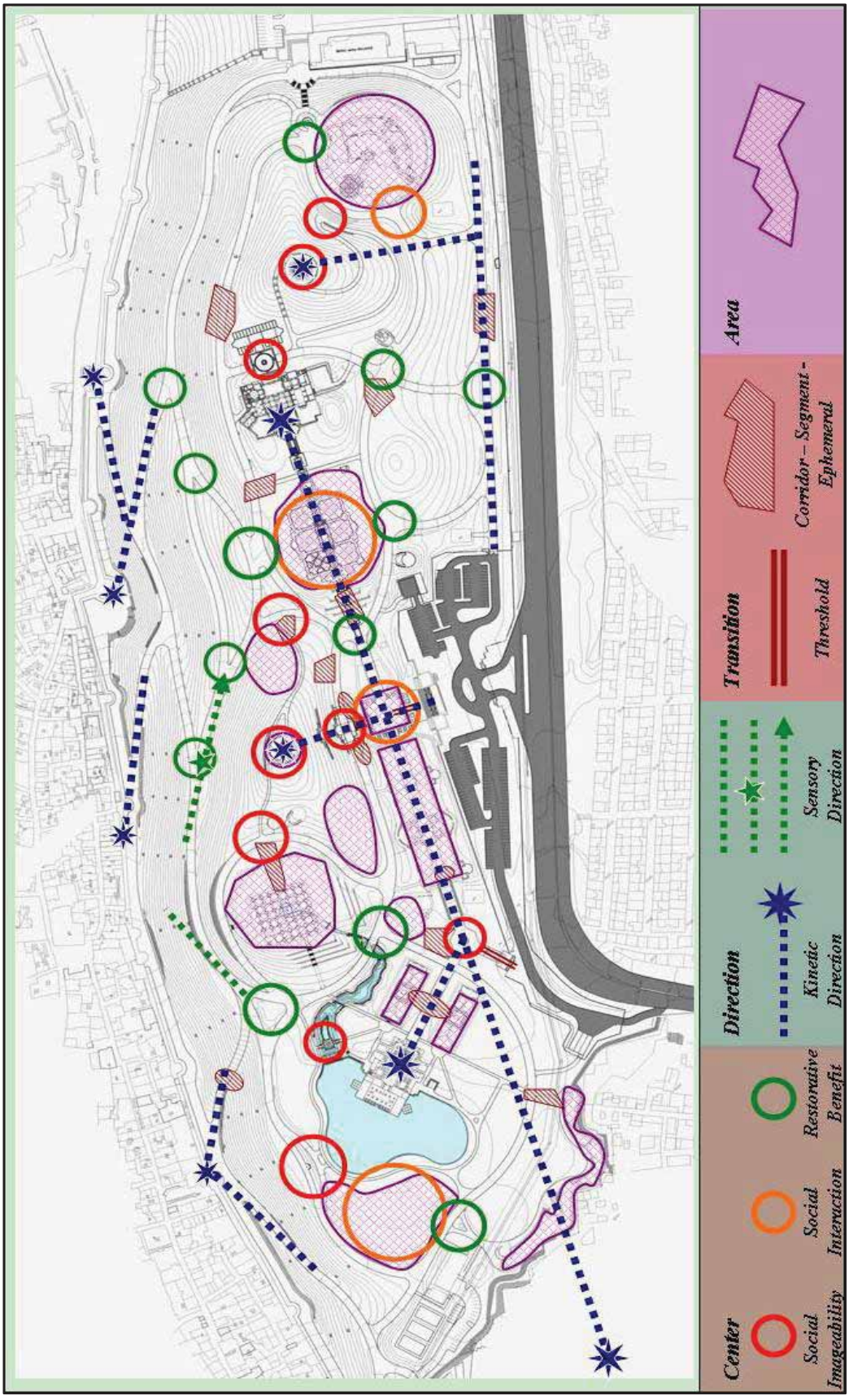


Figure 9-45: Collective CDTA for experiential landscape map of Al-Azhar Park

9.7. Conclusions of Al-Azhar Park evaluation

The conclusions for park evaluation will be listed in main three parts as followed:

- ***Observation and site visits.***

o The park is a very successful model to how the park can interact with the people's life, especially local users. For example, certain crafts and job opportunities for the local people living around the park has been developed for the park landscape design elements.

o The layout of the park were designed to cope with all the site challenges, starting with the three water tanks and the big slopes on the eastern side of the park after discovering the Ayyubid wall, which create come areas in the park hold some negative activities.

o Main items location and paths in the park were distributed to be liked with the surrounding environment, especially the old historic zone; it was clear from the royal promenade creating a framed view for the citadel, and the location of the hill top restaurant and its connection with Salah Salem Street.

- ***Questionnaire and its results correlations.***

From the initial readings of the questionnaire results, some results can be addressed:

o Groups and families are the main type that visits the park more than individuals, which confirm the idea that the park could attract families with all social classes again to open spaces.

o The best time to visit the park according to most of people's answers (42.5%) was afternoon.

o Social and cultural events were the major item could attract people more to visit the park many times.

o Non local users were the most willing to share in park development and redesign, generally more than 60 % shows the willingness and proposed some ways to be a part of the park redesign.

- Both local and non local users agreed that there are not enough shelters in the park, especially among who come in the mornings.
- The most place people feel safe in it within the park is beside the lake, which affect their choice for the best place they like.
- Almost 60% from the user's answers choose the mosque as the main thing they miss in the park.

After conducting deeper analyzing for the questionnaire results using SPSS programs to understand the correlations between questions variables, the results were shows from Table 9-12 to Table 9-23 can be listed as followed:

- Non local users and people who come in the afternoon were attracted more to the vegetation of the park, and it could encourage them to visit the park again.
- Most of the age group (15-25) chooses that developing sport areas will attract them more to visit the park, while non local users choose more information signs, and last for people who come at night choose restaurant.
- Most of the age group (15-25) shows acceptance to share in a plan to develop the park, also the majority was from non local users.
- Confirming the results that afternoon is the best times to visit the park, most of the people who visit the park in the afternoon evaluate the park as excellent with its social and historic context.
- Local users didn't agree on the main reason that gave the historic character to the park, while most of non local users choose the historic architectural style of buildings and landscape features.
- Most of the non local users find it difficult to explore landscape facilities in the park.
- Most of the age group (15-25) feels safer in the western edge of the park, while the group (45-65) choose children play area.
- After correlating the user's choices for the most places they feel safe in it and their best place among the park, there is a strong relation between both.

- Most of the age group (15-25) choose the western edge as their favorite place because of peace and quite, which confirm the idea that some parts of the park holds negative activities, while the group(45-65) choose the kids play area mainly because kids enjoy it.
- After correlating the time of visiting the park with the reason for choosing the best place, the results were very significant to people evaluation for the park, most of the visitors in the morning choose their place because it is peace and quite, and visitors in the afternoon choose it because of the view, at last for people visiting at night they choose their best place in the park because it is crowded.

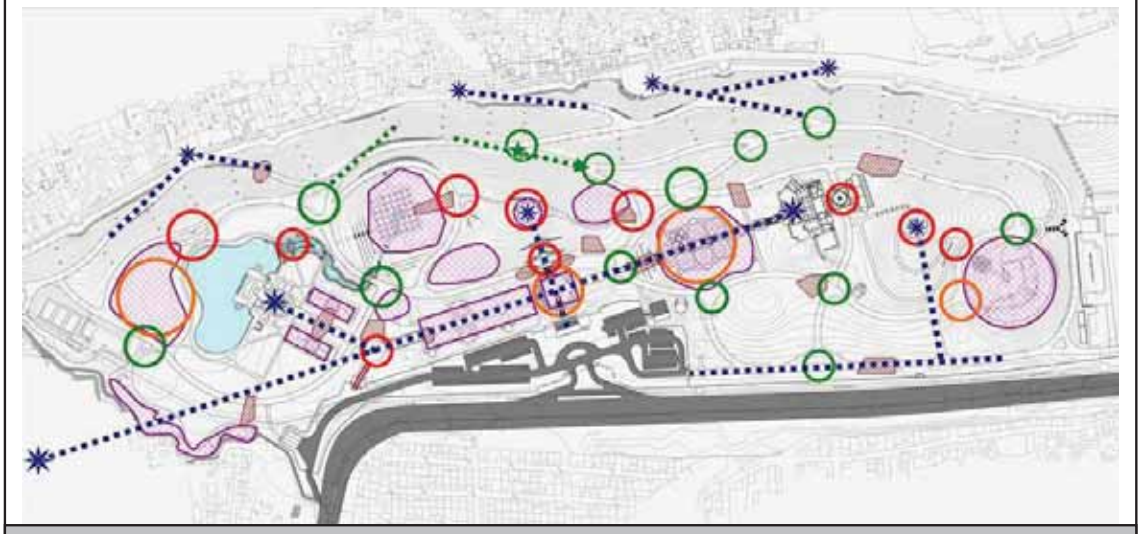
After conducting deeper analyzing for the questionnaire results using SPSS programs to understand the correlations between the types of activities in the park and other variables, the results were shows in Table 9-24 can be listed as followed:

- Most of the age group (15-25) likes to walk, while the group (45-65) chooses playing with kids.
- The answer of local users varied between all kinds of activities, while non local users choose visiting restaurants and enjoying the historic scenery.
- Visitors who come in the morning mainly choose playing with kids, who come in the afternoon choose relaxing and reading. Last, visitors at night choose visiting restaurants and attend festivals and cultural events.
- After correlating the most likable place to users with their activities, the result were:

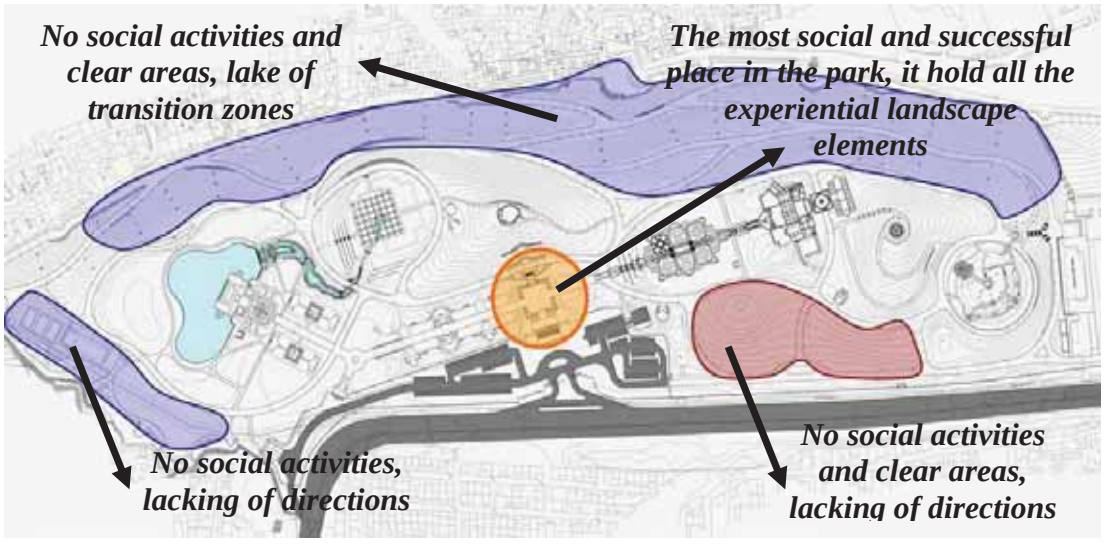
    1. The lake, (enjoying historic scenery – social events).
    2. Main restaurant, (visiting restaurant – observing people).
    3. Children's play area, (cultural events – playing with kids).
    4. Green open areas, (enjoying the green area).
    5. Viewing platform, enjoying the historic scenery).
    6. Main spine, (observing people – walking).
    7. Western edge, (relaxing – walking).

- ***Experiential landscape maps.***

After drawing the experiential landscape maps for Al-Azhar Park in Cairo, some points can be concluded as shown in Figure 9-46.



The Existing CDTA map for Al-Azhar Park



The conclusions of CDTA map for Al-Azhar Park

Figure 9-46: Conclusions for Experiential Landscape map of Al-Azhar Park

Footnotes

[1] The Expanding Metropolis: Coping with the Urban Growth of Cairo. (1984). Proceedings of Seminar Nine in the Series Architectural Transformations in the Islamic World. The Aga Khan Trust for Culture.

[2] www.akdn.org, Aga Khan Development Network, (AKDN) is a group of development agencies working in health, education, culture and rural and economic development, primarily in Asia and Africa.

[3] Al-Azhar Park in Cairo and the Revitalization of Darb Al-Ahmar. (2005). the Aga Khan Trust for Culture.

[4] Bianca, Stefano. (2007). Cairo: Revitalising a Historic Metropolis (Aga Khan Trust for Culture) Umberto Allemandes & Co; 2 editions.

[5] Al-Azhar Park in Cairo and the Revitalization of Darb Al-Ahmar. (2005). the Aga Khan Trust for Culture.

[6] www.akdn.org/agency/aktc_hcsp_cairo.html, Al-Azhar Park Project in Cairo and the Conservation and Revitalisation of Darb al-Ahmar.

[7] Al-Azhar Park in Cairo and the Revitalization of Darb Al-Ahmar. (2005). the Aga Khan Trust for Culture.

[8] www.akdn.org/agency/aktc_hcsp_cairo.html, Al-Azhar Park Project in Cairo and the Conservation and Revitalisation of Darb al-Ahmar.

[9] Al-Azhar Park in Cairo and the Revitalization of Darb Al-Ahmar. (2005). the Aga Khan Trust for Culture.

[10] www.googleearth.com. Satellite Image for the entire World. Photos by the researcher.

[11] Al-Azhar Park in Cairo and the Revitalization of Darb Al-Ahmar. (2005). the Aga Khan Trust for Culture.

[12] 100 Spontaneous Events in Al-Azhar Park (Al-Darb Al-Akmar). (2004). Social unpublished study presented to AKDN.

[13] Ibid.

[14] Al-Azhar park administration office.

[15] Ibid.

[16] A survey on 2008 done by Al-Azhar Park administration office.

[17] Ibid.

[18] AKTC stands for Aga Khan Trust for Culture, the organization responsible for the park before and during the design.

[19] Cairo: Urban Regeneration in the Darb Al-Ahmar District – a frame work for investment. (2008) Social Report. The Aga Khan Trust for Culture.

[20] Ibid.

[21] Al-Azhar park administration office.

[22] www.googleearth.com. Satellite Image for the entire World. Photos by the researcher.

[23] Al-Azhar Park in Cairo and the Revitalization of Darb Al-Ahmar. (2005). the Aga Khan Trust for Culture.

[24] B.O.T stands for Build Operate Transfer, it was the contract for Al-Azhar park to be built by AKDN and operate for 5 years starting from 2004 and end by 2009, then to be transferred to Cairo governorate.

[25] P.P.P. stands for Public Private Partnership.

[26] http://www.cairo.gov.eg/default.aspx, Cairo governorate.

[27] (AKDN) is a group of development agencies working in health, education, culture and rural and economic development, primarily in Asia and Africa.

[28] Al-Azhar Park in Cairo and the Revitalization of Darb Al-Ahmar. (2005). the Aga Khan Trust for Culture.

[29] Cairo: Urban Regeneration in the Darb Al-Ahmar District – a frame work for investment. (2008) Social Report. The Aga Khan Trust for Culture.

[30] www.akdn.org/agency/aktc_hcsp_cairo.html, Al-Azhar Park Project in Cairo and the Conservation and Revitalisation of Darb al-Ahmar.

[31] Al-Azhar Park in Cairo and the Revitalization of Darb Al-Ahmar. (2005). the Aga Khan Trust for Culture.

[32] Al-Azhar park administration office.

[33] Al-Azhar Park in Cairo and the Revitalization of Darb Al-Ahmar. (2005). the Aga Khan Trust for Culture.

[34] Al-Azhar park administration office.

[35] Ibid

[36] www.cr.nps.gov, National Park Service, cares for national parks, a network of nearly 400 natural, cultural and recreational sites across USA.

[37] www.akdn.org/agency/aktc_hcsp_cairo.html, Al-Azhar Park Project in Cairo and the Conservation and Revitalisation of Darb al-Ahmar.

[38] Cairo: Urban Regeneration in the Darb Al-Ahmar District – a frame work for investment. (2008) Social Report. The Aga Khan Trust for Culture.

[39] Al-Azhar park administration office.

[40] Al-Azhar Park in Cairo and the Revitalization of Darb Al-Ahmar. (2005). the Aga Khan Trust for Culture.

[41] Key Performance Indicator Handbook. World Bank (2000). Washington, D.C.

[42] Al-Azhar park administration office.

[43] http://www.raosoft.com/samplesize.html, Database web survey software for gathering information and calculating sample size.

[44] Sample size calculator is a special software designed by Raosoft.

[45] The confidence level is the amount of uncertainty you can tolerate. Suppose that you have 20 yes-no questions in your survey. With a confidence level of 95%, you would expect that for one of the questions (1 in 20), the percentage of people who answer *yes* would be more than the margin of error away from the true answer. The true answer is the percentage you would get if you exhaustively interviewed everyone. Higher confidence level requires a larger sample size.

[46] The margin of error is the amount of error that you can tolerate. If 90% of respondents answer *yes*, while 10% answer *no*, you may be able to tolerate a larger amount of error than if the respondents are split 50-50 or 45-55. Lower margin of error requires a larger sample size.

[47] The complete user survey is listed in the thesis appendix.

[48] All the pictures used in inside the table are taken by the researcher.

[49] SPSS (originally, Statistical Package for the Social Sciences) software helps organizations predict future events and proactively act upon that insight to drive better business outcomes. The research used SPSS version 16.

[50] CDTA stands for Center, Direction, Transition and Area maps for the park.

Chapter 10

Evaluative Model and Recommendations

Evaluative model for urban parks (EMUP)

Application of (EMUP) on Al-Azhar Park

Recommendations for Al-Azhar Park

General recommendations

Implications for future studies

10. Evaluative model and recommendations

After The practical study and evaluation for the experience of Al-Azhar Park in Cairo, using the proposed evaluative methodology in chapter 8, this chapter will crystallize the outcomes in a form to be used locally on Al-Azhar Park and generally when it is needed to evaluate the performance of any urban park. The points will be discussed in this chapter will be as followed:

- Evaluative model for urban parks (EMUP).
- Application of EMUP on Al-Azhar Park.
- Recommendations for Al-Azhar Park.
- General recommendations.
- Implications for future studies.

10.1. Evaluative model for urban parks (EMUP)

Most of the urban parks lack the overall vision for the evaluation of the performance efficiency after opening, in this point the research will conclude an overall evaluative model[1] to be used at any urban park for a better performance, this model are derived from the evaluative methodology in chapter 8 after testing it on Al-Azhar Park and adding more variables that emerged as crucial from the conclusions of this application study.

This model divides the process of evaluation into three main pivots[2] falls through detailed evaluation points, which in turn contribute to the access of the major features for the evaluation process, these main pivots are:

- Urban park layout and landscape design.[3]
- Urban Park and activities.[4]
- Historic landscape perception.[5]

Figure 10-1 shows the evaluation proposed model by the research, describing the evaluation items taking into consideration the main points that could affect this process. After the evaluative model, some tables will be concluded to show the detailed evaluation items with score, starting with Table 10-1 that shows section (A) in the evaluative model which evaluate the urban park layout and landscape design.

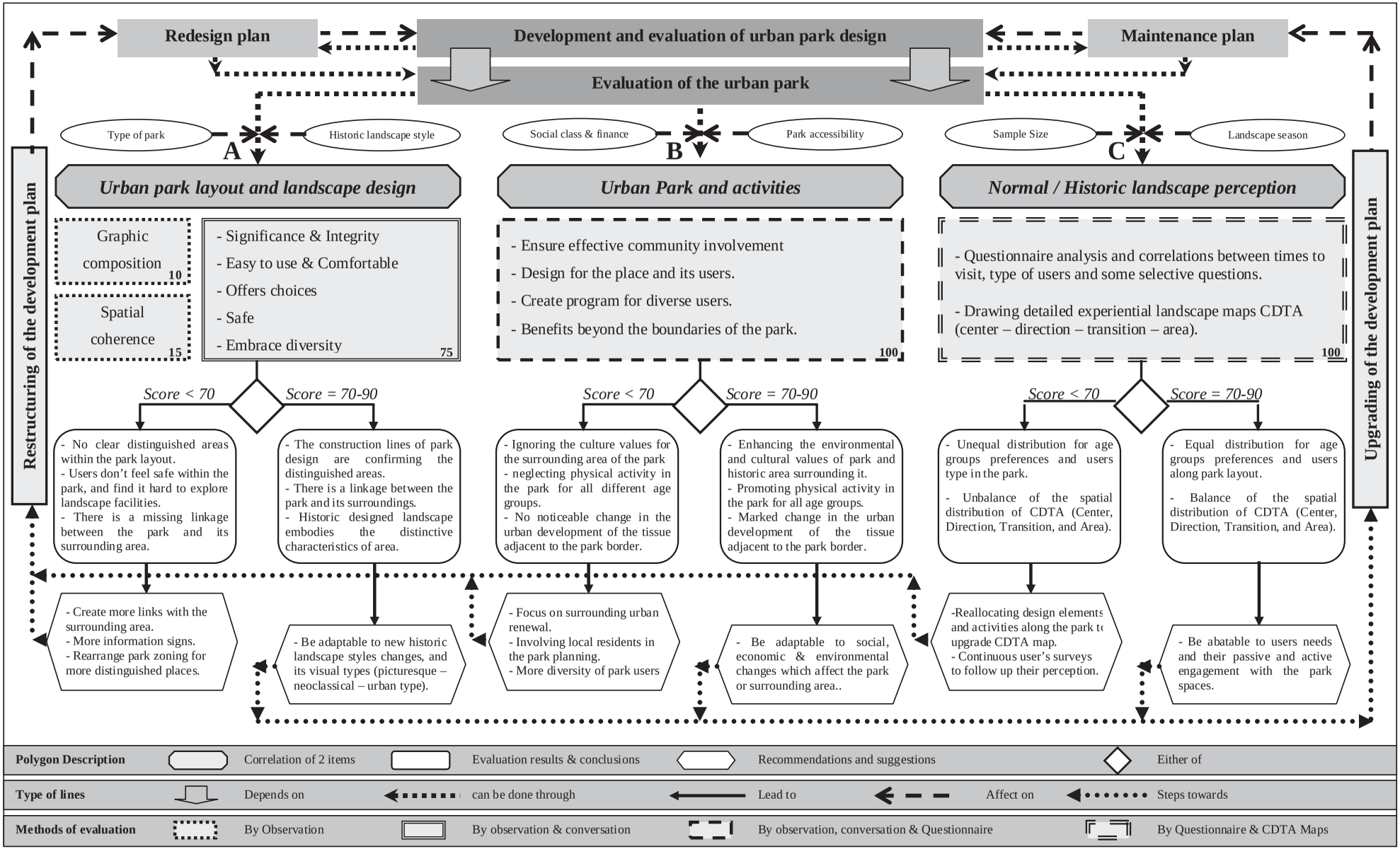


Figure 10-1: Evaluative model for urban parks (EMUP)

Table 10-1: Detailed evaluation points with scores - section (A) in evaluative model [6]

(A) Urban Park Layout and Landscape Design (total 100 points)			
Item	***Detailed evaluation point***	***Score***	***Max.***
Graphic Composition	Clear of distinguished parts in the ground plan		5
	Construction lines (both hard and softscape) are extracted from the wider surroundings		5
A1 score			**10**
Layout spatial coherence	Functional coherence between the inside and outside		5
	Visibility of internal and external landmarks		5
	Opening of the park to the outside		5
A2 score			**15**
Significant and integrity	Associations with significant events and trends		5
	Embody the distinctive characteristics of landscape type		5
	The integrity of a designed historic landscape		5
A3 score			**15**
East to use and comfortable	How easy it is for people to get to and around a historic designed landscape		5
	Network of facilities including toilets, food, help points and seating.		5
	Distribution of lighting elements around park layout		5
A4 score			**15**
Offer choices	Seating styles are suitable for individuals, families and groups		5
	Design of pedestrian paths and offering choices for different circulation		5
	Different levels of restaurants and food selling points		5
A5 score			**15**

(A) Urban Park Layout and Landscape Design (total 100 points)			
Item	***Detailed evaluation point***	***Score***	***Max.***
safe	Planting and trees		5
	Affect of any incomplete landscape work on safety		5
	Enough lighting elements around park layout		5
A6 score			**15**
Embrace diversity	Design landscape to be suitable for all users' ages.		5
	Variety of visitors with all social levels		5
	Distribution of visitors number along the day hours		5
A7 score			**15**
Total score			**100**

Figure 10-2 shows the detailed flow chart path for the first pivot in evaluative model.

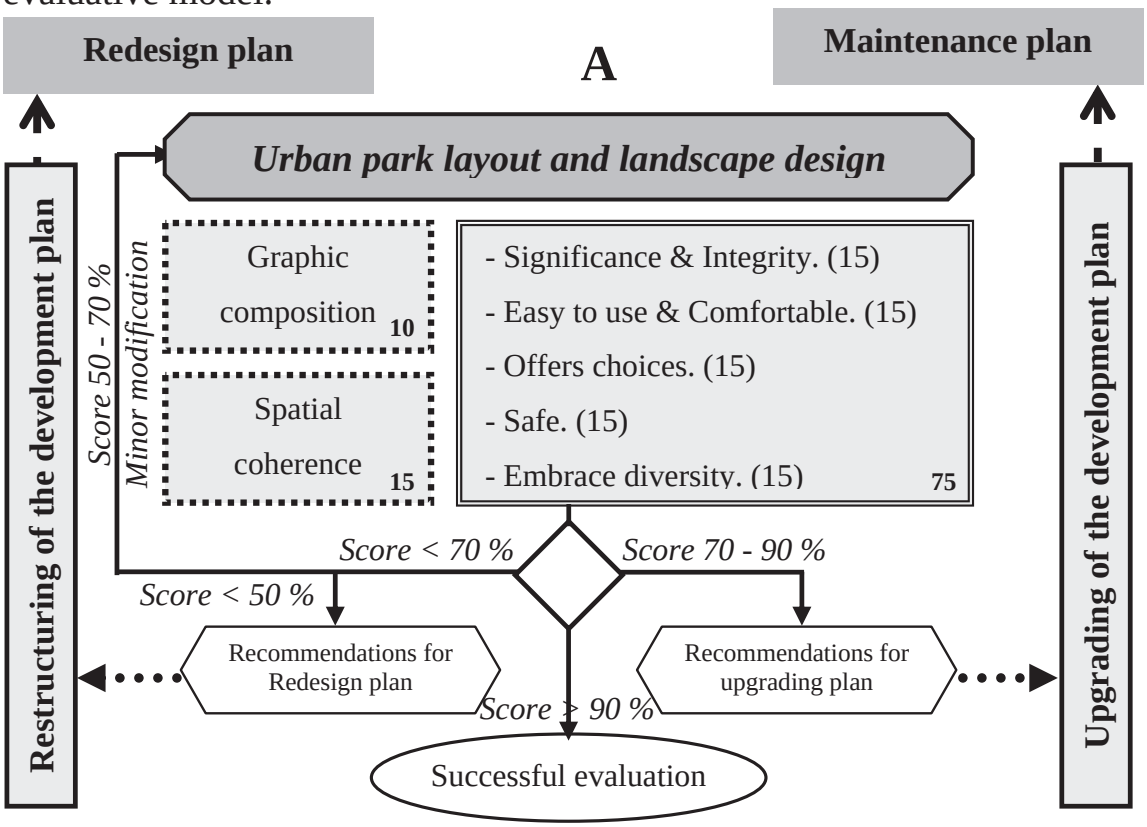


Figure 10-2: Detailed path for pivot (A) in evaluative model

Table 10-2: Detailed evaluation points with scores - section (B) in evaluative model

(B) Urban Park and Activities (total 100 points)			
Item	***Detailed evaluation point***	***Score***	***Max.***
Ensure Effective Community Involvements	During design stage – local users		5
	During construction stage – local users		5
	After construction stage – local users		5
	After construction stage – non local users		5
	Willing for future involvement in park development		5
B1 score			**25**
Design for the place an its users	Adapting with the changes in community needs		5
	Aesthetic considerations outside the park's boundaries		5
	Integration with surrounding uses		5
	Users overall evaluation for the park and its activities		10
B2 score			**25**
Create programs for diverse users	Diversity of visitors age segmentation		5
	Less places with negative activities		5
	Favourite places people like to visit within the park		5
	Favourite activity for people in their favourite places		10
B3 score			**25**
Benefits beyond the boundaries of the park	Improved learning opportunities from outdoor classrooms		5
	Increased urban tourism based on successful park design		5
	Increased business vitality based on employer & employee attraction after the park		5
	Developing projects in the adjacent surrounding area		10
B4 score			**25**
Total Score			**100**

Table 10-2 show the detailed evaluation items with scores for section (B) in the evaluative model, which evaluates the urban park layout and activities within it.

Figure 10-3 shows the detailed flow chart path for the second pivot in evaluative model – Section B.

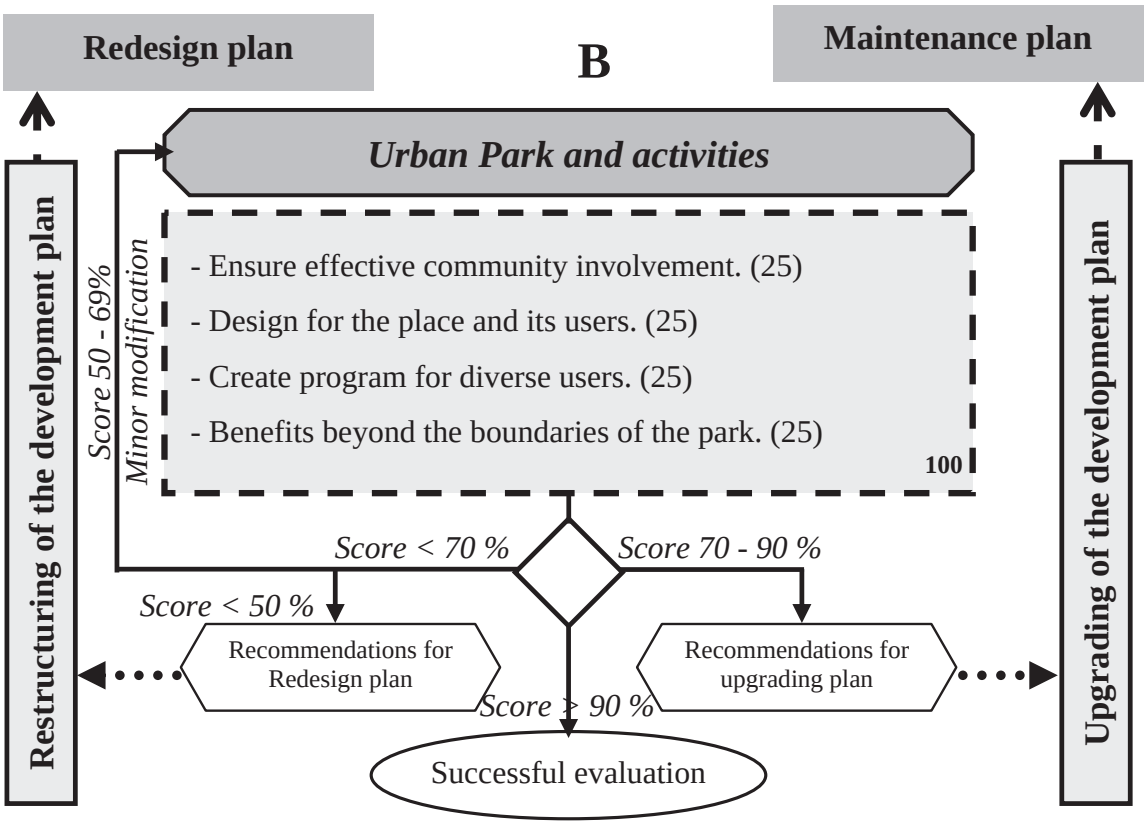


Figure 10-3: Detailed path for pivot (B) in evaluative model

In the third pivot of the evaluative model, the research will use the new tool which was tested in Al-Azhar Park case study – CDTA maps – to investigate user's perception of landscape design in the park.

Within this step of evaluation, the research suggests to analysis the results - derived before from the questionnaire - more deeply to understand the correlations between some selected questions within the questionnaire and each of:

- Age groups.
- Local and non local users.
- Time for visiting the park.

Table 10-3 show the detailed evaluation items with scores for section (C) in the evaluative model, which evaluates the urban park layout and activities within it.

Table 10-3: Detailed evaluation points with scores - section (C) in evaluative model

(C) Normal / Historic landscape perception (total 100 points)			
Item	***Detailed evaluation point***	***Score***	***Max.***
Questionnaire analysis and correlation for (age groups – Local and non local user – time to visit the park)	Overall evaluation for the park		5
	Reasons encourage you to visit the park		5
	Easy to explore landscape facilities		5
	Most unused areas or has negative activities		5
	Most area to feel safe in it		5
	Favourite location to visit in the park		5
	Why this place is your favourite		5
	What do you like to do mostly in the park		5
C1 score			**40**
Detailed Experiential landscape maps – CDTA maps	Centers – balance of social imageability and interactions		10
	Centers – balance of restorative benefits		5
	Direction – distribution of kinetic directions		10
	Direction – distribution of sensory directions		10
	Transition – function of threshold transitions		5
	Transition – function of corridor/segment/ephemeral directions		10
	Area – clear boundaries of spaces within the park		10
C2 score			**60**
Total Score			**60**

For more accurate results of this step, the chosen sample for user's surveys to answer the questionnaire should be calculated according to the daily visitors number of the park according to the standards mentioned before in chapter nine[7].

Figure 10-4 shows the detailed flow chart path for the third pivot in evaluative model – section C.

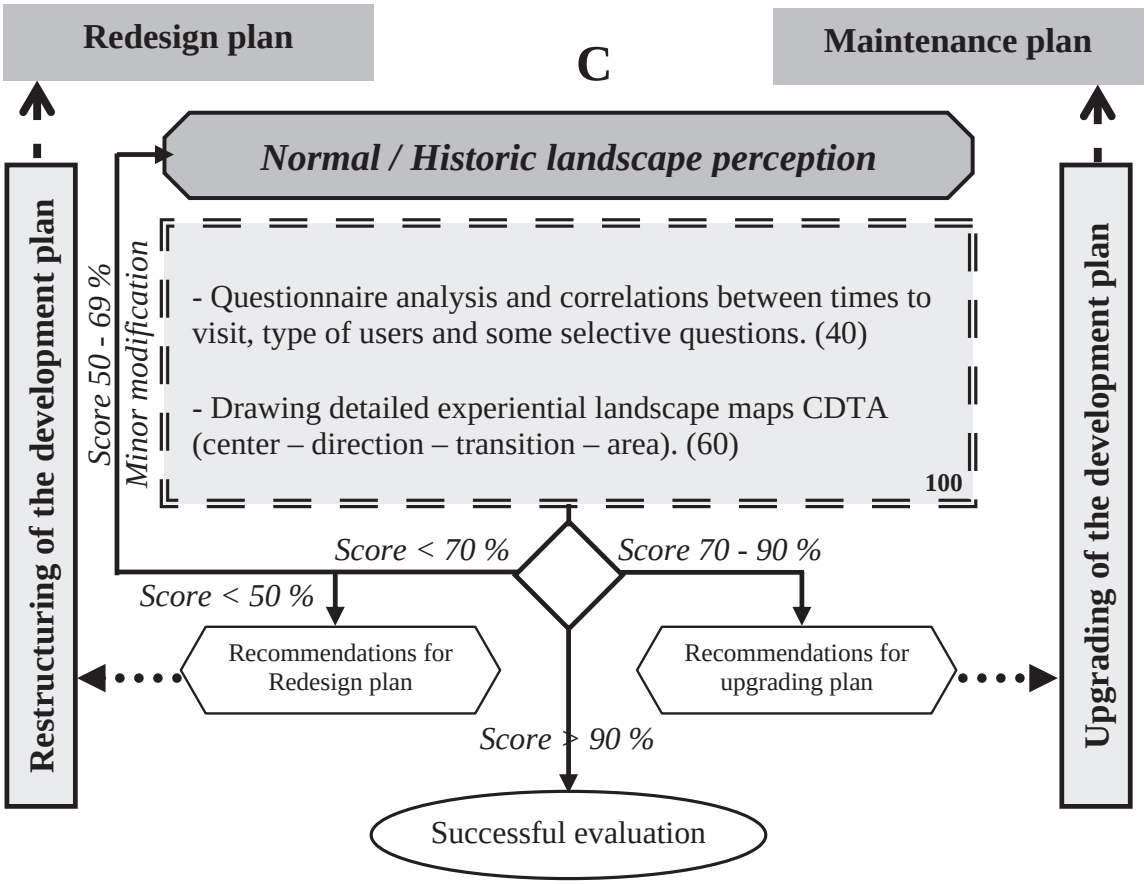


Figure 10-4: Detailed path for pivot (C) in evaluative model

It should be noted that all the relative weights of the elements of the assessment mentioned before from Table 10-1 to Table 10-3 may vary with different types of urban parks and purpose of the establishment.

10.2. Application of (EMUP) on Al-Azhar Park

After reaching the evaluative model at the beginning of this chapter, the research will apply it on Al-Azhar Park to calculate its score to crystallize the main recommendation in order to have a better performance and enhancing to activities and behaviour.

The output of the park evaluation will be in three tables for the main three pivots in the model, followed by the highlighted detailed path for Al-Azhar Park. From these tables for figures the research will put the suitable recommendations for each pivot.

Table 10-4 shows the detailed scores of Al-Azhar Park for the first pivot.

Table 10-4: Detailed evaluation points for Al-Azhar Park - section (A)

(A) Urban Park Layout and Landscape Design (total 100 points)			
Item	***Detailed evaluation point***	***Score***	***Max.***
Graphic Composition *	Clear of distinguished parts in the ground plan	4	5
	Construction lines (both hard and softscape) are extracted from the wider surroundings	3	5
A1 score		**7**	**10**
Layout spatial coherence *	Functional coherence between the inside and outside	4	5
	Visibility of internal and external landmarks	4	5
	Opening of the park to the outside	3	5
A2 score		**11**	**15**
Significant and integrity **	Associations with significant events and trends	3	5
	Embody the distinctive characteristics of landscape type	4	5
	The integrity of a designed historic landscape	4	5
A3 score		**11**	**15**

(A) Urban Park Layout and Landscape Design (total 100 points)			
Item	***Detailed evaluation point***	***Score***	***Max.***
Easy to use & comfortable **	How easy it is for people to get to and around a historic designed landscape	3	5
	Network of facilities including toilets, food, help points and seating.	4	5
	Distribution of lighting elements around park layout	2	5
A4 score		**9**	**15**
Offer choices **	Seating styles are suitable for individuals, families and groups	4	5
	Design of pedestrian paths and offering choices for different circulation	3	5
	Different levels of restaurants and food selling points	4	5
A5 score		**11**	**15**
Safe **	Planting and trees	4	5
	Affect of any incomplete landscape work on safety	3	5
	Enough lighting elements around park layout	2	5
A6 score		**9**	**15**
Embrace diversity **	Design landscape to be suitable for all users' ages.	3	5
	Variety of visitors with all social levels	4	5
	Distribution of visitors number along the day hours	3	5
A7 score		**10**	**15**
Total score		**68**	**100**

Score < 50 (redesign plan)

Score = 50-70 (minor modifications and changes)

Score = 70-90 (upgrading plan)

Score > 90 (successful evaluation)

* Items measures by observation
** Items measures by observation and conversation

Figure 10-5 shows the path for the first pivot in evaluative model for Al-Azhar Park after calculating the score.

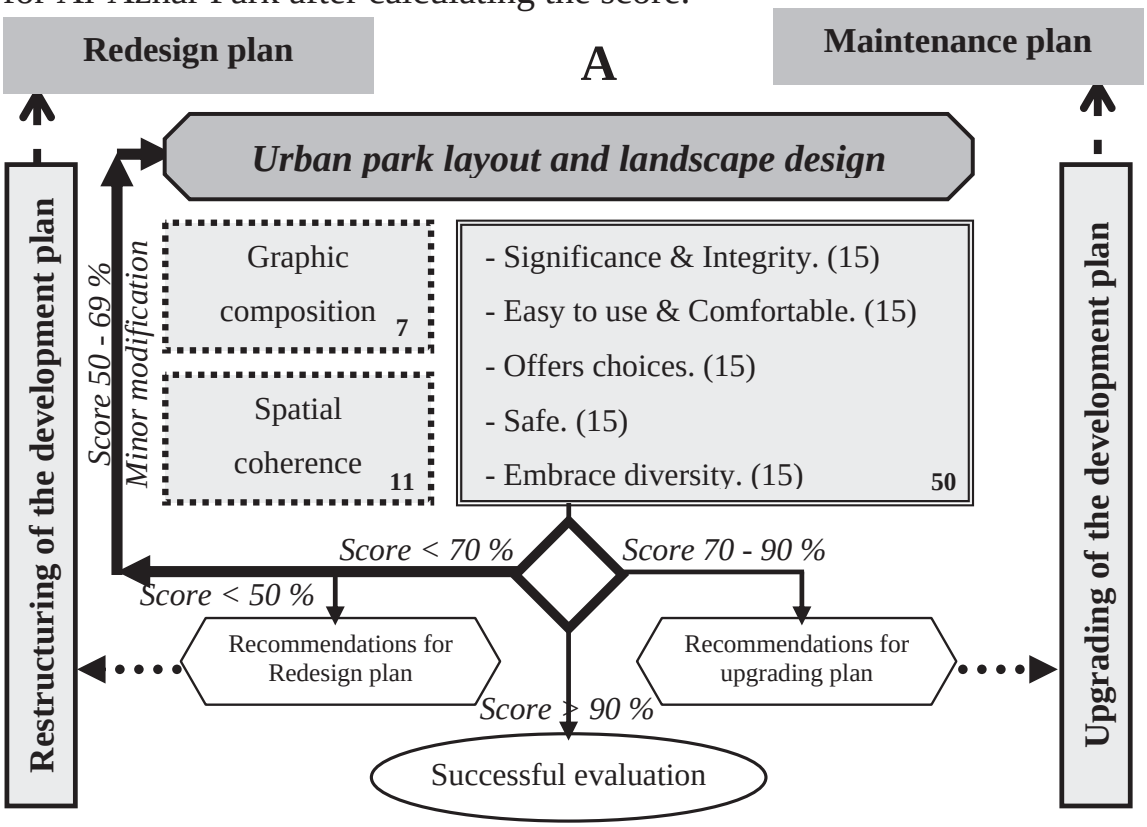


Figure 10-5: Detailed path for pivot (A) – Al-Azhar Park

Table 10-5 shows the detailed scores of Al-Azhar Park for the second pivot.

Table 10-5: Detailed evaluation points for Al-Azhar Park - section (B)

(B) Urban Park and Activities (total 100 points)			
Item	***Detailed evaluation point***	***Score***	***Max.***
Ensure Effective Community Involvements *	During design stage – local users	4	5
	During construction stage – local users	4	5
	After construction stage – local users	3	5
	After construction stage – non local users	2	5
	Willing for future involvement in park development	3	5
B1 score		**16**	**25**

(B) Urban Park and Activities (total 100 points)			
Item	***Detailed evaluation point***	***Score***	***Max.***
Design for the place an its users *	Adapting with the changes in community needs	4	5
	Aesthetic considerations outside the park's boundaries	4	5
	Integration with surrounding uses	3	5
	Users overall evaluation for the park and its activities	8	10
B2 score		**19**	**25**
Create programs for diverse users *	Diversity of visitors age segmentation	4	5
	Less places with negative activities	3	5
	Favourite places people like to visit within the park	3	5
	Favourite activity for people in their favourite places	7	10
B3 score		**17**	**25**
Benefits beyond the boundaries of the park *	Improved learning opportunities from outdoor classrooms	3	5
	Increased urban tourism based on successful park design	4	5
	Increased business vitality based on employer & employee attraction after the park	4	5
	Developing projects in the adjacent surrounding area	9	10
B4 score		**20**	**25**
Total Score		**72**	**100**

Score < 50 (redesign plan)

Score = 50-70 (minor modifications and changes)

Score = 70-90 (upgrading plan)

Score > 90 (successful evaluation)

* Items measures by observation, conversation and questionnaire

Figure 10-6 shows the path for the second pivot in evaluative model for Al-Azhar Park after calculating the score.

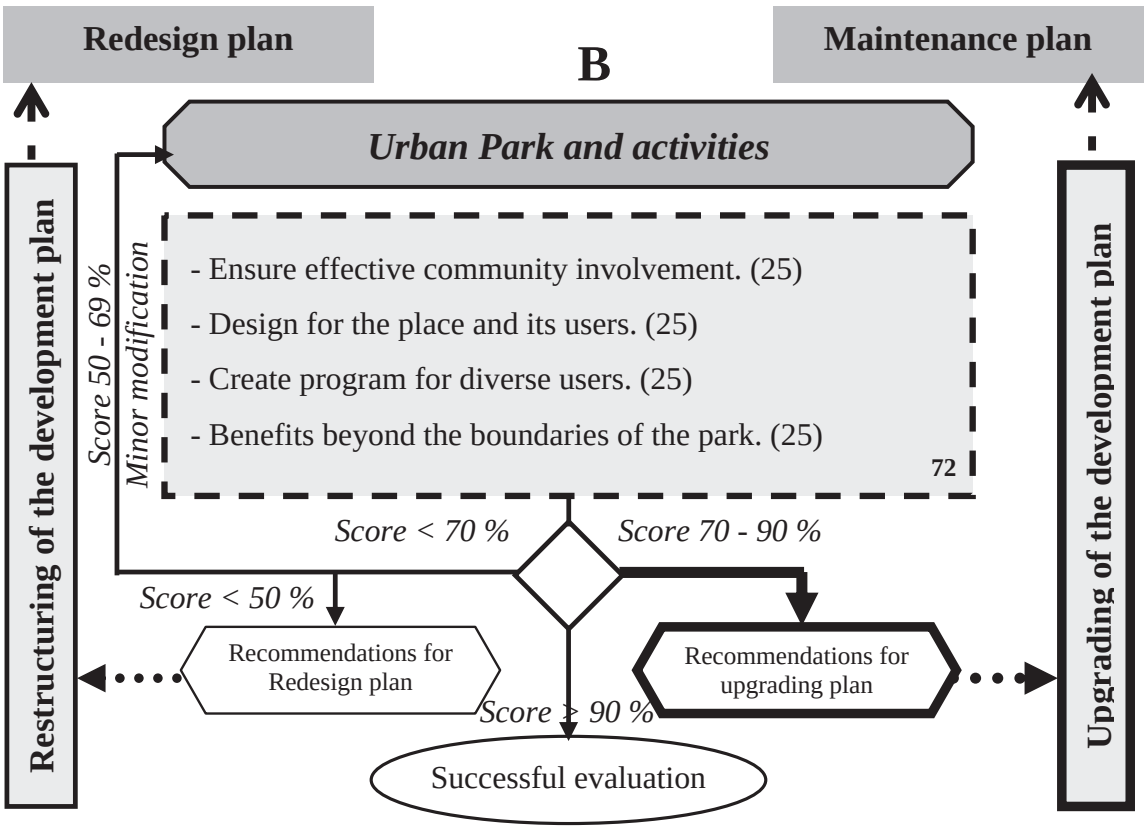


Figure 10-6: Detailed path for pivot (B) – Al-Azhar Park

Table 10-6 shows the detailed scores of Al-Azhar Park for the third pivot.

Table 10-6: Detailed evaluation points for Al-Azhar Park - section (C)

(C) Historic landscape perception (total 100 points)			
Item	***Detailed evaluation point***	***Score***	***Max.***
Questionnaire analysis and correlation for (age groups – Local and non local user – time to visit the park) *	Overall evaluation for the park	3	5
	Reasons encourage you to visit the park	3	5
	Easy to explore landscape facilities	2	5
	Most unused areas or has negative activities	2	5
	Most area to feel safe in it	3	5
	Favourite location to visit in the park	3	5
	Why this place is your favourite	3	5
	What do you like to do mostly in the park	3	5
C1 score		**22**	**40**

(C) Historic landscape perception (total 100 points)			
Item	***Detailed evaluation point***	***Score***	***Max.***
Detailed Experiential landscape maps – CDTA maps **	Centers – balance of social imageability and interactions	7	10
	Centers – balance of restorative benefits	3	5
	Direction – distribution of kinetic directions	8	10
	Direction – distribution of sensory directions	6	10
	Transition – function of threshold transitions	2	5
	Transition – function of corridor/segment/ephemeral directions	6	10
	Area – clear boundaries of spaces within the park	7	10
C2 score		**39**	**60**
Total Score		**61**	**100**

Score < 50 (redesign plan)

Score = 50-70 (minor modifications and changes)

Score = 70-90 (upgrading plan)

Score > 90 (successful evaluation)

***** Items measures by designed questionnaire and correlation

** Items measured by Experiential landscape maps as a final product for all the observation, conversation and questionnaire

Figure 10-7 shows the path for the third pivot in evaluative model for Al-Azhar Park after calculating the score.

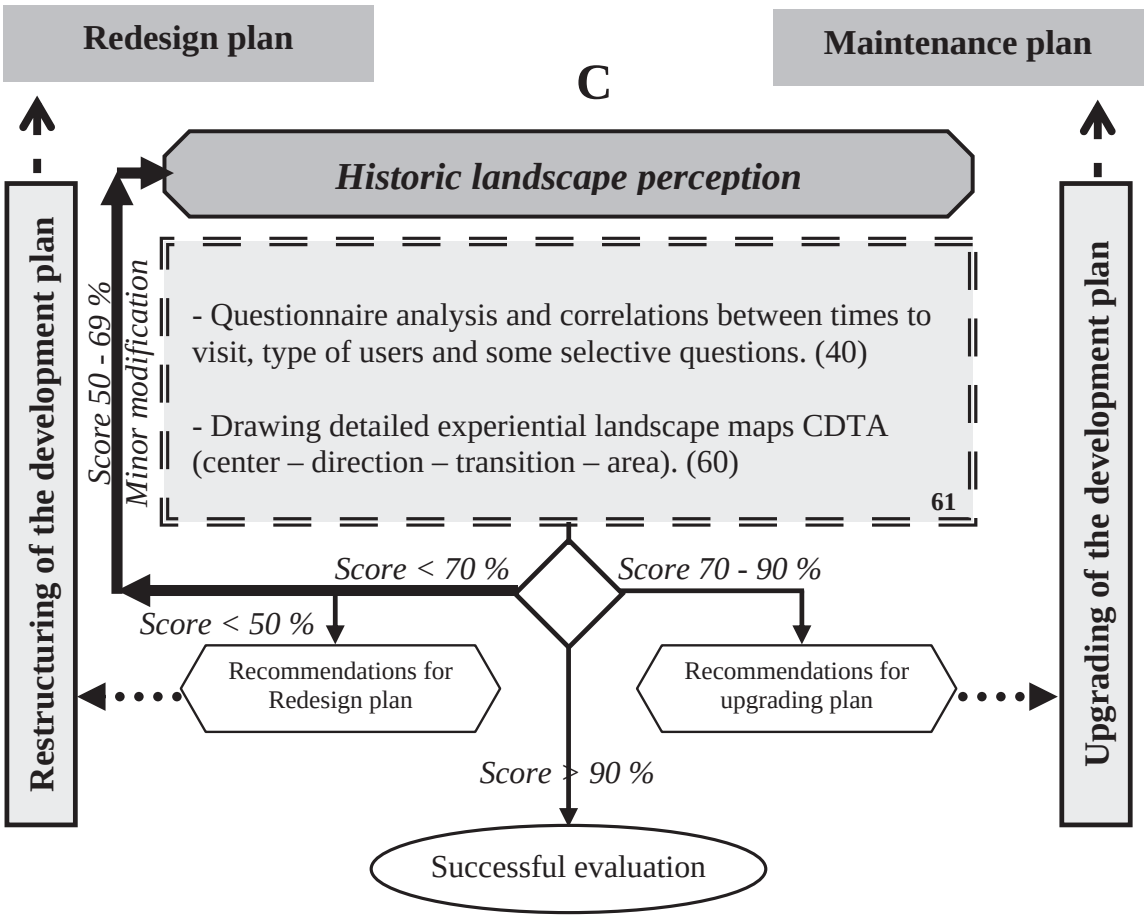


Figure 10-7: Detailed path for pivot (C) – Al-Azhar Park

10.3. Recommendations for Al-Azhar Park

After examining the evaluative methodology on A-Azhar Park and reaching main conclusions, some recommendation are made to make the park a better place and more effective in enhancing.

- ***Make the park more accessible to the community.***

- Paying more attention to the local users living around the park, and starting to organize more events to interact with both local and non local users as the park started when it was opened in 2004.
- The continuous user's surveys for the park visitors to examine the people interaction towards any change or modification for the park design.
- Start to design a way to cross Salah Salem Street to the main gate of the park, as it was one of the main problems facing people coming to the park by taxi or public transport.
- Create some transition open spaces next to the western edge of the park (Ayyubid wall) and near to the existing side gates, in order to connect the park more with the surrounding environment.

- ***Layout design suggestions.***

- Allocate a temporary place for praying, as it were mentioned from most of the users it is the main thing they miss in the park, till the side gates on the western edge start to be used and encourage users to use the surrounding mosques as it were planned in the first place.
- Create more gathering places and landmark nodes on the western edge, which might change the users perception for this place as it is a place for negative activities and the least area in the park they feel safe in the park layout.
- Reuse of the existing place for sports playground, as it is not used often and was not recognized at all to many of the park users.

- ***Historic landscape elements.***

- Allocate more shelters along the park layout to cope with user's needs as it was concluded from the user's questionnaire.

- More lighting elements in the park could encourage more visitors to explore a lot of hidden spaces in the park especially at night.
- Increase the number of direction and information maps within the park paths, to make it easier for the visitors to explore all around the park zones.
- Upgrading the children play area with more interacting and educational games for the children to attract educational trips especially in the morning when the park is normally empty.

• ***Activities inside the park.***

- Distribute the social events all along the park to increase the social activities in all park areas, not only near the lake and main restaurant.
- Create a different atmosphere for pedestrian paths along the park to achieve the desirable activities through using landscape elements in a way to enhance behaviour.
- Ongoing planning for the distribution of activity pattern of the park according to people's needs.
- Promote physical activities in the park by designing paths for walking, running and maybe for a certain days for cycling, or organize sports events for children and youth.
- Connect the local user with the park events, by organizing local exhibition for surrounding crafts.
- Reuse of the western edge for some activities which need quietness and scenery.
- Enter into partnerships with community agencies, voluntary organizations, religious organizations and sport clubs to promote and enable active living for children and youth, older adults and people with disabilities.
- The continuous update for the park behavioral map to follow the reaction of people towards any redesign of the park.

Figure 10-8 shows the distribution of some recommendation for a better performance of AL-Azhar Park and more effective enhancing to human behaviour and activities.

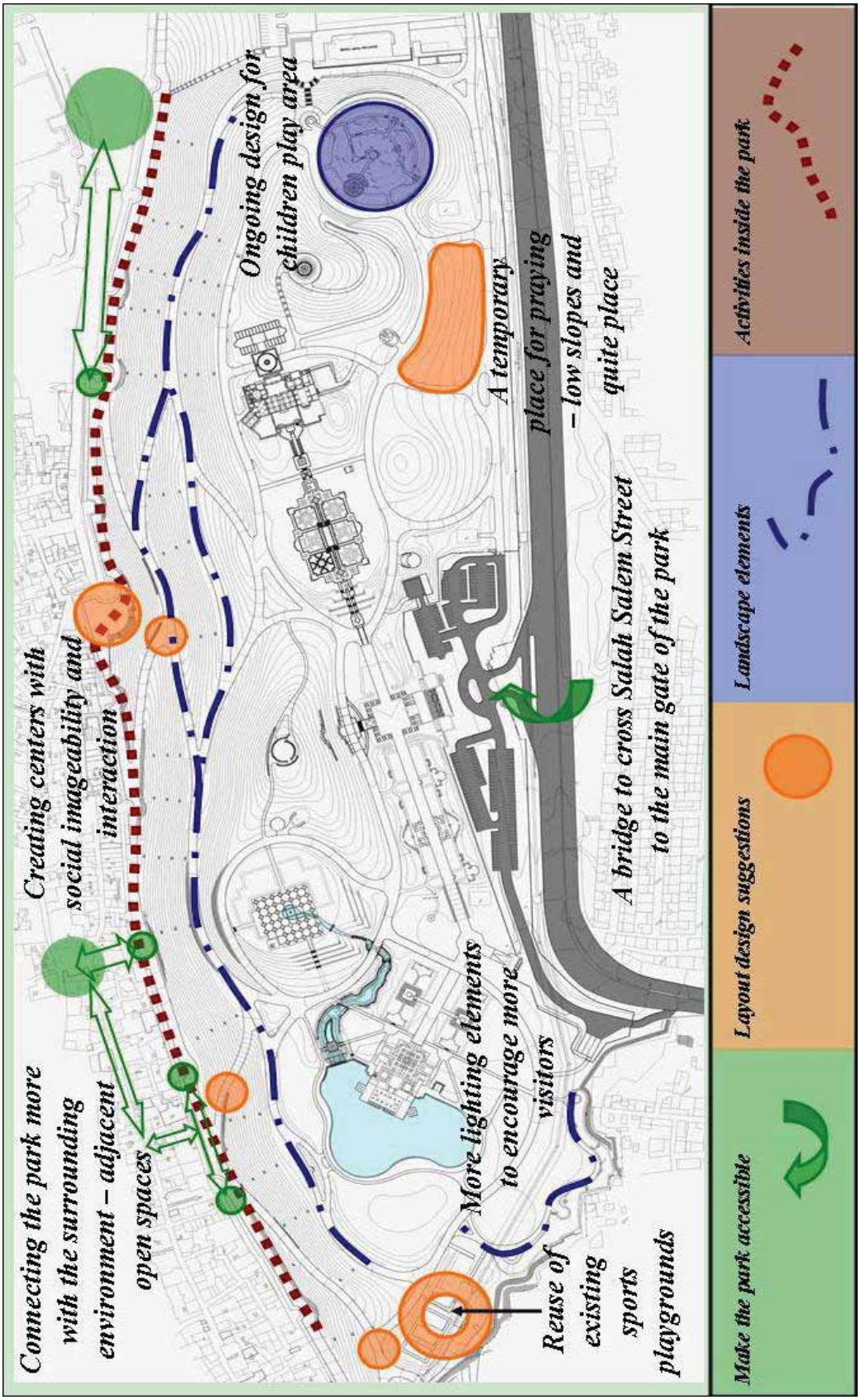


Figure 10-8: Recommendation for a better enhancing to human behaviour in Al-Azhar Park

10.4. General recommendations

The following lessons represent the findings of the research study, and after applying the evaluative methodology on Al-Azhar Park, these lessons can be listed as below:

- **Diverse social interaction is a goal of Place making, but so is creating safe spaces where groups can celebrate and seek out their cultural peers.**

Although some people argue that a "melting pot" is the highest form of multiculturalism, others maintain that fostering "safe" spaces where particular communities can come together and celebrate their unique culture is equally important in achieving diversity. Studies conclude that the most successful multicultural spaces are those that combine both elements: "The social interaction of diverse groups [in urban parks] can be maintained and enhanced by providing safe, spatially adequate territories for everyone within the larger space of the overall site," write Setha Low and co-authors in Rethinking Urban Parks: Public Space and Cultural Diversity.

- **People must be represented through familiar cultural symbols in public spaces.**

When people do not see their values and preferences reflected in a place, they feel unwelcome. Place making puts a particular emphasis on engaging many different stakeholders, listening to their stories, and making recommendations reflective of their specific concerns and desires. No community group's history should be erased from the physical and cultural reality of a public space.

- **Extensive and ongoing community participation is critical to the success of a multicultural place.**

Community-based planning is one method for tackling issues of underrepresentation of sub cultural groups. On the one hand, it seeks to redress the monolithic and often top-down approach to politics and planning by bringing those historically excluded voices into the decision-making process. The potential for the development of social capital through this process should not be underestimated. Place makers know well that outreach requires more than simply advertising workshops and meetings. More proactive and context-specific strategies must be

developed to gain resident input, especially when working with communities who have been historically excluded from the public process.

- **Discrimination is real, and needs to be tackled by public space managers.**

We would like to believe that public spaces in our community are free from inter-cultural hostility and discrimination, yet studies reveal that many people do experience overt discrimination in public space, which discourages them from using parks, business districts, civic centers, and other places. Creating a positive, welcoming space through design and programming should be a top priority of planners and managers.

- **Integrate many different types of uses--as well as elements that bring people together--into plans and designs.**

The most meaningful public space plans and programs strike a balance between official and vernacular uses, incorporating many different kinds of activities while simultaneously remaining flexible enough to accommodate values and preferences of different cultural groupings as they evolve over time.

- **Focus on neighborhoods.**

As a unit of planning, the neighbourhood is the most important in terms of promoting social diversity and increasing social capital. It is conceptually broad enough to get individuals to think beyond themselves and their streets, but of a small enough scale to still support the notion of "neighbourliness’" and encourage collaboration between community planners and stakeholders.

- **Program public spaces with educational and cultural activities that celebrate diverse cultures.**

Programs that offer educational experiences related to the history or the environment of a particular place have been shown to be effective in bringing people together. People want to learn, and when they come together to share the experience of knowledge, social divisions often dissolve. When spaces are programmed to celebrate diverse cultures and histories, there is an even greater impact. The power of learning and exploring should not be underemphasized.

10.5. Implications for future studies

In order for the results of this research to gain general applicability and reliability beyond Al-Azhar Park in Cairo, some additional researches is needed in the area of urban parks design and sociology and the open spaces located within old historic places. This point outlines some of the further research directions that would continue to develop a body of knowledge which would be very helpful to urban designers and park planners, such as:

- **Comparative testing of other parks.**

In order for the findings of this research to be generalized to other urban parks and open spaces in general, the evaluative model employed in this research should be applied and tested to other urban parks and open spaces in Egypt with different spatial characteristics and social mixture of users such (Imbaba Park, Cairo – Elmontazah, Alex), with the chance of adding more items according to research goals. By studying parks of varying designs, a data bank could be build which will increase the body of knowledge in some significant areas such:

-Effect of creating an atmosphere and flavour to the open space[8].
-The idea of healing landscape in Egypt.

- **Developing a comprehensive model.**

It is clear from the literature and application study of the research that there are many factors beside historic landscape elements which influence use patterns in urban parks, in order for the comprehensive model of the human ecology of urban to be developed; the effect of these factors on behaviour must be studied, these factors include (climatic conditions – park management – the social diversity of park users).

- **Testing controlled alternative designs.**

Another useful direction for researches would be comparative testing of the use patterns in alternative spatial environments, through the construction of actual alternative spaces. This research could take the form of before and after analysis of a place changed through redesign and reconstruction. In a more experimental framework, it would be useful to construct simple prototype or temporary environments with very different spatial form characteristics, and observe the use patterns associated with these alternatives.

Footnotes

[1] This evaluation model can be used to define the parameters of an evaluation, what concepts to study, and the processes or methods needed to extract critical data.

[2] These three main pivots are the result of correlation between the main three elements of the research, which are (urban parks – historic designed landscape – activities and behaviour).

[3] Detailed evaluation points and scores for this pivot are listed in table (10-1).

[4] Detailed evaluation points and scores for this pivot are listed in table (10-2).

[5] Detailed evaluation points and scores for this pivot are listed in table (10-3).

[6] The score for each evaluation item should change according to each type of parks, and landscape style in every culture, this table and scores are mainly suitable for historic designed urban parks located in the city context.

[7] http://www.raosoft.com/samplesize.html, Database web survey software for gathering information and calculating sample size.

[8] www.cresson.archi.fr/AMBIANCE2008.htm, the International symposium, creating an Atmosphere. 10-12 September 2008. France.

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- www.akdn.org, Aga Khan Development Network, (AKDN) is a group of development agencies working in health, education, culture and rural and economic development, primarily in Asia and Africa.
- www.akdn.org/agency/aktc_hcsp_cairo.html, Al-Azhar Park Project in Cairo and the Conservation and Revitalisation of Darb al-Ahmar.
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- www.altman.socialpsychology.org, a social physiologist studied the human-environment interaction.
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- www.centralparknyc.org, the official site for information on New York City's Central Park, hosted by the Central Park Conservancy.
- www.cityparksfoundation.org, City Parks Foundation, the only independent, non profit organization to offer programming in parks throughout the five boroughs of New York City.
- www.civicdesigncenter.org, Nashville Civic Design Centre, the Plan of Nashville Urban Design Projects.
- www.cleanersafergreener.gov.uk, How to Create Cleaner Safer Greener Community.
- www.cnp.org.uk, Council for National Parks Home Page, the National Parks of England and Wales.
- www.cp.berkeley.edu/lhp. The Landscape Heritage Plan (LHP) embodies the University's effort to preserve the historic legacy of the UC Berkeley Classical Core.
- www.cpat.org.uk, The Clwyd-Powys Archaeological Trust, one of the four Welsh Archaeological Trusts working to help protect, record and interpret all aspects of the historic landscape.
- www.cr.nps.gov, National Park Service, cares for national parks, a network of nearly 400 natural, cultural and recreational sites across USA.
- www.creativespaces.org.uk, Creative Spaces / A Toolkit for Participatory Urban Design.
- www.crimewise.com, Creating Secure Environments for Government, Business, Home & Travel.
- www.discusonline.com, the Original Internet Profiling Solution, Offering a Unique and Extraordinary Insight into Human Behaviour.
- www.gardenarena.co.uk, Essential British Gardens.
- www.gardenhistory.org.uk, United Kingdom Data Base of Historic Parks and Gardens.
- www.gardenhistorysociety.org, the Garden History Society in United Kingdom.
- www.gardenvisit.com, a guide for all the gardens and landscape all over the world.

- www.green-space.org.uk, a registered charity set up to help those committed to the planning, design, management and use of public parks and open spaces.
- www.hbes.com, The Human Behaviour and Evolution Society (HBES) is an interdisciplinary, international society of researchers, primarily from the social and biological sciences, who use modern evolutionary theory to help to discover human nature.
- www.healinglandscaapes.org, The Therapeutic Landscapes Resource Centre.
- www.itsyourspace.org.uk, Manifesto for Better Public Spaces, Improving Public Space in Town Centers.
- www.landdesign.com, Award Winning Urban Design, Planning, Civil Engineering, Blanding and Landscape Architecture Solutions to Public and Private Sector Clients.
- www.cnp.org.uk, Council for National Parks Home Page, The National Parks of England and Wales.
- www.jasonhawkes.com, a collection of London aerial photos taken by Jason Hawkes.
- www.lafoundation.org, a group of landscape architects who shared a concern for the quality of American environment and its future.
- www.landscape.co.uk, Landscape Design Trust, landscape design, garden design, landscape architecture and the wider environment.
- www.landscapegardeningonline.com, Landscape Gardening Online is a basic guide to designs, ideas, pictures, software, glossary and FAQs about landscape gardening.
- www.landscapeinstitute.org, The Landscape Institute, Royal Chartered body for landscape architects, professionals who inspire people to expect the best from the natural and built environments. Parks, streets, regeneration, waterways and open space.
- www.landscapeplanning.gre.ac.uk, Landscape planning Web, information and comments on landscape planning.
- www.landscapeplanning.gre.ac.uk, Landscape Planning Web: Home Page.
- www.livingstreets.org.uk, The Champions of Streets and Public Spaces for People on Foot. Practical Projects to Create Safe, Vibrant and Healthy Streets for all.

- www.londonlandscape.gre.ac.uk, Landscape and Open Space Planning in London.
- www.mapsofworld, a data base for all maps around the world.
- www.millenniumpark.org, Millennium Park in Chicago, an award-winning centre for art, music, architecture and landscape design.
- www.muslimheritage.com, discovers 1000 Years of Missing History, and Explore the Muslim Contributions to Present Day Science.
- www.nationalmall.org, the official partner of the national park service for the national mall, in Washington USA.
- www.nationalparks.nsw.gov.au/npws.nsf/Content/Home, The National Parks and Wildlife Service, The Main Government Conservation Agency in New South Wales, Australia.
- www.naturalearning.org, National Learning Initiative, to promote the Importance of the Natural Environment in the Daily Experience of all Children.
- www.nnlm.gov/pnr/uwmhg, University of Washington, Medicinal Herb Garden.
- www.nps.gov, The American System of National Parks.
- www.nycgovparks.org, New York City Department of Parks and Recreation.
- www.parkweb.vic.gov.au, Parks Victoria - the custodian of a diverse estate of significant parks in Victoria.
- www.pcl-eu.de, Pathways to Cultural Landscapes, a joint venture with twelve participating projects aimed at studying, mediating and preserving cultural landscapes.
- www.peoplespark.org, People's Park, Berkeley, California, supports free and open discussion of the issues and suggestions raised by the People's Park community related to the Park's operation and activities.
- www.planning.org, APA, American Planning Association, Non-profit Public Interest and Research Organization Committed to Urban, Suburban, Regional, and Rural Planning.
- www.pps.org/info/gps/60places, Al-Azhar Park, one of the 60 greatest places in the world.
- www.pps.org/upo, Project for Public Spaces, Resources for Parks, Plazas and Squares.

- www.prospectpark.org, the official website of Prospect Park in Brooklyn, New York.
- www.protected-landscapes.org, International Centre for Protected Landscape, to safeguard and enhance natural and cultural resources within viable programmes of social and economic development.
- www.recklessorchard.com, wide range of projects including major commercial and residential developments, public and urban spaces, historic landscapes and ecologically sensitive sites.
- www.royalparks.gov.uk, Royal Parks, London's Personal Space.
- www.sensorytrust.org.uk, an inclusive approach to design and management of outdoor space.
- www.spacesyntax.net, the Network for International Space Syntax Research.
- www.spacesyntax.org, List of Researchers at the Space Syntax Laboratory.
- www.spss.com, SPSS (originally, Statistical Package for the Social Sciences) software helps organizations predict future events and proactively act upon that insight to drive better business outcomes.
- www.tclf.org, the Culture Landscape Foundations.
- www.topos.de, the International Review of Landscape Architecture and Urban Design.
- www.touregypt.net/featurestories/azharpark.htm, Visiting Al-Azhar Park.
- www.tpl.org, the Trust for Public Land (TPL). A National Land Conservation Organization.
- www.urbanlandscape.org.uk, Urban Landscape Photography, Images for Urban Spaces.
- www.wallacefoundation.org, The Wallace Foundation, Supporting Ideas that Expand Learning and Enrichment Opportunities for People.
- www.wikispaces.com, Visual Dictionary for Plants Pictures.
- www.yourlondon.gov.uk/parks, A Data Base of London Parks and Green Spaces.

Suez Canal University

Faculty of Engineering – Department of Architecture

Questionnaire

(for Al-Azhar Park Visitors)

Goal

Know the opinion of visitors in Al-Azhar Park services and activities, as a step towards the development of the place commensurate with the needs of users and achieve optimum utilization of the various spaces in the park

Researcher

Eng. Usama Abd Elhameed Nassar

Assistant Lecture

Department of Architecture

1. General questions

1.1. Do you live near the park?

☐ Yes ☐ No ☐ Others

1.2. Please Tick the Relevant Box

☐ Male ☐Age under 20-40 ☐ Age 40-60

☐ Female ☐Age under 20-40 ☐ Age 40-60

1.3. From where you heard about the park?

☐ Media ☐ Living near ☐ Friends

☐ Others, Specify please.

1.4. How often do you visit Al-Azhar Park Average in a year?

☐ More than 3/week ☐ Weekly ☐ frequently

☐ Monthly ☐ infrequent

1.5. Usually, with whom you come to the park?

☐ Alone ☐ Family ☐ Friends

☐ All ☐ others

1.6. How do you come to the park?

☐ Car ☐ Public transportation ☐ On foot

☐ Taxi ☐ others

1.7. At what time in the day you like to visit the park?

☐ In the morning ☐ Afternoon ☐ At night

☐ It depends ☐ others

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2. Is the park accessible to the community?

2.1. What would encourage you a lot to visit Al-Azhar Park? *(you can choose more than one answer)*

☐ Improved safety ☐ Better maintenance ☐ Better facilities

☐ More events ☐ More staff ☐ Easier to get to

☐ More varied vegetation ☐ Other, specify

2.2. What do you think about the entry ticket fees to visit the park?

☐ Expensive ☐ Normal ☐ Cheap

☐ Other, Specify.

2.3. Types of facilities could encourage you to visit the park?

☐ Toilets ☐ Restaurants ☐ Shelters

☐ Children play area ☐ Sport area ☐ More information's signs

☐ Other, Specify.

2.4. Your overall evaluation for the park with its diversity of activities and cultural events?

☐ Excellent ☐ Good ☐ Average

☐ Poor ☐ Don't know

2.5. What are your suggestions to make Al-Azhar Park a better place?

2.6. If there is a plan to develop the design of AL-Azhar Park, do you like to share in it? And how?

☐ Yes , how? ☐ No, why? ☐ Don't know

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3. Comparative analysis of park design

3.1. What is the best thing you like in Al-Azhar Park?

3.2. Your evaluation for the park with its social and historical context?

☐ Excellent ☐ Good ☐ Average

☐ Poor ☐ Don't know

3.3. What is most important from the following features to the historic character of the Park?

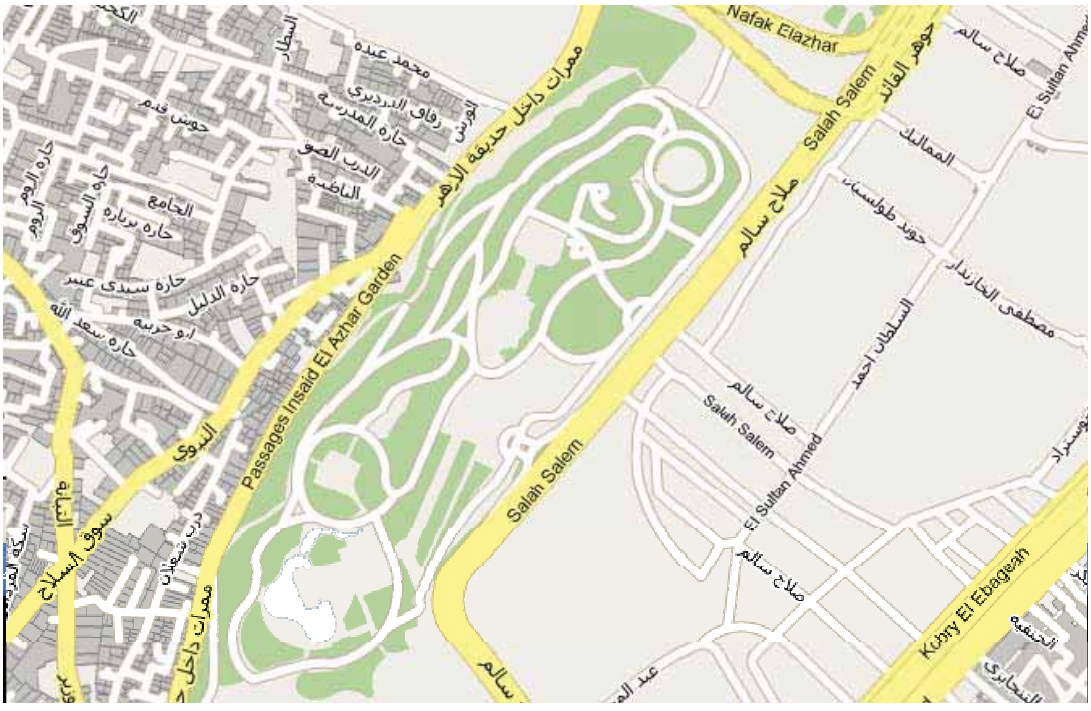
☐ Restaurants Buildings ☐ Water Features ☐ using Stones

☐ More ☐ don't Know

3.4. Can you allocate these design components of the park on the following layout?

1 Lake **2** Main restaurant **3** Children area

4 Telescope **5** Main promenade



4. Evaluation of designed historic landscape

4.1. How much it is easy to explore landscape facilities in the park?

☐ Very easy ☐ Average ☐ Difficult

☐ don't Know ☐ Others

4.2. Are there enough seating areas in the park?

☐ Yes ☐ No ☐ don't know ☐ Others

4.3. Are there enough shelters in the park?

☐ Yes ☐ No ☐ don't know ☐ Others

4.4. How do you feel about the information signs in the park?

☐ Very satisfied ☐ Satisfied ☐ not enough

☐ Not Happy ☐ don't Know ☐ Others

4.5. Do you feel safe walking around the park?

☐ Yes ☐ No ☐ don't know ☐ Others

4.6. If answer Yes to 4.5, what is the most area inside the park you feel safe in it?

☐ Beside the Lake ☐ Main Entrance ☐ Children's play ground

☐ Green open areas ☐ viewing platform ☐ Main spine

☐ Western edge ☐ Others

4.7. What are the most things you miss in the park?

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5. Activities inside the Park

5.1. Within the park, do you have a favourite location you like to visit?

5.2. Why is this place your favourite? *(you can choose more than one answer)*

☐ View ☐ Peace and Quiet ☐ Crowded

☐ Kids enjoy it ☐ don't know ☐ others

5.3. What do you like to do mostly in the park? *(you can choose more than one answer)*

☐ Walking ☐ Enjoying the green area ☐ Reading

☐ Visiting restaurants ☐ festivals & cultural events ☐ playing with kids

☐ Sports ☐ Observing people ☐ Relaxing

☐ Enjoying the historic Scenery for the surrounding area

☐ Others, Specify.

5.4. Is there any unused area in the park, or has negative activities?

☐ Yes (mention where) ----------

☐ How it can be reused? ----------

☐ No ☐ Don't know

المشكلة البحثية

الحدائق المفتوحة تلعب دورا بالغ الاهمية في تنمية وتطوير السلوك الانساني وطبيعة الانشطة التي تحدث داخل الفراغ، وبشكل خاص للمستخدمين المحليين حولها في المناطق المحيطة، علي الرغم من ذلك نادرا ما تم التعرض بالتحليل والدراسة لتلك العلاقة وكيفية التحكم فيها عن طريق تصميم وتنسيق الحدائق المفتوحة لتؤثر وتساهم في تحسين السلوكيات والانشطة بداخلها.

تكمن المشكلة الرئيسية للبحث في غياب الادراك الواعي للابعاد الانسانية والاجتماعية، وكيف لها ان تؤثر في تشكيل وتنسيق الموقع. بمعني اخر يمكن اعتبار الفراغات المفتوحة – وبشكل خاص الحدائق العامة- بانها من أهم عوامل تحفيز وتوجيه السلوك البشري. وفي اطار رؤية القاهرة 2050 للتنمية والتطوير، نجد ان ارتكزت علي ثلاث محاور هامة وهي:

- القاهرة مدينة عالمية.
- القاهرة مدينة خضراء.
- القاهرة مدينة مترابطة.

نحو تحقيق المحور الثاني من تلك الرؤية ولكي تكون القاهرة مدينة خضراء، كان التوسع في انشاء الحدائق المفتوحة لتتخلل الكتلة العمرانية القديمة، والتي تتركز معظمها بجوار المناطق ذات الطابع التاريخي حول حديقة الأزهر. وهنا تظهر الحاجة الماسة لوجود المنهجية الملائمة للتعامل مع تلك المناطق سواء لتصميم الفراغات العمرانية المستحدثة أو التعديل في المناطق المفتوحة القائمة، والوصول الي الاستخدام الاوفق للفراغ الذي سيحقق بدوره التنمية المستدامة ويؤكد الصورة البصرية شديدة التميز للعمران المحيط.

الاهداف البحثية

الهدف الرئيسي للبحث هو الوصول الي رؤية عامة وشاملة للحدائق المفتوحة في المناطق ذات الطابع التاريخي، تلك الرؤية من شأنها ان تقدم التفسيرات المنطقية لطبيعة العلاقة بين تنسيق وتصميم الفراغات المفتوحة والانشطة المختلفة التي تحدث داخل الفراغ. من اجل الوصول لذلك الهدف سيتم دراسة بعض نماذج الحدائق المفتوحة بالخارج وبشكل خاص التي تقع في نطاقات تاريخية، كما يتعرض البحث بالدراسة لحديقة الأزهر بالقاهرة ومدي تفاعل الناس مع تلك التجربة كخطوة نهائية للوصول الي نموذج لتقييم الحدائق المفتوحة.

محتويات البحث

نحو تحقيق الهدف الرئيسي للبحث، تعتمد المنهجية الرئيسية علي ثلاث محاور رئيسية تشمل:

o المدخل النظري:

يركز البحث في هذا المدخل علي الخلفيات النظرية للعناصر المكونة للبحث (الحدائق المفتوحة – السلوكيات والانشطة – تصميم وتنسيق المواقع التاريخية)، يحتوي الجزء النظري علي ثلاثة أبواب كالاتي:

الفصل الأول – الحدائق المفتوحة في المدن

يبدأ هذا الفصل بدراسة الخلفية التاريخية لنشأة الحدائق المفتوحة، وأهم التعريفات المحتلفة لمفهوم الحدائق المفتوحة الحضرية، كما يتعرض للطرق والمداخل المختلفة لتصنيف الحدائق بجميغ أنواعها. ويستعرض الفصل الادوار الهامة التي تلعبها الفراغات المفتوحة داخل النسيج العمراني، وفي نهاية الفصل تم الوصول التي أهم المعايير والنقاط التي تقاس بها كفاءة تلك الفراغات.

الفصل الثاني – تصميم وتنسيق المواقع التاريخية

نحو تحديد نطاق البحث لهذه الدراسة، يبدأ البحث بعرض مختلف التعريفات والمصطلحات لتنسيق المواقع التاريخية وبعض المفردات التي سيتم التعرض لها لاحقا في البحث. ينتقل الفصل الي الطرق المختلفة لفهم تنسيق الموقع علي أنه وسيله للمعرفة بمحتلف درجاتها، مع ذكر أهم الانساق والتكوينات البصرية التي يمكن استخدامها في تنسيق الموقع.

ينتهي الفصل باستعراض القواعد والاسس التصميمية التي يجب مراعاتها في تصميم الفراغات المفتوحة التاريخية، كما سيتم شرح كيفية تقييم تنسيق المواقع التاريخية طبقا للأسس السابق ذكرها.

الفصل الثالث – السلوك الانساني والأنشطة

يعتبر ذلك الفصل أخر مكونات المدخل النظري للبحث، والذي يهدف الي التعرف علي مختلف التعريفات النظرية للانشطة الخاصة بحركة المشاة داخل الفراغات المفتوحة، والتي تتأثر بشكل كبير بطبيعة البيئة المحيطة. كما يستعرض تعريف السلوك بمختلف درجاته كما تم التعرض لها سابقا من المفكرين، مرورا بالعوامل المختلفة التي تؤثر في السلوك البشري، واخيرا ينتهي الفصل بتقديم المحاولات المختلفة السابقة التي كانت تهدف الي محاكاة السلوكيات والانشطة داخل الفراغات المفتوحة لتقييم المقترحات قبل التنفيذ.

oالمدخل التحليلي:

يهدف البحث في هذا الجزء الي الربط بين عناصر المدخل النظري للوصول الي العلاقات المترابطة والتحليلية التي تربط بينها، وذلك في ثلاث فصول كالتالي:

الفصل الرابع – المبادئ التصميمية لتنسيق المواقع للحدائق المفتوحة الحضرية

هذا الفصل هو النتاج التحليلي لعنصري الدراسة (الحدائق المفتوحة – تنسيق المواقع)، يبدأ الفصل الرابع بتحليل امكانية تصنيف الحدائق المفتوحة تبعا لتنسيق الموقع لكلا منها. يلي ذلك التعرض بالنقد والتحليل للمبادئ التصميمية الاساسية للحدائق المفتوحة وصولا بشرح أهم مبادي التحليل المقارن لتصميم الحدائق الذي سيتم الاستعانة به لاحقا في الدراسة التطبيقية.

الفصل الخامس – المستخدمين والانشطة المختلفة داخل الحدائق المفتوحة

هذا الفصل هو النتاج التحليلي لعنصري الدراسة (الحدائق المفتوحة – السلوكيات والانشطة)، يبدأ الفصل بتحليل أهم الاحتياجات الانسانية داخل الفراغات المفتوحة، يتبعها توضيح لأهم العوامل التي تؤثر في درجة تفاغل المستخدمين مع الفراغ المفتوح. من خلال هذا الفصل يصل البحث بعد التحليل الي القواعد الاساسية للوصول الي تفاعل واداء افضل للسلوكيات والانشطة، وينتهي الفصل باستعراض التصنيفات المختلفة لمستخدمي الفراغ المفتوح.

الفصل السادس – الادراك البصري والتفضيل لعناصر تنسيق الموقع

هذا الفصل يركز علي العلاقة بين علم تنسيق المواقع والسلوكيات والانشطة، وكيف يستقبلها المستخدم لكي يتفاعل معها ويتأثر بها. يبدأ الفصل بتحليل الترجمات والتفسيرات المتنوعة لكيفية ادراك عناصر تنسيق الموقع، كما يتعرض بالنقد والتحليل لأهم الاسس التي يعتمد عليها الانطباعات البصرية المختلفة للمستعملين.

ينتهي الفصل باستعراض مفهوم علم تنسيق المواقع التجريبي الذي بدأ استخدامه بالخارج حديثا، وكيفية الوصول من خلاله الي خرائط تحليلية ترصد تفاعل المستخدمين للفراغ مع تنسيق الموقع التاريخية، وهو ما سيتم تطبيقه لاحقا في الدراسة التطبيقية علي حديقة الأزهر.

oالمدخل التطبيقي:

من أجل الوصول الي الرؤية الشاملة التي توضح العلاقة بين تنسيق الموقع للحدائق المفتوحة في المناطق التاريخية وطبيعة السلوكيات والانشطة بداخلها، والتي هي بدورها الهدف الرئيسي للبحث، يعتمد هذا المدخل علي استقراء عوامل النجاح لأهم التجارب العالمية لمجال الدراسة ودراسة حديقة الأزهر في القاهرة كأحد أهم النماذج للفراغات المفتوحة ذات الطابع التاريخ في القاهرة. يتكون هذا المدخل من ثلاث فصول كالتالي:

الفصل السابع – نماذج عالمية ناجحة للحدائق المفتوحة الحضرية

يستعرض هذا الفصل بالنقد والتحليل أهم نقاط التميز والقوة في بعض النماذج المختارة من الحدائق المفتوحة الحضرية التي تقع في نطاقات تاريخية في النسيج العمراني، هذا التحليل يتم اعتمادا علي النقاط التي توصل اليها البحث في كلا من المدخلين النظري والتحليلي بفصوله الستة. تلك النماذج المختارة موزعة كالاتي:

شمال امريكا (كندا - الولايات المتحدة الامريكية).

أوروبا (انجلترا – هولندا – برلين – برشلونة).

أسيا واستراليا (بكين – ماليبورن).

الفصل الثامن – الحدائق المفتوحة بالقاهرة (نحو منهج للتقييم)

يدرس هذا الفصل مفهوم الحدائق المفتوحة والفراغات في مدينة القاهرة وكيف تطور تاريخيا مع مرور الزمن، يلي ذلك سرد لأهم نماذج الحدائق المفتوحة الحضرية في القاهرة كخطوة أولي نحو تحديد مجال الدراسة وأختيار انسبها، ومن ثم شرح المنهجية المقترحة التي سيتم استخدامها وتطبيقها في الدراسة الميدانية.

الفصل التاسع – نموذج الدراسة التطبيقية (حديقة الأزهر)

في هذا الفصل سيتم تطبيق منهجية التقييم التي توصلت اليها الدراسة في نهاية الفصل السابق علي حديقة الأزهر بعد اختيارها للدراسة التطبيقية، حيث أنها من افضل النماذج التي تصلح لاختبار المنهجية وأكثرها ثراءا في المفردات التصميمية والنسق التاريخي المحيط.

كما سيتم الوصول الي العديد من النتائج الاحصائية والخرائط التي ترصد السلوكيات والانشطة داخل الحديقة طبقا لما تم ذكره في الفصل السادس في مبدأ علم تنسيق المواقع التجريبي، والتي يصيغها الفصل بالنهاية في نقاط الخلاصة.

الدراسة التطبيقية في هذا الفصل ستتم وفقا للمراحل الاتية:

- حديقة الأزهر – الخلفية التاريخية والموقع.
- مدي اتصال وتفاعل الحديقة مع المجتمع المحيط.
- التحليل المقارن لتصميم حديقة الأزهر.
- تقييم العناصر التصميمية لتنسيق الموقع.
- استقراء تنسيق الموقع التجريبي في الحديقة.
- رسم الخرائط التحليلية لتنسيق الموقع التجريبي.
- النتائج والخلاصة لتقييم الحديقة.

الاضافة البحثية والتوصيات:

ينتهي البحث في هذا الجزء بالوصول الي نموذج التقييم المقترح للتطبيق علي مختلف نماذج الحدائق المفتوحة، والذي تم الوصول اليه بعد التعديل في المنهجية المقترحة في الفصل الثامن طبقا للنتائج التي ظهرت بعد الدراسة التطبيقية.

الفصل العاشر – نموذج التقييم للحدائق المفتوحة الحضرية

يبدأ الفصل العاشر بتقديم نموذج التقييم الذي توصلت اليه الدراسة، والذي سوف يتم تطبيقه واختباره علي حديقة الأزهر. وينتهي الفصل بالوصول الي أهم التوصيات التي من شأنها ان تزيد من كفاءة حديقة الأزهر بشكل خاص، بالاضافة الي بعض التوصيات العامة لأهم الاعتبارات التي يجب التفكير فيها عند تصميم الحدائق المفتوحة بشكل عام.

واخيرا يوصي البحث ببعض الدراسات المستقبلية في مجال الدراسة لتطوير نموذج التقييم المقترح.

جامعـــة قنـــاة السويـس
كلية الهندسة ببورسعيد
قسـم الهندسة المعمارية
والتخطـــيط العمـــراني

تنسيق الموقع كأداه لتطوير الانشطة والسلوكيات داخل الحدائق المفتوحة بالمناطـــق التاريخيـــة

نحو منهج لتقييم الحدائق المفتوحة – حديقة الأزهر

رسالة مقدمة من

مهنـــدس / أسامة عبد الحميد نصار

المدرس المساعد بقسم الهندسة المعمارية بالاسماعيلية
للحصول علي درجة دكتوراه الفلسفة في العمارة

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كلية الهندسة، جامعة قناة السويس
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ابريل - ٢٠١٠

جامعـــة قنـــاة السويـس
كلية الهندسة ببورسعيد
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نحو منهج لتقييم الحدائق المفتوحة – حديقة الأزهر

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رسالة مقدمة من

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