

The Role of Public Space in Post-War Reconstruction

The Case of the Redevelopment of Beirut City Centre - Lebanon

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in

Architecture

By

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DECLARATION

I declare that this thesis is entirely my own work and is written by myself. Where use has been made of publications or information given in personal communication, these are acknowledged in the thesis. Any error in substance or connotation is mine and not that of those individuals or organisations interviewed or contacted during the course of the work for the thesis.

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Abstract of Thesis Form

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ABSTRACT

This research emerges from the author's observations and from concerns shared by many local and international architects, urban designers and planners about policies and strategies adopted to reconstruct the city centre of Beirut following the Lebanese civil war (1975-1990). Post-war reconstruction needs to be seen as a process that carefully restores and preserves the urban fabric as well as culture and heritage, and it should not be perceived as continuation of war by different means.

A major postulate of this thesis is that **post-war reconstruction is not just a physical phenomenon and needs to follow a holistic perspective that fulfils people's needs, perceptions and values. In other words, it is the unification of four attributes: the physical, socio-cultural, perceptual and functional attributes.** Public space imbued with these attributes, in which they have interrelated relationships perceived through the transactional perspective to be a holistic phenomenon. Space can be used to guide the ongoing process of post-war reconstruction, as well as the natural evolution and transformation of the environment. The research assumes that shared identity, cultural continuity and collective memory can be achieved through the transaction of people in the space. To fulfil the thesis objectives, theories and principles on public space are reviewed and examined. A contextual review of the war and post-war period of the city centre of Beirut uncovers major concerns regarding its reconstruction policies and strategies.

See reverse side for notes

Public opinion and preferences are elicited using an open-ended questionnaire. Cognitive mapping is also used to examine the collective memory of people about the city centre and its spaces. A comparative spatial analysis is also employed to identify changes in accessibility and integration levels between the pre and post-war spaces.

The consequence of the research outcome confirms that public space, through the transaction of people, provides the principles, qualities and meanings that respond to the authentic cultural forces and shared values of people, and the civic character of the city, which existed before the war and can still be seen shaping life today.

The thesis, however, follows a logical progression of four interrelated parts. These are:

Part One includes two chapters. Chapter One reviews a wide spectrum of literature on urban design principles. Chapter Two introduces attributes of public space.

Part Two comprises two chapters. Chapter Three focuses on reviewing the historical evolution of the old settlement of Beirut and its spaces, while Chapter Four outlines the implications caused by the civil war and its post-war reconstruction.

Part Three introduces the empirical work of the research in three chapters. Chapter Five reviews and analyses the questionnaire survey responses and results of 37 respondents. Chapter Six analyses the cognitive maps of the respondents using Lynch's five elements of *The Image of the City*. Chapter Seven presents the spatial analysis of the city centre of Beirut using space syntax (visibility graph analysis technique).

Part Four is the concluding chapter. Chapter Eight examines the research findings and restates the thesis approach by proposing a framework for implementation and outlining its major characteristics.

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*I DEDICATE
THIS WORK
TO
MY PARENTS*

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Introduction

The central theme of this thesis "*The Role of Public Space in the Post-War Reconstruction of Beirut City Centre*" was prompted by the researcher's personal observations of the early period of the Lebanese civil war and the later redevelopment processes taking place in his home city.

Towards the end of the twentieth century Beirut, once a meeting point for a highly diverse population of different ethnic, religious, cultural and class backgrounds, was torn apart by a senseless conflict. Over the span of 15 years, the civil war (1975-1990) destroyed the city's image and caused extensive damage to its public spaces and to its social and physical fabric. The city split in two along a barrier known as the Green Line, its neighbourhoods became the territories for various factions, and dialogue and cross-cultural understanding disappeared from the public spaces. The city was no longer a social space but filled with anger, intolerance and hatred.

Khalaf (1993, pp. 93-121) portrays some of the critical problems caused by the destruction of the civil war to the social and physical fabric of the city. He claims that one of the most profound consequences of the war has been **the redrawing of the social geography of the country**. Public spaces were rearranged to enable antagonistic groups to negotiate new identities.

At the cessation of hostilities, Beirut lay in ruins. Reconstruction was desperately needed to bring life and normalcy back to its public spaces. As an architect and urban designer, the author shares the growing concern of many researchers in post-war reconstruction through his observation of the reconstruction of the city centre of Beirut. Several plans have been put forward (these are discussed in Chapter Four), culminating in a master plan approved in 2001; which is evaluated in Part Three of this thesis. From these experiences, the researcher has learned that the city, as a complex of human behaviours and institutions, must act as a social phenomenon or it no longer functions.

However, the prevailing perception, which in fact triggered this research, was that the physical aspects of public space have been allowed to dominate the reconstruction process, to the exclusion of its other key socio-cultural, functional and perceptual aspects. This prompted the researcher to explore the literature in search of a holistic approach that responds to the ongoing redevelopment as well as to the natural evolution of the environment. Such an approach would also assist in defining the overall study context.

It was, therefore, appropriate to introduce, at the inception of the research, the philosophies, theories and principles that would underpin a theoretical framework for public space, one designed to understand the relationship between man and the environment, and what part such a relationship should play in post-war reconstruction.

As the researcher's knowledge of various theories grew, **transaction** emerged as a holistic perspective that sees people transacting and exchanging views and cultural values and constantly forming and reforming space in harmony with these values. Thus, public space becomes embedded with a multiplicity of values, qualities, dimensions and aspects.

Public space, as a phenomenon, reaches beyond its material properties to include all aspects of civic life. It is the place where community reconciliation occurs and differences are set aside; and where people meet and work together. Public space is the embodiment of shared identity, cultural continuity, collective memory, as well as social and spatial transformation that can be achieved through the transaction of the society in the space. Public space, within this concept, is perceived as holistic and the author explores how this approach can be used to guide the ongoing process of post-war reconstruction, as well as the natural evolution and transformation of the environment.

The identification of public space from a transactional perspective guides this research to seek matters that are important to people and to understand their behavioural responses to situations in public space. The built environment is the

result of people's behavioural responses; the two are intertwined. Intuitively, people acknowledge the norms, traditions, rules and social systems, which then allow them to transact within the environment.

A major postulate of this thesis is that **post-war reconstruction is not just a physical phenomenon and needs to follow a holistic perspective that fulfils people's needs, perceptions and values. In other words, it is the unification of four attributes: the physical, socio-cultural, perceptual and functional attributes.** Public space is imbued with these attributes, in which they have interrelated relationships perceived through the transactional perspective to be a holistic phenomenon. This requires that societal participation in the rebuilding process is vital when developing environments that are responsive to local needs and affiliations.

Research Objectives

The intention of this research is to learn from Beirut's experience of post-war reconstruction and to identify an approach that supports the ongoing redevelopment process as well as the natural evolution of the city. Moreover, it is intended to find out how public space may contribute to reconstruction, in order to achieve an environment that responds to people's needs, perceptions and values. These broad areas of concern and interest have led to the formulation of a series of objectives, which the research intends to meet (Figure 0-1). These are:

- **To formulate a theoretical framework** that guides the sequence of this research.
- **To explore the context of Beirut** in order to identify the problems and issues that emerged as a consequence of the civil war.
- **To investigate people's perceptions** in order to identify attributes and dimensions that respond to human needs.
- **To analyse the spatial structure** in order to identify the impact of post-war reconstruction on the urban and social fabric of the study area.

- **To formulate a framework**, based on public space principles and attributes, that responds to the consequences of war, supports the ongoing reconstruction process and nurtures the natural transformation of the environment.

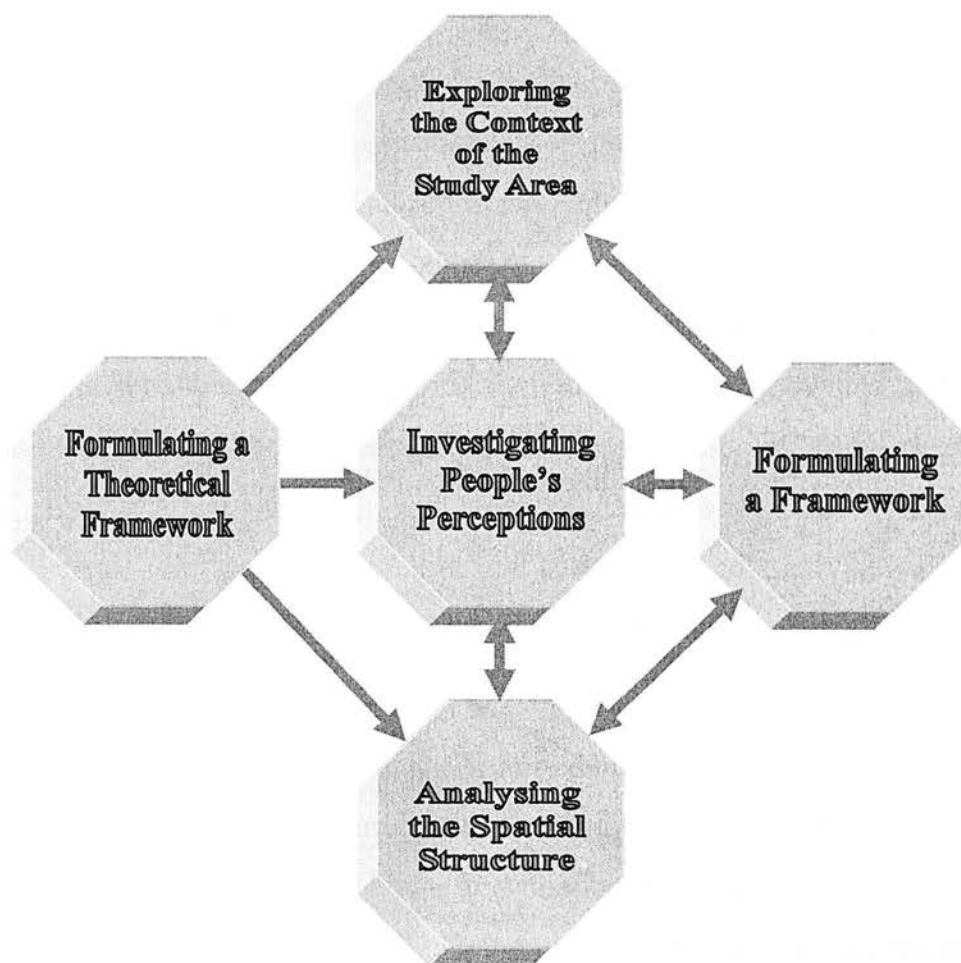


Figure 0-1: A diagram showing the relationships among the thesis's objectives (source: the author, 2004).

Research Methodology

The methodology developed in this research intends to fulfil its objectives by formulating a framework that is based on attributes derived from the literature review, the Beirut context and the empirical work.

Before embarking on this task, it is imperative to establish a clear relationship between public space and post-war reconstruction. The discussion leads to the conception that post-war reconstruction strategies should not only deal with the

physical aspects of the environment, but also with human needs and values. Maslow's hierarchy of needs provides a valuable understanding of the qualities embodied in the built environment. This prompted the need to identify a theoretical basis that deals holistically with all man-environment relationships and processes.

In reviewing the literature, particularly philosophical frameworks related to environmental psychology, a **transactional perspective** emerges as an approach that is holistic in nature and deals with man-environment relationships where human behaviour and perception constantly experience **change** and mutual **transformation**. In other words, the transactional perspective deals with the **changing relations** between the **psychological** and **environmental** aspects as united and interrelated entities, assuming an inseparability of these aspects, in terms of psychological, physical and temporal phenomena. The transactional perspective deals with people, processes and the environment as a holistic entity that collectively combines society and the city to formulate a whole (Altman and Rogoff, 1987, pp. 7-9).

As a result, a theoretical framework is developed based on principles, dimensions and qualities that guide the sequence of the research. The research then addresses the local context by reviewing the war and post-war period of the city centre of Beirut. This underscores major public concerns regarding reconstruction policies and strategies used in the process, which necessitate the need for empirical investigations.

The empirical research in Part Three was designed in three main stages that seeks to formulate an image of the city, as it exists in people's minds, and ends by complementing this with a socio-physical examination of the approved reconstruction master plan.

The first stage used an open-ended questionnaire survey that addresses socio-cultural and functional attributes. Through it, **public preferences** emerge as vital to this research, which leads to the identification of important attributes,

dimensions, and qualities of public space. In addition, the questionnaire is supported by an observation of pedestrian behaviour in an area identified by the respondents as highly suitable for transformation to a pedestrian zone.

In the second stage, cognitive mapping technique is used to examine the **collective memory** of people, an important force of the perceptual attribute of public space, and which forms the basis of the re-integration of the society in it.

The third stage involves space syntax as a technique employed to identify the impact of the post-war master plan on the **spatial structure** of the city centre of Beirut. This type of investigation allows the prediction of the level of change in **integration** between the traditional and post-war public spaces, which forms the basis of the physical attribute of space.

In distilling and combing the research findings, the research methodology intends to restate the thesis objectives and approach by proposing a framework that assist in guiding, implementing and controlling the ongoing post-war reconstruction process as well as the natural development of the city centre of Beirut.

Structure of the Thesis

The progression of the thesis is presented in four interrelated parts.

Part One (Theoretical Framework) consists of two chapters. In responding to the identified research objectives, a body of intellectual insights, ideologies and principles related to man and environment are synthesised and examined.

Chapter One draws attention to the growing concern in the discourse of post-war reconstruction and the contribution of urban design to such a process. It defines the role and nature of urban design by reviewing a wide range of literature on various theories, dimensions and issues.

Chapter Two gives an in-depth exploration of major attributes of public space. Matters related to the **physical, socio-cultural, perceptual and functional** aspects of people's behaviour and their interaction with the built environment are examined. Public space emerges as a phenomenon that interacts holistically with

human needs and values. Part One concludes by building a theoretical framework that guides the remaining chapters of the thesis.

Part Two (Contextual Review of Beirut) is divided into two chapters. After introducing the context of Beirut, it outlines the consequence of the civil war, and considers both physical and non-physical implications. As the central focus of this thesis is to learn from Beirut's experience of post-war reconstruction, the researcher attempts to identify the qualities as well as the issues that affected people and the environment as a result of the implementation of the reconstruction plan.

Chapter Three starts by giving a general background of the study area then focuses on the evolution of the urban fabric of the city of Beirut. It intends to highlight some of the major developments that contributed to the character of the urban fabric of the city and its public spaces. The discussion covers the historical development of the old city of Beirut up to 1986.

Chapter Four gives a brief account of the comprehensive upheavals of the physical and social fabric of the city because of the civil war (1975-1990). It attempts to identify, explore and examine the physical and non-physical implications of the war and the post-war reconstruction of the fabric of the city centre. This addresses the physical, social, cultural, economic and psychological aspects. In addition, it focuses on the phenomenon of transforming public spaces during war from places where people meet and interact, to places of isolation and of segregation between different communities. This chapter also explores some of the post-war circumstances that led to the making of the approved (2001) master plan for the city centre. In addition, it looks closely at the critical arguments that accompanied the reconstruction plan. The findings of Part One and Part Two indicate the need for an investigation of the Beirut people's perceptions and the built environment, and the impact of war and post-war reconstruction.

Part Three (Empirical Work) is divided into three chapters. Guided by the transactional perspective, this part aims to respond to the issues that emerged in Part Two.

In **Chapter Five**, an open-ended questionnaire technique is employed to explore people's perceptions and preferences of the pre- and post-war reconstructed city centre, particularly its public spaces. Salient qualities and dimensions emerge that respond to the ongoing transformation and modification of the built environment.

Chapter Six uses cognitive maps provided by the questionnaire's respondents to explore their collective memory, using Lynch's five elements of the image of the city. The five elements were also used to build up a shared mental map that reflected the way people collectively value their culture and the physical environment.

Chapter Seven examines the pre- and post-war spatial structure of the city centre and its public spaces using visibility graph analysis as a space syntax technique.

Part Four (Conclusion) presents the final chapter. **Chapter Eight** concludes by reviewing the findings of the thesis, suggesting a framework for reconstruction and methods for its implementation, introducing its major characteristics, proposing further research and conveying ending message. The structure of the thesis is shown in Figure 0-2.

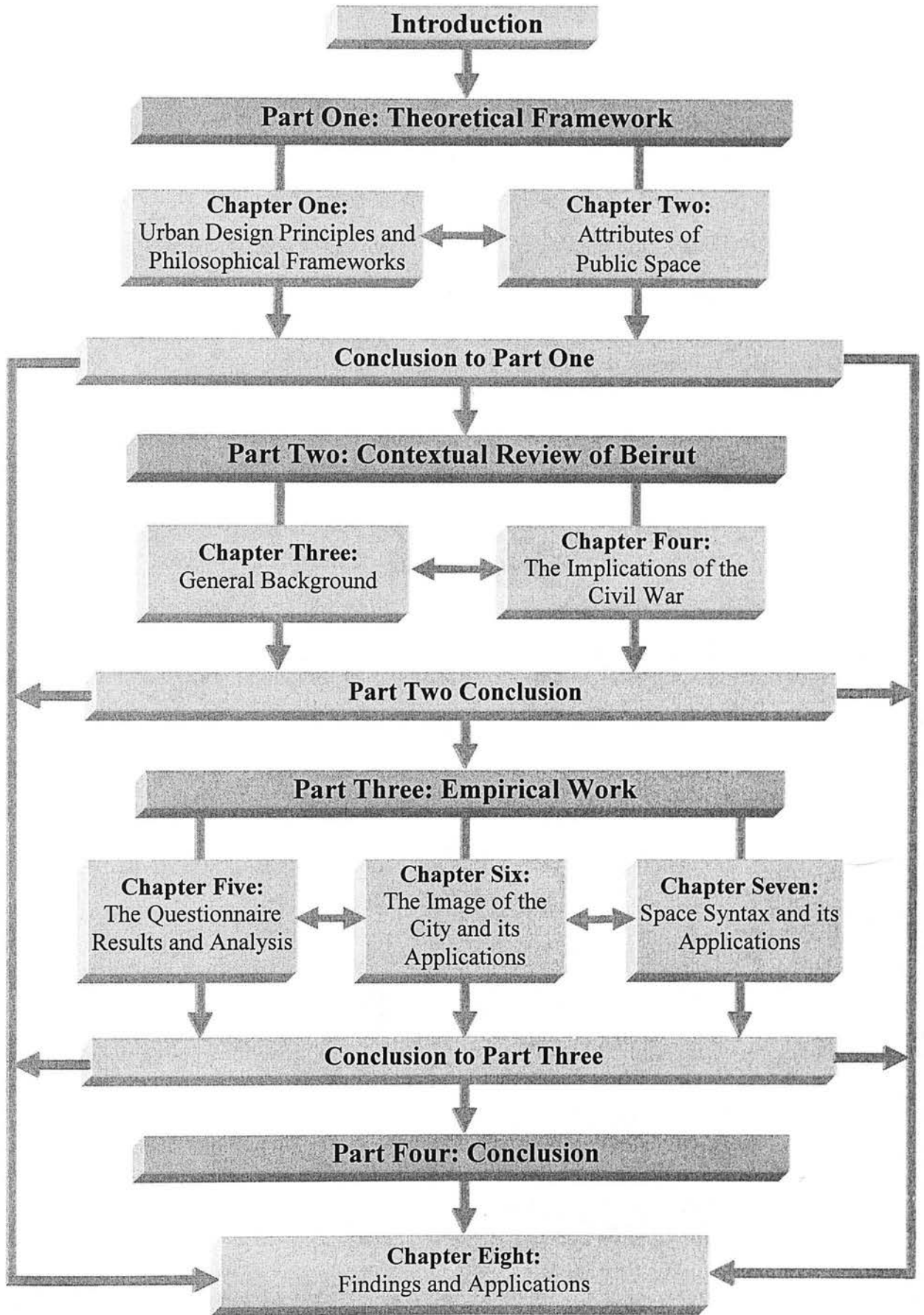


Figure 0-2: The structure of the thesis (source: the author, 2004).

PART ONE:
THEORETICAL FRAMEWORK

Introduction to Part One

Part One introduces ideologies, theories and principles of urban design, which are perceived as vital in determining attributes derived from people and the environment. This definition reveals the transactional importance of public space and emphasises its role as an essential link between the design of the physical environment and people, and their transaction with that environment. Such an understanding asserts the need to explore public space in its local and global contexts, as a driving force of any future post-war reconstruction process. Two areas for exploration are identified:

- To explore urban design theories and ideologies that can contribute to the understanding of the role of public space in any post-war reconstruction; and
- To unravel major attributes of public space, including physical, perceptual, functional and social attributes that alleviate the desolation of blighted cities and their future reconstruction.

Chapters One and Two both focus on discussing the above-mentioned areas. The principles derived from these chapters will be synthesised to formulate a theoretical framework that guides the subsequent parts of the thesis.

Chapter One:
Urban Design Principles and
Philosophical Frameworks

Chapter One: Urban Design Principles and Philosophical Frameworks

1.1 Introduction

This chapter articulates some of the influential principles, ideologies and philosophies of the twentieth century that affected the development and reconstruction of urban environments. The aim is to learn from the literature and to provide a useful synthesis of a large body of design thought that assists in establishing a theoretical framework.

Chapter One begins by reviewing the current discourse on post-war reconstruction as an urban design process, introducing some of the ideologies and principles, exploring human needs and environmental concerns and finally, examining some of the important philosophical frameworks in psychology, particularly the transactional perspective.

1.2 Current Discourse on Post-War Reconstruction

In the past century, many countries of the world have witnessed successive wars. The bombing campaigns of the Second World War left cities such as Warsaw, Berlin, Bristol and many others, with severe damage to their physical fabric. Beirut, Bosnia, Kosovo, Mostar and more recently Baghdad, are further examples of cities affected by war.

Unquestionably, the rebuilding of cities is an inevitable process soon after the end of atrocities. Optimism and a common desire to recover from war allow far-reaching decisions to be made about the future shape of war-torn cities. Among the main urban design issues to emerge is the controversial question of modernity versus tradition. This classic debate stems from the opposing ideologies of the twentieth century, which perceived the city as an object to be either preserved or replaced. On the one hand, the modernist views to post-war reconstruction was that the bombing was merely serving the process of transforming the old to a new

urban order, as the damaged cities were obsolete and beyond repair. On the other hand, the traditionalist point of view considers that the ravaged cities need to be carefully restored to preserve their culture and heritage, and that planning should not "... be the continuation of war by other means" (Jencks and Kropf, 1999, p.185).

The United Nations Centre for Human Settlements (UNCHS, Habitat, 2001, pp. 182-190) produced a report, *Cities in a Globalizing World: Global Report on Human Settlements 2001*, which indicates **the need for supporting post-disaster reconstruction of human settlements**. The aim of this report is to **rebuild** in ways that are constructive **for all segments of society**, and which help to prepare for future disasters. In addition, the report aims to learn from recent experiences in order to draw lessons that will improve future interventions, and to develop ways that will be of benefit to all sectors of the affected societies (Figure 1-1).

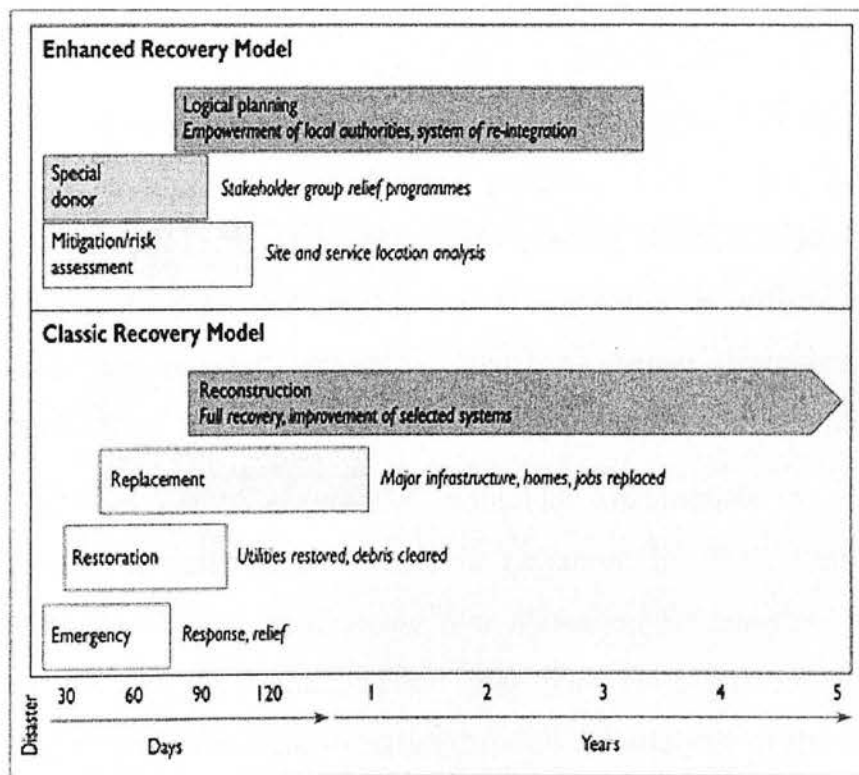


Figure 1-1: Classical and enhanced recovery model (source: Siembied and Baired, in UNCHS, Habitat, 2001, p.189).

This report recommends a new enhanced model that focuses attention on how to control disasters to empower local authorities and civil society. Many scholars have shown concerns and addressed various issues related to the rebuilding of war-torn cities. For instance, Percy Johnson-Marshall's (1966) book *Rebuilding Cities* contributes to modern urban planning by giving a wide overview of the movement to rebuild cities after war. Marshall affirms that the main task of every city is to reconstruct its centre, bringing it back to life, not just as a shopping area and office district but also as a focal point in the civic life of the community.

John Punter (1990, pp. 377-382) considers the wartime destruction of Bristol, one of Britain's foremost city centres, and the subsequent attempts to reconstruct it with a sense of place and visual quality. Punter's study explains how town planning learned some very hard lessons about its ability to shape growth and change, mobility and traffic, architectural style and aesthetics, character and conservation. He examines the economic, political, and social as well as design contexts that produced a series of changing architectural and urban design trends that shaped the urban form of the city. Punter discusses the post-Blitz plans for Bristol and the disappointments they produced. He argues that design control must remain an essential part of planning practice, if cities like Bristol are to maintain their visual quality or to recover their urban character. He explores the complexities of a development process that amalgamates the efforts of a variety of professions and interests groups – architects, urban designers, planners, politicians and critics.

Shouheil El-Masri (1992a) provides valuable information on community reconstruction of war-damaged villages in Lebanon. In 1993, Sultan Barakat (1993) submitted his thesis on *Reviving War-Damaged Settlements: Towards an International Charter for Reconstruction after War*. He offers a comprehensive understanding of post-war reconstruction through the analysis of the case studies of Iraq, Yemen and Northern Ireland. In addition, Barakat established the Post-War Reconstruction and Development Unit at the University of York to develop

research on issues of the management and planning of reconstruction after war and post-war recovery.

Sharief Motawef (1996) makes a valuable contribution, which is, on the one hand, through the preparation of a comprehensive approach to the reconstruction process, and on the other, through the understanding of the real problems and disputes between the government and landowners.

Spiro Kostof (1999, pp. 245-305) portrays the history of the main elements of cities: streets, public places and urban divisions (religious, political and social). He discusses various aspects of the urban process and the effect of natural disasters, wars and comprehensive redevelopment compared with the traditional processes of growth and change. In addition, Kostof discusses how one can **recharge the old forms with contemporary meaning**.

In the case of Beirut, many national as well as international writers, authors and professionals have shown a great interest in the post-war reconstruction of the city. Angus Gavin and Ramez Maluf (1996, pp. 45-141) present the approach taken by the agency responsible for the reconstruction process and illustrate the complexity of the reconstruction process of Beirut city centre.

Peter Rowe and Hashim Sarkis (1998, p.9) deal with two specific periods in the urban development of Beirut city. The first period coincides with the government interventions of the late 1950s to the late 1960s, while the second episode is concerned with the increasing private sector involvement in planning and reconstruction after the civil war (1975-1990).

Furthermore, many conferences, symposia and seminars have taken place in different parts of the world, highlighting the complex issues regarding the aftermath of the Lebanese civil war and its impact on the society. In September 1991, Assem Salam, a prominent Lebanese architect, gave a seminar on *Recovering Beirut: Urban Design and Post-War Reconstruction* at the Massachusetts Institute of Technology. He addressed a number of key issues on

four central and critical concerns: the role of the public sector in urban planning; the imminent controversy over the proposed scheme for the post-war reconstruction of Beirut city centre; an overview of Lebanon's legacy of urban planning; and future prospects. Also in June 1993, he gave a lecture at a symposium that was held at the Architectural Association in London. Highlighting critical issues related to the post-war reconstruction plan for the city centre of Beirut, he argued that the plan needed to be more human, and more attuned to the memory and scale of the city (Salam, 1995, pp. 145-154).

In July 1993, Michael F. Davie (1993, pp. 1-11) presented the paper *A Post-War Urban Geography of Beirut* at the European Association for Middle East Studies Conference. It describes some of the salient changes induced by the war that have affected the urban geography of Beirut and its suburbs since 1975. In addition, he provides a brief overview of research on the city undertaken by geographers, urbanists and urban sociologists, both in France and in Lebanon.

In November 1997, the International Union of Architects' Programme organised a conference, *Reconstruction of War-torn Cities*, which was held at the Order of Engineers and Architects of Beirut's headquarters. Many prominent local and international speakers participated in this conference sharing their experience of post-war reconstruction of different cities and countries, namely Beirut, Sarajevo, Mostar, Kuwait, Iraq, Yugoslavia, Vietnam and central Berlin (UY/PRDU, 1998). Furthermore, a conference on *The Reconstruction of the Souks of Central Beirut* was held at the same venue, which contributed enormously to shaping the current master plan of the new souks' project. The Order of Engineers and Architects of Beirut published the proceedings of both conferences in the Arabic language (Salam et al., 1998, pp. 4-16, 36-49).

1.3 Ideologies of the Late Twentieth Century

The last forty years of the twentieth century have witnessed a plethora of ideologies that explore various facets of urban design. Many theorists have contributed to debates about the ideals of urban design. The primary line of

argument was that of the post-modernists who questioned and criticised the followers of the modern movement for their emphasis on technology, authoritarian utopianism and mega-scale thinking (Collins and Collins, 1986, p.125). In other words, the discourse was dominated by the contrast between **modernity** and **tradition**.

Many in the professions of architecture and urban design, as well as many social scientists, behavioural scientists and architectural analysts, criticise the ethics and principles of the modern movement. For instance, Charles Jencks and Karl Kropf (1999, pp. 3-12) argue that the modernist movement of the 1960s and 1970s had undergone an impending sense of crisis and a profound mutation into three major approaches, namely **Post-Modernism**, **Late Modernism** and **New Modernism**.

The modernist approach was based on the perception that the urban forms of the past are inefficient and unable to respond to the requirements of the modern age. This approach has provided a set of generic solutions consisting of two city models, namely *the Garden City* and *the Radiant City*. The International Congress for Modern Architecture (CIAM), a group of avant-garde intellectuals, endorsed the motto **form follows function**. This motto signifies that the aesthetics and form of the environment are subordinate to their function and that **social planning and physical design** should go together (Lang, p. 121, 1994; Madanipour, 1996, pp. 45-47).

Aldo Rossi (1966) and Robert Venturi (1966) influenced the architectural and urban design ideologies during the 1960s. Rossi sets the intellectual agenda for neo-Rationalism, finding that there are two permanent characteristics of architecture, which are the aesthetic intention and the intention to create a better environment for life. He later notes that these aspects shape any significant attempts to explain the city as a human creation (Rossi, 1966, p.21). Venturi (1966) presents one of the most influential arguments against modernist functionalism and paves the way for the development of the post-modernist approach (Moughtin, 1992, p.5). Moughtin considers Venturi's arguments as

supportive of an empirical approach to city design, with a preference for richness of meaning rather than clarity of meaning.

Continuing this reaction against modernism, Hayward and McGlynn (1993, p.35) criticise theorists and designers who only acknowledge the physical phenomena as the product of development and ignore the determining factors. They describe such an approach as naive and suffering from an incomplete knowledge of the implications of modernist design.

Christian Norberg-Schulz (1977, pp. 19-24) also puts forward a strong criticism of modernism. He postulates that **the perception of form has a cultural basis and meaning in architecture**, and that the architect's mission is to convey such cultural intentions. Furthermore, he puts much emphasis on the unique qualities and importance of **symbolism of place**. In addition, Moughtin (1992, p.5) considers that the environment carries many rich and stimulating characteristics, such as symbolism, and that these characteristics were ignored in the so-called *heroic age* of modern architecture.

For Jon Lang (1987, pp. 5, 8), the modern movement provides the new city with many powerful images, but the results of applying modern design principles are not always predictable. He asserts that many of the modern and post-modern design ideologies are based on **a deficient understanding of what the built environment affords to people**.

Some critics, such as Peter Eisenman and Leon Krier (1989, pp. 7-18), advocate a morphological approach to urban design founded on a clear **understanding** of the qualities of the **traditional city**. They base their argument on tried and tested spatial patterns, stressing the need to work in harmony with the past. Eisenman and Krier present a new rationalist argument against the modern movement. They discuss architecture and city development in terms of **presentness** and **tradition**. Knox (1987, pp. 364-366) perceives that the modernist approach lacks dialogue with the end user who is most affected by the design. He disagrees with Le Corbusier's suggestions that people would have to be re-educated to appreciate

his vision. Furthermore, he refutes Walter Gropius' idea that talking to building users is undesirable, because they are intellectually undeveloped.

HRH Prince Charles (a member of the British Royal Family), in a television interview in 1988 gained much media attention and generated critical argument and architectural debate that drew attention to the value of the **traditional** design, emphasising that architecture should be treated as a language of harmony. The design principles that emerged from the architectural debate following Prince Charles' initiative are discussed later in this chapter. In addition, he called for the **participation** of local communities in development processes. He stated that "People should be involved willingly from the beginning in the improvement of their surroundings but participation cannot be imposed: it has to start from the bottom up" (Moughtin, 1992, p.11).

Hamdi (1995), however, suggests that community participation is about ensuring that all interested individuals share the responsibilities, profits and risks of their decisions, and that "their partnership is by necessity rather by luxury" (Hamdi, 1995, p.80).

Jane Jacobs (1962) illustrates a strong critique of modern planning of the twentieth century. She argues that city planning has more to offer than simply an order of pleasing appearance. Jacobs further argues:

"Why have cities not, long since, been identified, understood and treated as problems of organized complexity? If people concerned with the life sciences were able to identify their difficult problems as problems of organized complexity, why have people professionally concerned with cities not identified the kind of problem they had?... The theorists of conventional city planning have mistaken cities as problems of simplicity and of disorganized complexity... These misapplications stand in our way; they have to be hauled out in the light recognized as inappropriate strategies of thought and discarded..." (Jacobs, 1962, pp. 434, 435)

She points out that the primary concern of the architects and planners is not to seek for the appearance of order without equally looking for functional solutions (Jacobs, 1962). It is futile to plan a city's appearance, or to speculate on how to endow it with a pleasing appearance of order, without knowing what innate,

functioning order it has. As Moughtin (1992, p.30) argues that to seek for the look of things as a primary purpose is apt to make nothing but trouble, but also to seek only functional solutions is equally short-sighted.

Christopher Alexander (1965, pp. 58-61) makes a distinction between two types of cities, namely **natural cities** and **artificial cities**. He argues that today's designers seem to search for the physical features of the past instead of exploring the principles behind the physical features of the old towns. Alexander points out that the present built environment lacks the natural order of historic places and postulates that, when the balance between the needs of the individual and that of the whole environment are maintained, such organic order becomes apparent.

For Kevin Lynch (1960, pp. 9, 10), the physical setting of the environment evokes a strong image that plays a social role. He defines such a quality as **imageability**, which evokes collective memories of the whole community. Imageability is explored and applied in Chapter Six.

1.4 Urban Design Principles and Frameworks

The previous discussion elucidates the way this research perceives urban design in the light of its own research objectives and concerns. Urban design, as a tool for post-war reconstruction, has yet to establish a clear or unified definition and areas of realisation among individuals in the profession. Madanipour (1996, pp. 91, 92) perceives that this uncertainty derives from the fact that urban design involves a wide range of overlapping disciplines, which are ambiguous in nature. The main concern here is that urban design is a domain that involves both **global** and **local** matters. Madanipour, in his attempt to define the area of confusion surrounding urban design, refers to both the design of cities and settlements and the design of parts of the urban areas, in other words, to **macro** and **micro-scale** urban design.

Several urban problems emerged as a consequence of the misconception of modern urban design principles. Allan Jacobs and Donald Appleyard (1987, pp.

112-120) identify several problems that became wider symptoms of many cities. Such problems were seen as: **Poor living environments** of the surroundings of homes, which are still frequently dangerous, polluted, noisy, anonymous wastelands. **Gigantism** and loss of control of the city's elements, which grow relentlessly in size, substantial transportation systems, and vast districts and complexes are created that make people feel irrelevant. **Large-scale privatisation** has deprived many cities of its activities, while public life has become dependent on planned, formal occasions, mostly protected internal locations. **Centrifugal fragmentation** and the growth of out-of-town shopping have encouraged vehicular use and contributed to the diffusion of many cities, leading to the isolation of social groups from each other. **Destruction of valued places**, a process mainly seen through the unyielding exploitation of places that attract the public, has led to much destruction of heritage, historic places and natural amenities. **Placelessness**, where cities are becoming meaningless places and beyond people's reach and where things happen without full public participation. **Injustice**, in which cities are becoming symbols of inequality, where disparity between the rich and poor environments are striking. **Rootless professionalism** is seen in many professionals who are becoming part of a professional culture rather than part of the local cultures for which they design places. Urban environments are becoming rootless, as they are more vulnerable to changes in professional trends and ideologies, rather than to local events.

In his attempt to resolve the uncertainty surrounding urban design, Madanipour (1996, pp. 91, 92) compares two different sets of definitions, some of which are the definitions given by Francis Tibbalds and Kevin Lynch. Tibbalds (1988, pp. 11-15) describes urban design as the physical design of the public realm, in which **public realm** means the space between buildings, in other words public space, which is mainly the space beyond the private realm. Kevin Lynch defines urban design as "the art of creating possibilities for the use, management and form of settlements or their significant parts" (Lynch, 1981, p.290).

Another attempt to explain the nature of urban design is attained by Jon Lang (1994, p.106) who identifies four approaches: (1) **Financially pragmatic urban design** is an approach where design is required to meet the profit demands of the developer and respond to the demands of the marketplace. (2) **Urban design as an art**, the central aim of this approach is that urban design should be a work of art. For instance, the Neo-Rationalists and Deconstructionists tend to focus solely on the aesthetics of geometries at the expense of social aspects of their design. (3) **Urban design as a problem-solving process**, an approach that focuses on the users' needs, much of it based on naive nostalgia for the past. In addition, this approach involves much of the empirical research to design. (4) **Urban design as a community design** is an approach that puts much emphasis on the involvement and participation of the public in the design process. Lang (1994) points out that none of the approaches he identifies can be considered right or wrong, which asserts the current dilemma of urban design ideologies.

Parallel to this research understanding is the description, which appeared in the Department of the Environment, Transport and the Regions and Commission for Architecture and the Built Environment guide, in which urban design is defined as:

"... the art of making places for people. It includes the way places work and matters such as community safety, as well as how they look. It concerns the connections between people and places, movement and urban form, nature and the built fabric, and the processes for ensuring successful villages, towns and cities." (DETR/CABE, 2000, p.8)

In this sense, urban design, at both local and global levels, can play a key role in creating lively places and flourishing environments that are viable socially and economically. Good urban design can give cities and places their distinct character, where they are pleasant and accessible and give their users the feeling of being safe and secure (DETR/CABE, 2000, pp. 8-9). However, the guide aims to promote higher urban design standards that are relevant to all aspects of the built environment, in particular public spaces. In addition, the guide identifies many factors that influence the outcome of the design process and the sorts of

places that are created. The success of these factors depends on: (a) A clear framework provided by development plans and supplementary guidance, delivered consistently, including through development control; (b) A sensitive response to the local context; (c) Judgements of what is feasible in terms of economic and market conditions; and (d) An imaginative and appropriate design approach by those who design development and the people who manage the planning process (DETR/CABE, 2000, pp. 8-9).

The guide encourages a shift from a negative reliance on standards towards a more positive emphasis on performance criteria. In addition, it reveals several principles that have emerged from analysing successful streets, spaces, villages, towns and cities. The principles that assist designers in creating successful places are (DETR/CABE, 2000, p. 15):

- **Character**; a place with its own identity;
- **Continuity and enclosure**; a place where public and private spaces are clearly distinguished;
- **Quality of the public realm**; a place with attractive and successful outdoor areas;
- **Ease of movement**; a place that is easy to get to and move through;
- **Legibility**; a place that has a clear image and is easy to understand;
- **Adaptability**; a place that can change easily; and
- **Diversity**; a place with variety and choice.

Based on the review of past research and the analysis of several case studies, Carr et al. (1995, p.19) provide a wide-ranging analysis of the historical evolution of public space that has developed from many different impulses. They point out that public places should be **responsive, democratic and meaningful**. From their extensive research of types, characteristics and case studies, Carr et al. (1995, pp. 85-134) identified three critical dimensions of public space, which are

not often addressed, namely, **needs**, **rights** and **meanings**. They argue that emphasis on a specific attribute alone, such as the physical or aesthetic character of an environment, offers little understanding of public space and behaviour. They put much emphasis instead on understanding the interaction of people and places, considering a range of factors, including the natural qualities of the environment and the cultural, demographic and economic background of users. In addition, Carr et al. recognise five factors that account for people's needs in public space, namely comfort, relaxation, passive engagement, active engagement and discovery.

Kevin Lynch (1981, pp. 118, 119) identifies five key principles of urban design: (1) **Vitality** is the degree to which the form of places supports the functions, biological requirements and capabilities of human beings; (2) **Sense** is the degree to which places can be clearly perceived and structured in time and space by users; (3) **Fit** is the degree to which the form and capacity of spaces matches the pattern of behaviours that people engage in or want to engage in; (4) **Access** is the ability to reach other persons, activities, resources, services, information, or places, including the quantity and diversity of elements that can be reached; and (5) **Control** is the degree to which those who use, work, or reside in places can create and manage access to spaces and activities.

Lynch (1981) refers to the costs of designing, developing and maintaining any level of attainment of the above dimensions as efficiency and the way in which the environmental benefits are distributed as justice. Jacobs and Appleyard (1987, pp. 115, 116) propose a number of goals that are essential for good urban life and successful environments:

- **Liveability:** a city should be a place where everyone can live in relative comfort and a well-managed place where most people can bring up children, have privacy, sleep, eat, relax and restore themselves.
- **Identity and control:** people should feel that some part of the environment belongs to them, individually or collectively, some part for

which they care and are responsible, whether they own it or not. Environments should be designed for those who use or are affected by them, rather than for those who own them.

- **Access to opportunity, imagination and joy:** people should find the city a place where they can break from traditional moulds, extend their experience, meet new people, learn other viewpoints and have fun.
- **Authenticity and meaning:** people should be able to understand their city (or other cities), its basic layout, public functions and institutions; and should be aware of its opportunities. This means that an authentic city is where the origins of things and places are clear, and where the urban environment reflects its significant meanings. The city should symbolise the moral values of society and not be dominated by one group.
- **Community and public life:** cities should encourage participation of their citizens in community and public life. The city structure should invite and encourage all members of the community, where people of different kinds meet.
- **Urban self-reliance:** increasingly, cities will have to become more self-sustaining in their use of energy and scarce resources. This will help in establishing a strong sense of local and regional identity, authenticity and meaning.
- **An environment for all:** good environments should be accessible to all. Every citizen is entitled to some minimal level of environmental liveability and minimal levels of identity, control and opportunity. Good design should maintain an equal balance between different layers of society.

Jacobs and Appleyard (1987, pp. 112-120) postulate that a successful urban environment balances these goals, allowing for individual and group identity while maintaining a public concern, encouraging pleasure while maintaining

responsibility, remaining open to outsiders while sustaining a strong sense of localism. They identified five physical characteristics, which must be present as prerequisites for a sound urban environment, in order to obtain a positive response to the above goals and values: (1) Liveable streets and neighbourhoods; (2) Some minimum density of residential development as well as intensity of land use; (3) An integration of activities – living, working and shopping – in reasonable proximity to each other; (4) A man-made environment that defines public space (as opposed to buildings that, for the most part, sit in space); and (5) Many separate, distinct buildings, with complex arrangements and relationships (as opposed to a few, large buildings).

Bentley and his team devised an approach to urban design at the then Oxford Polytechnic (Bentley et al., 1985, pp. 10, 11). This approach calls for enriching environments that are more democratic, in order to allow a maximum degree of choice to users. It addresses the effects of place design on people's choices. It focuses also on seven main principles in making responsive places:

- **Permeability:** the quality that affects where people can and cannot go.
- **Variety:** the quality that affects the range of uses available to people.
- **Legibility:** the quality that affects how easily people can understand what opportunities a place offers.
- **Robustness:** the quality that affects the degree to which people can use a given place for different purposes.
- **Visual appropriateness:** the quality that affects whether the detailed appearance of the place makes people aware of the choices available.
- **Richness:** the quality that affects the decisions in ways that increase the choice of sense-experiences, which users can enjoy.
- **Personalisation:** the quality that affects the extent to which people can put their own stamp on a place.

Punter (1990) suggests that there are lessons to be learned from Bristol's experience in post-war reconstruction. Table 1-1 shows the principle articulations of urban design that have informed his appraisal of the redevelopment of Bristol city centre. One of the main lessons Punter describes is that the public need to be consulted, as failing to do so may lead to complete loss of public confidence in the planning profession. The lessons learnt from Bristol coincide, largely, with the debate put forward by the Prince of Wales. In his 1988 television broadcast *A Vision of Britain*, Prince Charles presented a set of principles for design control that he considered would meet public accord. Francis Tibbalds (1988b), the then President of the Royal Town Planning Institute (RTPI), took up the Prince's suggestions and produced the *Ten Commandments*:

1. Consider places before buildings;
2. Have the humility to learn from the past and respect your context;
3. Encourage the mixing of uses in towns and cities;
4. Design on a human scale;
5. Encourage the freedom to walk about;
6. Cater for all sections of the community and consult with them;
7. Build legible environments;
8. Build to last and adapt;
9. Avoid change on too great a scale at the same time;
10. With all the means available, promote intricacy, joy and visual delight in the built environment.

According to Tibbalds (2001, pp. 28-79), successful cities are characterised by several design themes and concepts, which, historically, have been well tried and proven. He reveals seven factors that contribute to the success of towns and cities:

	KEVIN LYNCH 1982	JANE JACOBS 1961	BENTLEY ALCOCK McGLYNN 1986 MURRAIN SMITH	TIBBALDS 1988	HRH THE PRINCE OF WALES 1989	HOLYOAK 1988	URBAN DESIGN GROUP 1987	WATES 1988	BUCHANAN 1988
1	Vitality (includes biological and ecological)	appropriate activity before visual order	"responsive" environments	places before buildings	the place		responsive forms	urban environment in broadest sense	place making public realm outdoor rooms
2	(see sense)		visual appropriateness	respect history and context	harmony	(i) retain the best (ii) respect street line		dialogue with context and history: re-contain street	
3	(see fit)	mixed use mixed age mixed rent concentration	variety	encourage mixed uses		more than one use	mixed uses		
4	(see vitality)	the street		human scale	scale enclosure	in scale with context			public space & movement systems
5	access	permeability (short blocks)	permeability	encourage pedestrian permeability			public access		
6	control	social mix and consultation	social mix and consultation	community		"acceptable" personalisation	consultation	individual responsibility professional enablers local action & control integrating expertise optimising resources envt. education	
7	sense (clarity with which it can be perceived)		legibility	legibility	hierarchy	visual accessibility reflect uses		(i) respect conventions (ii) articulate meanings (iii) connect inside & out	
8	fit (adaptability)	robust spaces	robustness and adaptability						
9	(see efficiency)	gradual not cataclysmic money	small scale change	visual delight	materials		stimulating	natural, rich materials good weathering	
10		activity richness	richness	visual delight	art decoration signs and lights	"visible" construction integral ornament		decoration	
11	two meta criteria efficiency (relative cost) justice (social equity)	automobile attrition surveillance (safety)					protection security comfort shelter		

Table 1-1: The principal articulations of urban design (source: Punter, 1990, p. 382)

Mixing uses and activities with the intention of producing environments that are of a deliberately mixed-use nature, varied activities and rich in character. **Human scale** is the quality that defines the urban environment for human beings and not for cars, lorries or big constructional projects. The human-scale environment is related to the scale and pace of pedestrians. **Pedestrian freedom** is the quality of the urban environment that is permeable to pedestrians. It permits and encourages pedestrians to move about in a variety of directions, freely, safely and comfortably. **Access for all** is the quality that ensures variety and choice of access to different activities, resources, information and places for all sectors of society. **Making it clear** whereby urban areas are legible, in the sense that pedestrians or drivers can understand where they are and how easy it is for them to get to different places, amenities and facilities. **Lasting environments** are achieved by creating environments that have the ability to adapt over time to changed circumstances and different uses and opportunities; and which have the quality of **robustness**.

Designing Places produced by the Scottish Executive (2001, pp. 1-5) is the first urban design policy statement on designing places in Scotland. It defines urban design as the collaborative process of shaping the setting for life in cities, towns, villages and rural areas. In addition, it suggests that creating successful and sustainable places depends on a shift in attitudes, expectations and practices about the principles of design relative to cities, towns, villages and the countryside. The policy statement identifies the main qualities of successful places that flourish socially and economically; these are:

- **Sense of identity:** places of distinctive landscapes, natural features, buildings, streets and spaces that inspire new developments;
- **Safe and pleasant:** places that have lively spaces and give the feeling of being safe;
- **Easy movement:** places that are easy to move around and give different and more direct alternatives of movement;

- **Sense of welcome:** places that have good views and help visitors to find their way around;
- **Adaptability:** places can adapt easily to changing circumstances; and
- **Sustainability:** places that contribute to the wider quality of life, and to make good use of scarce resources.

Designing Places suggest that the above qualities are at the heart of good design for urban and rural development. Ian McHarg's book (1992, pp. 196-197) *Design with Nature* combines a cogent set of principles based upon ecological methodologies of design. He suggests a model that contains the possibility of an inventory of all ecosystems, which determines their relative creativity in the biosphere. This suggests also an ecological value system wherein energy is the key factor. Such ecological values echo the work of Michael Hough (1984) whose proposals include values of the whole ecosystem, which he developed to become a full ecological planning model applicable to sustainable urban design.

Canter (1977), Punter (1991), Montgomery (1998) and Nabih (1999) depict the concept of place as a bridge capable of linking environmental-psychology and social psychology. Canter (1977, p.8) acknowledges the usefulness of supporting environmental-psychological research as it takes the construct of place into consideration within the role of social psychology. He claims that a **place** is the outcome of **relationships** between three components: **activity**, **conceptions** and **physical attributes**. In addition, he points out that these components are not to be considered as independent and interrelated elements, but as aspects of place to be explored. Building on Canter's (1977) concept of place, Punter (1991, pp. 24-27) and Montgomery (1998, pp. 93-116) locate components of a sense of place within urban design attributes. Figure 1-2 shows diagrams produced by Punter and Montgomery. These diagrams illustrate how urban design attributes can contribute to and enhance a sense of place.

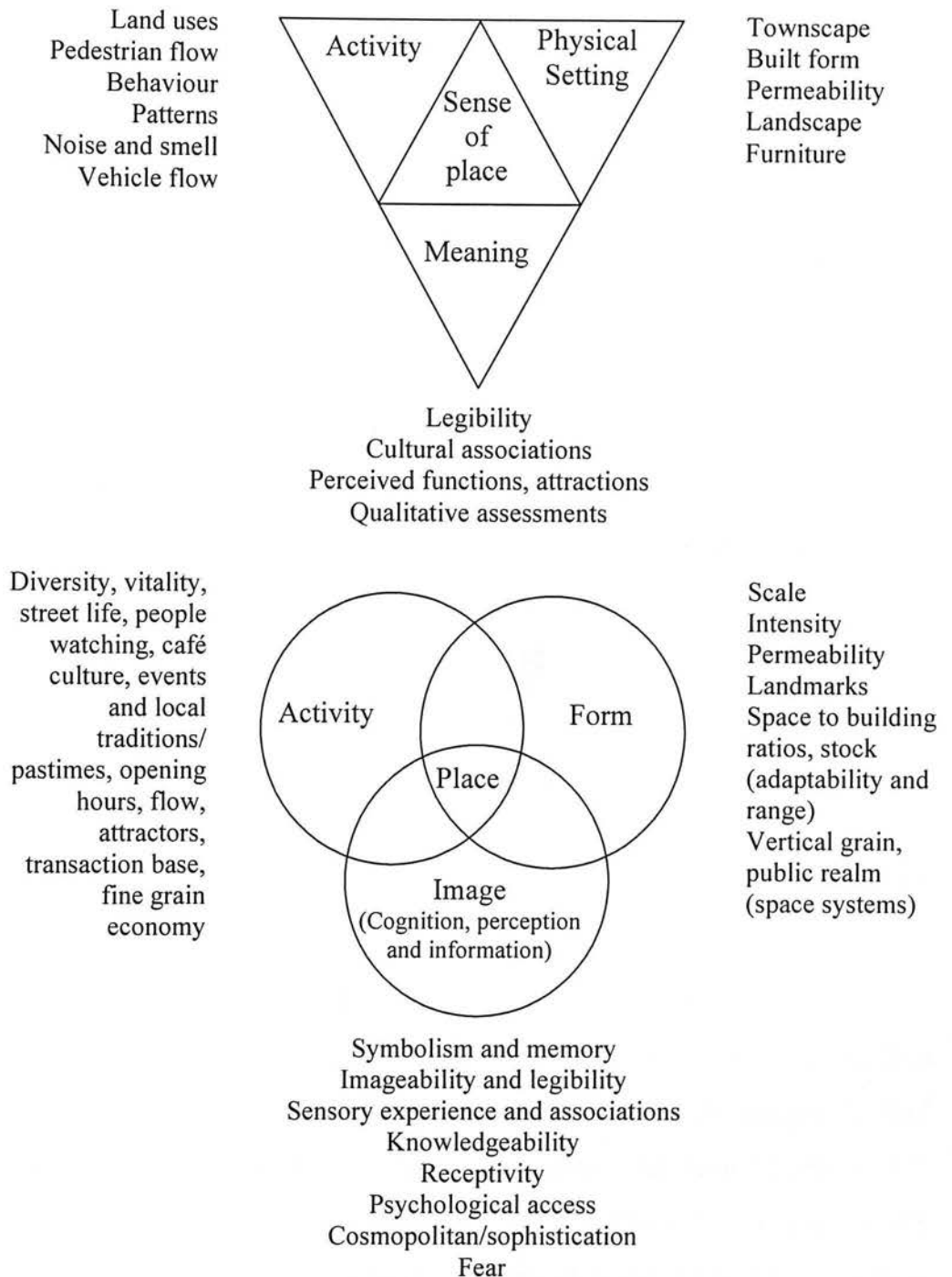


Figure 1-2: Diagrams by John Punter (1991) and John Montgomery (1998) illustrate urban design actions that can contribute to a sense of place (source: Montgomery, 1998, in Carmona et al., 2003, p. 99).

Lang (1987, p.77) distinguished the physical, the social, the psychological and the behavioural aspects. The physical consists of the terrestrial or geographical setting. The social is the interpersonal and inter-group organisations that exist

while the psychological contains images that people have in their heads, and the behavioural elements are those to which a person responds.

1.5 Human Needs and Environmental Concerns

Abraham Maslow's (1943, 1954 and 1987) hierarchy of needs provides a valuable framework for what attributes the built environment and public space hold for human needs. Maslow states that motivation is the guiding force behind behaviour, and that behaviour is directed towards the satisfaction of needs. When such needs are achieved, a new level of needs emerge. In this sense, the satisfied needs are no longer the driving force. Maslow established the theory of human needs that suggests a hierarchical order, in which the most important human needs are to be met first. Maslow perceives basic needs as a group of hierarchical levels that begin with **physiological needs**. These are very basic needs such as air, water, food and sleep; for instance, food to prevent hunger and water to overcome thirst. When such needs are not fulfilled, an individual may feel sickness, pain, irritation, discomfort etc. that in turn motivates the individual to find ways to ensure that such needs are met. Once they are attained, the individual may then pursue other needs.

The second level of needs is **safety**, which is psychological in nature and includes security, stability and freedom from fear and protection from physical harm. Safety needs are important driving forces that motivate people to feel secure in public space. The third level is **belonging and love needs**, which involve the need to belong to groups, such as work groups, religious groups and family, thereby receiving affection and the feeling of being loved and accepted. The fourth level is **esteem needs**. This level of needs is about the desire of an individual to be held in high value by him- or herself and others. There are two types of esteem needs. The first is self-esteem that occurs as competence in achieving tasks. The second is concerned with the recognition and appreciation that come from others. This is similar to the third level, belonging and love needs; however, seeking admiration is associated with the need for power. **Self-**

actualisation refers to people's desire and need to fulfil their capacities and the tendency to actualise the full potential that they are capable of achieving. There is the need to maximise one's potential, for example, through seeking knowledge, peace, and self-fulfilment. **Cognitive and aesthetic needs** deal with the aspiration to perceive and comprehend, such as the need for knowledge and the desire for beauty for its own sake.

In using Maslow's hierarchy of human needs, it was possible to determine what a 'good' city should provide, and to suggest commonly agreed sustainability criteria for the city. Barton et al. (1995, pp. 12, 13) offer practical guidance for planners, designers and developers on locational choice, land use/movement patterns, site appearance, site layout and building design, which will be of particular use to development controllers and design policy-writers alike. Barton et al. consider development as nesting spheres of influence and claim that a more sustainable and self-sufficient development should maintain an increasing level of autonomy, which can be achieved through reducing the impact of inner spheres on the outer spheres.

However, Frey (1999, p.31) outlines an ordered approach for the comparison of the city models (Table 1-2).

Table 1-2: Comparison between Maslow's hierarchy of human needs, what a good city should provide and the commonly agreed sustainability criteria for the city (source: Frey, 1999, p.31).

Maslow's hierarchy of human needs	What a 'good' city should provide	Commonly agreed sustainability criteria for the city and city region
1. provision for all physical needs	<ul style="list-style-type: none"> • a place to live and work • a reasonable income • education and training • transport (mobility) and communication • access to services and facilities 	Physical properties of the city/city region: <ul style="list-style-type: none"> • <i>some form of containment</i> of development to stem or even reverse sprawl and preserve the countryside; this can be aided through the reuse of underused and disused derelict and contaminated land to make it productive again, helping to make the city more compact and, by doing so to a tolerable degree, avoiding the unnecessary development of greenfield sites <i>a reasonably high population density</i> to achieve viable local services and facilities, i.e. a high level of activities and interactions and thus vibrant settlements and places, and viable public transport

Table 1-2: (continued): Comparison between Maslow's hierarchy of human needs, what a good city should provide, and commonly agreed sustainability criteria for the city (Frey, 1999, p.31).

Maslow's hierarchy of human needs	What a 'good' city should provide	Commonly agreed sustainability criteria for the city and city region
		<ul style="list-style-type: none"> • <i>a mixed-use environment</i>, specifically a higher concentration around public transport nodes within walking and cycling distance of people's front doors, in order to increase access to services and facilities and thus generate a vibrant environment, maybe even a sense of community, and to reduce to some degree the need to travel • <i>adaptability</i> to changing socio-economic conditions so that the city can change, expand and contract without major upheaval Provisions of the city/city region: <ul style="list-style-type: none"> • <i>public transport</i> in order to increase access to services and facilities, help reduce car dependency and thus congestion and pollution, achieve a reduction of energy consumption and help maintain a high level of energy-efficient and environmentally-friendly mobility inside the city or city region and between cities • <i>reduced traffic volumes and dispersed vehicular transport</i>, as a result of the availability of public transport and the design of road profiles, to avoid congestion of roads and urban areas
		<ul style="list-style-type: none"> • <i>a hierarchy of services and facilities</i> of different capacity and scale, from local provision in close proximity to one's front door to city centre provisions; this, together with a high degree of mobility, will increase choice <i>access to green open spaces</i> , the city's green lungs, for recreation and sports, nature reserves, city farming, forestry, etc.
2. Safety, security and protection	<ul style="list-style-type: none"> • a visually and functionally ordered and controlled environment • a place free of pollution and noise • a place free of accidents and crime 	Environmental and ecological conditions: <ul style="list-style-type: none"> • <i>an environment free of pollution, noise, congestion, accidents and crime</i> • <i>personal private outdoor space</i> for each individual dwelling in the form of gardens, roof gardens, terraces, loggias, etc. (without a return to low-density suburbs) • <i>a symbiotic relationship of the city with the country</i> through the inclusion of open space linking directly with nature; the spaces to be used for afforestation, farming, large-scale industries, sports and recreation, for the production of food and timber (for the construction industry, paper production and as renewable fuel) to make the city self-sufficient to as high a degree as possible
3. A conducive social environment	<ul style="list-style-type: none"> • a place where people have their roots and children their friends • a sense of community and belonging to a place or territory 	Socio-economic conditions: <ul style="list-style-type: none"> • <i>social mix</i> to reduce or eliminate social and locational stratification, achievable through higher population densities and a wide range of dwelling and tenure types

Table 1-2: (continued): Comparison between Maslow's hierarchy of human needs, what a good city should provide, and commonly agreed sustainability criteria for the city (Frey, 1999, p.31).

Maslow's hierarchy of human needs	What a 'good' city should provide	Commonly agreed sustainability criteria for the city and city region
4. A good image, reputation and prestige 5. A chance to be creative	<ul style="list-style-type: none"> • a place that provides a sense of confidence and strength • a place that gives a status and dignity opportunity for individuals to shape their personal space • opportunity for communities to shape their own districts and neighbourhoods 	<ul style="list-style-type: none"> • <i>a degree of local autonomy</i>, the ability of individuals and communities to shape their own environment according to their needs and aspirations; this would also support if not generate a sense of place and community, a sense of belonging • <i>a degree of self-sufficiency</i>, with different degrees of intensity, in terms of employment, energy (CHP), water, goods; the city not only as a consumer but also as a producer of goods
6. An aesthetically pleasing environment	<ul style="list-style-type: none"> • a place that is well designed (aesthetically pleasing) • a place that is physically imageable • a city that is a place of culture and a work of art 	Visual-formal quality: <ul style="list-style-type: none"> • <i>imageability</i> of the city as an entity and of the parts of the city, the neighbourhoods, districts and towns • <i>provision of a sense of centrality and place</i>

Bentley (1990, pp. 69-71), for example, attempts to address environmental concerns by including energy efficiency, cleanliness and preservation of wildlife as sustainability concepts to the essence of the responsive concepts of permeability, variety, legibility and robustness.

1.6 Philosophical Frameworks

A critical matter in understanding the role of public space in post-war reconstruction is to identify a phenomenon that assists in explaining the nature of the man-environment relationship and the use of public space. In other words, such a phenomenon should evoke emotional responses and motivational messages that stimulate human needs, and address changing processes within the environment. In exploring the various and associated conceptual and philosophical theories, environmental psychology emerges as a growing theme (Altman and Rogoff, 1987).

Dewey and Bentley (1949) distinguish three approaches to the pursuit of knowledge, self-action, interaction and transaction, which correspond to the Newtonian and the Einsteinian perspectives of science. Similarly, Pepper (1942) introduces four world hypotheses, which were termed as formism, mechanism, organicism and contextualism and selectivism. In their examination of world views in psychology, Altman and Rogoff, (1987, pp. 7-9) claim that, there is a concern about the environment and the need for psychological and other social sciences to contribute to the solution of social problems. Altman and Rogoff identify four world views that relate to past and current research and theory in psychology. These world views are **trait**, **interactional**, **organismic** and **transactional** that relate to different assumptions. Their perception of the four world views integrates and extends the analysis of that of Pepper, Dewey and Bentley. Table 1-3 provides an important comparison between Altman and Rogoff's (1987) four world views with the approaches to knowledge introduced by Dewey and Bentley (1949) and Pepper (1942).

Table 1-3: Philosophical approaches to psychological phenomena (source: Altman and Rogoff, 1987, p.9).

Dewey & Bentley	Pepper	Altman & Rogoff	Definition of Psychology
Self action	Formism	Trait	The study of the individual, mind or psychological processes.
Interaction	Mechanism	Interactional	The study of the prediction and control of behaviour and psychological processes.
	Organicism	Organismic	The study of dynamic and holistic psychological systems in which person and environment components exhibit complex reciprocal and mutual relationships and influences.
Transaction	Contextualism and Selectivism	Transactional	The study of changing relations among psychological and environmental aspects of holistic unities.

The following discussion summarises similarities and differences in these world views.

1.6.1 Trait

Trait world views perceive psychology as the study of the individual, the mind, or mental and psychological processes. The primary determinants are individuals, or psychological processes, with environments and contexts playing a secondary role (Altman and Rogoff, 1987, p. 11). This perspective, for example, if it were applied to the study of a billiard ball, would view it as an independent and isolated phenomenon, which deals with its intrinsic qualities devoid of any external forces, as long as the other billiard balls are not in motion.

According to Dewey and Bentley (1949), self-action assumes that the functioning of physical and social phenomena is directed by internal essences, self-powers, forces, or qualities that are inherent in objects, organisms, or phenomena. Usually, such an approach gives no emphasis to temporal processes or change, except as manifestations of the essence of a phenomenon.

In Pepper's (1942) formism, knowledge is accumulated from the differentiation of similarities and differences between phenomena, grouping together like things and distinguishing them from dissimilar things. This analytical approach tends to search for dimensional properties of phenomena as a basis for comparison and categorisation.

Altman and Rogoff's (1987) trait category, Dewey and Bentley's (1949) self-action and Pepper's (1942) formist hypothesis are very similar in attempting to identify the essence of phenomena, with no direct association to their temporal aspects or their context, where the intrinsic and stable properties of phenomena determine their functioning. Altman and Rogoff (1987, p. 11) assume that the trait approach is similar in nature to self-action and formist perspectives. These assumptions are: (1) psychological processes, cognitive characteristics and personality qualities are the basic units of studying any particular phenomenon.

Such characteristics and qualities are viewed as personal and considered as principal determinants of psychological functioning, which work independently of physical and social contexts. (2) Temporal processes assume a minor role in psychological functioning, based on presumed personal characteristics only, or a pre-established course of action.

1.6.2 Interaction

Altman and Rogoff's (1987, p.15) interactional world views treat the environment, the context and psychological processes as independently defined and operating entities. It is based on Pepper's mechanism approach and Dewey and Bentley's interaction approach. Accordingly, behavioural and psychological processes are considered as dependent variables, whereas environmental factors are treated as independent variables or causal influences on psychological functioning.

Interaction, to Dewey and Bentley (1949), assumes that physical and psychological elements take place independently of one another and possess certain inherent qualities, although their functioning may be affected by interaction with other elements. The phenomena here interact and are influenced by contexts. An analogy from Dewey and Bentley, who perceive the relationship between interactional world views and psychological phenomena, is that similar in nature to billiard balls. Each ball exists separately from the others with its independent characteristics. Interaction between the balls occurs as one bangs into another, leading to a change in their locations. Pepper's (1942) mechanism perspective assumes that the functioning of physical or psychological phenomena is based on the relationship of a variety of elements that interact and influence one another.

Interactional perspectives treat temporal factors as distinct from psychological processes and describe change because of the interaction of variables, not as an inherent aspect of the phenomena. Although time is treated independently,

interactional perspectives examine change in psychological functioning. Problem solving, performance and social interaction are registered over time. Interactional world views, as well as the trait approach consider the observer as separate and detached from the phenomenon, in the sense that the search for knowledge can be objective and independent of the observer's biases in relation to the phenomenon (Altman and Rogoff, 1987, pp. 16, 17).

1.6.3 Organismic

Organismic world views correspond with Pepper's organicism approach, which define psychology as "the study of dynamic and holistic psychological systems in which person and environment components exhibit complex, reciprocal relationships and influences" (Altman and Rogoff, 1987, p.19).

The organismic approach conceives of the whole as composed of independent or separate parts. Although the whole cannot be described or predicted by understanding the properties of its parts, an understanding of the whole permits a better knowledge of the properties of its parts. The relationships between parts within organismic wholes and between the parts and the whole are based on reciprocal and complex patterns.

Although change and time are central to organismic perspectives, as wholes strive to maintain stability and/or move towards the ideal situation, they are directed by organic processes, leading to a total stability and an absence of change and function in a smooth and harmonious manner (Altman and Rogoff, 1987, pp. 20, 21).

1.6.4 Transaction

For Dewey and Bentley (1949), Pepper (1942) and Altman and Rogoff (1987), the transactional world views assume the **changing relations** between **psychological** and **environmental** aspects are **holistic** in nature. They consider transaction as the inseparability of contexts, temporal factors, and physical and psychological phenomena. Thus, Altman and Rogoff state that:

“... one is not dealing with separate elements of a system. Instead, a transaction approach defines aspects of phenomena in terms of their mutual functioning. Persons, processes, and environments are conceived of as aspects of a whole, not as independent components that combine additively to make up a whole.” (Altman and Rogoff, 1987, p.9)

Altman and Rogoff give a brief characterisation of the transactional perspective in the field of psychology, based upon the work of Pepper (1942, 1967) and Dewey and Bentley (1949). They identify dissimilarity in the unit of analysis in the treatment of person-environment systems and the conceptualisation of change, which assisted them in differentiating between transaction and interaction (Altman and Rogoff, 1987).

Dewey and Bentley (1949) perceive transaction as an approach inseparable from contexts, temporal factors, and physical and psychological phenomena. Unlike interaction, transaction defines aspects of phenomena in terms of their mutual functioning. It treats context, time and process as aspects of an integrated unity. In that sense, the transactional perspective examine processes and activities, or people doing things in relation to the social and physical environment.

Temporal qualities are inherent aspects of phenomena and embody a flow of dynamics in people’s relation to social and physical settings. This approach collectively acknowledges, for example, that the billiard balls have their own characteristics and are in constant interaction and movement, and that the balls are not treated as independent phenomena, but as changing situations of interactions.

Pepper’s (1942) contextualism is an approach that has great similarities with the transactional approach suggested by Dewey and Bentley, and Altman and Rogoff, in particular its assumption that contextual and temporal processes are fundamental aspects of phenomena. Pepper (1942, p.237) views the historical event as a complex and holistic phenomenon, where the parts interpenetrate and are connected in an inseparable manner. The whole event must be studied as a

unity, since studying its parts is insufficient to lead to an understanding of the whole.

Unlike interactional perspectives, which assume that observers are separate from the phenomenon, transactional perspectives consider the location and movement of the observers to be part of the phenomenon (Altman and Rogoff, 1987, p.18).

1.7 Transactional Perspective as Holistic Units of Analysis

The transactional perspective deals with the man-environment relationships as holistic units of analysis, whereby no independent elements or sets of discrete relationships of the whole are separable. In other words, the system consists of elements and sets that simultaneously and collectively define the whole. This perspective does not allow the functioning of elements or parts in isolation from the psychological phenomenon, instead the functioning of the elements and parts collectively represent an event, whole or unity.

The transactional perspective includes temporal processes in the very nature of events. The transactional view shifts from analysis of the causes of change to the idea that change is an intrinsic quality of holistic unities allowing the study of transformation to understand the phenomenon. Change is not associated with a predetermined ideal state that if achieved, would involve no further change (Altman and Rogoff, 1987, pp. 24, 25).

Recent research models focus on examining the issue of change as they could be embodied in functional transformations within the structure of the city. For instance, Spirn argues that processes of change in urban landscapes involve the "...knowledge of the processes, both natural and social, which shape over time" and require the "appreciation of the urban landscape as dynamic and evolving" (Spirn, 1986, p.440).

Hartig (1993, pp. 17-36) asserts that transaction draws motive from an ongoing process of differentiation and evaluation of the environment, which is integral to the development of cultures, which has led to the creation of conditions that

challenge our biological adaptations. Lucca and Pacheco (1992, pp. 226-238) and Yamamoto et al. (1992, pp. 189-205) consider temporal qualities as inherent aspects of phenomena that embody people's relations to social and physical settings. This view draws attention to changes, transitions, and shifts in life circumstances.

Hatem Nabih (1999, pp. 1-7) developed an approach to determine the dominant aspects of place and human perception. He suggests a research model based on a transactional approach to determine attributes, which would address how change in behaviour and the environment take place.

Lang (1987, p.103) claims that humans have the capacity to adapt their activities to the affordances of new built environments, to adapt the built environment to their needs, and to learn new aesthetic values. He identifies three adaptive abilities, which are **learning**, **remembering** and **generalising**. Although humans are highly adaptable creatures, Lang believes that the things to which they have become accustomed influence their perceptions of the environment. Dubos (1965, quoted in Lang, 1987, p.103) recognises that the tendency for people to adapt to conditions which threaten to destroy values, as being characteristically human. Piaget defines adaptation as "an equilibrium between assimilation and accommodation" (Piaget, 1950, p.8).

1.7.1 People

The transactional perspective considers psychological processes to be embedded in physical and social circumstances, thus forming a life space or psychological field. This life space is a temporary amalgamation of people's qualities and properties of the psychological environment. This involves features related to motives, needs and characteristics of people, in this manner blending the man-environment relationships (Lewin, 1936, 1964).

1.7.2 Context

It has been pointed out previously that the transactional perspective considers context as the principle unit of study that involves events, situations and settings. Context includes the qualities of the physical and social environment. This may be psychologically related to the sequence of events, aspects of people's life, the interpretations of situations by participants and the familiarity of the participants with the setting.

1.7.3 Time

Unlike, the interactional approach, which treats time as a separate dimension, the transactional perspective deals with time as an intrinsic nature of the phenomenon. It embodies the progression and dynamics of people's relation to social and physical settings. Carmona et al. (2003, p.196) perceive the man-environment relationship as a constantly changing relationship with the flow of time that is affected, shaped and transformed by technological, economic, social and cultural forces. He argues that any intervention into the built environment permanently changes its social and physical fabric and its history for all time.

1.7.4 Change

The transactional perspective focuses on the changing configurations of people, psychological processes and contexts. Carmona et al. (2003, p.39) perceive change as inevitable and often desirable, as the social, cultural and technological context as well as the environment are continually changing.

Change is perceived in this research more as an ongoing, intrinsic aspect of events, situations and settings, rather than as a consequence of the impact of independent elements on each other. Change is inherent in the whole and the study of its transformation is vital in understanding the phenomenon. Transactional perspective emphasised the study of holistic man-environment units of analysis, whereby aspects of an event are so intermeshed that the

understanding of one aspect requires simultaneous inclusion of others in the analysis.

1.8 Conclusion

In this chapter, the concepts and theories reviewed covered a wide range of principles, dimensions and qualities necessary to be adopted in any design, development, or reconstruction of cities that would promote a positive mutuality between the built environment and the needs and behaviour of its users. Among these principles and qualities are **adaptability, functionality, identity, diversity, safety, responsiveness, sustainability, sociability, community participation, imageability, accessibility and legibility.**

The research identifies the need to adopt a **holistic framework** that conveys meanings to its users, through the good experiences and qualities made available to public spaces. In addition, the research highlights major philosophical approaches, where psychological phenomena appeared to be critical to an understanding of the role of public space in the urban context. This is because not only do such phenomena assist in explaining the nature and use of public space, but also, they evoke emotional responses and motivational messages, which in turn, stimulate human needs. Through reviewing the four world views of psychology, **transactional perspective** was perceived to be holistic in dealing with the man-environment relationships that treat people, context, time and change as interrelated unities.

Chapter Two:
Attributes of Public Space

Chapter Two: Attributes of Public Space

2.1 Introduction

Chapter One establishes that the role of public space in post-war reconstruction cannot be fully understood without taking into account the diverse attributes of public space. This chapter is structured around four principal urban design attributes of public space namely, **physical, socio-cultural, perceptual, and functional** attributes. These four attributes correspond mainly with models on a **sense of place** as proposed by Canter (1977), Punter (1991), Montgomery (1998), and the Project for Public Spaces (1997). These attributes reflect, largely, the principles, dimensions and qualities that emerged from Chapter One.

2.2 Physical Attributes

The researcher regards public space, in a physical sense, as all un-built spaces, including streets, pedestrian routes and urban squares that are available for public use. Such spaces may be enclosed, or encompassed by physical structures, like buildings, landmarks and natural elements. In addition, the author perceives the urban fabric of the city to be the outcome of the configuration of all its urban spaces and physical structures. Many urban designers and researchers (Conzen, 1960; Clark, 1985; Madanipour, 1996; and Carmona 2003), identify the physical structure of the urban fabric as **urban morphology**.

As indicated by Carmona et al. (2003, p. 61), exploring the form and shape of settlements is the study of urban morphology. Urban morphology is “the systematic study of form, shape, plan, structure and function of the built fabric of towns and cities, and of the origin and the way in which this fabric has evolved over time” (Clark, 1985; Small and Witherick, 1986; and Goodall, 1987). In their research on the form and structure of settlements, Carmona et al. consider Conzen’s (1960) four morphological elements: land uses, building structures, plot pattern and street pattern. However, this research explores the physical

attributes of space in terms of physical structures, street patterns, pedestrian routes and urban squares and their enclosure.

2.2.1 Physical Structures

Madanipour (1996, p.31) identifies two perspectives in urban structures. The first approach regards urban structure as a collection of buildings and artefacts, while the other point of view considers it a site for social relationships. Madanipour argues that urban structures only make sense when a socio-spatial perspective emerges to replace these two disjointed views.

Zeidler (1985, p.11) argues that what gave the medieval city its distinctive character was the fact that the city wall enclosed all the inhabitants' activities. Merchants' work places and residences existed in one structure. This relationship between workplace and residence has become more difficult and less practicable to achieve, particularly with the increasing population densities and the greater concentration and congestion within cities, which has resulted in stacking many inhabitants over a single place of work.

Building structure should reflect not only the functional and financial needs, but should also respond to the external urban fabric. In reality, to create a coherent urban fabric, designers, planners and decision makers must develop urban space principles that act as guiding forces to control the form and the organisation of the physical structures.

2.2.2 Street Patterns

One cannot imagine city life without streets. Kostof puts it more bluntly: "Without it, there is no city" (Kostof, 1999, p.194). The street is the most essential and active public space in the city. The street's main function is to structure the community and to facilitate the movement of people and vehicles, the exchange and trade of goods, and social exchange between people. It accommodates a variety of amenities, functions, activities; in other words, it accommodates civic life. Street patterns are mainly generated from their

surrounding land use, which can be physical structures such as buildings, or natural elements such as mounds and trees.

As a public space, the street is required to be kept open, accessible to all, and equipped for its main functions. The desire to utilise this space for private use is regarded in many traditions as an infringement and violation of public rights. In general, encroachments on the public street emerge gradually over time. In this instance, adjoining property owners consider the street as an extension of their premises and through claiming outdoor spaces for their private use. In many traditional Middle Eastern cities, there is a clear distinction between through-streets and residential cul-de-sacs. The through-street is a public right-of-way, while the cul-de-sac is the private property of people living around it.

In the past, the traditional street was the place where social classes and social uses mixed. It staged many social activities such as walking, watching and trading. Zeidler (1985, pp. 122-135) argues that the greatest threat to the traditional city centre and its streets that once teemed with pedestrian life is the suburban shopping centre. He thinks that a suburban shopping centre siphons off the forces that support street life; that the individual store, out of the urban setting, transposes street life to remote locations. The activity of the street and the public square in their many variations are inseparably connected with the visual form of the individual buildings, which physically support this activity. The interaction between form and activity does not result in a uniform pattern but in a multifaceted variety.

Master planning has a tendency to impose new street patterns on the urban fabric of the traditional city. An exceptional example is the concept of axial planning introduced by Baron Haussmann. His ideas were associated mainly with the straight streets of the gridiron planning. His main concern was for the rapid movement of troops to keep order in the city of Paris (Moughtin, 1992, p.123).

2.2.3 Pedestrian Routes

Pedestrian routes are the channels along which pedestrians move safely away from high-speed traffic. They can be woven into the city fabric, incorporating existing buildings into their overall structure. The separation of the pedestrian movement from the road with trees, and in some cases, lanes for parked or slow-moving vehicles is quite important. Pedestrian routes represent the rich potential of adding to and renewing the existing city on a human scale. They demonstrate a larger possibility for the city as a whole – the idea of continuous and active pedestrian networks. Today the pedestrian routes that survive in Paris and other cities are still as active and alive as they were when first constructed. They exist as one of the last and best examples of a truly urban multi-use structure (Zeidler, 1985, p.12).

In the environmental areas within the interstices of major routes, the needs of the pedestrian zones, and the creation of a sense of place is paramount. In such a situation, the street, the square and the public façade of buildings are the dominant design elements (Moughtin, 1992, p.132). Norberg-Schulz (1972, pp. 20-24) gives a symbolic definition of the path, which man chooses and creates to structure his existential space. The path, therefore, symbolises an essential quality of human existence that reflects a stimulating and memorable image of connected places.

2.2.4 Urban Squares

The urban square is the place where civil rights are practised and exercised, and where a sense of belonging emanates. People have the right to come, remain and go as they wish, without the consent of authorities and without declaring or justifying their reasons. The success of urban squares is dependent on the variety of attractions they offer so that pedestrians in large numbers have a reason for remaining there. It is also conditional on good access for both private and public transport. One of the main issues is the integration of car parking within the

surrounding urban fabric (Moughtin, 1992, p.132).

Historically, the enclosure of urban gathering places was the prerogative of religious architecture. The atrium of the early Christian basilica and the saha of the Muslim mosque were large urban courtyards entered through one or more gates and surrounded by covered porticoes. In a traditional Islamic city, the saha or maidan (square) is limited to areas between neighbourhoods, souks and mosques. Every member of society had equal claim to such places, be they Muslim or non-Muslim. The saha is the congregation place of Muslims after Friday prayer. Small sahas were nothing more than urban vestibules to monumental public buildings. They acted as distributing nodes, serving the masses moving in and out of the major buildings, and to and from the neighbouring paths; and they accommodated the large monumental structures within the compact bulk of the old city. In cities like Cairo, it has been claimed, sahas had distinctive spatial patterns that changed under each dynasty, and informal conventions for shaping them are implicit (Kostof, 1999, p.127).

Activity in a square is important for its vitality and therefore, also for its visual attraction. The size of the square should be proportionate to the number of users, so that it may not be too small a space to be useful. The public square is probably still the most important element in city design; it is the chief method by which a town or city is both decorated and given distinction. It is the natural setting for the most important civic and religious buildings, a place for fine sculpture, fountains and lighting and, above all else, a place where people meet and socialise. When such public places are designed according to some basic principles and are imbued with a sense of place, they take on an added symbolic meaning. The most important physical quality of such spaces is enclosure. The methods of enclosure are many though the principles are few. The enclosure of space is the purest expression of a sense of place. The key to enclosure in the square is the treatment of its corners, in the sense that the more the corners of the square are open, the less is the sense of enclosure, while the more that the corners

of the square are built up, the greater the feeling of being enclosed (Moughtin, 1992, pp. 99, 123).

Carr et al. (1995, pp. 7, 8) consider urban space as a space that is distinguished by a predominant characteristic, such as the quality of its enclosure, the quality of its detailed treatment or fittings, and the activity that occurs in it. Carr et al. point out that any one of these qualities is sufficiently strong to evoke a sense of urban space. In addition, this urban space, which has a sense of place in the city, may act as a landmark, a traffic node, as well as being the business centre.

2.3 Socio-cultural Attributes

Most recent studies of the built environment and human behaviour stress the importance of social factors in understanding and predicting the interaction patterns of people with the environment. The relationship between culture and environment is influenced by the way people are collectively motivated to make choices over time in creating distinctive socio-cultural contexts. Urban places are better perceived through understanding the local socio-cultural contexts and cultural differences that shaped them (Carmona et al., 2003, p.38). Porteous (1977, pp. 206-223) claims that social relationships depend on social stimulation and a response that in turn becomes the stimulation for another response.

“Beliefs, attitudes, preferences, and other personality attributes derive from the individual alone, but are largely colored by his experiences as a member of a family, ethnic, social class, cultural, national, and life style groups.” (Porteous, 1977, pp. 206-223)

Porteous' statement coincides, more or less, with Lang's perception of the individual as a member of a social system. Lang (1987, p. 80) states that a social system incorporates a set of individuals, who interact on a regular basis, directly or indirectly, to fulfil specific needs. The environment of any individual consists of a set of social systems. Lang points out that each member of the social system is expected to perform according to the norms of that system.

Carr et al. (1995, p. 31) suggest that public and private domains influence the nature, size and heterogeneity of the community. They assert that, in a highly diverse community, it can be difficult to make contacts in the public space unless people are able to identify others with similar interests or backgrounds. Heterogeneity can thus lead to withdrawal into private spaces. Larger communities, where residents are unknown to each other, encourage private behaviour and a retreat into private spaces.

In his theory of urbanism, Louis Wirth (1938, quoted in LeGates and Stout, 2003, pp. 98-101) argues that there are three key characteristics of cities, which are:

- **Large population size:** the greater the number is of individuals participating in the process of interaction, the greater the potential differentiation between them. Such differentiation can emerge from the individuals' personal traits, occupations and cultural life. In addition this variation gives rise to spatial segregation of individuals, according to colour, ethnic heritage, economic and social status, tastes and preferences;
- **Social heterogeneity:** promoting intimate and lasting acquaintanceship between members of local areas within the city is difficult, mainly because individuals become segregated more by virtue of differences in race, language, income and social status, than through choice or positive attraction to people like themselves; and
- **Population density:** an increase in the number of individuals when an area is held constant tends to produce differentiation and specialisation, since only in this way can the area support increased numbers. Density thus reinforces the effect of numbers in diversifying individuals and their activities and increases the complexity of the social structure.

Based on the three variables, number, density of settlement and the degree of heterogeneity, of the urban population, it becomes possible to evaluate many

underlying characteristics of urban life and to account for the differences between cities of various sizes and types.

2.3.1 Identity and Collective Memory

Hayden (1996, pp. 8, 9) points out that homogeneity arises from the trend of people choosing to live and work together with close friends and relatives. She claims that **identity is intimately tied to memory**, in terms of both **personal memories** (where an individual has come from and where he or she has lived) and the **collective** or **social memories** interconnected with the histories of a person's families, neighbours, fellow workers and ethnic communities.

The environmental psychologists Altman and Low (1992, quoted in Hayden, 1996, p.16) suggest that place attachment can develop social, material and ideological dimensions, as individuals develop ties to kin and community, own or rent land, and participate in public life as residents of a particular community.

Monuments and urban elements, such as streets, squares and quarters, form the physical basis for the **re-integration** of the public realm through the appreciation of the **collective memory** (Krier, 1979; Krier, 1991; Gosling and Maitland, 1984, quoted in Madanipour, 1996, pp. 41-42). These monuments and places **evoke connections** to past events and stimulate feelings of **national pride**, a **sense of belonging** and concern for an entity outside of one's primary associations with family and friends (Carr et al., 1995, p. 47).

2.3.2 Territoriality, Privacy and Personal Space

The concepts of territoriality, privacy and personal space are closely interrelated. In general, the city is organised along a hierarchal system ranging from private, semi-private/semi-public to public space. The role of the urban designer is to describe and explain how the layout of the environment responds to these mechanisms. Amos Rapoport (1977), for instance, defines privacy as the ability to control and achieve desired interactions, while Schwartz (1968, pp. 541-542)

argues that privacy should not be seen as the physical withdrawal of a person from others in a quest for seclusion.

Westin (1970, quoted in Lang, 1987, p.145) identifies four types of privacy, namely solitude, intimacy, anonymity and reserve. He defines solitude as the state of being free from observation by others, intimacy as the state of being with another person but free from the outside world, anonymity as the state of being unknown even in a crowd; and reserve as the state in which a person employs psychological barriers to control unwanted intrusion.

The type and degree of privacy desired depends on the prevalent pattern of behaviour, the cultural context, the personality and aspirations of the individual involved. The use of walls, screens, symbolic and real territorial demarcators, and distance are all mechanisms for attaining privacy, which the environmental designer can control to some extent (Lang, 1987, p.146). Pastalan (1970) gives the following definition of a human territory:

“A territory is a defined space that a person or a group uses and defends as an exclusive preserve. It involves psychological identification with a place, symbolized by attributes of possessiveness and arrangements of objects in the area.” (Pastalan, 1970, quoted in Lang, 1987, p.148)

Irwin Altman’s identification (1975) of territory as one mechanism for attaining privacy comes through in his definition of territorial behaviour:

“Territorial behaviour is a self-other boundary regulation mechanism that involves personalization of or making a place or object and communication that is owned by a person or group.” (Altman, 1975, quoted in Lang, 1987, p.148)

These definitions suggested some basic characteristics of territories, including the ownership of, or rights to, a place; the personalisation or marking of an area; the right to defend against intrusion; and the serving of several functions ranging from the meeting of basic physiological needs to the satisfaction of cognitive and aesthetic needs.

Lang (1987, pp. 148-149) points out that the ways people demarcate territories vary considerably from real barriers, such as doors and walls, to symbolic

markers, such as signs, a structure associated with an ethnic group, a change in material of a floor, or lines painted on a street. These markers all differentiate between one area and another and identify them with the people who control them. Altman (1975, quoted in Lang, 1987, p.149) describes territories not only as a means of attaining privacy but also as a means of stabilising social relationships. El-Sharkawy (1979) identifies four types of territory in his effort to build a model that deals specifically with the concerns of environmental design. These are **attached**, **central**, **supporting** and **peripheral**. An attached territory is one's personal 'space bubble'. Central territory is defined as the space for private use such as one's home, students' room or one's workstation.

Oscar Newman (1973) refers to this as private space. Supporting territories are either **semi-private** or **semi-public**. Peripheral territories are public spaces, which are areas that may be used by individuals or a group but are not owned or claimed by them. In his attempt to find solutions to the problem of increasing crime levels in America, Newman introduces the notion of *Defensible Space*.

"Defensible Space is a surrogate term for the range of mechanisms - real and symbolic barriers, strongly defined areas of influence, and improved opportunities for surveillance - that combine to bring an environment under the control of its residents. A defensible space is a living residential environment which can be employed by its inhabitants for the enhancement of their lives while providing security for their families, neighbors and friends." (Newman, 1973, p. 3)

From his analyses of some environmental structures, Newman provides considerable statistical evidence to support the observation that some structures express a social fabric better than others do. The information he gathered was mainly collected through interviewing inhabitants of housing areas and from crime records. From the study of the relationships between design characteristics and crime statistics, Newman (1973, pp. 8, 9) concluded that some building patterns afford criminal activity more readily than others do. He identifies four characteristics of the layout of the environment that on their own, or in conjunction with each other, create defensible space. These are:

- The ability of the physical environment to generate perceived zones of territorial influence, this implies that the physical design should provide a clear territorial definition of space in developments, from public to semi-public, semi-private to private;
- The ability of the physical design to provide surveillance opportunities for residents. This can be achieved through design solutions, such as the positioning of doors and windows to enable the residents to naturally gain control over exterior and interior public areas of their living environment;
- The capacity of the design to influence the perception of the environment's uniqueness, isolation and stigma. This can be achieved through the use of symbolic stigma of building forms, reducing the image of isolation, and the apparent vulnerability of inhabitants;
- The influence of a geographical juxtaposition with 'safe zones' on the security of adjacent areas. That is to say, the residential developments should be located in functionally sympathetic areas, where inhabitants feel safe and not threatened.

Territoriality as perceived by Newman (1973) is:

"The capacity of the physical environment to create perceived zones of territorial influences." (Newman, 1973, p.51)

Newman (1973) proposes that territorial definition can be established:

- By the use of surface textures, steps, lamp posts and bollards, as symbolic barriers, or walls as physical barriers. It works because it subdivides a development into zones over which people establish proprietary interests; and
- Through the ability of the inhabitants to see the public and semi-public areas of their environments as part of their day-to-day activities.

Oscar Newman (1973) illustrates his hypotheses about defensible space using three diagrams Figure 2-1, Figure 2-2 and Figure 2-3.

Figure 2-1 illustrates the territorial definition of space, which is the hierarchy of space from public to private that Newman finds important to enable people to establish control over their environment. Figure 2-2 displays conceptually the combination of territorial definition and natural surveillance opportunities. While Figure 2-3 shows the use of the hierarchy in high-rise residential buildings. Newman postulates that territorial definition, or gradients in privacy are essential for people to develop a sense of security; in other words, the way professionals design the environment directly affects people's perceptions.

In addition, he finds that there are different ways to demarcate territories using symbolic and physical elements. Newman's main finding of defensible space design is that subdivision and the hierarchy of space allows residents to distinguish neighbour from intruder. Newman (1973, p.18) argues that crime control can be achieved by creating a situation in which it is possible for the potential victim to recognise in advance the potential criminal. In the sense that the criminal will not attempt to commit a crime in a place where he can be identified easily.

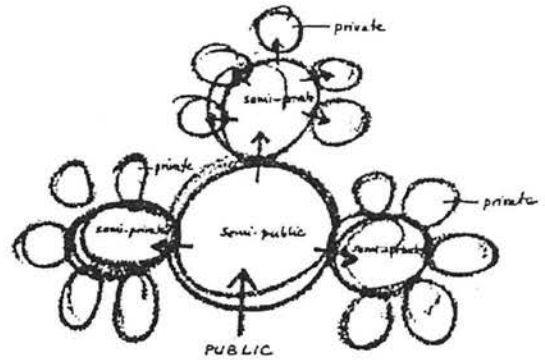


Figure 2-1: A schematic diagram illustrating the evolving hierarchy of defensible space from public to private (source: Newman, 1973, p.9).

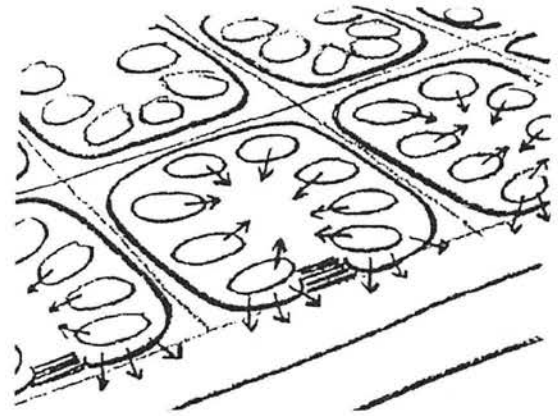


Figure 2-2: A schematic sketch illustrating territorial definition, reinforced with surveillance opportunities (arrows) (source: Newman, 1973, p.9).

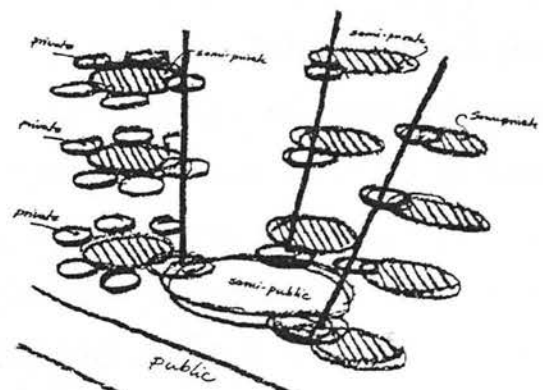


Figure 2-3: Hierarchy in a multi-level dwelling (source: Newman, 1972, p.10).

According to Lang (1987, p.156), the structure of the built environment, if properly configured, screens activities and provides affordances for personal space and territorial needs. He believes that there is a correlation between the individual's ability to call an area his/her own and the willingness of the individual to look after it. In addition, Lang states that the way buildings and the spaces around them are configured affect the perception of the inhabitants who are supposed to be in charge of them. He believes that each level in the hierarchy engages different degrees of personalization, ownership and control.

Newman's (1973, p. 11) controversial notion of defensible space provoked many critical arguments from researchers in the fields of architecture, urban design and planning. He is well aware of some scepticism about the belief "...that crime, born of a poverty of means, opportunity, education and representation, could be prevented architecturally", but argues that the environment has an undeniable effect on behaviour.

Carr et al. (1995, p.150) argue that the idea of defensible space is a way of preventing strangers from gaining entry to an area by providing an identity that facilitates surveillance and discourages entry by those who do not belong there. According to Carr et al. some barriers, which are proposed by Newman, act to define a space as belonging to a particular group, giving unwelcome indications to strangers. Carr et al. argue that the environmental barriers suggested by Newman, which can include limited entrance points, visibility to people and signage, are alternatives to the presence of guards who are associated with security. They point out that there are other design methods, which can be used to convey a sense of safety other than using security people. Carr et al. argue that the presence of guards, not only signals ownership of an area, but it delivers an unwelcome message to those who do not belong to that area. In addition, the presence of guards suggests that the environment is an unsafe one for insiders.

Research by Brower et al. (1983, pp. 419-437), suggests that symbolic barriers are not very effective in areas of perceived high threat, unless there is also a clear

physical presence of residents. Under high levels of threat, markers are needed to establish boundaries and claims.

One of the principles of Newman's defensible space was the idea of defining and protecting the boundaries of an environment, to keep away strangers, and therefore reduce the risk of crime. This principle, of which Newman is an advocate, has been criticised by neighbourhoods' residents who feel excluded (Madanipour, 1996, p.82).

In further criticism of Newman's findings, Madanipour (1996) argues that the concept of defensible space and its development potentially can subdivide the urban space into fragmented entities, promoting further segregation and exclusion, through restriction of access, a decline of public space and a fear of difference. Madanipour argues that the use of design to divide society into medieval factions cannot be considered as the proper contribution of urban design, which he perceives as being to develop an approach to fight crime, while promoting tolerance and social integration, rather than segregation and division.

Christopher Alexander (1965, pp. 58-61), in his article *A City is not a Tree*, argues critically that the planning concept is based on the hierarchical distribution of a city's spaces. He criticises urban designers and planners who have conceived cities as trees, when the organic structure of the city is, in every case, a semi-lattice. Alexander postulates that the tree pattern is accessible mentally and is easy to visualise, while the semi-lattice is hard to perceive, and therefore hard to visualise. He continues to assume that when the city structure is perceived as a tree, the humanity and richness of the living city is traded for a conceptual simplicity, which benefits only designers, planners, administrators and developers.

Contrary to Newman's concept of defensible space, which is based on a hierarchical order of space, Hillier (1988, pp. 63-88) argues that enclosure, repetition and hierarchy lead to social fragmentation. Hillier's arguments and his notion of the social logic of space will be presented in Chapter Seven.

2.3.3 Safety and Security

Safety and security are major factors that affect the presence of people in space. In the extreme situation of war, people are forced to stay within their private properties to avoid physical assault, seek more secure shelter or leave their city. Streets and public spaces become places of danger. Consequently, human behaviour and activities are restricted due to fear from assault. Fear of aggression, under such circumstances, may range from psychological concerns, such as fear of going places or taking protective measures, to physical assault, such as attack on people or property destruction. The discussion in Chapter Four, which deals with the implication of the 1975-1990 civil war, reflects such concerns.

Madanipour (1996, p.80) assumes that the anonymity of the city has been paralleled with a rise in crime, which in turn has led to withdrawal from urban life. However, a sense of security, as defined by Carr et al. (1995, pp. 97-102), is a feeling that one's person and possessions are invulnerable. Carr et al. assert that crime is a common concern and a reality in many public spaces, making them less comfortable to use. Their research indicates that the perception of danger can be an important deterrent to the use of urban public places, especially for women. Hidden places and screens from the street's view may support the desire for privacy or retreat but they also reduce the perceived safety of the site. Places that have barriers to visibility or obstruct visual accessibility by any other means generate major concerns for safety. This is recognised in Hillier's (1988) notion of convex space, i.e. space without hidden corners, and underpins the researcher's empirical analysis of Beirut's urban spaces in Chapter Seven.

Some measures already exist that seek to provide safety and security in public spaces. These range from converting streets to pedestrian malls, to providing security guards and installing security cameras. According to Carr et al. (1995, pp. 145-149), separation from vehicular traffic, as in the case of pedestrian malls, often makes it easier to be relaxed, but may increase user concern about safety

and security during low-use hours. Security guards at the entrances to many of the newest corporate sponsored public plazas may suggest order and safety from harassment to most middle-class adults but equally present a less welcoming image to others. Lang (1987, p.148) argues that security needs to take a variety of forms that allows a sense of being free from censure, free from outside attack, and that encourages self-confidence.

Through their observations, however, Jane Jacobs (1961) and Oscar Newman (1973) argue that where there is considerable interaction between people at the local level, crime levels are low. They believe that this is due to natural social obligations, where the concern people have for each other is high, and alienation is low. In addition, Jacobs (1961) and Newman (1973) point out that such hypotheses should be treated with some caution, as there are areas where there is considerable interaction between people but crime levels are high. They believe that the reason for this may be due partially to the lack of clear territorial patterns but more likely, it may reflect more on the social and cultural environment than on the physical environment of which the people are a part (Jacobs, 1961, pp. 29-35; and Newman, 1973, p. 51-77). According to Hillier and Hanson (1984, p.140), the notion of **territoriality** introduced by Newman reduces the encounter rate, encourages an increase in crime rates and leads to social segregation.

Hillier's perspective of **the social logic of space** has been widely used by many architects, urban designers and planners as a method to analyse the spatial structure of built environments. This perspective and its application on the structure of the city of Beirut are the central theme of Chapter Seven.

2.3.4 Social Interaction

Carr et al. (1995, p. 45) claim that public space allows casual encounters in the course of daily life and permits individuals to get together and interact, thereby enriching their lives with meaning. Nevertheless, in some circumstances, public space can be a source of disagreement and conflict, as in the case of Beirut.

Behrens and Watson (1996, p.208) assert that public spaces exist essentially to facilitate social interaction and collective social events, to act as extensions of overcrowded individual dwellings by providing opportunities for privacy, recreation, and rest to facilitate informal trade and provide a spatial framework for the consolidation of public facilities and commercial activities.

According to Lang (1987, pp. 159-163), social interactions take place more easily when people's social needs are balanced by the sense of individual autonomy that comes with privacy. Ambiguous spaces, those that are neither public nor private, tend to diminish interactions, since the individual is less able to control the interaction on his or her own terms. Lang argues that there is a direct relationship between the distance between people and the level of interaction. He bases his argument on the fact that, as the distance between people increases, so the visual, olfactory, thermal and kinaesthetic information they pick up about each other decreases and the voice level rises in order to maintain contact. Equally, as distance increases, so does the privacy of the person increases and the privacy of the interaction decreases. According to Lang, sustaining human relationships is the basis for meeting human needs for affiliation and belonging; and one of the main reasons that explains why interaction is desirable.

Christopher Alexander (1972, pp. 406-434) argues that, in order for primary relationships between individuals to develop, people must see each other very often under informal conditions to become intimate. In addition, he suggested that interactions between people of varied backgrounds and natures lead to positive changes in the attitudes that groups have toward each other. According to Kostof (1999, p.123), there are two aspects to the social, rather than individual, use of public space, which are:

- **Familiarity and chance encounters.** People may go out to meet friends and neighbours in the park or in the square. In addition, people see or meet other people they do not know or do not have association with in the same park

and square. They might sit next to each other, and they might do unpredictable things or things that others might find offensive or annoying thus *"The charter of public places is freedom of action and the right to stay inactive."*

- **Ritual aspects.** Public places witness a diversity of communal activities, such as festivals, riots, celebrations and public executions. As a result, such places will bear the designed evidence of a community's shared record of accomplishment and ritual behaviour. For instance, some public spaces are the places where people would choose to commemorate a costly war. In addition, public spaces are places where people would honour a public figure by setting up a monument to his/her memory, on another occasion, people might come together to pull down the same monument.

2.3.5 Social Exclusion and Cultural Differences

The research discusses literature that examines here the relationship between social exclusion and space, exploring some of the ideas that institute barriers to spatial practices. The researcher believes that this is relevant to understanding the role of public space of the city of Beirut during the war and its later reconstruction. Greenbie (1981) argues that although fences of some sort remain important to neighbourhoods, it is only as urban life extends beyond the city walls that human culture is able to expand.

"If the neighborhood is to the family as the family is to the individual, it would follow that the same relationship holds between the city and neighborhood. But does it? I think not, not exactly. I think, also, that failure to understand why it does not is the source of many human woes, past and present." (Greenbie, 1981, p.108)

The need for small-group identity is constant in city life, and all attempts to eliminate it are doomed to failure and risk adding to rather than reducing the sum of human miseries. The second part of the hypothesis is that we also have the capacity to transcend, under the right conditions, compulsive small-group loyalties and territorial defensiveness.

In his extensive research, Greenbie (1981, pp. 113-114) identifies two terms that describe various kinds of cultural and social space that determine the relationships between the inhabitants of urban and rural villages and city neighbourhoods, which are:

- **Proxemic:** this term describes the various kinds of culturally homogenous urban and rural villages and city neighbourhoods, as well as certain types of small group associations in space. There is likely to be less conflict if people of the same culture primarily share and control a given area. But there are large and important spaces in all real cities that are used by diverse people of many cultures and subcultures and cannot properly be considered the 'turf' of any one group.
- **Distemic:** this term refers to parts of the city, such as spaces and places that are actively shared by people with diverse cultural values and codes of conduct, which must be readily intelligible to all. Such spaces must also be governed by codes of conduct, which are explicit and consciously directed and followed.

Greenbie (1981, p.113, 114) attempts to show that distemic relationships can both underlie and override ethnic and class differences. The purpose of cities, as compared with villages, is to provide both proxemic and distemic spaces. Diversity between proxemic neighbourhoods, which are internally similar, should be accommodated in adjacent distemic public places in which various people can interact, both as individuals and as groups, in order to develop those potentials in human beings which transcend local differences. Greenbie considers the marketplace, which is probably the oldest and most effective space in accommodating social diversity, as a good example of distemic public space. On the other hand, he considers the neighbourhood as proxemic where members of the same neighbourhood can distinguish those who belong from those who do not by observable characteristics.

Greenbie (1981, p.115) postulates that both distemic and proxemic spaces emerge as a culture continues to evolve, in the sense that what is distemic for one generation may become proxemic for the next. For instance, the ethnic urban village or historical rural town can be highly proxemic for its residents and distemic for tourists and it will be distemic even for residents who perform services or sell commodities to visitors. On the other hand, the most interesting cosmopolitan public places, while distemic in function, express the proxemic cultures of the societies that initially brought them into being, as well as those of the people that most strongly influence current decisions.

Hildebrand Frey (1999, p. 98) believes that the social stratification of the city is a continual process. The city is an agglomeration of ghettos for the rich and ghettos for the poor, with the rich and mobile in advantaged areas, which they can afford, and the poor and less mobile in disadvantaged areas because they cannot afford to live anywhere else. Madanipour (1988, quoted in LeGates and Stout, 2003, p.182) asserts that the exclusion of groups of city residents from access to all that the city has to offer based on race, religion, income, or national origin, has been and continues to be a pressing issue in cities throughout the world. He suggests two potentially more promising approaches:

- Decommodifying space so that the private real estate market plays a less decisive role in where different groups are located within the city, and using deliberate city planning to de-spatialise social exclusion.
- Building inclusionary housing units for low- and moderate-income households in neighbourhoods they could otherwise not afford is an example of the first strategy. Mixed-use zoning to promote social diversity is an example of the second.

According to Madanipour (1988, quoted in LeGates and Stout, 2003, pp. 182,183), different social groups may experience varying degrees of these different but highly interrelated forms of social exclusion. For instance, exclusion from the political arena, such as a rejection of participation in decision-making,

may alienate individuals and social groups, and may lead to social exclusion. Madanipour concludes his analysis by revisiting spatial barriers, promoting accessibility and more spatial freedom, which therefore becomes one way in which spatial planning can contribute to promoting social integration.

Theorists such as Kuper (1953), Michelson (1976) and Lang (1987) assume that when populations are not homogeneous in character, proximity can lead to negative contacts between people, especially if they do not have enough privacy. Thus, when a working-class family locates to a middle-class area it can find itself socially excluded rather than integrated (Lang, 1987, p.162). According to Kostof (1999, p.106), religious and ethnic exclusion is based on the fundamental invariables of roots and beliefs. He points out that cities are rarely able to sustain a population that is pure in ethnic background and also unified in faith since patterns of interaction are weak. There is a clear need for a balance of users and activities in public spaces. It is possible to encourage diverse activities so that no one group dominates a space to the exclusion of others. The risk of diversity is that the individual and activities of the various users and groups may collide unless skilful design and timing of uses and users help to provide sufficient space and resources (Carr et al., 1995, p. 158). To Greenbie (1981, pp. 111, 112), social and cultural differences may be based on religious belief, profession, trade, age, sex, social class and even recreational activities, as well as national or ethnic culture. In addition, he points out that each culture takes its values and views of the world for granted and that traditional societies have difficulty visualising and accepting other traditions.

2.4 Perceptual Attributes

Perception is considered to be a **transaction** in which the environment, the observer and the perception are mutually dependent on each other. Ittelson (1960) defines the process as follows:

"Perception is that part of the living process by which each of us, from his own particular point of view, creates for himself the world in which ...he tries to gain satisfaction." (Ittelson, 1960, quoted in Lang, 1985, p.89)

Ittelson's statement suggests that humans need to experience the environment from their own point of view. This means that humans' perception of the surrounding environment generates a wide diversity of symbolic meanings and qualities that instigate emotional responses, and motivational messages, which in turn stimulate needs.

Perception and cognition are usually not just operations in the head, but transactions with the world. These transactions do not merely inform the perceiver, they also transform him. Each of us is created by the cognitive acts in which we engage (Neisser, 1976, pp. 11, 20). Similarly, Lang (1987, p.79) defines perception as the physiological and psychological process of obtaining information from the environment.

Norberg-Schulz (1972, p.11) distinguishes five concepts for public space, which are the pragmatic space of physical action, the perceptual space of immediate orientation, the existential space which forms man's stable image of his environment, the cognitive space of the physical world and the abstract space of pure logical relations. He defines these five concepts as:

- Pragmatic space is the space that integrates the human with the environment;
- Perceptual space is essential to the human's identity as a person;
- Existential space allows the human to belong to a social and cultural totality;
- Cognitive space means that the human is able to think about space; and finally
- Logical space offers the tool to describe the other spatial attributes. It is a relatively stable system of perceptual schemata, or image of the environment (Norberg-Schulz, 1972, p.28).

In the light of the human need to understand urban space and the way users perceive such an environment, many questions can be asked about how people perceive the environment, how meanings are learned, and how likes and dislikes are generated and developed; and why some places are better remembered than others. The following discussion, which involves the basic cognitive processes such as learning and remembering, attempts to answer these questions.

2.4.1 Environmental Cognition

Nabih (1999, p.71) postulates that transactional objectives assume psychological phenomena, which occur in terms of **cognition** (e.g. perceptual learning), **affection** (e.g. feeling, emotions, memory, image forming and symbolisation) and **valuation** (e.g. processes involving comparison with personal and collective standards such as aesthetic evaluation). He suggests that, although these processes are treated separately, they mainly exist simultaneously in everyday life.

Rapoport (1980, pp. 108, 109) points out that there are two important approaches to cognition as an interface between the individual and the environment. On the one hand, the psychological approach tends to put stress on **knowledge** of the environment. On the other, the anthropological approach takes cognition as a process concerned with different ways of making the world **meaningful**. However, the view of environmental cognition is generally that it is about giving meaning to the world rather than knowing about it. Lang (1987, p.80) points out that the environmental perception approach to the study of human behaviour claims that behaviour is a function of the individual's motivations, the affordances of the environment, the images of the world outside direct perception and the meanings those images have for the individual.

Madanipour (1996, p.69) argues that developments in environmental cognition research have shown an inclination to accept some of the social dimensions of difference in understanding the environment. He reveals that these studies

conclude that the conceptions of space are different from one individual to another, both in objective and concrete terms, and in subjective and symbolic terms. For instance, what is seen by one person as a *slum* is considered by another as an *urban village*. Madanipour argues that the presence of such differences between people is a clear indication that environmental cognition is essentially a social product, in a sense it is learnt by individuals and shaped by their social environment.

2.4.2 Sensory Values

Sensory values are those generated by pleasurable and unpleasurable sensations, which are obtained from the touch, smells, tastes, sounds and sights of the world. Lang (1987, p.182), through his extensive research, classifies the sensory experience into **lower sense**, which involves touch, smell, taste and **higher sense**, which involves sight and hearing.

Tuan (1977, pp. 6, 30, 79-84) postulates that human connection to a place derives from both human biology and culture. He argues that the experience of place engages all five senses in seeing, smelling, feeling, hearing and tasting the essence of places. In addition, Hayden (1996, p.16) points out that human beings come to know places through engaging all five senses, sight as well as sound, smell, taste and touch.

Madanipour (1996, p.45) reveals that individual awareness of the contents of a place, for example, the urban fabric with its colour, texture, scale, style, character, personality and uniqueness, is an important dimension to an individual's emotional reactions to that environment. Nevertheless, Lang (1987) reiterates Gibson's (1966) argument that senses operate as perceptual systems instead of channels of sensations (Table 2-1).

Lang (1987, p.90) considers perception as multi-modal and universal. He argues that the hypothesis, which postulates that information about the world is conveyed directly through light, sound waves and other perceptual sources,

without the mind having to reconstruct meaningless sense data, is a controversial view. In other words, senses are considered as generators of skilful activities, such as listening, touching, smelling, tasting and looking. These senses then enable the individual to perceive and acquire information about the surrounding environment and assist him/her to respond and perform activities accordingly.

Table 2-1: The senses considered as perceptual systems (source: Lang, 1987, p.91)

Name	Mode of Attention	Receptive Units	Anatomy of the Organ	Activity of the Organ	Stimuli Available	External Information Obtained
Basic orienting system	General orientation	Mechano-receptors	Vestibular organs	Body equilibrium	Forces of gravity and acceleration	Direction of gravity, being pushed
Auditory system	Listening	Mechano-receptors	Cochlear organs with middle ear and auricle	Orienting to sounds	Vibration in the air	Nature and location of vibratory events
Haptic system	Touching	Mechano-receptors and possibly thermo-receptors	Skin (including attachments and openings), joints (including ligaments), muscles (including tendons)	Exploration of many kinds	Deformations of tissues, configuration of joints, stretching of muscle fibres	Contact with the earth, mechanical encounters, object shapes, material states-solidity or viscosity
Taste-smell system	Smelling	Chemo-receptors	Nasal cavity (nose)	Sniffing	Composition of the medium	Nature of volatile sources
	Tasting	Chemo- and mechano-receptors	Oral cavity (mouth)	Savouring	Composition of ingested objects	Nutritive and bio-chemical values
Visual system	Looking	Photo-receptors	Ocular mechanism (eyes, with intrinsic and extrinsic eye muscles, as related to the vestibular organs, the head, and the whole body)	Accommodation, pupillary adjustment, fixation, convergence, exploration	Variables of structure in ambient light	Everything that can be specified by the variables of optical structure (information about objects, animals, motions, events, and places)

Contrarily, Dewey (1920), who was concerned with the space-time relationship, argues that sensory value is not fundamental but that it provides the input for the appreciation of the forms of the environment. According to Dewey, unity is the highest formal value and can be obtained in many ways, for example, through rhythm, the ordered variation of change or through symmetry. Dewey also stresses the intrinsic meaning of shapes and forms. He introduces ideas such as the culmination, anticipation and fulfilment of expectations in explaining what it

is about sequential experiences that give pleasure (Dewey, 1920, quoted in Lang, 1987, p.183).

Numerous theorists and thinkers (such as Harris, 1965; Rock and Harris, 1967; and Neisser, 1976) perceive that many of the characteristics of our environment that can usually be obtained by looking, can also be achieved by touching and feeling. Hence, such information can be anticipated and can be integrated in cognitive maps and images. The individual's perceptual anticipations are so thoroughly integrated that things may come to look hard, rough, or heavy, but the decisive information about size and position is usually visual (Harris, 1965, pp. 419-444; Rock and Harris, 1967, pp. 96-104; and Neisser, 1976, p.143).

To Neisser (1976, pp. 144-155), taste seems a somewhat more passive sense than vision or touch. Once a substance is in the mouth, the information obtained by tasting it is probably much the same, no matter what the taster may do, even though one can develop refined anticipations of taste. In addition, he reckons that sound informs the perceiver about events. Vision and touch enables the perceiver to explore stationary environments, whereas hearing conveys messages to the perceiver about movement and change.

2.4.3 Cognition and Schemata

The concept of stored information plays a key role in most contemporary theories of memory. Perception is always an interaction between a particular object or event and a more general schema. The schemata are culturally determined and comprise qualitative properties resulting from the need for effective orientation to the environment (Norberg-Schulz, 1972, pp. 10, 11).

A city image can be recaptured and symbolised in a variety of ways. In his study *The Image of the City* Kevin Lynch (1960) identifies that the node is one of the elements by which the urban form is perceived and which gives the city a strong image, that is to say **imageability**. Lynch (1960, pp. 45-50) points out that stored information about the city and its space can be obtained by examining several

representative means (such as sketch mappings, verbal descriptions and information lists). Lynch's five elements of the city image can be considered as fundamental components of cognitive images, which if recaptured, can be used to produce a representative map of the stored information. These five elements of the city image are discussed and applied later in Chapter Six.

Lang (1987, p.103) points out that the set of affordances of the environment at a particular location embodies the potential environment for human behaviour at that place. Not all of these affordances are perceived by people, nor are all the perceived affordances used. This means that the set of affordances used depends on the nature of the people involved, their **motivations, experiences, values** and the perceived costs and rewards of their involvement in a particular set of activities or interpretations of their environment (Figure 2-4).

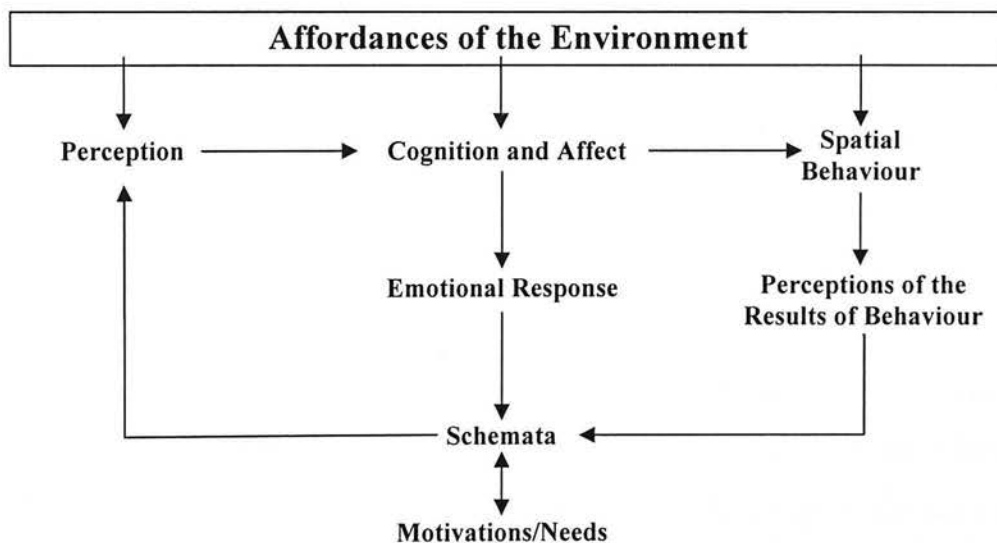


Figure 2-4: The processes of human behaviour (source: Gibson, 1966, in Lang, 1987, p.84).

Ulrich Neisser (1976, p.22) claims that anticipatory schemata are cognitive structures crucial for perception, and that people perceive only what they know how to find. Schemata guide such a search process, which is innate and partly learned. Neisser considers that the schema assures the continuity of perception over time, and because schemata are anticipations, they are the medium by which the past influences the future and by which; information already obtained governs what will follow. He defines explicitly the term schema as:

“... that portion of the entire perceptual cycle which is internal to the perceiver, modifiable by experience, and somehow specific to what is being perceived. The schema accepts information as it becomes available at sensory surfaces and is changed by that information; it directs movements and exploratory activities that make more information available, by which it is further modified.” (Neisser, 1976, p.54)

Piaget (1956) sums up his investigations with these words:

“It is quite obvious that the perception of space involves a gradual construction and certainly does not exist ready-made at the outset of mental development.” (Piaget, 1956, p.6)

2.4.4 Symbolic Meanings

Lang (1987, pp. 204-205) states that there is more confusion over the nature of **symbolic meaning**, than over any other level of meaning. He defines **symbol** as the result of a cognitive process, whereby an object acquires a connotation beyond its instrumental use. Lang asserts that the symbols people choose to have around them may reflect their perception of who they are or whom they aspire to be, or they may be simply a rejection of the past. In both instances, the nature of the symbol is that they are produced by the person and reflect his or her motivations, needs and background.

Hayden (1996, p.11) points out that perceptible objects and events of a common setting are most symbolic and meaningful. In her research, Hayden finds that restoring significant shared meanings for many neglected urban places involves claiming the entire urban cultural landscape as an important part of the history.

In contrast to the symbol, which is the product of an individual's highly personalised view of the environment, the sign is a product that exists externally in them within that environment. Madanipour (1996, pp. 69, 70) identifies the concept of sign as the meaning of the environment that derives from the role of any objects, events and appearances that send messages and convey meanings. Another person in a different state of mind or in another social and cultural context may not share such an interpretation. The meaning of each sign is determined only by its difference from other signs. Thus, a sign is a convention

or device that stands for something else in a reality rather than in an abstract sense.

Carr et al. (1995, p. 214) consider that symbolic values can be employed in the design of public space to enhance its meaning. Although symbolic references can be both positive and negative, they may evoke an association of pride, enjoyment or nostalgia, and add to the positive meaning of the site for users, or they may convey messages of an old wound to an area or group.

2.4.5 Aesthetic Values

Lang (1987, p.181) identifies two broad approaches to the study of aesthetics, which are:

- The study of the processes of perception, cognition and attitude-formation, which is psychological in character;
- The study of aesthetic philosophies and the creative processes, which are largely metaphysical and psychoanalytical.

The subject of meaning is a fundamental one in aesthetic theory. Empirical and experimental research suggests that there are three primary emotional responses: pleasure, arousal and dominance (Mehrabian and Russell, 1974). Pleasure has to do with feelings of liking and disliking; arousal has to do with the interest-evoking qualities of the environment; dominance has to do with the individual's feelings of freedom of action. The concern here is with the interest and pleasure of environments and their effective meanings (Lang, 1987, pp. 94-96).

Aesthetic values are related to **motivations** for they define the **attractive** and **repulsive** elements of the world. Patterns of the built environment that people find pleasing have a positive value for them; anything that is despised has a negative value. Aesthetic values thus represent a linkage between a person's motivations, emotions and behaviour. Lang (1987) postulates that symbolic aesthetics is concerned with the pleasure generated by the associational meanings

people have or make of the patterns of their built environment. For instance, Lang suggests that the study of aesthetics is concerned with the following:

- Identifying and understanding the factors that contribute to the perception of an object or a process as a beautiful or, at least, a pleasurable experience;
- Understanding the nature of the human ability to create and to enjoy creating displays that are aesthetically pleasing.

2.5 Functional Attributes

Functional attributes of public space involves how people function in places, more precisely how people use public spaces. This research, through its literature review, identifies factors related to functional attributes that account for people's needs in public space.

2.5.1 Mixed Uses

Successful urban places have some mixtures of land use that integrate a variety of activities. The ultimate in land use provision would be for public space to be surrounded by a wide range of uses from living, to working, to shopping, as well as public, spiritual and recreational activities. Such a mixture in land use responds to cultural values and diversity that encourages local community identity.

Jacobs and Appleyard (1987, pp. 112-120) observed that people are drawn to public space when there is a mixture of uses. They claim that it is the mix and not just the density of people and uses that brings life to public space. In their view, mixed use should be easily accessible and closely located to places where pedestrians meet, shop and work or simply enjoy passing time.

Public spaces are greatly affected by the surrounding land use, in the sense that an inconsiderate change of land use can deprive and degrade the vitality of public spaces. For instance, driving away traditional businesses and replacing them with imported modern uses that cater only for a small group in society, such as

replacing an indigenous bazaar or souk with a prestigious shopping centre, creates a social imbalance and diminishes the role of public space as the meeting place for the whole community.

Paumier (1989, in HMSO, 1992, p.66), in his commentary about designing in towns and cities, puts emphasis on ingredients that he perceives create a sense of place. He identifies two basic concepts necessary for all town centre redevelopments and reconstruction, namely diverse markets and quality of space. Paumier asserts that a town centre must have a variety and complementary land use in a concentrated area, to attract people and encourage public activities that promote a lively and sociable environment, and at the same time will generate the economy.

Many researchers (such as Behrens and Watson, 1996, p.212) view the function of the public market as the **socio-economic generator** that assists informal sector (local) manufacturers and traders, improves the access of lower income consumers to commercial services, provides a space for community interaction and, in some cases, provides a tourist attraction. In addition, public markets enable many otherwise unemployed people to generate income through a variety of small-scale manufacturing, service and retail activities. Hence, the presence of the market plays an important role in meeting the daily needs of the lower income groups by providing high levels of access and selling in smaller, affordable units.

According to Marcus and Francis (1998, p.3), a new kind of semi-public space is emerging encompassing boutiques, cafés and prestigious stores. They oppose this trend, arguing that such places are accessible only to those with money to spend; closer to the truth is the fact that many users do not spend money but come only to window-shop or to sit and watch the crowds. There is no doubt that such places have enlivened whole sections of cities. For city teenagers, these lively marketplaces have become at least as appealing as the shopping mall. Perhaps these are the modern equivalent of the street market.

As indicated by Carr et al. (1995, p.149), the semi-public spaces of new shopping streets, as opposing to indigenous souks, are characterised by various non-human factors and are mainly related to social-symbolic access. This means that certain design elements or facilities may privilege some users over others. For instance, while the presence of shops and vendors may signal the **publicness** of a space and the type of people who are welcome there, the expensive shops and cafés that dominate indoor malls and atria provide clear signals as to the intended users.

Moughtin (1992, p.88) defines the use and the function of public places that contribute to civic life in the city. These are: civic buildings; principle meeting places; places for great ceremonial occasions; spaces for entertainment around buildings, such as theatres, cinemas, restaurants and cafés; spaces for shopping, shopping streets, arcades and markets: spaces around which offices are grouped; spaces of a semi-public nature around which residential accommodation is arranged; and, finally, the spaces associated with urban traffic junctions.

2.5.2 Movement and Accessibility

Movement patterns and the location of public facilities affect the degree of interaction that takes place between people (Skaburskis, 1974, p.39-44). Behrens and Watson (1996, pp. 68-69) assert that public spaces should be supported by facilities, activities and public transport, and should be located and integrated closely to the movement system. They suggest that the distribution of public spaces plays a central role in determining the distribution of urban activities in space. Public spaces are the places where people gather and move, and it is this pattern of gathering and movement, which sends out investment signals. Behrens and Watson found that activities, which are most dependent on public exposure, seek the most accessible locations. Behrens and Watson envisage that, over time, the relationship between **moving**, **gathering** and **surrounding uses** creates a strong hierarchical dimension to the **spatial system**, with spaces ranging from very intensively used to very private.

However, Lang (1987, pp. 157-158) refers to **functional distance** and **functional centrality** as major predictors of the interaction patterns of people. He defines functional distance as the degree of complexity encountered in moving from one point to another, while functional centrality refers to **the ease of access** to common facilities for a group of people, the frequency with which they use them and the amount of time they spend using them. What matters is the importance of such behaviour-forming settings in the lives of the people concerned and the ease of access to such common facilities. He further argues that the opportunity for individuals to see and meet each other is a prerequisite for promoting interaction between people. Through extensive empirical work on the relationship between movements, the spatial structure of space and land uses, Bill Hillier (1996, pp. 47-60) argues that the configuration of space and its effect on visual permeability are the main factors in determining movement densities and encounter rates. He identifies three factors of movement in an urban system, namely origin, destination and the series of spaces passed through on the way from one to the other. He refers to **movement** and **visual permeability** as **intelligibility**.

The urban fabric offers people a collection of open, closed or controlled places. The physical organisation of space, using elements from the natural or the built environment is employed socially and symbolically to put visible and strict limits on our spatial practices. According to Carr et al. (1995, p.150), there are three types of access – physical, visual and symbolic. These three types interact frequently and can present a strong or ambiguous picture of who is free to enter a space and who has control over ‘the right of access’. **Movement** and **accessibility** have a major role to play in the **integration** or **segregation** of space in the city. The Project for Public Spaces (PPS)¹ examined public space in terms of its functionality as the relation between people, their activities and the space.

¹ The Project for Public Spaces (PPS) is an organisation founded in 1975 to continue the pioneering work of the writer-sociologist William H. Whyte. PPS is dedicated to creating and sustaining public places that build communities (www.pps.org).

The PPS put an emphasis on learning about the use and function of public space through observation, rather than anticipating its use (PPS, 1999, p.51).

2.5.3 Comfort

Carmona et al. (2003, p.165) perceive comfort as a prerequisite of successful public space, and that the time people spend in a space is an indicator of its level of function and comfort. This quality embraces physical, social and psychological comfort. According to Carr et al. (1995, pp. 95-97), physical comfort is fulfilled through the provision of basic needs in public space such as seating, access to sunlight, trees, water, food and other amenities. In addition, physical elements can be designed to encourage social and psychological comfort. Carr et al. assert that comfort is a quality that stimulates or frustrates people's needs in space. They argue that where social and psychological comfort exists, it extends people's experience and offers a sense of security in an environment where one's person and possessions are not vulnerable.

2.5.4 Relaxation

Carr et al. (1995, p.98) point out that a sense of psychological comfort may lead to relaxation, which is a more developed state of body and mind. Hence, relaxation is a quality of space that provides a sense of psychological comfort, a lifting of physical strains, moving the person to a sense of repose. In an urban setting, natural elements and a separation from vehicular traffic help to reduce stress and evoke a sense of relaxation. A place that offers relaxation also invites a person to engage within it.

2.5.5 Passive Engagement

Passive engagement within a space covers any situation in which an individual experiences the surrounding environment but without being actively involved in it. Such a type of engagement satisfies those who desire indirect or passive encounters with people, such as looking and watching other people's activities.

Passive engagement can be enhanced by providing fountains, views, public art, performances and other features that involve passive encounters (Carr et al., 1995, p.103). Jan Gehl (1987, pp. 15-19) defines passive engagement as participating in a modest way, where observers are present in public space with passive participation. He found that the majority of people in the city streets and city centres are in passive social contact with each other, such as seeing and hearing.

A further attribute of passive engagement, which is highly significant to this research, is that it is informal and spontaneous and demonstrates a person's enjoyment of being in that place. Thus, Jan Gehl strongly recommends designers to create urban places that invite passive engagement, and sees the level of passive engagement in the squares of Copenhagen as an indicator of its success.

2.5.6 Active Engagement

Active engagement is the quality of behaviour within a space that represents a more direct involvement with the surrounding environment and its user. Satisfaction emerges with this type of engagement with direct contact with other people and the environment (Carr et al., 1995, p.119). Jan Gehl (1987) identifies three types of activities, i.e. **necessary activities**, **optional activities** and **social activities**. Necessary activities are compulsory, in the sense that individuals are involved to a greater or lesser degree with required activities, such as going to school or work, shopping or waiting for a bus. He points out that such activities happen continuously and the individual has no choice. Optional activities are those pursuits in which the individual wishes to participate if time and place allow them to happen; such activities include taking a walk to get fresh air, standing around and enjoying life, or sitting. Social activities are all activities that depend on the presence of individuals in public spaces, ranging from children at play, to greetings and conversations, to communal activities of various kinds, and finally to passive contacts (Gehl, 1987, pp. 11-14).

2.5.7 Discovery

Discovery is the quality whereby visitors are able to move around and discover parts of the space. The main aspect of this quality appears to be the diversity of the physical design to offer a succession of vistas to enjoy (Carr et al., 1995, p. 134). Carmona et al. (2003, p. 168) define discovery as the desire for new spectacles and pleasurable experiences, which depend on variety and change. It may involve some sense of unpredictability, or more precisely a break from familiarity, which may involve some risk. In addition, discovery may involve some organised programmes, such as public concerts, art exhibitions, street theatre, festivals, parades and other public events.

2.6 Conclusion

Discussion in Chapter Two was based mainly on four major attributes of public space namely, physical, socio-cultural, perceptual and functional attributes. Such qualities are closely related to Maslow's human needs that are necessary to sustain the functionality of public space in any redevelopment process. Although these attributes are seen to be as separate wholes, the transactional perspective adopted in Chapter One treats them as unified entities that are interrelated by a series of complex relationships to define the meaning and nature of human needs and behaviour in public space.

The physical attributes of public space focus on the physical and spatial aspects of the environment and their influence on people's behaviour and needs. The discussion extended to highlight issues related to the exploitation of public space by private use, which has encouraged access to more privileged groups while excluding others. Another issue is related to the impact of suburban shopping centres on the pedestrian life and street activities in the traditional city centre. There is a need for traditional streets to encourage public activities by locating facilities along movement patterns. Various forms of movements, other than private transportation, are required that ensure permeability of pedestrian access and public transport.

Socio-cultural attributes raise issues associated with identity, homogeneity, collective or social memories, territoriality, safety and security, social interaction, social exclusion and movement and accessibility. Social attributes focus on issues related to a sense of belonging that emanates from the ability of people to practise their rights, and not to feel threatened in public space. The level of safety and security provisions are among the salient issues that may encourage or discourage civic activities in space. Social exclusion was seen in terms of controlling the opportunities for individuals and social groups to participate in public life and in decisions made that affected their living environments. Spatial planning can contribute to promoting social integration by encouraging intelligibility.

Perceptual attributes focus on understanding people's perceptions, cognition and behaviour, and their appreciation of the surrounding environment. Public space carries a diversity of symbolic meanings that evoke emotional responses and motivational messages, which stimulate human needs. Aesthetic values represent a linkage between people's motivations, emotions and behaviour.

Functional attributes of public space foster people's needs through the provision of a wide range of mixed uses that surround public space. Integrating a variety of activities, such as living, working, shopping etc is of extreme importance to the vitality of public space. Public markets emerge to assume the role of socio-economic generators. They assist in encouraging traditional trades and small businesses, and improve the access to services for all members in society. This promotes community interaction in space and, in some cases, may act as tourist attractions. Public space also provides qualities that respond to the needs of the users allow people to gain a satisfactory level of comfort, relaxation, passive and active engagements with the environment and discovery.

Conclusion to Part One

Part One of the thesis introduced major intellectual thoughts, principles and philosophies that provide many of the qualities derived from people and place, which should be treated as the foundation of any post-war reconstruction programme.

Chapter One focused on investigating principles, dimensions, and qualities that respond to human needs and the environment, which are the key factors needed in any reconstruction process. After reviewing philosophical frameworks, **transaction emerged as a holistic approach that enables an understanding of the man-environment relationship, which evolves and transforms in harmony over time.** The transactional perspective is built around issues related to time and change. In a sense, it considers numerous facets that influence human judgement and behaviour in the environment.

Chapter Two explored public space attributes by examining a wide range of literature related to the physical, perceptual, functional, and social attributes. Public space emerges as being holistic in the sense that it encompasses all the attributes that derive from the man-environment relationship, which are perceived to fulfil human needs. **If the environment undergoes any change, public space would be the most affected part, because of its transactional nature.** Public space is highly responsive, in the sense that its own attributes are interlinked in such a way that if one attribute is affected this influences the whole.

Lynch's imageability and Hillier's intelligibility became apparent as influential concepts that can be utilised to analyse the cognition of the Beirut people and the spatial structure of the city and its public spaces. The application of these two tools is the central discussion in Chapters Six and Seven.

There is a need in any reconstruction process for a theoretical base that embraces a holistic approach, to ensure a balance is maintained among the attributes of

public space that respond to the man-environment relationship. These attributes are perceived from within the transactional perspective as interlinked entities and they function in an integrated manner that allows an understanding of the Beirut context, people's behaviours and perceptions and the physical environment. The theoretical framework of this research is based on the concept that transaction is a holistic approach that best embraces and preserves the integrity of public space attributes.

In concluding this part, the aim was not only to locate the subject area in its own discourse by referring to various theories and principles, but also to adopt a theoretical framework that would guide this research in its investigation of the role of public space in post-war reconstruction. Furthermore, the framework assists in exploring the **Contextual Review of Beirut** in Part Two, directing the **Empirical Work** in Part Three, as well as, supporting the formulation of the **Thesis Approach** in Part Four.

PART TWO:
CONTEXTUAL REVIEW

Introduction to Part Two

Part Two is divided into two chapters. It outlines the detrimental issues of war both in terms of physical and non-physical implications. Chapter Three focuses on the historical development of the urban structure of the city. It goes back in history to trace the early development of the old settlement of Beirut city to the final epoch of the civil war. It underlines the deplorable issues of the civil upheaval on the physical and social fabric of the city.

Chapter Four attempts to explore and highlight the physical and non-physical implications of the war and its post-war reconstruction on the fabric of the city centre, including the physical, social, cultural, economic and psychological issues. As one of the major objectives of the thesis is to learn from Beirut's experience of post-war reconstruction, the research attempts to identify most of the qualities as well as the issues resulting from the implementation of the approved (2001) master plan for reconstruction as presented by Solidere.

Chapter Three:
General Background

Chapter Three: General Background

3.1 Introduction

Chapter Three begins by providing a contextual overview of Lebanon and its capital city, Beirut, in terms of topography, climate, population, religion, social structure, economic conditions and political system. However, the central theme of this chapter is to outline the evolution of the urban fabric of Beirut. In addition, this chapter intends to unravel some of the major forces that shaped the character of the built environment of the city and its public spaces. This overview covers some of the historical periods that have contributed to the formation of the urban character of the old settlement of Beirut. This chapter also deals with the modern attempts made to develop the city from independence in 1943 to 1986. The later period between 1986 and 1990 witnessed no major urban developments as the country was deeply engaged with the civil war.

3.2 The Country and its Capital City

Lebanon is a country located at the centre of the Middle East (Figure 3-1). Syria borders Lebanon to the north and east, Israel to the south and the Mediterranean Sea to the west (Figure 3-2). Lebanon covers an area of 10,452 km² bordering the Mediterranean Sea. Along the coast, there is a narrow strip of land measuring 210 km in length. Beirut stands in the mid-point of this coastal strip. However, its location with the slopes of the mountains to the east and the Mediterranean Sea to the west offers little opportunity for natural expansion.

3.3 Topography

Lebanon's topography embodies four main geographical terrains running north to south and parallel to the Mediterranean Sea, namely: the coastal plain, the Lebanon mountain range, the Bekaa Valley and the Lebanon/Syria mountain range. The narrow fertile coastal plain is broken at several points by the foothills and peaks of the Lebanon Mountains. Beirut, Tripoli, Sidon and Tyre are the four

major cities located along this coastal plain. Qornet Es-Sauda is the highest mountain in Lebanon at 3090m. Behind the mountains of Lebanon is the Bekaa Valley. Its 15 km wide fertile terrain represents the country's main agricultural resource.

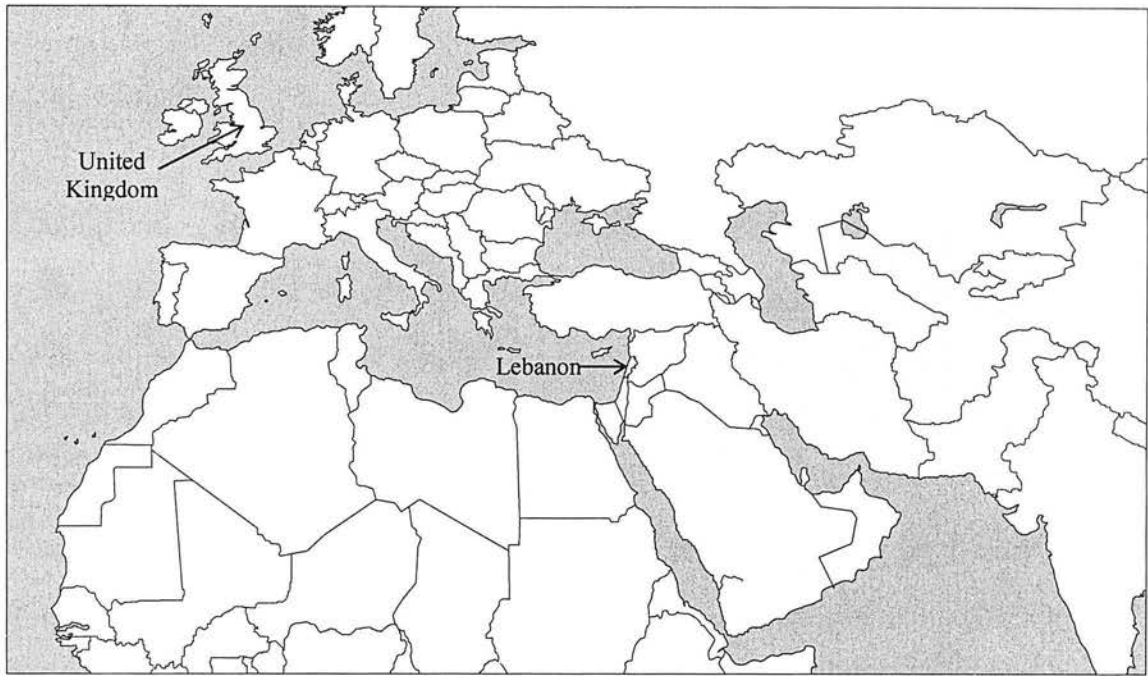


Figure 3-1: The strategic location of Lebanon (source: the author).

3.4 Climate

Lebanon has a moderate Mediterranean climate. The coastal strip is characterised by a hot and very humid summer with a rainy winter. Its average summer daytime temperature is 30°C with a slightly lower temperature at night, while its winter daytime temperature averages 15°C. The inner terrain of Lebanon has a hot dry summer and a cool, rainy winter. In the mountains, summer daytime temperatures average 26°C and the nights are pleasantly cool. The sun shines throughout the year. The annual rainfall on the coastal plain is around 35 inch, and more than 50 inch in the mountains. The moderate climate in Lebanon has significantly encouraged outdoor activities and public life, which are more pronounced in warm areas. Lebanese cities typically have some public spaces that are more heavily used in winter than summer, and vice versa.

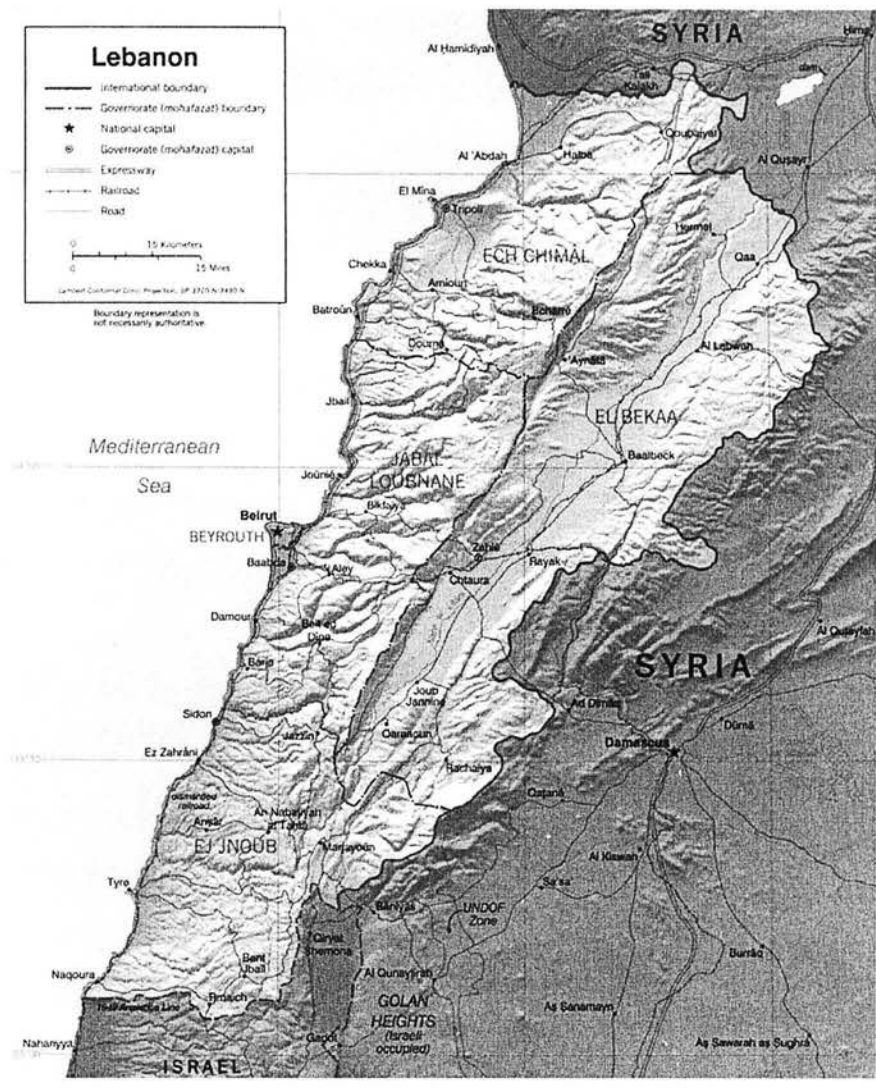


Figure 3-2: A physical map of Lebanon (source: Atlas of the Middle East 1993, from the University of Texas at Austin, General Libraries, 2003, www.lib.utexas.edu/maps/lebanon.html).

3.5 Social Conditions

3.5.1 Population

There has been no official census of Lebanon since 1932, but the population is estimated to be between 3 and 4 million. Beirut is Lebanon’s capital and the largest city with a population estimated to be about 1 million in 1970, representing about 45 per cent of the nation’s population and occupying roughly 2 per cent of the land area (Rowe and Sarkis, 1998, p.15).

Although there is no official census to date, Figure 3-3 shows that the population of the metropolitan area of Beirut is about 1.4 million. Tripoli, to the north, is the

second largest city, with over 175,000 inhabitants. Most of the country's population live along the narrow coastal strip. Less than a third of the population lives in the rural areas, and they are dependent on agriculture for their livelihood.

3.5.2 Major Religions

By the 4th century, Christianity was established in Lebanon. In the 7th century, the Christian sect that was later to become the Maronite Church settled in the northern district of the Lebanese mountains to avoid conversion to Islam by the Arabs, who inspired by the teachings of the Holy Prophet Mohammed in the 7th century, had converted most of the region to Islam. The geographical inaccessibility that made Lebanon attractive as a religious refuge also appealed to Muslims; the Shi'a found a haven here during the 9th century and the Druze in the 11th century. The mosaic of

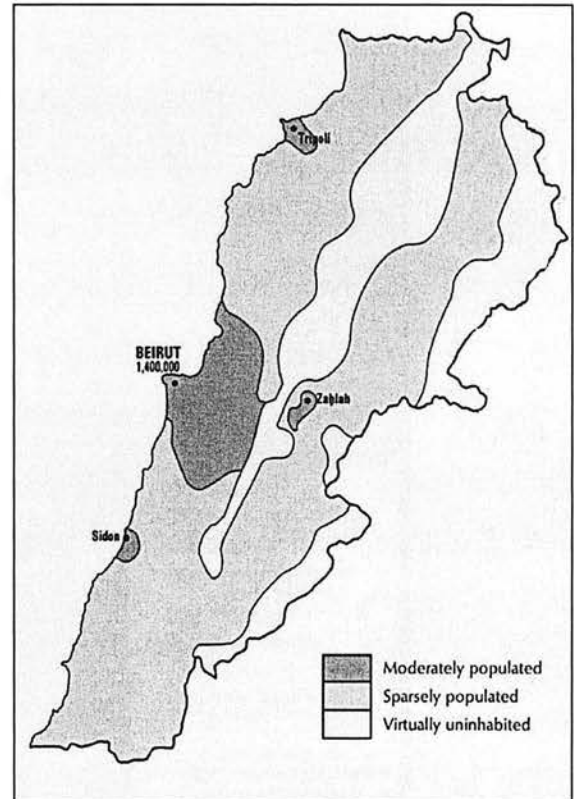


Figure 3-3: Population density in Lebanon (source: Atlas of the Middle East 1993, www.lib.utexas.edu/maps/lebanon.html).

different beliefs in Lebanon gave a unity to the region as a whole. Khalaf (1993) portrays his own experience of religious co-existence by saying that:

"Within one-mile radius... all four Christian churches (Maronite, Greek Orthodox, Catholic and Protestant) adjoined the mosque, synagogue, Druze retreats and meeting places." (Khalaf, 1993, p.51)

This spiritual experience in Lebanese society, which appears clearly in religious festivities, gives each religious group its own identity and a certain amount of autonomy in specific areas. Figure 3-4 illustrates the distribution of religious groups in Lebanon in 1983.

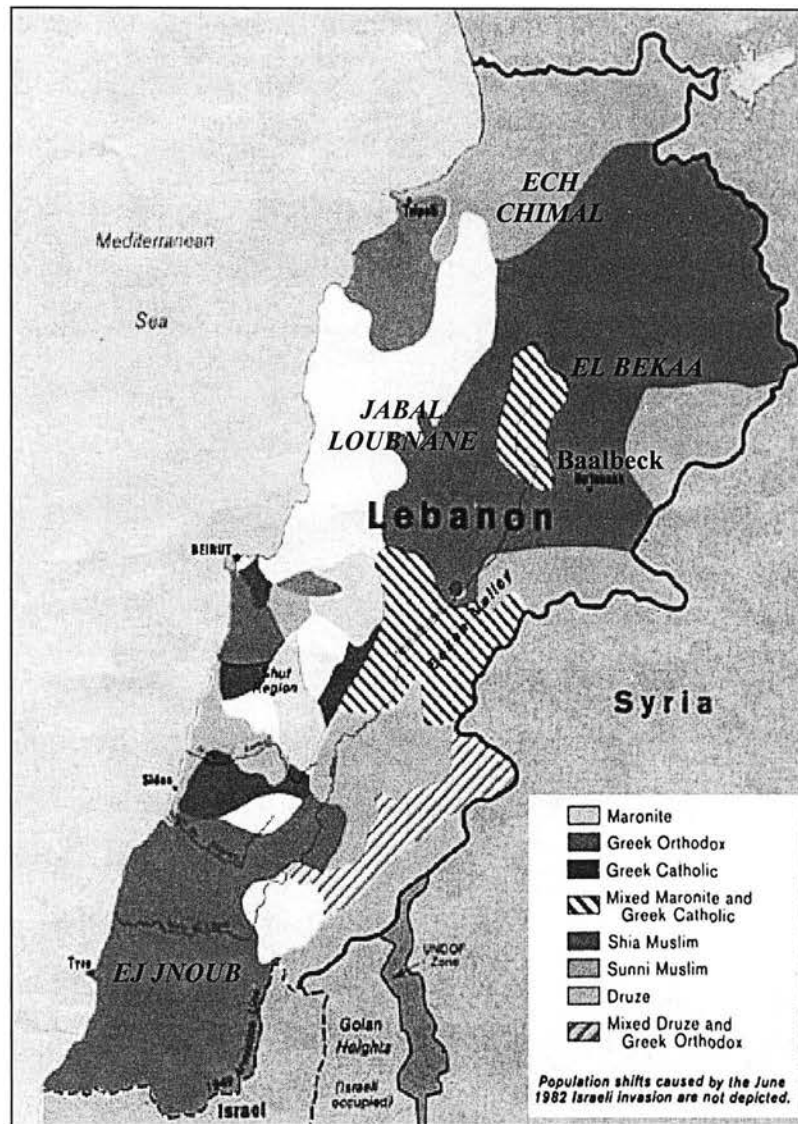


Figure 3-4: Distribution of religious groups in Lebanon, 1983 (source: Atlas of the Middle East 1993, www.lib.utexas.edu/maps/lebanon.html).

3.5.3 Lebanese Social Structure

The social structure of Lebanon is neither that of a society closed to the outside world, nor of a cohesive one into which smaller communities have been integrated. Communities are still different at the level of inherited religious loyalties and intimate family ties, which co-exist within a common framework in a pluralistic society. Public spaces, however, play an important role in bringing people together. They were the product of the natural development of an urban fabric that responded to the social, cultural, religious, political and economical demands of various groups. Such spaces cross and intermingle to form

communal spaces that support all human activities and bring people together. Spiritual activities, family connections and a variety of businesses existed within the old city. Social relations developed between various communities regardless of their financial status or religious background. Such social relations were characterised with tolerance, goodwill and respect. Muslims worked and lived in Christian communities and the converse was true. The city was thus a common territory and collective association. It was not dominated by any one particular group but witnessed the co-existence and interdependence of many groups and a convergence of many interests.

3.5.4 Economic Conditions

The Lebanese are efficient traders and the country's economy is supported largely by commerce and tourism. Before the start of the civil war in 1975, Beirut city centre was the hub of economy for the whole country. It encompassed civic institutions, financial establishments, educational institutions, public services, souks, entertainment facilities, and diversity of other businesses. The economy in Lebanon has always influenced public life, and this is apparent on the life style and the outgoing nature of the Lebanese people, which played a major role in determining the way people interacted with, developed and cared for public spaces. Hence, the quality of public spaces has always been a reflection of the economic infrastructure.

3.5.5 Political System

Based on a democratic constitution, the republic is governed by 99 Members of Parliament, a Council of Ministers and a President. Freedom of speech, personal freedom, a free currency exchange, free enterprise and a free banking system are inherent parts within the Lebanese political system. Public spaces, however, have always played an important role in the political life of Lebanese society. They are spaces where the people are able to demonstrate their well-being, courage and

opinions, and Lebanese history can be seen as the emergence of the independence of the country from its capital public spaces.

3.6 Evolution of the Urban Character of the City

The urban fabric of the city of Beirut and its spaces has evolved over many years, and has been influenced by many cultures, namely: Phoenician, Roman, Byzantine, Mamluk, Ottoman and French (Figure 3-5). Although that some of the periods were undocumented, particularly Persian, Hellenistic, Umayyad and Abbasid, recent archaeological excavations in the city centre have revealed some of the historical layers of the city. Figure 3-6 illustrates these layers, which provides evidence of how the old city and its public spaces have evolved through the ages. In spite of its small area, Beirut had all the characteristics of a true city, including fortification walls, a Grand Serail (the infantry barracks), a multitude of religious and public buildings, specialised souks, major public spaces and, in particular, a population of very diverse origin and beliefs.

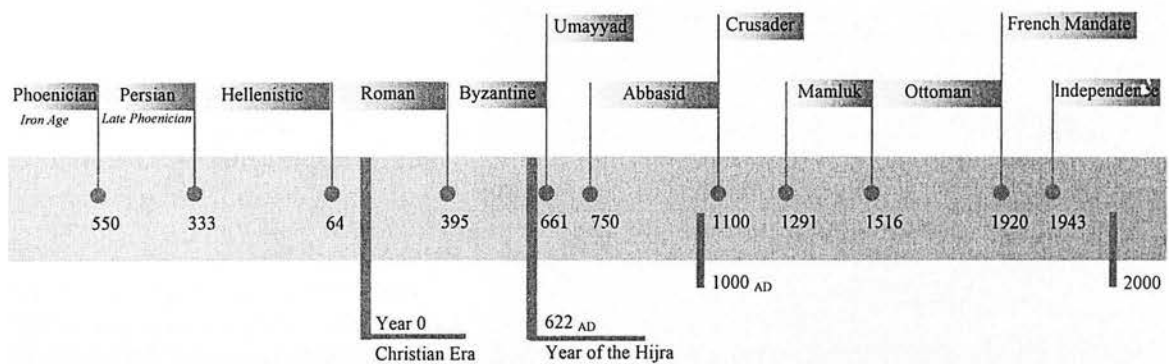


Figure 3-5: The path of Beirut's history (source: drawn by the author adopted from Gavin and Maluf, 1996, p. 21.).

3.6.1 The Roman City (64 BC-395 AD)

Berytus (the Roman name for Beirut) was founded as a Roman colony and built on the ruins of a Hellenistic city (Mouterde, 1966, pp. 23-25). The Roman grid-pattern still survives, although in a deteriorated form, because of several interventions and natural catastrophes. Helen Sader (1998), however, points out

that the recent excavations that took place in the city centre yielded important information on the Roman and Byzantine city and provide enough evidence to locate the pre-Hellenistic settlement.

Archaeological excavations in the city centre uncovered Iron Age sloping wall (Sader, 1998, p.31).

Roman public buildings and Roman baths were revealed, which correspond with Lauffray's plan (Sader, 1998, p.33).

A ditch of the western medieval fortification wall and the remains of the famous tower Burj al-Kashaf were found (Sader, 1998, p.34).

The Ottoman souks occupied the centre of the fortified settlement where the Roman buildings were found (Sader, 1998, p.36).

The French Mandate superimposed a grid of radiating streets and cleared the remaining medieval city.

Demographic change to the urban fabric and the emergence of the Green Line and the Normandy landfill.

Post-war reconstruction plan (1995 to the present) involving the restoration of selected buildings in the city centre and the treatment of the Normandy landfill.

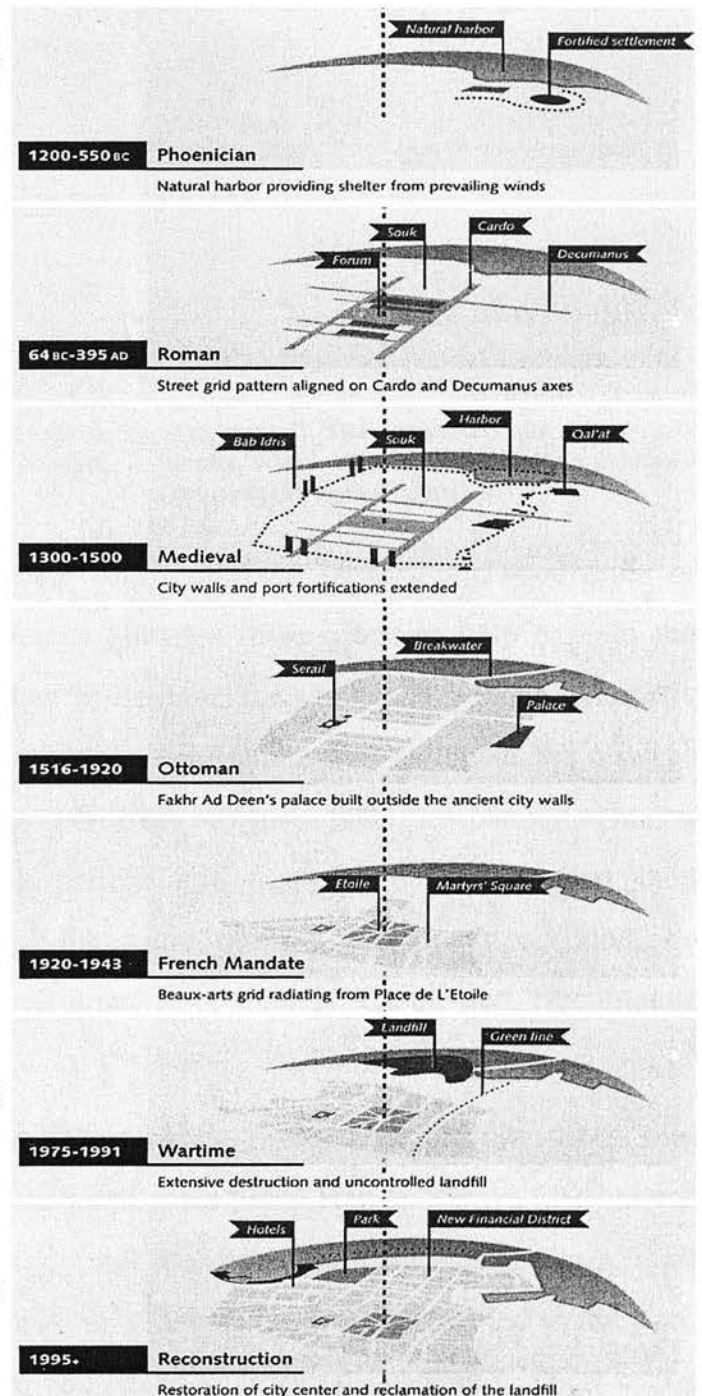


Figure 3-6: Historical layers of the city (source: Gavin and Maluf, 1996, p.62, adapted by the author).

The only surviving physical remains of the Roman city are the Roman baths (Figure 3-7) at the hillside of the Grand Serail and the Roman columns (Figure

3-8), which were removed from al-Nijmeh Square to the new excavation site of the old souks and replaced by the Al-Abed Clock (Sader, 1998, pp. 28, 29).



Figure 3-7: The newly developed archaeological park accommodates the excavated Roman baths (source: the author, 2001).



Figure 3-8: The excavated site of the old souks, which embraces the Roman columns (source: the author, 2001).

Michael Davie (1987) in his article *Maps and the Historical Topography of Beirut* examines five maps of Beirut. He uses these maps to help explain the initial Bronze Age choice for urban settlement, then to discover the Hellenistic and Roman grid street-pattern, which survived in the disposition of the modern souks. Michael Davie (1987, pp. 141-164) suggests that the Roman columns indicate the existence of a grid-pattern and that the Romans, when they developed their colony, followed the same existing pattern. In addition, he identifies two main axes of the Roman grid, namely *Cardo* and *Decumanus* (Figure 3-9).

The two main axes, the *Cardo* and *Decumanus*, divided the old city fabric into four equally sized quarters, with the main gates being Bab as-Saraya (the eastern gate), Bab ad-Darkeh (the southern gate) and Bab Idris (the western gate, built around 1860). The northern gate did not exist, as the *Decumanus* led to the port, protected by a fort built on an outlying island and perhaps another built on a spur overlooking the eastern part of the cove (Davie, 1987, pp. 141-164).

According to Lauffray (1948, pp. 5, 8), Berytus was not built according to one grid-system. The local topography as well as older urban vestiges probably

forced the Roman town planners to adapt to grids of different orientations. However, Lauffray points out that the alignment of the columns indicates that the town extended westwards to the base of the hill, where the Grand Serail is located, which is the suspected location of a temple.

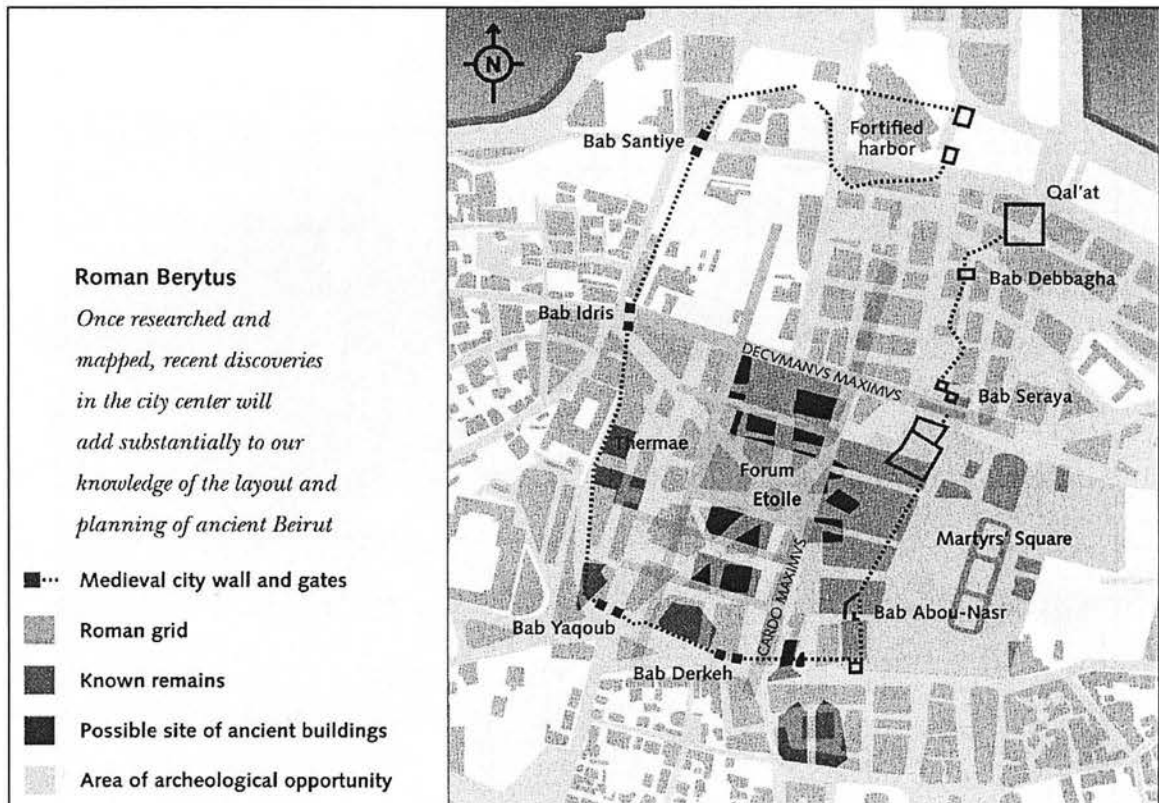


Figure 3-9: A map showing the Roman Berytus, its main axes (Cardo and Decumanus) and the medieval city wall and its gates (source: Gavin and Maluf, 1996, p.23).

3.6.2 The Medieval City (1300 -1500)

The history of Beirut does not indicate massive remodelling of the city during any of the post-Roman eras. The earlier Islamic period is not properly documented and virtually no valid information about the Umayyad and the Abbasid Beirut, in spite of the post-war excavations (Sader, 1998, p.34).

Michael Davie (1987, pp. 141-164) assumes that the palace of the Prince Fakhr ed-Din was a Crusader fort, repaired and partially rebuilt (Figure 3-10). He claims that the city defences were dependent on two important towers, which defended the eastern side of the city as well as its northern approaches from the

sea. Davie suggests that one of these towers was defending the Grand Serail's edge (the Ottoman barracks), which would have been in visual contact with the Fakhr ed-Din castle and the Burj al-Kashaf (the watchtower).

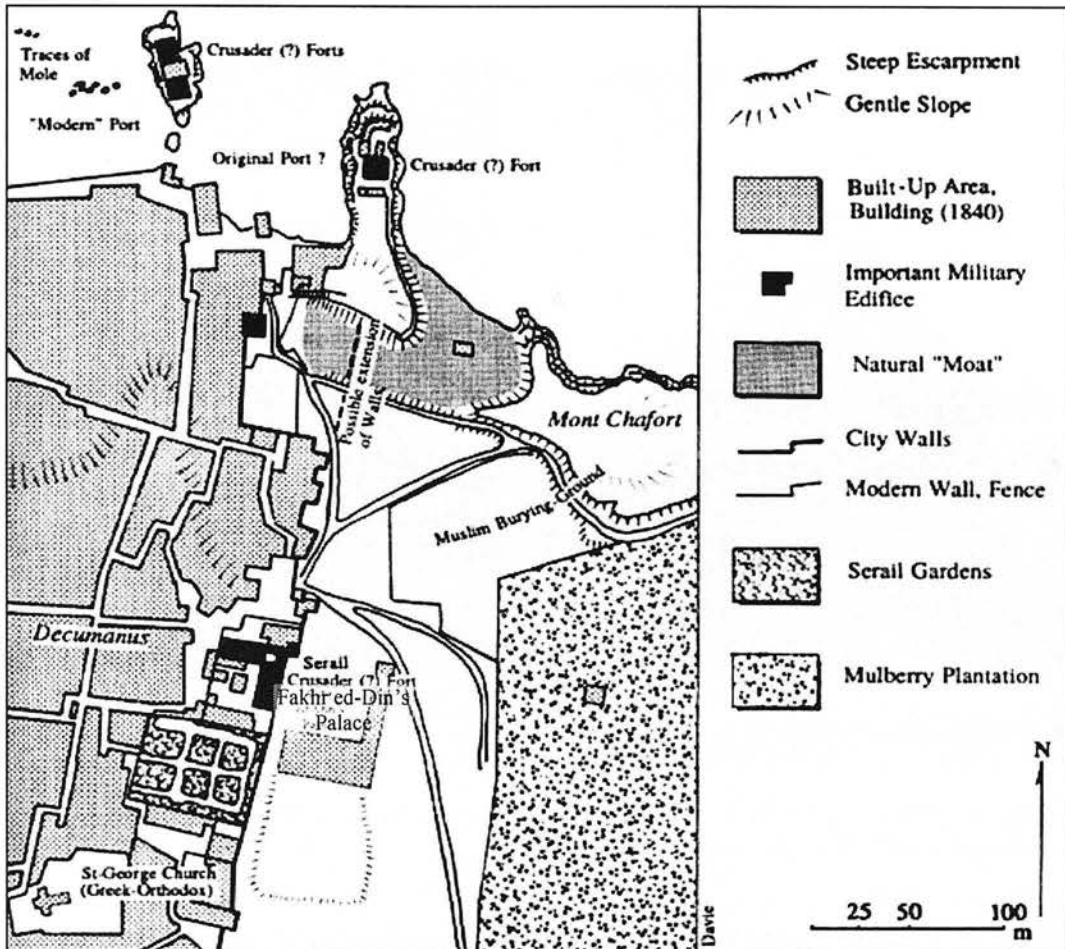


Figure 3-10: The castle and Fakhr ed-Din palace (source: Davie, 1987, www.almashriq.hiof.no/lebanon/900/902/MICHAEL-Davie).

However, Helen Sader (1998, pp. 32-36) reveals that the excavations of the city centre have uncovered the foundations of the castle, a vaulted room, a cistern northwest of the ancient tell, a ditch of the western medieval fortification wall, the remains of Burj al-Kashaf and the remains of the irrigation network of the Fakhr ed-Din palace. Sader does not refer to Davie's assumption regarding the origin of Prince Fakhr Ed-Din and asserts that, apart from the medieval ditch, there is no evidence related to the city's urban planning and extensions during that period. Sader claims that the Mamluks did not enlarge the city and that the

focus on that period lies on the Crusader cathedral of St. John, which the Mamluks later transformed into al-Omari Mosque (Figure 3-11). Further evidence of that period is the Mamluk building at Ibn Iraq corner, at the entrance to Souk al-Tawileh (Figure 3-12).



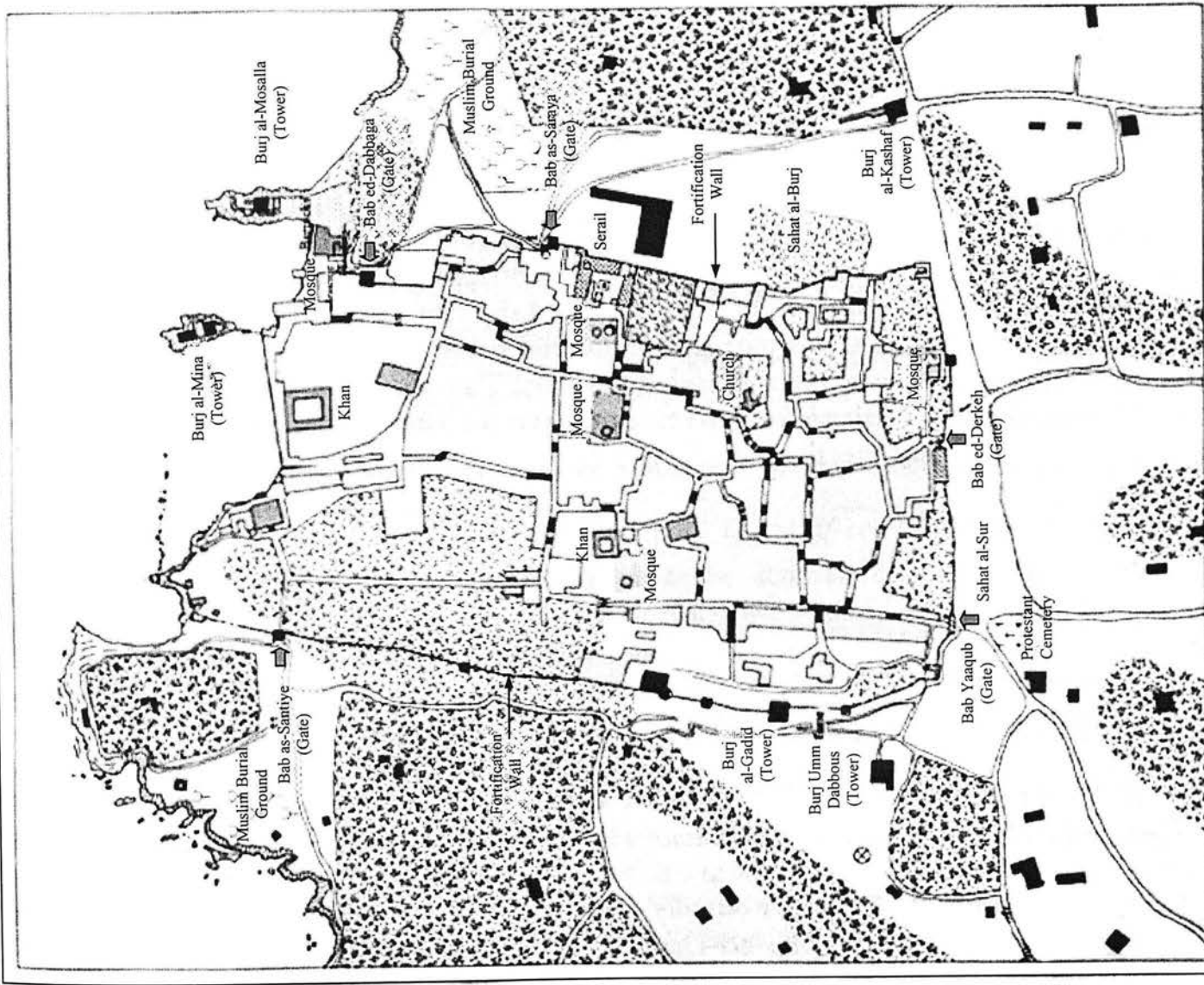
Figure 3-11: The Omari Mosque (source: Tueni and Sassine, 2000, p.64).



Figure 3-12: Ibn Iraq corner is the only remaining Mamluk structure (source: the author, 2001).

3.6.3 The City under the Ottoman Rule (1516 -1920)

In 1516, Lebanon became part of the Ottoman Empire. When the Ottomans captured Beirut, they found a city with significant military characteristics (Figure 3-13). The 1841 map of Beirut shows the old city defences, including fortification walls, control towers (Burj al-Mina, Burj al-Mosalla, Burj al-Kashaf, Burj Umm Dabbous and Burj al-Gadid), old city gates (Bab ed-Dabbaga, Bab es-Saraya, Bab ed-Derkeh, Bab Yaaqub and Bab as-Santiye) and military barracks (Figure 3-14 and Figure 3-15). In addition to their military value, the fortification walls defined the shape of the city and imposed its rectangular form, and indeed marked its limits.



1. THE DEFENCES OF THE CITY

- WALL, TOWER
- CASTLE, BURJ
- BARRACKS, MILITARY BUILDING
- GATE
- OPENING, BREACH IN WALLS

2. THE TOWN

- BUILT-UP AREA
- STREETS, SQUARE
- COVERED STREET
- KHAN, IMPORTANT EDIFICE
- SERAIL
- MOSQUE, CHURCH
- MINARET
- CUPOLA
- DEGRADED MULBERRY PLANTATIONS, WASTE OR FALLOW LAND
- SERAIL GARDENS
- RUINS

3. THE SURROUNDING COUNTRYSIDE

- MULBERRY PLANTATION
- ORCHARDS
- OPEN SPACE
- MUSLIM CEMETERY
- PROTESTANT CEMETERY

- ROAD
- TREE-LINED ROAD
- WATER DISTRIBUTION SYSTEM
- WALL
- STAIRS
- SLIPWAY
- ISOLATED BUILDING

4. TOPOGRAPHY

- ROCKY EROSION SURFACE
- ESCARPMENT, CLIFF

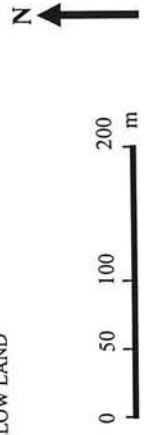


Figure 3-13: 1841 map of the old city of Beirut (adapted by the author from Davie, 1987, cited in, www.almashriq.hiof.no/lebanon/900/902/MICHAEL-Davie).



Figure 3-14: Bab ed-Derkeh was the southern gate of the old wall of the Ottoman city (currently the beginning of al-Maarad Street) (source: Hallaq, 1987, p.143).

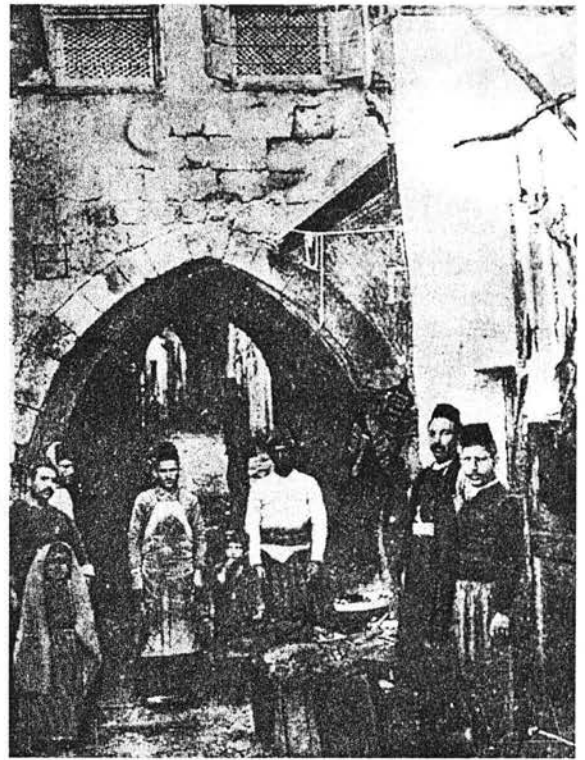


Figure 3-15: Bab Yaaqub at Sahat al-Sur (currently the entry from Riad el-Solh Square to the Financial Street) (source: Hallaq, 1987, p.144).

An important Ottoman military building is the Grand Serail, which was built in 1853 as infantry barracks. It was constructed on top of a hill overlooking the whole city, the seaport and the Mediterranean Sea. This gave the Sultan the ability to control the city and its public spaces visually and physically (Hanssen, 1998, pp. 41-49).

Until the middle of the 19th century, the area of the old city was approximately 15 ha and its total population was approximately 9,000 to 10,000 inhabitants. The old city was subdivided hierarchically into urban components: mahallat (neighbourhood), harat (sub-neighbourhood), zouqaq (dead-end lane), souk (market) and sahat (public square). These components had different functions and natures, and contributed variously to the structure of the city, in general a unitary compact urban fabric, characterised by enclosed public spaces, narrow lanes and dead ends. The old souks represented an important aspect of the Beiruti community. The Beiruti people resided in a harat or zouqaq attached to the souk.

the stone wall enclosing the harbour (Gavin and Maluf, 1996, pp. 24, 25). During the reign of Sultan Abdulhamid II, the urban environment of Beirut witnessed the introduction of *tanzimat* (regulations). The new regulations included the legal and physical control of urban space, new construction laws, street alignment directives and safety and hygiene regulations (Hanssen, 1998, pp. 41-45).

The management of urban space portrayed the new public image of the Ottoman rule. This was demonstrated by the attention given to public spaces and public buildings. For instance, during the rule of Sultan Abdulhamid II, important Ottoman urban features were constructed, including al-Hamidiyya Fountain at Sahat al-Sur, a public park at Sahat al-Burj, the Sanayah Garden and the Petit Serail. Sahat al-Sur (al-Sur Square) with its Hamidiyya Fountain provided a good example of the visual and physical supremacy and dominance of political influence over public spaces. It was used to demonstrate the power of the Ottoman rule through commemorative rituals and opening ceremonies for public institutions (Figure 3-17 and Figure 3-18). In 1884, a new public park was developed at Sahat al-Burj (Figure 3-19).



Figure 3-17: The Beiruti community celebrating the inauguration of al-Hamidi Fountain at Sahat al-Sur, on the 25th anniversary of the reign of Sultan Abdulhamid II (source: Hallaq, 1987, p.145).

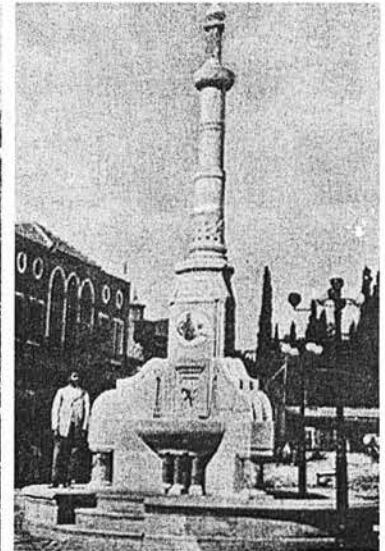


Figure 3-18: al-Hamidi Fountain (source: Hallaq, 1987, p.146).



Figure 3-19: The public park (later Freedom Garden) at Sahat al-Hamidiyya (formerly Sahat al-Burj). The Petit Serail appears in the background (source: Tueni and Sassine, 2000, p.224).

It was inaugurated in the presence of the Syrian Wali (ruler) Hamdi Basha, the military leaders and the elites of Beiruti society. Sahat al-Burj was renamed after Sultan Abdulhamid II as Sahat al-Hamidiyya. However, when, Sultan Abdulhamid II was toppled in 1908, Sahat al-Hamidiyya was renamed Sahat al-Itihad (Union Square), while the public park was called Freedom Garden. Between 1915 and 1916, Sahat al-Itihad witnessed the execution of the Lebanese martyrs who died opposing the Ottoman rule (Tueni and Sassine, 2000, p.21). In 1889, a Belgian company was the first to provide streets in Beirut with gas lighting. The same company obtained permission in 1898 to build the city's electric tramway (Figure 3-20). Many streets were aligned, paved and widened alongside the rails. On the Sultan's birthday, January 9, 1907, the tramway was inaugurated with great splendour. Initially, the Beiruti people reacted against the tramway with hesitation, but later it became a popular means of transportation (Hanssen, 1998, p.50).



Figure 3-20: A tram along Weygand Street (source: Hallaq, 1987, p.121).

3.6.4 The City under the French Mandate (1920 - 1943)

Just before the end of the First World War, the Ottomans carried out extensive work in the city, demolishing large areas of its medieval fabric for road alignments, rehabilitations and extensions. In 1920, Lebanon came under the French Mandate. The Mandate introduced beaux-arts planning and principles throughout the historic fabric of the city. Having cleared the remains of the medieval city, a radiating street grid was superimposed. This grid pattern was modelled on the Parisian square, *Place de l'Étoile* (Figure 3-21).

The axial streets were named after well-known French and other Western European personalities at that time (Foch, Allenby, Gouraud, Monot and Clemenceau).

Around al-Nijmeh Square, the French placed some very important civic buildings, such as the Parliament Building and the St. Elie's Catholic Cathedral and St. George's Orthodox Church. This new street pattern was much like the Haussmannian boulevards of Paris. For instance, the colonnaded street of al-Maarad is a major axis of al-Nijmeh Square and was modelled on its Parisian counterpart Rue de Rivoli.

Fortunately, the eastern axes of the radiating grid were not implemented, leaving ancient buildings intact (Gavin and Maluf, 1996, p.27). Sahat al-Burj, however, was given its French name *Place des Canons* and its circular part to the south was altered to a rectangular form. In 1932, the French planner Danger, with his modernistic approach, drew the first plan for Beirut. The new plan prescribed



Figure 3-21: Aerial view of al-Nijmeh Square shows the radiating street pattern. At the bottom of the image is the former location of the old souks, currently an archaeological site (source: Solidere, 2001, p.19).

major circulation routes, zoning, densities and public spaces. His plan promoted the possibility of extending the Martyrs' Square towards the north to open onto the inner basin of the seaport of Beirut (Figure 3-22) (Gavin and Maluf, 1996, p.47).

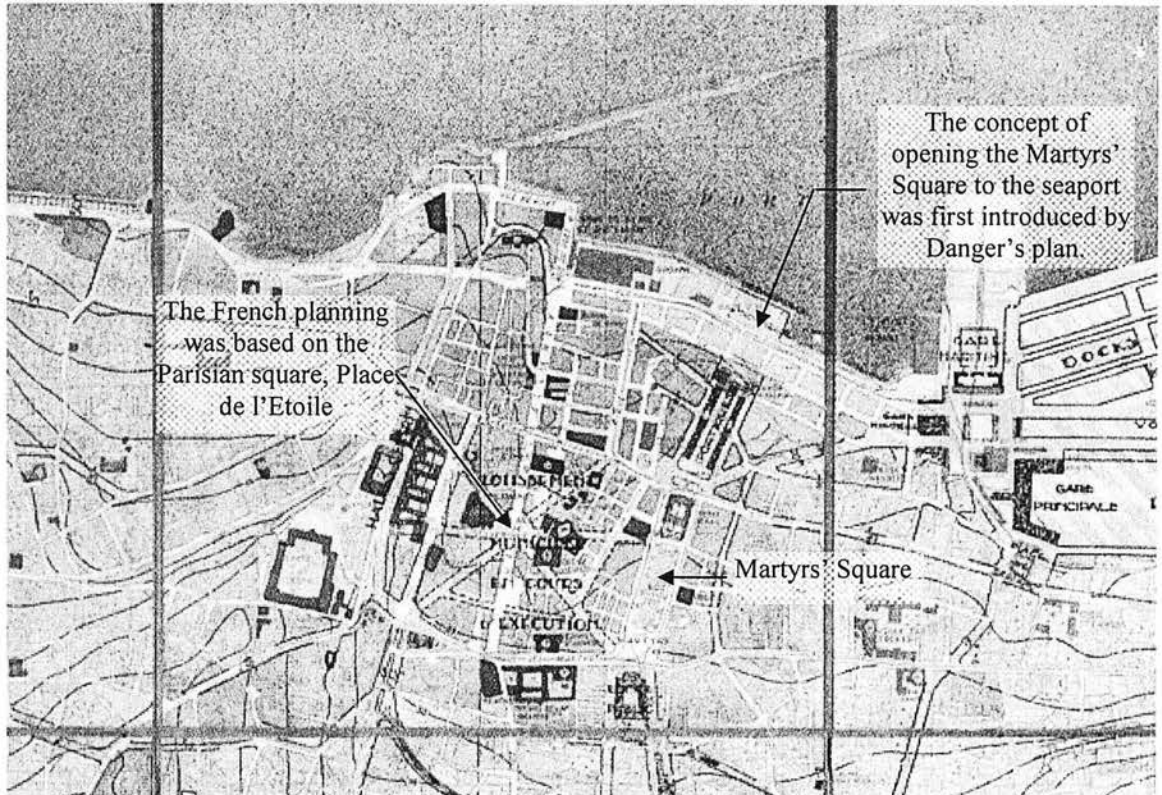


Figure 3-22: The master plan of the city centre drawn by the French architect Danger in 1932 (source: Gavin and Maluf, 1996, p.47).

The Danger plan can be considered as the first attempt at a comprehensive planning of the city and its conurbation, and took into consideration geographic, climatic, geological and human factors. The plan proposed major circulation routes with other major cities in the country and the region, namely Tripoli, Sidon and Damascus. It also proposed residential neighbourhoods based on the garden city concept, and determined the zoning coefficients, densities of occupation and property holdings. In addition, the plan recommended outskirts villages for Beirut. However, the Danger plan was never approved nor put into effect by the government (Salam, 1998, p.124).

3.6.5 The City's Development (from Independence to 1986)

After independence from the French in 1943, Michel Ecochard presented two master plans for Beirut to the Lebanese government. His first plan, the 1943 plan, which introduced land use and zoning proposals (Figure 3-23), was not approved immediately but adopted by the Egli Report in 1950, and was to become the basis of the 1952 master plan. This plan did not consider the future development needs of the city and it disregarded the preservation of the natural environment and historic structures of the city. The plan promoted zoning regulations and high-density sectors, which later presented issues for the surrounding residential neighbourhoods (Salam, 1998, pp. 125-126).

Responding to the pressure of the construction boom of the early 1950s, the municipal administration appointed a commission of experts to draw up a plan that aimed at tackling urban issues that emerged as a result of the rapid growth of the city. Although it was based on the earlier Echochard's proposals, the 1953 plan was approved and its 1958 amendments indicating the proposed new road network and zoning regulations, which had not been implemented. In 1963, Echochard presented his second master plan - *Plan Directeur de Beyrouth et des Banlieues* (Figure 3-24).

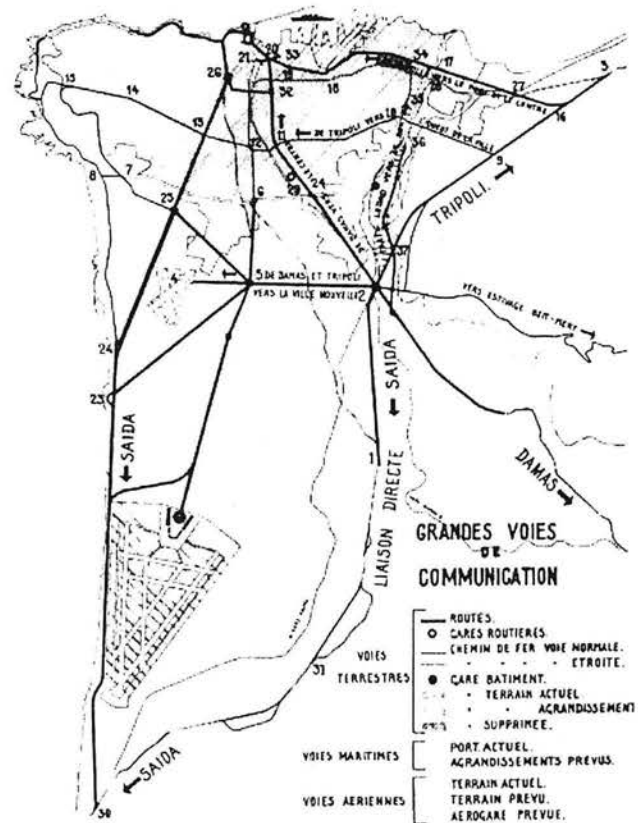


Figure 3-23: Echochard's 1943 master plan of Beirut city (source: Salam, 1998, p.112).

The 1963 plan illustrated planning proposals for the city of Beirut and its surrounding conurbation, although many of his proposals for the surrounding areas were later abandoned (Rowe and Sarkis, 1998, p.15). Ecochard's second plan recommends proposals similar to those of the 1943 plan, promoting the notion of the new city, the clearing of the town centre and the use of northern and southern highways as links to two other major coastal cities. However, like the Danger plan, it was never approved. (Ghorayeb, 1998, p.119).

In 1965, Raymond Daoud and Habib Aoun prepared a master plan for the city that was based on the previous zoning regulations of the 1953, 1958 and 1963. The plan indicated the city zones numbers and the implemented

parts of the city's ring road. In addition, it showed the approved extension of the waterfront promenade towards the north of the city centre, which was never implemented. The plan also illustrated the extension of the Bechara El-Khoury Street towards Martyrs' Square with no indication of opening up the square towards the first basin of Beirut Seaport (Figure 3-25).

During the first phases of the civil war, a drastic change to the demographic fabric and urban structure of Beirut city resulted in major population shifts and migration, which radically affected the distribution of the population in and around the city.

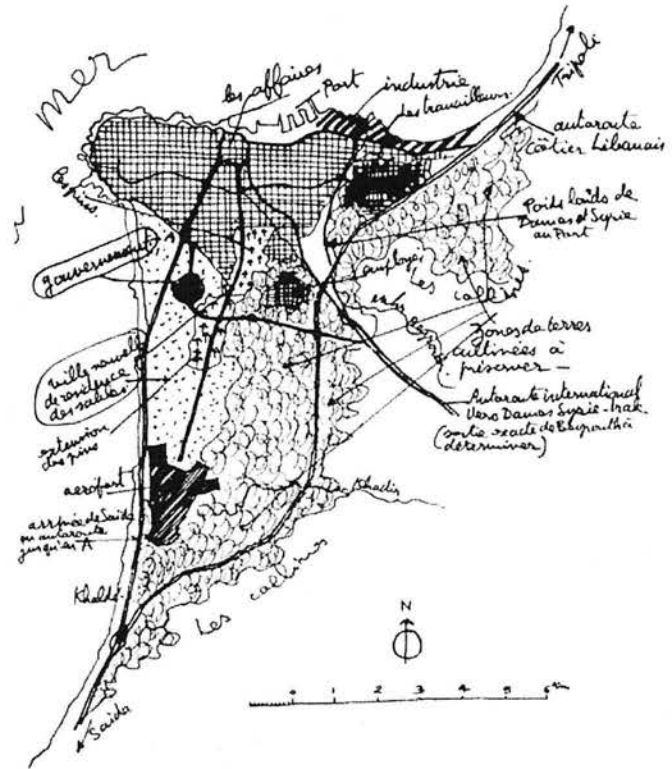


Figure 3-24: Echochard's 1963 master plan of Beirut city (source: Salam, 1998, p.112).

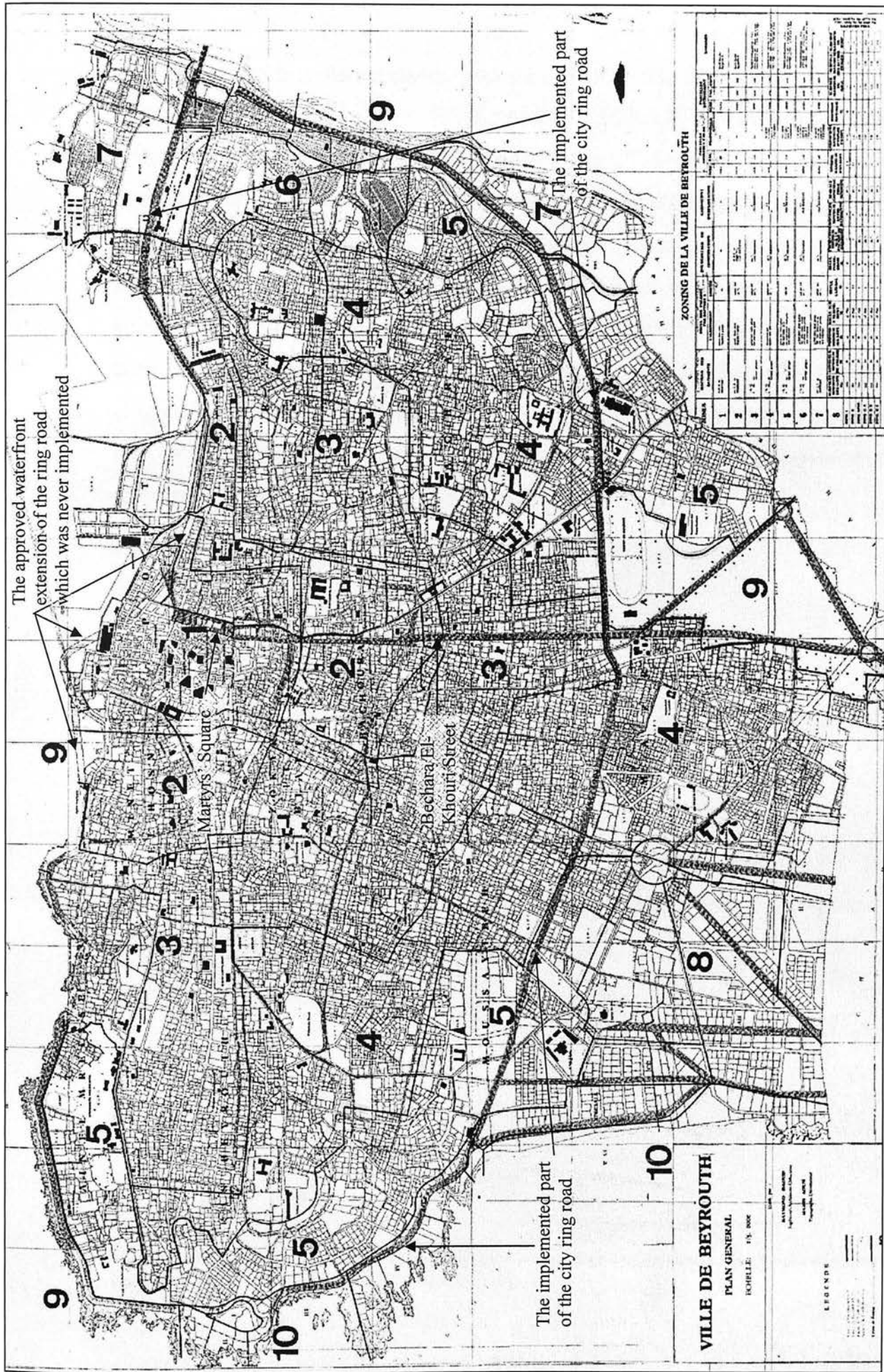


Figure 3-25: The 1965 master plan of the city of Beirut showing the 1953, 1958 and 1963 zoning regulations and the proposed new road networks (source: National Lebanese Printing Press, 1965).

In response to this demographic change, in 1978 the Municipality of Beirut appointed a special committee APUR (Atelier Parisien d'Urbanisme) to draw up a master plan for the damaged city centre. The 1978 master plan was mainly based on earlier planning concepts for the city, which proposed a ring road to establish a link with the Fouad Chehab highway. As a result of the continuing destruction of the city centre and the emergence of secondary centres in the suburbs, the 1986 master plan for Beirut and its regions was prepared by the Institut d'Aménagements et d'Urbanisme de la Région d'Ile de France (IAURIF) (Figure 3-26). This plan was intended to re-establish the city centre as a major hub of activities, with a coherent hierarchical order for the secondary centres in the region (Gavin and Maluf, 1996, pp. 47, 48).

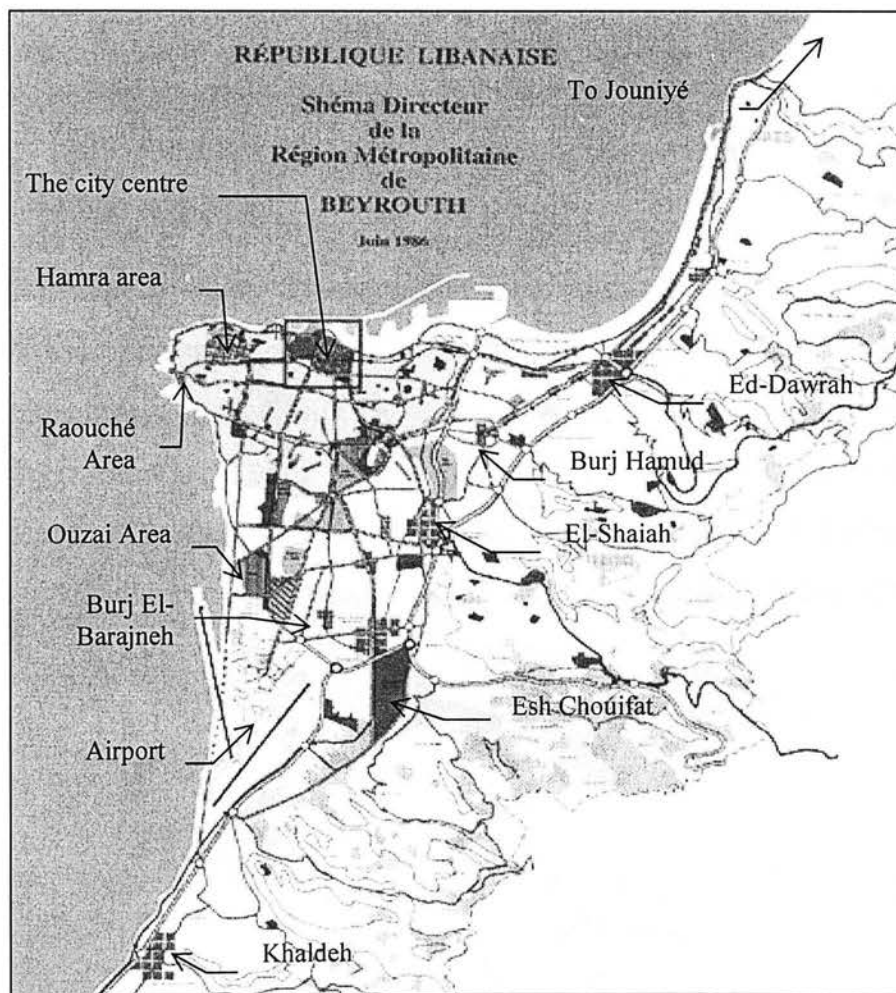


Figure 3-26: The 1986 plan of Beirut city and its metropolitan region shows the growth of suburban centres (source: Gavin and Maluf, 1996, p.48).

3.7 Conclusion

The historical development of the city of Beirut shows a city that has undergone a series of significant changes, each of which have left an impact and have accumulated into a city of layers. Such historical layers evoke distinctive historical epochs and largely shape the character of Beirut.

The medieval fabric continued to develop organically until the late nineteenth century, when the Ottomans demolished large parts of the city in order to make way for new street alignments. When the French Mandate gained control of the city, they knocked down the remainder of the medieval city in order to implement a modernistic plan, modelled on the Parisian *Place de l'Étoile*, in the form of a star grid pattern centred on al-Nijmeh Square.

Public spaces in the old city witnessed a series of major physical and functional modifications and transformations. They became symbols of the dominating powers, as well as continuing to function as meeting places for the people and venues for public festivities.

After independence in 1943, successive modernising planning attempts were made, which promoted high-density residential neighbourhoods, zoning regulations and modern road networks. Because of these attempts, problems still exist today, including high levels of congestion, social degradation and environmental dilapidation. Later, the situation was exacerbated during the civil war, which forced a redistribution of inhabitants, and the emergence of secondary centres.

Chapter Four:
The Implications of the Civil War

Chapter Four: The Implications of the Civil War

4.1 Introduction

The review in Chapter Three focuses on the historical evolution of the urban structure of the city of Beirut and its public spaces and some of the major planning initiatives that have contributed to or influenced the development of the current urban fabric. Chapter Four, however, continues the discussion by examining some of the critical problems induced by the Lebanese civil war.

Many authors, urban designers and urban sociologists, such as Khalaf (1993; 1998), Davie (1993), Gavin and Maluf (1996), Rowe and Sarkis (1998) and Kabbani (1998), show concern for many issues and predicaments caused by the civil war. For instance, Khalaf, in his book *Beirut Reclaimed: Reflections on Urban Design and the Restoration of Civility*, portrays some of the civil war's appalling images as "...the devastation of the landscape, the disappearance of civility, the eclipse of pleasure, ... social spirit, the narcissism of desperation and solitude" (Khalaf, 1993, p.11).

Moreover, the systematic developments of wastelands and dumping grounds over the fifteen years of civil war, which continued to develop at the early stage of the city centre reconstruction, have prompted concerns at both local and international levels. Greenpeace presented an alarming report indicating an increase in the level of pollution, which has had adverse consequences on both human health and the environment (Greenpeace, 1998). However, the bulk of this chapter deals with concerns related to the physical and non-physical implications of the civil war on the city, its centre and its public spaces (Figure 4-1).

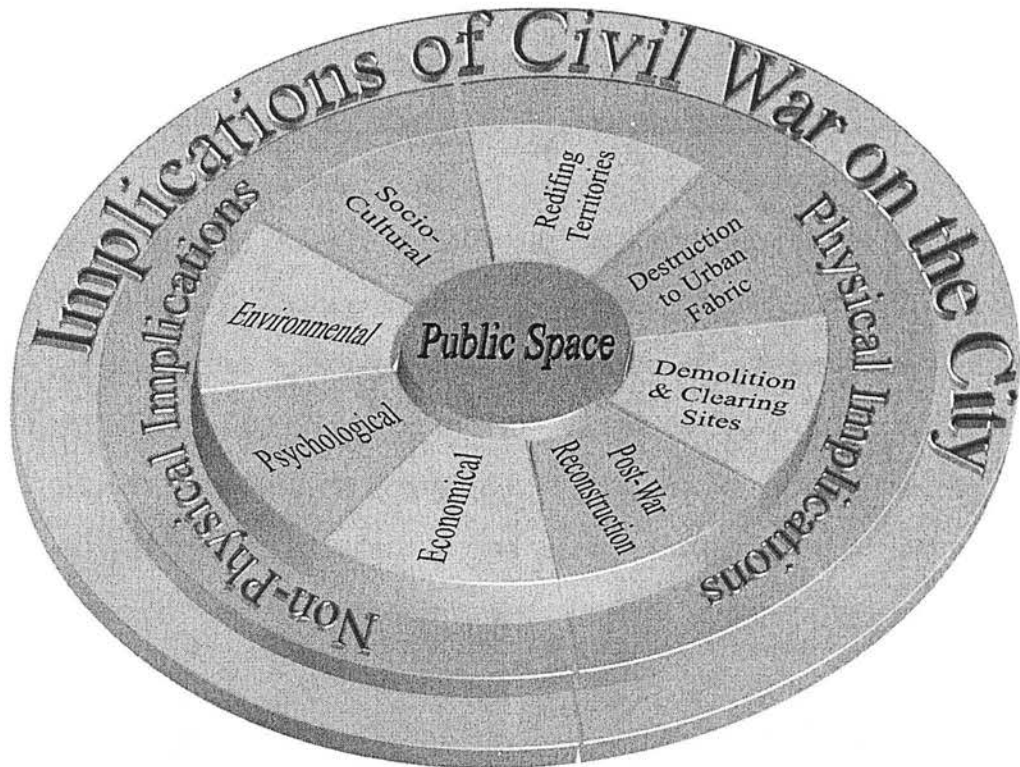


Figure 4-1: Implications of the civil war on public space (source: the author, 2004).

4.2 The Emergence of New Sub-Centres

The disappearance of the city centre of Beirut from the lives of the Beirut people for over twenty-four years was among the main factor that encouraged the growth of independent secondary centres in the suburbs. However, the change in role of the city centre was not only because of the civil war but was also promoted by the pre-war planning policies, as discussed in the preceding chapter, and by later post-war strategies. This has encouraged the decentralisation of the capital city by extending its boundaries to include suburban towns. The first episode of the civil war was characterised mainly by the looting and wrecking of private properties and public institutions. Buildings were transformed into armed shelters for snipers and other military activities. Property owners, traders and merchants escaped to inner areas of the city, seeking safer places to conduct their commercial activities. Cease-fire periods gave these people the opportunity to return to homes and businesses. Beirut people always hoped that this would be a temporary situation but this hope was shattered as the war continued for longer than was expected (Figure 4-2).

Gavin and Maluf (1996, p.41) depict the devastation of the city centre during the war as having led to rapid dislocation of its uses and functions to peripheral areas and centres. Michael Davie (1993) portrays how relatively safe residential neighbourhoods were quickly transformed into commercial or business areas such as Mar Elias, al-Mazraa, Raouché, Achrafiyé, Jdaideh-Antelias and Kaslik-Jouniyé. The ground and first floor apartments of almost every residential building in Beirut were converted to shops or offices. New office buildings and shopping malls were built on agricultural land on the outskirts of the city. Public institutions and banking branches opened on both sides of the city (Davie, 1993).



Figure 4-2: The desolation of al-Maarad Street in 1975, followed by the return of merchants and vendors during a cease-fire period in 1977 (source: Al-Laham, 1990, pp. 28, 212).

The escalation of violence during the Lebanese civil war led to the relocation of inhabitants who found themselves forced to leave their homes and cities to find safe haven in the suburbs of Beirut. The coastal area between Jdaydeh and Jouniyé, which before 1975 was an agricultural area, became completely built-up with independent public services and main facilities such as, shopping malls, office buildings and entertainment centres. Such services and facilities, which used to be once in the city centre, have been opened permanently in places near to their owners' out-of-town residences.

On the one hand, however, areas to the east of the city, such as Sinn el-Fil, Mansouriyeh and Furn el-Chebbak, have come under great demand for business and residential use. On the other hand, neighbourhoods to the south of the city,

such as Ouzai, Hay Madi and Hay al-Sellom, expanded during the war to respond to the influx of the population who had left their towns and cities seeking refuge on the outskirts of the city. Gradually these areas became relatively independent from the city and its centre but their function and stability were mainly influenced by the political and military conditions in the area. Davie points out that the dramatic transformations in the role of Beirut city centre to other secondary centres had major consequences on the economy of the country and for its capital in particular (Davie, 1993).

4.3 Redefining Territories

The first two years of the civil war witnessed the redefining of territories of dominance and areas of control. *Khoutout al-Tamas* were confrontation lines that separated the combating factions from each other. As the war years continued, such confrontation lines became *al-Mahawer al-Taklydieh* (the traditional axes), which were the demarcation lines conventionally accepted by the opposing parties. They became buffer spaces between the warring factions across which no one could go (Figure 4-3 and Figure 4-4) (Kabbani, 1998, pp. 242-246).



Figure 4-3: Unconventional means used to provide protection from cross-fire (source: Kabbani, 1998, p. 243).



Figure 4-4: Private properties used to monitor public spaces and other private domains along the Damascus Road (source: Kabbani, 1998, p. 243).

The demarcation lines were slowly widened and stretched along the city's main streets and squares and became no-man's lands. Public spaces in the city centre, which used to be places of social interaction before the war, became spaces of

desolation, isolation and seclusion, overgrown with wild vegetation. The infamous **Green Line** stretched from the seaport of Beirut to the north passing through the Martyrs' Square, to Damascus Road, to the pine forest and ending at the adjacent hilly slopes to the south the of the city (Figure 4-5).

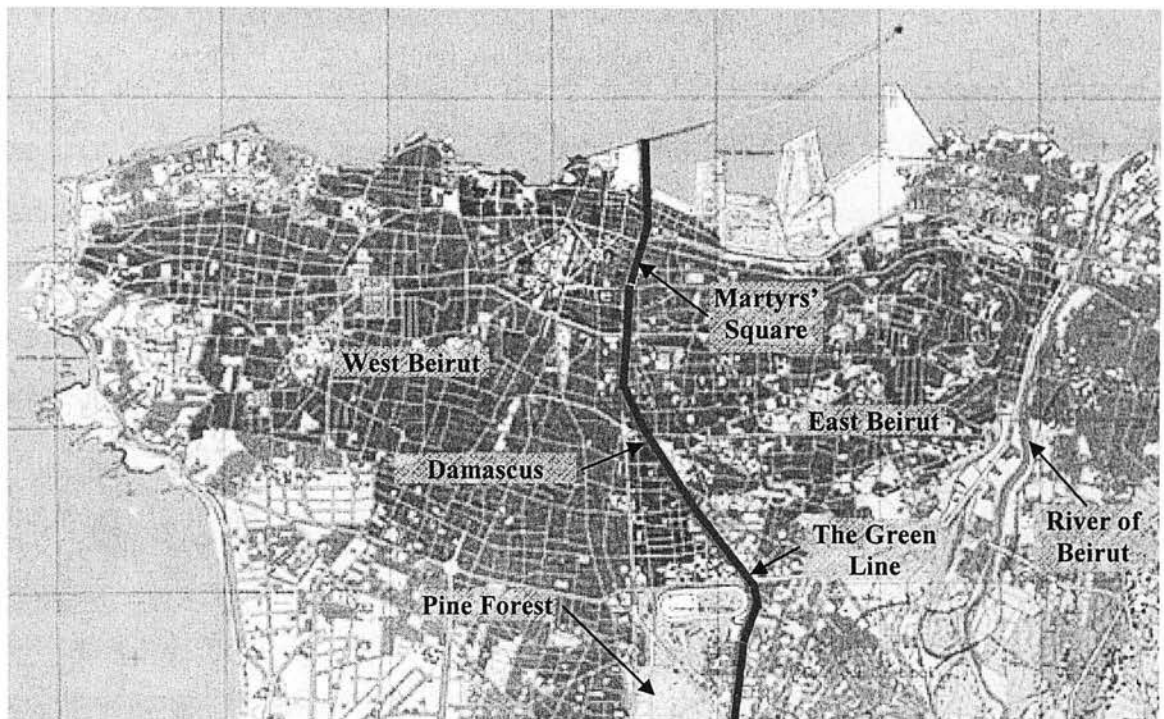


Figure 4-5: A pre-war map showing the extent of the Green Line (source: www.almashriq.hiof.no/lebanon/900/910/919/beirut/greenline/index.html).

This Green Line created a split in the social and the physical fabric of the city, dividing the city into two enclaves and preventing people from interaction. **Al-Sharkiyeh** (the eastern part of the city) was an area predominantly occupied by the Christians before and during the war, and was controlled by the rightist militias. **Al-Garbiyeh** (the western part of the city) was an area dominated by the leftist militias. The majority as a whole were Muslims (Kabbani, 1998). Accordingly, the country was subdivided into secluded communities based on political, religious and ethnic origins. Family links and relations with local leaders became an important factor for survival and the city community fragmented accordingly into areas where people felt they belonged. They believed that safety would be granted according to loyalties, ideologies and

beliefs. However, ideologies and beliefs were not even a sufficient reason for safety, as different factions within the same sector fought for dominance and power causing people to seek safer places (Davie, 1993; and Kabbani, 1998, pp. 242-243).

4.4 Symbolic Boundaries

Public spaces, contrary to their social and functional role, became strategic military targets. They were used as buffers and borders to define territories and areas of control. The opposing parties strove to impose their respective political and ideological agendas on those who opposed them. They used visual expressions to demonstrate the boundaries of their ideological territories. The boundary of dominance was clearly marked with signs, symbols, landmarks and slogans to define territories and areas of dominance (Figure 4-6). Davie (1992) notes that graffiti were used during the war as **signatures** or **tags**.



Figure 4-6: A landmark representing an ideological territory (source: Børre Ludvigsen 1997-1998).³

The single function of the graffiti was to mark the passage of combatants through a precise place by using phrases loyal to a political group (Davie, 1992). Lang (1987, p.205) believes that people choose particular symbols to have around them, which might reflect their perception of who they are or who they aspire to be. In addition, he points out that, when people are struggling for survival, the aesthetics of the environment are not the centre of attention, rather, the focus is on the messages that the environment directly conveys about the status of the individuals in the community concerned.

³ Figure 4-6 was taken by Børre Ludvigsen (1997-1998) cited in almashriq official website <http://almashriq.hiof.no/lebanon/900/910/919/beirut/pictures/corniche/index.html>

4.5 The Destruction of Public Space

Buildings, properties, facilities and public spaces along the Green Line were systematically subjected to heavy bombardment from both sides. Nothing was spared from the aggression of the militia fighters and no distinction was made between civilian or military targets. Demoralising images, the crumbling of identities, the discontinuity of culture and the erosion of civility all became visible symptoms of the war. Gahassan Tueni and Fares Sassine touched the collective memory of the Beirut community through presenting images of the historical evolution of Martyrs' Square (Figure 4-7 and Figure 4-8).



Figure 4-7: Aerial view of Martyrs' Square taken in 1963 (source: Tueni and Sassine, 2000, p.154).

They questioned the calamity that happened to heart of the city centre by asking “Al-Burj: is it the Martyrs' Square or the Martyred Square?” (Tueni and Sassine, 2000, p.14). This statement implies that the symbolic meaning of the Martyrs' Square has diminished. This great square was stripped of its values and meanings for the 15 years of the war. Martyrs' Square today is still waiting to acquire its new identity and function.



Figure 4-8: Martyrs' Square during the civil war in 1981 (source: Kabbani, 1998, p.250).

This suggests that Martyrs' Square has been rendered meaningless to the Beirut people, having once been a place that nurtured culture, national identity, politics, religion and tourism, a place where everybody enjoyed the right of being there, practising their daily activities, a place where ordinary people, artists, poets, writers, politicians and businessmen met and interacted in a civilised manner. Martyrs' Statue, a national landmark and a symbol of heroism and sacrifice, once stood in the heart of the city (Figure 4-9). The statue was erected to commemorate the courage of the martyrs who resisted the Ottoman rule. This statue has been damaged and its new replacement has yet to be determined.



Figure 4-9: Martyrs' Statue during the inauguration ceremony in 1960 (source: Tuani and Sassine, 2000, p. 24).

4.6 Environmental Problems

During the 15 years of war and in the early reconstruction period, the north shore of Beirut witnessed uncontrolled dumping of the city's domestic waste, the rubble of destroyed buildings and the debris of war (Figure 4-10). Such environmental problems are a major concern of many local and international environmental organisations. The Normandy landfill represents a major source of pollution for the city as well as other cities along the Mediterranean. Its environmental problems include the emission of toxic gases, contamination of the sea caused by the biodegradation of waste and land instability.

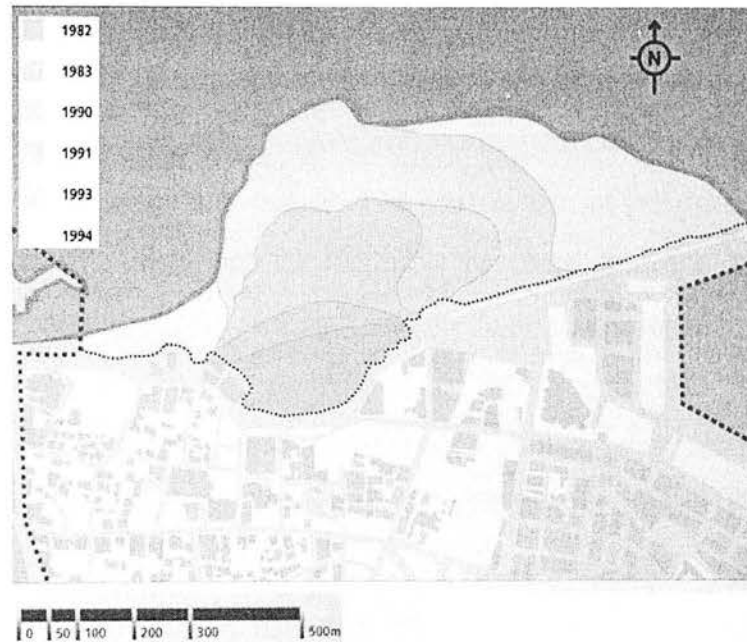


Figure 4-10: A diagram showing the different stages of the Normandy landfill (1982-1994) (source: Gavin and Maluf, 1996, p.76).

The Greenpeace Mediterranean Office carried out a sample analysis from the sediment of the Normandy dumping ground, which showed high levels of contamination, including the toxic heavy metals vanadium, chromium, mercury and lead. Greenpeace was extremely alarmed by the results as eating fish contaminated by such toxic materials causes severe health problems.⁴

⁴ The sample was taken in October 1998 when Greenpeace Mediterranean toured the Lebanese coast from Tyre to Akkar and sampled the major industrial outflows and sewage pipes. The Greenpeace

Solidere, the company in charge of the reconstruction process of the city centre, already inherited a challenging environmental problem from this dumping ground over the 15 years of war and carried out an extensive clean-up programme and infrastructure work on the Normandy landfill, which involved decontamination, stabilisation and sea protection. As a result, the pollution has been prevented from spreading any further.

4.7 Demolition and Clearing of War-Damaged Spaces

The physical destruction of the city centre of Beirut was not only because of the civil war, as much that was worth saving was destroyed after the end of the war. The war simply necessitated what many came to see as the process of converting Beirut to a new urban order. The worst damage to the city centre occurred in the first two years of the war, after which, and during the cease-fire period, the 1977 plan was drawn up for the city centre. The central aim of the plan was to preserve most of the urban fabric, but the fighting resumed and the plan was halted (Salam, 1995, pp. 155-164). The first stage of the demolition of the city centre took place in 1983, as part of a clearing-up initiative applied to the war-damaged areas. Out with any proper control, a massive campaign of bulldozing reached even areas that had been designated for rehabilitation in the 1977 plan. As a result, some of the most significant parts of the urban fabric were demolished. Schmid (1998) illustrates the different stages of demolition and the preserved areas of the city centre (Figure 4-11).⁵






The Schmid plan (1975-1998) shows the drastic level of demolition to vital areas of the city centre. The demolition process flattened many areas of the city centre including the old souks, residential neighbourhoods at Saifi and Ghalghoul, and numerous buildings around Martyrs' Square. Such a process endangered not only the modern structures, but it even threatened the prehistoric remains.

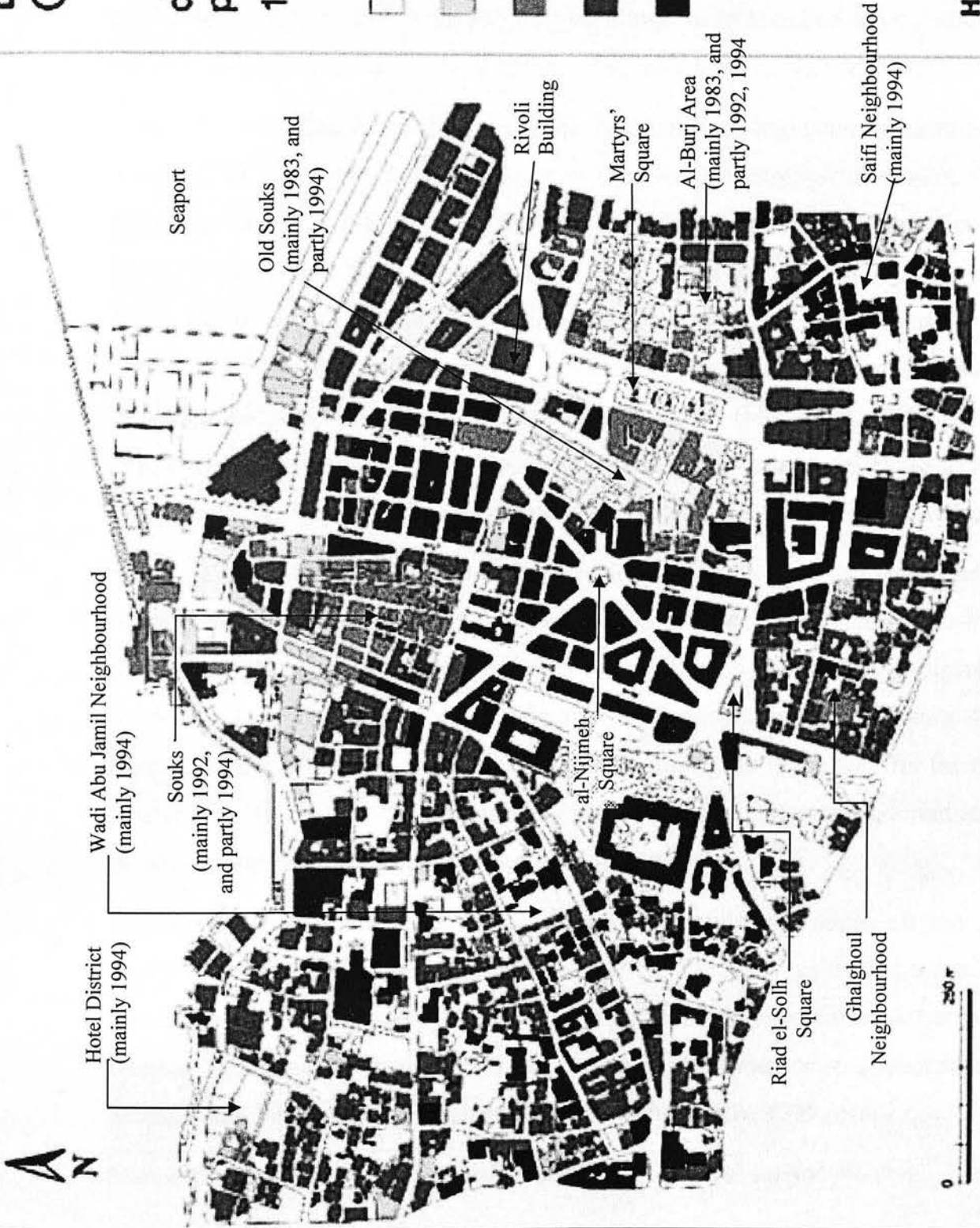
International Laboratory at Exeter University in England tested the samples. (Cited in Greenpeace official website, <http://www.greenpeace.org/~med>).

⁵ Heiko Schmid's 1998 map was cited in Saliba (2000), www.csbe.org/Saliba/essay1.htm.

Beirut Central District

demolition and preservation 1975 - 1998

-  demolition until 1983
(mainly 19/12/83)
-  demolition until 1990
(till the end of civil war)
-  demolition until 1994
(mainly 1992)
-  demolition until 1998
(Solidere)
-  buildings for
preservation



Heiko Schmid, © 1998

Figure 4-11: A plan of Beirut city centre showing the demolition and preservation areas between 1975 and 1998 (source: Schmid, 1998, in Saliba, 2000, www.csbe.org/Saliba/essay1.htm, further annotation by the author).

Salam (1995, pp. 155-164) highlights the intensity of the physical devastation caused by the bulldozers, which reached the entire medieval sector on the western side of Martyrs' Square and the entire nineteenth-century Ottoman quarter to the east of the square. The second demolition stage took place between 1992 and 1993 but this time was portrayed as being necessary in the interest of public safety. More than three hundred buildings were knocked down, some of which were damaged during the war but could have been saved and restored.

Some 282,000 cubic feet of Beirut's archaeological finds had been bulldozed and dumped into the sea, without being excavated for archaeological remains. The remains of the fort of Beirut near the port were destroyed. Despite the efforts of the archaeologists, 3.5 million cubic feet had been lost by May 1995. By January 1997, 7 million cubic feet of Beirut's past had been destroyed.⁶ A Department of Antiquities official questioned if the outcome of the anticipated reconstruction project would simply be 'une destruction de l'histoire' (Hakimian, 1994, pp. 17-29). This widespread destruction instigated public concern and debate as to how to salvage what was left of the history and archaeology of the old city of Beirut.

Salam (1995, pp. 155-164) argues that the damage to the city centre caused by the war, though considerable, was restorable as had been indicated in the 1977 plan. He claims that the damage in 1983 and 1992 was deliberately inflicted in order to allow for the implementation of the reconstruction plan. Figure 4-12 reveals further demolition to Martyrs' Square buildings to make way for the new master plan. Residential neighbourhoods were considered slum areas, structurally unsafe and unsuitable to be accommodated in any plans.

Consequently, such areas were designated for demolition, which left the city centre with enormous barren parking lots. The bulldozing of residential areas, old buildings and public spaces in the city centre and its surrounding areas were resisted by groups of concerned citizens, which, on a few occasions, succeeded in saving some buildings from destruction (Rowe and Sarkis, 1998, p.282).

⁶ Fared Abou-Haider, Beirut Archaeological Disaster, <http://www.he.net/~archaeol/index.htm>.



Figure 4-12: The Rivoli building (Orient) in Martyrs' Square, among the buildings marked for demolition, although it was structurally sound (source: Tueni and Sassine, 2000, p.202).

4.8 Socio-Cultural and Psychological Consequences

Before the war, people of diverse social, cultural and religious backgrounds lived and worked together, enriching their lives through various transactions in public spaces in the city. They participated in each other's ceremonies, occasions of grief and joyful events. Khalaf (1993, p.76) imparts that, although each social group demonstrates some diverse customary behaviour in everyday life, they all share common social values and patterns of social interaction and popular culture.

Applying the notions of proxemic and distemic of Greenbie (1981), which are discussed in Chapter Two, to Beirut city, one can consider various Beiruti communities as proxemic i.e. culturally homogeneous neighbourhoods. Members of the neighbourhood can distinguish each other from intruding individuals through shared features, such as facial expressions, dialect, jargon and costumes.

The city centre, on the other hand, could be considered as distemic, i.e. its public spaces do not belong to a particular group but to the whole community. This may explain the eagerness of the warring factions to attempt to dominate the city centre, which led to the destruction of its physical fabric. Under such conditions, the main concern of people was safety and security, and they found these needs provided for in areas with inhabitants of similar ethnic background. Choice, behaviour and freedom were thus limited, driven and inhibited by uncontrolled vicious activities and violent events. People were under extreme physical and psychological distress (Khalaf, 1993; and Kabbani, 1998).

Lang (1987, p.164) quoted Fried (1963), who described the psychological conditions of evicting inhabitants from their environments. He stated that such eviction is accompanied by much grief. Khalaf (1993, p.96) quoted Kai Erikson (1976), who published a study that tackled the impact of the Buffalo Creek flood on local inhabitants. He noted that Erikson found that the survivors of the flood suffered profound and continuing symptoms of depression due to the change of their environment. Erikson elucidated that those survivors were disoriented and distressed, as they had lost freedom, independence and a sense of control over their lives. Erikson described the impact of the disaster on survivors as “it destroys the past for those who are left: people have no sense of belonging anywhere” (Erikson, 1976).

Similarly, the Lebanese civil war affected the lives of the local inhabitants of Beirut. They lost their homes, properties and businesses. They were denied practising their simplest rights and freedoms, and were no longer able to openly use public spaces without being exposed to danger. Khalaf (1993) describes the socio-psychological consequences of dislodging inhabitants from their familiar places, such as home and neighbourhood, as quite shattering. Perhaps what is more damaging than losing one's properties and possessions is the suffering and anguish of losing one's past, identity and attachment to places.

4.9 Economic Predicaments

During the civil war (1975-1990), the Lebanese people had to endure many successive tragedies that radically undermined the country's economic, scientific and technical development, especially compared with the rate in these fields regionally and internationally (Korm, 1996, p.49). By the autumn of 1982, UN experts estimated that the country had sustained US \$12 to 15 billion in damage, i.e., \$2 billion per year. Today, more than one third of the population is considered to be below the poverty line because of war and displacement (Khalaf, 1998, p.143). According to Korm (1996, p.49), the social change in Lebanon emerged in an arbitrary and spontaneous manner for two reasons: the emigration of the young and professional people to the wealthy countries in the region and the acts of the civil war. The changes that occurred, therefore, in the Lebanese social and economic structures were not only because of the internal conflicts, but also because of the divergence of regional economies and finances. In addition, the civil conflict exacerbated the situation in Lebanon, as many lost their properties and became impoverished, while others became affluent due to the tragic war.

Nowadays, economic problems are still the most visible signs that overwhelm the whole society. Hence, the economic map of post-war Beirut should not depict the same situation on the ground as that during the war period. However, in 2001, a report produced by al-Hayek Group indicated that major investors are coming back to the city. Many renowned financial institutions, insurance companies, hotels and restaurants are arranging to start building in and moving into the city centre of Beirut, even though the suburbs may offer a more lucrative deal. Close by neighbourhoods have been targeted as well, where renting or owning properties are still much cheaper than the city centre. Tabaris, Charles Helou Avenue, Sassine, Sioufi, Hamra and Verdun are inner neighbourhoods that have proved to be successful commercial centres. In addition, the report indicates that large-scale developments are taking over small and traditional businesses. Giant

establishments have moved into dense and populated neighbourhoods, such as Achrafiyé area and al-Jinah in Beirut, without any noticeable competition from smaller retailers. In addition, large supermarkets, department stores and shopping malls, such as Spinneys, ABC Dbayyeh, Hypermarket Bou Khalil, BHV/Monoprix Bir Hassan and the newly opened branch in Achrafiyé replacing Abela, have infiltrated the retail market (Al-Hayek Group, 2001).⁷

Spinneys, supermarkets and department stores, for instance, have already planned to develop six new branches in Beirut and its suburbs, as well as, other Lebanese cities. As a result, the demand on residential land has increased the turnover value of land. Offices in Beirut now fall into three main categories: the big multinational firms, which prefer to occupy spaces between 1500m² and 3000 m²; the medium-sized firms settle for offices between 350m² and 1500m²; while the majority of Lebanese companies operate in offices around 200m² and 80m² (Al-Hayek Group, 2001). This demand for land has hugely influenced the post-war policies, as is discussed later in this chapter.

4.10 Post-War Reconstruction Process

The reconstruction of Beirut city centre is parallel to that of many cities of the world that have been widely damaged and typically reshaped by rapid and comprehensive reconstruction programmes in their post-war period. In the case of Beirut, the option to reinstate its pre-war role as a cultural, educational, commercial and financial capital stimulated the sentiments of every Lebanese, resulting in a spontaneous support of the reconstruction policy. After the end of hostilities, the Lebanese were appalled and horrified by the images of destruction and the problems inflicted upon their capital city during the war. It was clear that these complex problems could not be resolved by individual efforts and a recommendation was made by those in authority to establish a private agency that could manage and monitor the redevelopment process.

⁷ Joseph Safar presented a weekly report on the official website of al-Hayek Group on the real estate market and economic situation of the city of Beirut (<http://www.hayekgroup.com/jsafar8.asp>).

In 1991 the Lebanese Government, under Law 117, gave the municipal administration the authority to create *the Lebanese Company for the Development and Reconstruction of the Beirut Central District* (Solidere), providing the legal framework for the formation of the company. Solidere is a joint stock company incorporated on May 5, 1994. The central task of the company was the reconstruction of war-damaged areas in the city centre, in compliance with an officially approved master plan. Its share capital was US \$ 1.65 billion. As a real estate company, Solidere was also entrusted with managing real estate project development, selling and marketing land and servicing rental properties (Solidere, 2001, p.1).

The reconstruction of central Beirut has caused major public concerns, and two motions have emerged from several public seminars and debates. On the one hand, some professionals feared that this expeditious process of reconstruction would lead to loss of identities and the disintegration of social traditions. They expressed a strong sense of nostalgia and raised the need to evoke the past through the preservation and conservation of the historic fabric of the city centre. In other words, their view associated national identity and pride with the historic structures and traditional public spaces that existed before the war. On the other hand, another group of professionals represented a more modern approach, one that advocated the motion that the devastation caused by the war presented the opportunity to break from the past. They felt that there was a need to sweep away the old and to start from scratch in rebuilding a modern city with efficient infrastructures, wide streets and grand public spaces (Gavin and Maluf, 1996, pp. 46, 53).

4.10.1 The Preliminary Master Plan (1992)

At the early stage of the post-war reconstruction, Henry Eddie proposed a master plan based on creating three monumental axes dividing the city centre into four parts (Figure 4-13). The first one was the Martyrs' Square axis with an avenue wider than the Champs-Élysées in Paris. Eddie proposed the extension of this

axis towards the seafront, leading to semi-circular glass towers, which would engulf the first basin of the seaport (Figure 4-14).

Al-Maarad axis was the central axis, which was proposed to extend to the seafront and terminate by twin towers. The Grand Serail axis was to extend to the north to meet the newly proposed financial island (Salam, 1995, pp. 155-164; Gavin and Maluf, 1996, pp. 50, 51; and Kabbani, 1998, pp. 252, 253).

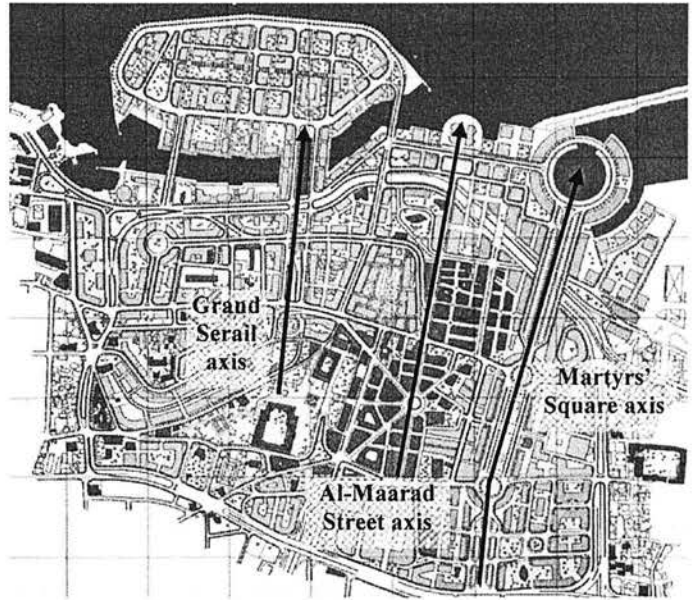


Figure 4-13: The preliminary master plan (1992) (source: Gavin and Maluf, 1996, pp. 50, 51).

This plan raised several technical issues, which were addressed and modified. In October 1992, the modified version of the plan was approved, after eliminating the island to the north, adjusting the overall densities, and introducing a large public park on part of the Normandy landfill. Many in the professions of architecture,



Figure 4-14: A proposed perspective of the Martyrs' Square axis (source: Gavin and Maluf, 1996, pp. 50, 51).

urban design and planning, as well as members of the public raised considerable debates and criticisms about the substantial intervention of the plan in the historic fabric of the city centre. Later, the implementation of the preliminary plan was halted to make way for the development of a new concept that would respond to culture, identity and heritage.

4.10.2 The Approved (2001) Master Plan

Following the intense criticism of the 1992 plan, a new master plan was introduced, which Solidere claimed responded to the public concerns and issues that were raised in the previous plan. The new master plan adopts a moderate approach with the motto *Beirut: Ancient City of the Future*. This approach is based on several guiding concepts: the integration of the old and the new, a sense of place, the city memory, the natural landform, opening up view axes to the waterfront, historic street patterns, a traditional mix of uses, and care for the public realm, and the existing neighbourhood structure (Gavin and Maluf, 1996, pp. 55, 69).

The concept of the **city memory** emerges as a distinctive feature of this master plan. Beirut is an ancient layered city that contains surviving remains and features from several civilisations as outlined in Chapter Three. Gavin (1998, pp. 222, 223) asserts that there is a need to respect and preserve this layering pattern, and to allow it to evolve. He points out that the combination of these layers encapsulates the culture and identity of the Beirut community. In addition, the plan maintains the concept of extending avenues towards the sea. Existing street alignments and frontages are protected wherever possible, including Allenby, Foch and the new Grand Serail axis, and a new street pattern is proposed on the Normandy landfill. The concept of street alignment goes hand-in-hand with the modern concept of defining view corridors and the distribution of high buildings (Figure 4-15).

To preserve sight-lines towards the sea and mountains, several visual axes are identified, namely the Burj axis (Martyrs' Square axis) to the sea, the Foch axis to the sea, the al-Maarad/Allenby axis to the sea, the Grand Serail axis to the sea, the Grand Serail axis to the mountains, Zaytouneh axis to the mountains and the Ottoman wall to the mountains. Gavin and Maluf (1996, pp. 27, 73) perceive the concept of opening avenues to the sea is a common theme among Mediterranean cities, and that the Bourj axis (Martyrs' Square axis) has been many years in the

making in Beirut. The master plan recommends that high buildings be restricted to carefully selected zones outside these corridors as well as it promotes a hierarchy of linked nodes. These nodes are public spaces, both existing and new, interconnected by a pattern of pedestrian networks.

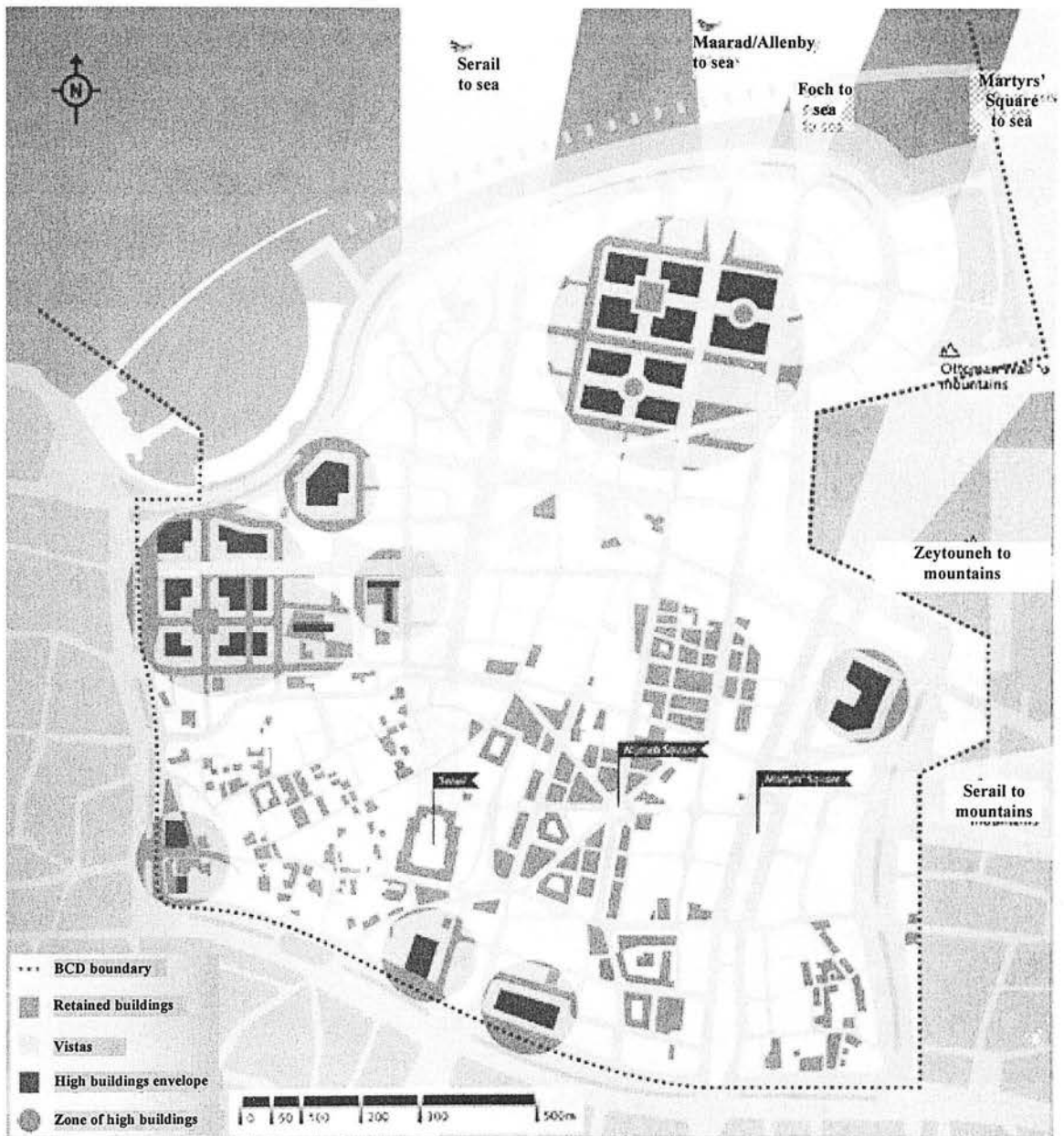


Figure 4-15: View corridors and high building zones (source: Gavin and Maluf, 1996, p.73).

Figure 4-16 illustrates more than thirty parks and public spaces. Among the main public spaces are the Riad el-Solh Square, al-Nijmeh Square and Martyrs' Square. A new square at Khan Antoun Bey is the starting point for a series of

heritage trails. These trails are intended to communicate the concept of the city memory by passing through different sites that represent different layers of the history of the city. In addition, the waterfront parks and the promenade form a major attraction point.

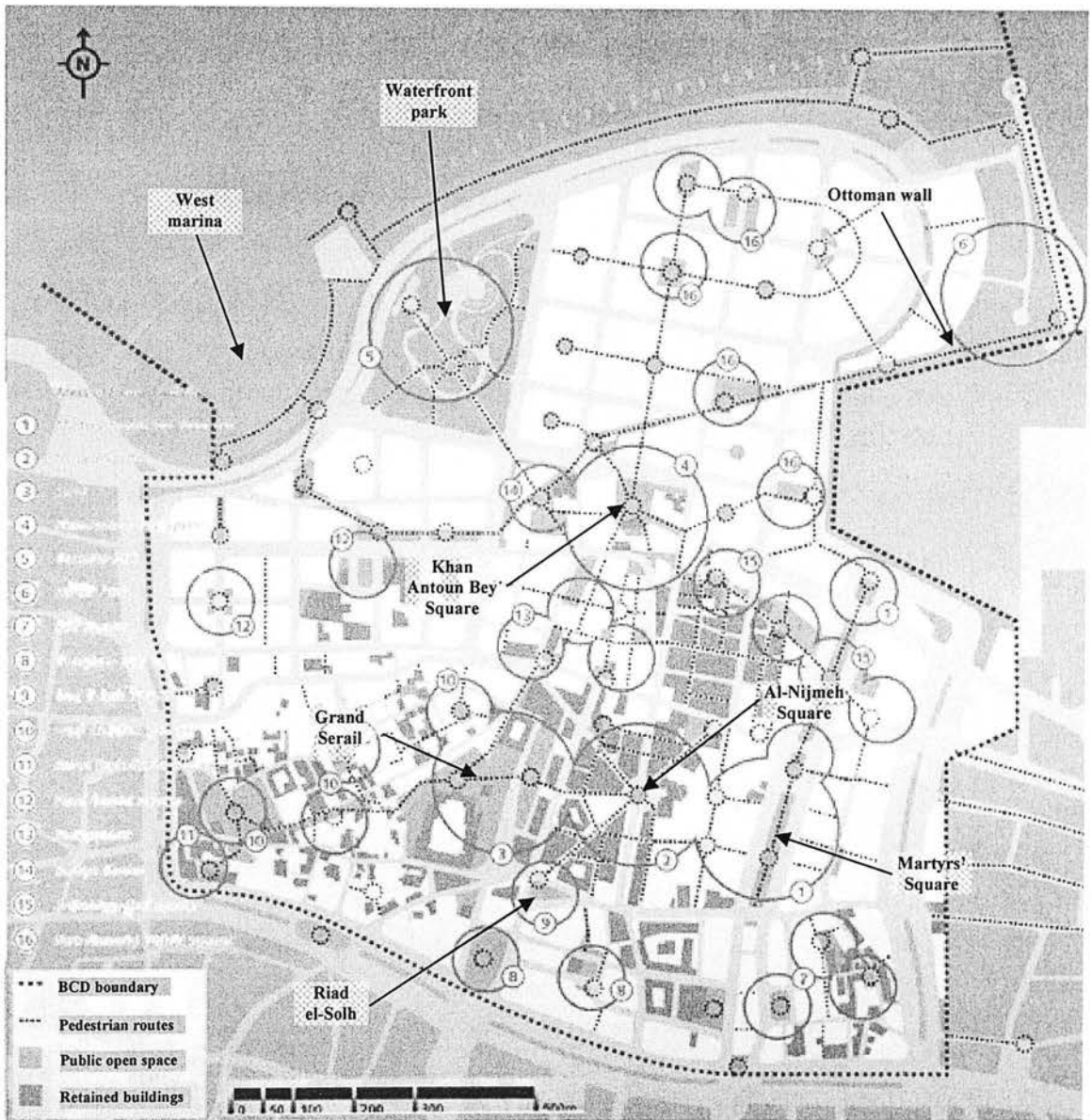


Figure 4-16: Plan of the public space framework and pedestrian network (source: Gavin and Maluf, 1996, p. 91).

The plan accommodates a wide mix of land uses, including business, government, residential, cultural and recreational facilities (Figure 4-17). The land use strategy of the new master plan, as described by Gavin and Maluf (1996,

p.100), is divided into two parts: the public domain, which includes roads and public open space; and the development land, which consists of retained buildings and vacant sites. The master plan endorses a relatively flexible approach to land use, whereas it is specific about the maximum building heights. Building heights vary between 11 m and 120 m, according to specific sites. In the new financial district, the maximum allowable height is 160 m.

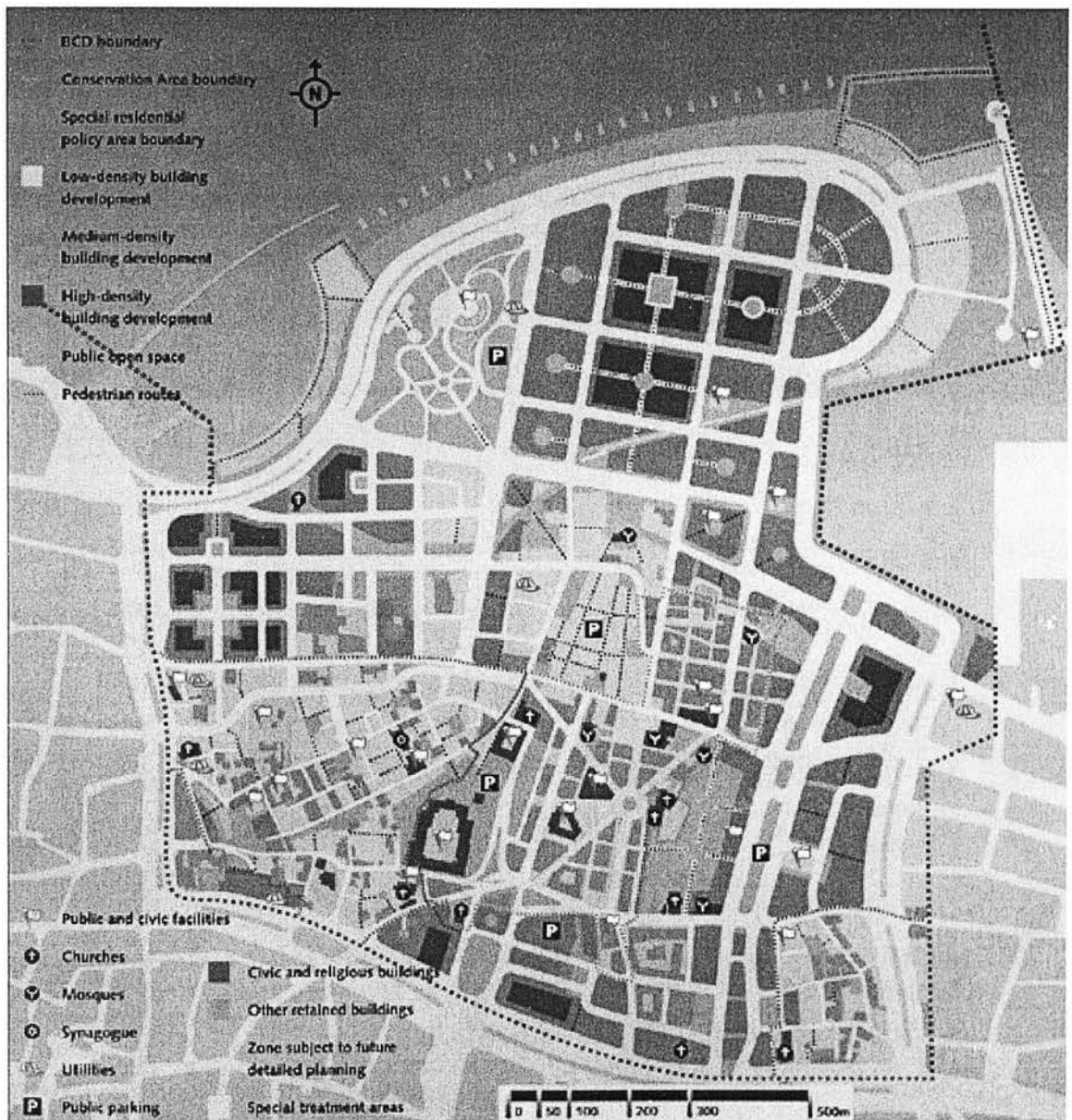


Figure 4-17: The master plan of the city centre of Beirut (source: Gavin and Maluf, 1996, p. 101).

The zoning plan of the city centre of Beirut was formed to include 10 planning sectors (Figure 4-18). Each sector has a unique development control. Gavin and

Maluf reveal the central aim of the planning sectors is: “first, to create the simplest possible framework for the application of a coherent set of planning regulations and guidelines; and to define, create and preserve the character of a distinct neighbourhood” (Gavin and Maluf, 1996, p. 129). They claim that the character and harmony of many of these sectors existed either pre- or post-war, while other sectors’ character emerged during the making of the plan.

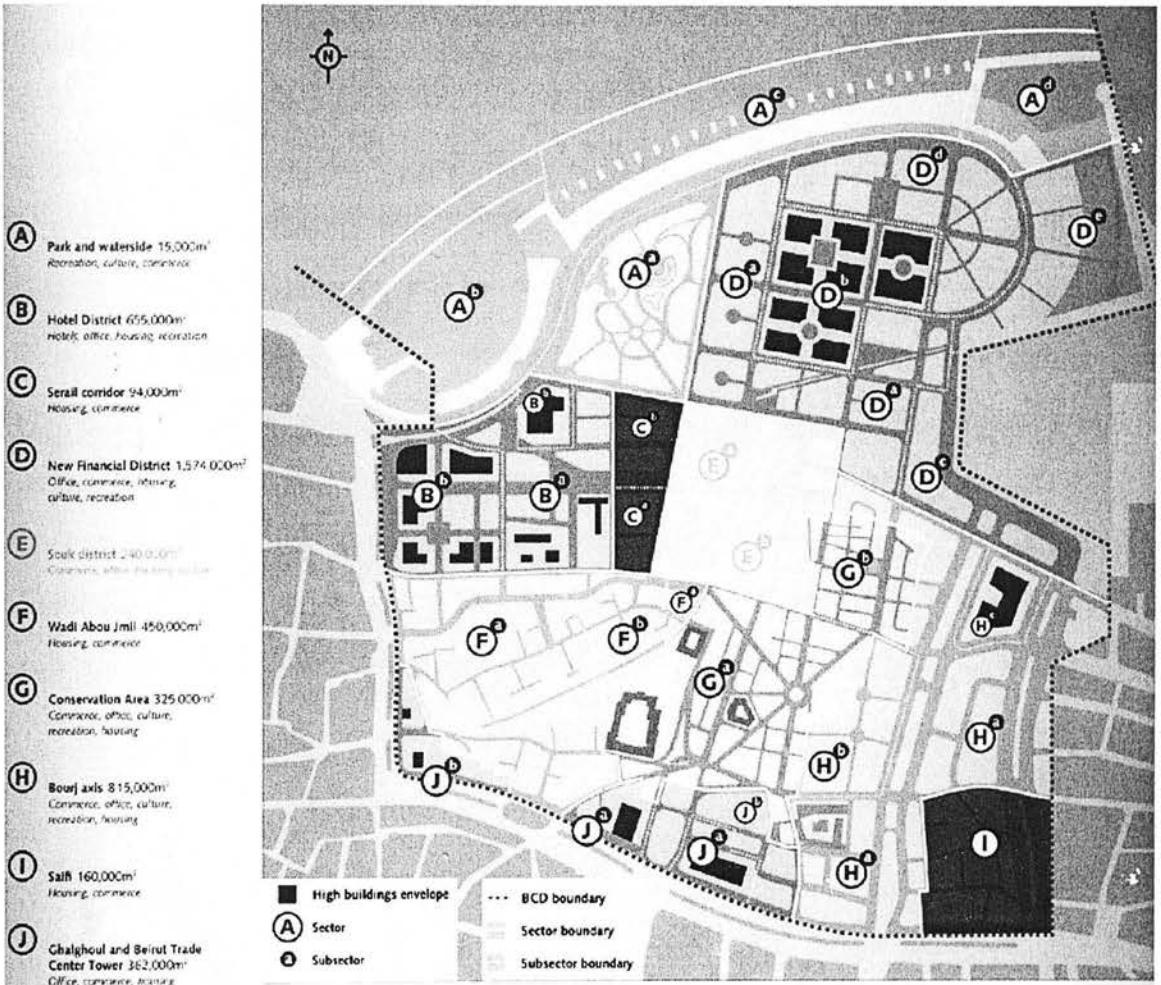


Figure 4-18: Zoning plan indicating the various planning sectors (Gavin and Maluf, 1996, p.128).

The approved (2001) master plan also includes detailed 1/500 maps with specifications as to the locations and areas of the reconstituted public domain (Figure 4-19, Figure 4-20 and Figure 4-21).

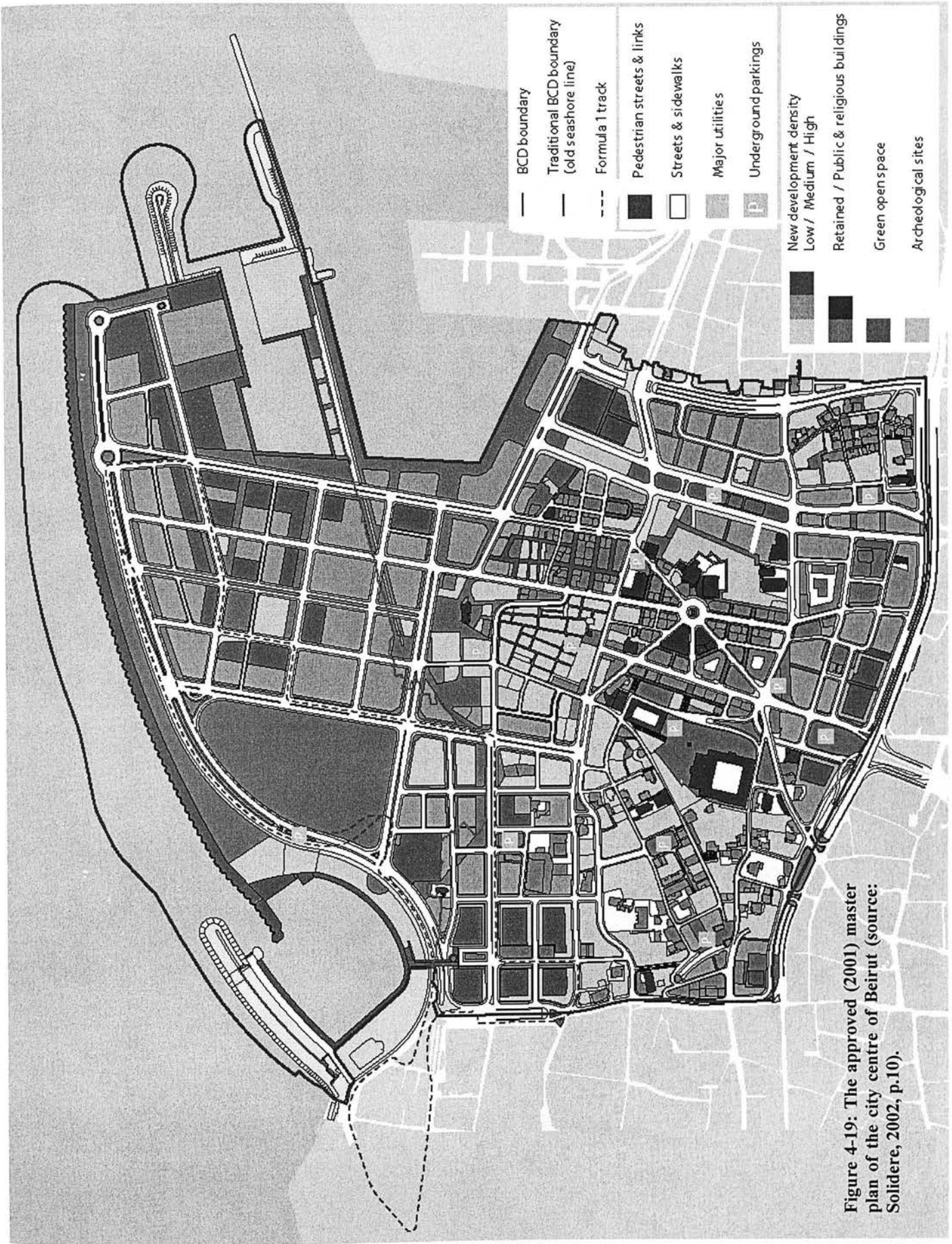
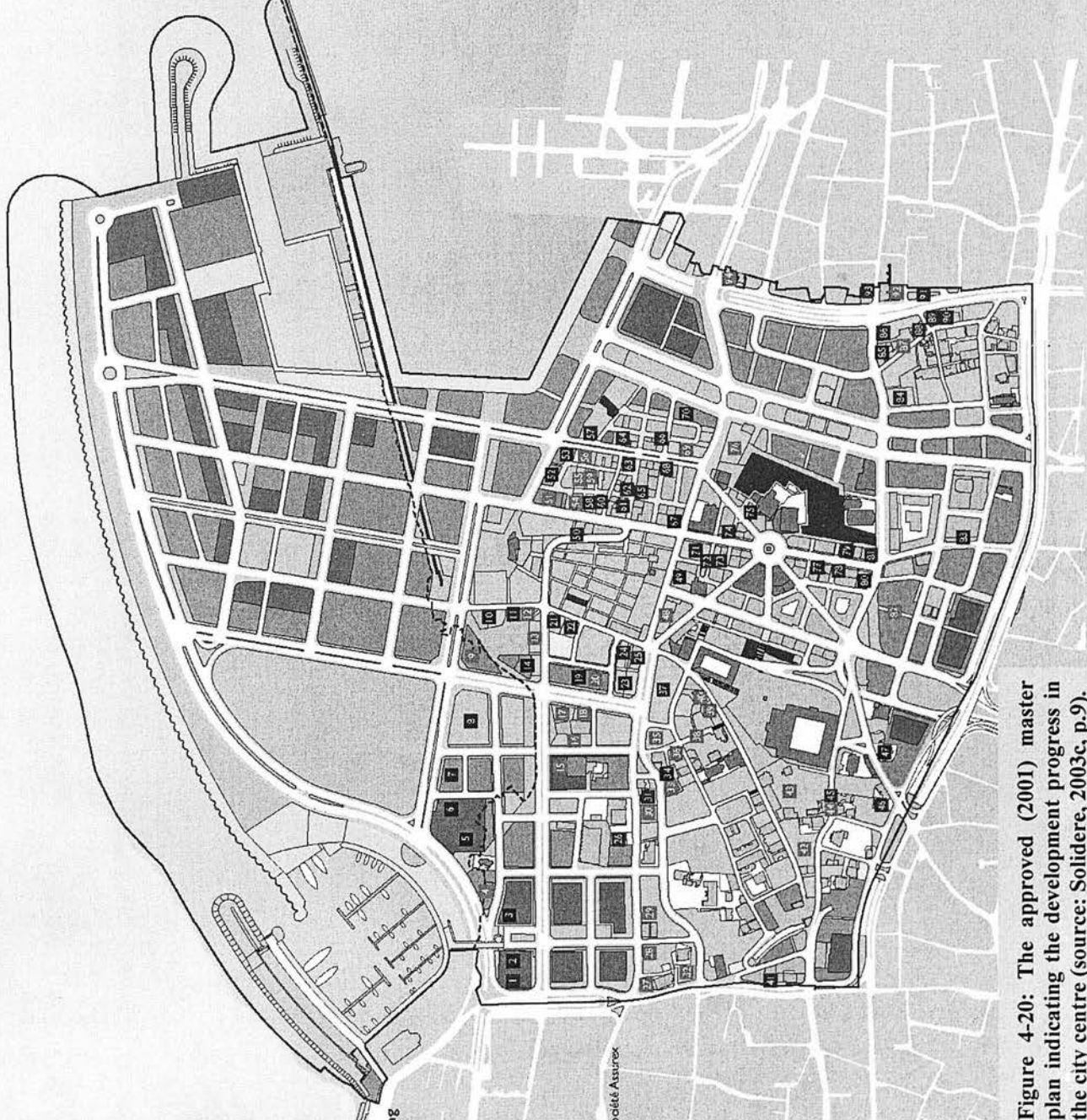


Figure 4-19: The approved (2001) master plan of the city centre of Beirut (source: Solidere, 2002, p.10).



Superstructure/underground construction

- | | |
|----|---|
| 6 | Kingdom Beirut / Four Seasons |
| 10 | Société al Ikrat & al Albna |
| 2 | Pinnacle Tower |
| 3 | Beirut Tower |
| 5 | Marina Towers |
| 19 | 1444 Avenue Plaza |
| 47 | Private residence |
| 52 | Jalayer |
| 85 | Société 750 Saifi |
| 14 | Berytus |
| 23 | Sifeo / Khattallah |
| 34 | Elite Saab |
| 49 | Première Immobilier |
| 53 | Technite |
| 58 | Sama Abou Khater Taman |
| 67 | Al'Awkal al Islamiya (Pachji) |
| 75 | Etoile Realty |
| 80 | Al'Awkal al Islamiya / Z & AR Khayat, S. Barz |
| 83 | Al Saoud Family |

Under study/permitting

- | | |
|----|---|
| 15 | Société Méditerranéenne des Grands Hôtels |
| 38 | Royal Hotel & Resort |
| 82 | Landmark |
| 1 | CCC |
| 9 | Namr Diab |
| 16 | Banamo Estate |
| 17 | 1330 Park Avenue |
| 20 | 45 Park Avenue |
| 28 | Mini Real Estate |
| 36 | Private residence |
| 39 | Private residence |
| 40 | Private residence |
| 42 | Banamo Realty |
| 43 | Private residence |
| 44 | Les Grédins |
| 48 | Société Semiramis |
| 51 | Sayed Philippe Mokhtara |
| 59 | Starway |
| 87 | Société 750 Saifi |
| 92 | Elite Selwan |
| 12 | Medgulf |
| 13 | Media Fan |
| 18 | Luna One Company for Investment |
| 27 | Greenline Real Estate |
| 29 | Société Lebanon Invest. |
| 30 | Dar al Handash |
| 32 | Luna Company for Investment |
| 33 | The School Real Estate |
| 35 | Al'Awkal Bank |
| 54 | Crédit Libanais |
| 55 | Radium |
| 56 | Al'Awkal al Islamiya |
| 69 | Bank of Kuwait and the Arab World |
| 76 | Serene Real Estate |
| 94 | Al'Mashtak Insuranc ^{es} |

Completed/under finishing

- | | |
|----|--|
| 1 | Monroe Hotel |
| 7 | Park View Realty |
| 8 | Block 24 |
| 22 | Centre Ville 1341 |
| 41 | Ala Aad Brothers |
| 45 | Les Grédins |
| 46 | Private residence * |
| 89 | Private residence |
| 90 | Private residence |
| 11 | Medgulf |
| 21 | Société Global |
| 24 | Société Khlil Fatah & Fils / Société Assurex |
| 25 | Société Melrose |
| 26 | Carlyle Real Estate |
| 31 | 1053 Mina al Hosn |
| 37 | Barque Audi |
| 50 | Moufid Boyoun |
| 57 | Voice Real Estate |
| 60 | Lebanon & Gulf Bank |
| 61 | Ela & Brothers |
| 62 | Khalid Ghannour |
| 63 | Saudi Lebanese Bank * |
| 64 | Groupe du Moyen-Orient |
| 65 | Lebanese Catering |
| 66 | Bank of Beirut * |
| 68 | Foch Real Estate |
| 70 | Société al Ikrat al Sahila |
| 71 | Prime Estate |
| 72 | Khachadourian Real Estate |
| 73 | Youssef Chatawi |
| 74 | Alycabed * |
| 77 | Société 168 Maarad |
| 78 | Arab Reinsurance Company * |
| 79 | Al Ikrat Malkhaf * |
| 81 | Société Hiba al Maarad |
| 86 | Bankers' Association |
| 88 | P. El-Khouary / A. Maamari |
| 93 | Société Gouraud |
| 84 | Beirut Consulting Clinics |
| 91 | Medico Station |

Figure 4-20: The approved (2001) master plan indicating the development progress in the city centre (source: Solidere, 2003c, p.9).

* Purchased as a developed property from Solidere. The Master Plan includes proposed modifications to the New Waterfront District sector plan. In case of multiple developments, the predominant land use has been indicated.

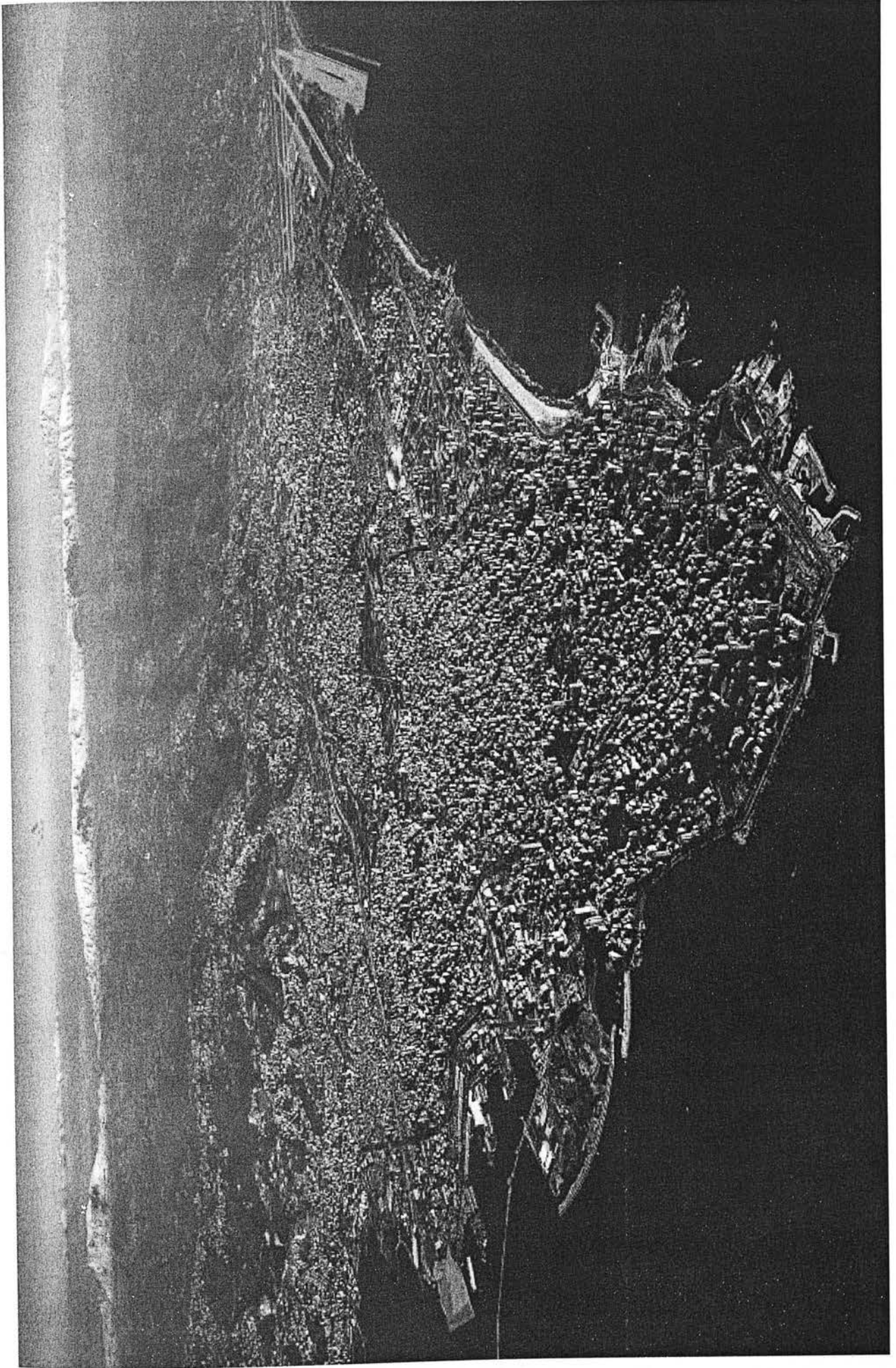


Figure 4-21: Aerial view of the city of Beirut (source: Solidere, 2003, p.4).

In the process of updating the plans to a 1/500 scale, government officials questioned the validity and relevance of some of these spaces and removed them from the plan. This, and the re-planning of the financial island, resulted in a reduction of public domain areas to approximately 498,534 m². In order to balance this reduction and attain the 502,152 m² targeted for public domain reconstitution, Solidere needed to relinquish 3,618 m² from its development land to the state. As a result, the areas allocated to Solidere became approximately 599,092 m², of which 563,441 m² consists of development land, with the remaining area being devoted to Hadiqat as-Samah (Garden of Forgiveness) and other private open spaces (Solidere, 2001, pp. 5-21).

The project covers approximately 18.45 million m² (455 acres), including 1.2 million m² (296 acres) the traditional settlement of Beirut and 645,000 m² (159 acres), the reclaimed land from the sea. The area allocated to public spaces is about 913,000 m² (225 acres), which includes 592,000 m² (146 acres) of roads and 321,000 m² (79 acres) are public open space. However, the area allocated for development land is about 932,000 m² (230 acres), including approximately 852,000 m² (210 acres) of new development and 80,000 m² (20 acres) of religious or state property (Figure 4-22). The development target is about 4.69 million m² (50.5 million sq ft) of floor space. However, the master plan acknowledges that the guidelines for various land uses are modifiable, depending on market conditions (Figure 4-23) (ibid). The reconstruction plan, however, was based on two phases:

- *Phase One (1994-2004)* deals with the restoration of the historic core, implementation of the infrastructure works, redevelopment of residential areas within the plan boundaries, treatment of the reclaimed land and marine works.
- *Phase Two (2005-2020)* involves the completion of the development of the new souks' quarter, the residential areas, hotel district and areas surrounding Martyrs' Square. It also involves the completion of the land treatment, infrastructure of the waterfront land and development of the eastern marina.

Solidere anticipates that most of the public activities will be centred on the waterfront with two marinas, promenades and quaysides, a waterside park and a 4.8 km Formula One track (Solidere, 2002, pp. 11, 16, 19).

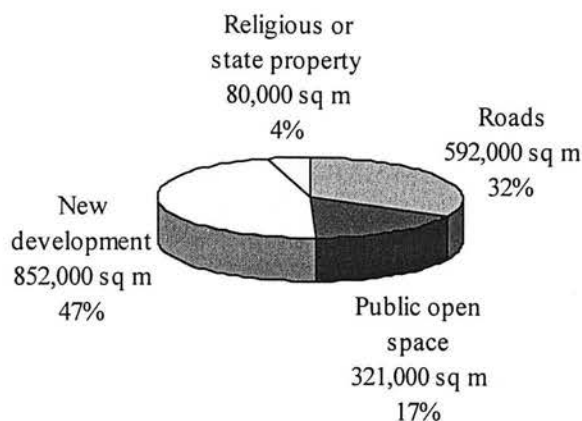


Figure 4-22: Pie chart showing the relative areas allocated to new development, religious or state property and public domain (source: the author, adopted from Solidere, 2001, pp. 9-11).

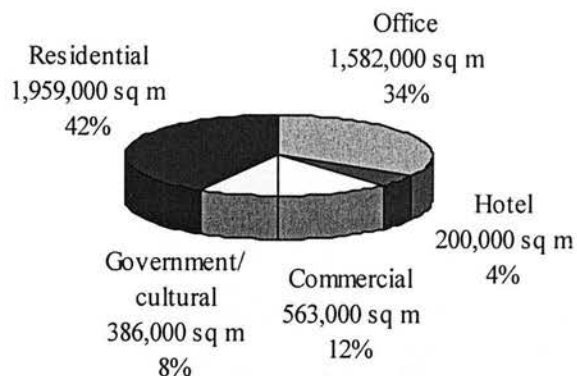


Figure 4-23: Pie chart showing the target floor space for various land uses (source: the author, adopted from Solidere, 2001, pp. 9-11).

As to public open space design, in October 2002 Solidere launched an open international competition for the urban design and landscaping of the Martyrs' Square axis, comprising the open space corridor down to the quayside of the Beirut Seaport's first basin and most of Sector H development land (Figure 4-24). The competition included the integration of important archaeological sites to the north of Martyrs' Square, as well as proposals for a high-rise landmark site at the northeast gateway to the city centre. In January 2002, an agreement was signed with the British-American architectural firm, Gustafson Porter Limited, winner of the international landscaping competition, for the detailed design of Hadiqat as-Samah (Garden of Forgiveness), after decree 5714/2001 incorporated the project in the amended Master Plan. Solidere landscaped the areas adjoining al-Nijmeh Square. Other new open spaces were developed, including Gibran Khalil Gibran Garden facing the UN House, Zouqaq el-Blatt Garden overlooking the city, the Roman Baths Garden and pedestrian area, Riad el-Solh Square, Emir Amine Square in Bachoura, a cascading open space under the Grand Serail, Omar Daouk Square in Mina el-Hosn and the Planet Discovery Garden (Solidere, 2002, pp. 18, 19).

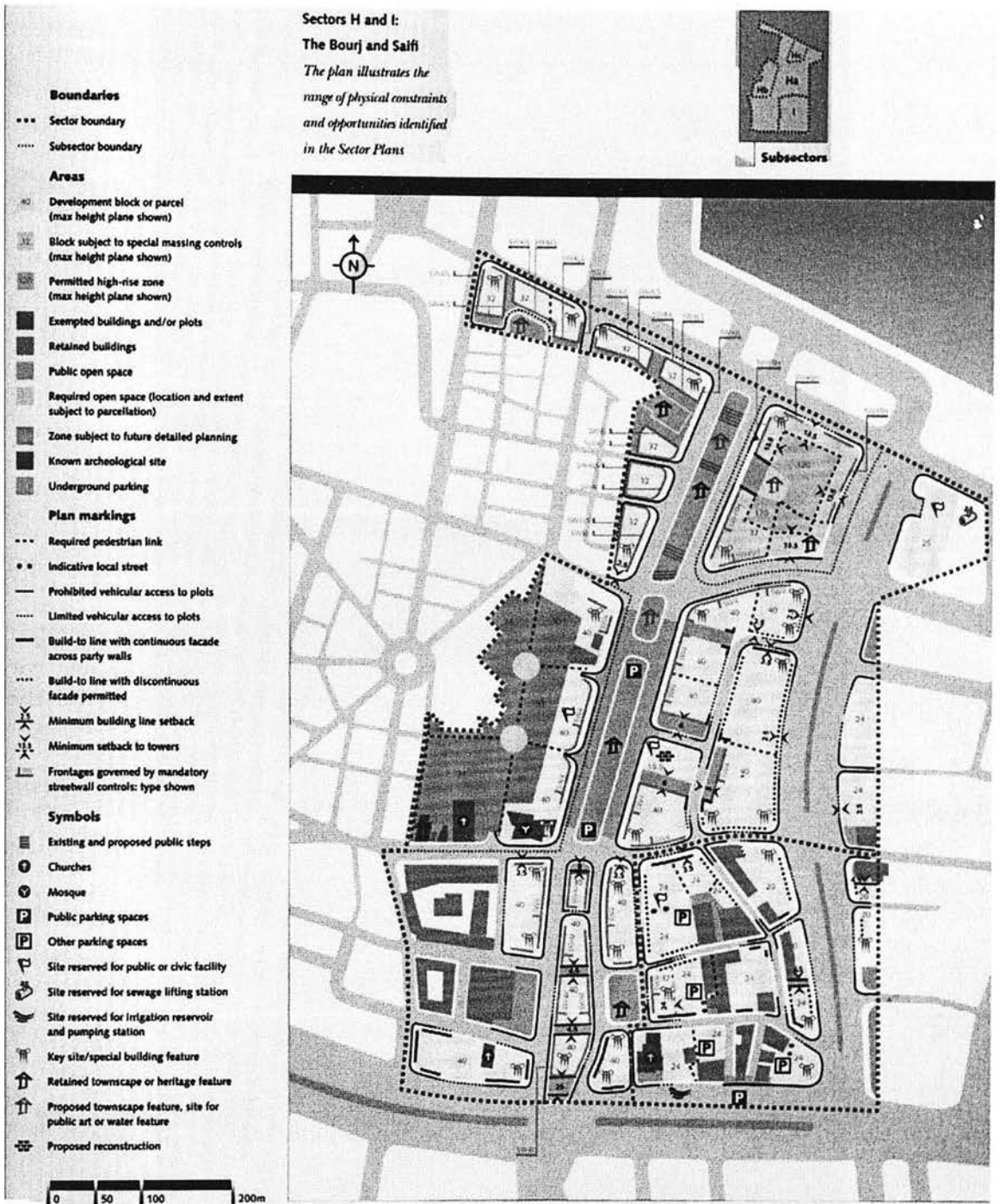


Figure 4-24: Plan illustrates the extension of Martyrs' Square towards the quayside of the Beirut Seaport's first basin (source: Gavin and Maluf, 1996, p.130).

Figure 4-25 shows that Martyrs' Square is still waiting for its new identity to materialise. New structures have already started to emerge contributing to the overall character of the city centre and its central square. The most prominent structure is Al-Amin Mosque with its four colossal minarets dominating the skyline of the city.

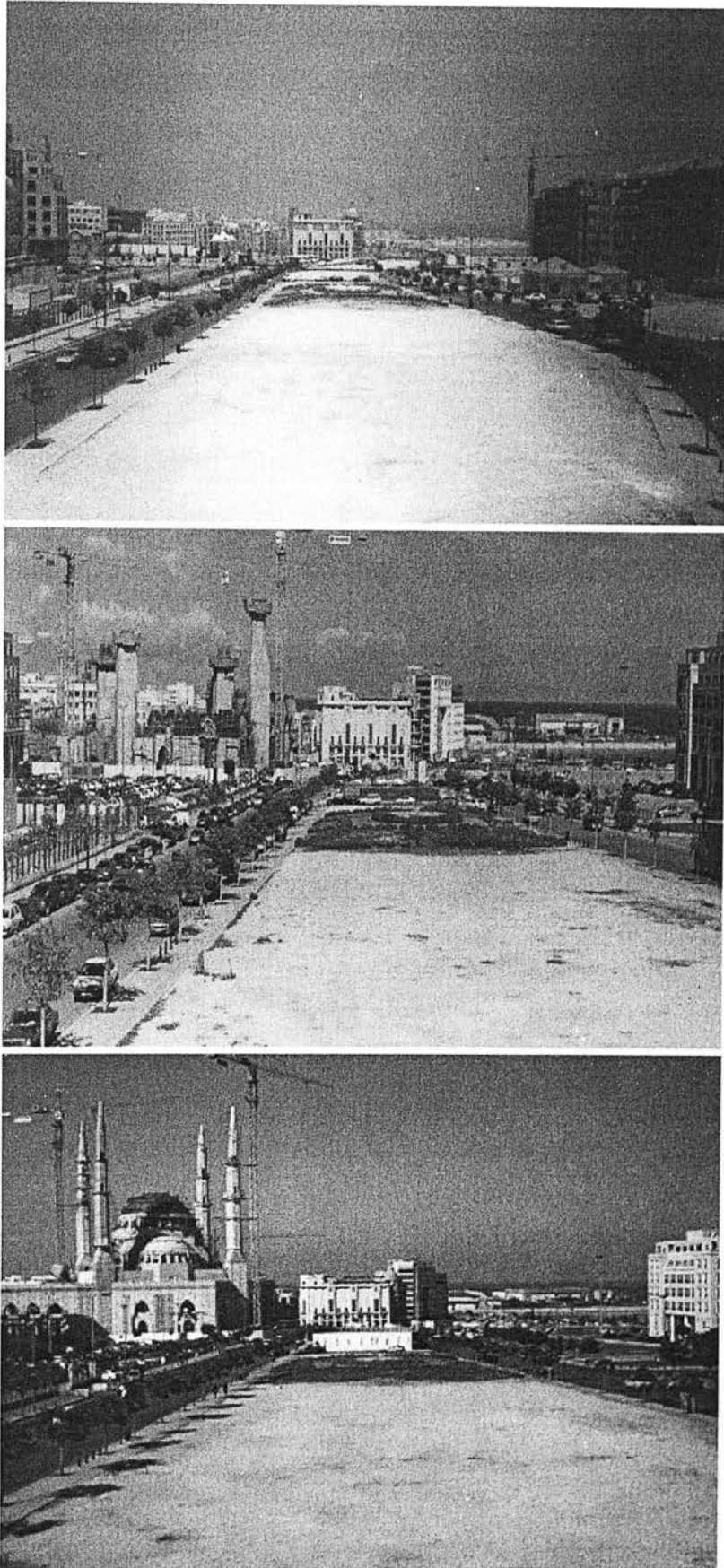


Figure 4-25: Martyrs' Square as it appeared during August 2001, March and November 2004 respectively (source: the author, 2004).

The general concept of the plan was based on maintaining the pre-war souks' alignment, determining major pedestrian pathways, integrating open space and archaeological finds and defining the unique character for each individual souk (Moneo, 1998, pp. 263-273). The master plan preserved the locations of the souks with a touch of the emotional and memorial spirit of the old, that is, the development of the new souks did not exclude the past, and respected traditional proportions, width and heights (Figure 4-27 and Figure 4-28).

The focus of the master plan of the souks was to provide several alternatives, as follows (Solidere, 1994, pp. 12, 34-44; Gavin and Maluf, 1996, p.135, 136; Moneo, 1998, pp. 263-273; and Kabbani, 1998, pp. 255-257):

- To reinstate some prominent features and focal points that respond to peoples' memories like al-Intabli's Fountain and Khan Antoun Bey to be reconstructed as a department store.
- To preserve the topography of the site.
- To preserve proportions, dimensions and pathways that link the east with the west side of the souks.

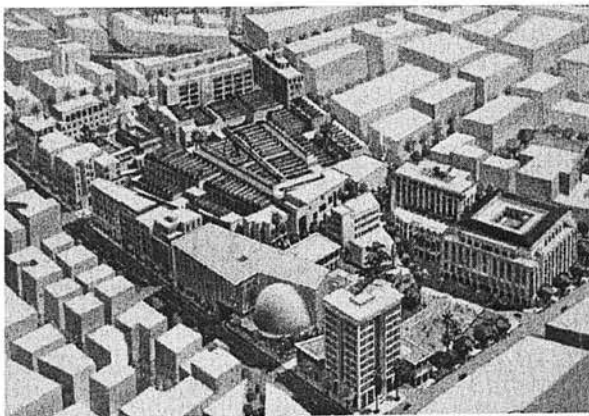


Figure 4-27: Perspective view of the souks (source: www.solidere-online.com/project/overview.html).

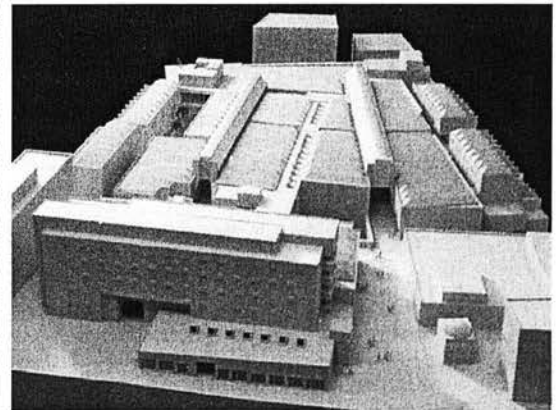


Figure 4-28: View of a model the souks showing the main building structure of the new souks (source: Moneo, 1998, p.267).

The new souks' quarter of Beirut city centre is proposed as a modern shopping district. Its floor space is 100,000 m², accommodating about 200 shops, which form the main souks, and includes gold and jewellers' market, an international

department store, a multi-use store, a supermarket, an entertainment complex, restaurants and cafés, an art gallery, an archaeological museum, a children's science museum, and an underground car park of 2500 parking spaces. The overall design is based on retaining the previous street grid and Ottoman access gates, as well as introducing five new public spaces. These public spaces incorporate the Persian-Phoenician site, the recovered part of the medieval wall, the Mamluk Zawiya Ibn Iraq shrine and Ottoman Majidieh Mosque.⁸

Shops are arranged systematically alongside major pedestrian routes, which are covered with skylights to provide protection from direct sunlight and which lead to several public spaces. An important public space is the square facing Khan Antoun Bey⁹ and Majidieh Mosque. It is anticipated that this square will encourage social and spiritual interaction among people due to the presence of the mosque and the khan. The overall layout also provides other secondary pedestrian routes running perpendicularly to the major routes of the souks. The souks' fabric is separated from vehicular traffic, connecting the pedestrian flow from Weygand Street to the major spine of the souks' quarter. These secondary routes provide access to the individual shops from surrounding public spaces (Gavin and Maluf, 1996, p.135, 136; Moneo, 1998, pp. 263-273; and Solidere, 2001, pp. 32, 33).

4.10.4 Critique and Counter Critique

Today's visitors to the reconstructed areas of the city centre can admire the new environment and appreciate the efforts and the achievements made. A high degree of expertise was employed to restore, reconstruct and develop the war-

⁸ Quoted from Solidere official website (<http://www.solidere-online.com/project/overview.html>).

⁹ The Turks knew hotels as khans, which later the Arabs used. Beirut khans were two types:

1. Commercial khans included two storeys. The ground floor was a series of rooms used as shops for merchants.
2. Travellers' khan: the khan owners rented the khan to specialised people in hotel management where they charged the travellers for renting a room. Khans were to many in Beirut and one of the famous and most beautifully maintained khans at that time was Khan Antoun-Bey, which was built in 1860 and named after Antoun-Bey who was one of the big Beirut merchants (Shibaro, 1980, pp. 177-180).

torn areas. Solidere's approach to rebuilding the city centre, as presented by Gavin and Maluf (1996) as '**Beirut an ancient city of the future**', portray the master plan as a solution that responded to issues of national identity, heritage and collective memory. Gavin and Maluf advocated the aims of Solidere in maintaining a balance between the new development and the old fabric of the city centre. Such an approach, however, prompted much criticism from professionals, such as Salam (1995), Rowe and Sarkis (1998) and Khalaf (1993), who were sceptical about the whole process of merging the old with the new.

Looking at the approved master plan one realises that much of the old fabric of the city seems to have been swept away and replaced by new development. This raises the question about the appropriateness of using the phrase 'merging the old with the new', as virtually nothing is left of the old fabric of the medieval city. The emphasis on replacing it with new development has generated strong feelings and concerns among people, who feel, perhaps legitimately, that the new city centre has been developed to respond to high-income users.

Saliba (2000) commented that one of the main criticisms made of the reconstruction of the city centre of Beirut was that it would convert the area into an island for the rich resulting in segregating the centre from its periphery. He argued that the majority of those who will be working in the city centre are not corporate heads, but middle and low-income employees involved in service jobs. Saliba refuted the idea that the current redevelopment of the city centre would lead to a state of social segregation.¹⁰

In response to critics who doubted Solidere's plan in providing adequate open spaces for the city centre, Saliba responded that the current plan provided the highest percentage of open spaces in the city including pedestrian walkways, parks and squares, which was not the case before reconstruction. Saliba added that the open spaces provided in the city centre were more or less the only open

¹⁰ *Deconstructing Beirut's Reconstruction: 1990-2000, Coming to terms with the Colonial Heritage* is an essay presented at Darat al-Funun, Aman on April 19, 2000 by Robert Saliba who elaborated on the various Beirut's master plan matters.

public spaces in Beirut. On the contrary, the city's periphery is growing into a highly congested area that lacks minimal public amenities (Saliba, 2000). However, one should keep in mind that not all of these open spaces are accessible to the public.

A new type of semi-public space has emerged in the city centre, dominated by commercial uses. This phenomenon, if not carefully controlled, may be considered as a shift towards the privatisation of the city centre. One outcome of this privatisation of public space is shown in the way that pedestrian walkways and streets in the city centre are almost completely dominated by street cafés (Figure 4-29).

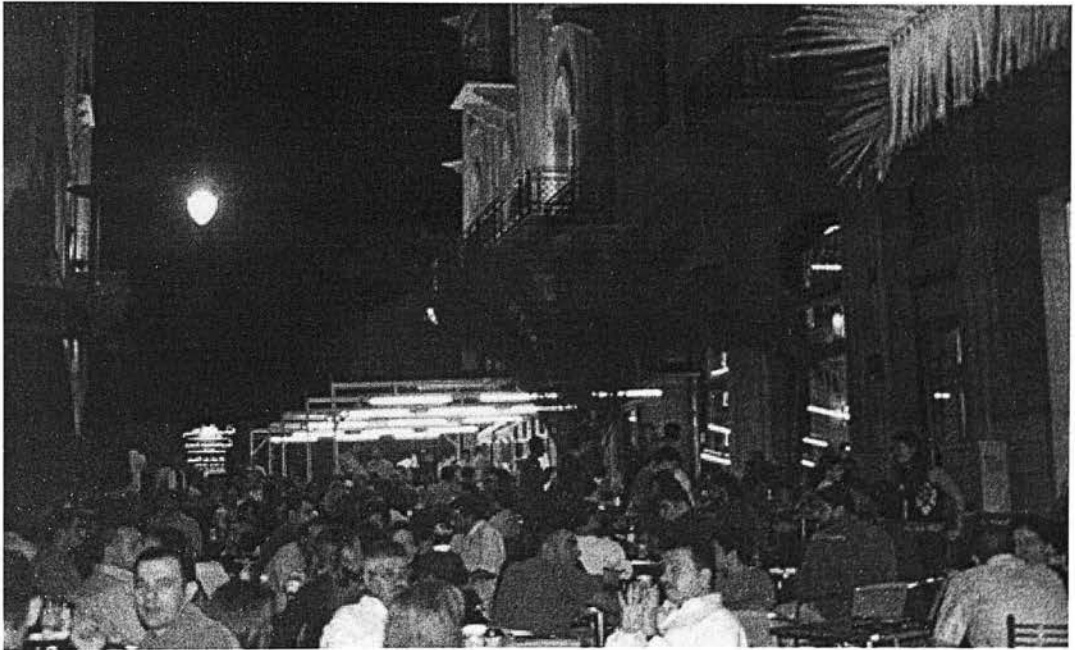


Figure 4-29: Street cafés have transformed public spaces (walkways and streets) to private use with virtually no space left for pedestrian movement (source: the author, November 2003).

Marcus and Francis (1998, p.3) have addressed similar issues regarding this type of semi-public space. They point out that such places are accessible only to those with money to spend. They view that many members of the public do not spend much money but come only to window-shop or to sit and watch the crowds. Davie (1993) also questions the legality of turning over private and public land to private companies, which enjoy complete control of the decisions as to the future

role and physical aspect of the centre of the capital. He assumes that the city centre of Beirut will not be rebuilt to pre-war characteristics, nor will it have the same functions.

In a similar vein, Zukin (2003, p.138) argues that, although reconstructing a city depends on how the traditional economic factors of land, labour and capital are combined, its success in cultural terms is heavily determined by how symbolic languages of exclusion and entitlement are manipulated.

Salam (1995, pp. 155-164) is critical about the policy of compulsory participation of original owners and occupiers of private properties in the real estate company. He argues that the conversion of ownerships and leases into shares automatically deprived local inhabitants of the city centre from the right to reoccupy or return to their premises. As for those who legally resided in the city centre, they were obliged to vacate their dwellings. Salam's concerns also touch upon the consequence of evicting the local population and the clearance of the medieval pattern of properties within the city. He points out that such issues may eliminate the social and the physical fabric of the city. In line with Salam's argument is the statement made by Albert Mayer (1967) who stated that:

"We all naively thought that if we could eliminate the very bad physical dwellings and surroundings of slums, the new sanitized dwellings and surroundings would almost 'per se' cure social ills. We know better now." (Mayer, 1967, quoted in Lang, 1987, p.11)

Kostof also portrays the urban renewal experience of some western cities as devastated needlessly in the name of slum clearance. For instance, slum clearance and urban renewal activities are perceived as the equivalent of war reconstruction. He states that "Urban blight worked slower, but the net result was the same as the damage of bombs" (Kostof, 1999, p.275). In addition, Davie (1993) calls for producing a general theme of integrating the various Beiruti communities using public space, such as the waterfront promenade, gardens, the Place des Canons, which he sees as imperative to the concept of belonging to the city.

4.11 Conclusion

Chapter Four explores some of the implications and consequences of the Lebanese civil war and its post-war redevelopment and the concerns shared by local and international professionals, as well as members of the community. Such consequences were identified as the emergence of new sub-centres within Beirut and its outskirts before the war, the physical and social disintegration of the society, the devastation of public and private domains, the demolition and clearing of war-damaged areas, the post-war plan and the change in land use and activities. In addition, this chapter explores the critical arguments that accompanied the reconstruction plan. The discussion in this chapter argues that eradicating many of the old structures of the city centre, depriving it of its original uses, and establishing new uses may lead to the creation of a setting that lacks cultural, traditional and historical associations. The efforts made to change the images of war by creating a high standard, sleek and clean environment are undoubtedly visually impressive but raise questions regarding how far the reconstruction process responded to the needs of the Beirut people.

Conclusion to Part Two

Part Two presented a contextual review of Beirut, starting by giving a general background to Lebanon, its natural characteristics and social conditions. The natural evolution of the city's urban fabric responded to the social, cultural, religious, political and economic demands of the Beiruti community. Public space fostered social and cultural relationships between various social groups, regardless of their financial status or religious background. Such relationships were characterised by tolerance, goodwill and respect.

Historically, public space in Beirut was given attention by those in control of the city. The Ottomans introduced the new regulations that defined the legal and physical control of urban space, construction laws, street alignment, and safety and hygiene regulations. Although such regulations were intended to improve the quality of the environment, the street alignments necessitated direct intervention in the historic fabric of the city, which involved the demolition of parts of the city's old wall and gates.

Later, when the French gained control of Beirut, they introduced their architectural style and planning principles, which are still apparent today. The planning period after independence from the French, was mainly concerned with recommendations and proposals in response to the construction boom of the period between 1950 and 1975, which were mostly unrealised. A significant planning attempt was initiated in 1965 by introducing a master plan that adopted the earlier zoning regulations of 1953, 1958 and 1963 plans for the city of Beirut. The 1965 master plan also illustrated the effort made at that time to complete the city's ring road by extending the waterfront promenade towards the northern part of the city centre, which was never implemented.

The civil war period (1975-1990) was characterised by the destruction of the physical, economic and social structures of the city, leading to serious problems. The destruction of the urban fabric and the redefining of territories led to socio-

cultural, psychological, environmental and economic problems, which were perceived in this research to have physical and non-physical implications. The escalation of violence led to the displacement of people and businesses to adjoining residential neighbourhoods and suburbs, which encouraged the emergence of sub-centres.

Public spaces were the first to suffer the consequences of war. The Green Line stretched along main public squares and major roads, creating a physical and social split of the city structure. Choice, behaviour and civil liberty were restricted and confined. The Beiruti people suffered profound symptoms of depression as they lost control over their lives. Such suffering was not mainly due to the loss of property, but it was related to the loss of one's past, identity and association to old places.

The post-war reconstruction process was also viewed as a consequence of the civil war, which involved massive and rapid change to the physical fabric of the city centre. The clearance of the war-damaged areas and the demolition of buildings to make way for the reconstruction plan were seen as the continuation of war by other means. The preliminary master plan (1992) generated major public debates and concerns as to the direction the reconstruction should follow.

A great sense of nostalgia accompanied those who called for the preservation of the city's historic fabric. Others viewed the reconstruction as an opportunity to break from the past and to have a modern city centre. Such public debates led to the abolition of the preliminary plan, which was followed by the approved (2001) master plan. This plan was seen as having adopted a moderate approach in merging the old with the new. It was perceived to have created a distinct character that does not match the surrounding areas.

The new road network that encircled the city centre contributed to the separation of the city centre from the rest of the city. The extension of Martyrs' Square towards the sea promoted segregation between various Beiruti communities. This

square, which was at the heart of the city centre, has stood vacant for over twenty-five years waiting to be re-integrated into the urban fabric of the city.

In conclusion, guided by the theoretical framework of Part One, the discussion in Part Two was intended to clarify how the urban fabric of the city evolved throughout the history of Beirut, and how public space was affected as a result of the civil war and the post-war reconstruction. The findings of this part indicated the need to investigate the socio-cultural, perceptual and functional attributes of the Beirut community, as well as analysing the impact of implementing the reconstruction plan on the physical structure of the city centre.

PART THREE:
EMPIRICAL WORK

Introduction to Part Three

Part Three introduces the empirical substantiation of the findings and principles, which emerged from Part One and Part Two.

Chapter Five addresses the socio-cultural and functional attributes by examining the people's preferences through conducting a questionnaire survey, in order to formulate dimensions that respond to local needs. It discusses the questionnaire results and analyses them based on the theoretical framework of Part One.

Chapter Six explores the collective memory of the people, which is an important force of the perceptual attribute. It analyses the cognitive maps of the city of Beirut drawn by the respondents through utilising Kevin Lynch's concept of imageability. This exploration of the collective memory allows the identification of which elements of the city are most valued by the respondents.

Chapter Seven focuses on the physical attributes by analysing the impact of reconstruction on the spatial structure of the city centre of Beirut using Hillier's space syntax as a technique for investigation.

Chapter Five:
The Questionnaire Results and Analysis

Chapter Five: The Questionnaire Results and Analysis

5.1 Introduction

This chapter explores people's responses to and preferences for their city centre before and after reconstruction. Chapter Five begins by defining the benefits of carrying out the qualitative data survey, then a section dealing with defining the purpose and implementation of the survey. This section also gives an account of the methods used in devising and administering the questionnaire, followed by how the sampling group was determined, and examines in-depth the perceptions and preferences of the 37 respondents. Moreover, this section acknowledges the obstacles and limitations encountered during the survey.

The survey then presents the demographic characteristics of all of the respondents, and introduces some of the valuable comments made by several of them. Based on the researcher's interpretation, all the responses and reasons were piled and classified into dimensions. Finally, explanatory statements follow as substantiation of why such dimensions were selected for discussion.

5.2 Benefits of Qualitative Analysis

The qualitative data survey is a widely-used approach by researchers in many fields of the social sciences, notably anthropology, sociology, urban planning and environmental design (Miles and Huberman, 1994; and Patton, 1990). Qualitative research expresses commitment to viewing **events, actions, norms, values** etc. from the perspective of the questionnaire's respondents. The strategy of taking the respondents' opinions can be expressed in terms of seeing things through the eyes of the people. The general image of the qualitative research is attuned to the notion of viewing social life as involving an **interlocking series of events**, which tends to place much emphasis on the changes that the processes are responsible for inducing (Bryman, 1995, pp. 61, 65). Miles and Huberman (1994) state that:

“Human relationships and societies have peculiarities that make a realist approach to understanding them more complex – but not impossible... Human meanings and intentions are worked out within the frameworks of these social structures – structures that are invisible but nonetheless real. In other words, social phenomena, such as language, decisions, conflicts, and hierarchies, exist objectively in the world and exert strong influences over human activities because people construe them in common ways. Things that are believed become real and can be inquired into.” (Miles and Huberman, 1994, p.4)

Moreover, qualitative research is a source of well-grounded, rich descriptions and explanations of processes in identifiable local contexts. It assists the researcher to determine which events led to which consequences. The findings of qualitative research are characterised as **undeniable qualities**, where words carry concrete, vivid and meaningful explanations. It allows the respondents’ words to be arranged as incidents or stories, which often prove more convincing to a reader, another researcher, a policymaker or a practitioner (Miles and Huberman, 1994, p.1).

Words such as **understanding**, **discovery** and **meaning** became qualitative terms, which may reflect personal and informal thoughts, based on evolving definitions during a study. The qualitative researcher thus acknowledges the value-laden nature of the study and actively articulates personal values and biases, as well as the value nature of the data gathered from the field (Creswell, 1994, pp. 6, 7).

Patton defines qualitative data as “...detailed descriptions of situations, events, people, interactions, observed behaviours, direct quotations from people about their experiences, attitudes, beliefs and thoughts and excerpts or entire passages from documents, correspondence, records, and case histories” (Patton, 1990, p.22). Denzin and Lincoln (1994, p.2) acknowledge that qualitative research means different things to different people. They perceive qualitative research as a naturalistic approach to interpreting and making sense of phenomena that convey meaning to people.

It is particularly applicable in research based on the idea that people perceive the environment in different ways, giving particular responses that may be due to

contextual variables, the mood of the person or the person having different motivations at different times. Lang suggests that people's responses may be based on "... how they have categorised the environment and its elements, on the associations they have built up over time, and on the reinforcements, they have received" (Lang, 1987, p.94).

The qualitative data analysis approach adds information to the context of this thesis. It addresses hidden forces and issues, which are important in highlighting the underlying motivations of people for giving certain responses related to the quality of public space and the surrounding environment.

5.3 The Purpose and Implementation of the Survey

The purpose of this survey is to collate and examine the **collective memory** of the respondents and to understand their **feelings, aspirations** and **expectations** towards the redevelopment of the city centre and its new public spaces. This survey is intended to discover the principles and qualities that encourage people to transact in public space and to nurture the continuing process of post-war reconstruction, as well as the natural evolution of the built environment.

5.3.1 Designing the Questionnaire

The questionnaire used in this survey was designed to move from the general topic areas, to subsidiary topics and, finally, to more specific informational requirements. However, the questionnaire is the result of many modifications and developments to its form and content, including adjustments to the wording, ordering and layout until its final format was determined. The questions included in the questionnaire are classified into seven sections:

- Section A: Demographic Characteristics of the Involved Sample;
- Section B: General Information about the City of Beirut;
- Section C: Places of Interests in the City (*the past and present*);
- Section D: The Old City Centre and its Traditional Souks (*the period before 1975*);

- Section E: The Redeveloped City Centre;
- Section F: Information about the Qualities and Needs of Users in Public Space;
- Section G: Cognitive Mapping.

Samples in both the English and Arabic language are included in Appendices A and B respectively.

5.3.2 Administering the Questionnaire

As the objectives of the thesis are best met through qualitative research, this survey adopted the open-ended questionnaire technique as a method of data collection. In other words, the researcher was required to **interact** with the subjects being researched over a prolonged period of time (Creswell, 1994, p.6).

The **face-to-face interviews** allow the researcher to gain direct contact with the respondents, enabling the researcher to achieve higher response rates with more detailed and rich content than with any other survey approaches. Moreover, face-to-face interviews offer some immediate means of validating the data, where the researcher has the chance to question and assess the quality of the information as it is being provided. However, face-to-face interviews are a more expensive way of administering a survey than using a postal questionnaire. Time and travel expenses, as well as the demands placed on the respondents can be considerable. Another difficulty is that the researcher is involved in arranging long meetings with a large number of interviewees (Denscombe, 1998, p.8). For most people involved in this study, the questionnaires were handed over to them and later collected. This proved appropriate for some of the respondents, who preferred to have extra time when answering the questions. In other instances, the respondents were interviewed face-to-face, on their premises and in private.

5.3.3 Determining the Sampling Group

Determining the sampling group of any qualitative research is always a contentious matter, especially if the sample is statistically small. Qualitative

research therefore focuses on some phenomena embedded in a single social setting, it usually deals with **small samples** of people, situated in particular **contexts** and studied **in-depth** (Miles and Huberman, 1994, p.27). Significant sociological research is often based on relatively small samples drawn from one local area (Gilbert, 1996, p.73). For instance, Oakley's (1974) study into the sociology of housework was centred on a sampling group of 40 respondents. Denscombe (1998, p.24) recommends that small-scale research should involve between 30 and 250 cases.

Qualitative samples tend to be purposive because social processes have a logic and coherence rather than random sampling (Miles and Huberman, 1994, p.27). The concept behind qualitative research is to select purposefully the participants who can best assist the researcher in understanding the phenomenon under study (Creswell, 2003, p.185). Denscombe (1998, p.15) suggests that **purposive sampling** allows the researcher to hand-pick the sample for the study. In this type of sampling, the researcher already knows something about certain people or events and intentionally selects particular ones because they are seen as cases that are most likely to produce valuable data.

Nevertheless, this research adopted a purposive sample that targeted a group of people who have experienced Beirut city centre at different times, namely before, during and after the civil war. The choice of selecting the sampling group in this study was based on **conceptual** grounds (**knowledge, experience and perception**) rather than **representative** grounds (**social, political, or religious background**). The intention was mainly based on incorporating information about **qualities** and **dimensions** of the pre- and post-war spaces of the redeveloped city centre. This survey, therefore, involves 37 mature respondents. They are all responsible, experienced and knowledgeable about many aspects of their city and its centre.

5.3.4 Obstacles and Limitations

This study encountered certain obstacles and limitations. These can be listed as follows:

- Obstacles related to the age of the respondents. At the early stage of distributing the questionnaire, a pilot study was carried out targeting a random sample. The results of that sample indicated that young respondents were less interested, lacked knowledge and many sought the help of older persons in responding to questions related to historical events, traditions, old structures and pre-war places in the city centre;
- There were issues related to the difficulty in answering some of the questions. Some respondents did not complete the questionnaire or refused to answer certain questions that they felt might give an indication of their political affiliation or social status; and
- Other limitations related to time and finances presented significant problems for the research. Only sufficient resources to study a small sample were available. Because of this, the researcher identified an opportunity for further investigation targeting younger age groups and reiterates this as a recommendation at the end of the thesis.

5.4 Demographic Characteristics of the Survey Sample

The demographic data of the respondents is briefly outlined to establish indications of a change in attitude and behaviour of the respondents. These data include the age of the respondents, their gender, work status, level of education, area of residence and length of stay in the city of Beirut.

Age groups:

Table 5-1 shows the respondents' different age groups according to gender, classified into four groups. The first group includes respondents between 35 and 44 years old; the second group between 45 and 54 years; the third group between

55 and 64 years; and the fourth group, 65 and over. In addition, the table also indicates the gender distribution of the respondents, as 15 females and 22 males.

Table 5-1: Cross-tabulation between the age group and gender of the respondents (source: the author, 2004).

Gender	Age groups				Total
	35-44 years	45-54 years	55-65 years	Over 65 years	
Male	7	7	3	5	22
Female	6	7	1	1	15
Total	13	14	4	6	37

Work status:

The respondents involved in the survey were grouped into four main categories based on their work status (Table 5-2). This assists the reader to establish a clear understanding of the respondents' employment level.

Table 5-2: Cross-tabulation between the occupation and gender of the respondents (source: the author, 2004).

Gender	Work status				Total
	Self-Employed	Employee	Housewife	Retired	
Male	4	16	0	2	22
Female	1	7	7	0	15
Total	5	23	7	2	37

Level of education:

The respondents are classified into six main categories according to their level of education (Table 5-3).

Table 5-3: Cross-tabulation between the education level of the respondents and gender (source: the author, 2004).

Gender	Level of education						Total
	Elementary School	High School	Diploma	Bachelor Degree	Master Degree	PhD Degree	
Male	3	1	1	12	1	4	22
Female	2	4	4	4	1	0	15
Total	5	5	5	16	2	4	37

Area of residence:

The respondents are grouped according to their area of residence. The intention of the survey is not to examine the preference of one social group with particular political associations, as this may lead to biased results that emphasise the attributes of a particular territorial group. It is rather to examine a wider sampling group to include people coming from diverse neighbourhoods of the city (Table 5-4). The distribution of these areas within Beirut is indicated on the sketch map (Figure 5-1).

Table 5-4: Cross-tabulation between the area of the respondents' residence and gender (source: the author, 2004).

Gender	Area of residence									Total
	Minet el-Hosn	Achrafiyé	Ras en-Nabaa	Furn el-Chebak	Harat Horiek	Tariq el-Jedideh	Moussaytbeh	Verdun	Al-Sanayah	
Male	2	5	3	2	0	5	2	2	1	22
Female	0	2	0	2	2	3	1	3	2	15
Total	2	7	3	4	2	8	3	5	3	37

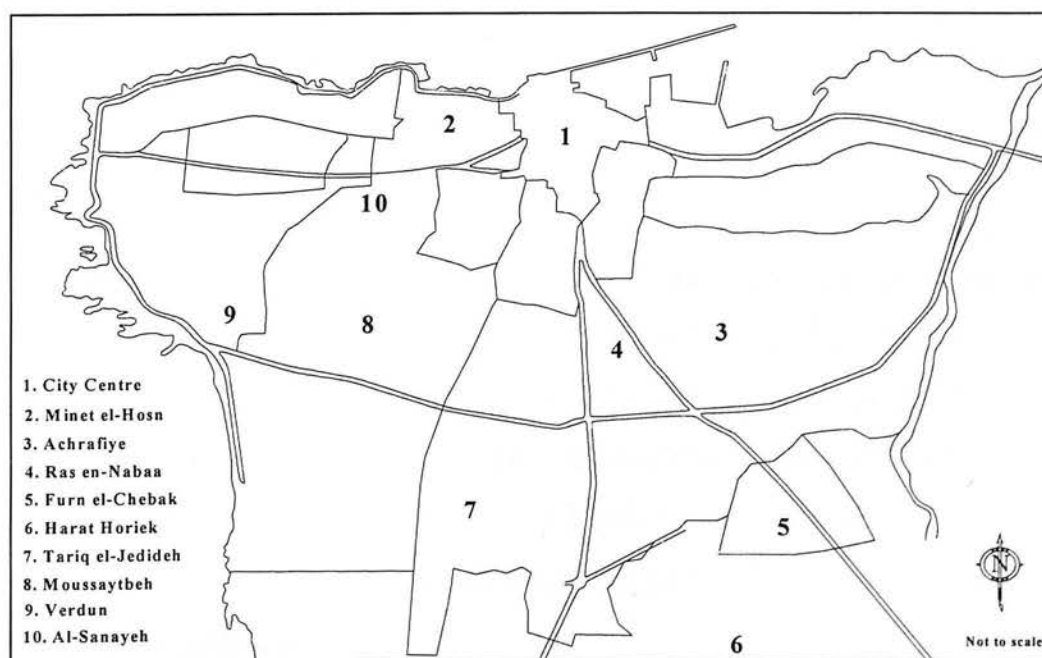


Figure 5-1: A sketch map showing the residential areas of the respondents (source: the author, 2004).

Length of stay:

Table 5-5 below shows the respondents classified into five categories according to the number of years of stay in the city.

Table 5-5: Cross-tabulation between the respondents' length of stay and gender (source: the author, 2004).

Gender	Length of stay					Total
	20-29 years	30-39 years	40-49 years	50-59 years	Over 60 years	
Male	2	3	6	6	5	22
Female	0	3	7	3	2	15
Total	2	6	13	9	7	37

The demographic characteristics of the respondents involved in the survey can be summarised as follows: they are all adults aged between 35 to over 65 years; they live in different parts of the city; their average length of stay is about 50 years; their current employment ranges from self-employed/employed, to housewife and retired person; and with a varied level of education. By gathering information from such a sample group, it is anticipated that the level of information acquired about the different periods of the city reflects those of a range of people who have lived through much of its recent history. The quality of this information is understood as forming the best contribution to the purpose of this research.

5.5 Personal Profiles

This section focuses on introducing the personal profiles of some of the respondents who provided interesting insights and comments. The aim was to give the respondents the opportunity to express their opinion about the pre- and post-war spaces of their city centre. The respondents' comments were originally provided in the Arabic language. An exact and accurate translation into English proved to be impractical and was addressed by giving the overall meaning rather than a literal translation.

1. A retired, 80 years of age, male, lived in Tariq el-Jedideh for 50 years (passed away 2003).

His memory took him back to the late thirties, when his father used to have a small shop selling and mending watches at Martyrs' Square. He said that, from his father's shop, he used to wander in the streets of the old souks to watch and look, or just to pass the time, often walking far in the desire to see more attractive shop fronts. In the summer, he used to sit on a wooden chair in front of his father's shop to watch the activities of the pedestrians passing by. He used to sit beneath a fabric canopy, which was fixed over the shop entrance, providing protection from the heat of the sun. When asked about the most important public square to him, he referred to the Martyrs' Square. He said: "I am the son of al-Burj (referring to Martyrs' Square). I lived, grew up and worked there. I have many good memories of that square, which I will carry with me for life." Such a statement gives an indication of the level of his attachment to his public spaces. They were not places to pass through or in which to gather only, but places that nurtured life for the whole community.

When he mastered his father's profession he opened a similar shop at Riad el-Solh Square. The researcher asked the respondent about the possibility of him going back to his previous business. He replied that nowadays there is no need for a person like him to go to the city centre, as there is nothing there for him. "I lost my shop, which I worked in for about forty years. At that time, I knew almost everybody and everybody knew me. Recently, when my son and I visited the area, I had to figure out where my shop was located. After a while, we discovered that a new glass building had been erected in the same location. Everything has changed, the people, the public squares and even the way of life." He said that he really missed those old days when he used to gather with other shopkeepers in the Riad el-Solh Square for lunch.

He was convinced that, for him to go back and pursue his old profession in Riad el-Solh, he would have to rent a shop, which he could not afford. He continued

by saying that re-establishing his old business would pose many questions. For example, how many watches one would have to repair per day so he could pay his rent? Additionally, how many passers-by would remember that he/she had a watch to repair. He inferred that it would never work out for small businesses to flourish under the current conditions. He suggested that the company in charge of the city centre should encourage small businesses to go back, through providing an appropriate environment for small investors.

2. A school director, 52 years of age, male, lived in Tariq el-Jadide neighbourhood for more than 30 years.

When the researcher asked the respondent about changes he disliked in the city centre, he said that the massive demolition works were unnecessary, particularly in the old souks' quarter. Now, nobody could replace it, due to political and financial reasons. "We would have been better off keeping it as it was, rather than having nothing." He favoured transferring some of the streets to pedestrian zones, as this would create safe public spaces away from traffic and reduce conflict between people and the car. This would provide an opportunity to walk in an environment away from traffic and would encourage people to use the city centre as a meeting place. One would have a multitude of choices, which in time, would give the feeling of being attached to the place. In turn, this feeling would attract people repeatedly to the place. Such a feeling would give the city centre its importance among other sub-centres.

3. A pilot, 56 years of age, male, lived in al-Sanayah neighbourhood since birth.

The respondent began by recapturing some of his past memories. He used to walk during his summer vacations from al-Sanayah neighbourhood to the old city centre, passing through Wadi Abu Jamil neighbourhood, in order to visit one of his relatives who owned a store in Souk al-Franj.¹¹ The store offered rare and

¹¹ Souk al-Franj (the Foreigners' Market) was a market that specialised in high quality and expensive fruits and speciality vegetables. Its customers were mainly high-class women and European people.

exotic fruits, as well as French cheeses arranged in wonderful displays. He used to linger along al-Baladiéh Street (Weygand Street), passing by different types of shops until he reached Martyrs' Square. These are nice memories to cherish. When he was asked about the qualities of public spaces of the old souks, he mentioned the attractive scenery and the beautiful smells emerging from the fruit and flower shops. The smell and the attractiveness of the shops contributed to the quality of the place.

The civil war ravaged the city centre spaces with massive destruction beyond imagination. The respondent thought that what was more distressing than the destruction of old buildings and the subsequent clearance of rubble was the loss to the community of its shared values, meanings and associations to public spaces. The reconstruction of the city centre was a miracle, as it removed the scars of the civil war. Nevertheless, the city centre was reconstructed in an immaculate and expensive way, which left little chance for local people to re-establish their old businesses. Nowadays, public spaces in the city centre have become a museum for the poor and a paradise for the rich.

4. A housewife, 67 years of age, lived in Moussaytbeh neighbourhood since birth.

She remembers very clearly the public spaces of the old souks. She said that, when she used to visit the city centre, she arrived at Bab Idris Square, where there were the entrances to three main souks, namely: Ayyass, al-Tawileh and al-Jamil. Al-Daouk drinking water fountain was one of the features that characterised public spaces of the old souks. It was located at the end of the road that ascends from Souk al-Franj. The respondent remembered tired customers gathered around the fountain loaded with their shopping, being chased by young boys with wicker baskets and paper bags, offering them the service of carrying their shopping from the souks to their home for a little money.

5. A housewife, 48 years of age, lived in Harat Horiek since birth.

The respondent started by describing the qualities and needs she required of the present public spaces of the city centre. She mentioned that there is a need to encourage daily activities. She advocated the concept of converting some of the local streets to pedestrianised zones and including some restaurants and other facilities, as this would make the place lively and enhance social encounters. She expressed concerns that public spaces might lack an imbalance between various social groups. She asserted that safety and security are the most important qualities of public space. If you feel safe and secure in a place, you can spend your time and carry out your normal activities freely without feeling that you are at risk. In the past, there were specialised souks for selling antiques, like Souk al-Bargouth. These souks attracted many tourists. Nevertheless, Souk al-Bargouth did not provide the products necessary to satisfy people's daily needs, but functioned more as an exhibition place for tourists and visitors to admire. It is nice to go around, but there is nothing you really need to buy. It is temporary, in the sense that it is only open at night and it does not remain open throughout the year.

6. A teacher, 50 years of age, male, lived in Tariq el-Jedideh since birth.

The respondent described his regular visits to his grandfather's store near Souk al-Bazrakan. He remembered a series of memories regarding the public spaces of the old souks. He said that he could never forget the social interaction that occurred among the people. Public spaces were in constant use and were always busy, crowded and full of people. It was a joyful atmosphere, which prevailed throughout the city centre, in particular the souks, where the merchants and customers were continuously interacting, greeting each other, smiling and bargaining. He felt that the removal of the old souks and their proposed replacement with modern structures contradicted the character of the survived of the city's urban fabric. He was in favour of preserving the city centre's residential neighbourhoods, despite the condition of its physical fabric. He put

forward several recommendations for consideration in the plans for the reconstruction of the city centre. These were:

- To re-develop the old souks of Beirut in a way that responds to traditions and culture;
- To encourage pedestrian movement in public spaces in the city centre;
- To provide a variety of services and encourage daily activities, which cater for all social groups;
- To keep spaces well-maintained and clean and to provide trees and landscapes along streets and in public spaces; and
- To maintain security and safety as a major factor in drawing people back to the post-war spaces.

He felt that this would draw people together in public spaces, where reconciliation could take place, as well as promoting identity, culture, heritage and attachment to places. The souks could then become places where all the residents of the city, as well as people from other regions and tourists, would converge. He suggested adding many productive activities to the area's traditional commercial activities, whereby each distinct group of activities would have its own defined business areas. He suggested having small shops and stores, craft shops, a variety of restaurants, cafés and theatres.

5.6 Piling of the Responses

In an open-ended questionnaire, the respondents were asked to give three responses and two reasons. The open-ended questionnaire invited the respondents to reflect on a range of specific aspects of their knowledge of Beirut, past and present. Using questions such as “Mention three (3) important features or things you liked about public spaces in the old souks” or “Mention three (3) features or things you disliked about public spaces in the old souks”, the author identified particular features or characteristics that evoked strong positive or negative feelings. For each answer given, the respondents were asked to give (2) reasons.

This allowed each respondent to remember meanings and associations related to each response. For instance, when a question was asked about areas, streets, traditions and customs, the responses were given in a preconscious manner. The researcher was able to extract and interpret such meanings and associations from the responses. The same process was repeated for the other questions. The answers to the questions are given in full in Appendix C at the end of this thesis.

Using a statistical program (SPSS), the questionnaire responses and reasons were coded and entered in a systematic order, starting with the respondent sequence number, the demographic characteristics and followed by the responses and their reasons. Then the responses and reasons to each individual question were piled and sorted in a descending order; i.e. ranging from the highest to the lowest frequency. This gave a clear indication about the most significant responses and their reasons as to why they were favoured by the respondents.

The total number of answers piled was 7173 responses, which provided data related to the respondents' preferences of the city and its centre. Based on the researcher's interpretations, people's responses were classified into dimensions, then explanatory statements followed as substantiation of why such dimensions were selected for discussion.

5.7 Interpretation of the Responses

Qualitative research is interpretative research, where the researcher's biases, values and judgement are stated explicitly in the research report. Such openness is considered useful and positive (Locke et al., 1987). Metaphors and analogies are as appropriate as open-ended questions. Data analysis requires the researcher to be comfortable with developing categories and making comparisons and contrasts (Creswell, 1994, p.153).

The interpretation of the responses ranges from more global to more specific, which generates valuable information about how the sample perceived and appreciated public space and the environment. The level of frequency of any

response can be considered as an indicator of its significance. However, understanding the man-environment relationship requires a holistic perspective that recognises the inseparability of the variety of the aspects that have been signified by the respondents.

5.8 Dimensions

Dimensions are the **motivating forces** behind **people's involvement** in the **environment**, provoking a sense of the significance of **objects**, being stimulated by **activities**, and feeling and thinking by **aspects** (Aspinall and Ujam, 1992; Abdalla, 1998; and Assi, 1998).

Such motivating forces are behind any occurrence in the environment, whether it is physical or emotional, visible or hidden, permanent or momentary. For instance, why do people visit one place but not the other? The reason could be that some places are safer for people to carry out their activities than are others. **Variables may include factors such as climate, texture, trees, views, walking, seeing, spiritual, sentimental, sense of place, sense of time etc.** For example, if the social dimension is under discussion, this could mean the accumulation of so many responses and reasons, including objects, aspects and activities.¹² When asked to mention three things they like to do every day and to give two reasons for each answer, the respondents were free to give answers such as: "I like to go to the café because I like to meet friends, to enjoy the fresh air, or to pass the time". Going to the café, sitting there, enjoying the fresh air and meeting people could be interpreted as social.

Therefore, the word **social** is a dimension driven by motives such as going to places, sitting on a bench, eating in a restaurant, talking to people, meeting friends, enjoying the fresh air, visiting a café, etc. Many other dimensions of a

¹² These principles emerged from discussion with Dr. Faozi Ujam at the Edinburgh College of Art, summer 2000, Dr. Ujam explained his profound interpretation of people's perceptions, which he classified into three categories namely objects, aspects, and activities. He instigated that dimensions are motivating forces behind people's involvement in the environment.

place, such as its economy, also motivate people, and could be associated with shopping, buying, selling, affordability, old souks, merchants, etc.

The inclusion of a variable in any particular dimension is irrespective of its intrinsic qualities, whether it contributes positively or negatively. For example, under the dimension of safety, for instance, come unsafe issues such as pollution, slippery walkways and insufficient light. Such issues are perceived in this research as motives that need to be accommodated in any design strategy.

For example, the issue of pollution, as such, becomes the motive for cleanliness, thus resulting in a pleasant environment. The issue of slippery walkways becomes the drive for efficient maintenance to minimise painful incidents. The issue of insufficient light becomes the motive to distribute light units in locations that most benefit the pedestrians and other modes of movement, thus reducing crime levels, and traffic accidents.

In Chapter One, the transactional perspective assumes that person and context are aspects of a system that jointly and mutually define one another and contribute to the meaning and nature of a holistic event. The transactional perspective rejects the use of independent and separate elements or parts, instead the different aspects of the whole co-exist as intrinsic and inseparable qualities of the whole (Altman and Rogoff, 1987, pp. 24, 25).

Dimensions and their variables are seen in this research as inseparable entities whose interrelationships are continuously changing and being mutually defined, thereby conveying meaning one to the other. Relationships among variables of the same dimension are so intermeshed that the definition or understanding of one variable requires simultaneous inclusion of other variables in the analysis.

An example of relations among dimensions and variables in the transactional perspective is seen in the example of the old souks. The old souks have been highly referred to by the respondents for their economic importance. Such importance derives not only because the old souks are places for trade and

business. They are also places that foster tradition, cultural continuity, social interaction, aesthetics, leisure and entertainment, etc. The relational qualities that exist between the old souks and other dimensions define and govern the way people function within an environment whose circumstances are constantly changing. This analysis is transactional in nature in that all the qualities mentioned earlier contribute, in part, to the definition and meaning of old souks. Table 5-6 introduces the dimensions and the variables that were emphasised by the respondents.

Table 5-6: The piling of the respondents' responses and reasons (source: the author, 2004).

Dimensions	Variables	Freq.	Total
			Percent
Economic	Affordability, commercial streets, variety, old souks, economic concerns, style of facilities, commercial activities, stalls and vendors, speciality goods, commercial importance, bargaining, shopping centre, local shops, attracting businesses, commuting, management system, changing use of centre, location, good services, presence of business, attracting old merchants, space utilisation, seaport, public facilities.	917	12.8
Leisure and entertainment	Attracting people, touristy, entertainment, walking, relaxing, lingering, encourage prolonged visits, Raouché area, sports, old souks, observing activities, resting, spending time, discovering places, Hamra Street, Hotel District, Verdun Street, al-Maarad Street, entertaining, drinking refreshments, city sports stadium.	703	9.8
Safety	Safety and security, hygiene, protection from climate, risky condition, crowded spaces, pollution, obscured spaces, old souks, congestion, good for women, ventilation, slippery walkways, noisy atmosphere, controlled environment, well-lit at night, insufficient light, dumping ground, inhumane, exposed to rain, fabric canopies, location.	624	8.7

Continued from previous table.

Aesthetics	Quality, attractive, aesthetical value, old souks, admiration, organised setting, nice views, sleek architecture, modern image, well-lit at night, art displays, displaying products, new environment, shop fronts, uniqueness.	551	7.7
Psychological	Sense of familiarity, user-friendly, lively, good for the whole family, discourage prolonged visits, confusing, inactive, atmosphere, pausing at shop front, old souks, good expectations, sense of time, contemplating, sense of direction.	491	6.8
Social	Social interaction, family reasons, celebrations and festivities, informal, old souks, meeting place, courtesy, wedding ceremonies, identity, meeting people, social activities, verbal exchange, gathering of people.	462	6.4
Accessibility	Preferences, pedestrianised street, accessible, al-Nijmeh Square, linkage, parking places, al-Maarad Street, good for pedestrians, transport stations, new road network, Allenby Street, Weygand Street, Foch Street, traffic free, location, Bab Idris.	433	6.0
Comfort	Convenience, pleasant, comfort, daily needs, essential, suitability, functional, adequate seating, bringing pleasure, public toilets, appropriateness, quenching thirst, location.	429	6.0
Architectural	Character, restoration, covered pathway, high standard, colonnades, new souks, Parliament Building, compactness, high quality construction, old souks, National Museum, location, Grand Serail, Municipality Building, al-Azariyé Building.	389	5.4
Traditional	Traditional, cafés, street market, traditional foods and drinks, sitting in a café, craft shops, festivity shopping, wearing costumes, occasional, listening to storyteller, gathering of people, visiting al-Gasaz café, eating food, old souks, temporary events, Souk al-Bargouth, Intabli fountain, tramway tours, identity.	324	4.5

Continued from previous table.

Cultural	Cultural value, exhibitions and conferences, political life, bubbling with activity, identity, programmed events, going to theatres, freedom of speech, encourage artistic activities, educational, gathering of people, location, Grand Theatre.	320	4.5
Spatial	Martyrs' Square, al-Nijmeh Square, Riad el-Solh Square, promenade, vacant areas, meeting point, location, open spaces, connected spaces, Intabli Square, Dabas Square, Sassine Square, isolated, vastness, Bab Idris Square.	263	3.7
Emotional	Sentiments, loss of businesses, demolition of places, attachments, past memories, restore image, imitation of the past, old tramway, burial ground clearance, unnecessary.	260	3.6
Sensory	Sight, hearing, smell, way-finding, fresh products, convey knowledge, attracted to sounds, touch, feeling the surrounding, listening, taste, old souks, examining products, nice aromas, knowing places.	215	3.0
Symbolic	Symbolic value, statues, landmark, sense of unity, Raouché Rocks, location, bourgeois image, al-Abed Clock, naming of places, focal point, al-Manarah tower.	211	2.9
Historical	Historical value, revealing ancient finds, heritage, Martyrs' Square, National Museum, display of antiques, Riad el-Solh Square, identity, Bab Idris, al-Maarad Street, al-Nijmeh Square, Grand Serail, old souks.	198	2.8
Territorial	Closeness, Ras Beirut, al-Achrafiyé, Furn el-Chebak, Tariq el-Jedideh, Basta area, city centre, Adoura, Bourj Hamood, location, old souks.	153	2.1
Religion	Religious buildings, religious reasons, attending ceremonies, spiritual, identity, going to burial grounds, charitable events, good cause.	128	1.8
Natural environment	Fountains, Pine forest, natural views, Sanayah park, shaded areas, fresh air, location, Sioufi Park, good landscape, gathering of people.	102	1.4
Total		7173	100.0

5.8.1 Economic

The economic dimension was highly significant to the respondents and its variables were referred to 917 times, which is approximately 12.8% of the total frequencies of all the answers (Table 5-7).

Table 5-7: Economic dimension and its variables (source: the author, 2004).

Dimension	Variables	Freq.	Percent	Total
				Percent
Economic	Affordability	131	14.3	
	Commercial streets	126	13.7	
	Variety	89	9.7	
	Old souks	72	7.9	
	Economic concerns	68	7.4	
	Style of facilities	61	6.7	
	Commercial activities	47	5.1	
	Stalls and vendors	41	4.5	
	Speciality goods	39	4.3	
	Commercial Importance	38	4.1	
	Bargaining	37	4.0	
	Shopping centre	36	3.9	
	Local shops	23	2.5	
	Attracting businesses	17	1.9	
	Commuting	15	1.6	
	Management system	15	1.6	
	Changing use of centre	14	1.5	
	Location	11	1.2	
	Good services	10	1.1	
	Presence of business	8	0.9	
	Attracting old merchants	6	0.7	
	Space utilisation	6	0.7	
Seaport	4	0.4		
Public facilities	3	0.3		
Sub-total		917	100.0	12.8

Affordability was the most significant economic variable and was mentioned 131 times.¹³ It was notable that affordability was mainly linked to the **old souks**,

¹³ Affordability (meaning both affordable and unaffordable) mainly emerged as a reason to various answers given by the respondents. See Appendix C for piling of questions, 3, 5, 7, 9, 11, 15 and 16.

including Souk Sursok, Souk al-Nouriye, Souk Ayass, Souk al-Samak, Souk Abi-Anaser, Souk al-Lahameen, Souk al-Azariyé, which formed part of the old souks. Among the other responses are features such as: local shops and markets, craft shops, vendors, transport stations, traditional coffee shops, old tramways, entertainment places and informal settings. The respondents referred to the old souks as the most important place in their city. The old souks combine social, cultural, traditional, historical and economic values. They were the main source of good quality and cheap commodities that catered for the whole community.

Almost all the respondents surveyed identified the old souks as the place for social, cultural and commercial activities before the civil war took place.¹⁴ This was confirmed by observing many of the variables associated with the old souks are also related to other dimensions, such as economic, leisure and entertainment, safety, aesthetics, psychological, social, architectural, traditional, cultural, sensory and territorial dimensions. This demonstrates that, although the souk is primarily a place of commerce, its function in city life is far more holistic. Such a finding should be brought to the attention of those responsible for reconstructing the old souks of the qualities their proposals need to embrace.

People's appreciation of the public spaces of the old souks was due to many reasons that they felt had given the old souks their unique importance. People were attracted to the old souks because they were places **to meet, to shop and to spend time**. People used to come from different parts of the city and the surrounding towns, seeking good bargains and affordable products. The public spaces of the old souks used to accommodate wholesale merchants, stalls, vendors and push carts. Economic activities such as **selling, buying and bargaining**, all gave the public spaces of the old souks their **informal nature**, and generated attachment to these places. As a habit, local customers always sought good **quality products, fresh food and lower prices**. The public spaces of the old souks witnessed honest competition amongst merchants in their

¹⁴ See question 3, Appendix C.

attempts to attract the attention of speculative customers. Making better offers, reducing prices or giving additional quantities were all means to encourage customers to come back repeatedly. From reviewing the reasons given by the respondents, the author deduces that the hidden meanings and associations to the old souks are still the most important in the memory of many Beirut people today.

Economic concerns for the new reconstructed souks were insinuated by some of the respondents, who felt that the city centre could not survive for long without having its traditional souks reinstated, as they were the real generators of the economy and a means of attracting local people, visitors, tourists and investment. Other respondents were concerned about the extent to which the new souks' project, which has been halted for more than 5 years for financial and political reasons, will cater primarily for the middle and upper classes, alienating the rest of the society. It was noted from people's responses that their shopping habits have already been shifted to places located close to their neighbourhoods, which would have an impact on the continuity of activities in public spaces of the city centre.

Although **unaffordable**, as a variable, was not mentioned frequently by the respondents, it was mainly related to responses including bourgeois image, suitability for investors, high quality construction and modern road networks. Some of the respondents touched on the issue of the cost of reconstruction, arguing it was too high, unaffordable and exerted many social and economic pressures on the local community.¹⁵ They noted that the cost of high-quality restoration and reconstruction created economic pressures on Solidere (the company in charge of reconstruction), as well as discouraging former businesses from going back, as property prices had gone sky-high. Economic pressure has forced Solidere to attract big investors who are capable of paying the price of reconstruction. Such investors, who have no previous family connections with or

¹⁵ See Appendix C for the piling of responses and reasons of question 15.

attachments to the Beiruti community, reflect an unfamiliar social image, one that is characterised by their wealth and social status.

5.8.2 Leisure and Entertainment

Leisure and entertainment are qualities of a space that represent the participation of users with each other and the surrounding environment. They offer opportunities for relief from the stresses of urban life and provide for societal contact. Generally, the respondents referred to various variables related to leisure and entertainment, which were observed in total 703 times, equivalent to 9.8% of the total number of responses given by the respondents (Table 5-8).

Table 5-8: Leisure and entertainment dimension and its variables (source: the author, 2004).

Dimension	Variables	Freq.	Percent	Total Percent
Leisure and entertainment	Attracting people	129	18.3	
	Touristy	101	14.4	
	Entertainment	97	13.8	
	Walking	74	10.5	
	Relaxing	49	7.0	
	Lingering	38	5.4	
	Encourage prolonged visits	35	5.0	
	Raouché area	28	4.0	
	Sports	25	3.6	
	Old souks	18	2.6	
	Observing activities	18	2.6	
	Resting	17	2.4	
	Spending time	14	2.0	
	Discovering places	12	1.7	
	Hamra Street	11	1.6	
	Hotel District	11	1.6	
	Verdun Street	8	1.1	
	Al-Maarad Street	7	1.0	
	Entertaining	5	0.7	
	Drinking refreshments	4	0.6	
City Sports Stadium	2	0.3		
Sub-total	703	100.0	9.8	

Entertainment was cited 97 times as a reason for various responses and was related to cultural events and organised programmes and activities in public spaces.¹⁶ This gives an indication of the value of entertainment and leisure in the lives of the respondents. Variables given for leisure and entertainment included activities such as walking, relaxing, lingering, sports, observing, resting, spending time, discovering places, entertaining and drinking. It was also observed that the respondents enjoyed passive activities more than active ones; this may be related to the age of the people involved in the survey; a different age cohort might have revealed different results.

Walking is more intimate to the environment and therefore allows a more articulated process of interpretation and remembering (Madanipour, 1996, pp. 64, 65). In addition, "... the freedom with which a person can walk about and look around is a very useful guide to the civilized quality of an urban area" (Moughtin, 1992, p.132). Out of all activities, walking was the most cited and was mentioned 74 times. The respondents denoted walking as an important activity that relates to many aspects of their daily life, and this raised hopes for pedestrianised areas, which is part of the discussion of the accessibility dimension of this section.

Relaxation was the second highest activity after walking; it was observed 49 times in people's responses and was linked mainly to environment and nature, including the promenade, the pine forest and various parks. Related to relaxation was a sense of security, which is an important quality of public space. The respondents felt that, if security was not provided for the public, it would be very difficult for the young to stay longer in public spaces and for the frail to go outdoors.

Moreover, adequate seating was mentioned as one of the qualities people preferred to have in public space, which is also linked to relaxation.¹⁷ Relaxation

¹⁶ See Appendix C for the piling of responses and reasons of individual questions 1, 2, 6, 8, 18, 19.

¹⁷ For relaxation, see questions 6 and 18, Appendix C.

is the quality of space that provides a sense of psychological comfort; a lifting of physical strains, moving the person to a sense of repose (Marcus and Francis, 1998, p. 217). A sense of relaxation can be evoked through passive qualities of space, which involves an awareness of the surrounding environment yet without being vigorously involved in it (Figure 5-2). Such activity is closely related to leisure, which includes looking and observing other people's activities, rather than being actively involved in activities.

Enjoying nature may encourage seasonal awareness and help older persons to maintain cognitive orientation to the passing of time, while offering variety and interest (Marcus and Francis, 1998, p. 223). Carstens argues that there is a misconception that older people prefer a “peaceful and quiet environment”. He considers that it is very important for elderly people to meet, talk and feel part of the activity; even sitting and observing activities may be an active form of participation for them (Carstens, 1982).



Figure 5-2: Relaxation in the city centre can only happen to those who can afford it (source: the author, 2004).

The respondents mentioned the Raouché area frequently as a place for leisure and entertainment. It is mainly associated with its famous landmark Raouché Rocks (Pigeon Rocks), which attract many people and tourists, as well as its spectacular views towards the sea (Figure 5-3). Although the Raouché area is predominantly a middle- and upper-class residential area, its popular promenade has become a public place where all social groups meet to pursue a variety of activities, such as jogging, walking with the family, sitting in cafés and dining in a restaurant. The Raouché area also embraces many places of entertainment, amusement centres, cafés, restaurants, as well as sports facilities, which attract many people and tourists, making the area a hive of activity at night (Figure 5-4).



Figure 5-3: An attractive view towards Raouché Rocks (source: the author, 2004).



Figure 5-4: A view of the Raouché area showing its promenade with some tourists enjoying the scenery (source: the author, 2004).

Hamra Street is a cosmopolitan street renowned for its leisure and entertainment, as well as its commercial and cultural facilities. Although predominantly middle-class in lifestyle, the Hamra area has a heterogeneous cosmopolitan, ethnic and religious mix (Khalaf and Kongstad, 1973, pp. 142-143).

During war times, leisure and entertainment were restricted and activities became limited to seeking basic needs, safety and shelter. Different times of the day meant people went to numerous places and pursued various activities. Where people once freely occupied public space in pursuit of their normal lives, the conflict forced them to desert these spaces and look for a hiding place. Similarly, at night, people's activities were mainly constrained to their own homes, a pattern which could last for days, rendering a sense of time as meaningless.

5.8.3 Safety

Public perception of crime and fear for their personal safety has led many people to change the way in which they use public spaces in their community (Marcus and Francis, 1998, pp. 6-7). In this survey, the respondents signified safety as an important dimension required of a public space. Its variables were cited 624 times, equivalent to 8.7% of the total number of answers (Table 5-9). The respondents felt that if safety and security were provided, people would be encouraged to continuously occupy and visit public spaces.

Table 5-9: Safety dimension and its variables (source: the author, 2004).

Dimension	Variables	Freq.	Percent	Total Percent
Safety	Safety and security	193	30.9	
	Hygiene	105	16.8	
	Protection from climate	48	7.7	
	Risky condition	42	6.7	
	Crowded spaces	40	6.4	
	Pollution	23	3.7	
	Obscured spaces	19	3.0	
	Old souks	18	2.9	
	Congestion	18	2.9	
	Good for women	18	2.9	
	Ventilation	16	2.6	
	Slippery walkways	14	2.2	
	Noisy atmosphere	11	1.8	
	Controlled environment	11	1.8	
	Well-lit at night	11	1.8	
	Insufficient light	10	1.6	
	Dumping ground	8	1.3	
	Inhumane	6	1.0	
	Exposed to rain	5	0.8	
	Fabric Canopies	5	0.8	
Location	3	0.5		
	Sub-total	624	100.0	8.7

Variables relevant to safety and security included a safe place, familiarity, liveliness, pedestrian zones, management systems, suitability for investors, well-lit at night, parking places, safe for children and women, good for the whole family, encourages prolonged visits, comfort, encourages walking, accessibility, necessary and essential.

It was clear that when the respondents were asked about the most important places in the city they used to go to for shopping during the civil conflict, several responses and reasons were given associated with safety and security. Safe places were highly emphasised by the respondents and were linked mainly to their local neighbourhoods or to those of their relatives. In addition, people associated

themselves with names of places. For instance, during the war people used terms such as al-Sharkeiyh wa al-Garbieyh¹⁸ in referring to the eastern and western sectors of Beirut, which not only indicated particular locations but also the different affiliations of their inhabitants. This supports the findings of the literature in Chapter Two as well as the contextual review of Chapter Four regarding territoriality, identity, social exclusion, and safety and security.

The respondents also referred to local shops as safe, familiar, close to their family and relatives and satisfying daily needs. During the war, the activities of local inhabitants were mainly restricted to bare necessities; civil liberties were controlled. People sought safe places and shelter away from streets and public spaces, as they were theatres of conflict where the warring factions tried to resolve their differences. This gives a good indication about the limitations and restrictions imposed on civil liberties during the civil war and confirm the statements made by Khalaf (1993), Erikson (1976) and Fried (1963) in Chapter Four regarding the extreme physical and psychological conditions people endure throughout the atrocities of war.

In recent years, the agency responsible for managing the reconstructed areas of the city centre has hired its own security guards. Some of the respondents regarded the presence of security guards in public spaces as a means to control behaviour. On the other hand, some of the respondents perceived that the presence of security guards, the high standard of reconstruction and the saturation of public spaces with street cafés, limited the public use of such spaces and give unambiguous visual and spatial messages about the types of people welcomed in such places.

“Fear of crime limits women’s access to resources and opportunities... But it also affects the livability and viability of the city: Fewer people use the streets; city services may not be used by the people who need them; stores in downtown centers may lose customers; and employers have a more limited pool of employees.” (Wekerle and Whitzman, 1995, p.4)

¹⁸ Al-Sharkeiyh and al-Garbieyh are Arabic terms meaning east and west.

Female respondents indicated that the provision of safety and security features have much improved in the current public spaces, which encourage women to stay longer. Variables cited more by female than male respondents included user-friendly environment, connected spaces, pedestrian zones, lively, safe environment, sense of familiarity, good for women, safe for children, good for the whole family and comfort. These responses indicated that fear of crime affects family members, in particular women and children, as they are the most susceptible to violence. Hygiene was cited frequently and was considered an important health and safety variable. Pollution, health, ventilation and cleanliness were variables related to hygiene.¹⁹

The respondents also referred to some of the spaces of the old souks, as crowded, congested, noisy and slippery, particularly in respect of Souk al-Samak, Khan al-Dajaj, Souk al-Lahameen and Souk al-Nouriye, which sell fish, poultry, meat and vegetables. Such souks lacked sanitation and storm water systems. This problem was most apparent during the winter, particularly when the rainwater accumulated on roads and walkways. Some of the respondents reported incidents that had led to personal injuries because of bad or slippery walkways. In addition, some reported that various spaces of the old souks were crowded, confusing, inconvenient, unhealthy, unventilated and uninviting.

Crowded spaces are stressful because they restrict personal autonomy and expression and break down desired patterns of communication. Crowding is associated with a feeling of a lack of control over the environment. It is affected by the individual's perception of the degree of control others have over the intrusions they are making (Rapoport, 1977, pp. 335, 336).

In contrast, the respondents referred to a clean environment as a quality that distinguished the redeveloped city centre from the former public spaces. Among the benefits reported was that the reconstructed city centre now provides an aesthetically clean environment. The removal of the old souks and the

¹⁹ For hygiene see Appendix C, questions 10, 13, 15, 19, 23.

implementation of an efficient infrastructure, including storm water and drainage systems, have eliminated pollution and reduced health risks; but for some of the respondents, they have also eliminated public life. In addition, hygiene was considered to reduce dissatisfaction, but did not actually lead to satisfaction. In other words, its absence provoked much stronger, negative feelings than its presence provoked positive recognition.

Taking Aguirre's (1999) argument that motivating forces are the ones that are thought to lead to satisfaction, similar to Maslow's top level of human needs. Hygiene is an essential variable that contributes to the quality of public space and if not considered, may lead to dissatisfaction and discourage people from prolonged visits. Among other variables related to both hygiene and comfort was the provision of public toilets.²⁰ Female respondents mostly mentioned this as a quality among facilities they require in a public space. They feel that the provision of clean and properly located public toilets aids comfort, satisfaction and convenience. Although Beirut enjoys a moderate climate, the respondents felt that protection from the climate was an important environmental variable that characterised the public spaces of the old souks. It was referred to 48 times overall.²¹ They referred to the compact planning of the old city centre and the narrowness of its spaces and pathways that provided shaded areas and filtered direct sunlight.

Similarly, the traditional covered pathways, colonnades and fabric canopies provided protection from the climate while moving from one place to another during both summer and winter. The respondents cited the importance of protection from the climate for reasons related to human needs, including comfort, pleasantness, resting, encouraging walking and for encouraging prolonged visits. Evidence on the ground that supports these remarks is that many small businesses and cafés have needed to set up temporary awnings and shelters (Figure 5-5 and Figure 5-6).

²⁰ See Appendix C question 18.

²¹ See Appendix C questions 3, 9, 16, and 18.



Figure 5-5: A recent solution to protection from the climate (source: the author, 2004).



Figure 5-6: A plastic hut as protection from wind and rain (source: the author, 2004).

Older respondents mainly voiced some concerns related to their vulnerability to climate, and they acknowledged their need for protection from it. Marcus and Francis (1998, p. 214) observe that elderly people are particularly susceptible to changes in temperature, and to excessive heat, cold, wind and glare.

5.8.4 Aesthetics

Aesthetic qualities contribute to the character or identity of a city, because a person's mental map is constructed from its landmark places. The aesthetic qualities of an urban setting affect people's judgment (Devlin, 1976, pp. 235-243). Aesthetic pleasure is derived from satisfying basic needs, which are required for the purpose of survival, such as safety and security factors (Appleton, 1975; and Dewey et al., 1987).

Appleton (1975, p.69) regards aesthetic satisfaction as the spontaneous perception of landscape features which in their shapes, colours, spatial arrangements and other visual factors act as sign-stimuli indicative of environmental conditions favourable to survival, whether they really are favourable or not. One of the principal aims of the reconstruction process has always been the rapid transformation of the destructed areas into an aesthetical environment that is portrayed through the development of attractive structures, a clean environments, mini parks and archaeological sites (Figure 5-7).

The aesthetic dimension was mentioned 551 times, corresponding to 7.7% of the overall number of responses (Table 5-10). It was mainly related to the architectural character and landmarks of the main areas of the city centre.²² The respondents referred to aesthetic qualities as an important aspect that distinguished the redeveloped city centre and its



Figure 5-7: Jbran Khalil Jbran park facing the ESCWA building. The public rarely uses this park (source: the author, 2001).

public spaces, including sleek architecture, clean environment, organised setting, touristy, attractive, admiration and well-lit at night (Figure 5-8).

Table 5-10: Aesthetics dimension and its variables (source: the author, 2004).

Dimension	Variables	Freq.	Percent	Total Percent
Aesthetics	Quality	169	30.7	
	Attractive	68	12.3	
	Aesthetical value	50	9.1	
	Old souks	49	8.9	
	Admiration	28	5.1	
	Organised setting	28	5.1	
	Nice views	27	4.9	
	Sleek architecture	23	4.2	
	Modern image	20	3.6	
	Well-lit at night	19	3.4	
	Art Displays	18	3.3	
	Displaying products	17	3.1	
	New environment	17	3.1	
	Shop fronts	11	2.0	
	Uniqueness	7	1.3	
Sub-total		551	100.0	7.7

In their appreciation of the built environment, people demonstrated an awareness of the new image of the city centre with regard to its modernist versus traditional

²² See questions 2, 15, and 22 of Appendix C.

character. Some of the respondents associated the Hotel District with aesthetical values because of the new and modern architecture it embraces. On the other hand, most of the respondents were in favour of transforming some streets in the city centre to pedestrianised zones because of the aesthetic qualities they would then carry. The respondents particularly appreciated the aesthetic qualities of the historic buildings in the area, including old mosques, churches and civic buildings, which also represent identity and heritage.



Figure 5-8: Light at night is a quality that adds to the aesthetics of reconstruction. The site of the old souks (source: www.solidere-online.com/history/).

Quality as an aesthetic variable was frequently cited and it was observed 169 times in the overall responses. Quality is associated with almost every aspect of public life. The respondents mainly associated quality with the old souks, in terms of the freshness of products, attractive shop fronts and nice smells. Aesthetic quality is conveyed by more common experiences such as comfort, convenience and pleasure (Mehrabian and Russell, 1974; and Lang, 1987).

5.8.5 Psychological Factors

The psychological dimension was mentioned 491 times, which corresponds to 6.8% of the overall responses (Table 5-11). Although it has been considered as a separate dimension, a sense of safety is closely related to the psychological dimension. Moreover, the respondents mentioned a sense of familiarity with an overall frequency of 139. Familiarity of place was closely related to safe place, informal, friendly and lively environments, courtesy and social interaction.²³

²³ A sense of familiarity was observed in questions 3, 4, 5, 7, 9, 8, 16, see Appendix C.

Table 5-11: Psychological dimension and its variables (source: the author, 2004).

Dimension	Variables	Freq.	Percent	Total Percent
Psychological	Sense of familiarity	139	28.3	
	User-friendly	62	12.6	
	Lively	52	10.6	
	Good for the whole family	51	10.4	
	Discourage prolonged visits	46	9.4	
	Confusing	39	7.9	
	Inactive atmosphere	37	7.5	
	Pausing at shop front	29	5.9	
	Old souks	14	2.9	
	Good expectations	8	1.6	
	Sense of time	7	1.4	
	Contemplating	4	0.8	
	Sense of direction	3	0.6	
	Sub-total		491	100.0

The majority of the respondents referred to familiar places during the war as the ones within their neighbourhoods. When the respondents were asked about the places in the city they used to go to for their shopping before the civil conflict, they spoke of their familiarity with the old souks. The respondents also mentioned that light at night brought psychological comfort and a sense of security.

Although public lighting increases the aesthetic quality of the environment, it is equally essential to improving visibility, increasing safety, reducing crime, encouraging prolonged visits and encouraging night activities. An informal observation of pedestrian movement along al-Maarad Street conducted by the author in March 2004 revealed that the number of female visitors increases during the night (Figure 5-9 and Figure 5-10). This gives an indication of the level of psychological comfort and satisfaction among women in using the current spaces. As women have been increasingly integrated in the community, their influential role in promoting the local economy has expanded. They have

now assumed an important role in society and in contributing to education, politics, arts and science.



Figure 5-9: Sitting in a street café, a modern phenomenon that reflects a particular social status (source: the author, 2004).



Figure 5-10: Light at night gives people a sense of psychological comfort (source: the author, 2004).

5.8.6 Social Factors

“The environment is made more congruent with the socio-cultural and cognitive environments; its organization of space, time, meaning, and communication is clear, easily decoded and social identity expressed.” (Rapoport, 1977, p.257)

Public space is vital in maintaining many aspects of communal life. The social dimension, in the context of this research, refers to cultural and political aspects as well as ordinary gatherings and people meeting each other. In this study, the social dimension and its significant variables were mentioned 462 times, equivalent to 6.4% of the total responses (Table 5-12). Social behaviour mainly occurs in public space, where each individual determines and protects his/her own personal space. Social interaction emerged from reviewing people’s responses as to the most significant variable among other socio-cultural qualities. Social interactions are the basis for the formation and continued existence of social organisations, which lead to the formation of a sense of community (Lang, 1987, p.165). This suggests that the city expresses its social values through the transaction of people in public space. The sample of Beirut people proved to be extremely conscious of the importance of public spaces in their daily lives through identifying major civic square in the city.

Table 5-12: Social dimension and its variables (source: the author, 2004).

Dimension	Variables	Freq.	Percent	Total Percent
Social	Social interaction	135	29.2	
	Family reasons	77	16.7	
	Celebrations and festivities	70	15.2	
	Informal	60	13.0	
	Old souks	30	6.5	
	Meeting place	26	5.6	
	Courtesy	19	4.1	
	Wedding ceremonies	12	2.6	
	Identity	11	2.4	
	Meeting people	11	2.4	
	Social activities	5	1.1	
	Verbal exchange	4	0.9	
	Gathering of people	2	0.4	
	Sub-total		462	100.0

The pre-war Martyrs' Square, al-Nijmeh Square and Riad el-Solh Square played a major role in their social life. They enabled valuable contacts between different social groups, creating opportunities for people to meet and socially interact. Social interaction among people is attained in public spaces, facilitates collective social events and the spaces act as extensions of overcrowded residential units. This is achieved by providing possibilities for privacy, recreation and rest. In addition, public spaces facilitate informal trade and provide a spatial framework for the consolidation of public facilities and commercial activities (Behrens and Watson, 1996, p.208). Closely related to social interaction are variables, including social exchange, social gatherings, the mix of social groups and social reasons.²⁴

The old souks played an important role in every aspect of the lives of Beirut people. They symbolised an important part of the cultural heritage of the city of Beirut. The souks were not only the place for commercial activities (buying and bargaining) but also a place for meeting and conversation. The hospitality of the

²⁴ See Appendix C for the piling of responses and reasons of individual questions 2, 12, 16, 17, 20, 21, 23.

merchants encouraged social relationships to take place in a friendly environment (Figure 5-11 and Figure 5-12).



Figure 5-11: The old souks of Beirut in the 1970s (source: Kabbani, 1998, p.254).



Figure 5-12: Souk al-Nouriyé in the 1970s, a market selling fresh fruits and vegetables (source: Al-Houri, 1977, p.46).

Activities within the souks required people to communicate in the same space at the same time facilitating an important social dimension. It was a normal practice in the souks for the vendors to allow visitors to buy and pay later. Honesty, friendliness and a sense of public service were practised as a norm and appreciated by the customers. An exceptional quality of human relations existed. This is why the souks were an important meeting place for the Beirut people and formed a core location for their daily activities (Melki, 1994, pp. 43-46).

Other important variables associated with the social dimension, included entertainment, cultural values, family reasons, celebrations and festivities, identity, political life, spirituality, charity, courtesy, religious reasons, freedom of speech, education and sports events. Some of the respondents saw the new image of the city centre portrayed by Solidere since the inception of the reconstruction as a bourgeois image, suitable only for big investors, businesspersons and tourists, and not reflecting their own local identities. Such a response was mainly related to the type of services and facilities, which carry non-traditional names such as Grand Café, Met Café, IF Boutique, sports town, footmarks, Paolo Bongia Jewellers, Anabel Boutique, Banca di Roma, Amideast Cultural Cooperation Agency, Bio Merieux Pierre Fabre Pharmaceuticals, Virgin Mega

Store, Versace and Aïshti Boutique. To the respondents, such services could not meet the daily needs of the Beirut people.

Solidere have recently promoted social and cultural activities through utilising public spaces and vacant areas in the city centre, for example, the Maarad in Maarad exhibition, the Art, Tree and Heritage exhibition, and the Indian art exhibition. These three were among the events that took place in al-Maarad Street between 2002 and 2003.²⁵ In addition, National Heritage Day is another event organised recently by Solidere, where historic buildings and sites are opened to the public, including the Grand Serail, the Parliament Building, al-Omari Mosque, Amir Assaf Mosque, St George's Orthodox Church, the Roman baths and garden and the Municipality Building (Solidere, 2003b, pp. 6-8). This was seen by some of the respondents more as an attempt to draw investors' attention than to reflect cultural and traditional values of the Beirut society.

5.8.7 Accessibility

Accessibility can be defined as "space that permits all the people to have access to it and the activities with it, which is controlled by a public agency, and which is provided and managed in the public interest" (Madanipour, 1996, p.148). Public space is perceived as "all the parts of the urban fabric to which the public have physical and visual access" (Tibbalds, 2001, p.1).

"There's a hunger for pedestrian life. People are looking for ways to get out of their cars and live on a human level in an urban center." (Morgan, 1996, p.59)

Carr et al. (1995, pp. 144-149) define the ability to enter spaces as based on physical, visual and symbolic access. Physical access can be achieved when the space is physically available to the public, well connected to paths of circulation and without barriers to its entry points. Visual access is essentially a quality of space that allows people to judge the safety of a space before they have entered it. Finally, symbolic access is that which is suggested through design elements

²⁵ Al-Maarad Street is one of the major streets in the city centre, which was pedestrianised by Solidere to accommodate a variety of public activities. Al-Maarad is an Arabic word, which means the exhibition.

and the type of users, and gives messages as to who are the individuals most welcomed to that space. In this survey, variables underpinning the accessibility dimension were cited 433 times, corresponding to 6.0% of the overall number of answers (Table 5-13). The respondents were given the opportunity to express their preferences allowing them to suggest matters that best met their needs and expectations.

Table 5-13: Accessibility dimension and its variables (source: the author, 2004).

Dimension	Variables	Freq.	Percent	Total Percent
Accessibility	Preferences	74	17.1	
	Pedestrianised street	52	12.0	
	Accessible	44	10.2	
	Al-Nijmeh Square	33	7.6	
	Linkage	33	7.6	
	Parking places	31	7.2	
	Al-Maarad Street	28	6.5	
	Good for pedestrians	27	6.2	
	Transport stations	20	4.6	
	New road network	20	4.6	
	Allenby Street	16	3.7	
	Weygand Street	15	3.5	
	Foch Street	13	3.0	
	Traffic free	11	2.5	
	Location	10	2.3	
	Bab Idris	6	1.4	
	Sub-total	433	100.0	6.0

For instance, when the respondents were asked to select streets in the city centre to be transferred to pedestrian zones, 28 out of the 37 were in favour of pedestrianisation.²⁶ As cited previously, the reasons for favouring pedestrianised streets were mainly related to safety and security, and included a safe environment, safety for children, good for women, good for the whole family, friendly, a sense of familiarity, lively and traffic free.

²⁶ See questions 21 and 22 Appendix C.

Some of the respondents, contrary to the above presumed benefits, were not in favour of pedestrianisation. They felt that if some streets were closed to traffic then this might lead to traffic congestion elsewhere, divert commercial activities, as well as being inappropriate for elderly people. Older respondents felt that pedestrianised streets would be less accessible and that it would be more difficult for them to get from one place to another without having to walk long distances.

Rapoport (1977, pp. 81, 82) observes that people pick settings with characteristics that they value highly and avoid environments that they regard negatively. Carr et al. (1995, pp. 169-170) argue that pedestrian movement is one of the principal aspects that distinguishes successful public space. An associated variable to movement is the connection between different places, as it gives better opportunities for people to cover wider areas and experience an expanded variety of activities.

Behrens and Watson (1996, pp. 118, 119) view pedestrian zones as spaces that accommodate the movement of pedestrians exclusively with adequate space for occasional emergency, or service vehicles. In contrast to pedestrianised streets, Behrens and Watson point out that the main advantages of through-streets are to lessen walking distances and to allow both pedestrian and vehicular access in both directions. Moreover, through-streets permit larger numbers of passers-by and create better opportunities for informal trade, such as stalls and vendors. However, the main disadvantages of through-streets are the high level of noise and congestion and the possible danger of road accidents.

Al-Nijmeh Square and al-Maarad Street were highly favoured and were mentioned 33 and 28 times respectively.²⁷ The reason for such a preference was that these areas have buildings of architectural, historical and aesthetic value. The restoration work ideally needs to conserve the pedestrianised areas that carry meaning and attachment for people, the places that embrace important civic and religious buildings (Figure 5-13).

²⁷ See Appendix C, questions 1, 3, 6, 8, 17, and 22.

However, during the course of this research, Solidere transformed the area into a pedestrianised zone. This prompted the researcher to substantiate the answers given by the respondents with what actually happened in reality.

A supportive survey was conducted during the last week of February 2004, covering al-Maarad Street/al-Nijmeh Square area. The aim of this survey was to increase understanding of the behavioural patterns of pedestrian movements and to identify any problems faced by pedestrians. Based on observation, the researcher identified five age groups, including young males and females between 5 and 14 years, females between 15 and 40 years, females over 40, males between 15 and 40 years and males over 40 years of age. The pedestrian count was considered at three different locations along al-Maarad Street/al-Nijmeh Square axis (Figure 5-14). The average sum of the count at the three different locations was considered during two main intervals: during the day (12:30 pm - 1:30 pm) and at night (8:30 pm - 9:30 pm) (Figure 5-15).²⁸



Figure 5-13: Colonnaded walkways of al-Maarad Street (source: the author, 2004).

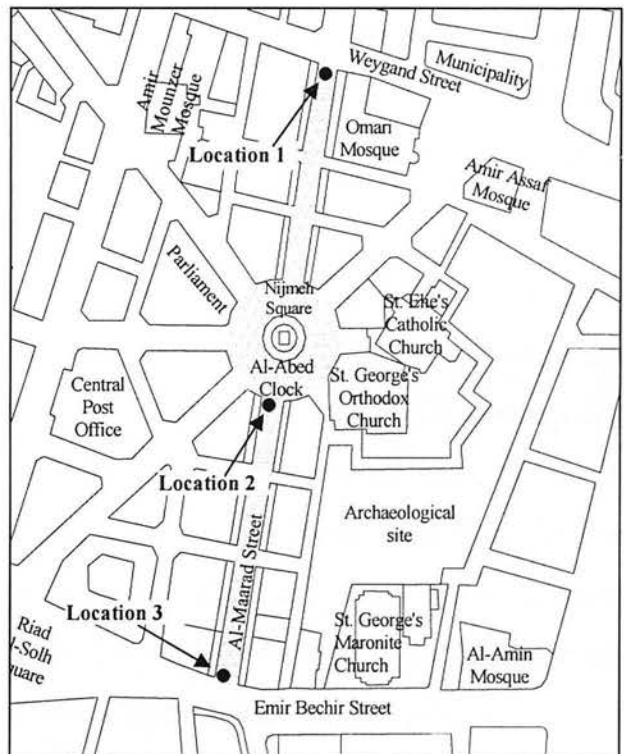


Figure 5-14: A map showing the extent of the surveyed area and the different locations of the pedestrian counts (source: the author, 2004).

²⁸ For pedestrian movement data count, see Appendix D.

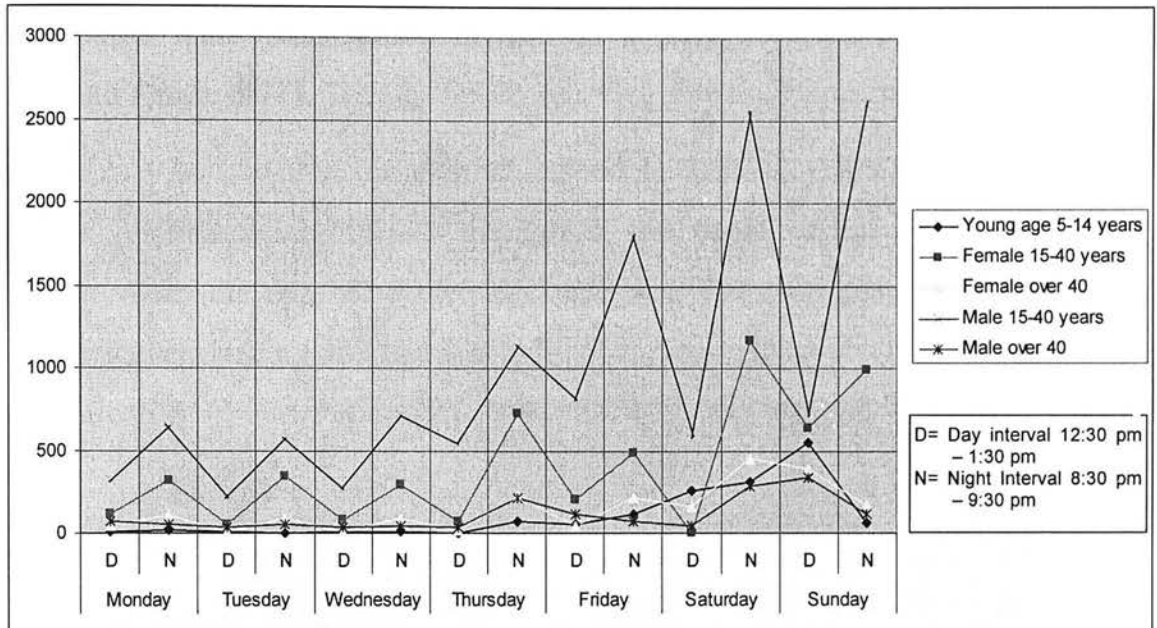


Figure 5-15: A line chart showing the number of pedestrians in the area of al-Maarad Street/al-Nijmeh Square during day and night intervals (between 23 and 29 February 2004) (source: the author, 2004).

Although February is a rainy season, it is also officially declared as Lebanon's shopping month, where special offers, promotions and discounts are given on a variety of services and products to encourage tourists from different countries, in particular the Gulf States, to visit Lebanon.²⁹

Observations of the first interval throughout the first three days of the week (Monday to Wednesday) were characterised, more or less, by slight fluctuations but similar proportions in visitor numbers. The early presence of owners and workers of cafés and restaurants, as well as shopkeepers in the area, was quite moderate. Off-loading activities of goods and products from nearby trucks was notable. Security guards and maintenance workers were also present. Nevertheless, most of the visitors at the time of the count were business people going to their work places, banks or public departments. Significant numbers of others were tourists walking around or sitting in cafés.

As time went on, more tourists accompanying their children started to make their presence felt in the area, particularly around al-Nijmeh Square. At lunchtime,

²⁹ Lebanon is a country that is mainly dependent on tourism as one of its major resources.

female and male users started to emerge, mainly from nearby offices (Figure 5-16 and Figure 5-17).

It was also noticed that the number of people over 40 years of age (male and female) was considerably low throughout the week, except on Saturday and Sunday when the number of female users was slightly higher than their male counterparts, reaching 387 and 340 individuals respectively.



Figure 5-16: A view of al-Maarad Street during the first interval of the survey (source: the author, 2004).

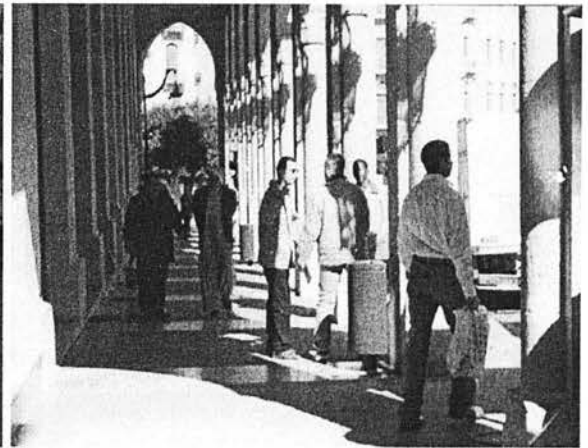


Figure 5-17: The colonnaded walkway of al-Maarad Street (source: the author, 2004).

Most probably, one main reason for such a low frequency in the number of users during the week was that youngest ages and adults were either at school or at work. While older people, perhaps, preferred staying at home in the morning, particularly on a rainy day. Nevertheless, the number of visitors started to pick up in the middle of the week (Thursday) as the weather started to improve.

On Friday, the number of male visitors aged between 15 and 40 years was the highest of the week, when 822 males were counted. This is because the area encompasses a number of religious buildings. On Fridays, males from the Muslim community congregate before and after Friday prayer in public spaces close to mosques for social exchange.

The presence of adult females aged between 15 and 40 years was also notable, with a total number of 204 females. Observation on Sunday in the first interval, however, showed significant numbers of visitors of all ages, mainly because

Sunday is a weekend day when schools and offices are closed. In addition, Sunday is a religious day for members of the Christian community, who came for Sunday prayer to the churches in al-Nijmeh Square. Observation in the second interval showed completely different results from the first interval.

The number of male visitors aged between 15 and 40 years was moderate in the first three days of the week, with an average number of 640 visitors. Similarly, the average of female visitors in the same age was 318 females, which was even lower (Figure 5-18 and Figure 5-19).



Figure 5-18: Al-Maarad Street at night (source: the author, 2004).

However, on Thursday, the number of males and females aged between 15 and 40 years increased by approximately 50% more than the previous nights, reaching 1130 and 723 persons respectively. Friday night showed a dramatic increase in the number of adult males, some



Figure 5-19: Al-Nijmeh Square at night (source: the author, 2004).

1794 persons. Conversely, the number of female adults fell by 32% from the previous night, reaching 978. On Saturday night, there was a dramatic increase in the number of pedestrians of all ages, when the number of female and male adults reached 1172 and 2521 respectively.

Moreover, on Saturday night the number of females over 40 years was more than at any other times of the week. Their presence was accompanied by an increase in the number of males over 40 and younger people. This gives a good indication that families have started to make their presence felt in public spaces. The

pedestrian count on Sunday night revealed a slight increase in the number of male adults compared to the night before, with a slight drop in the number of female adults. The number of other age groups fell sharply, because Sunday night is the end of the weekend and on the next day, people go back to their schools or businesses.

It became clear throughout the duration of the pedestrian count that the current conditions in the city centre have attracted particular groups from the Beiruti society as well as tourists. Middle-income people are welcomed into the area through providing high quality facilities, fashion and lifestyle, which are clearly aimed at satisfying consumers with high level of demands and aspirations.

Adults aged between 15 and 40 years of age were the dominant group, particularly those who can afford to sit in expensive restaurants and cafés, and buy expensive clothes and products. In addition, it was observed that cafés and restaurant owners have encroached gradually into public space by occupying parts of the pavements and the pedestrianised streets.

Analysis of the data gathered revealed that there is a considerable fluctuation in the number of users throughout the week between day and night-time intervals, with an average number of 985 and 2437 visitors respectively.³⁰ This gives an indication of the variation in daily and nightly pedestrian movements.

However, relatively, nightlife is flourishing for both male and female users, encouraged by the increase of organised night activities, accompanied by the growing confidence in the level of safety and security provided in the area. It also indicates that, more effort is needed to encourage continuous social transactions between people in public space during the daytime.

³⁰ The average number of visitors is derived from the total sum of the respective intervals divided by the number of days of the survey.

5.8.8 Comfort

Comfort is the quality of space that stimulates or frustrates people's needs. The respondents valued comfort as an important quality that is required in public space. Comfort and its related variables were mentioned 429 times, which is equivalent to 6.0% of the total answers; its variables includes convenience, preferences, pleasantness, daily needs, essential, suitability, functional, adequate seating, bringing pleasure, public toilets, appropriateness and quenching thirst (Table 5-14). Comfort was mainly related to physical comfort, including the provision of adequate seating and public toilets, and to psychological and sensory comfort, indicated by their desire for a sense of security, and to have their senses of sight, hearing, smell and touch stimulated by the public spaces.³¹

Table 5-14: Comfort dimension and its variables (source: the author, 2004).

Dimension	Variables	Freq.	Percent	Total Percent
Comfort	Convenience	172	40.1	
	Pleasant	62	14.5	
	Comfort	51	11.9	
	Daily needs	32	7.5	
	Essential	28	6.5	
	Suitability	25	5.8	
	Functional	13	3.0	
	Adequate seating	13	3.0	
	Bringing pleasure	11	2.6	
	Public toilets	8	1.9	
	Appropriateness	7	1.6	
	Quenching thirst	4	0.9	
	Location	3	0.7	
	Sub-total		429	100.0

Comfort brings a sense of security, a feeling that one's person and possessions are not vulnerable. Comfort is also related to other qualities of public space, such as access to sunlight, trees, water, food and amenities, while social and psychological comfort extends to people's experiences in public places. Comfort

³¹ Comfort as a reason was cited in questions 18, 21, and 23.

is affected by the degree to which public space provides protection from, or offers the possibility of enjoying the natural elements (i.e. sun, wind and rain). The provision of adequate street furniture and the use of surfacing and materials can enhance the physical comfort of public space. Places are valued for the features that contribute to the success of the activity being pursued, for instance, eating sandwiches, while being offered protection from the wind and crowds (Behrens and Watson, 1996, p.211).

Convenience has been a determining variable in evaluating places. Heath (1988) refers to convenience as an instrumental objective that can be attained through achieving comfort and the absence of distraction. Convenience covers many qualities of a public space that facilitates its use, such as sufficient amelioration of wind, sun and rain, the provision of ventilation, ease of access, parking spaces, pedestrianised streets, safety and security, and the presence of stalls and vendors. Some of the respondents felt that the reconstructed centre has yet to function as it did in the pre-war situation. They feel that the current city centre does not cater for public life anymore, as public spaces have been invaded or converted to public use.

5.8.9 Architectural

Architecture has played an important role in enhancing the physical character of the city centre, as well as in reflecting the social, traditional and cultural values of society.

“Architecture ... is more than just a spectacle of arches, domes, minarets or beautiful Mushrabiyyah. Architecture is an expression of culture, beliefs, social and economic structure, political motivation and visual sensibility of (a) mixed and unified tradition(s).” (Abdalla, 1998, p.95)

It was significant to the respondents and was mentioned 389 times, which is equivalent to 5.4% of the total answers (Table 5-15). The respondents denoted certain physical structures because of architectural qualities that related to character, tradition, historical values, restoration, symbolism, high standards, landmark and heritage.

Table 5-15: Architectural dimension and its variables (source: the author, 2004).

Dimension	Variables	Freq.	Percent	Total Percent
Architectural	Character	109	28.0	
	Restoration	84	21.6	
	Covered Pathway	38	9.8	
	High standard	36	9.3	
	Colonnades	19	4.9	
	New souks	19	4.9	
	Parliament building	18	4.6	
	Compactness	15	3.9	
	High quality construction	12	3.1	
	Old souks	11	2.8	
	National Museum	9	2.3	
	Location	6	1.5	
	Grand Serail	5	1.3	
	Municipality Building	4	1.0	
	Al-Azariyé building	4	1.0	
Sub-total		389	100.0	5.4

The French planning, with its colonnaded buildings on al-Maarad Street,³² the Ottoman Grand Serail, the Parliament Building and the Municipality Building, as well as many religious buildings, embody historical, social and cultural values, and contribute to the character of the city centre (Figure 5-20, Figure 5-21 and Figure 5-22).



Figure 5-20: The Ottoman Grand Serail overlooking Riad el-Solh Square (source: the author, 2004).



Figure 5-21: The Parliament Building located at al-Nijmeh Square (source: the author, 2002).

³² Al-Maarad Street is a major street that bisects the city centre from the north to the south.

The compact urban fabric of the old city enhanced social relations amongst the residents. All the common activities were experienced in public space, which made people, live and work just like one family. This made all the city dwellers live in an integrated social unit. The old souks were built and evolved according to social demands.

They were structured along narrow and winding passageways, with shops on both sides. The passageways, lanes and alleyways were paved with unlevelled kiln stones, which led to a *sahat* (square) that combined several different activities. The souks were not completely covered allowing natural daylight to penetrate them, despite



Figure 5-22: Municipality Building with a unique architectural character (source: the author, 2002).

the presence of the awnings fixed over the shops. This natural light reached all the alleys and illuminated even their farthest corners (Bohsali, 1994, p.9).

The *sahat* used to act as a node for several alleyways, giving access to other public spaces in other souks, to form an interwoven urban fabric. The hierarchy of public spaces in the old souks was not arrived at by accident; rather, it reflected the social and cultural needs of the local society. The shops were raised about one metre from the ground to form a *mastaba* (a fixed masonry seat). The *mastaba* encouraged social interaction between merchants and tired customers who were seeking a place to rest (Al-Wali, 1992).

5.8.10 Traditional

The strength and adaptability of genuine traditions lies behind the continuity of the old ways, which neither need be revived nor invented (Hobsbawm, 1983, p. 8). Beirut people retain a profound appreciation of their traditions, which reflect

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identities and promote cultural continuity. The respondents, however, only mentioned variables related to the traditional dimension 324 times (Table 5-16).

Table 5-16: Traditional dimension and its variables (source: the author, 2004).

Dimension	Variables	Freq.	Percent	Total Percent
Traditional	Traditional	106	32.7	
	Cafés	31	9.6	
	Street market	22	6.8	
	Traditional foods and drinks	21	6.5	
	Sitting in a café	19	5.9	
	Craft shops	18	5.6	
	Festivity shopping	15	4.6	
	Wearing costumes	12	3.7	
	Occasional	11	3.4	
	Listening to storyteller	11	3.4	
	Gathering of people	10	3.1	
	Visiting al-Gasaz Café	9	2.8	
	Eating food	6	1.9	
	Old souks	6	1.9	
	Temporary events	6	1.9	
	Souk al-Bargouth	6	1.9	
	Intabli Fountain	6	1.9	
	Tramway tours	5	1.5	
	Identity	4	1.2	
	Sub-total		324	100.0

Cafés were highly favoured by the respondents and these were mainly associated with qualities of social interaction, traditions, meeting people, spending time and an informal atmosphere. However, al-Gasaz Café (the glass café) had its own tradition and culture. The Ottomans were the first to introduce al-Gasaz Cafés to every city they dominated. Beirut was among those cities where most of its major public squares had a café. Digging deep into his memory, one of the respondents said that such a café used to serve al-Kahwa al-Othmalieh (Turkish coffee) and al-Narjelah (hubble-bubble or water pipe) to customers. He related the name of the café (al-Gasaz) and its method of construction.

The café space was surrounded by timber columns with glass panels fitted in between, separating the indoor space from the public space. The function of the glass panels was to protect the customers from dust and the noise of the traffic passing by, at the same time as giving customers the opportunity to watch passers-by and attracting further customers.

The old city of Beirut did not know today's theatres and cinemas. Instead, *al-Hakawati* (the storyteller) was a popular alternative. The personality of al-Hakawati was used to attract people to cafés where he would tell his mythical stories about legendary heroes, creating an exciting atmosphere for the customers to enjoy. He used to sit on a small timber deck in order to allow people inside the café as well as the crowd outside to hear his stories. Such stories used to run for several weeks, giving customers reasons to come again and creating a sense of continuity and a bond among the customers.

"These settings carry important private memories that become part of the identity of a person, sometimes sharpened by photographs but always embedded within, ready to be evoked." (Carr, 1985, p. 200)

In addition, cafés used to be the meeting places for politicians, artists, poets and novelists, as well as ordinary people who sought relaxation and the social exchange of ideas, views and opinions. Daouk (1994) portrays the social encounters that occurred between people as follows:

"...encounters ranged from family reunions to social, literary and artistic congregations where everyone met everyone; all this in a relaxed, joyful atmosphere, with everyone exchanging news and anecdotes about everyone else." (Daouk, 1994, p.26)

Such a warm atmosphere promoted the development of personal connections between customers within the café and extended to the public outside. Al-Gasaz Cafés proliferated during the French mandate and even during the civil war, until the civil war entrapped and ruined most of these cafés. Nowadays, none of al-Gasaz cafés exists as they have been replaced by street cafés.

The respondents also mentioned physical features in public spaces that they were attracted to, such as fountains. For example, Intabli Fountain was built in Souk Ayyass and acquired well-deserved fame in itself and for the souk as a meeting point for both customers and merchants, who used to gather around the fountain for traditional drinks in a pleasant and refreshing environment. It served the souk's merchants, as well as its visitors, with delicious Arabic deserts and refreshments like jellab, rosewater, lemonade and liquorice drinks.

Itani (1994, p.37) gives a good description of the social and traditional atmosphere that occurred around the Intabli Fountain. He writes that the water from the fountain used to run onto a small basin, which allowed it to drain. Near that basin, a



Figure 5-23: A liquorice vendor (source: Halaq, 1987, p.184).

man stood wearing traditional baggy trousers, a vest and a fez (Figure 5-23). In front of him was a pushcart with glass sides, full of Arabic sweets with creams and *Mohallabiah* (rice pudding), which attracted all kinds of people of all ages and origins to eat and drink at Intabli Square. There were many places in the old souks, which acquired their own character, special customs and traditions attracting particular groups of people (Figure 5-24). For instance, Souk Sursock was the meeting place where the mountain people, as well as those of the north, the Bekaa Valley and the south, used to meet with the residents and merchants of Beirut. They came to this souk to find the goods they needed at reduced prices and to exchange bank drafts received from their relatives abroad at the money exchangers, located on both sides of the souk (Ghandour, 1994, p.31).

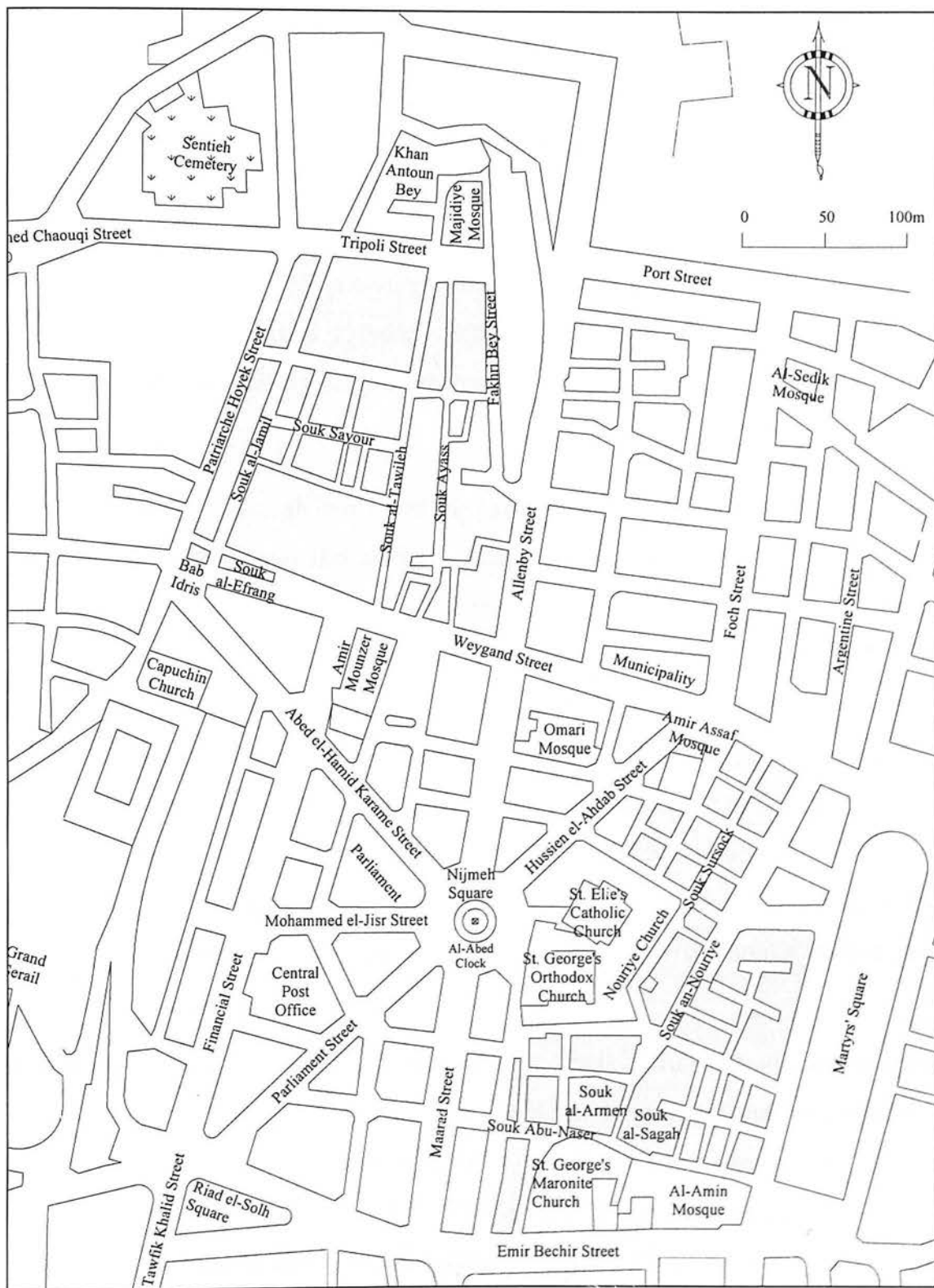


Figure 5-24: Map of the city centre of Beirut before 1975, showing its main souks (source: the author, 2004).

Souk Sursock was the central part of the old souks, in the northern part, where textile merchants were concentrated. Fruit and vegetable merchants, who sold their merchandise on stationary or moveable wooden carts, were found in its southern part. Vendors used to peddle their merchandise through harmonious, singsong cries. These vendors did not own private shops but erected their stands or *bastas* (stalls) beside the public roads, in front of shops in return for a nominal monthly fee paid to the shop owners, from which they sold goods to customers. Souk Sursock was paved in stone with open sewers along the centre line. Awnings were fixed above shop entrances for protection against the heat and rain (Wali, 1994, p.57).

The Souk al-Tawileh, al-Jamil and Ayyass were the meeting places of Arab nationals who came into Beirut from various Arab countries. Souk al-Tawileh acquired its name because it was the longest souk in old Beirut. Its merchants were mainly sales agents of European trading companies. On its eastern end, the Sufi Imam Ibn Iraq built a prayer corner called Zawiyat Ibn Iraq. Its western end housed Zawiyat Imam al-Ouzai Prayer Corner, which the Beyhum family built in the last century over the place thought to have been the house of Imam al-Ouzai. Narrow stone-paved lanes, exclusively reserved for pedestrians, branched out of Souk al-Tawileh. Among these lanes, Souk Sayyour was a specialised souk for men's tailor shops and shops selling articles required by the souks' tailors and merchants (Ghandour, 1994, p.31).

A wealthy Beirut citizen of Damascene origin, Sheikh Muhammad Said Ayyass, built Souk Ayyass and preserved its traditional buildings. The souk was reserved for pedestrians and no cars ever entered it. Its shops specialised in the sale of textiles, fabrics and accessories needed by tailors. To the north of the souk's end, and opposite Trablous Street, lay al-Ajami restaurant. This restaurant catered for the established and respected Beirut families and was a meeting place for many politicians, poets and artists. Another important feature in Souk Ayass was the

stone stairways that connected Souk Ayyass with Souk al-Tawileh and Souk al-Joukh (Ghandour, 1994, p.31).

Souk al-Sagha (jewellers' market) had a mixture of traditional elements with some modern buildings constructed after the Second World War. These were on several floors, the upper most of which were used by exporters and importers, while retail merchants used the ground floors. Souk al-Sagha still preserves the splendour of its old facades. Its shops had metal roller doors surrounded with marble. Souk al-Jamil (the elegant market) changed dramatically from an old traditional souk, to an elegant one, because of European influence and contacts with the West through the port of Beirut. This led to its being flooded with European goods and products (ibid).

The respondents also referred to the recent Souk al-Bargouth as a locus of social interaction and promoter of culture and heritage, and where traditional events were held to attract people and tourists to public spaces in the city centre (Figure 5-25 and Figure 5-26).



Figure 5-25: Souk al-Bargouth is a temporary event organised by Solidere that takes place in different locations in the city centre (source: the author, 2001).



Figure 5-26: Displaying antiques and artefacts are the main feature of Souk al-Bargouth (source: the author, 2001).

Souk al-Bargouth is an occasional flea market, which is organised by Solidere in an attempt to draw renowned pre-war merchants back to the city centre. This souk has been held in different public spaces, such as Martyrs' Square, Beil, al-Maarad Street, Allenby Street and Foch Street. Other respondents perceived

Souk al-Bargouth as an imitation of the old souks in displaying antiques and old furniture, which was not the main function of the old souks. They made it evident that they felt a keen sense of nostalgia among the people and a felt need to return to the old customs and traditions, through promoting social engagements for people and utilising public space.

According to Hobsbawm (1983), invention of tradition is more likely to occur when rapid transformation of society declines or obliterates the social patterns from which old traditions had been shaped. As a result, new traditions emerge which are inappropriate.

5.8.11 Cultural

Culture as a dimension is associated with beliefs and perceptions, values and norms, customs and behaviours of a group or society. Rapoport (1980) defined culture as a way of life representing a group of people, or as a symbolic system consisting of shared meanings (Bourassa, 1991). One of the most effective ways that is used to vitalise public spaces has been through promoting programmed public events and activities. Many city centres now have management organisations that direct changes and programmed activities and events in public space (Carr et al., 1995p. 176,). The respondents referred to variables related to the cultural dimension 320 times throughout the questionnaire responses (Table 5-17). Among the variables included in the cultural dimension are cultural values, identity, education, political life and freedom of speech. Cultural values were denoted 91 times as reasons and were related to public celebrations, festivals, exhibitions, programmed events, theatres and the arts.³³ The cultural values of the Beirut people are reflected in their lifestyle as mentioned earlier. They assist in understanding how Beirut people interact and function within the environment. When the respondents were asked to mention important social, cultural or traditional events that had occurred recently in the city centre, cultural events and activities including exhibitions and conferences, programmed events,

³³ Cultural values emerged as reasons for answers given in questions 1, 2, 12, 15 17, 19.

going to theatres, artistic activities and gatherings of people were mainly specified.

Table 5-17: Cultural dimension and its variables (source: the author, 2004).

Dimension	Variables	Freq.	Percent	Total Percent
Cultural	Cultural value	91	28.4	
	Exhibitions and conferences	39	12.2	
	Political life	32	10.0	
	Bubbling with activity	28	8.8	
	Identity	27	8.4	
	Programmed events	26	8.1	
	Going to theatres	16	5.0	
	Freedom of speech	16	5.0	
	Encourage artistic activities	13	4.1	
	Educational	10	3.1	
	Gathering of people	10	3.1	
	Location	8	2.5	
	Grand Theatre	4	1.3	
	Sub-total	320	100.0	4.5

Moreover, such events and activities included street markets, music festivals, concerts, exhibitions and marathons. The respondents also signified identity, a notion closely related to cultural values. Identity is about distinctiveness, belonging and collective values that differentiate people from others. In essence, identity gives a sense of attachment to location and yet assures individuality. It is also about social relationships and complex involvement with others (Weeks, 1990, p.88).

Proshansky (1987) suggests that one's self-identity is composed of a number of sub-identities, one of which is derived from the physical environment that has been a part of one's socialisation experience. This means that people who grow up in similar kinds of physical settings develop common ways of coping with their physical environment. Different settings create different demands and challenges, provide different levels of satisfactions and may well lead to different

patterns of attachment (city people, for example, preferring environments that are differentiated, stimulating, choicely and changeable).

It was noticed that the female respondents did not refer to political events or international conferences, showing perhaps that their primary concerns were related to issues that were more private. Political life and freedom of speech were among other important variables mentioned by the respondents. Public space has always been an important theatre for diversity and free speech in Lebanese society. The exposure to different viewpoints that take place in public space advances the exchange of new ideas.

5.8.12 Spatial

Central to place-making is the creation of a number of special public places. Public spaces and public institutions represent the focal points of community life. Hard public spaces (i.e. squares, and public markets and streetscapes in particular), frequently provide the focal points for social interaction, community events and street trading (Behrens and Watson, 1996, p.68). Urban public spaces assumed an overall 263 frequencies (Table 5-18). Such significance can be attributed to the fact that public squares and open spaces are the very life of the whole city. When the respondents were asked about important public squares in the city centre, Martyrs' Square, al-Nijmeh Square and Riad el-Solh Square were cited most frequently, above other squares such as Intabli Square and Dabas Square.³⁴ The significance of these urban squares emerged from the various reasons given, including daily commercial activities, associations with political life, significant architectural character, important services, meeting points, associations with tradition, historical value, location, heritage, sense of familiarity, symbolic values, religious reasons, vastness, family reasons and sentiments and memories of past events.

³⁴ See Appendix C for piling of question 8.

Table 5-18: Spatial dimension and its variables (source: the author, 2004).

Dimension	Variables	Freq.	Percent	Total Percent
Spatial	Martyr's Square	42	16.0	
	Al-Nijmeh Square	37	14.1	
	Riad el-Solh Square	36	13.7	
	Promenade	34	12.9	
	Vacant areas	23	8.7	
	Meeting point	17	6.5	
	Location	14	5.3	
	Open spaces	13	4.9	
	Connected spaces	12	4.6	
	Intabli Square	11	4.2	
	Dabas Square	7	2.7	
	Sassine Square	5	1.9	
	Isolated	5	1.9	
	Vastness	4	1.5	
	Bab Idris Square	3	1.1	
	Sub-total		263	100.0

Marcus and Francis (1998) describe the importance of public squares in the lives of people, as follows:

“The medieval town square, or piazza, was often the heart of a city, its outdoor living and meeting place; a site for markets, celebrations, and executions; and the place where one went to hear news, buy food, collect water, talk politics, or watch the world go by. Indeed, it is doubtful that the medieval city could have functioned without its piazza or town square.” (Marcus and Francis, 1998, p.1)

Riad el-Solh Square, for instance, was the meeting place for the inhabitants of eastern and northern Beirut, the eastern and northern parts of Lebanon. This cultural mix has always constituted the Lebanese people, distinguished above all by its extraordinary diversity and harmony between people from cities and villages, from the coast and the mountains, urbanites and peasants, and Christians and Muslims of all denominations (Steitieh, 1994, p.53). All congregated there: merchants, poets, artists, engineers, taxi drivers, farmers, employees and managers. Everyone worked in and crowded the streets, or bought and sold, or just wandered around. All sects, creeds and religious communities could be

found in the souks (Sanbar, 1994, p.49). Redevelopment of the area has eliminated the role of the square and it is now attached to a temporary parking space. The promenade, perhaps, is the most thriving public space in the city, as a major attraction place accessible to all social groups.

When the respondents were asked to mention important places in the city that they prefer to take their family to, the promenade proved the most popular choice. Several reasons emerged for people's responses as to why they favoured the promenade, including walking and strolling, nice views, sports activities, relaxing and as a good place for the whole family (Figure 5-27 and Figure 5-28).



Figure 5-27: A walk or a stroll along the promenade available to all social groups in the society (source: the author, 2004).



Figure 5-28: Social activities can happen informally and in a pleasant environment on the promenade (source: al-Mashriq website).³⁵

The promenade has assumed a great cultural significance for the community, in which people meet and socially interact day and night. In 1885, during the Ottoman rule, the promenade was initiated. In 1934, during the French Mandate, the promenade was lit and nightlife gravitated to it. The extension of the promenade towards the north of the city centre has already been proposed by the current master plan, and has been implemented in part by Solidere (Kabbani, 1998, p.251).

The Beiruti people are aware of the many health problems that affected their society during the war, and they find that the promenade is the place that has many

³⁵ <http://almashriq.hiof.no/lebanon/900/910/919/beirut/sounds/corniche/990/411.html>

benefits in alleviating such problems. A hearty walk or a stroll along the promenade and breathing the fresh air, away from the urban congestion and pollution, means a lot to people. For the family, the promenade is a good and safe place where a mother can push a pram and at the same time monitor her other children playing around. For an elderly person, it is a place for relaxation and contemplation, a place to enjoy the beautiful view of the sea, as well as watching and admiring fishermen with their catch.

For the adult or the youngster, it is a place to pursue different types of activities including jogging, swimming, singing and playing backgammon. The promenade is the place where young people gather and pursue different activities. The promenade attracts many people of both sexes who meet every morning, wearing colourful jogging suits to walk, jog, or meet friends.

5.8.13 Emotional

“At every instant, there is more than the eye can see, more than the ear can hear, a setting or a view waiting to be explored. Nothing is experienced by itself, but always in relation to its surroundings, the sequences of events leading up to it, the memory of past experiences... Every citizen has had long associations with some part of his city, and his image is soaked in memories and meanings.” (Lynch, 1960, p.1)

Francis and Hester (1990) define spaces that allow people to create strong connections between place, their personal lives and the larger world, as **meaningful spaces**. Such connections may be linked to the individual’s own history or future, to a valued group, to their culture or relevant history, to biological and psychological realities, or even to other worlds. A continuously used public space with its many memories can help anchor one’s sense of personal continuity in a rapidly changing world.

The emotional dimension of public space is that quality that permits people to develop genuine associations, attachments and connections between each other and their surrounding environment. Spaces that carry individual experiences and

shared memories become meaningful and are remembered by the whole community.

“If our memories, our sense of self, and our aspirations are enfused (infused) with environmental images, ..., the quality of our environment is more than a pleasant amenity; it is an ingredient in the kinds of people we are.” (Carr et. al, 1995, p. 198)

“Removing... public activities from areas where they are visible into hidden private spaces ultimately will reduce the liveability of a city...These urban activities may vary from shopping to sitting in a park, but they all relate to the overall network of the city.” (Zeidler, 1985, p.154)

Variables related to the emotional dimension of Beirut spaces were mentioned 260 times including sentiments, loss of businesses, demolition of places, attachments, past memories, restored images, imitation of the past, old tramways, burial ground clearance and unnecessary actions (Table 5-19).

Table 5-19: Emotional dimension and its variables (source: the author, 2004).

Dimension	Variables	Freq.	Percent	Total Percent
Emotional	Sentiments	54	20.8	
	Loss of businesses	45	17.3	
	Demolition of places	36	13.8	
	Attachments	30	11.5	
	Past memories	25	9.6	
	Restore image	23	8.8	
	Imitation of the past	14	5.4	
	Old tramway	14	5.4	
	Burial ground clearance	11	4.2	
	Unnecessary	8	3.1	
	Sub-total	260	100.0	3.6

When the respondents were asked to mention any changes they disliked that had occurred in the redeveloped areas of the city centre, the demolition of places was the highest response and it was referred to 36 times.³⁶

As such, what most of the respondents did not like was not only the devastation of the historical fabric of the city, but the loss of businesses and attachment,

³⁶ For the variable demolition of spaces, see question 14, Appendix C.

which had created an inhumane, unpleasant and inactive atmosphere, leading to the withdrawal of people from these public spaces with consequent economic issues being encountered. The memories of most of the respondents were mainly focused on the old souks, which, they believed, encapsulated the most shared memories of life, not only for the Beirut people, but also for all the Lebanese and for every tourist who has visited the place.

The respondents did not consider the demolition and removal of the old souks as the best solution, as they could have been saved improving their physical fabric and infrastructure. Their distress at the demolition of the old souks was not, therefore, because of the removal of the old stones but because the demolition had somehow removed the spirit and the history of the place. Some of the respondents were uncertain as to how the centre of a capital city could function without its souks.

Some of the respondents described deep-rooted mental images about the variety of activities that had created the life of the old souks, and about the way in which these souks functioned as a meeting place for all of the Lebanese people. They also talked about the connections between people that were mainly centred on the public spaces of the old souks.

Another emotive issue was related to the removal of the burial ground in order to make way for the redevelopment plan. The old tramways were important features of the city centre as they represented part of the traditional character of Beirut society. Although removed from service before the war, some of the respondents felt that the trams should be reintroduced as a traditional means of transport within the city centre.

5.8.14 Sensory

The importance of all senses in environmental perception seems clear. The environment provides an array of stimuli available to the various senses, which

differ in their reliability and availability and in the type and amount of information they can process (Stea and Blaut, 1972).

In their appreciation of the quality of public space, the respondents mentioned variables related to sensory qualities 215 times (Table 5-20). The low frequency of the sensory dimension does not reflect its actual insignificance, because sensations are the gateways through which one achieves all other appreciations of the surrounding environment.

Table 5-20: Sensory dimension and its variables (source: the author, 2004).

Dimension	Variables	Freq.	Percent	Total Percent
Sensory	Sight	35	16.3	
	Hearing	33	15.3	
	Sense of smell	27	12.6	
	Way-finding	22	10.2	
	Fresh products	19	8.8	
	Convey knowledge	18	8.4	
	Attracted to sounds	10	4.7	
	Touch	9	4.2	
	Feeling the surrounding	9	4.2	
	Listening	8	3.7	
	Taste	7	3.3	
	Old souks	6	2.8	
	Examining products	4	1.9	
	Nice aromas	4	1.9	
	Knowing places	4	1.9	
	Sub-total		215	100.0

From people's responses, mentioned in order of significance, the most important senses that were used in appreciating the quality of public space were those of sight, hearing, smell, touch and finally taste.³⁷ The respondents mentioned sight frequently and it was cited 35 times. Carmona et al. suggest that vision provides more information than the other senses combined (Carmona et al., 2003, p.87).

³⁷ For people's responses on senses, see question 23, Appendix C.

Almost all of the respondents identified sight as an important sense, because it assists people in perceiving knowledge about the surrounding environment, which involves way-finding, discovering places, admiring surroundings and observing activities and ultimately leads to a sense of comfort.

Hearing was second to sight and was identified 33 times. Hearing is information poor, but emotionally rich and humans are strongly aroused by it (Porteous, 1996, pp. 33, 35). Hearing assists people in perceiving the immediate environment through identifying sounds and advances social interaction through improving communication and verbal exchange. The quality of sound associated with a behavioural setting affects perceptions of the quality of the setting. Any disturbing sound is called noise (Lang, 1987, p.130).

Sense of smell was mentioned 27 times. Similar to hearing, sense of smell is not well developed, but probably emotionally richer (Carmona et al., 2003, p.87). The respondents related a sense of smell to being able to identify the suitability of the environment, whether pleasant, hygienic, or comfortable.

Touch can be achieved in public space through feeling, examining, or exploring the environment with the human body. For instance, walking involves feeling the walkway surface through the feet, while examining goods or products involves feeling by using the hands.

The respondents also appreciated a sense of taste, as it extends the qualities of public space to include enjoyment through eating food and drinking refreshments, while sitting, relaxing and feeling comfortable. Sensory aesthetics is concerned with the pleasure of the sensation received from the environment. It involves the arousal of one's perceptual system, is multi-dimensional and results from the colours, odours, sounds and textures of the environment (Santiana, 1986).

Santiana's statement can be seen in Bohsali's (1994, p.10) memoirs of his experiences of the old souks of Beirut. He described the passageways of the old

souks as narrow and winding. They were paved with **yellow kiln stone** extracted from Lebanese mountains. Their levels were uneven. Some of the shop walls were built of **sandstone**; others were covered with **light-coloured** painted mortar. Some of the shop display windows were made from polished carved **wood**, while others were made of ordinary wood painted white, or grey. In these narrow souks, one did not hear the **city noises**, rather a certain kind of **silence** prevailed. This silence was interrupted by the **shouts** of peddlers, or by the **bang** of metal cups produced by **liquorice** drink sellers, or by the voices of shop owners who used to **exchange news** and anecdotes, while waiting for customers in front of their shops. Bohsali's appreciation of the environment was through sensing material, colour, texture and sound as well as exchanging news.

Itani (1994, p.38) gives a similarly enriched account of his memories of old Beirut. He describes that when passing by al-Bahrain Restaurant, one would enjoy the **odours** and **sights** of fried sardines and countless other traditional dishes and appetizers spread over its tables. The **sound** of dominoes and the competing voices of waiters were **heard** all over the neighbourhood. At the same time smokers of hubble-bubble pipes **looked** on, beyond the wooden balustrades, to **watch** the swimmers, boat riders and surfers in the small bay. The sensory stimuli in this account were perceived and appreciated through odours, sights and sounds.

5.8.15 Symbolic

Physical environments encompass many symbols, meanings and values. The symbolic value is related to social and emotional meanings attached to or evoked by features of the environment. Such values are often perceived as important as the structural and physical aspects of people's imagery (Knox and Pinch, 2000, p.302). The symbolic dimension was cited 211 times. Among its variables are landmarks that carry high symbolic value (Table 5-21).

Table 5-21: Symbolic dimension and its variables (source: the author, 2004).

Dimension	Variables	Freq.	Percent	Total Percent
Symbolic	Symbolic value	43	20.4	
	Statues	39	18.5	
	Landmark	28	13.3	
	Sense of unity	19	9.0	
	Raouché Rocks	17	8.1	
	Location	16	7.6	
	Bourgeois image	16	7.6	
	Al-Abed Clock	14	6.6	
	Naming of places	9	4.3	
	Focal point	7	3.3	
	Al-Manarah Tower	3	1.4	
	Sub-total		211	100.0

For instance, Martyrs' Square, Riad el-Solh Square and al-Nijmeh Square evoke connections to past events that stimulate feelings of cultural continuity, of shared identity and of a sense of belonging (Figure 5-29 and Figure 5-30). The statues have also become iconic and symbolic statements, reflecting shared community values, and have represented historical events such as the Martyrs' Statue and Riad el-Solh Statue³⁸.



Figure 5-29: Riad el-Solh Square was converted to a temporary parking leaving the statue in a mini park (source: the author, 2004).



Figure 5-30: Riad el-Solh Square before 1975 with its statue at the centre of the square (source: al-Wali, 1992).

³⁸ Riad el-Solh was the Prime Minister of the first government after independence (1943).

Martyrs' Square has always been the ground for historical, political and public events (Figure 5-31). It is a public space of great national importance that carries shared meanings and connections for the community of the historical memories of the martyrs.

In the city of Beirut, many buildings were preferred because they were also considered as landmarks by which people could identify the place. For example, the Grand Serail, with its unique Ottoman architecture, stands on a low hill with commanding views towards the city, the mountains and the sea. This landmark has become part of the skyline of the city. Al-Abed Clock, another landmark, sits at the centre of al-Nijmeh Square (Figure 5-32).

According to Greenbie (1981, p.120), landmarks can be any prominent orienting features that can be clearly distinguished from the other surrounding elements. For instance, a tall building may be a landmark if there are no other tall buildings nearby; on the other hand, an elegant work of architecture placed among other elegant works of architecture on the same scale, will most likely not be a landmark. In general, landmarks are more likely to carry significant symbolic meaning for the observer. Naming is associated with identifying places, groups, uses, or activities. Naming is also

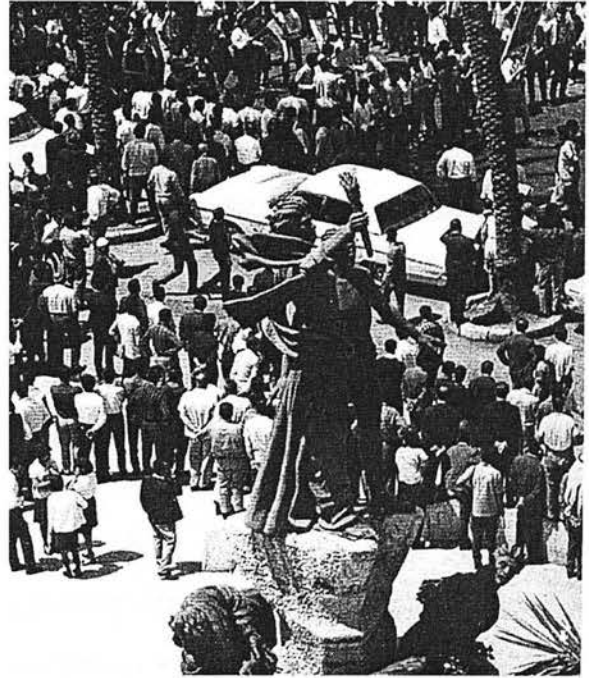


Figure 5-31: The Statute of Martyrs' witnessing one of the students' marches (source: Tueni, 2000, p.79).



Figure 5-32: Al-Abed Clock in the middle of al-Maarad Street (source: the author, 2002).

important in defining how things are classified, which also affects people's preferences, in a sense that names attached to objects may carry positive and negative meanings for people.

Places that carry particular names evoke memories, associations and meanings for people. Rapoport quoted Cox (1968), who stated that the naming of places is important in making people feel at home and in making the world meaningful. The importance of meaningful names may continue to exist even when their real physical counterparts have long gone. Rapoport postulates that when names and cognitive schemata coincide with physical equivalents, the environment becomes particularly clear and forceful (Rapoport, 1980, pp. 109, 111).

Traditionally, the naming of places in Beirut city has always been used as a symbolic meaning to indicate the function, use or association to a place. The old souks, for instance, are still remembered by their names although that their physical structures are not in existence any more. Each souk was named after the commodity sold in it, such as *Souk al-Dabagin* (Dyers' Market), *Souk al-Kazzazeen* (Glassmakers' Market), *Souk al-Haddain* (Ironsmith Market), *Souk al-Najarin* (Carpenters' Market), *Souk al-Atarin* (Perfumers' Market), *Souk al-Khyateen* (Tailors' Market), *Souk al-Saramy* (Shoe Cobblers' Market), *Souk al-Jawharjeh* (Jewellers' Market) and *Souk al-Kotton* (Cotton Market). Food, vegetables and sweets were sold in *Souk al-Nouriyé* (Vegetable Market), *Souk al-Lahameen* (Butchers' Market), *Souk al-Khoubiz* (Bakers' Market) and *Souk al-Katayf* (Pastry Market) (Al-Wali, 1992).

Other souks carried family names of some well-known merchants, which were mainly specialised in selling clothing, silk and other type of fabrics, such as Souk Ayyass, Souk al-Tawileh, Souk Sayyour and Souk Sursock (Figure 5-33 and Figure 5-34). In addition, *Souk al-Frang* (Foreigners' Market) was located in the area north to Bab Idris (one of the gates of the old city wall) to cater for the foreign customers who lived to the west of the old city.

In 1908, Souk al-Frang was widened to include the tram, and later this souk was known as *Souk al-Arman* (Armenians' Market) (Al-Wali, 1992). Location also deals with where things are, in terms of distance and direction. It is also related to names of places. Distance has to do with how far away a place is. So distance, a seemingly straightforward measure, can be quite complex and is closely linked with other aspects of environmental cognition and orientation. The other dimension of location, direction, is equally complex. When travelling, we often rely on the cardinal directions, north, south, east and west. In some instances, all directions are based on a well-known landmark – a street, statue or a monument (Altman, 1980, pp. 47-49).

5.8.16 Historical

The historical dimension is an important quality of public space that develops out of shared meanings of past events. The respondents mentioned variables related to historical dimension 198 times, including historical value, revealing ancient finds, heritage, Martyrs' Square, National Museum, display of antiques, Riad el-Solh Square, identity, Bab Idris, al-Maarad Street, al-Nijmeh Square, Grand Serail and old souks (Table 5-22). Such answers demonstrate that the attachment, affection and connection of the respondents to their public spaces and



Figure 5-33: Souk al-Tawileh (source: Al-Wali, 1992).



Figure 5-34: Souk Ayyass (source: Al-Laham, 1990).

architecture came on the one hand because it had fulfilled their needs as well as reflected their history and way of life.

Table 5-22: Historic dimension and its variables (source: the author, 2004).

Dimension	Variables	Freq.	Percent	Total Percent
Historical	Historical value	86	43.4	
	Revealing ancient finds	37	18.7	
	Heritage	20	10.1	
	Martyrs' Square	12	6.1	
	National Museum	9	4.5	
	Display of antiques	9	4.5	
	Riad el-Solh Square	6	3.0	
	Identity	7	3.5	
	Bab Idris	4	2.0	
	Al-Maarad Street	2	1.0	
	Al-Nijmeh Square	2	1.0	
	Grand Serail	2	1.0	
	Old souks	2	1.0	
	Sub-total	198	100.0	2.8

Public space has always accommodated the historical dimension as a symbol of public life. It plays an important role as a social binder of the scale of a group's history and culture, establishing the past, its heroes and events as a context within which the present finds its foundation and the future its direction. A person, therefore, is not passively dependent on the surrounding environment but constructs a mental image of it that embraces personal and social experiences.

"... contextual references may be to real historical connections, whether typical settlement patterns of the place, the typical qualities of past architecture, or the particular occurrences." (Carr et. al, 1995, p.266)

Consciously or unconsciously, individuals' backgrounds, history and experiences give them a set of expectations about the worlds so that they recognise familiar things and bend less familiar ones until they resemble what the people already know (Stewart, 1981).

The archaeological finds have contributed to a deeper appreciation of the city's settlement history, its topography and urban growth over various historical periods. A wealth of the city's archaeological heritage still lies beneath the surface, awaiting the influence that it might exert, once exposed, in further shaping and enriching the city.

5.8.17 Territorial

The territorial dimension was cited 153 times (Table 5-23). In people's responses, variables of location and closeness were mainly associated with local neighbourhoods because they are related to being close, safe and familiar places. This gives an indication of the still resonant aftershock of the war, when people's movements were restricted to locations close to home, where shelter could be sought when personal safety was put at risk.

Table 5-23: Territorial dimension and its variables (source: the author, 2004).

Dimension	Variables	Freq.	Percent	Total Percent	
Territorial	Closeness	57	37.3		
	Ras Beirut	16	10.5		
	Al-Achrafiyé	14	9.2		
	Furn el-Chebak	13	8.5		
	Tariq el-Jedideh	13	8.5		
	Basta area	11	7.2		
	City centre	8	5.2		
	Adoura	7	4.6		
	Bourj Hamood	7	4.6		
	Location	5	3.3		
	Old souks	2	1.3		
	Sub-total		153	100.0	2.1

Going to old places in the city centre, such as the old souks, was then impossible without putting one's life in jeopardy. It was notable from people's responses that shopping during the civil war was restricted to bare necessities. Variables related to shopping were referred to 342 times, including safety and security, familiar places, safe place, daily needs, convenience from home, closeness to

shelter, family reasons, local neighbourhoods, local shops and co-operative markets. Neighbourhoods are the basic spatial unit in Beirut city, which historically have been witness to the physical manifestations and social interaction between various communities. Before the civil war, Beirut's neighbourhoods were mainly residential quarters with few commercial services, as most of the services were located in the city centre and its old souks. Traditionally, neighbourhoods played an important part in strengthening local identities, giving various groups the ability to set behavioural norms and to determine appropriate activities that could be undertaken within public spaces.

Ras Beirut, (Hamra, Manarah and Ain al-Meriese), arguably one of the oldest neighbourhoods of Beirut, huddles on a picturesque cove on the waterfront of the western flank of the city centre. It adjoins the Hotel District, which was devastated during the war. In the pre-war period, Ain al-Meriese, like the rest of Ras Beirut, was a mixed neighbourhood with fairly open and liberal lifestyles. Its inhabitants, mostly Sunni, Druze, Shi'a and Greek Orthodox, along with Armenians and Kurds, lived side by side.

The presence of the American University of Beirut also drew a rather large number of foreign residents to Ras Beirut, including diplomats, freelance workers, intellectuals, journalists and artists. By virtue of its proximity to the city centre and the seaport, its inhabitants were mostly merchants, retailers and clerks in the burgeoning tourist sector of hotels, entertainment centres and sidewalk cafés. The bulk of its indigenous population worked at the port or were fishermen, serving as the mainstay of the neighbourhood and defining its character (Khalaf, 1998, p. 155).

Achrafiyé is a homogeneous Christian (mainly Maronite and Greek Orthodox) residential quarter with definite Francophile leanings, in both style of life and cultural orientation. The area is predominantly middle- and upper-class with exclusive residential mansions of the traditional urban aristocracy. Basta is almost entirely Sunni Muslim and of clearly lower socio-economic status. In its

style of life, the inhabitants are tradition-oriented. Despite their striking differences, both areas have remained relatively homogenous residential quarters. The city centre was the heart of the city, which nurtured culture, education and religion. It was the place where people had their needs provided for by commercial services, civic institutions and recreational facilities. The city centre has known many names throughout its history.

For instance, *al-Balad* is a traditional Arabic term, which means the country, that people still use when referring to the pre-war city centre. This gives an indication of the importance of the city centre in the lives of the Beirut people. Recently, young people have adopted unfamiliar terms to reflect the particular social and functional status of the city centre areas, such as *down town*, *al-Wasat al-Tijari* (the commercial centre) and *al-Solidere* (named after Solidere).

All the respondents identified the old souks as the place for shopping before the civil war took place.³⁹ This is because the old souks were the central place for all social, cultural and commercial activities of the whole community. Shopping in the old souks was highly appreciated by people for many reasons related to a sense of familiarity, affordability, family reasons, quality of products, variety, bargaining, lingering and protection from climate. The researcher has profound concerns about the cultural, social and economical implications of decapitating the city centre from this most important function. Since the inception of the reconstruction process in 1995 until now, the society still appears to be waiting with anticipation to see what qualities the reconstruction plan will offer as an alternative for what used to be the centre of their daily activities and livelihood.

5.8.18 Religion

Communities evolve through an array of variables, such as religion, economics, politics and the physical environment. Religion motivates the way people perceive their physical environment. Religion's ultimate motivation is to

³⁹ See question 3, Appendix C.

maintain harmony between people and between people and their environment. Public spaces foster connections among members of a culture or subculture. Sacred places or ceremonial plazas, through frequent use, inspire worship, admiration and powerful feelings of relatedness for believers of a particular faith or system of beliefs (Carr, 1995, p. 207). The respondents referred to religion as an important dimension in every aspect of their lives and it was cited 128 times (Table 5-24). It was mainly expressed in relation to the identity and spirituality of various social groups.

Table 5-24: Religion dimension and its variables (source: the author, 2004).

Dimension	Variables	Freq.	Percent	Total Percent
Religion	Religious buildings	30	23.4	
	Religious reasons	24	18.8	
	Attending ceremonies	18	14.1	
	Spiritual	15	11.7	
	Identity	12	9.4	
	Going to burial grounds	10	7.8	
	Charitable events	10	7.8	
	Good cause	9	7.0	
	Sub-total	128	100.0	1.8

Moreover, religious buildings encouraged various functions to occur that foster social interaction and cultural continuity. This was represented in attending religious ceremonies and charitable events in mosques, churches and shrines. Religion as a civic dimension encourages charity and promotes good causes, in requiring values of cleanliness and tolerance among various people. Religious leaders have an important role in education, in resolving legal disputes, in caring for the poor, and in city politics. For instance, on January 24, 2002 al-Nijmeh Square hosted a communal religious event organised by the National Committee for Islamic-Christian Dialogue. After separate prayers, the participants, including clerics and members of various religious groups, gathered in the square and joined their voices to call for peace in Lebanon, the region and the world (Figure 5-35) (Solidere, 2002a, p.7).

Moreover, gatherings of various religious groups take place in public spaces to mark public religious festivals such as Ramadan, Eid, Passover and Christmas. In the context of a city and city life, religious buildings are not only considered for their spiritual importance as being a place for prayers and rituals, but also for their social and cultural significance. They become meeting places where people of the same social group gather during festivities and social occasions. Al-Nijmeh Square encompasses several important civic and religious buildings, including the Parliament, St. George's Orthodox Church and St. Elie's Catholic Cathedral, giving social, cultural, historical and religious values to the square (Figure 5-36).



Figure 5-35: Al-Nijmeh Square fosters connections among various religious groups (source: Solidere, 2002a, p.7).

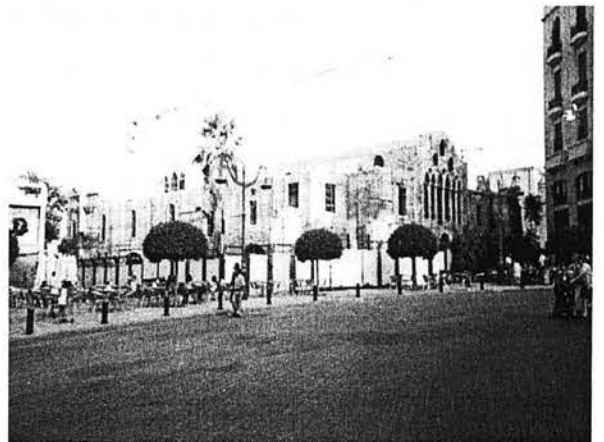


Figure 5-36: St. George's Orthodox Church under restoration (source: the author, 2002).

Religious buildings also contribute in a major way to the character and the configuration of the physical environment with their domes and minarets. With their unique forms, religious buildings become landmarks that identify the city centre of Beirut. The minarets and domes of the mosques and the church towers enriched the visual quality of the city centre by breaking up the monotony of the skyline. In addition, they function as landmarks, which people could use in identifying locations, and areas, and in way-finding.

In the city of Beirut, religion has played a considerable role in forming the built environment. For instance, the presence of major religious buildings in the historic core of the city has improved social exchange among various social groups in the Beiruti community where all people meet and transact socially in public space. Al-Omari Mosque is located at the intersection of two main streets, namely al-Maarad and Weygand Streets (Figure 5-37). Its minarets

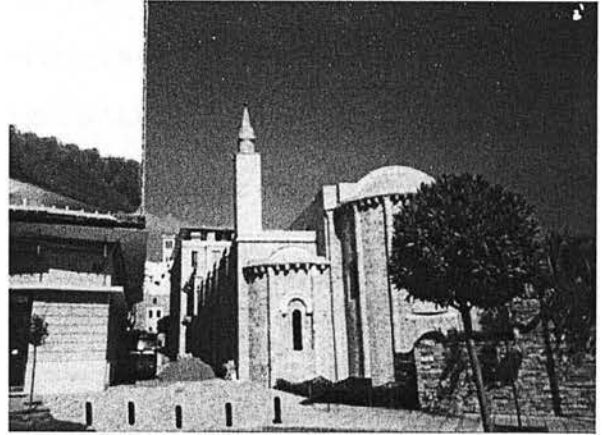


Figure 5-37: Al-Omari Mosque under restoration (source: the author, 2002).

and domes are unique and contribute to the character of the area. The respondents considered this mosque as one of the important architectural features in the city centre for many reasons, but mostly for its spiritual and social importance, which can be seen clearly in religious festivities. However, Lebanese communities are less restrictive about the mixing of women and men in the society than other countries in the Middle East. Nevertheless, the segregation of sexes, as a defining value of the Muslim community, has been put into practice at the school and the family level.

5.8.19 Natural Environment

The natural environment is a popular resource that makes a valuable contribution to public life. Public life is supported by the attraction of people to natural features. Vegetation, trees on streets and gardens are highly valued parts of cities (Carr et al., 1995, p. 41). This appreciation of the natural environment is shared among various cultures. Natural environmental qualities were mentioned 102 times overall (Table 5-25). It was notable that natural features attracted people to get involved with various outdoor activities. The respondents frequently mentioned parks, good landscapes, fresh air and natural views as features that assist in encouraging them to spend time outdoors. They felt that parks and green

spaces give people the opportunity to contact with nature and have a replenishing effect. People spoke of their delight in parks, nature, and pine trees that have a positive effect on their lives. Such spaces also contribute to the heritage and culture of the Beirut communities, as they have become venues for religious festivities, public celebrations and social gatherings.

Table 5-25: Natural environment dimension and its variables (source: the author, 2004).

Dimension	Variables	Freq.	Percent	Total Percent
Natural environment	Fountains	24	23.5	
	Pine forest	14	13.7	
	Natural views	12	11.8	
	Sanayah park	11	10.8	
	Shaded areas	11	10.8	
	Fresh air	10	9.8	
	Location	6	5.9	
	Sioufi Park	6	5.9	
	Good landscape	5	4.9	
	Gathering of people	3	2.9	
	Sub-total		102	100.0

The natural environment can have a positive binding effect on diverse communities in that it embraces a level of existence that accommodates all human differences. It can promote community cohesion, encourage community development and stimulate partnerships between the private and public sectors. Parks and green spaces are essential elements of liveable towns and cities. Parks and green spaces also contribute to the urban environment by fostering local pride and offering places for city dwellers to find calm, places to be active and sociable, and the chance to find personal respite from the pressures of city life. Green spaces help to build community cohesion by allowing people to engage with each other in partnerships and friendship groups and by bringing together communities in shared spaces (DTLR, 2002, pp. 10-13).

- The souks were not only the place for commercial activities (selling, buying and bargaining), but also a **place for meeting and conversation**. Shopping in the old souks was highly appreciated by the respondents for reasons related to a sense of **familiarity, affordability, family reasons, the quality of products, variety, lingering and protection from the climate**.
- The leisure and entertainment dimension included active and **passive activities**. Out of all active variables, **walking** was cited most frequently and it was denoted as an important activity that relates to many aspects of human life. Other important activities mentioned, included eating, shopping and drinking.
- The respondents also mentioned public spaces being well-lit at night as it brings **psychological comfort** and a sense of security. Although public lighting increases the aesthetic quality of the environment, it is essential to improving visibility, increasing safety, reducing crime, prolonging visits and encouraging night activities.
- Relaxation was the second most frequently mentioned variable for leisure and entertainment after walking and it was linked mainly to open spaces, including promenades, parks and the pine forest. Adequate seating was mentioned as one of the qualities people preferred to have in public space, which was also linked to relaxation.
- Related to relaxation was a sense of security, which is an important public space quality. The respondents signified **safety and security** as important qualities required of public space. They felt that, if safety and security were provided, people would be encouraged to more frequently occupy and visit public spaces. A widespread perception of crime and fears for personal safety has led many people to change the ways in which they use public spaces in their community.

- Female respondents indicated that the provision of safety and security features has been far better in the current public spaces, which encourages people and in particular women to prolong their visits. User-friendly environment, connected spaces, pedestrian zones, lively, safe environment, sense of familiarity, **good for women**, safe for children and the family and comfort, were variables signified more by female than male respondents.
- The respondents also mentioned a **sense of familiarity**. Familiar places were closely related to **safe places, informal, friendly** and **lively** environments, **courtesy** and **social interaction**.
- Some of the respondents were discomfited by the presence of security guards in public spaces as a means to control public behaviour. In addition, they felt that the high quality of reconstruction and the exclusive facilities provided have limited public use and emit visual and spatial messages about the type of people welcomed in the area.
- Closely related to social interaction are the expressions of **social exchange, social gatherings** and the mix of social groups. Social exchange among various groups in the community is promoted through shared identity, where all people meet and transact in public space.
- Identity is about distinctiveness, belonging and shared values that differentiate people from each other.
- The respondents approved of the **cultural** and **traditional events** that have occurred recently in the city centre, recognising in these an effective way to promote activities in public space. Social interaction between people as attained in public spaces facilitates **collective social events**.
- The old souks throughout history evolved according to social demands. The hierarchy of public spaces within them did not happen by master plan or accident; rather, it conformed to and reflected the social and cultural needs of the local society.

- The compactness of the old city structure before the war enhanced social relations among residents. All the common activities were experienced in public squares and streets, which made people live and work together as an integrated social unit.
- Discovering places is a quality of space that is mainly associated with movement, where people are able to move around and find out about different parts of their environment. Activity as a dimension is closely related to **space** and **time**, as environments are used differently at different times.
- The respondents referred to aesthetic qualities as an important aspect that distinguished the redeveloped city centre and its public spaces, including **sleek** architecture, a **clean** environment, an **organised** setting, **touristy**, **attractive**, worthy of **admiration** and **well-lit at night**. Aesthetic qualities of an urban setting affect people's judgment.
- In their appreciation of the built environment, people demonstrated an awareness of the new image of the city centre, with regard to merging the modern with its traditional character.
- Quality is associated with almost every aspect of public life. The respondents associated quality with the old souks, in terms of the freshness of products, attractive shop fronts and beautiful smells.
- Movement through public space is at the core of the urban experience, as it reflects life and activity. The opportunity for people-watching often influences people's choice of where to sit or linger in public space, which in turn relates to appreciation of the activity and movement within the space.
- The respondents also favoured qualities related to promoting **pedestrianisation** of some streets of the city centre. Al-Nijmeh Square and al-Maarad Street were most frequently selected as suitable areas to be transformed into pedestrianised zones. A pedestrian count survey,

conducted in the selected areas, revealed that there existed fluctuations in the pedestrian movement pattern throughout the period of the survey. Such fluctuations in pedestrian movement along a principal area in the city centre indicate that the centre has not yet fully recovered, and more efforts need to be made to attain more recovery.

- The respondents valued **comfort** as an important quality that is required of public space. For them, this includes many qualities of public space that make it convenient for human use, such as allowing a sufficient amount of air circulation, shade, ease of access, parking spaces, pedestrianised streets, safety and security, and stalls and vendors. The respondents felt that there is a need to provide **protection from the climate**.
- Major public squares emerged as focal points in community life, including Martyrs' Square, al-Nijmeh Square and Riad el-Solh Square. The Beiruti people are extremely conscious of the importance of public spaces in their daily lives, as they attain valuable contact amongst different social groups in these places. The promenade, also, is a thriving public space in the city, which has assumed a great cultural significance for the community. It has become an important public space where people can enjoy social transactions day and night.
- **Cafés**, highly favoured by the respondents, were mainly associated with social interaction, tradition, meeting people, spending time and an informal atmosphere.
- The respondents also mentioned **physical features** in public spaces that people were attracted to, such as fountains.
- Beiruti people have a profound appreciation of **customs**, which reflect their **identity** and **traditions**. Identifying a need to return to the old customs and traditions through promoting social engagements amongst people utilising public space, many of the respondents referred to the recent Souk al-

Bargouth as a locus of social interaction and promoter of culture and heritage. They also recognised it as an example of a traditional event, which attracts people and tourists to public spaces.

- The respondents appreciated the qualities of public spaces through their **senses**, which facilitate in perceiving the surrounding environment. Appreciation through sense involves way-finding, discovering places, admiring surroundings, observing activities, feeling, examining, exploring and comfort.
- **Religion** also motivates the way people perceive their physical environment.

In conclusion, the dimensions, which emerged from people's preferences, correspond to the theoretical framework of Part One, which are based on four main attributes of public space, namely the **physical**, the **socio-cultural**, the **perceptual** and the **functional** attributes. Figure 5-38 depicts how the variables raised in response to the questionnaire are distributed according to four main attributes. The transactional perspective provided the discussion with a holistic approach to understanding the local and global context of this thesis. The local context informed the discussion about the background of individual dimensions and variables raised in response to the questionnaire. These dimensions and variables are embedded in their local contexts are also embedded in the global context, which supported the discussion with the theoretical discussion of Part One.

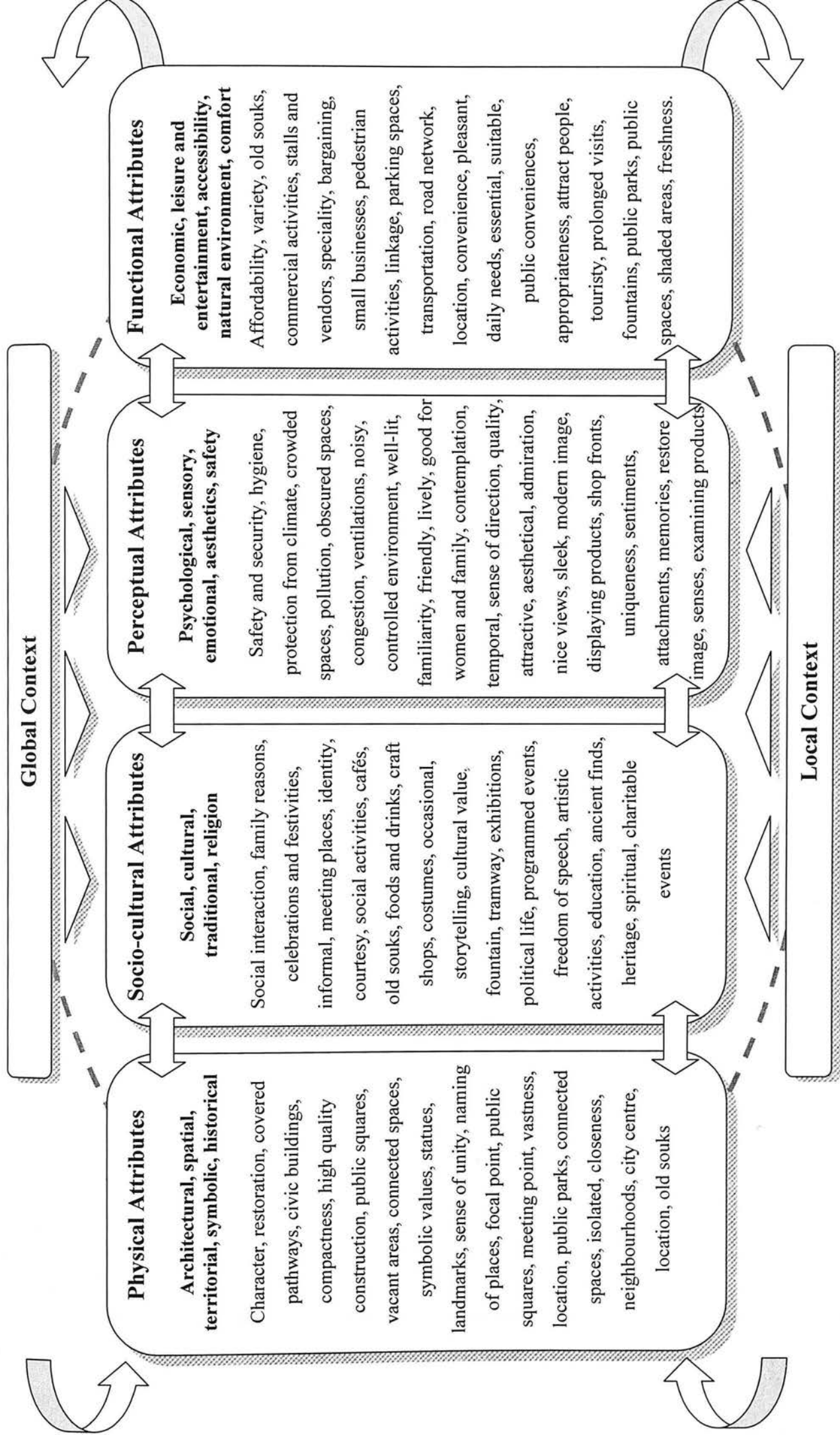


Figure 5-38: A diagram illustrating the dimensions and variables raised in response to the questionnaire are distributed according to the four main attributes (source: the author).

Chapter Six:
The Image of the City and its Applications

Chapter Six: The Image of the City and its Applications

6.1 Introduction

In Chapter Five the author derived an understanding of Beirut as a lived-in city through eliciting people's perceptions of and preferences in their environment. To understand further how people come to learn and know their environment, Chapter Six examines and analyses the cognitive maps that were prepared by the respondents vis-à-vis question 24 of the questionnaire.

Cognitive maps are mental images of the environment, which individuals collate and use instinctively in their everyday behaviour within the city. Cognitive mapping technique can thus be used to capture the way the respondents remembered their city. It is another means of unravelling people's perceptions and awareness of their environment. This technique provides value-rich data that addresses subjective issues and features that may not be expressed in the questionnaire responses. Lynch's five elements of the city image are considered as primary components of cognitive images, which focus on the physical qualities that relate to the attributes of identity, structure and meaning. Hence, this chapter commences by introducing Kevin Lynch's main findings, arguments and criticisms, followed by the cognitive maps of the respondents, and finally the application of the five elements of **imageability** in order to construct a shared mental image of the city of Beirut.

6.2 The Image of the Environment (Kevin Lynch)

City images can be recaptured and symbolised in a variety of ways. Lynch (1960, pp. 45-50) points out that stored information about the city and its space can be obtained by examining several representative means, such as sketch mappings, verbal descriptions and information lists.

"At every instant, there is more than the eye can see, more than the ear can hear, a setting, or a view waiting to be explored. Nothing is experienced by itself, but always in relation to its surroundings, the sequences of events leading up to it, the memory of past experiences." (Lynch, 1960, p.1)

Rapoport (1977, p.41) associated image with memory. He quoted Downs (1976), who describes images as the “point of contact between people and their environment”, thus relating them to behaviour. Boulding (1956), however, claims that all behaviour depends on the image, which is defined as subjective knowledge, all the accumulated and organised knowledge that an individual has about him/herself and the world. He argues that the image rejects any change that is in contradiction with it, but if conflicting messages continue, then the original image is eventually altered.

Environmental images are the product of a two-way process between the observer and the environment. The ability to structure and identify the environment is vital to all human beings. Lynch suggests that an environmental image may be analysed as having three components: **identity**, **structure** and **meaning**. A workable image requires (Lynch, 1960, p.8):

1. The identification of an object refers to identity, which implies the distinction of the object from other things, its recognition as a separate entity. This is called identity, not in the sense of equality with something else but with the meaning of individuality or oneness.
2. The image must include structure, which refers to the spatial or pattern relation of the object to the observer and to other objects.
3. Finally, this object must have some meaning for the observer, whether practical or emotional. Meaning is also a relation, but a quite different one from a spatial or pattern relation.

Lynch (1960, pp. 8, 9) argues that if the purpose of building cities is to fulfil the needs of the majority of people from diverse backgrounds, it is wise to concentrate on the physical clarity of the image and to allow meaning to develop without the researcher’s direct guidance. Lynch identifies several image qualities necessary to have value for orientation in the living space. He suggested that the

map must be sufficient, in the sense that it must allow the individual to function within his surroundings to the required level.

Whether exact or not, the map must be good enough to get one home. It must be sufficiently clear and well integrated to minimise mental effort; in other words, the map must be readable. It should be safe, with a surplus of clues so that other activities are achievable and the risk of failure is not too high. The image should thus be open-ended, adaptable to change, permitting the individuals to continue to explore and arrange reality. There should be empty spaces where they can expand the drawing for themselves. Finally, it should be comprehensible to other individuals.

6.2.1 Imageability of the City

Imageability, as Lynch defines it, is that quality in a physical object, which evokes a strong image in any observer. He believes that imageability encompasses the shape, colour, or arrangement, which facilitates the construction of clearly identified and vigorously planned mental images of the environment. In addition, he suggests that imageability may be called **legibility**, or perhaps **visibility** (Lynch, 1960, pp. 9, 10).

Lynch's analysis is focused on the central areas of three American cities, namely Boston, Jersey City and Los Angeles. His study includes two basic analyses, which are a systematic field survey of the area and lengthy interviews with a small number of the respondents to evoke their own images of their physical environment.

Although Lynch's major intention is to uncover the role of the physical form, he acknowledges that there are other influences on imageability, such as the social meaning of an area, its function, its history, or even its name. However, Lynch put more emphasis on the physical environment as the independent variable, looking for physical qualities, which relate to the attributes of identity, structure and meaning (ibid).

6.2.2 Contents of the City Image

Lynch (1960, p. 7) reveals that each individual creates and develops his own image. He suggests that members of the same group have a significant agreement of **shared images** and **collective memories**, which should be the focus and interest of the city planners. He refers to grouped shared images as **public images**, or **common mental pictures**, which are carried by many city inhabitants. These are:

- Areas of agreement which might be expected to appear in the interaction of a single physical reality;
- A common culture; and
- A basic physiological nature.

Kevin Lynch (1960, pp. 46-49) found that people approached the mapping task in five ways. Some emphasised paths and the elements along them; some drew boundaries first and then filled in the maps; some drew a repetitive system - such as a grid layout of streets - and then filled it in; some drew districts first and then connected them; and some started out drawing the nodal points and then filled in their surroundings. As a result of his studies, Lynch classifies the physical elements of the city images into five types of elements (Figure 6-1):

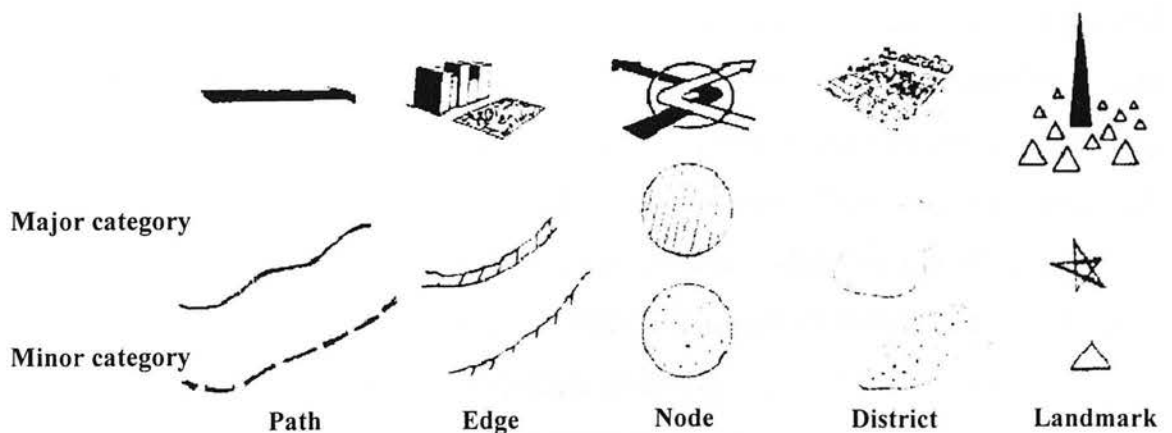


Figure 6-1: The physical elements of the city image (source: Lynch, 1960, pp. 46-49).

1. **Paths:** Paths are the channels along which the observer customarily, occasionally or potentially moves. They may be streets, walkways, transit lines, canals or railroads. For many people, these are the predominant elements in their image. Along these paths, people observe the city while moving through it.
2. **Edges:** Edges are the linear elements not used or considered as paths by the observer. They are the boundaries between two phases, linear breaks in continuity: shores, railroad cuts, edges of development, walls etc. They are lateral references rather than co-ordinate axes. Such edges may be barriers, more or less penetrable, which close one region off from another, or they may be seams, lines along which two regions are related and joined together. These edge elements, although probably not as dominant as paths, are for many people important organising features, particularly in the role of holding together generalised areas, as in the outline of a city by water or a wall.
3. **Nodes:** Nodes are points, the strategic spots in a city into which the observer can enter, and which are the intensive foci to and from which he/she is travelling. They may be primarily junctions, crossings or convergences of paths, moments of shift from one structure to another.
4. **Districts:** Districts are the medium-to-large sections of the city, conceived of as having two-dimensional extent, which the observer mentally enters 'inside of' and which are recognisable as having some common, identifying character. Always identifiable from the inside, they are also used for exterior reference if visible from the outside. Most people structure their city to some extent in this way, with individual differences as to whether paths or districts are the dominant elements. It seems to depend not only upon the individual but also upon the given city.
5. **Landmarks:** Landmarks are another type of reference point, but in this case, the observer does not enter within them, they are external. They are

usually rather simply defined physical objects: a building, sign, store, or mountain. Their use involves the singling out of one element from a host of possibilities. Some landmarks are distant ones, typically seen from many angles and distances, over the tops of smaller elements, and used as radial references. They may be within the city or at a distance such that, for all practical purposes, they symbolise a constant direction, such as isolated towers, golden domes and great hills.

Lynch's five elements of the city image can be considered as fundamental components of cognitive images, which, if recaptured, can be used to produce a representative map of the stored information. These elements are interrelated features that affect the individual's cognition of a place. They allow the individual to be aware of various attributes of place and to sense distances and orientations. Thus, cities where the five elements are clearly legible offer more visual pleasure and emotional security and heighten the potential depth and intensity of human experience (Lynch, 1960, pp. 45-50).

6.2.3 Notes and Criticisms

In the aftermath of the publication of Lynch's theory in 1960, many scholars in the fields of urban design and social science expressed reservations about his work as giving more weight to structural phenomena and neglecting the social, cultural and behavioural aspects of the city. For instance, Rapoport (1977) argues that the definition of the city image elements (paths, edges, districts, nodes and landmarks) ignore the nature of the same physical elements, and in some situations may create confusion. Lynch defines paths as "...the channels along which the observer customarily, occasionally, or potentially moves" (Lynch, 1960, p.47). Based on this definition, a major highway can be a path for motorists and an edge to pedestrians. Madanipour (1996, p.68), however, argues that Lynch's approach to the city image is another attempt to impose some form of imaginary order onto the urban fabric. He argues that Lynch's concept of the district has been used widely to create subdivisions in urban space. This concept

has been used with crime prevention measures that promote the use of barriers and gates in neighbourhoods. Both subdivisions – for legibility or for security – present the danger of disintegration of urban space into fragmented, exclusive entities, creating new social and spatial barriers yet failing to address the interface between strangers and inhabitants.

6.3 Cognitive Mapping, Orientation and Way-Finding

The technique of cognitive mapping became widely acknowledged when Kevin Lynch (1960, p. 2) used it in his influential book *The Image of the City*. Lynch's key concern was mainly centred on creating environments with "apparent clarity or 'legibility' of the cityscape". Cognitive maps are central aspects of people's everyday behaviour. Lang (1987) quotes Downs and Stea (1973):

"We view cognitive mapping as a basic component in human adaptation, and the cognitive map as a requisite for human survival and everyday behaviour. It is a coping mechanism through which the individual answers two basic questions quickly and efficiently: (1) Where valued things are; (2) How to get there from where he is." (Downs and Stea, 1973, quoted in Lang, 1987, p.136)

People's spatial behaviour depends partially on the images they have of the structure of the environment. The way the built environment is structured very much affects the ease with which people find their way through buildings, neighbourhoods and cities. The individual's ability to orient him or herself, both socially and physically, is a major contributor to the sense of security of the individual (Lang, 1987, p.135). Appleyard (1969, p. 437) reveals that city images are likely to be schematic, disorganised and simplified. Appleyard identifies critical spatial properties of these images in regard to their topological, positional, sequential, configurational and spatial characteristics (Figure 6-2).

Cognitive maps to Neisser (1976) are often discussed as mental pictures of the environment that could be examined by the mind's eye while the mind's owner is at leisure; like other schemata, they accept information and direct action. In cognitive maps, perceivers tend to have expectations about things that may happen in the future. According to Neisser, the word 'imaginary' suggests that

images are anything but realistic anticipations of the future. He postulates that mental images frequently represent expectation or desires that are preconscious or unconscious (Neisser, 1976, pp. 132, 133).

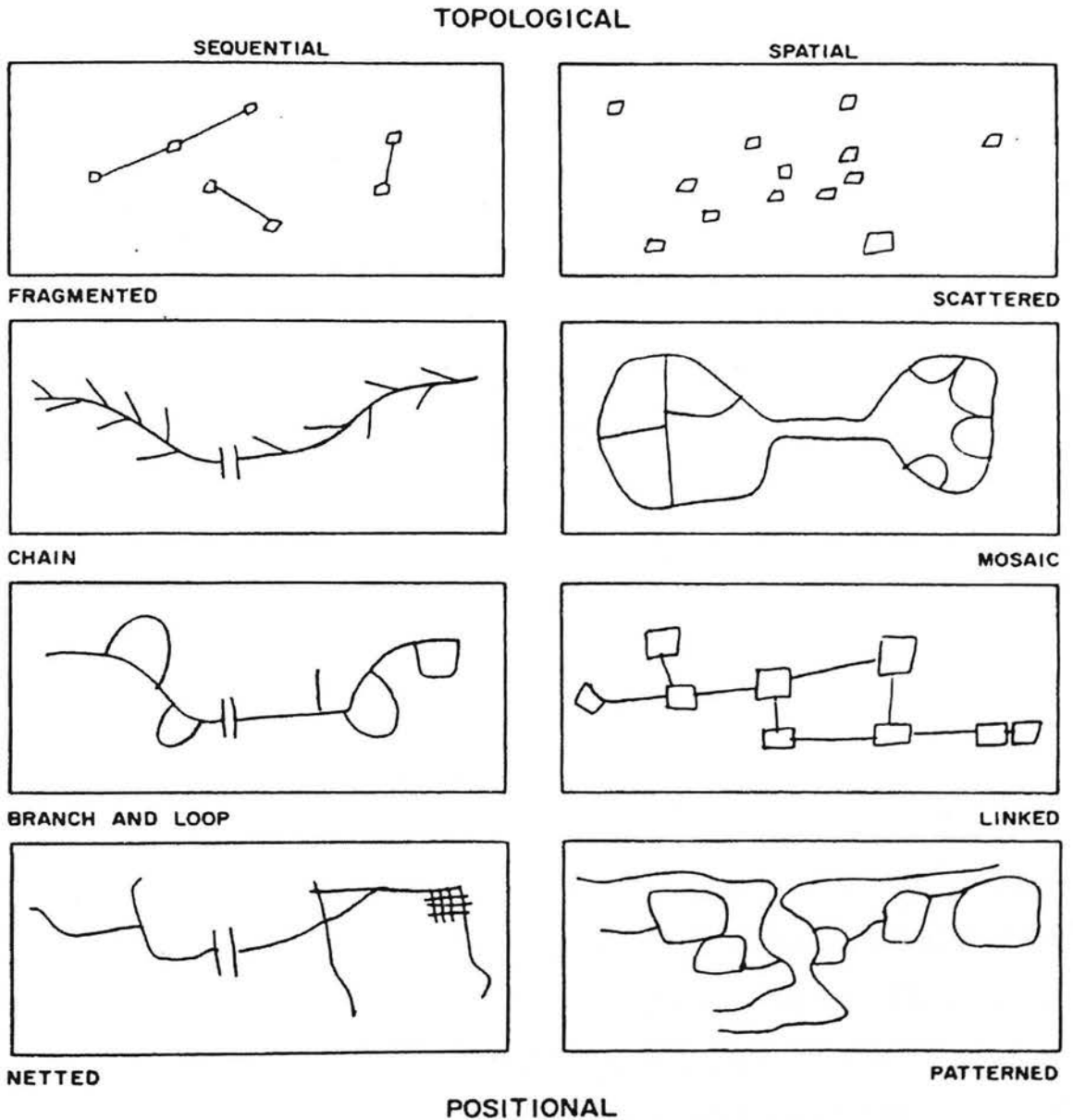


Figure 6-2: Appleyard's map types (source: Appleyard, 1969, p.437).

Cognitive maps are remarkably durable, adaptable and easily recalled. It is easy therefore for people to add new information to their cognitive maps when they perceive some changes in the environment. It is particularly important that an

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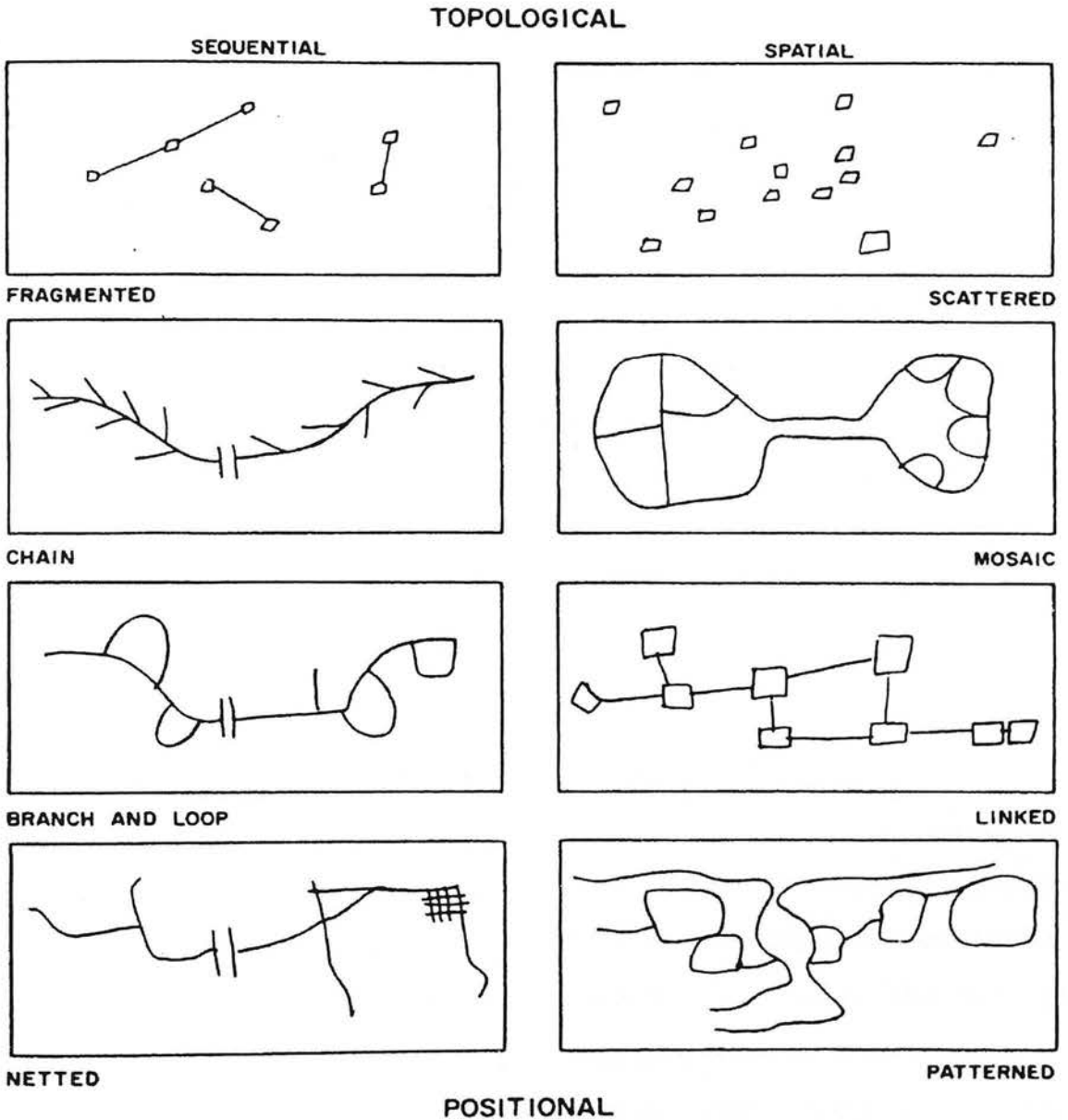


Figure 6-2: Appleyard's map types (source: Appleyard, 1969, p.437).

Cognitive maps are remarkably durable, adaptable and easily recalled. It is easy therefore for people to add new information to their cognitive maps when they perceive some changes in the environment. It is particularly important that an

individual can add information to cognitive maps even when the individual is merely told about situational changes without perceiving them, thereby being able to alter their perceptual anticipations and travel plans based on verbal information alone (Neisser, 1976, pp. 110-135).

In general, the process of acquiring spatial knowledge is denoted as the **cognitive mapping process**. The product, the sum of the total of environmental information stored in memory, is called the **cognitive map**. Consequently, the term cognitive map represents the individual's model of any particular place (Stokols and Altman, 1987, pp. 143-144).

People feel and perceive the quality of their environment and its spaces as a series of public images that are shared by many citizens. Such images are necessary if an individual is to function productively within the environment and to work together with other users of that same environment. Lynch (1960, pp. 1, 2) believes that every individual has long associations with the city, which is full of meanings and memories of experience. According to Lynch, moving elements in a city and in particular people, and their activities, are as important as the stationary physical parts.

Lang (1987, pp. 135, 136) states that learning the layout of the city is rewarding and a person's stress level rises when he or she gets confused about directions. The process of learning involves the formation of cognitive maps. Lang argues that cognitive maps are not exact replicas of the reality of the structures of cities, neighbourhoods and buildings; rather, they are models of reality. The drawings people do are graphic representations of cognitive maps of areas of cities or buildings, which are partial, schematised and distorted in the sense that they reflect both group resemblance and individual dissimilarities.

6.4 Individuals' Cognitive Maps

The main advantage that a cognitive map has above a questionnaire is not merely to give people a second opportunity to name streets, parks, and buildings but is to

show how they structure this internal information. Such knowledge cannot be derived from a questionnaire, which automatically pre-structures their responses by a predetermined question ordering. Hence, the analysis of cognitive maps is not based on comparing features named in the questionnaire to those named on the maps, but it is rather to do with the structuring of the city as recommended by Appleyard (1969). The request to respond to Question 24 came at the end of the questionnaire, which stated the following:

(Q) 24. Imagine that a visitor or a tourist came to Beirut and asked you to give a rapid description of the city by drawing a little map indicating the most important landmarks, buildings of historical or cultural importance, public places, parks, picturesque areas, so he/she can visit.

Please draw the map of the city on the other side of this sheet. You can use symbols to indicate the main features of the city. It does not put any emphasis either on your personal drawing skills, or on the accuracy and scale of the drawing, but it is rather to identify areas, places, buildings and features of the city are most important to you, which may not have appeared in the answers to the questionnaire.

However, responses were modest as out of the 37 interviewees involved in the questionnaire, only 22 managed to complete the question. Mainly, this was because some of the respondents felt that they lacked drawing skills and experience; others requested time to practise but never completed their sketches. The following are selected samples of the sketches provided by the respondents.

Figure 6-3 is a linked-type map, which shows major roads in the city leading towards the city centre. It also shows important buildings, landmarks and neighbourhoods. The waterfront and the promenade to the north of the city were among the most important features that appeared in almost all the maps.

Other things of interest are that all shaded areas are places of intensive public gathering or traffic. The respondent structures the city about these, and what is more interesting is that although Martyrs' Square was shown, it was left blank, perhaps it is becoming less interesting to the respondent. This map is also based on patterns of movement; thus, the exact locations (for example, the airport) are pushed around to simplify main routes. The list given in English shows the

respondent was still thinking about the questionnaire (good, quality, local international, and architecture).

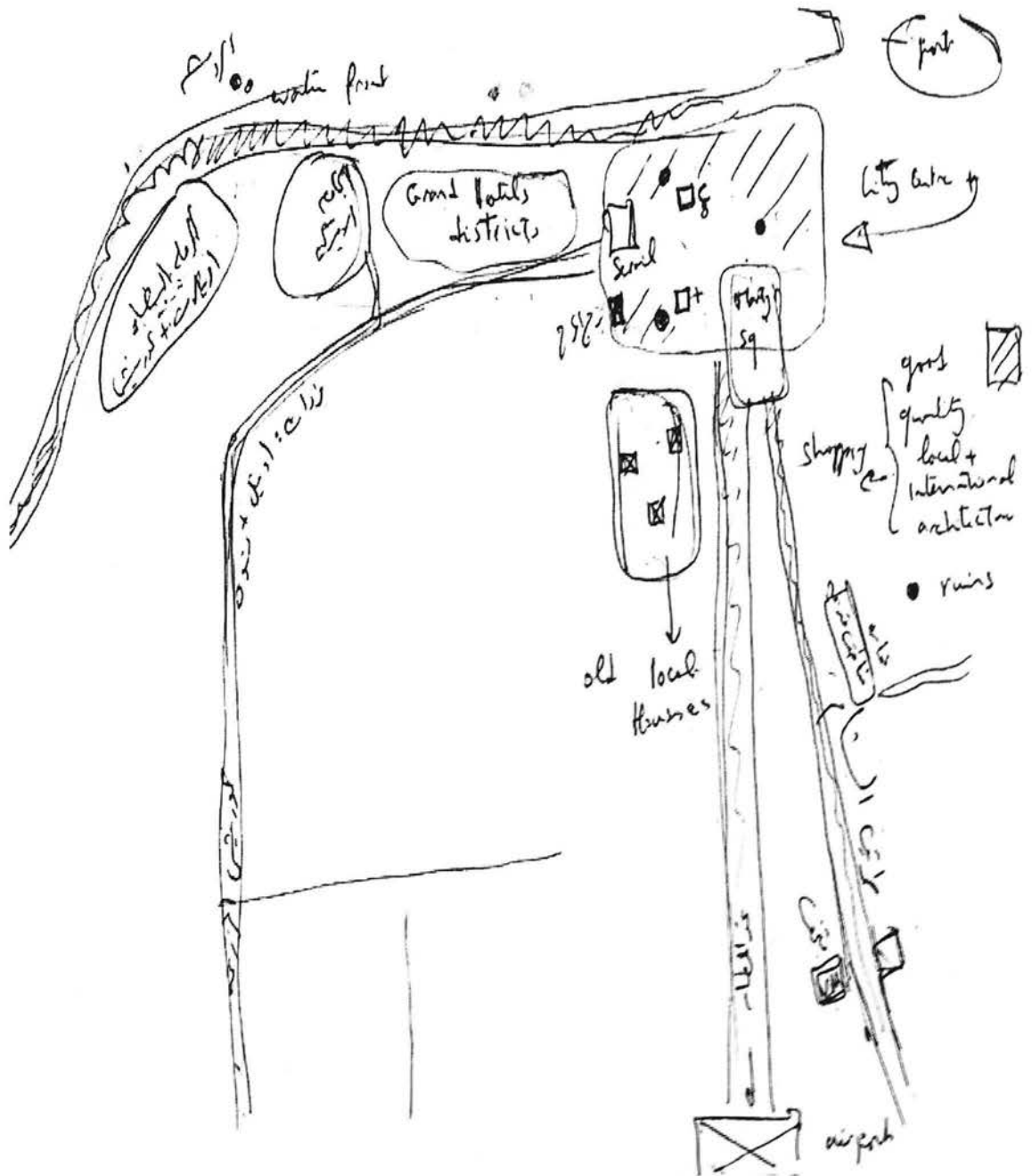


Figure 6-3: A linked-type map of the city as was perceived by one of the respondents.

Figure 6-4 is a scattered-type map, where the respondent began by locating the waterfront to the north and west, which is the natural edge of the city. Then the respondent defined the boundary of the city centre, the Green Line and major districts in the city (such as east and west of Beirut).

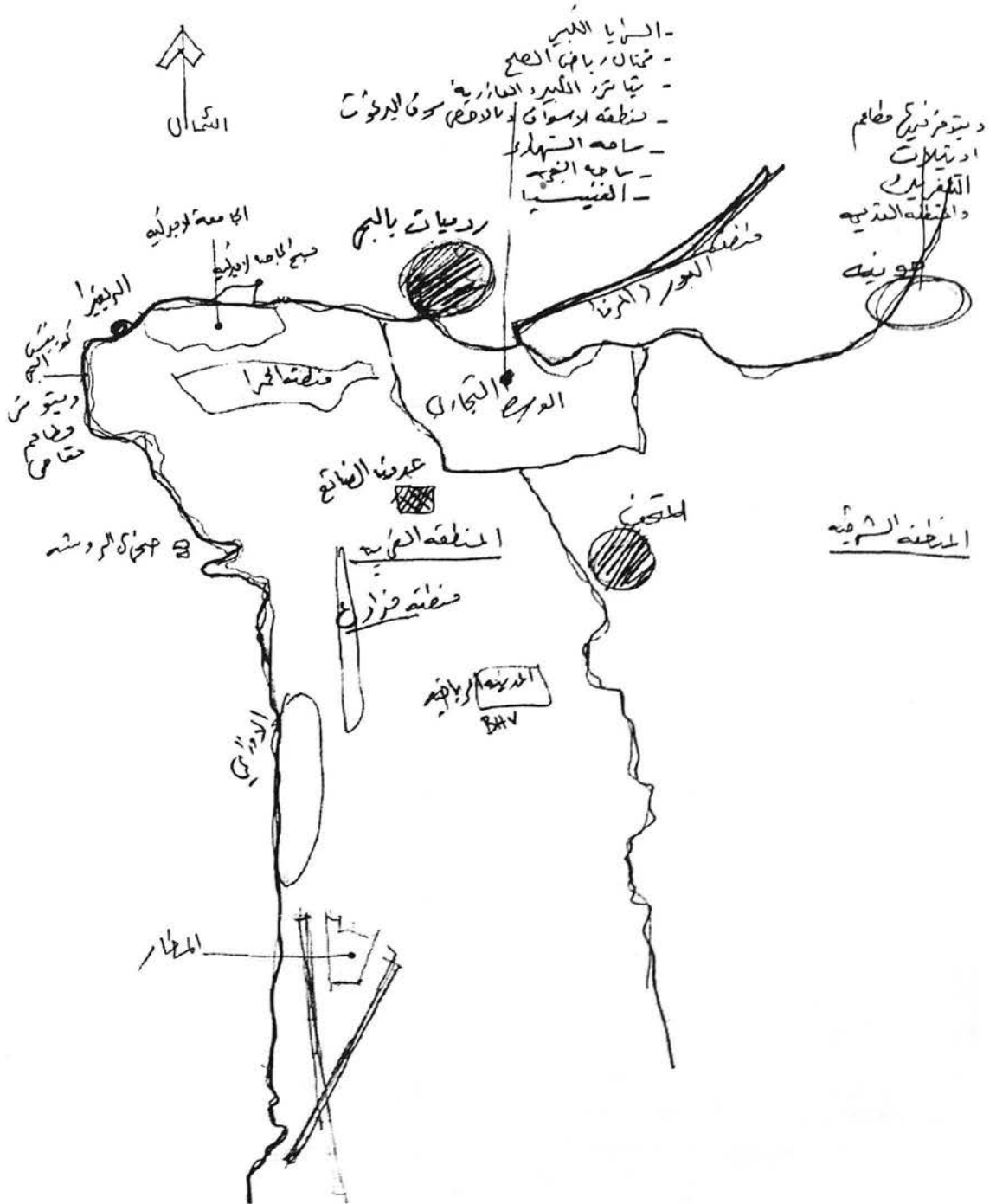


Figure 6-4: A scattered-type map of the city as was perceived by one of the respondents.

A list of physical features was provided at the top of the map indicating important buildings, public squares and important areas within the city centre. Other features were scattered along the waterfront line. The map included a sub-centre to the north east, which is Jouniyé, as well as the airport to the south of the city. The north direction sign also appeared at the top of the map. The care with

which the respondent drew the waterfront, expressing it as a natural craggy feature indicates that such natural feature is of great importance to the respondent. This natural location/setting is, for this respondent, the top facet of Beirut city, which perhaps the respondent could not express in the questionnaire. Like the waterfront, other three areas are very strongly indicated namely: the National Museum, al-Sanayah Park, and the Normandy Landfill. These places are highly significant to the respondent although the Normandy Landfill is still not developed but it seems that the respondent's expectations of that area are quite high.

Figure 6-5 is a patterned-type map. The respondent drew the streets in a grid pattern first, and then located various physical features, including buildings, streets, landmarks and important areas in the city.

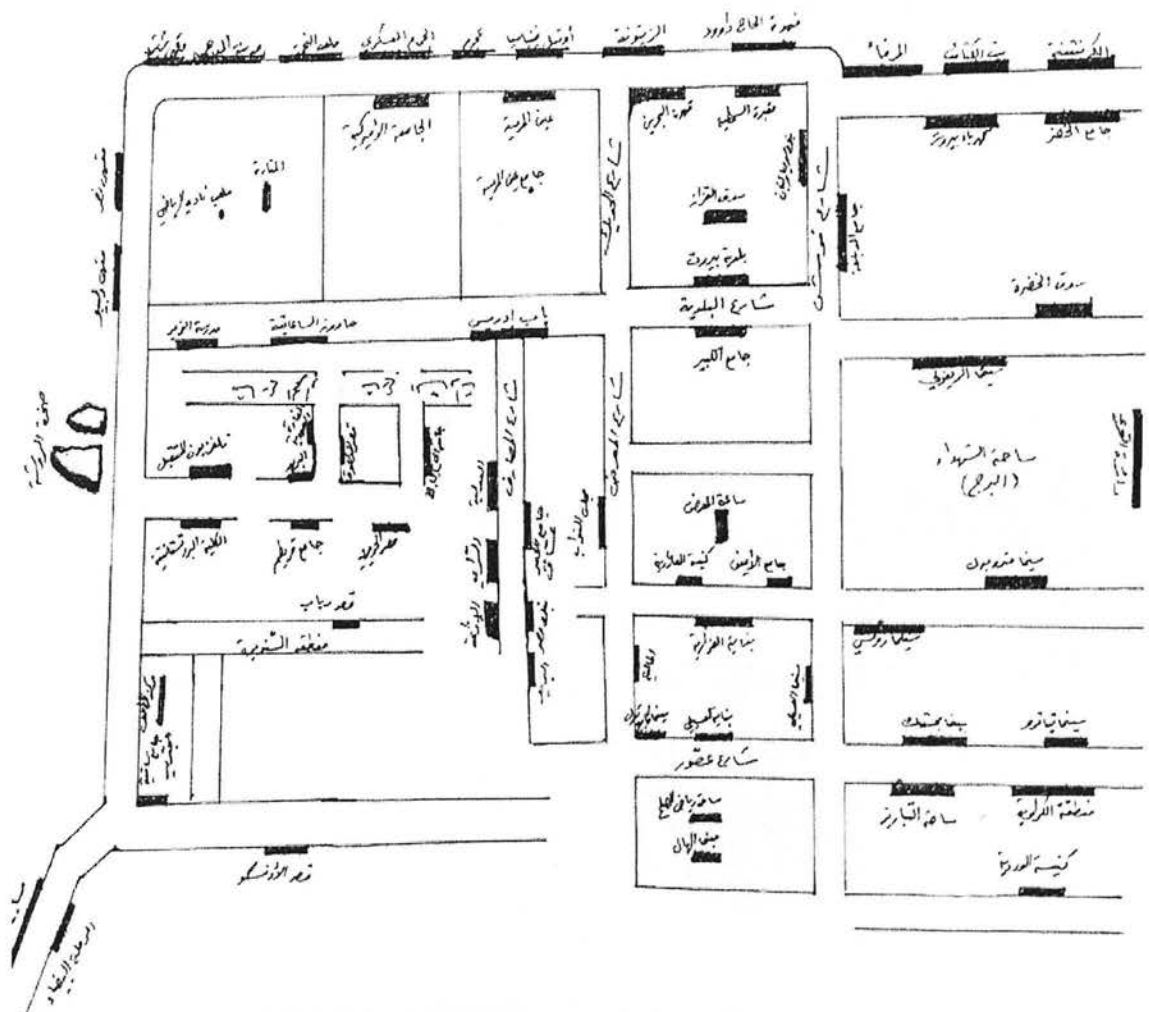


Figure 6-5: A patterned-type map of the city as was perceived by one of the respondents.

This map shows places and buildings that do not exist any more such as old souks, the Hall building and Rivoli building. The respondent also located Al-Amin Mosque that was a small prayer corner before the war and is currently under construction. In general, this respondent still perceives the city as he remembered it before the inception of the reconstruction process.

Figure 6-6 is a netted-type map showing the waterfront, major roads, buildings, landmarks and major areas in the city. This map includes post-war modifications such as the extension of Martyrs' Square towards the seaport (northeast of the map).

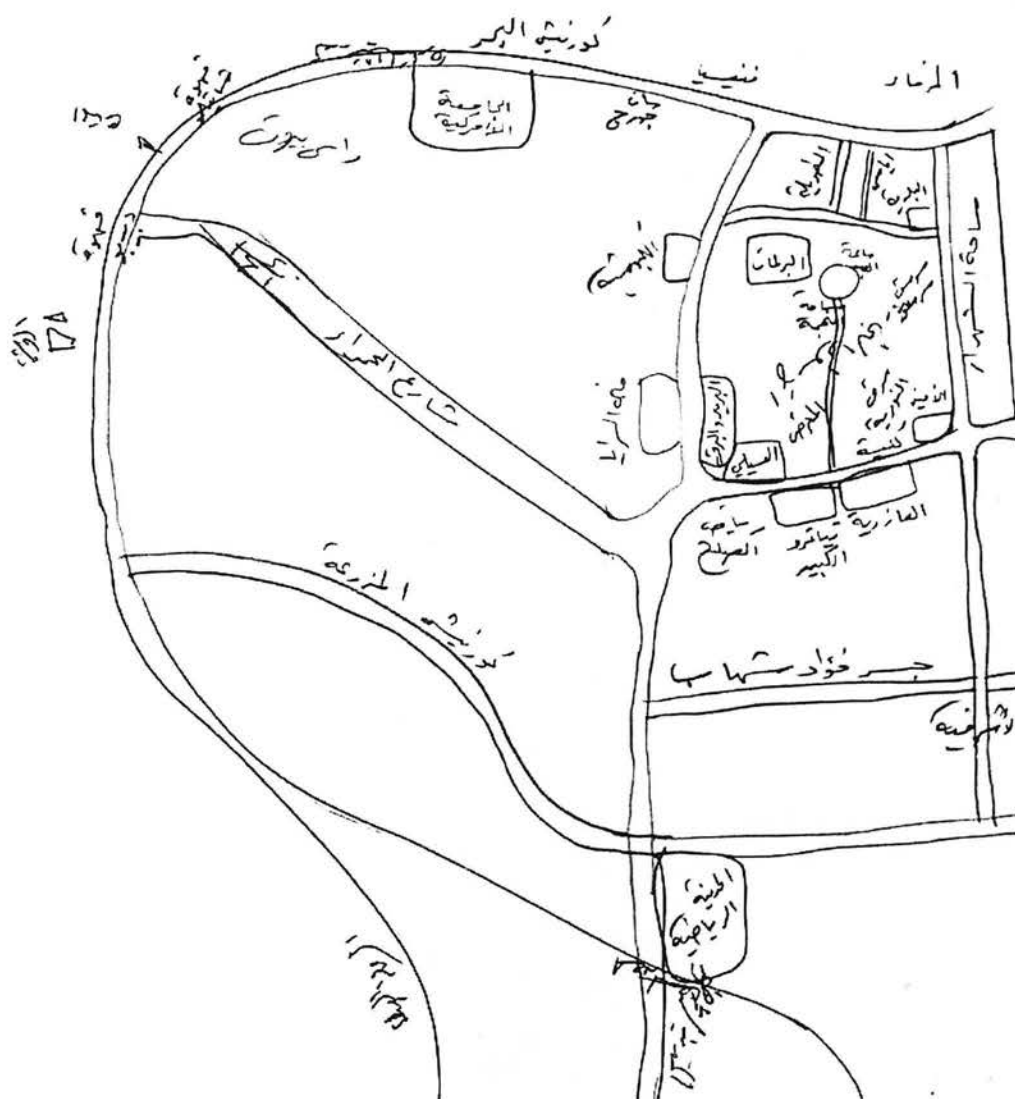


Figure 6-6: A netted-type map of the city as was perceived by one of the respondents.

Figure 6-7 is a fragmented-type map, which illustrates major roads and areas in the city surrounded by a ring road. It also indicates the waterfront to the north of the map. Other areas are also indicated, including the old souks and residential neighbourhoods. Apart from the Grand Serail building, this map does not indicate any other individual buildings. This map is very much significant of areas and streets in which various requirements can be met.

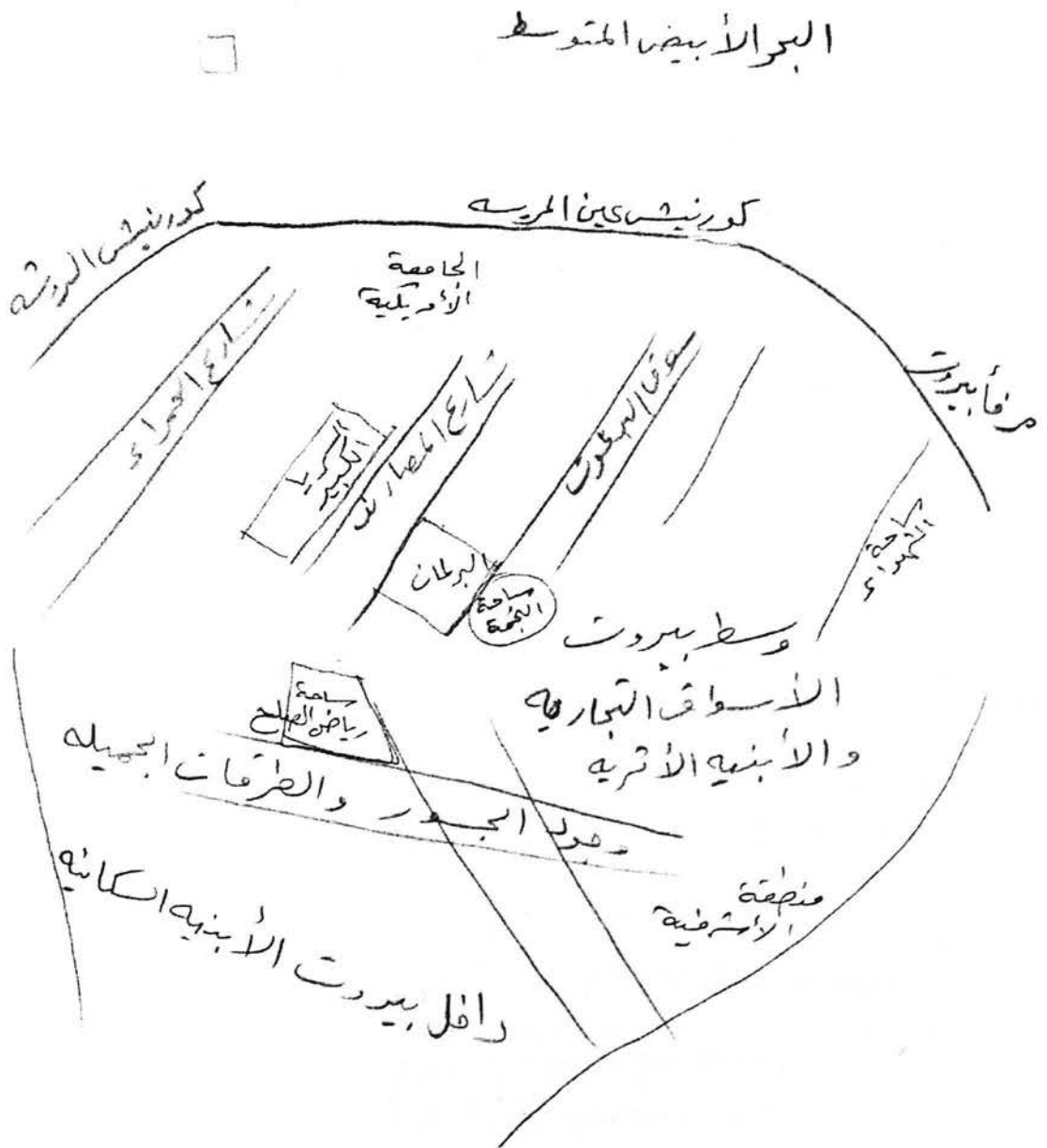


Figure 6-7: A fragmented-type map of the city as was perceived by one of the respondents.

Figure 6-9 is a loop-type map, where a single line connected various physical features in the city including streets, squares and neighbourhoods. This loop represented the city ring-road to the respondent, which, in reality, does not pass through most of these places. What can be understood from this sketch is that the respondent perceived the city as a combination of important physical features linked with a travel route that is used daily when going to work, doing shopping, or even when pursuing social activities. The respondent views Beirut as a place for activities, and not just as a physical environment.

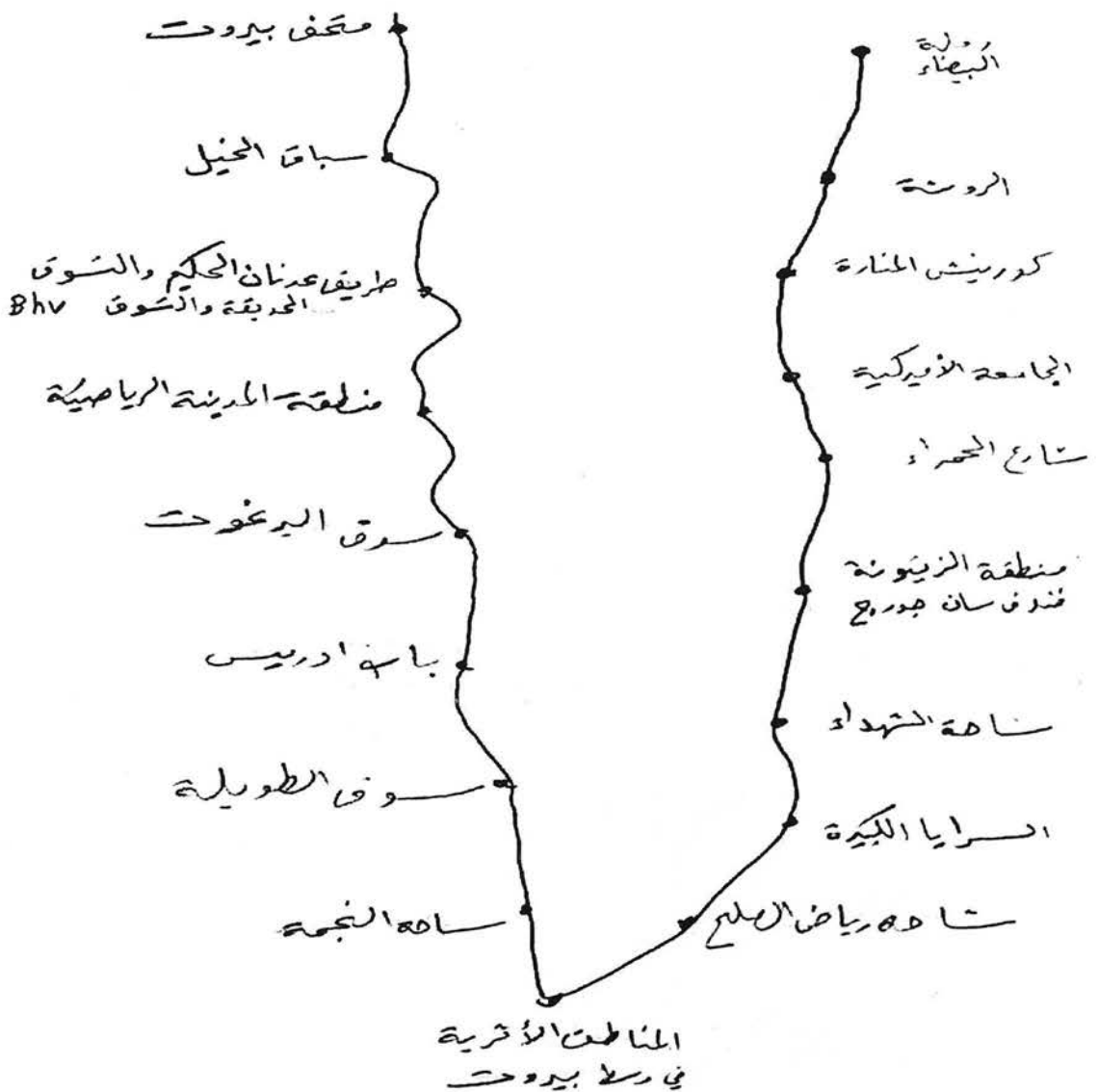


Figure 6-9: A loop-type map of the city as was perceived by one of the respondents.

Figure 6-10 is a scattered-type map, where the respondent started by defining the natural edge of the city (the waterfront) and then locating some of the major landmarks, buildings and areas, using a variety of personal symbols. Such symbols represent the shape of their physical features, as the respondent perceived them. In addition, the respondent oriented the map in the proper direction, indicating the north direction sign at the top of the map.

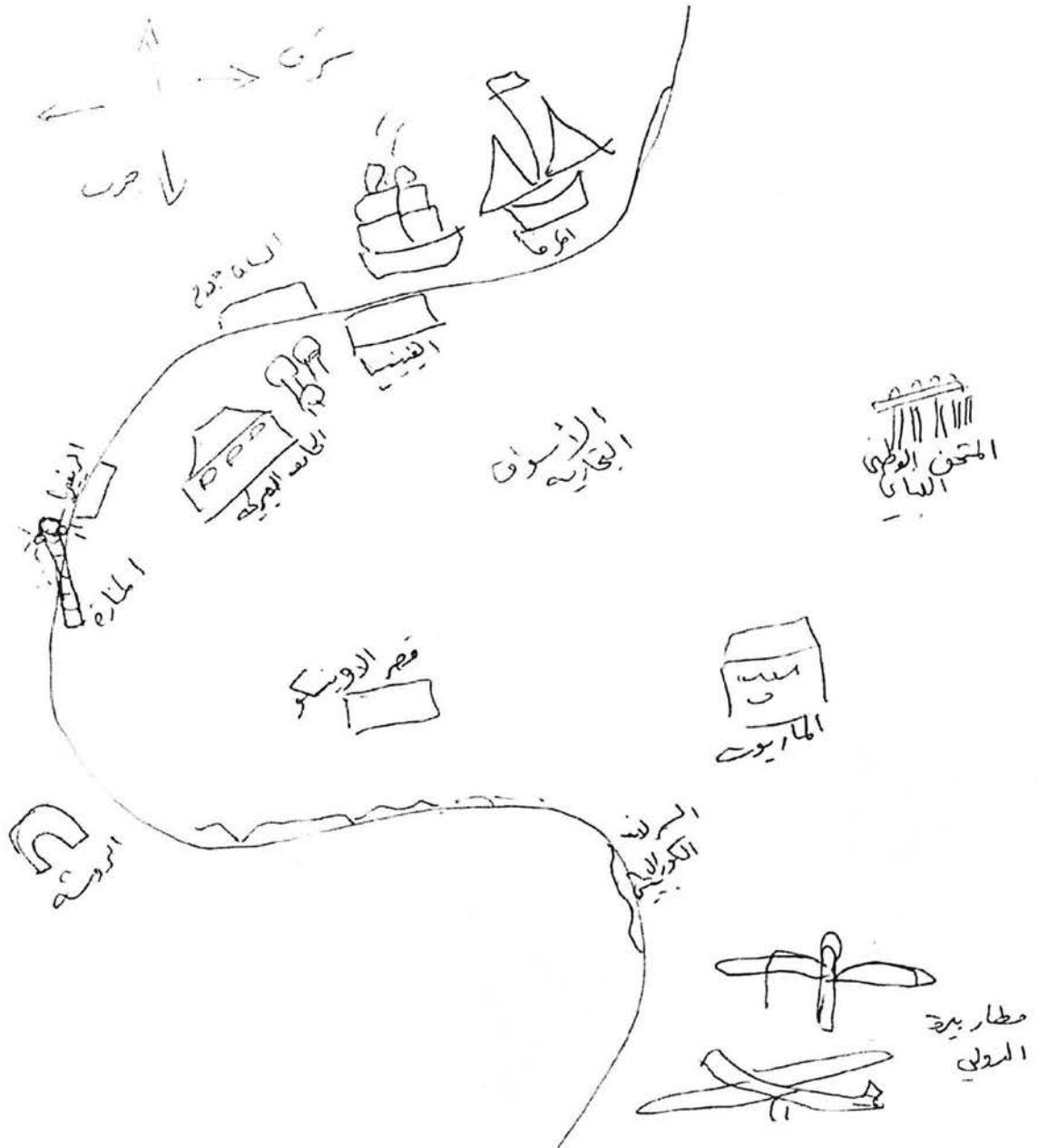


Figure 6-10: A scattered-type map of the city as was perceived by one of the respondents.

Figure 6-11 is a patterned-type map, in which the respondent showed the major physical constituents of the city, including the waterfront, major buildings, landmarks, roads and various areas within the city that may have appeared in other maps.

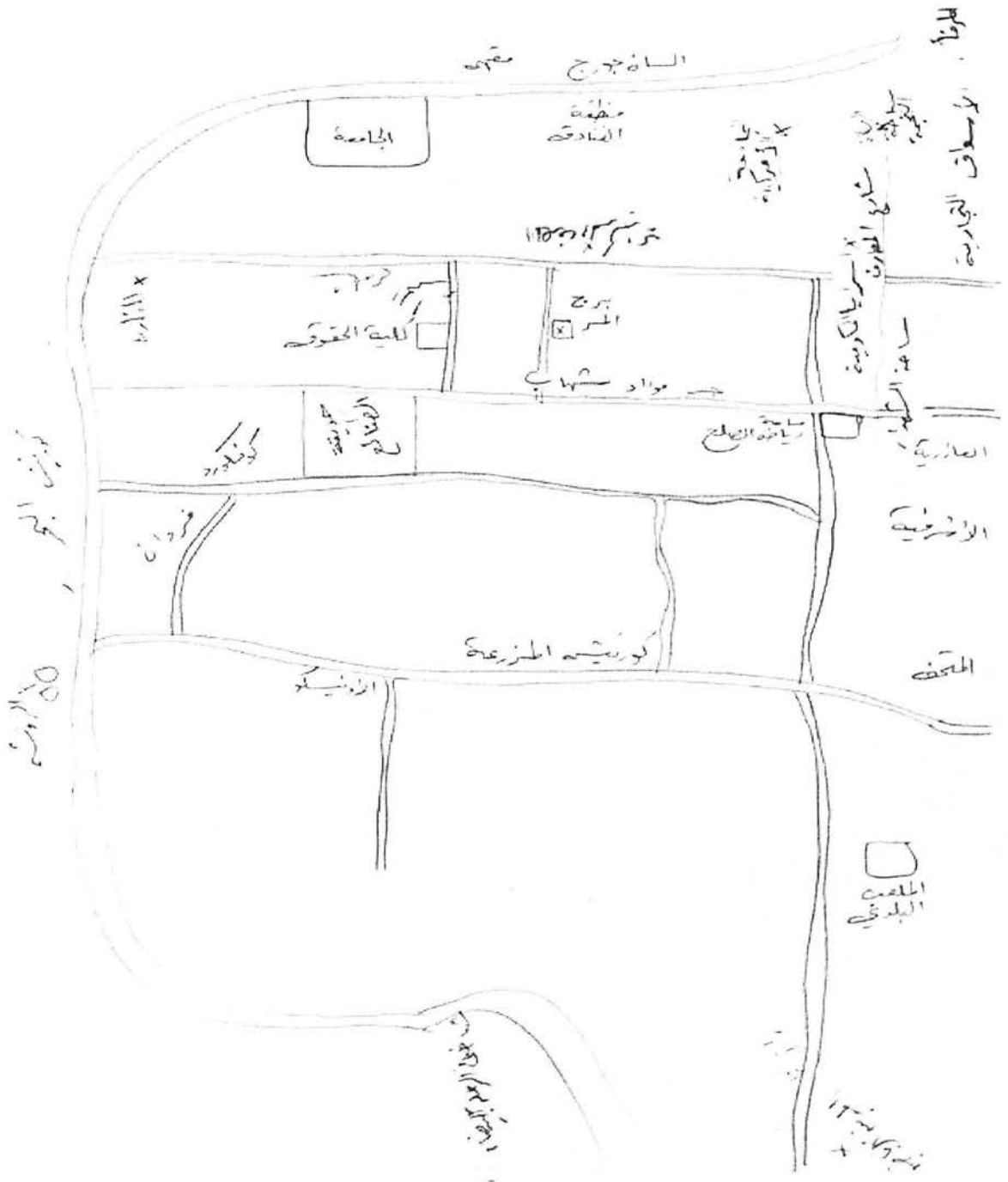


Figure 6-11: A patterned-type map of the city as was perceived by one of the respondents).

Figure 6-12 is a chained-type map, showing a tree-like street pattern that provides a link between the airport and the city centre and other districts of the city. The circle in the middle of the map indicates the roundabout near the Beirut City Sportive. There are areas indicated on the map, including the western sector of Beirut, Bourj Hamoud and River of Beirut located to the north-west of the map, which should be positioned with al-Achrafyie to the south of the map. In addition, the map is distorted and has no sense of orientation, perhaps indicative that the respondent getting lost within the city at times.

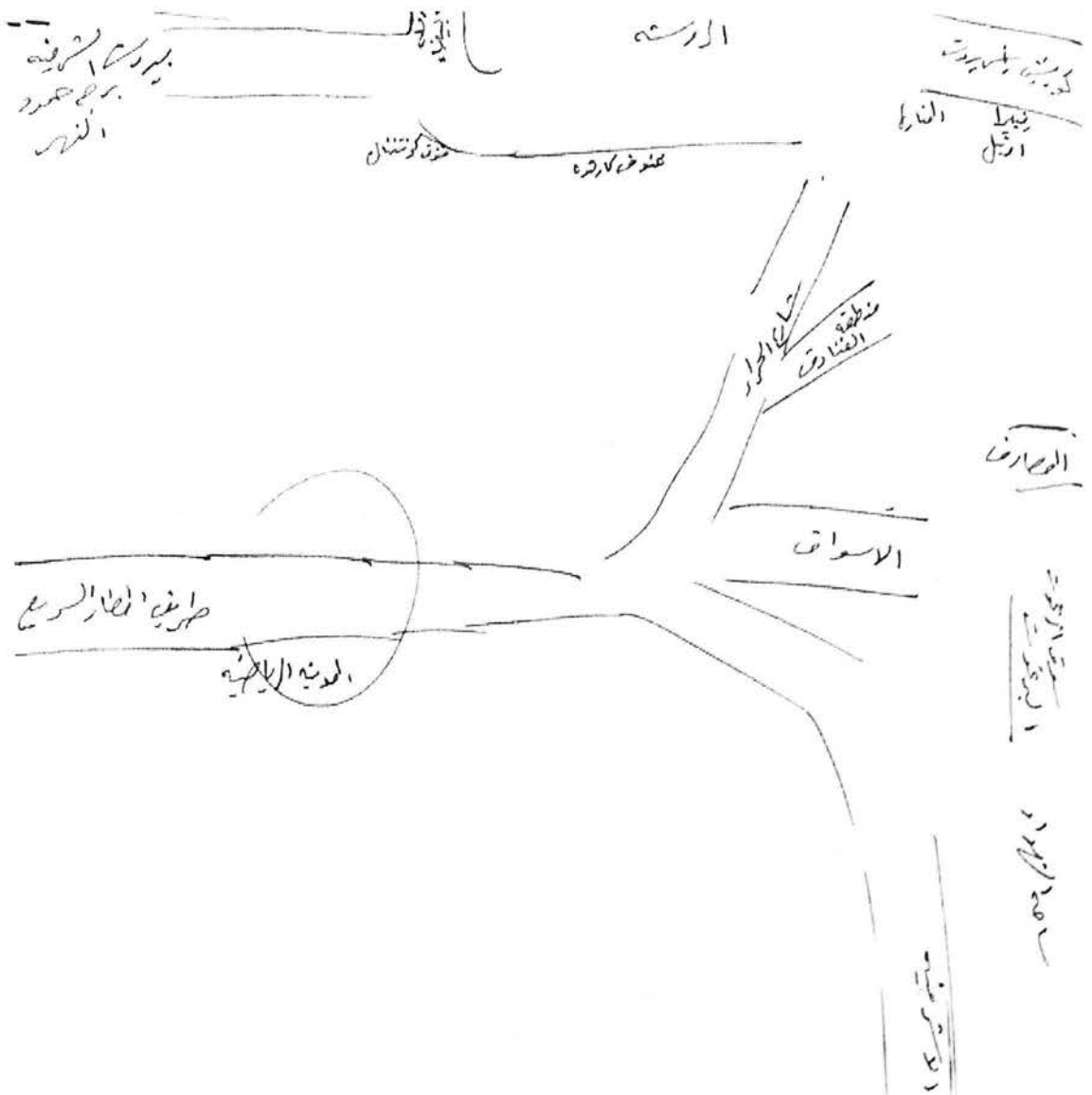


Figure 6-12: A chained-type map of the city as was perceived by one of the respondents.

Figure 6-13 is a fragmented-type map indicating the Mediterranean Sea, the waterfront, the Beirut Seaport, the airport, the city centre and the old souks, major roads (Hamra Street and Mazraa), and main areas (Achrafiyé, Raouché) as well as a major landmark (Raouché Rocks). The respondent oriented his mental image towards the north direction, except that the airport was indicated in a different location.



Figure 6-13: A fragmented-type map of the city as was perceived by one of the respondents.

Figure 6-14 is a scattered-type map, which shows important features in the city including, the Grand Serail, ASCWA Building, Parliament Building, Al-Omari Mosque, Ouzai Mosque, Zawiet Ibn Iraq, Saint George's Hotel, Beirut Arab University area, Riad el-Solh Square and Hamra Street. Although this mental map includes little information, it is quite clear that there is a concentration of various physical features in one location. This map indicates that the respondent genuinely used the scattered features to identify the location of the city centre by putting them together, while those further away are features associated to other areas in the city. This reflects the importance of the city centre to the respondent.

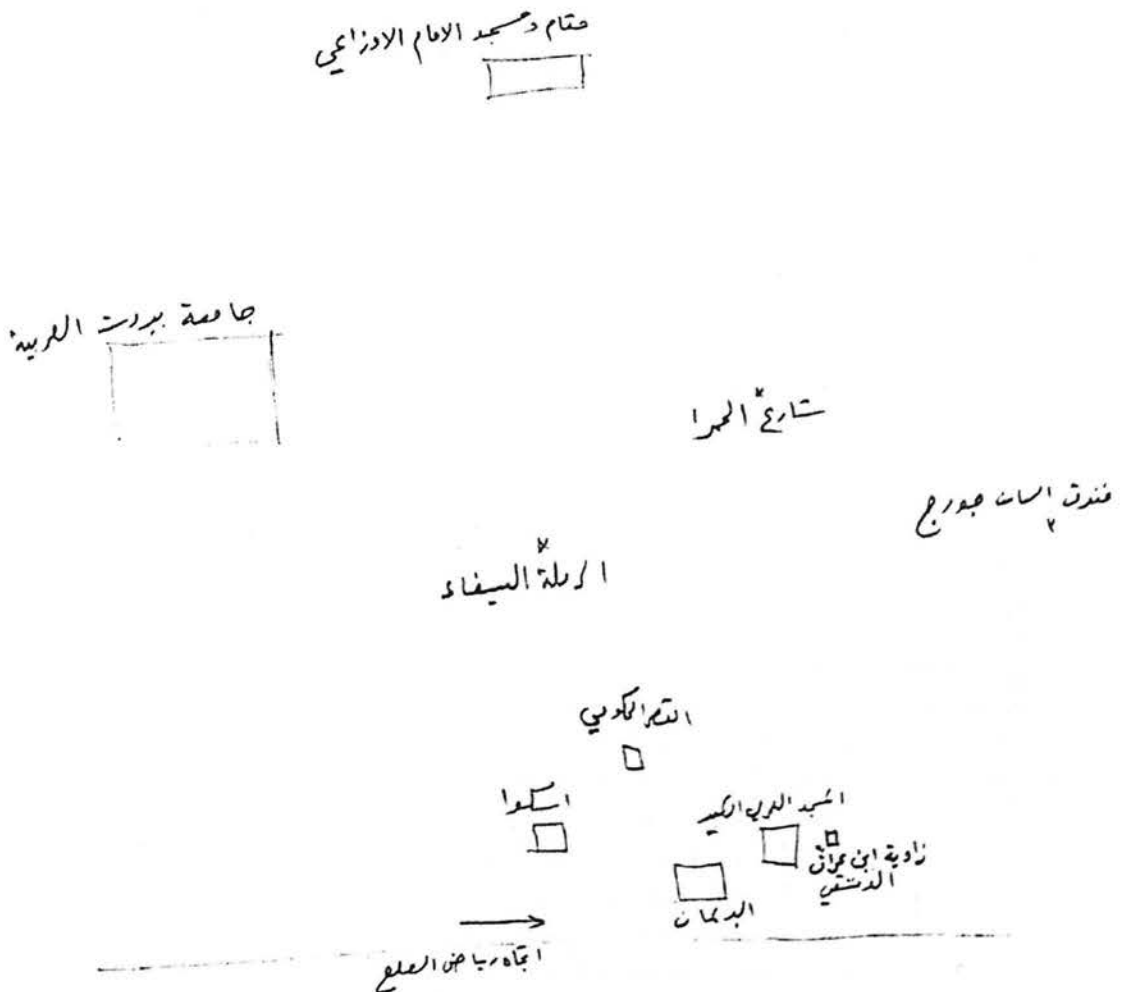


Figure 6-14: A scattered-type map of the city as was perceived by one of the respondents.

This question has invited the respondents to bring to mind elements that may otherwise have been forgotten or pre-conscious. This approach allowed the respondents to give greater priority to very central and important features, such as landmarks, buildings of historical or cultural importance, public places, parks and picturesque areas in the city, which are highly significant in the lives of the respondents, as well as highly important nodes of orientation to a visitor. Such features, which are stored in the respondents' minds, form the basis of their knowing, orienting and way-finding about the city.

The respondents illustrated features that were actually or potentially perceivable in the city, but this did not mean that what they had indicated in their maps existed or still exist in reality. The most common example was the Martyrs' Square and Statue, which has been destroyed and reshaped. However, the information, which appeared in the various maps is listed in Table 6-1.

Table 6-1: The physical features that appeared in the respondents' cognitive maps (source: the author, 2004).

No.	Physical features	Freq.
1.	City centre	19
2.	Waterfront	18
3.	Hamra Street	15
4.	Old souks	15
5.	Grand Serail	13
6.	Raouché Rocks	12
7.	Beirut Seaport	12
8.	National Museum	12
9.	Ramelet Al-Bayda	12
10.	Beirut International Airport	11
11.	City Sportive	11
12.	Martyrs' Square	10
13.	Al-Manarah Tower	10
14.	Al-Mazraa Street	10
15.	Parliament Building	10
16.	Al-Maarad Street	10
17.	American University Tower	9
18.	Al-Achrafiyé	9
19.	Damascus Road (Green Line)	9

Continued from the previous table

20.	Riad el-Solh Square	8
21.	Ras Beirut Area	8
22.	Promenade	7
23.	Al-Abed Clock	7
24.	Financial Street	7
25.	Hotel District	7
26.	Phoenicia Hotel	7
27.	Martyrs' Statute	6
28.	Al-Nijmeh Square	6
29.	Ain Al-Merieseh	6
30.	Azariyé Building	6
31.	Saint George's Area	6
32.	Verdun Area	6
33.	Riad el-Solh Statue	5
34.	Bab Idris	5
35.	Municipality Building	5
36.	Municipality Stadium	5
37.	Souk Al-Bargouth	5
38.	Unesco Palace Area	5
39.	American University	4
40.	Raouché Area	4
41.	Al-Amin Mosque	4
42.	Beirut Arab University	4
43.	Beirut Pine Forest	4
44.	Fouad Chihab Avenue	4
45.	Capuchin Church	4
46.	Mediterranean Sea	4
47.	Military club	4
48.	Omari Mosque	4
49.	Riviera Hotel	4
50.	Sabak Al-Khiel (Hippodrome)	4
51.	Sanayah Park	4
52.	Shatila café	4
53.	Saifi Area	4
54.	Souk Al-Tawileh	4
55.	St. George's Maronite Church	3
56.	Grand Theatre	3
57.	Ajram Area	2
58.	River of Beirut	2
59.	Al-Dabas Square	2
60.	Al-Hall Market	2
61.	Al-Riady Club	2
62.	Al-Simteih Cemetery	2
63.	Al-Zaitounch	2

Continued from the previous table

64.	Assour Street	2
65.	Mur Tower	2
66.	Al-Nijmeh Club	2
67.	Ouzai Area	2
68.	Police main building	2
69.	Souk Ayass	2
70.	Syria and Lebanon Bank	2
71.	West District	2
72.	Zawiet Ibn Iraq	2
73.	Adlieh Area	1
74.	Ain al-Meriesehe Mosque	1
75.	Al-Amir Assaf Mosque	1
76.	Al-Frair School	1
77.	Al-Khoudr Mousque	1
78.	Al-Mounzir Mosque	1
79.	Al-Wardieh Church	1
80.	Archaeological Parks	1
81.	Ascwa building	1
82.	Beirut electricity building	1
83.	Bourj Hammoud	1
84.	Café Al-Bahrain	1
85.	Café Haj Daoud	1
86.	Carentina Area	1
87.	Cinema Metropol	1
88.	East District	1
89.	Entertainment City	1
90.	Foch Street	1
91.	Hawoz Al-Saatieh	1
92.	Jouniyé	1
93.	St. Elie's Catholic Cathedral	1
94.	Old local houses	1
95.	Protestant College	1
96.	The Normandy Landfill	1
97.	Residential neighbourhoods	1
98.	Rivoli Cinema	1
99.	Souk Al-Jamil	1
100.	Souk Al-Kazaz	1
101.	Souk Sursock	1
102.	Vegetable Market	1
Total		476

The above table shows most of the physical features that appeared in the respondents' cognitive maps, sorted according to the highest frequency. The total number of the features is 102 in total, with frequencies ranging between one and

19 occurrences. The huge difference in the range of frequency means that there are certain features in the environments that carry meanings and associations for the respondents. This may be that some are only locally or individually important to certain respondents. According to Lynch (1960), there is a correlation between the features included in people's maps, the order in which they were introduced, and the importance of these features.

Although the respondents' maps were distorted and varied in size, content, orientation and accuracy, yet they shared certain features, which had certain regularities and interrelationships that clearly affected the way the respondents perceived their environment. The most frequently drawn features that appeared on the respondents' maps included: the waterfront/promenade, the Raouché area/rocks, Martyrs' Square/Statue, Hamra Street, the old souks area, the Grand Serail, al-Nijmeh Square/Clock, Riad el-Solh Square/Statue, Beirut Seaport, the National Museum. It was noted that most of these features located in the respondents' maps were also mentioned in the questionnaire answers.

On the other hand, some of the respondents indicated structures that are no longer in existence such as old souks, streets, buildings and demolished areas. Others drew Al-Amin Mosque in their maps, which indicates that there are members in the Muslim community still carry a sense of anticipation of a structure that has been earmarked for development for a long time. This mosque is currently under construction to contribute to the city centre's skyline and in particular Martyrs' Square. This outcome corresponds with Neisser's (1976) conception of cognitive mapping, which was elaborated earlier in this chapter, concerning the extent to which mental images can be independent from the physical 'reality' on the ground.

Some of the respondents oriented their maps in the proper direction, and even indicated north symbol on their maps, while others oriented their maps differently, assuming that was the north direction. It was noticeable that older respondents provided more detailed information about past conditions. Robert

Saliba's work confirms this observation. When he and his students carried out a mental image exercise of the city centre of Beirut, they found that people less than 25 years old presented very simplified and basic maps, while those between 25 and 45 years provided maps that were more elaborate. On the other hand, people over 45 years illustrated very data-rich maps (Saliba, 2000a). These findings indicate a possible correlation between age and respondents' knowledge of a place.

In summary, the researcher found that the respondents could identify themselves with certain physical features in the city, such as monuments, religious and historic buildings, public squares, statues, streets and neighbourhoods. Such physical features form the city structure that enhances the identity of place.

6.5 Applications

After reviewing and analysing the mental maps of the respondents, the researcher is thus able to identify the most significant features that appeared in the cognitive maps drawn by the respondents. The previous table (Table 6-1) reveals that the respondents used boundaries and major features, such as paths, nodes, districts, landmarks and edges, to locate other elements in their maps. Hence, the information, which appeared in the previously mentioned table, is the accumulation of all the features that were indicated on the maps.

The previous discussion has prompted the researcher to build up a shared mental image based on the collective memory of the respondents of their city and its centre. After presenting two aerial views of the city (Figure 6-15 and Figure 6-16), two schematic maps were prepared, which combined all the physical elements and features that appeared in the respondents' mental maps (Figure 6-17 and Figure 6-18). These maps were complemented by spatial analysis to the physical structure of the city. The reason for asking the respondents to draw cognitive maps for the whole city, rather than concentrating only on the city centre, was to give them a wider opportunity to identify features and locate areas of importance. In addition, this allowed the researcher to identify how important

the city centre is in the minds of the respondents, in the context of the city as a whole. This was achieved through a synthesis of all the maps drawn by the respondents showing the most significant features and areas, using Lynch's five elements of the city image.



Figure 6-15: A satellite image of the city of Beirut, March 2002 (source: Solidere, 2002, p.3).

Symbols are used in Figure 6-17 and Figure 6-18 to indicate the level of significance of the physical features identified by the respondents. These symbols represented three levels of significance, namely low frequency (features named between 3 and 6 times), medium frequency (between 7 and 13) and high frequency (between 14 and 19). Physical features with very low frequency (1 and 2 times) were not considered in the synthesis of the mental maps.



Figure 6-16: Aerial photograph of the city centre of Beirut (source: Solidere, 2001, p.5)

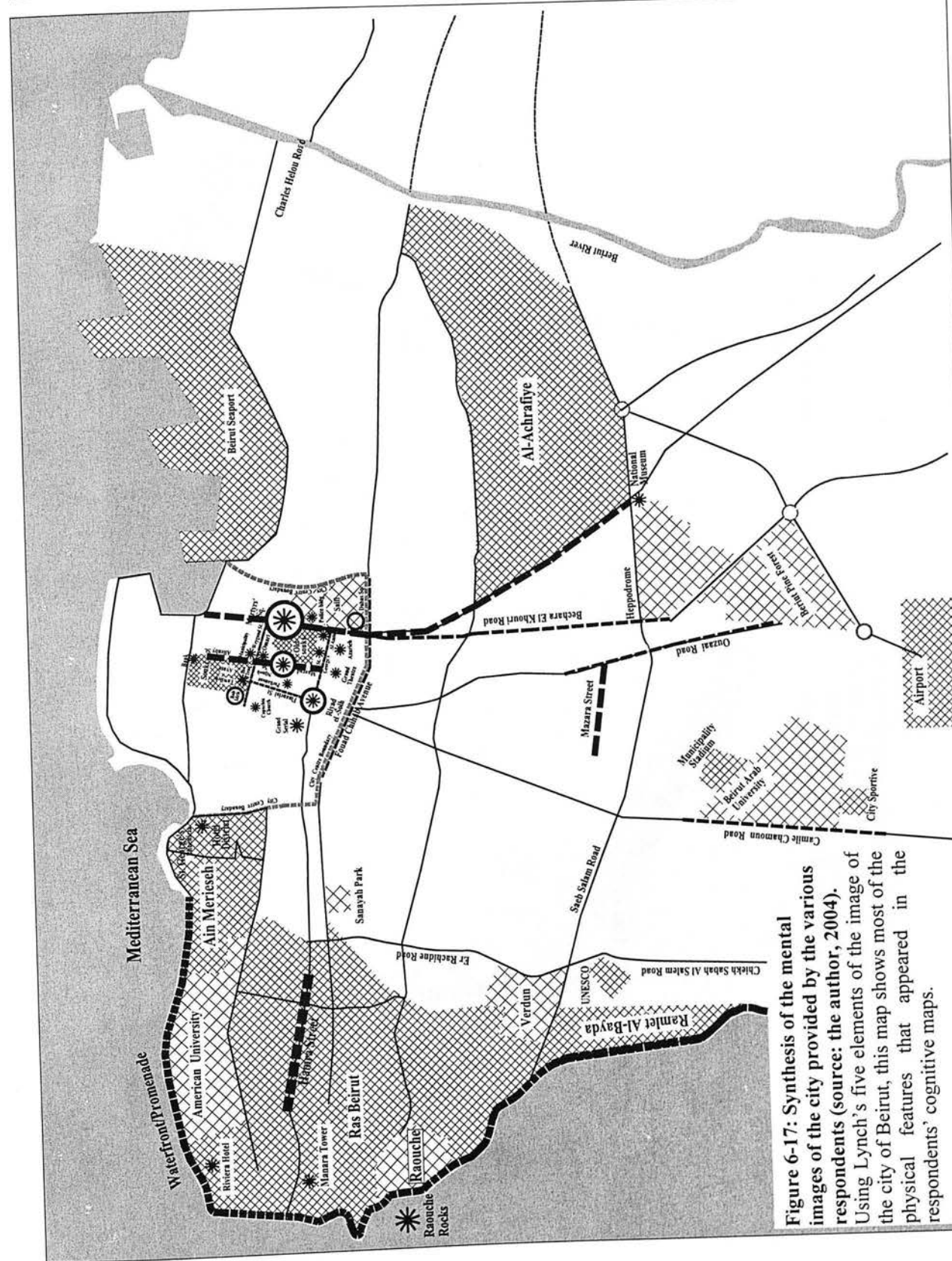
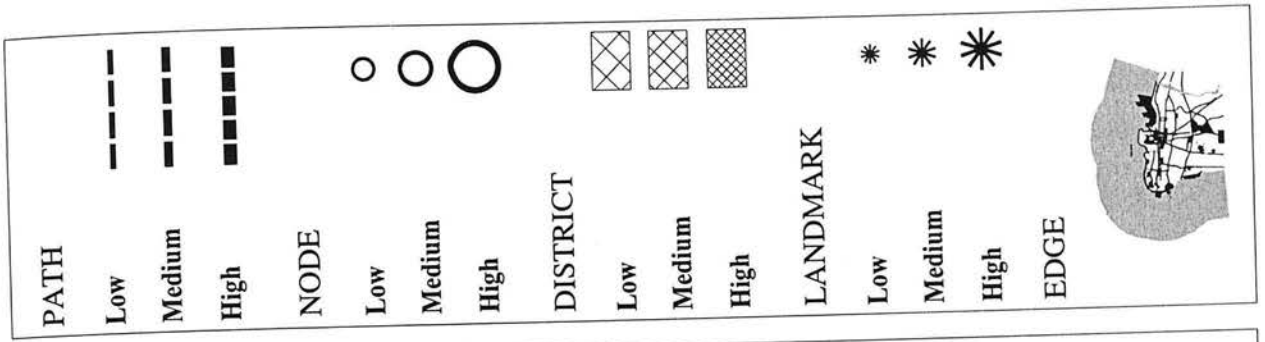


Figure 6-17: Synthesis of the mental images of the city provided by the various respondents (source: the author, 2004). Using Lynch's five elements of the image of the city of Beirut, this map shows most of the physical features that appeared in the respondents' cognitive maps.

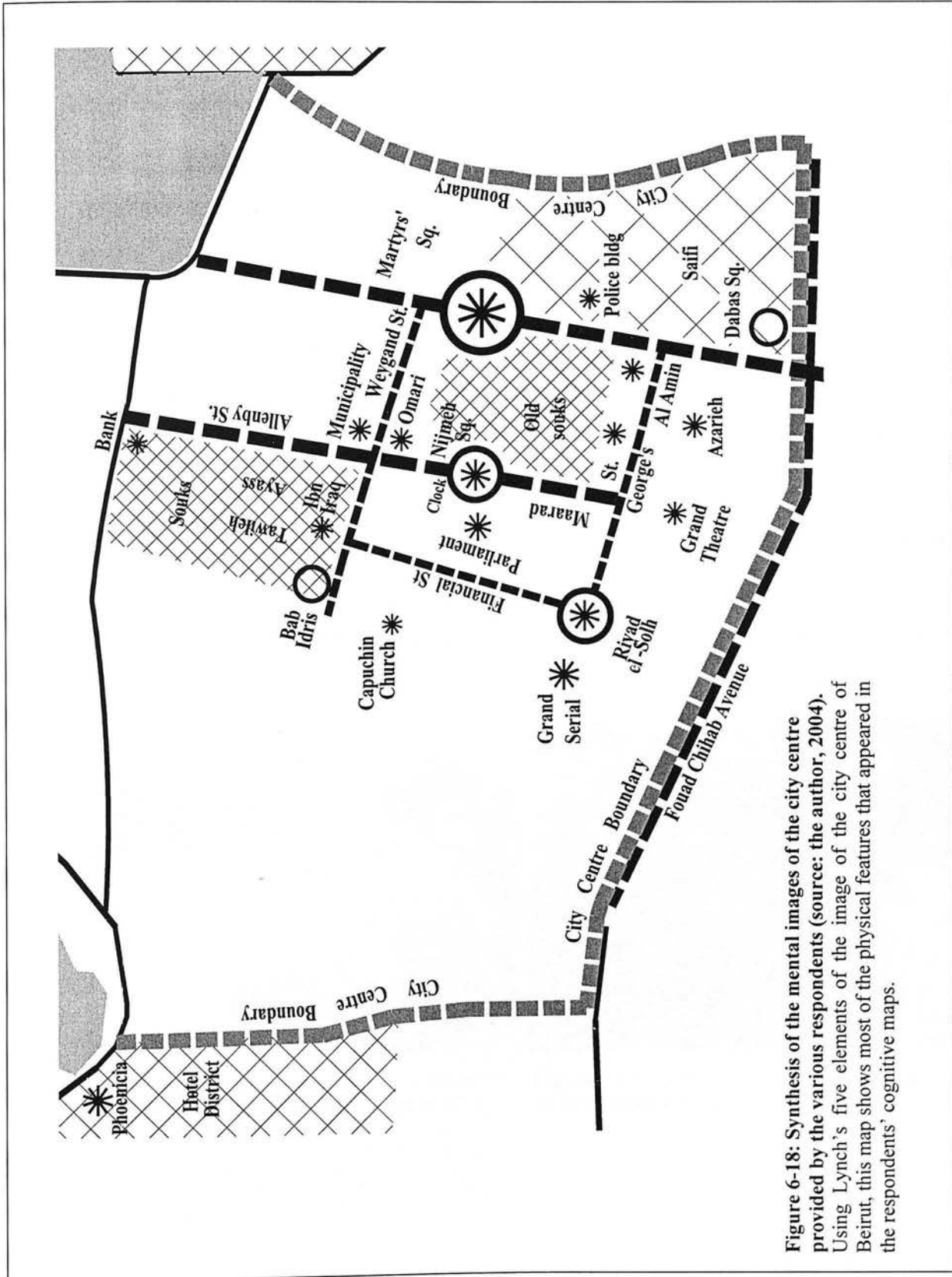
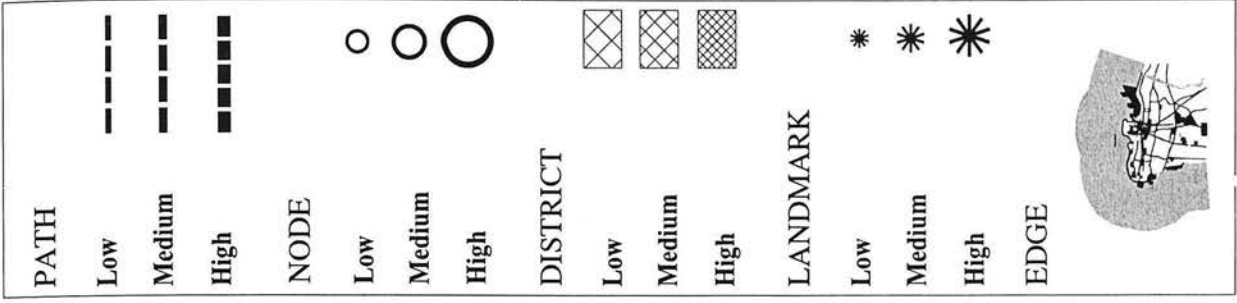


Figure 6-18: Synthesis of the mental images of the city centre provided by the various respondents (source: the author, 2004). Using Lynch's five elements of the image of the city centre of Beirut, this map shows most of the physical features that appeared in the respondents' cognitive maps.

Paths:

Paths are the most effective urban elements, which the city inhabitants use to travel from one place to another. The total number of times of paths appeared in the respondents' maps were 56. Looking at the various maps of the respondents, major paths were pinpointed in the city. For example, Hamra Street emerges as the most significant and important street and was drawn 15 times in the respondents' mental maps.

Equally, Hamra Street was cited 11 times in total in the responses to the questionnaire. This street has been renowned nationally and internationally as a centre of education, art, culture, commerce and entertainment. Many tourists come to Beirut to visit Hamra Street. Other major roads indicated in the mental maps of the respondents include al-Maarad Street, Fouad Chehab Avenue, al-Mazraa Street, promenade and Financial Street.

Nodes:

Nodes are focal points in the city, which are formed by intersections or junctions of paths. The total number of frequency of nodes illustrated in the respondents' maps is 31 times. Three major nodes were frequently cited in the maps, namely Martyrs' Square, al-Nijmeh Square, Riad el-Solh Square (Figure 6-19 and Figure 6-20).



Figure 6-19: Martyrs' Square as a major node in the city centre. Picture taken in 1975 (source: the author, 2004).



Figure 6-20: Al-Nijmeh Square (source: Ayman Trouwi, 2003, www.downtownbeirut.com).

Martyrs' Square appeared most frequently in the maps of the respondents, 10 times and in the questionnaire answers 54 times. This indicates the importance of the square in the lives of the respondents, and the meanings and associations it holds for many in the society. Other squares were also shown, including Bab Idris Square and Dabas Square.

Districts:

Districts were mainly related to respondents' neighbourhoods or areas of work or entertainment. Districts are distinctive areas of the city that are recognised by their cultural or geographical characteristics. They were highly illustrated with a total frequency of 181 times. The city centre was the most frequent district that appeared 19 times in the respondents' maps. Its importance derives from the fact that the city centre is the hub for the whole city, where most social, cultural and economic activities occur. Another important district, which appeared frequently in the maps, is the old souks area, which was cited 15 times. Districts also included residential neighbourhoods, comprising Al-Achrafiyé, Ras Beirut, Basta, Ain Merieseh, Verdun, Ramlet el-Bayda and the Hotel District.

Other districts were shown included the American University campus, Beirut Arab University area, Beirut International Airport, Beirut Seaport, Pine Forest, Sanayah Park and al-Sabak area (the Hippodrome area). For the city centre, the old souks were frequently cited in the mental maps of various respondents. Other districts included the Saifi area and the reclaimed land to the north of the city centre.

Landmarks:

From the synthesis of the mental images of the respondents, many landmarks were identified. Landmarks such as natural features, towers, high buildings or monuments, play an important role in directing and orienting people in the city because they can be easily noticed from a distance. Important natural landmarks are the Raouché Rocks that appeared in most of the respondents' maps and were also mentioned in the questionnaire answers (Figure 6-21). In addition, the

respondents intuitively associated landmarks with other features in the city, such as public squares or important areas. For instance, Martyrs' Statue, Riad el-Solh Statue and al-Abed Clock in al-Nijmeh Square were all linked to their respective squares.

Landmarks also included buildings such as the Parliament Building, the Municipality Building, the Grand Serail, the National Museum, the Grand Theatre, the Azariyé Building and other important hotels in the city.

Religious buildings were also illustrated in the respondents' mental maps, including St. George's

Maronite Church, St. Elie's Catholic Cathedral, Omari Mosque, the Capuchin Church and, most interestingly, Al-Amin Mosque (Figure 6-23 and Figure 6-22). Al-Amin Mosque is a project that has been embedded in the collective memory of the Muslim community for years, long before the start of the conflict. This mosque was indicated in the mental maps, although it was not in existence at the time the respondents prepared their maps.



Figure 6-21: Raouché Rocks (source: the author, 2001).



Figure 6-22: St. George's Maronite Church is located closely to Al-Amin Mosque (source: the author, 2004).



Figure 6-23: Al-Amin Mosque is a new landmark that dominates the skyline of the city centre (source: the author, 2004).

Edges:

Finally, edges are the most obvious boundaries of districts, neighbourhoods, or other areas. It is these features that define a city's structure, how it is perceived and used by people. For instance, the waterfront is the most important feature and is cited 18 times in the mental map. The waterfront is both the natural edge and limit of the city (Figure 6-24).

It was noticed that when most of the respondents began their drawings, they first indicated the waterfront as an edge of their drawing, and then filled in their maps with other features. Because the waterfront forms the northern and the western boundary of the city, the author suggests that it was more logical for the respondents to start their drawings from that edge.

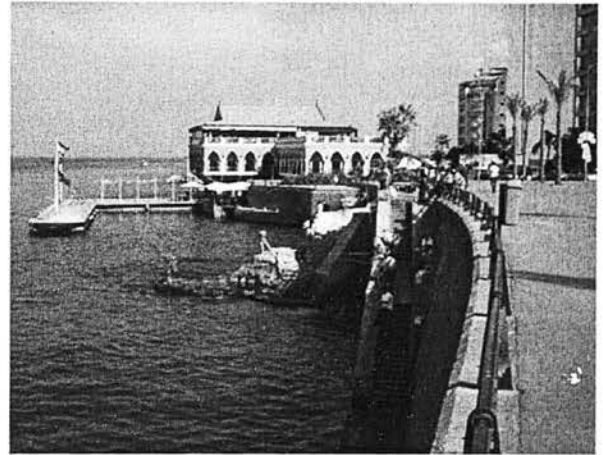


Figure 6-24: The waterfront is the natural edge of the city and its limit (source: the author, 2004).

Major streets can be paths to those who are travelling by car, at the same time they function as edges to inhabitants of various communities, neighbourhoods and districts. For instance, Damascus Road appeared 9 times in the respondents' maps. It was known as the Green Line that split the city into two enclaves during the civil war. It stretches north to meet Martyrs' Square, the heart of the city centre.

Another natural edge was the River of Beirut, which again forms a natural demarcation line in the eastern part of the city, but it was not highly signified by the respondents. It could be argued that, because the river is little more than a concrete gutter and is unpleasant and inaccessible, people deliberately suppress it from their minds. Although the river in reality makes an edge, it is one that people choose to ignore completely. Only two of the respondents have indicated

the River of Beirut as a distinct feature to the east, which reduces the imageability of the city as a whole.

It is recommended, however, that enhancement or naturalisation of the river might have a globally positive effect on people's imagining of the city as a whole, enabling it to be more 'bounded'. It was noted that most of the maps indicated no edge to the south, apart from several maps that show a road leading to the airport and ends there. This gives a strong indication that the real edges are the north and the west coast of the city. This could be a strong reason why the orientation of the maps in most cases is accurate.

6.6 Conclusion

The focus in this chapter was to find out how people perceived and understood their city structure, and how they use such understanding in their everyday life. It became apparent that the clarity and ease with which people form mental images, and remember them, was a vital matter.

From the evidence of the maps drawn by the respondents, the majority of them understood their city in a spatial-sequential manner rather than a sequential-spatial phenomenon. As a consequence, the category of elements that registered most prominently to them were paths, nodes and districts, whereas the physical landmarks existed as supportive elements or cues that helped lock these (paths, nodes, districts and edges) into an urban fabric. Also of a massive significance was the natural boundary of the city to the north and west by a coastline. This promenade provided the respondents with places of delight: the social space of the promenade; the recreational space of the beaches; the attachment to a source of seafood; and the visual spectacles of the Raouché Rocks and the Mediterranean Sea itself. In addition, the findings of this chapter relate to 'layers of history', through identifying ancient and historic physical features, including the archaeological park (Roman bath), the Mamluk Zawiya Ibn Iraq shrine, and Ottoman Grand Serail, the French *Place de l'Étoile* (al-Nijmeh Square), the post-war extension of Martyrs' Square. Such layering, which was the subject of

discussion in Chapters Three and Four, is retained as various aspects of centrality demonstrated in cognitive maps, in aerial photographs and in the synthesised maps.

The findings of this chapter also complement those of Chapter Five, in demonstrating that physical features are not the only motivating force behind the relationships between people and between people and their environment. Thus, Chapters Five and Six investigate the internalised mental images of Beirut held by the respondents and identify the priorities and requirements that they desire of their city. Chapter Seven extends the scope of this investigation to focus on the physical structuring of the city centre. The purpose of this is to see how well or poorly this corresponds to the wishes of the residents, as an evidence-based vehicle for identifying how ongoing reconstruction of this city centre offers a built environment that is sympathetic to its users' needs and best embraces the goal of social integration in public space.

In this research, public space emerged as the natural place to nurture shared identity, cultural continuity and heritage. Public space is the place that promotes reconciliation among various post-war communities, where people meet, work and exchange ideas. From the maps drawn by the respondents, identified regular and shared elements emerged, which were categorised as paths, edges, districts, nodes and landmark. These shared elements form the structure of the city as it was perceived and remembered by people. It became clear that mental image was mainly associated with memory. Recapturing the collective memory of people emerged as invaluable in appreciating the shared identity, cultural continuity and heritage, which should be accommodated in any post-war reconstruction process. The aim of this research is to find ways to encourage integration among various communities through the transaction in space, hence, there is a need to investigate further the impact of post-war reconstruction on the structure, in order to identify and assess the level of integration between the pre- and post-war spaces of the city centre.

Chapter Seven:
Space Syntax and its Applications

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7.1 Introduction

The preceding chapter focused on the perceptual attribute of public space through examining people's collective memory using cognitive mapping technique. The analysis of the mental maps revealed that people's appreciation of the environment derives from their ability to establish a series of relationships between themselves and physical features within that environment. Such relationships are spatial in nature; they usually occur in space and through establishing spatial connections, such as paths. According to the transactional perspective, these spatial phenomena conform to the relationships that develop among people themselves, between physical features and between people and physical features in the built environment.

Hillier and Hanson (1984, pp. 9, 21, 26) identify spaces as the most basic aspect of the environment in which, through its ordering of the physical world it is already a social behaviour. They describe the space of the street system as the theatre of everyday life and transactions, by which public space is determined by buildings and their entrances. They postulate that society can be described in terms of its intrinsic spatiality and that spaces must be described in terms of their intrinsic sociality. Building on this concept, Hillier and Hanson developed space syntax as a tool for examining the network of public space. Hillier and Hanson's argument is that spaces are highly accessible and open to other areas in the network and are likely to be most inviting to distemic social interaction, whereas segregated and enclosed spaces serve a lesser social purpose. In other words, this concentrates on the physical attribute of space, without disregarding its socio-cultural, functional and perceptual attributes.

This chapter employs space syntax as a tool to analyse the spatial structure of the city centre of Beirut. It presents a comparative analysis between the pre-war and post-war spaces. The plans used in the analysis are the 1965 master plan and the

approved (2001) master plan. The central aim is to highlight any shifts in the level of spatial integration that will emerge as a result of implementing the approved master plan. The aim also is to identify spaces that are expected to be most intelligible and accessible to pedestrians. A brief background about the evolution of the urban structure of the old city and the making of the post-war plan has already been introduced in Part Two.

Chapter Seven begins by giving an overview of space syntax with a brief consideration of Hillier's argument against enclosure, then introduces space syntax techniques, namely **axial map** and **visibility graph analysis**. Finally, it demonstrates the application of space syntax on the spatial structure of the city centre using visibility graph analysis.

7.2 Bill Hillier: The Social Logic of Space

Society is a spatial phenomenon, where people encounter each other and transact socially. In 1984, Bill Hillier in collaboration with Julienne Hanson initiated a new concept **space syntax**, which was published in their book *The Social Logic of Space* (1984). Space syntax is a **socio-spatial theory**, which portrays space as an important aspect of social life. Space syntax has been widely used as a tool by many urban designers to analyse spaces.

Hillier and Hanson (1984, pp. 26, 27) perceive society as a spatial order that arranges individuals in space and locates them in relation to each other with a certain level of aggregation and separation, generating movement patterns and encounters. Public space is the most important interface between various types of communities, in terms of the relationship among inhabitants and between inhabitants and strangers. Hillier and Hanson found that, while strangers are more likely to move through space in the settlement, inhabitants collectively have a more static relationship to various parts of the local system. They suggest that the axial extension of public space allows strangers to gain access to the system. While convex organisation creates a more static zone, in which inhabitants are potentially more in control of the interface.

Hillier and Hanson (1984, pp. 95, 96) and Hillier (1988, pp. 69, 70) related cultural variation in urban spatial forms to the pattern of movement in a town, which they perceive as a function of the integration pattern. In addition, they found that this relationship depends on the syntactic property of the system, which they identified as intelligibility.

Hillier's (1988) research of the encounter concept is mainly to do with the natural pattern of background space use and movement created by the town plan and the distribution of buildings within it. This based on the logical premise that, the more a point in a space is visually contiguous to other points in space, the greater becomes the **encounter rate** it offers to any person standing there. He proposes to observe the movement pattern in a set of spaces, in which an encounter rate can be assigned to each space, then, using a statistical correlation encounter rate and integration values, he is able to make reliable predictions of the movement pattern as determined by the spatial structure.

Such a type of movement pattern prediction is normally valid, because integration is a measure that relates each space to every other space in the system. This implies that the encounter rates of individual spaces are, in the main, a function of their position in the *global* structure of the system, and not the more *local* properties of the space. Hillier's (Hillier, 1988, pp. 72-76) analysis reveals that the intelligibility of the spatial structure of towns can be defined in this way. Generally speaking, the more intelligible the urban area, the better will be the prediction of encounter rates from integration values. Hillier states that:

"In a grid people start and finish everywhere. Origins and destinations are everywhere, with different levels of intensity. This by-product of movement is to generate as many happenings and interactions as possible... enclaves are almost, by definition destinations which are not available for 'natural movement'. They are discontinuities in the urban grid and disruptive of the movement economy. Any tendency in an urban structure towards 'precinctisation' must also be a tendency to a lessening of the useful by-product of movement." (Hillier, 1992a, p. 1.10; quoted in Hayward and McGlynn, 1993, p.88)

Hayward and McGlynn (1993, pp. 88, 89) suggests that the grid offers a social logic to the location of services resulting from the range of global and local connections. He postulates that pedestrian **proximity** is a principal measure in locating a great mix of uses and activities within reasonable walking distance of where the majority of people live.

7.3 Against Enclosure

Based on his previous research, Hillier's *Against Enclosure* (1988, p.63) reviews several housing schemes from many countries throughout the world. He finds that, although such housing schemes have geometrical dissimilarity, they are based on principles of enclosure, repetition and hierarchy. Hillier's critical argument here is centred on the idea that enclosure becomes the basis for design and the development of neighbourhoods, towns and cities, in which local enclosures are either repeated or subjected to simple geometrical conversions, which are then replicated at a higher level of hierarchal design. He describes such a process as *enclosure of enclosures*.

However, Hillier's (1988, p.64) main emphasis is that enclosure is not the solution to the urban problem, but the problem itself. He believes that the arbitrary use of enclosure has been responsible for the creation of the fragmented, unintelligible and largely under-used spaces. Hillier supports his arguments by using space syntax to first demonstrate how intelligibility and continuous use of urban space was created in the past, then to show how the unintelligibility and under-use of much modern space arises from the uncritical use of over-localised concepts like *enclosure*. In addition, he provides evidence that such enclosed environments may increase vulnerability to certain types of crime. He continues his argument by putting much emphasis on the fact that to dehumanise the urban environment, one must confine the concept of enclosure to those places where it is genuinely applicable. Thus, Hillier proposes that public space should re-establish the idea of open, outward-facing layouts, with intelligibility and integration given priority over exclusion and group territory.

Hillier (1988, pp. 64, 65) does not refute the notion of enclosure completely, as it derives from the urban fabric of historic towns, and enclosed spaces can give a pleasurable sense of enclosure. Rather, what he is refuting is the notion that enclosure can become the basis of urban form, as there are fundamental differences between the old and new plan types.

According to Hillier (1988, pp. 66, 67), the main characteristics of the traditional towns are that they had forms of order built into them, which gave them their intelligibility and workability. He believes that the great majority of historic towns are *deformed grids*, in the sense that the town has the general topology of a grid, being made up of a series of islands of buildings facing outwards, each surrounded by open space, which forms part of an interrelated pattern. He points out that the old town plan is deformed according to the length and width of its spaces; in terms of its access and sight lines, and of the changing fatness of its spaces.

According to Hillier and Hanson (1984, pp. 16, 17) and Hillier (1988, pp. 67, 68) the deformed grid can be quantified into two systems of organisation. **Two-dimensional** organisation can be identified using the concept of convex spaces, in which all points are directly visible and accessible from all other points. This can be achieved by dividing the deformed grid into its fattest and fewest convex spaces. **One-dimensional** organisation can be achieved by drawing the longest straight – or axial – lines, then the next longest, and continuing until all convex spaces are passed through at least once and all axial links are made (Figure 7-1).

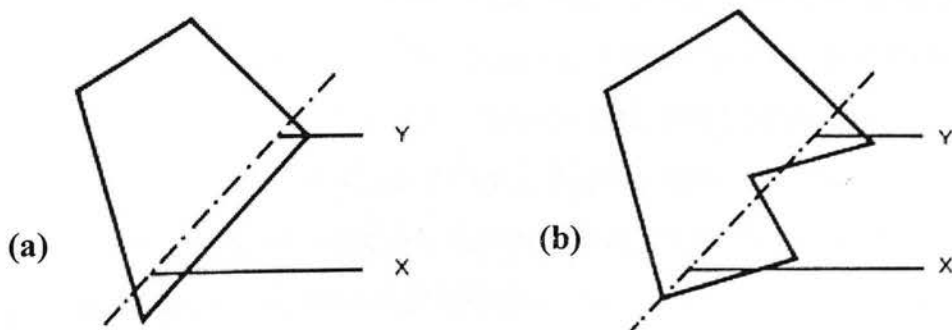


Figure 7-1: Convex and non-convex space (source: Hillier, 1988, p.68).

Figure 7-1 shows two diagrams (a) and (b). Diagram (a) is a convex space where all points within the space can be joined to all others, without passing outside the boundary of the space. Diagram (b), however, is not convex because the line from X to Y passes outside the space (Hillier, 1988, p.68).

Hillier and Hanson (1984) attribute the presence of people in a space not to its local features but to its location within the overall system of spaces in a city. In other words, the integrated spaces refer to spaces that are highly accessible from other parts of the city, and, very likely, they would attract businesses, intensive land use and social activities' as well as providing security. Hillier and Hanson (1984) assert that by allowing an interface between strangers and the inhabitants of an area, safety can be secured but it is not achieved through segregation.

Hillier (1988) attempts to correlate burglary rates with integration values through analysing several case studies of integrated and segregated spaces. He finds that vulnerability to burglary increases slightly with increasing segregation (Hillier, 1988, p. 80). This means that the more integrated the space, the lower the burglary rate and the more segregated, the higher the burglary rate. Such a concept contradicts the nature of Newman's hypothesis of territorial space, which promotes the hierarchical organisation of space (Hillier and Hanson, 1984, p.140).

7.4 Notes and Criticisms

One of the main issues of space syntax using axial map technique is the methodology of defining and creating axial lines, in the sense that some personal interpretation is involved, mainly in drawing convex spaces, and then further interpretation is required to link these spaces with axial lines. Such a drawing methodology raises the issue of reliability as human error may be involved in the process. In other words, drawing the axial map does not follow a certain standard or procedure, which would ensure obtaining similar results from different people. Another difficulty arising from the methodology of drawing an axial map is how to render curves in the physical urban setting. A standard graphics package may

render a curve as having many hundreds of vertices, whereas a large area with relatively few complex polygons, will have very few lines.

7.5 Axial Map and Visibility Graph Analysis

Since the initiation of the space syntax theory, much attention has been given to devising a design tool for regenerating urban areas that will allow factors such as **connectivity**, **integration** and **permeability** to be objectively measured. However, Space Syntax Ltd⁴⁰, in collaboration with University College London, has developed computer software that links space syntax with graphical representation, allowing researchers and urban designers to assess and predict the **impact** of their **proposals** on **people** and the **environment**, and to improve their designs.

The computer-based techniques, such as axial maps and visibility graph analysis, of space syntax can be used to produce graphical representations, as well as numerical information, of **pedestrian movement** levels, **urban integration levels**, **land use patterns** and expected **crime patterns**. Both axial maps and visibility graph analysis are mere tools in the research programme that examine spatial configuration as an independent variable in social systems (Desyllas and Duxbury, 2001).

Spatial analysis using axial maps deals with a given spatial system in terms of both its one- and two-dimensional organisation (Hillier and Hanson, 1984, p.17), as mentioned in section 7.2. Once the axial map of a given system has been created, various measures of spatial characteristics can be obtained using **Axman** software.

The interactivity and depth of the system can then be analysed graphically or by numerical data. In this interpretation, **depth** is the consequence of the **accessibility** of any one space to another. To be more precise, **the greater the number of spaces** an individual has to access to reach another space, **the deeper**

⁴⁰ Space Syntax Ltd. is an international company that provides design consultation and support to various organisations in the world (<http://www.spacesyntax.com/>).

the system. Conversely, **the fewer intermediate spaces** an individual has to pass through to get to another space, **the shallower the system.** The number of spaces passed through to reach a particular space is taken as its **depth value.** The mean of all these numerical values represents the shallowness or depth of the system as a whole, which can be compared with other depth patterns of different towns or urban areas.

Recently, visibility graph analysis has been used as a complementary tool to space syntax methods. Whereas depth value refers to physically reaching a place, visibility analysis addresses to what extent a space can be seen from, or is hidden from, other points in the network. It thus identifies the visibility of any point in a spatial network from any other point. A graphical matrix of points can be calculated to identify how many intervening points a person must pass through in order to see the previously hidden points (Desyllas and Duxbury, 2001).

This kind of analysis was pioneered first by Braaksma and Cook to identify the visual and spatial associations between various facilities that a passenger must find in airports (Braaksma and Cook, 1980). In a more recent development in space syntax, Turner et al. (2001) revive visibility graph analysis to describe the configurational properties of space within a building or urban space environments. They introduce the software **Depthmap** as a tool that allows designers to perform visibility graph analysis (Turner and Penn, 1999; and Turner et al., 2001).

Both Axman and Depthmap allow the researcher to perform various analytical measures on a given spatial system. The mean depth is often calculated using axial maps and visibility graphs. Generally, depth measures are valid in spatial analysis when a bounded spatial system is found.

However, many researchers such as Turner and Penn (1999), Desyllas and Duxbury (2001) and Campos and Fong (2003) view Depthmap as an effective space syntax tool to analyse and assess designs, and predict areas of integration and identify any critical issues in terms of space segregation. At the Fourth

International Symposium on Space Syntax, Jake Desyllas and Elspeth Duxbury (2001) presented a paper on axial map and visibility graph analysis that investigates the methodology and use of both techniques in models of urban pedestrian movement. In their comparative study, Desyllas and Duxbury examine central London using axial map and visibility graph techniques for the analysis and representation of urban spatial structure and they test their relationship with observed pedestrian movement patterns.

The study correlates the graph measures produced from the axial map and visibility graph analysis with the observed flows, using a sample of pedestrian movement counts on individual pavements. The results of their study indicate a considerably higher correlation between visibility and pedestrian movement than between any axial graph measure and movement (Desyllas and Duxbury, 2001). Similarly, Turner and Penn (1999) published a comparative test of axial analysis and visibility graph analysis in models of pedestrian movement from a study of a department store. Their study shows a higher correlation between graph measures of mean depth and pedestrian movement when calculated with a visibility graph analysis representation than with axial lines (Turner and Penn, 1999).

7.6 Applications Using Visibility Graph Analysis – Depthmap

Following the previous discussion, the researcher determines that a visibility graph analysis is the most appropriate means to this research for applying space syntax on the spatial structure of the city centre of Beirut. This analysis will be conducted on the pre- and post-war development plans of a city centre in order to identify any shifts in visual spatial integration from the old to new spaces. However, the researcher suggests that a depth analysis of the same plans constitute a valid area for future investigation. The pre-war 1965 master plan and the approved (2001) post-war master plan are the plans used in the process. Each plan was first drawn at a scale 1:1 using CAD, exported as a data exchanged format (DXF) and then imported into Depthmap for analysis. Each graph was analysed at the same grid size of 6m x 6m using global measures with a radius

n.⁴¹ The graph measures used in analysing the plans were integration Hillier/Hanson and integration Teklenburg et al.⁴²

7.6.1 Spatial Analysis of Beirut City Centre (1965 Master Plan)

In reviewing the 1965 master plan, it was quite noticeable that the city centre's structure was interwoven with the urban fabric of the whole city. The only avenue in the area was Fouad Chehab Avenue, which bounded the city centre to the south. However, the overall street pattern in the area was a mixture of a radiating grid at al-Nijmeh Square, a rectilinear street pattern mainly at the Beirut Seaport area, and short irregular streets or dead end streets (cul-de-sacs) in the nearby neighbourhoods. Both graph measures of integration Hillier/Hanson and Teklenburg et al. reflected, more or less, similar relationships to the overall system. Although they vary in terms of colour range, they both highlighted the same streets and squares within the city centre area (Figure 7-2).

The analysis identified Weygand Street as the most integrated street in the city centre, next the Martyrs' Square area and then Financial Street. The prediction presented by Depthmap was actually to a large extent true and represented the existing conditions prior to reconstruction of the city centre. Martyrs' Square was the centre of activities for the whole city. People coming from different regions in the country would have to stop at Martyrs' Square before going to their final destination. It was the hub for the whole country in terms of transportation, business, culture, entertainment and art. Most noticeable was that integration Teklenburg et al. picked up more integrated areas than integration Hillier et al., which nearly matched the conditions prior to reconstruction. This included most of the streets that radiate from al-Nijmeh Square, most importantly al-Maarad Street/Allenby Street.

⁴¹ The criteria of selecting the grid size used for both graphs were to allow Depthmap to cover the narrowest spaces required for analysis.

⁴² The Teklenburg et al. analysis gives different results from that of Hillier et al. because they are different methods for normalising total depth in relation to the size of the system (email communication with Dr. Campos of Space Syntax Ltd., 2004. Also see Campos and Fong, 2001).

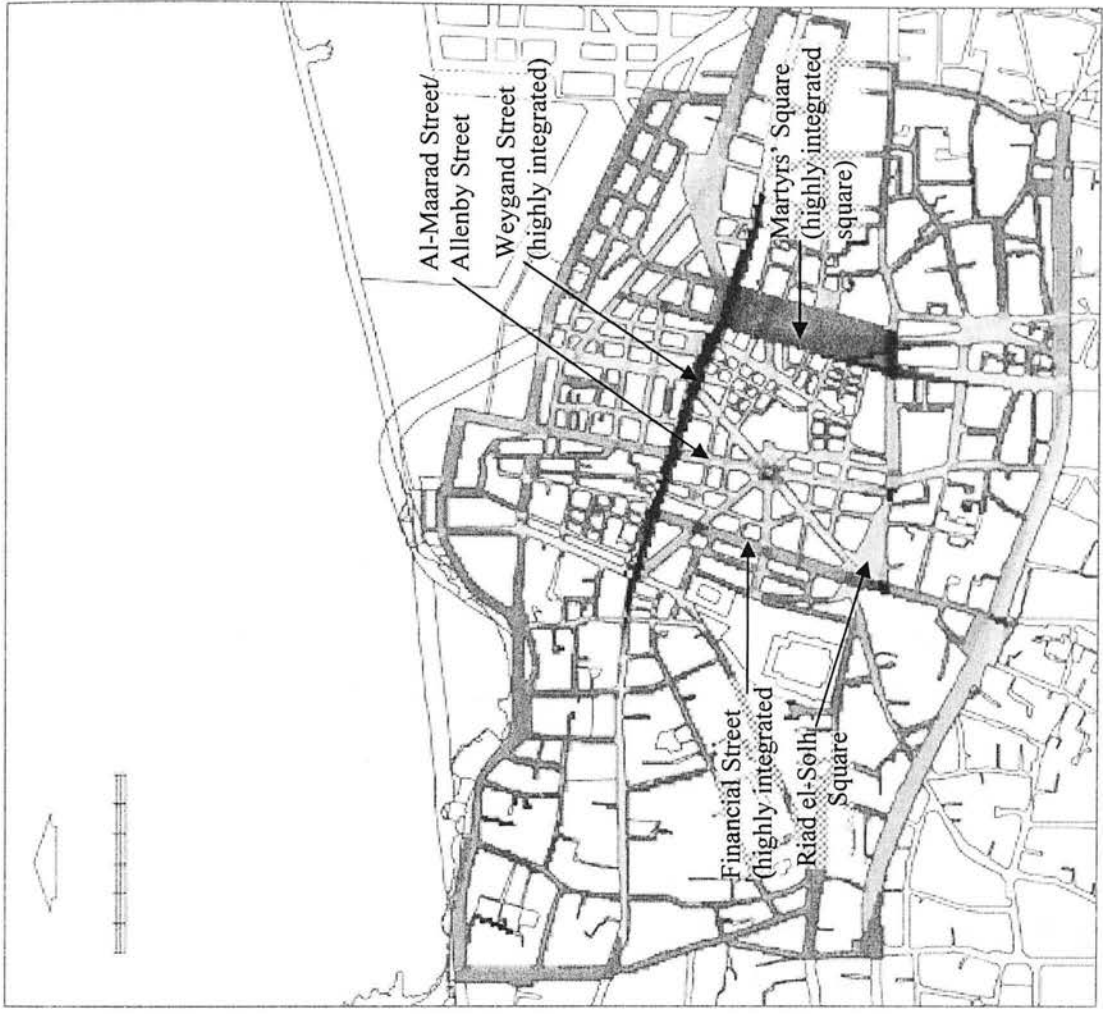


Figure 7-2: Visibility graph analysis of the 1965 master plan using integration Hillier/Hanson (left) and Teklenburg (right) (source: the author, 2004). Depthmap colours are a spectral range from indigo for low values through blue, cyan, green, yellow, orange and red to magenta for high values (Turner, 2001, p.3).

Foch Street was also identified as an integrated street. Traffic circulation within the city centre was mainly a two-way system, apart from the main squares, including Martyrs' Square, Riad el-Solh Square and al-Nijmeh Square, as well as some of the streets within the old souks. Both graphs indicated the old souks as being less integrated although the souk was the most active place in the city centre. This is because the spatial structure of the old souks was mainly a compact structure and based on a deformed grid pattern, in terms of the length and width of its spaces; and in terms of its access and sight lines, and of the changing fatness of its spaces. Again, this confirms with Hillier's views regarding traditional towns and cities, as was discussed earlier in this chapter.

7.6.2 Spatial Analysis of the Approved (2001) Master Plan

Looking at the visibility graph of the approved (2001) master plan, one can identify the extent of change that has already taken place. As was mentioned earlier in Chapter Four, the master plan has picked up four major visual axes to extend north towards the sea, including Martyrs' Square, Foch Street, al-Maarad Street/Allenby Street and the Grand Serail axes. Although they were considered as visual axes, they also signify that the master plan is a vehicle-oriented plan in that they are based on wide, straight routes that run directly through the city centre area. Both integration graphs identify that the most integrated areas are concentrated in the new Financial District (the waterfront development) (Figure 7-3). North-south streets in the Financial District are revealed as being more integrated than other streets in the city centre. This is because the more connections there are along any particular street, the more likely a concentration of activities will occur at these connections. Shorter streets with fewer intersections thus appear to be less integrated. This is clearly expressed in the difference in integration level between al-Maarad Street/Allenby Street, which is the longest axis in the city centre with many intersections, in comparison to other parallel streets.

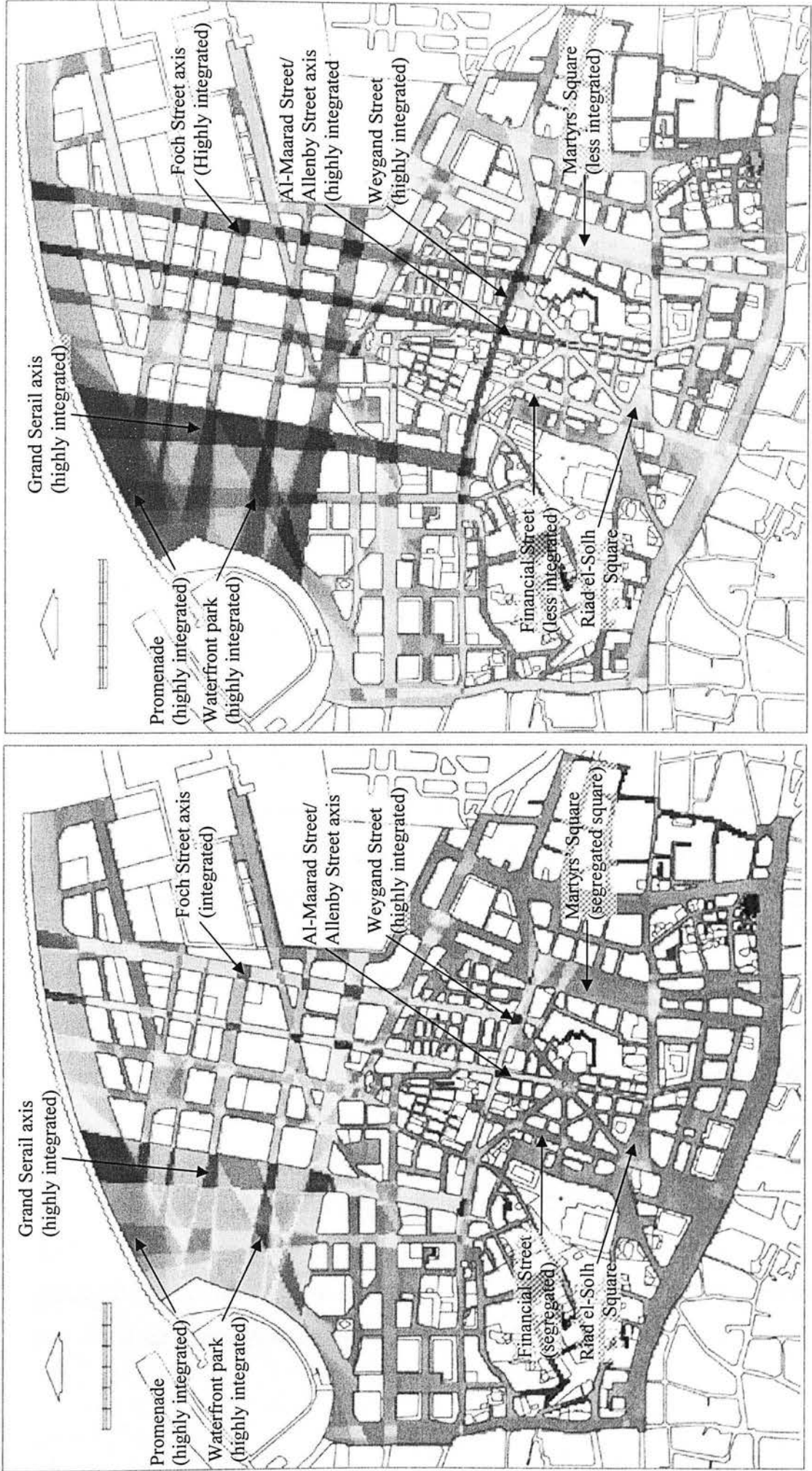


Figure 7-3: Visibility graph analysis of the approved (2001) master plan using integration Hillier/Hanson (left) and Teklenburg (right) (source: the author, 2004). Depthmap colours are a spectral range from indigo for low values through blue, cyan, green, yellow, orange and red to magenta for high values (Turner, 2001, p.3).

The implication is that, **if the new development is to be implemented according to the current master plan, then it is expected that most activities will move away from the historic core towards the new development.** This may lead eventually to the isolation of the historic core, to the withdrawal of activities from its traditional public spaces and to a shift of businesses towards the more integrated areas of the new development.

Both graph measures predicted that the waterfront area, including the new park and its promenade, would be an area of high integration level. The analysis of Hillier/Hanson predicted a dramatic decrease in the integration level of the areas identified as highly integrated in the previous analysis of the 1965 master plan. It was quite apparent that Weygand Street and Martyrs' Square indicated a split of integration towards the new developments of the Financial District, the waterfront park and the promenade. However, the extension of two existing streets, namely al-Maarad Street/al-Nijmeh Square/Allenby Street and Foch Street towards the sea, slightly increase their integration level, particularly their new extensions towards the new financial development. In contrast, the Teklenburg et al. analysis indicates a moderate decrease in the integration level of Weygand Street, Martyrs' Square and Financial Street, with a complete shift of integration towards the new development, in particular the waterfront park area.

A new road network, with bridges and tunnels, has been implemented. It surrounds the city centre on three sides: the east, the south and the west, with Beirut Seaport and the new Financial District enclosing it to the north. This limits the natural extension of the urban fabric of the city centre towards the surrounding neighbourhoods, and creates a localised character that is disconnected from the main fabric of the city of Beirut. This disconnection is stylistically underpinned by the planning of the Financial District as an orthogonal grid pattern. The new road network has divided the city centre into various areas, through the extension of several exiting roads towards the sea to

the north and towards the mountains to the east. It was noted earlier in Chapter Four that the main reason for extending these roads was to establish axial views to the sea. However, as the visibility graphs and the author's experience of the area show, these views become very unrecognisable at such a long distance. The main, if not the sole, benefit of these streets has been to promote vehicular access to the new development area, by passing the true city centre and draining the social activities from it. One of the major factors that needs to be considered, is **the impact of implementing the new road network on the city centre fabric and the integration level in the area.** Interchanges, underpasses and bridges could be seen as promoting an urban environment that was too rigidly designed to enable rapid transport links and separate pedestrians from drivers to prevent obstructions and accidents. The ring road, designed to encircle the traditional city centre and allow new road alignments towards the sea, effectively isolated the city centre from its neighbouring areas and acts as a barrier between the remainder of the city and the new waterfront.

7.6.3 Comparative Analysis

In order to understand the implications of the integration between the 1965 master plan and the approved (2001) master plan, a comparative analysis is needed. The visibility graphs (Figure 7-2 and Figure 7-3), illustrated previously, indicated that the global integration level of the approved (2001) master plan is more than that of the 1965 master plan. This is because the new plan introduces a rigid street pattern, which promotes permeability towards the proposed waterfront development and predicts a higher integration level in that area. Such a development will lead to a major shift in social meaning of the city spaces by attracting activities from the historic core of the city centre towards the new development.

Looking at the major public spaces in the city centre, particularly Martyrs' Square and Riad el-Solh Square, one would find that they have been subjected to a series of major physical and functional transformations. Most of the physical

structures that surrounded these squares have been replaced by new development. The comparison of Hillier and Hanson's integration graphs (Figure 7-4 and Figure 7-5) and Teklenburg et al.'s graphs (Figure 7-6 and Figure 7-7) indicate a dramatic decrease in visual integration of traditional public spaces as well as their connecting streets. This actually corresponds to a large extent to the current situation. The opening of Martyrs' Square towards the first basin of the seaport has contributed to the segregation between the eastern and western parts of the city.

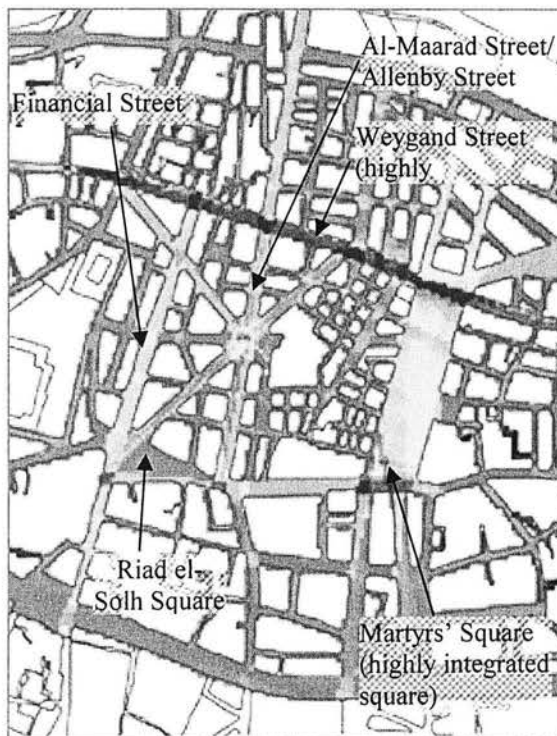


Figure 7-4: Visibility graph analysis of a detailed part of the 1965 master plan using integration Hillier/Hanson (source: the author, 2004).

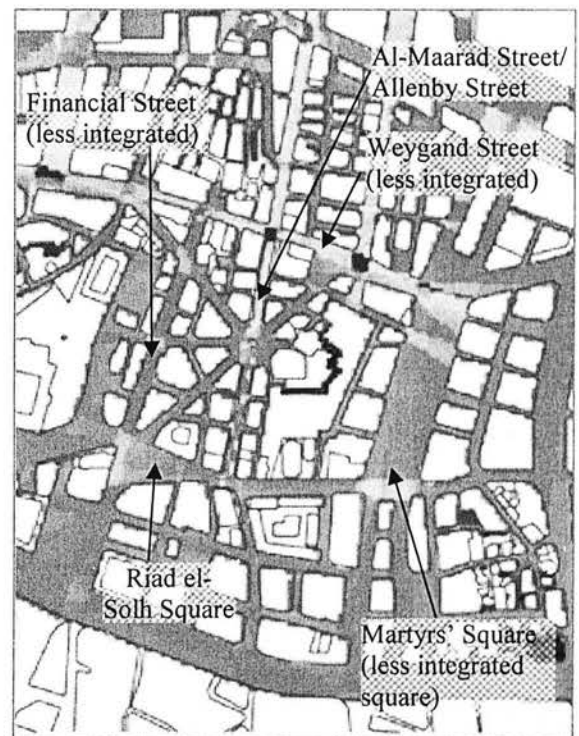


Figure 7-5: Visibility graph analysis of a detailed part of the approved (2001) master plan using integration Hillier/Hanson (source: the author, 2004).

The widening of the square inhibits the kind of criss-crossing movement; as a result, the inhabitants of nearby residential neighbourhoods will find it easier to stay at the edges of the space rather than crossing it diagonally. Behrens and Watson (1996, p.210) argue that large and underutilised spaces are neither pleasant nor do they feel safe.

Conversely, small, crowded spaces are successful. The character of the smaller spaces is therefore more informed by its locational significance and the uses that

about it. Visibility graphs analysis of both integration measures predict that Martyrs' Square, in relation to the overall city centre plan, is not nearly as important as it was prior to reconstruction. It appears to be isolated from its surroundings by wide streets, which promote dense traffic. Recent observation of Martyrs' Square, revealed that the square is still vacant and has no vitality (see previous Figure 4-25 in Chapter Four). The square is segregated from the surrounding areas by major streets all around, which create visual barriers and act as demarcation line between communities.

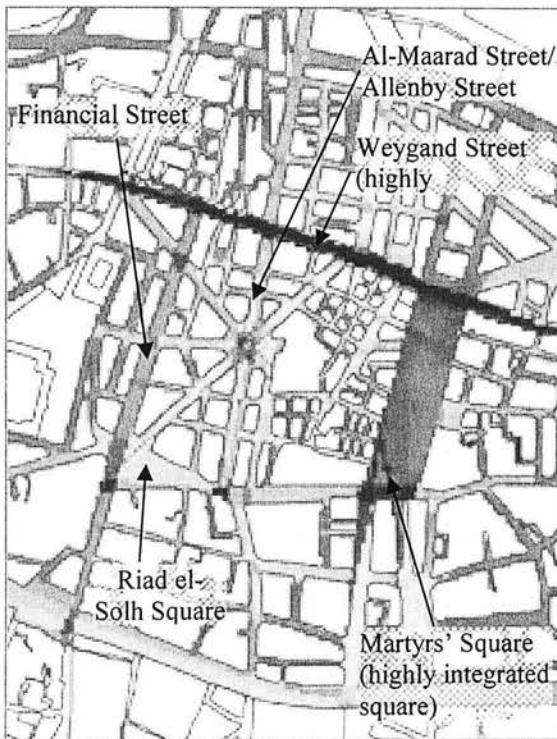


Figure 7-6: Visibility graph analysis of a detailed part of the 1965 plan using integration Teklenburg et al. (source: the author, 2004).

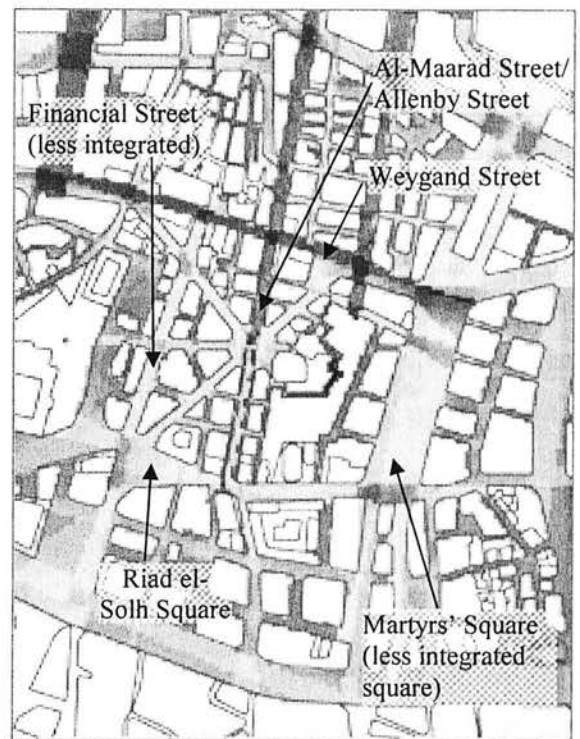


Figure 7-7: Visibility graph analysis of a detailed part of the approved (2001) master plan using integration Teklenburg et al. (source: the author, 2004).

Riad el-Solh Square has lost most of its former businesses, craft shops, cafés and many small shops, as well as its nearby residential neighbourhood at Ghalghoul, which has been formed into a temporary car park. This has alienated the role of the square in terms of its usage by its local inhabitants, and its functionality in regulating the traffic in the area. Instead, it has become a little, landscaped space attached to a temporary car park (see previous Figure 5-29 in Chapter Five). Moreover, the visibility graphs reveal other areas of concerns, particularly the

reduction of integration levels along Weygand Street, Financial Street. The graphs also predict that the northern part of Al-Maarad Street/Allenby Street axis would assume a greater integration level than its southern part. This largely confirms the considerable fluctuation in the pedestrian movement patterns that emerged from the supportive survey discussed in Chapter Five.

7.7 Conclusion

The findings of this chapter raise great concerns for the author. They indicate, particularly, if the socio-spatial theories of Hillier and Hanson (1984), and Hillier (1988) etc. are well-founded, then the new development will effectively use space itself as a tool for reshaping the entire legibility and social use of Beirut, for the benefit of new commercial enterprises. Where social activity naturally congregated in areas where cultural memory was deepest, the new development involves opening up huge vistas that will act as vacuum-pumps, tugging the areas of social gathering and profit into newly-created domains that are not deep in memory. In other words, the driving force for transaction that creates the city as a social-cultural manifestation through the interplay of man and environment (Altman and Rogoff, 1987; Dewey and Bentley 1949) is overwhelmed by the irresistible force of a new spatio-commercial strategy.

This divorce between the old and the new Beirut is powerfully underlined by the fact that the development of the new Financial District is located on artificial land that was open sea before (1982) and which has never been the locus for land-based activities. It embraces no collective urban memory, but that of man's technical and engineering aptitude. In conclusion, if the aim of the reconstruction plan was to promote integration between various communities, then it would have been better for the individuals responsible for the reconstruction process to have reconsidered their policies towards public space. Traditional public spaces should assume their central role, rather than being at the periphery of the reconstruction process.

Conclusion to Part Three

Part Three presented the empirical work in three chapters, modelled in sequence on the four attributes of space identified in Part One. Chapter Five explored people's responses and preferences towards their city centre before and after the reconstruction. It explored the **functional** and **socio-cultural** attributes through a questionnaire that investigated qualities, dimensions and features that form the guiding framework for people's relationship to the urban environment of Beirut city centre.

Chapter Six dealt with the **perceptual** attributes by allowing people to present their own personalised image of the city in cognitive maps. Recapturing people's collective memory through cognitive mapping technique was an invaluable process in understanding the way they appreciated their shared identity, culture and traditions.

Chapters Five and Six underscored the theoretical premise that people have associations that carry sentimental, symbolic, religious, cultural and emotional meanings that lead to their appreciating the environment. Appreciation thus evolves from the associations that are attached to objects, ultimately becoming definitive to their quality of urban life. In other words, it is not just the physical features that attract people to a place, but the hidden meanings that lie behind such features. Meanings are associated to almost every physical entity in the environment. These meanings and associations are multi-dimensional, in the sense that people perceive them in their own deep thinking; the accumulation of which has a dominant impact on people's appreciation of place.

Meanings and associations are accumulated to formulate a set of broader dimensions that reflect people's perceptions and attitudes to public spaces. These dimensions correspond to the theoretical framework that emerged in Part One, which is based on four main attributes of public space: the physical, socio-cultural, perceptual and functional attributes. These attributes can be put together

to form a holistic approach, which does not only assist in explaining the nature and use of the environment, but also evokes emotional responses and motivational messages, that stimulate human needs. Most importantly, is that public space in the city centre was not perceived wholly as a physical entity, but rather a complex series of relationships among people themselves and between them and their surrounding environment.

Chapter Seven introduced the notion of space syntax and its application in order to investigate the **physical** attribute of the reconstructed environment of the city centre of Beirut. Space syntax's main concern is to do with two generative principles of spatial patterns, which are visibility and accessibility, as both factors can promote or discourage social transaction in space. The visibility graph analysis was the technique used to analyse the spatial configuration of the city centre. When the research moved on to investigate the physical attribute of space, taking as its examples the 1965 master plan of Beirut and the approved (2001) master plan, it found that the parts of the city, which were highly favoured in physical terms were no longer the same as those most appreciated or identified by the people. This means that the city being proposed is not a rendering in physical form of the city, as the people know it. New developments have always been perceived as a threat to historic cities, but there are examples in the world, such as Edinburgh's old and new town, where the new through time have developed a natural and harmonious relationship with the old. The question whether we need to allow or not the new waterfront development to take place is based upon maintaining a balance between the old and the new, through a holistic approach that responds to the aspirations of the Beirut community.

PART FOUR:
CONCLUSION

Introduction to Part Four

This part merges the findings of the literature review, the context and the empirical work in order to distil the principal messages for the role of public space in post-war reconstruction. It concludes the research by reviewing the findings of the research and presenting a proposed framework that can guide the ongoing reconstruction process and the natural evolution of Beirut city centre.

Chapter Eight:
Findings and Applications

Chapter Eight: Findings and Applications

8.1 Introduction

The thesis's main emphasis has developed from the concern that the post-war reconstruction of Beirut requires not only the physical restoration of the city centre, but it is equally important that is integrated with the socio-cultural, perceptual, and functional aspects of Beirut society.

This assertion holds that, if public space is to foster community reconciliation it must enable the transaction of people in public space by endorsing shared identity, cultural continuity and collective memory within the spatial transformation of the environment. Public space is the natural arena for people to meet and work together, as it is imbued with the qualities in which they have interrelated relationships, and this is perceived in the transactional perspective to be a holistic phenomenon. This intrinsic nature gives public space a leading role in guiding the natural evolution and transformation of the built environment, which is vital in post-war reconstruction processes.

This thesis emphasises that any post-war reconstruction process needs to follow a holistic perspective, and that there is a risk of prioritising a particular dimension, whether economic, aesthetical, physical, etc., thus creating an imbalance of the whole. Although reconstruction is to do with the physical restoration and redevelopment of the urban fabric, this thesis also perceives reconstruction as a healing process that revives the man-environment relationship. The physical structures hold unique qualities that carry the real meaning for the whole community, and thus, by addressing such qualities, the city provides comfort, supportive associations, and pleasing aesthetical values to people.

These qualities, which should be uppermost in the thoughts when any attention is being given to the lived environment, attain a far greater importance in the case of reconstruction. Rather than being viewed as an opportunity to test new planning ideologies, such reconstruction should be recognised as providing an

accentuated need to restore the psychological and social well-being of the city's people and its visitors. The need to rebuild is the need to reinstate identities, cultures and motivations by allowing the participation of the community to assume a greater priority over investment and physical considerations.

Within the general context of the thesis, the discussions raised about the role of public space in the post-war reconstruction process have revealed that public space has a significant role to play in healing cities after war. Public space is the most appropriate place in the city that could promote the revival of tolerance and encourage communities to mix. Public space is perceived as the domain that, if it is used to guide the reconstruction process, can assist in promoting reconciliation among various communities. It also has a substantial role to play in helping the community to come to terms with their loss of people, lifestyles and the city they once knew. Through integrating the findings of the theoretical discussion with the results of the empirical work and guided by a transactional perspective, this chapter suggests a framework for the role of public space in post-war reconstruction that emanates from the Beiruti context. Then the thesis introduces major characteristics related to promoting reconstruction policies and strategies, and lastly, suggests areas of further research and presents a final message.

8.2 Review of Findings

Part One established the theoretical framework that guided the author through the contextual review, survey and analysis. It acknowledged that a transactional approach was needed in order to appreciate the complex social and physical phenomenon that is public space. Transaction relates directly to issues of change, emphasising that co-evolution of the physical and non-physical properties is a prerequisite for public space that is imbued with social meaning and is a locus for cultural development.

The transactional approach guided the research to recognise the non-physical qualities of space, which although intangible, are as “real” and pertinent as its physical properties. Because these non-physical qualities are those that reside in

the individual and collective imaginings of space, structured along deeply-held values and principles, the research adopted a qualitative approach that sought to elicit a detailed awareness of public space as it exists in people's minds, while also explaining its physical qualities.

The methodology was further structured and related space to four major attributes: physical, socio-cultural, perceptual and functional. Guided by theory, Part Two presented the Beiruti context by discussing the evolution of the urban fabric of the city from pre-Roman times, through various stages of colonial rule and up to 1975 (before the war). The intention was to demonstrate how, over the millennia, Beirut, until its whole-scale destruction in the civil war, had grown up as a series of layers that supplanted but never completely eradicated each other, giving it a coherent extension through time. In other words, it led to the identification of Beirut as city that has undergone epochal moments of transaction and yet retained a deep memory of its growth over many generations.

The devastating impact of the civil war on the city's structure was then explored, in terms of its physical and non-physical consequences on Beiruti society and the built form. The physical problems of the war were highly visible and their symptoms were seen in the destruction of the urban fabric, the redefining of territories and the segregation of communities. As well as many environmental and psychological pressures, the loss of the social role of Beirut's city centre to other secondary centres had major consequences on the economy of the city and the country as a whole.

The cessation of hostilities was also characterised by a different type of disruption to the physical fabric of the city. The clearance of war-damaged areas and the demolition of buildings, justified as surgical operations, rendered the city centre meaningless. The most substantial change was the demolition of the old souks, which has resulted in a dramatic loss of traditional businesses, but most importantly, was the loss of socially desirable uses and activities that nurtured public life in the city centre.

Part Two concluded by introducing a series of master plans put forward in the drive to redeem the destroyed city centre. It recorded how the earlier plan prompted a number of reactions, concerns, and criticisms of the modernist approach, until a compromise was reached in an approved (2001) master plan. This was seen as a moderate approach that maintained a balance between the old and the new. The post-war period saw a dramatic acceleration in the pace of physical reconstruction, which was characterised by higher quality environments with a new waterfront development and modern road networks. Although, on the one hand, the reconstruction process of Beirut city centre was an effective solution for treating the physical scars of the civil war, on the other hand, it altered the social, spatial and economic infrastructure. In addition, the expense of reconstruction and the demand for land directed the then investment policies towards attracting foreign investors and multinational companies, with little opportunity for local people to re-establish their traditional businesses.

Based on the discussion in Parts One and Two, the author embarked on relating the theories to the context through empirical investigations. A qualitative survey was carried out to understand the psychological as well as the spatial effects that the civil war and the post-war reconstruction have had on the Beiruti society. The findings of the survey established the tendency in respondents' perceptions and opinions regarding the changes that had affected their environment.

The most significant finding was that the respondents did not perceive the city centre as simply a physical entity, but rather a complex series of relationships amongst the people themselves, and between them and their surrounding environment. The past experiences of the respondents were demonstrated in the valuable responses they made, which generated associations that carried **sentimental, symbolic, religious, cultural and emotional meanings**. Thus, physical features were not in themselves the aspects that attracted people to a place, but the hidden meanings that lie behind such features. Public space is caused by the **transaction** of people and their environment, which holistically

combine **physical, socio-cultural, perceptual** and **functional** attributes. These attributes derive from understanding the relationship between the man-environment and the qualities that encourage people to be present in and use space.

Additional feedback was gained through examining the way people perceived their city using the cognitive mapping technique. From the analysis of the respondents' mental maps, it became apparent that they perceived their city in a spatial-sequential manner, in the sense that most of the features registered were related to paths, nodes and districts, whereas landmarks existed as elements of orientation in the urban fabric.

An important natural boundary was the coastline and the promenade that provided the respondents with the spaces that promoted social activities. It was also found that the respondents shared elements that had formed the structure of the city as they remembered over different times in history. This collective memory reflected invaluable qualities in appreciating the shared identity, cultural continuity and heritage, which should be considered in any reconstruction strategy. The physical spatial structure of the city centre was explored using space syntax, which showed that major traditional public spaces in relation to the overall city centre plan, were not nearly as vital as they were prior to reconstruction. Space syntax also predicted a tension between the new waterfront development and the historic core of the city centre, as a result of utilising the existing space to restructure the entire legibility and social use of the city.

This chapter, however, extends the discussion further to explore the role of the key participants, in order to establish an understanding among the diversity of interests of the various actors in the reconstruction process.

8.3 Key Participants

For a reconstruction framework to be an effective tool, it should rely on contributions from a range of professionals and members of the community, from

qualified planners and designers to local business owners and members of the community.

The process of reconstruction should give an opportunity for citizens to define a future vision for their community. Public engagement can be of vital importance to providing a renewed sense of co-operation in the city. This allows the population, through the transaction in public space, to realise their vision for a new Beirut. This spirit of collaboration should continue through the various stages of the reconstruction process and should extend to its completion, encouraging the people to help in the rebuilding process of their own city by promoting their perception of ownership of the public realm. There are many benefits of involving the community in the different stages of the reconstruction process. The representation of various ethnic groups from Beiruti society is of extreme importance, in order to ensure that whatever decisions are made, they will actually reflect the aspirations of the whole of the society.

Public opinion has already influenced greatly the making of the reconstruction plan of the city centre of Beirut, mainly through voicing opposition to plans presented for public scrutiny. Intense criticism generated by members of the society, including professionals as well as ordinary people, led to the abandonment of the original 1992 master plan, which did not mirror the shared identity and the cultural continuity of the whole society. Without such involvement, the impact of the master plan on the traditional and social fabric would have led to dramatic and different results. The reconstruction process should coalesce and carry forward messages that have emerged from people's responses and in so doing, regenerate the cycle of local involvement and community commitment.

Public engagement in Beirut should be considered as a way of exchanging ideas and concepts that are important to various parties, which can ensure that the reconstruction plan is not only implemented but also maintained and valued by the whole community. It should be seen as a series of feedback processes

between the various actors at all levels, where the local community is involved from the inception of the reconstruction process, to the implementation of the reconstruction plan. Sufficient information should be made available, which would assist the Beirut community in giving more knowledge-based opinion, as well as making them aware of the consequences of their views. This can be achieved through the development of local non-governmental organisations (NGOs), international NGOs, as well as other contributors that can play a significant role in the reconstruction process.

Formal and informal channels of communication need to be established to ensure continuous feedback among the various actors. Inviting communities to participate in and contribute to the redevelopment of their city centre provides a broader spectrum that incorporates physical, economic and social considerations, including education, training and employment opportunities.

Involving the private sector in the post-war reconstruction process was seen as a vital matter in the case of Beirut city centre. As a joint-stock company, Solidere is a model that has been used by the government to respond to the issue of financing the reconstruction process. The concept of involving the private sector is an important factor, but it should not dominate the whole process. The private sector should work in conjunction with other stakeholders (Municipality of Beirut and the local community) so they can share the benefits as well as the responsibilities of the reconstruction process. The Municipality of Beirut should assume a greater role in the reconstruction process of the city centre, and it should not be seen as an observer only, but rather as protector of the public rights. It is necessary for the authorities responsible for managing the reconstruction process of Beirut to adopt an approach that encourages community participation in order to understand the need and satisfy people's needs in the process.

8.4 The Framework

In reviewing the findings of the thesis, it became evident that there is a need to formulate an integrated framework that addresses the ongoing change as well the natural development of the built environment. Redevelopment after war involves a multiplicity of various actions and interventions of many participants with diverse interests and motives including, national and international contributors, politicians, investors, developers, landowners, professionals and users. Thus, gaining an understanding of how such complex actions and relationships can be combined in the process of reconstruction is important in order to create an environment that responds to people's needs and aspirations.

This section, however, proposes a framework that aims to provide guidance as to how to carry out plans in order to foster short-term and long-term strategies. It involves identifying central issues, opportunities, and challenges, as well as analysing the physical and non-physical conditions of the affected areas. As a philosophical approach to reconstruction, transaction guides the proposed framework by explaining how the four attributes identified in the thesis are translated into design, how the design is implemented, and finally, how the whole process is controlled. This framework underpins the four main stages that post-war reconstruction needs to follow in order to move towards achieving a responsive environment that fulfils human needs (Figure 8-1).

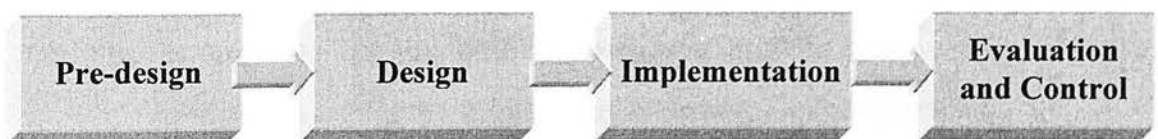


Figure 8-1: A diagram illustrating the various stages of the proposed framework (source: author, 2004).

Figure 8-1 illustrates the four principal stages that make up a reconstruction framework: pre-design, design, implementation and evaluation and control. Each of these stages encompasses a complex set of actions, which is perceived and conceptualised as a linear process, while from a transactional perspective they are more interrelated than the diagram appears to indicate.

8.4.1 Pre-Design

The pre-design stage gaining an understanding of the principles and values that derives from the context (i.e. the people and the environment). The local context can be appraised in terms of the four attributes namely, the physical, socio-cultural, functional and perceptual attributes. These attributes are intended to guide the remaining process and can be reflected in the following assessments:

- i Analysing the local context through interviewing and consulting the public, in order to identify the needs, values and aspirations of the community. This provides an assessment of the memories, associations and local traditions.
- ii Exploring and assessing the qualities of the environment, which include:
 - The origins of the blighted areas, including landownership, street patterns and surviving historic structures;
 - The historic quality and architectural character and the contribution they make to the overall character of the city centre;
 - The character, hierarchy and quality of spaces and the relationships between buildings and spaces;
 - The area's former or traditional uses and building types;
 - Features which have been lost or destroyed, or which may contribute to the character of the city centre and reflect shared identity;
 - The imageability of the built environment and its relationship to space, including significant paths, edges, nodes, districts and landmarks;
 - The spatial structure of the city centre to identify the relationship between the heights of buildings and the spaces they enclose;
 - Accessibility to, from and within the city centre would have to consider pedestrian movements and private and public transport. Space syntax analysis is one technique that can assist in analysing movement patterns.

- The archaeological potential of the area and the contribution it can offer to the national heritage and cultural continuity;
 - The legibility of the city centre through a variety of techniques, including mapping, carrying out surveys and interviews, and observing how people behave;
 - The adaptability of the environment through the survey of buildings and spaces by looking at how they were used, what level of destruction they endured and how the surviving environment can be adapted to reflect the past and at the same time to respond to future needs. Such an assessment includes evaluating the condition of existing buildings and their uses; and their suitability for restoration or redevelopment;
 - The diversity of the environment by examining the relationships between buildings and spaces and how they are used, including patterns of activities, land use patterns, ownership and occupancy;
- iii Identifying the constraints and opportunities of the area. This can be established through assessing the current planning policies and attaining links with the surrounding developments and with the urban fabric of the city.

8.4.2 Design

The principles and considerations discussed in the pre-design stage will be effective only if they are developed into a set of design concepts and policies that can be visualised and implemented. This can be achieved by translating the design concepts into a master plan, reflecting the intentions of the reconstruction policies. The main function of the plan is to signify the aims, objectives and targets of the key participants, and to provide the basis for more detailed guidance on how the damaged area will be reconstructed and how the proposed development will be implemented and phased. The following is a set of design

considerations for urban designers and policy makers to consider at this stage of the reconstruction process.

8.4.2.1 Physical Design Considerations

Designers, planners and decision makers must consider the physical attributes as guiding forces to control the form and the organisation of the built environment to create a coherent urban fabric. This can be achieved by addressing qualities related to character, spatial integration, territorial definition, symbolic meaning and the historical value of the city centre.

a) Respect Character:

- Maintain an appropriate relationship with the surrounding fabric and respect the existing architectural character in terms of building height, details, local materials, colour, street alignments, viewing corridors, vistas and skyline.
- Promote the continuity of street frontages and the enclosure of spaces by providing developments that clearly define private and public spaces.
- Respect the existing spaces, streets and viewing corridors as this ensures connectedness and continuity with the urban fabric. This can be achieved by integrating and retaining the existing building with the new development.
- Reinststate the character of major squares, such as Martyrs' Square, to enclose all the inhabitants' activities and merchants' work places by reinstating their former mixed uses.
- Propose buildings on an appropriate scale that can contribute to the character of the space. Building heights should relate to the width of the space.

b) Promote Spatial Integration:

- Respect the spatial structure of the historic fabric of the city centre by creating a clear hierarchy of routes and spaces that integrate with the existing ones.

- Use space syntax as a design tool to predict the impact of the design proposals on the spatial integration of the whole city centre.
- Employ space syntax to analyse, assess and identify any critical issues in terms of space integration and segregation. Consider reshaping the reconstruction plan to ensure and maintain the balance and harmony between the existing urban fabric and the proposed development.
- Use space syntax to produce a series of graphical and numerical representations to assist in the distribution of the land use patterns, the mixing of uses and the types of activities within the city centre, as well as, to predict pedestrian movement patterns.

c) Define Territories:

- Re-establish the concept of outward-facing layouts with intelligibility and integration given priority over exclusion and group territory. This should encourage the diversity between proxemic neighbourhoods and allow for connectedness and loyalties to place.
- Allow for small-group identity, by defining territories using symbolic markers, such as signs, a structure associated with an ethnic group, a change in the material of a floor, or lines painted on a street. These markers all help to differentiate one area from another and to identify them with the people who control them.

d) Endorse Symbolic Meanings:

- Promote symbolic meanings that most reflect the perception of the local people and their aspirations.
- Reinstate and preserve some of the prominent features, landmarks and focal points that respond to people's shared identity and collective memory.
- Use cognitive mapping to identify features with significant shared meanings and, which are collectively remembered by people.

e) Reinstate Historical Values:

- Provoke the city's memory by allowing people and visitors to learn more about the history of the city by creating a heritage trail. This can be accomplished by identifying sites of archaeological and historical importance on the master plan, linked with pedestrian networks and supported by public transport and a diversity of mixed uses and activities.
- Identify, restore and preserve buildings of historical importance to their original state.

8.4.2.2 Socio-Cultural Design Considerations

The reconstruction process needs to be seen to promote social and cultural diversity, support local businesses and ensure continuous functioning of the city centre by giving consideration to the following:

a) Encourage Social Interaction:

- Maintain an equal balance between different layers of society. This may occur by bringing back old family businesses, which existed for many years before the war.
- Reinstate the role of the old souks by allowing the design to accommodate a diversity of shops sizes that can accommodate former family businesses and can be afforded by local merchants.
- The shop design should allow informal interaction between the merchants and customers. This can be achieved by providing each shop with an external space where merchants can display their products, permitting customers to examine goods and conduct informal conversations with the merchants.
- Reinstate the social role of major public squares in the city centre by creating a comprehensive public space network supported by direct pedestrian access with a wide range of mixed-use facilities.

b) Reinstate Cultural Values:

- Design a public square to accommodate an open theatre in order to support communal activities such as public concerts, celebrations, or public events.
- Design the street to permit organised events, such as art exhibitions, street theatre, festivals, parades and other programmed activities and public events by providing the appropriate facilities.

c) Maintain Traditional Values:

- Identify the physical features in public spaces that attract people, such as fountains, which can act as a magnet that attracts people to gather and enjoy traditional food and drinks.
- Provide places for vendors' carts and stalls in front of shops, along public roads and pedestrian routes and encourage street markets.
- Provide affordable shops to attract local hand crafts.
- Reinstate the old tram as a traditional means of transportation and as an important feature of the city centre that contributes to the traditional character of Beirut society.

d) Encourage Religious Values:

- Locate significant religious structures at important spaces, intersections and nodes and use their minarets and domes to function as landmarks.
- Design public spaces to accommodate important civic and religious buildings, giving social, cultural, and religious values to the space.
- Design public spaces in a way that they can accommodate religious festivities as well as public celebrations.

8.4.2.3 Perceptual Design Considerations

Perception of the reconstructed areas should generate a wide diversity of symbolic meanings and qualities that instigate emotional responses and motivational messages. Hence, the designer should consider the following:

a) Promote Psychological Aspects:

- Restore significant structures that reflect shared identity and cultural continuity. Use cognitive mapping as a technique to examine the collective memory of people in order to create a shared mental map that is based on the concept of imageability. This would allow identification of the most important shared features, which could then be restored and maintained.

b) Encourage Sensory Aspects:

- The design should provide qualities that stimulate all the senses in the environment, such as the texture of pavements, pleasant odours, natural features and views towards the sea and mountains.

c) Endorse Emotional Values:

- Provide spaces for individual experiences and shared memories that carry meanings and can be remembered by the whole community.
- Preserve structures that permit people to develop genuine associations, attachments and connections between each other and their surrounding environment. In the case of the city centre of Beirut, the old souks functioned as a structure that held deeply-rooted memories in the lives of the people. The master plan should reinstate the role of the souks and should respect areas that are highly emotional and sensitive to people, such as burial grounds.

d) Promote Aesthetical Qualities:

- Use colours and the textures of elements and material to contribute to the aesthetics of the city centre, such as the decorative ironwork, the stained

glass, the colour of the brickwork, the colour and paint of mortar, the yellow sandstone of walls, the polished wood of doors, the texture of the pavements.

- Use landscape features to add to the aesthetics of the place and to contribute to the overall character of the area.
- Use light fixtures in locations of historical value to contribute to the aesthetical quality of the reconstructed area at night.

e) Maintain Safety and Security:

- Avoid designing ambiguous spaces such as those spaces that are neither public nor private, which tend to diminish social interaction. For relationships between individuals to develop, they must see each other often under informal conditions to become intimate.
- Pedestrian routes should be designed in such a way that they allow frequent encounters among people, by locating the main entrances and openings of buildings along pedestrian routes.
- Pedestrian movement should be separated from the traffic with trees, and in some cases, lanes for parked or slow-moving vehicles is quite important.
- Light fixtures should be provided in public squares, pedestrian routes, as well as, road intersections so it would promote a sense of safety and security.

8.4.2.4 Functional Design Considerations

The reconstruction plan should maintain the main former functions and uses of public places to contribute to the civic life of the city. Integrating the variety of activities that used to take place before the civil war in the city centre would reflect social, cultural and functional values, as well as allow diversity and encourage local identity.

a) Reinstate the Local Economy:

- Attract the original property owners to go back to the restored areas to live and establish their former businesses, by providing financial and technical support.
- Develop socio-economic generators such as the old souks as they used to play an important role in meeting the daily needs of various sectors of the society, particularly the low-income groups.
- Provide small affordable shops to attract a variety of small-scale manufacturing, services and retail activities.

b) Allow a Diversity of Mixed use:

- Provide a high level of access for mixed use by locating spaces close to places where pedestrians meet, shop, work, and simply enjoy passing time.
- Develop a diversity of specialised souks and markets and promote the quality of spaces by providing a variety of complementary land uses in major squares, such as Martyrs' Square.
- Introduce zoning changes in order to allow combining residential with commercial use. Local plans may be required to include general design policies that address transportation, utility and facility, housing, educational facilities, land use.

c) Encourage Leisure and Entertainment:

- Reinstate the role of the city centre as an entertainment centre by developing leisure and recreational facilities, theatres, art centres and museums.
- Design leisure and entertainment facilities and places, such as amusement centres, cafés, restaurants as well as sports facilities, that will attract local people as well as visitors and encourage easy access to such facilities by providing an efficient public transportation.

d) Encourage Easy Access:

- Promote accessibility and local permeability by making places that connect with each other and are easy to move through, putting people before traffic and integrating land uses and transport.
- Conduct observational surveys of pedestrian movements in the study area to increase understanding of pedestrian behavioural patterns and to identify any problems faced by them.
- Maintain a hierarchy of road networks that ensure the flow of traffic with little impact on pedestrian routes.
- Extend the uncompleted section of the city's ring road to the north of the city centre, as this would ensure the continuous flow of traffic.
- Promote public transport along major pedestrian routes and corridors in order to provide the opportunity for people to gain access from the historic core to the waterfront promenade.
- Provide urban squares with a variety of attractions, so that pedestrians in large numbers have a reason for remaining there. It is also conditional on good access for both private and public transport, with car parking within the surrounding urban fabric.

e) Preserve Natural Environments:

- Preserve and respect the natural environment and the topography of the site. Reintegrate irreplaceable natural and scenic areas, such as the pine forest, the waterfront promenade and the River of Beirut, to the overall spatial structure of the city.
- Create a hierarchy of open spaces and natural parks that interconnect with the waterfront promenade and existing spaces supported by a pattern of pedestrian networks and public transport.

f) Provide Comfort and Encourage Social Engagement:

- The design should invite informal and spontaneous engagements such as sitting, looking and watching, by providing good views towards natural features and by utilising physical elements, such as fountains, public arts and sculptures.
- The design should allow users to be able to move around and discover parts of the space, by providing a diversity of the physical design that offer a succession of vistas to enjoy and provoke spectacles and pleasurable experiences.

8.4.3 Implementation

The master plan is implemented by a means of programmes, budgets, and procedures. Implementation involves organisation of the resources and the motivation of the key stakeholders to achieve objectives. The way in which the plan is implemented can have a significant impact on whether it will be successful. In a large-scale project, such as the reconstruction of the city centre of Beirut, those who implement the strategy are likely to be different people from those who formulated it. For this reason, care must be taken to communicate the strategies encompassed in the master plan and the reasoning behind it. However, this research envisaged that the implementation of the current master plan should have considered the reconstruction activities based on the order indicated in the following phases:

Phase One:

- 1) The sensible clearance of war-damaged areas and the identification of sites of archaeological importance to ensure the preservation of heritage and continuity of culture.
- 2) The revitalisation of major public spaces, particularly Martyrs' Square, supported by the diversity of mixed uses, including the redevelopment of the souks' quarter.

- 3) The restoration of the existing residential neighbourhoods, infrastructure development and the land treatment of the dumping ground (to the north of the city centre).
- 4) The restoration of buildings of historical, cultural and religious importance.

Phase Two:

- 1) The completion of infrastructure development, including the extension of the ring road to the north of the city centre.
- 2) The completion of the land treatment and the implementation of the waterfront development to the north of the city centre, including the waterfront park, the promenade and the marina.

8.4.4 Evaluation and Control

At this stage of the reconstruction process, systematic evaluation after implementation is of the utmost importance to ensure that the reconstruction process sustains its natural evolution; while responding to the changing needs of the social environment mirrored by the natural transformation of the physical environment.

The process of reconstruction greatly influences the quality of the environment and public space. Thus, design proposals and their implementation should be controlled in order to ensure that all works comply with the vision of the local authorities, in terms of agreed objectives and of preventing development likely to conflict with those objectives. Once implemented, the results of the reconstruction policies reflected in the master plan need to be measured and evaluated as follows, with changes made as required to keep the plan on track:

- Control the private use of public space, such as cafés dominate walkway and pavements should be restricted, thus transferring public space to semi-public.
- Control the flow of traffic with little impact on pedestrian routes.

- Control proportions, dimensions, building heights according to zoning regulations and preserve sight-lines towards the sea and mountains.
- Protect existing street alignments and frontages and protect wherever possible existing densities and building heights. Building heights are to be restricted to carefully selected zones outside the viewing corridors.
- Control demolition and slum clearance, and allow only if such processes was supported by investigation reports stating that the selected buildings are structurally unsound.

The Municipality of Beirut should guide and control the quality of what is allowed to be restored or developed through introducing design guidelines. These guidelines would provide the tools to ensure that quality is achieved in a manner consistent with the vision of the overall master plan for the reconstructed area. This will assist developers to draw up proposals that meet public policy requirements. Land use regulations allow the municipality to guide future growth, protect natural resources, preserve its special character, and ensure that new development does not overburden municipal services and facilities.

The most common types of land use regulations are zoning, which is designed to implement the future land use element of the municipal plan and support other goals and policies of the plan related to natural resource protection, public facilities, transportation, and housing. Zoning regulations are the most common local land use regulation and among the most important tools available for controlling growth, protecting natural resources, and maintaining community character. Zoning involves the creation of different land use – or zoning – districts. These districts should be consistent with the settlement patterns envisioned in state and local planning goals, and the land use element of the municipal plan. The standards outlined in the zoning regulations specify the mix of land uses allowed in each district, as well as development densities and dimensional standards. Zoning bylaws can refer to a variety of things such as the minimum or maximum size of housing lots, minimum or maximum setback from

roads, building heights, and permissible uses (residential, agricultural, commercial, etc.).

Development will be permitted provided it:

- Promotes the overall character of the surrounding areas and the overall urban structure of the city, in terms of scale, density, mass, height, landscape, layout and access.
- Reinforces local distinctiveness, allow variety and ensures the most effective use of land without compromising quality, and most importantly, sustains the natural evolution of the environment.
- Maintains a balance between the old and new public spaces. This can be achieved by spatial re-arrangements of pedestrian movements, the re-designing of public spaces and the re-allocation of public facilities and amenities, in a sense that allow harmony to develop between the old and the new space.
- Respects the archaeological value and the historical associations of the site by carrying out a site investigation and an historic building assessment of any standing structures.

8.5 Major Characteristics

This thesis identifies several characteristics necessary for the ongoing reconstruction as well as the natural evolution of Beirut city centre. These characteristics are based on the findings that emerged from the literature review, people's perceptions of their environment, and the analysis of the spatial structure of the city centre, which include:

1. **Distinctive Character:** This can be achieved by responding to and reinforcing locally distinctive patterns of existing character in order to evoke a sense of identity and belonging. This can be achieved by preserving public spaces, natural features, skylines, historic buildings,

archaeological sites and monuments that evoke shared identities, cultural continuity and collective memory.

2. **Safety and Security:** Streets and public spaces should be made safer places for all people particularly women, children and the elderly who are more vulnerable to crime. The presence of people outdoors makes spaces safer and more active, which can be achieved by making hidden spaces more visible and accessible from surrounding buildings. Provision of good lighting improves safety and encourages people to extend their visits during night times. Streets are made safer and more pleasant through controlling the speed and volume of traffic and through providing pedestrian zones supported by mixed uses and civic activities.
3. **Legibility:** Promote the continuity of street frontages and the enclosure of space by developments that clearly define private and public areas. Public space should evoke a sense of place by maintaining the quality of its enclosure, accommodating landmarks to improve the views for people to orient themselves, and providing nodes to facilitate pedestrian and traffic movements.
4. **Adaptability:** Developments should be able to respond to changing circumstances, including physical, social, technological and economic conditions. In addition, it should allow for possible future uses to be accommodated. Vacant and underdeveloped sites can be made available to public use to accommodate temporary uses and at the same time allow for future provision. This can be done by allowing programmed events and public ceremonies to occur there. It should provide spaces that allow for open-air activities, such as meetings, shows, exhibitions, shopping and recreation.
5. **Diversity:** A mixture of compatible developments and uses can be combined to create viable places that respond to local needs. The provision of a wide range of land uses from living, to working, to shopping, as well

as public, spiritual and recreational activities can contribute to the vitality of the space. Such provision also responds to the cultural values and diversity that promote local identity. The mix of uses can be concentrated in locations that are easily accessible to pedestrians, and in places where people meet, shop, work or enjoy spending time. Public spaces can be made lively by reviving public activities, and providing high levels of access to smaller businesses and affordable units, street vending and public events. Diverse activities can be encouraged so that no one group dominates a space to the exclusion of others. The provision of specialised souks responds would respond to the daily needs of all social layers in the society. It would give an opportunity for traditional businesses to return to the city centre, such as craft shops, traditional cafés and restaurants.

6. **Permeability:** Public spaces can be made permeable by making spaces more accessible and visually intelligible to pedestrian movements. Public spaces can be made more permeable to people by considering pedestrian movement before traffic, at the same time allowing access to a mixture of uses and transport. This can be realised by closely integrating public spaces with the movement system (particularly public transport), and by encompassing larger spaces with a variety of facilities, amenities, functions and the activities that require the greatest degree of public exposure. The provision of adequate parking and good access for both private and public transport are important factors in achieving permeability.
7. **Attractiveness:** Public spaces should include qualities related to adequate sunlight, clean air, trees, vegetation, gardens, open space, pleasantly scaled and designed buildings; without offensive noise; with cleanliness and physical safety. Many of these characteristics can be designed into the physical fabric of the city. Aesthetic values, as an important quality of public space, should be promoted by developing environments that convey

positive values to people. This can be achieved by providing good quality building restorations, proper maintenance and adequate cleanliness, as well as the use of lighting at night to create pleasurable settings.

8.6 Further Research

The main area the author recommends for further research is examining how we encourage public engagement in the process of post-war reconstruction? How can the private sector engage with and work effectively and in harmony with the public sector? How do we realise issues related to enclosure, amenity and design to augment the collective values and memory of people? A further area of research is to relate the findings of this thesis to other cities of the world that have experienced conditions similar to Beirut, in order to find a pattern for the role of public space in post-war reconstruction. Such a pattern might assist in determining a set of broader strategies that could be utilised as a basis for any reconstruction process, taking into consideration the local context.

Another area of research is to establish correlations between the findings of the research techniques used in this thesis. For instance, relating the findings of the cognitive maps to the results of space syntax analysis, and relating such results with the findings of the questionnaire survey. The researcher acknowledges that the scope of the supportive survey of the pedestrian movement presented in Chapter Five was limited. Further research is recommended to establish a wider understanding of pedestrian patterns at other places, at different times and during different seasons.

8.7 Final Message

The research findings occupy two worlds: that of the psychological city as it exists within people's memories, their values and understandings of spaces and spatial qualities; and that of the physical city as a sequence of built features and formed spaces, which form the channels and nodes within which people conduct their daily life. The transactional perspective holds that, if physical space is the

manifestation of people's psychological values, then the city and the society are mutually generative and supportive and form a holistic unity. If on the other hand, there is a dislocation between these two worlds, then the city is no longer wedded to the aspirations and values of its own people.

The researcher believes that, in a programme of reconstruction following a traumatic and destructive civil war, it is of critical importance that the rebuilding, as an intrinsic part of the reconstruction process, should keep in mind its role in supporting the psychological city. Reconstruction is perceived as the establishment of an entirely new place upon earth and within people's minds. In order to achieve a successful post-war reconstruction, the process of change has to be engaged with in a comprehensive manner. Reconstruction is only holistic if all dimensions are considered simultaneously. Reconstruction strategies should not be instantaneous responses to certain forces and circumstances, but rather, a broader perspective is required, one that responds to social and environmental changes.

This thesis has deduced that a great deal of pre-war Beirut has survived, intact, within people's minds, if not on the ground. It is this intangible, socio-cultural and perceived city that demands reconstruction to the same extent, if not more so, than the physical city. Through this, the city is transformed into a locus for the exchange and flow of thoughts, ideas, feelings, affections and affiliations among individuals and communities. Such a city can then fulfil the vital needs of the Beirut society to recover its pre-war characteristics, as well as to accommodate the ongoing post-war reconstruction process.

Finally, the researcher hopes that the structure, the methodology and the findings of this thesis have contributed to a better understanding of the role of public space in post-war reconstruction.

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APPENDIXES

APPENDIX A: English Version of the Questionnaire

Dear Interviewee,

Enclosed with this letter, a copy of a questionnaire that is a major part of a scientific research project to obtain a PhD degree. Its main objective is to identify public preferences and perceptions of the design, quality and function of public spaces in the city centre of Beirut and to highlight the real and actual aspects and features that make public spaces in the reconstructed areas livelier and socially interactive.

I would like to take this opportunity to present my sincere appreciation and gratitude for your help in responding promptly to the questionnaire.

Yours sincerely,

Ziad A Alameddine

Postgraduate Researcher
Heriot-Watt University
Edinburgh College of Art
School of Architecture
Edinburgh – UK

July 2001

Note: All the information provided in this questionnaire will be used only for the purpose of the scientific research.

QUESTIONNAIRE

General Instructions:

Please, read the questionnaire in full before you start to answer the questions.
Please make sure you answer all the questions, otherwise, it will defeat the purpose of this study.

Use an extra sheet if you feel that you need to expand your answers or you wish to give any further comments.

SECTION A: Demographic Characteristics

Name: *(optional)* -----

Age: -----

Gender: Male Female

Work Status: -----

Education Level: -----

Address or Area: -----

Length of Stay: -----

SECTION B: General Information about the City of Beirut

(Q) 1. Mention three (3) important places that contributed to the urban character of the city. Give two (2) reasons for each choice.

1) ----- a) -----
b) -----

2) ----- a) -----
b) -----

3) ----- a) -----
b) -----

(Q) 2. Mention three (3) important landmarks in the city. Give two (2) reasons for each choice.

1) ----- a) -----
b) -----

2) ----- a) -----
b) -----

3) ----- a) -----
b) -----

SECTION C: Places of Interests in the City (past and present)

(Q) 3. Mention three (3) important places in the city you used to go for your shopping before the civil conflict. Give two (2) reasons why each place was important to you.

- | | |
|----------|----------|
| 1) ----- | a) ----- |
| | b)----- |
| 2) ----- | a) ----- |
| | b)----- |
| 3) ----- | a) ----- |
| | b)----- |

(Q) 4. Mention three (3) important places in the city you used to go for your shopping during the civil conflict. Give two (2) reasons why each place was important to you.

- | | |
|----------|----------|
| 1) ----- | a) ----- |
| | b)----- |
| 2) ----- | a) ----- |
| | b)----- |
| 3) ----- | a) ----- |
| | b)----- |

(Q) 5. Mention three (3) important places in the city you have been going recently for your shopping. Give two (2) reasons why each place is important to you.

- | | |
|----------|----------|
| 1) ----- | a) ----- |
| | b)----- |
| 2) ----- | a) ----- |
| | b)----- |
| 3) ----- | a) ----- |
| | b)----- |

(Q) 6. Mention three (3) important places in the city you prefer to take your family, nowadays, for entertainment or to meet some friends. Give two (2) reasons for each choice.

- | | |
|----------|----------|
| 1) ----- | a) ----- |
| | b)----- |
| 2) ----- | a) ----- |
| | b)----- |
| 3) ----- | a) ----- |
| | b)----- |

SECTION D: The Old City Centre and its Traditional Souks (The period before 1975)

(Q) 7. When you are asked about the old souks of Beirut, what are the first three (3) souks that come to your mind? Give two (2) reasons why you remember each one.

- | | |
|----------|----------|
| 1) ----- | a) ----- |
| | b)----- |
| 2) ----- | a) ----- |
| | b)----- |
| 3) ----- | a) ----- |
| | b)----- |

(Q) 8. Mention three (3) important public squares in the city centre. Give two reasons why each square is important to you.

- | | |
|----------|----------|
| 1) ----- | a) ----- |
| | b)----- |
| 2) ----- | a) ----- |
| | b)----- |
| 3) ----- | a) ----- |
| | b)----- |

(Q) 9. Mention three (3) important features or things you liked about public spaces in the old souks. Give two (2) reasons for each choice.

- | | |
|----------|----------|
| 1) ----- | a) ----- |
| | b)----- |
| 2) ----- | a) ----- |
| | b)----- |
| 3) ----- | a) ----- |
| | b)----- |

(Q) 10. Mention three (3) features or things you disliked about public spaces in the old souks. Give two (2) reasons for each choice.

- | | |
|----------|----------|
| 1) ----- | a) ----- |
| | b)----- |
| 2) ----- | a) ----- |
| | b)----- |
| 3) ----- | a) ----- |
| | b)----- |

(Q) 11. Mention three (3) important things in the past that encouraged people to use public spaces in the city centre. Give two (2) reasons for each choice.

- | | |
|----------|----------|
| 1) ----- | a) ----- |
| | b) ----- |
| 2) ----- | a) ----- |
| | b) ----- |
| 3) ----- | a) ----- |
| | b) ----- |

(Q) 12. Mention three (3) important traditional, cultural, and social customs or activities people used to perform in the city centre, and which you would like to see maintained. Give two (2) reasons for each choice.

- | | |
|----------|----------|
| 1) ----- | a) ----- |
| | b) ----- |
| 2) ----- | a) ----- |
| | b) ----- |
| 3) ----- | a) ----- |
| | b) ----- |

SECTION E: The Redeveloped City Centre

(Q) 13. Mention three (3) important changes you like that occurred in the redeveloped areas of the city centre. Give two (2) reasons for each choice.

- | | |
|----------|----------|
| 1) ----- | a) ----- |
| | b) ----- |
| 2) ----- | a) ----- |
| | b) ----- |
| 3) ----- | a) ----- |
| | b) ----- |

(Q) 14. Mention three (3) changes you dislike that occurred in the redeveloped areas of the city centre. Give two (2) reasons for each choice.

- | | |
|----------|----------|
| 1) ----- | a) ----- |
| | b) ----- |
| 2) ----- | a) ----- |
| | b) ----- |
| 3) ----- | a) ----- |
| | b) ----- |

(Q) 15. Mention three (3) important qualities, features or characteristics that distinguish the redeveloped city centre and its public spaces, which were not available in the old city centre. Give two (2) reasons for each choice.

- | | |
|----------|----------|
| 1) ----- | a) ----- |
| | b)----- |
| 2) ----- | a) ----- |
| | b)----- |
| 3) ----- | a) ----- |
| | b)----- |

(Q) 16. Mention three (3) important qualities, features or characteristics that distinguished the old souks and its public spaces, which have not been considered yet in the redeveloped city centre. Give two (2) reasons for each choice.

- | | |
|----------|----------|
| 1) ----- | a) ----- |
| | b)----- |
| 2) ----- | a) ----- |
| | b)----- |
| 3) ----- | a) ----- |
| | b)----- |

(Q) 17. Mention three (3) important social, cultural or traditional events, which occurred recently in the city centre and where it took place. Give two (2) reasons for each choice.

- | | |
|----------|----------|
| 1) ----- | a) ----- |
| | b)----- |
| 2) ----- | a) ----- |
| | b)----- |
| 3) ----- | a) ----- |
| | b)----- |

SECTION F: Information about the Qualities and Needs of Users in Public Space

(Q) 18. In your opinion, what are the three (3) important qualities or needs you require of a public space, which ultimately encourage you to visit the space again? Give two (2) reasons for each choice.

- | | |
|----------|----------|
| 1) ----- | a) ----- |
| | b)----- |
| 2) ----- | a) ----- |
| | b)----- |

3) ----- a) -----
 b)-----

(Q) 19. In your opinion, what are the three (3) important qualities that souk al-Bargouth (a flea market) provides, which were not available in the old souks? Give two (2) reasons for each choice.

1) ----- a) -----
 b)-----

2) ----- a) -----
 b)-----

3) ----- a) -----
 b)-----

(Q) 20. Would you prefer to see such occasional street markets as permanent souks?

Yes

No

Please give two reasons: a) -----
 b)-----

(Q) 21. Are you in favour of transforming some streets in the city centre to pedestrianised zones?

Yes

No

Please give two reasons: a) -----
 b)-----

(Q) 22. If your answer is (YES) to Q (21), please mention three (3) important streets or areas you suggest should be transformed to pedestrianised zones. Give (2) reasons for each street or area and why it is important it becomes a pedestrianised zone.

1) ----- a) -----
 b)-----

2) ----- a) -----
 b)-----

3) ----- a) -----
 b)-----

(Q) 23. Mention the (3) three most important senses you use in appreciating the quality of public spaces. Rank them according to their importance and then give two reasons for each choice.

1) ----- 1-----
 2-----

2) -----

1-----

2-----

3) -----

1-----

2-----

SECTION G: Cognitive Mapping

(Q) 24. Imagine that a visitor or a tourist came to Beirut and asked you to give a rapid description of the city by drawing a little map indicating the most important landmarks, buildings of historical or cultural importance, public places, parks, and picturesque areas, so that he/she can visit them.

Please draw the map of the city on the other side of this sheet. You can use symbols to indicate the main features of the city. It does not put any emphasis either on your personal drawing skills, or on the accuracy and scale of the drawing, but it is rather to identify areas, places, buildings and features of the city are most important to you, which may not have appeared in the answers to the questionnaire.

(Q) 25. Finally, would you like to add any comments? *(Please use a separate sheet, if you feel you need to)*

Thank you

APPENDIX B: Arabic Version of the Questionnaire

أخي الفاضل ،،،

تحية طيبة وبعد،

أرفق مع هذه الرسالة نسخة من الإستبيان الذي هو جزء من دراسة علمية لنيل شهادة الدكتوراة التي تبحث عن رغبات وآراء العامة للنواحي التصميمية والوظيفية والنوعية للأماكن العامة، (أي الساحات، والحدائق، والشوارع ... الخ).

كما يهدف الإستبيان إلى تحديد الخصائص الحقيقية التي تجعل من الأماكن العامة للمناطق التي إعيد تطويرها في الوسط التجاري لمدينة بيروت إلى مناطق أكثر تفاعلاً وحيوية.

لذلك أرجو التأكد من الإجابة على كافة الأسئلة حتى يتحقق الهدف المرجو من هذه الدراسة. كما أود أن أنوه على أن جميع المعلومات التي سيدلى بها في هذا الإستبيان سيتم إستخدامها للبحث العلمي فقط.

شكراً على حسن تعاونكم ،،،

زياد أحمد علم الدين

باحث دراسات عليا
جامعة هريوت وات
كلية العمارة
أدنبرة – بريطانيا

تموز – 2001م

ملاحظة: أن جميع المعلومات التي سيدلى بها سوف تستخدم للهدف العلمي فقط.

استبيان عن رغبات وآراء الناس في النواحي التصميمية والنوعية والوظيفية للأماكن العامة

خطوات توضيحية للإجابة على الأسئلة:

- يرجى قراءة الاستبيان كاملاً قبل الشروع بالإجابة على الأسئلة.
- يرجى الإجابة على كافة الأسئلة مع ذكر الأسباب.

القسم (أ): معلومات شخصية

الاسم: (اختياري) -----
 العمر: -----
 الجنس: ذكر أنثى
 الوضع المهني: -----
 المستوى العلمي: -----
 العنوان / المنطقة: -----
 مدة الإقامة في مدينة بيروت: -----

القسم (ب): معلومات عامة عن مدينة بيروت

1. اذكر ثلاثة من أهم الأماكن التي ساهمت فاعطاء مدينة بيروت شخصيتها العمرانية، مبيناً سببين لكل مكان موضعاً أهميته.

المكان الأول: -----
 السبب الأول: -----
 السبب الثاني: -----
 المكان الثاني: -----
 السبب الأول: -----
 السبب الثاني: -----
 المكان الثالث: -----
 السبب الأول: -----
 السبب الثاني: -----

2. اذكر ثلاثة من أهم المعالم البارزة المهمة في المدينة، مبيناً سببين لكل مكان موضعاً أهميته.

المعلم الأول: -----

السبب الأول: -----

السبب الثاني: -----

المعلم الثاني: -----

السبب الأول: -----

السبب الثاني: -----

المعلم الثالث: -----

السبب الأول: -----

السبب الثاني: -----

القسم (ج): معلومات عن أماكن التسوق والتمتع المهمة في المدينة (الماضي والحاضر)

3. أذكر ثلاثة من أهم الأماكن التي كنت تذهب بغرض التسوق قبل الحرب الأهلية، مبيناً سببين لكل مكان وموضحاً أهميته.

المكان الأول: -----

السبب الأول: -----

السبب الثاني: -----

المكان الثاني: -----

السبب الأول: -----

السبب الثاني: -----

المكان الثالث: -----

السبب الأول: -----

السبب الثاني: -----

4. أذكر ثلاثة من أهم الأماكن التي كنت تذهب بغرض التسوق خلال الحرب الأهلية، مبيناً سببين لكل مكان وموضحاً أهميته.

المكان الأول: -----

السبب الأول: -----

السبب الثاني: -----

المكان الثاني: -----

السبب الأول: -----

السبب الثاني: -----

المكان الثالث: -----

السبب الأول: -----

السبب الثاني: -----

5. أذكر ثلاثة من أهم الأماكن تذهب إليها في هذه الأيام بغرض التسوق، مبيناً سببين لكل مكان وموضحاً أهميته.

المكان الأول: -----

السبب الأول: -----

السبب الثاني: -----

المكان الثاني: -----

السبب الأول: -----

السبب الثاني: -----

المكان الثالث: -----

السبب الأول: -----

السبب الثاني: -----

6. أذكر ثلاثة من أهم الأماكن في مدينة بيروت التي تفضل أخذ عائلتك إليها أو إلتقاء بعض الأصدقاء فيها، مبيناً سببين لكل مكان وموضحاً أهميته.

المكان الأول: -----

السبب الأول: -----

السبب الثاني: -----

المكان الثاني: -----

السبب الأول: -----

السبب الثاني: -----

المكان الثالث: -----

السبب الأول: -----

السبب الثاني: -----

القسم (د): معلومات عن الوسط التجاري لمدينة بيروت وأسواقها القديمة (الفترة قبل

1975)

7. عندما تسأل عن أسواق مدينة بيروت القديمة، ما هي الأسواق الثلاثة التي تجول في خاطرك أولاً؟ أذكر سببين لكل سوق موضعاً الأهمية.

السوق الأول: -----

السبب الأول: -----

السبب الثاني: -----

السوق الثاني: -----

السبب الأول: -----

السبب الثاني: -----

السوق الثالث: -----

السبب الأول: -----

السبب الثاني: -----

8. أذكر ثلاثة من أهم الساحات الموجودة في الوسط التجاري للمدينة مع ذكر اثنين من الإرتباطات المعنوية أو الملامح التاريخية أو الحضارية أو الثقافية أو النوعية التي تتميز بها هذه الساحات:

الإرتباط/الملح/النوعية الأولى: -----

السبب الأول: -----

السبب الثاني: -----

الإرتباط/الملح/النوعية الثانية: -----

السبب الأول: -----

السبب الثاني: -----

الإرتباط/الملح/النوعية الثالثة: -----

السبب الأول: -----

السبب الثاني: -----

9. اذكر ثلاثة من الملامح أو الخصائص المحببة عندك للأماكن العامة التي كانت موجودة في الأسواق القديمة، مبيناً سببين لكل ملح أو خاصية موضعاً الأهمية.

- الملمح/الخاصية الأولى: -----
 ----- السبب الأول: -----
 ----- السبب الثاني: -----
 ----- الملمح/الخاصية الثانية: -----
 ----- السبب الأول: -----
 ----- السبب الثاني: -----
 ----- الملمح/الخاصية الثالثة: -----
 ----- السبب الأول: -----
 ----- السبب الثاني: -----

10. اذكر ثلاثة من الملامح أو الخصائص الغير محببة عندك للأماكن العامة التي كانت موجودة في الأسواق القديمة، مبيناً سببين لكل ملمح أو خاصية.

- الملمح/الخاصية الأولى: -----
 ----- السبب الأول: -----
 ----- السبب الثاني: -----
 ----- الملمح/الخاصية الثانية: -----
 ----- السبب الأول: -----
 ----- السبب الثاني: -----
 ----- الملمح/الخاصية الثالثة: -----
 ----- السبب الأول: -----
 ----- السبب الثاني: -----

11. اذكر ثلاثة أشياء كانت موجودة قديماً وأدت إلى تشجيع الناس لإستخدام الأماكن العامة في الوسط التجاري، مبيناً سببين لكل شيء موضعاً الأهمية.

- الشيء الأول: -----
 ----- السبب الأول: -----
 ----- السبب الثاني: -----
 ----- الشيء الثاني: -----
 ----- السبب الأول: -----
 ----- السبب الثاني: -----
 ----- الشيء الثالث: -----

----- السبب الأول: -----
----- السبب الثاني: -----

12. اذكر ثلاثة من أهم العادات الإجتماعية أو الحضارية أو التقليدية التي كان يمارسها الناس قديماً في الوسط التجاري والتي ترغب في المحافظة عليها، مبيناً سببين لكل عادة موضحاً الأهمية.

----- العادة الأولى: -----
----- السبب الأول: -----
----- السبب الثاني: -----
----- العادة الثانية: -----
----- السبب الأول: -----
----- السبب الثاني: -----
----- العادة الثالثة: -----
----- السبب الأول: -----
----- السبب الثاني: -----

القسم (هـ): معلومات عن إعادة إعمار الوسط التجاري لمدينة بيروت

13. اذكر ثلاثة من أهم التغييرات المحببة إليك حصلت في المناطق التي أعيد إعمارها في الوسط التجاري، مبيناً سببين لكل تغيير موضحاً الأهمية.

----- التغيير الأول: -----
----- السبب الأول: -----
----- السبب الثاني: -----
----- التغيير الثاني: -----
----- السبب الأول: -----
----- السبب الثاني: -----
----- التغيير الثالث: -----
----- السبب الأول: -----
----- السبب الثاني: -----

14. اذكر ثلاثة من أهم التغييرات الغير محببة إليك حصلت في المناطق التي أعيد إعمارها في الوسط التجاري، مبيناً سببين لكل تغيير.

التغيير الأول: -----
 السبب الأول: -----
 السبب الثاني: -----
 التغيير الثاني: -----
 السبب الأول: -----
 السبب الثاني: -----
 التغيير الثالث: -----
 السبب الأول: -----
 السبب الثاني: -----

15. أذكر ثلاثة من أهم النوعيات أو الملامح أو الخصائص التي تتميز بها المناطق التي أعيد إعمارها في الوسط التجاري وفرغاتها العامة ولم تكن متوفرة من قبل، مبيناً سببين لكل نوعية وموضحاً الأهمية.

النوعية/الملح/الخاصية الأولى: -----
 السبب الأول: -----
 السبب الثاني: -----
 النوعية/الملح/الخاصية الثانية: -----
 السبب الأول: -----
 السبب الثاني: -----
 النوعية/الملح/الخاصية الثالثة: -----
 السبب الأول: -----
 السبب الثاني: -----

16. أذكر ثلاثة من أهم النوعيات أو الملامح أو الخصائص التي تميزت بها الأسواق القديمة وفرغاتها العامة ولم تتوفر بعد في المناطق التي أعيد إعمارها في وسط بيروت التجاري، مبيناً سببين لكل نوعية وموضحاً الأهمية.

النوعية/الملح/الخاصية الأولى: -----
 السبب الأول: -----

----- السبب الثاني:

----- النوعية/الملح/الخاصية الثانية:

----- السبب الأول:

----- السبب الثاني:

----- النوعية/الملح/الخاصية الثالثة:

----- السبب الأول:

----- السبب الثاني:

17. أذكر ثلاثة من أهم الأحداث الإجتماعية أو الحضارية أو التقليدية التي حصلت مؤخراً في الوسط التجاري، مبيناً سببين لكل منهما وموضحاً الأهمية.

----- الحدث الأول:

----- السبب الأول:

----- السبب الثاني:

----- الحدث الثاني:

----- السبب الأول:

----- السبب الثاني:

----- الحدث الثالث:

----- السبب الأول:

----- السبب الثاني:

القسم (و): معلومات عن إحتياجات الناس وعن النوعيات للفراغات العامة

18. برأيك الشخصي ما هي أهم ثلاث نوعيات أو إحتياجات يجب أن تتوفر في الأماكن العامة وبالتالي تشجعك على العودة مرة ثانية، مبيناً سببين لكل نوعية أو إحتياج وموضحاً الأهمية.

----- النوعية/الإحتياج الأول:

----- السبب الأول:

----- السبب الثاني:

----- النوعية/الإحتياج الثاني:

----- السبب الأول:

----- السبب الثاني:

----- النوعية/الإحتياج الثالث:

السبب الأول: -----

السبب الثاني: -----

19. برأيك الشخصي ما هي أهم ثلاث نوعيات يقدمها سوق البرغوت والتي لم تكن موجودة في الأسواق القديمة، مبيناً سببين لكل نوعية وموضحاً الأهمية.

النوعية الأولى: -----

السبب الأول: -----

السبب الثاني: -----

النوعية الثانية: -----

السبب الأول: -----

السبب الثاني: -----

النوعية الثالثة: -----

السبب الأول: -----

السبب الثاني: -----

20. هل ترغب في أن ترى مثل هذه الأسواق وبشكل دائم؟

كلا

نعم

السبب الأول: -----

السبب الثاني: -----

21. هل تفضل تحويل بعض الشوارع في الوسط التجاري إلى مناطق مشاة؟

كلا

نعم

السبب الأول: -----

السبب الثاني: -----

22. إذا كانت الإجابة على سؤال رقم 17 (نعم)، اذكر ثلاثة من أهم الشوارع أو المناطق التي تقترح تحويلها إلى مناطق مشاة في الوسط التجاري، مبيناً سببين لكل شارع وموضحاً الأهمية.

الشارع/المنطقة الأولى: -----

السبب الأول: -----

- السبب الثاني:
- الشارع/المنطقة الثانية:
- السبب الأول:
- السبب الثاني:
- الشارع/المنطقة الثالثة:
- السبب الأول:
- السبب الثاني:

23. إذكر ثلاثة من الحواس التي تساعدك في الإستمتاع بالنوعيات والخصائص المتوفرة في الفراغات العامة. رتب هذه الحواس الثلاثة حسب الأهمية ثم أذكر سببين لكل منها موضحاً الأهمية.

- الحاسة الأولى:
- السبب الأول:
- السبب الثاني:
- الحاسة الثانية:
- السبب الأول:
- السبب الثاني:
- الحاسة الثالثة:
- السبب الأول:
- السبب الثاني:

القسم (س): الإدراك الحسي للمدينة وفراغاتها

24. تخيل بأن زائراً أو سائحاً قدم إلى مدينة بيروت وطلب منك أن تقوم برسم مخطط مبسط للمدينة مبيناً أهم المعالم والمباني والأماكن العامة والمناطق الجميلة كي يقوم بزيارتها ومشاهدتها. لذلك قم برسم هذا المخطط على ظهر الصفحة، ويمكن استخدام الرموز لإيضاح أهم المعالم والأماكن. إن الهدف من هذا المخطط هو ليس الدقة في الرسم والمقياس، بل الهدف هو توضيح بعض المناطق المهمة التي لم يشار إليها خلال الإجابة على الأسئلة المطروحة في هذا الإستبيان.

25. أخيراً،الرجاء تقديم أية مقترحات أو تصورات أو تعليقات تساعد في تحسين وتنشيط الفراغات العامة في المدينة.

شاكراً ومقدراً حسن تعاونكم.

APPENDIX C: Piling of Responses and Reasons

(Q) 1. Mention three (3) important places that contributed to the urban character of the city. Give two (2) reasons for each choice.

The table shows the piling of all responses to question 1 and reasons for each choice, according to gender.

Responses to Question 1	Freq.	Reasons	Gender		Total
			Male	Female	
Old Souks	17	Commercial importance	8	2	10
		Traditional	6	2	8
		Architectural character	2	4	6
		Attracting people	2	2	4
		Historical value	4		4
		Location		2	2
		Total		22	12
Ras Beirut	16	Entertainment	6	2	8
		Commercial importance	3	3	6
		Architectural character	3	2	5
		Cultural value	3	1	4
		Touristy	4		4
		Location	2	1	3
		Attracting people	1	1	2
		Total		22	10
Martyrs' Square	14	Entertainment	5	1	6
		Historical value	4	2	6
		Commercial importance	2	2	4
		Touristy	2	2	4
		Architectural character	1	2	3
		Location	2	1	3
		Landmark	2		2
		Total		18	10
Riad el-Solh Square	12	Commercial importance	5	1	6
		Historical value	3	1	4
		Architectural character	1	3	4
		Traditional	2	1	3
		Entertainment	2	1	3
		Landmark	1	1	2
		Cultural value		2	2
		Total		14	10

Continued from previous table.

Al-Nijmeh Square	9	Architectural character	5	4	9
		Commercial importance	4	1	5
		Traditional	1	3	4
		Total	10	8	18
City centre	8	Architectural character	2	2	4
		Commercial importance	1	3	4
		Entertainment	2	2	4
		Historical value	2		2
		Location	1	1	2
		Total	8	8	16
National Museum	8	Historical value	7	3	10
		Architectural character	1	1	2
		Attracting people	1	1	2
		Cultural value	1	1	2
		Total	10	6	16
Hotel District	7	Entertainment	4	3	7
		Touristy	4	3	7
		Total	8	6	14
Raouché	6	Landmark	3	2	5
		Touristy	3	1	4
		Natural views	2	1	3
		Total	8	4	12
Promenade	5	Natural views	2	3	5
		Entertainment	2	1	3
		Attracting people		2	2
		Total	4	6	10
Pine Forest	5	Attracting people	3	1	4
		Natural views	2	2	4
		Entertainment	1	1	2
		Total	6	4	10
Seaport	4	Location	1	4	5
		Commercial importance	1	2	3
		Total	2	6	8
Total	111		132	90	222

(Q) 2. Mention three (3) important landmarks in the city. Give two (2) reasons for each choice.

The table shows the piling of all responses to question 2 and reasons for each choice, according to gender.

Responses to Question 2	Freq.	Reasons	Gender		Total
			Male	Female	
Raouché Rocks	17	Landmark	8	5	13
		Symbolic value	6	7	13
		Attracting people	3	4	7
		Touristy	1		1
		Total	18	16	34
Martyrs' Statue	16	Symbolic value	7	5	12
		Historical value	6	3	9
		Sentimental	4	4	8
		Location	1	2	3
		Total	18	14	32
Riad el-Solh statue	10	Symbolic value	2	5	7
		Location	1	3	4
		Historical value		3	3
		Landmark	1	2	3
		Sentimental	2	1	3
		Total	6	14	20
National Museum	10	Historical value	2	6	8
		Architectural character	3	3	6
		Identity	1	1	2
		Educational	2		2
		Cultural importance		2	2
		Total	8	12	20
Parliament building	8	Architectural character	4	2	6
		Political life	2	1	3
		Symbolic value	2	1	3
		Location	2		2
		Restoration	2		2
		Total	12	4	16
Grand Serail	7	Architectural character	2	3	5
		Historical value	1	3	4
		Traditional	3		3
		Location	2		2
		Total	8	6	14

Continued from previous table.

Al-Abed Clock	7	Sense of time	5	2	7
		Focal point	5	2	7
		Total	10	4	14
Intabli Fountain	6	Pleasant	4	1	5
		Meeting point	2	1	3
		Gathering	2		2
		Social activities	2		2
		Total	10	2	12
Municipality building	4	Architectural character	1	2	3
		Restoration	2		2
		Traditional		2	2
		Educational	1		1
		Total	4	4	8
Omari Mosque	4	Spiritual value	3	1	4
		Religious value	1	1	2
		Restoration	1		1
		Social activities	1		1
		Total	6	2	8
Grand Theatre	4	Educational	2	2	4
		Attracting people	1	2	3
		Social activities	1		1
		Total	4	4	8
Hotel District	4	Touristy	3	2	5
		Aesthetical value	1		1
		Architectural character	1		1
		Entertainment	1		1
		Total	6	2	8
St. George's Maronite Church	4	Religious value	2	1	3
		Spiritual value	2		2
		Architectural character	1		1
		Restoration	1		1
		Social activities		1	1
		Total	6	2	8
Al-Manarah Tower	3	Sense of direction	3		3
		Landmark	3		3
		Total	6		6
City Sports Stadium	2	Attracting people	2		2
		Sports	2		2
		Total	4		4

Continued from previous table.

St. Elie's Catholic Cathedral	2	Architectural character		1	1
		Historical value		1	1
		Religious value		1	1
		Restoration		1	1
		Total		4	4
Majidiyeh Mosque	2	Architectural character	1		1
		Historical value	1		1
		Religious value	1		1
		Restoration	1		1
		Total	4		4
Total	110		130	90	220

(Q) 3. Mention three (3) important places in the city you used to go for your shopping before the civil conflict. Give two (2) reasons why each place was important to you.

The table shows the piling of all responses to question 3 and reasons for each response, according to gender.

Responses to Question 3	Freq.	Reasons	Gender		Total
			Male	Female	
Al-Maarad Street	18	Familiar	2	2	4
		Protection from climate	4	1	5
		Family reasons	3	3	6
		Quality	6	4	10
		Variety	5	6	11
		Total	20	16	36
Souk al-Tawileh	11	Variety	4	3	7
		Familiar	2	3	5
		Protection from climate	3	1	4
		Quality	2	2	4
		Bargaining	1	1	2
		Total	12	10	22
Souk al-Nouriyé	10	Variety	6		6
		Affordable	2	3	5
		Fresh products	2	2	4
		Bargaining	2	1	3
		Quality	2		2
		Total	14	6	20

Continued from previous table.

Souk Sursok	10	Variety	6	2	8
		Familiar	2	3	5
		Affordable	4	1	5
		Lively	2		2
		Total	14	6	20
Hamra Area	9	Quality	4	4	8
		Variety	2	4	6
		Familiar	2		2
		Lingering		2	2
		Total	8	10	18
Souk al-Samak	8	Affordable	4	1	5
		Bargaining	3	1	4
		Variety	3	1	4
		Fresh products	2	1	3
		Total	12	4	16
Bab Idris	7	Bargaining	2	2	4
		Lingering	2	2	4
		Quality	2	1	3
		Variety	2	1	3
		Total	8	6	14
Martyrs' Square	7	Lively	3	2	5
		Family reasons	1	3	4
		Familiar	2	1	3
		Lingering	2		2
		Total	8	6	14
Souk Ayass	7	Protection from climate	2	4	6
		Quality	1	5	6
		Family reasons	1	1	2
		Total	4	10	14
Souk al-Dahab	7	Quality	4	2	6
		Lingering	2	2	4
		Familiar	2		2
		Family reasons		2	2
		Total	8	6	14
Souk al-Lahameen	6	Variety	4	1	5
		Fresh products	2	1	3
		Quality	2		2
		Affordable	2		2
		Total	10	2	12

Continued from previous table.

Souk al-Efrang	5	Quality	3	2	5
		Lingering	2	1	3
		Family reasons	1	1	2
		Total	6	4	10
Al-Azariyé building	4	Bargaining	2	2	4
		Quality	2	2	4
		Total	4	4	8
Souk al- Sour	2	Family reasons	2		2
		Quality	2		2
		Total	4		4
Total	111		132	90	222

(Q) 4. Mention three (3) important places in the city you used to go for your shopping during the civil conflict. Give two (2) reasons why each place was important to you.

The table shows the piling of all responses to question 4 and reasons for each response, according to gender.

Responses to Question 4	Freq.	Reasons	Gender		Total
			Male	Female	
Local shops	23	Familiar	2		2
		Family reasons	3	1	4
		Safe place	5	5	10
		Closeness	9	6	15
		Daily needs	9	6	15
		Total	28	18	46
Basta area	11	Convenient	4	2	6
		Safe place	3	2	5
		Closeness	2	2	4
		Daily needs	5	2	7
		Total	14	8	22
Hamra Street	9	Convenient	3	1	4
		Family reasons		2	2
		Safe place	5	3	8
		Closeness	2	2	4
		Total	10	8	18
Co-operative markets	8	Convenient	2		2
		Familiar	5	3	8
		Daily needs	3	3	6
		Total	10	6	16

Continued from previous table.

Al-Achrafiyé	7	Convenient	3	3	6
		Safe place	3	3	6
		Daily needs	2		2
		Total	8	6	14
Adoura	7	Familiar	5	2	7
		Safe place	5	2	7
		Total	10	4	14
Bourj Hamood	7	Familiar	4	3	7
		Safe place	4	3	7
		Total	8	6	14
Souk Furn el-Chebak	7	Convenient	3	4	7
		Safe place	2	1	3
		Closeness	1	3	4
		Total	6	8	14
Al-Mazraa Street	6	Familiar		4	4
		Safe place	1	1	2
		Closeness	1	5	6
		Total	2	10	12
Souk Tariq El-Jedideh	6	Convenient	1	2	3
		Family reasons	3	2	5
		Safe place	2		2
		Daily needs		2	2
		Total	6	6	12
Souk al-Raouché	6	Convenient	2		2
		Familiar	3		3
		Family reasons	1	1	2
		Safe place	1	1	2
		Closeness	3		3
		Total	10	2	12
Sioufi Street	5	Familiar	3	2	5
		Safe place	3	2	5
		Total	6	4	10
Sassine Square	5	Familiar	3	2	5
		Safe place	3	2	5
		Total	6	4	10
Souk Barbour	4	Familiar	2		2
		Family reasons	3		3
		Closeness	3		3
		Total	8		8
Total	111		132	90	222

(Q) 5. Mention three (3) important places in the city you have been going recently for your shopping. Give two (2) reasons why each place is important to you.

The table shows the piling of all responses to question 5 and reasons for each response, according to gender.

Responses to Question 5	Freq.	Reasons	Gender		Total
			Male	Female	
Hamra Street	23	Familiar	7	4	11
		Lingering	5	6	11
		Variety	4	4	8
		Quality	3	4	7
		Convenient	3	2	5
		Affordable	2	2	4
		Total	24	22	46
Souk Mar Elias	15	Variety	3	8	11
		Quality	6	3	9
		Closeness	2	4	6
		Convenient	3	1	4
		Total	14	16	30
Souk Barbour	13	Closeness	4	2	6
		Convenient	4	1	5
		Familiar	3	2	5
		Variety	4	1	5
		Affordable	3	2	5
		Total	18	8	26
Verdun Street	12	Variety	4	5	9
		Quality	4	4	8
		Convenient	2	2	4
		Lingering	2	1	3
		Total	12	12	24
Al-Achrafiyé	7	Quality	4	1	5
		Closeness	4		4
		Familiar	2	1	3
		Variety	2		2
		Total	12	2	14
Tariq El-Jedideh	7	Familiar	3	1	4
		Quality	3	1	4
		Affordable	3	1	4
		Closeness	1	1	2
		Total	10	4	14

Continued from previous table.

Spinneys	7	Quality	5	2	7
		Convenient	4	1	5
		Parking spaces	1	1	2
		Total	10	4	14
Hypermarket Bou Khalil	7	Quality	5	1	6
		Affordable	4	2	6
		Variety	1	1	2
		Total	10	4	14
Furn El-Chebak	6	Familiar	2	3	5
		Quality	1	3	4
		Convenient	1	2	3
		Total	4	8	12
ABC-Dbayeh	6	Quality	2	2	4
		Parking spaces	2	1	3
		Affordable	1	2	3
		Variety	1	1	2
		Total	6	6	12
BHV/Monoprix	8	Convenient	6	1	7
		Quality	4	1	5
		Parking spaces	2	2	4
		Total	12	4	16
Total	111		132	90	222

(Q) 6. Mention three (3) important places in the city you prefer to take your family, nowadays, for entertainment or to meet some friends. Give two (2) reasons for each choice.

The table shows the piling of all responses to question 6 and reasons for each choice, according to gender.

Responses to Question 6	Freq.	Reasons	Gender		Total
			Male	Female	
Promenade	29	Walking	9	5	14
		Nice views	9	5	14
		Sports	11	2	13
		Relaxing	8	4	12
		Good for the whole family	3	2	5
		Total	40	18	58

Continued from previous table.

Raouché Area	22	Nice views	6	4	10
		Entertainment	6	2	8
		Relaxing	3	4	7
		Sitting in a café	4	3	7
		Walking	3	4	7
		Good for the whole family	2	3	5
		Total	24	20	44
Sanayah Park	11	Relaxing	5	3	8
		Good for the whole family	5	1	6
		Walking	3	2	5
		Sports	3		3
		Total	16	6	22
Hamra Street	11	Entertainment	6	2	8
		Walking	4	4	8
		Meeting people	2	1	3
		Sitting in a café	2	1	3
		Total	14	8	22
Pine Forest	9	Good for the whole family	2	3	5
		Relaxing	4	1	5
		Good landscape	2	3	5
		Gathering	2	1	3
		Total	10	8	18
Al-Maarad Street	9	Walking	2	5	7
		Good for the whole family	1	3	4
		Sitting in a café	1	3	4
		Entertainment	2	1	3
		Total	6	12	18
Verdun Street	8	Sitting in a café	2	3	5
		Walking	2	3	5
		Entertainment	1	3	4
		Meeting people	1	1	2
		Total	6	10	16

Continued from previous table.

Sioufi Park	6	Good for the whole family	3	2	5
		Relaxing	3	1	4
		Nice views	2	1	3
		Total	8	4	12
Souk Al-Bargouth	6	Entertainment	3	2	5
		Good for the whole family	3	1	4
		Walking	2	1	3
		Total	8	4	12
Total	111		132	90	222

(Q) 7. When you are asked about the old souks of Beirut, what are the first three (3) souks that come to your mind? Give two (2) reasons why you remember each one.

The table shows the piling of all responses to question 7 and reasons for each response, according to gender.

Responses to Question 7	Freq.	Reasons	Gender		Total
			Male	Female	
Souk Al-Tawileh	20	Quality	7	6	13
		Attractive	4	5	9
		Touristy	2	3	5
		Speciality goods	2	2	4
		Crowded	1	2	3
		Family reasons	2	1	3
		Covered pathway	2	1	3
		Total	20	20	40
Souk Sursok	20	Speciality goods	6	6	12
		Familiar	3	4	7
		Crowded	2	4	6
		Affordable	3	2	5
		Informal	3	1	4
		Bargaining	3		3
		Covered pathway	2	1	3
		Total	22	18	40

Continued from previous table.

Souk al-Nouriyé	16	Affordable	2	4	6
		Bargaining	2	3	5
		Crowded		4	4
		Familiar	2	2	4
		Speciality goods	2	2	4
		Family reasons	1	2	3
		Informal	3		3
		Covered pathway	2	1	3
		Total	14	18	32
Souk Ayass	13	Fountain	5	2	7
		Speciality goods	2	3	5
		Family reasons	1	2	3
		Quality	3		3
		Attractive	3		3
		Affordable	2	1	3
		Familiar		2	2
		Total	16	10	26
Souk al-Efrang	12	Touristy	5	3	8
		Attractive	5	1	6
		Quality	3	2	5
		Speciality goods	1	2	3
		Family reasons	2		2
		Total	16	8	24
Souk al-Dahab	9	Quality	2	4	6
		Attractive	2	3	5
		Speciality goods	1	3	4
		Touristy	1	2	3
		Total	6	12	18
Souk al-Bazerkan	9	Quality	5	1	6
		Attractive	4		4
		Speciality goods	3		3
		Touristy	2	1	3
		Family reasons	2		2
		Total	16	2	18

Continued from previous table.

Souk Abi-Anaser	7	Crowded	4		4
		Informal	4		4
		Affordable	4		4
		Bargaining	2		2
		Total	14		14
Souk al-Azariyé	5	Speciality goods	4		4
		Quality	2	1	3
		Affordable	2	1	3
		Total	8	2	10
Total	111		132	90	222

(Q) 8. Mention three (3) important public squares in the city centre. Give two reasons why each square is important to you.

The table shows the piling of all responses to question 8 and reasons for each response, according to gender.

Responses to Question 8	Freq.	Reasons	Gender		Total
			Male	Female	
Martyrs' Square	33	Historical value	4	5	9
		Commercial activities	4	3	7
		Architectural character	3	3	6
		Archaeological finds	2	4	6
		Statue	4	1	5
		Services	3	2	5
		Symbolic value	4	1	5
		Vastness	3	1	4
		Craft shops	2	1	3
		Familiar	1	2	3
		Location	3		3
		Meeting point	2	1	3
		Political life	2	1	3
		Entertainment	2		2
		Family reasons	1		1
		Sentimental		1	1
Total		40	26	66	

Continued from previous table.

Riad el-Solh Square	30	Traditional	5	3	8
		Statue	5	2	7
		Services	3	4	7
		Commercial activities	3	2	5
		Familiar	4	1	5
		Political life	2	3	5
		Architectural character		4	4
		Craft shops	2	2	4
		Entertainment	1	2	3
		Historical value	2	1	3
		Symbolic value	2	1	3
		Family reasons	2		2
		Location	1	1	2
		Sentimental		2	2
Total	32	28	60		
Al-Nijmeh Square	30	Political life	5	9	14
		Parliament building	5	5	10
		Al-Abed Clock	4	3	7
		Architectural character	4	3	7
		Religious reasons	2	4	6
		Archaeological finds	5		5
		Commercial activities	3	1	4
		Location	3	1	4
		Meeting point	3		3
		Total	34	26	60
Intabli Square	11	Traditional	4	2	6
		Meeting point	4	1	5
		Fountain	4	1	5
		Commercial activities	3		3
		Entertainment	1	2	3
		Total	16	6	22
Dabas Square	7	Commercial activities	1	2	3
		Meeting point	3		3
		Entertainment	1	1	2
		Services	1	1	2
		Location	2		2
		Fountain	2		2
		Total	10	4	14
Total	111	132	90	222	

(Q) 9. Mention three (3) important features or things you liked about public spaces in the old souks. Give two (2) reasons for each choice.

The table shows the piling of all responses to question 9 and reasons for each choice, according to gender.

Responses to Question 9	Freq.	Reasons	Gender		Total
			Male	Female	
Compactness	15	Traditional	5	2	7
		Pleasant	4	5	9
		Convenient	2	4	6
		Informal	4	1	5
		Shaded areas	1	2	3
		Total	16	14	30
Lively environment	14	Lively	5	2	7
		Friendly	3	3	6
		Attracting people	4	1	5
		Safe	3	2	5
		Informal	3	2	5
		Total	18	10	28
Craft shops	11	Traditional	3	4	7
		Attracting people	2	3	5
		Educational	2	1	3
		Affordable	2	1	3
		Convenient		2	2
		Friendly	1	1	2
		Total	10	12	22
Shop fronts	11	Convenient	3	4	7
		Attractive	4	2	6
		Traditional	3	2	5
		Attracting people	2	2	4
		Total	12	10	22
Vendors	10	Friendly	6	1	7
		Convenient	4	4	8
		Affordable	1	2	3
		Attracting people	1	1	2
		Total	12	8	20
Fountains	10	Pleasant	6	1	7
		Location	4	2	6
		Attracting people	2	2	4
		Traditional	2	1	3
		Total	14	6	20

Continued from previous table.

Familiarity	9	Safe	2	4	6
		Informal	4	2	6
		Friendly	3	1	4
		Lively	1	1	2
		Total	10	8	18
Naming of places	9	Convenient	2	2	4
		Location	6	3	9
		Attachments	2	1	3
		Attracting people	2		2
		Total	12	6	18
Religious buildings	6	Attachments	4	2	6
		Functional	4	2	6
		Total	8	4	12
Covered pathways	6	Convenient	4		4
		Functional	4		4
		Protection from climate	4		4
		Total	12		12
Fabric canopies	5	Convenient	3	2	5
		Protection from climate	3	2	5
		Total	6	4	10
Public facilities	3	Convenient		3	3
		Functional		3	3
		Total		6	6
Total	109		130	88	218

(Q) 10. Mention three (3) features or things you disliked about public spaces in the old souks. Give two (2) reasons for each choice.

The table shows the piling of all responses to question 10 and reasons for each choice, according to gender.

Responses to Question 10	Freq.	Reasons	Gender		Total
			Male	Female	
Crowded spaces	23	Confusing	5	5	10
		Inconvenient	3	4	7
		Unhealthy	3	4	7
		Discourage access	5	2	7
		Risky condition	3	4	7
		Discourage prolonged visits	2	2	4
		Unventilated	1	3	4
		Total	22	24	46
Unhygienic features	21	Pollution	9	7	16
		Unventilated	5	7	12
		Unhealthy	2	4	6
		Discourage prolonged visits	3	2	5
		Inconvenient	1	2	3
		Total	20	22	42
Obscure spaces	19	Confusing	10	7	17
		Risky condition	8	3	11
		Discourage access	5	2	7
		Discourage prolonged visits	1	2	3
		Total	24	14	38
Slippery walkways	14	Risky condition	9	3	12
		Inconvenient	5	2	7
		Exposed to rain	4	1	5
		Discourage access	4		4
		Total	22	6	28
Congested roads	13	Risky condition	6	3	9
		Inconvenient	5	1	6
		Discourage prolonged visits	2	2	4
		Confusing	2	2	4
		Pollution	1	2	3
		Total	16	10	26

Continued from previous table.

Noisy atmosphere	11	Discourage prolonged visits	6	1	7
		Unhealthy	3	2	5
		Confusing	5		5
		Inconvenient	3		3
		Discourage access	1	1	2
		Total	18	4	22
Insufficient light	10	Discourage access	1	5	6
		Discourage prolonged visits	2	3	5
		Inconvenient	3		3
		Confusing	2	1	3
		Risky condition	2	1	3
		Total	10	10	20
Total	111		132	90	222

(Q) 11. Mention three (3) important things in the past that encouraged people to use public spaces in the city centre. Give two (2) reasons for each choice.

The table shows the piling of all responses to question 11 and reasons for each choice, according to gender.

Responses to Question 11	Freq.	Reasons	Gender		Total
			Male	Female	
Old souks	27	Affordable	4	7	11
		Festivities	2	6	8
		Commercial activities	5	2	7
		Attracting people	4	1	5
		Family reasons	3	2	5
		Meeting place	3	2	5
		Informal	3	2	5
		Traditional	2	2	4
		Services	2	2	4
Total		28	26	54	
Transport stations	20	Commuting	6	3	9
		Services	4	5	9
		Meeting place	4	4	8
		Affordable	2	4	6
		Attracting people	2	1	3
		Informal	2	1	3
		Festivities		2	2
		Total		20	20

Continued from previous table.

Coffee shops	17	Meeting place	6		6
		Traditional	5	1	6
		Family reasons	4	1	5
		Spend time	4	1	5
		Affordable	5		5
		Festivities	4		4
		Informal	2	1	3
		Total	30	4	34
Old tramway	14	Affordable	4	3	7
		Traditional	2	4	6
		Commuting	5	1	6
		Attracting people	4		4
		Informal	1	2	3
		Spend time		2	2
		Total	16	12	28
Religious places	13	Festivities	3	4	7
		Meeting place	4	3	7
		Traditional	1	4	5
		Sentimental	3	1	4
		Family reasons	1	2	3
		Total	12	14	26
Entertainment places	9	Festivities	6	1	7
		Spend time	4		4
		Affordable	4		4
		Services	2	1	3
		Total	16	2	18
Presence of business	8	Services	3	3	6
		Attracting people	2	2	4
		Commercial activities	3	1	4
		Family reasons		2	2
		Total	8	8	16
Total	108	130	86	216	

(Q) 12. Mention three (3) important traditional, cultural, and social customs or activities people used to perform in the city centre, and which you would like to see maintained. Give two (2) reasons for each choice.

The table shows the piling of all responses to question 12 and reasons for each choice, according to gender.

Responses to Question 12	Freq.	Reasons	Gender		Total
			Male	Female	
Attending religious ceremonies	18	Spiritual reasons	1		1
		Social interaction	2		2
		Traditional	2		2
		Food and drink	2		2
		Family reasons	1	2	3
		Identity	3	2	5
		Gathering of people	2	4	6
		Spiritual	4	3	7
		Sentimental	5	3	8
		Total		22	14
Going to theatres	16	Cultural importance	7	8	15
		Gathering of people	4	3	7
		Identity	2	2	4
		Meeting people	2	1	3
		Food and drink	1	2	3
		Total		16	16
Festivity shopping	15	Traditional	3	5	8
		Good expectations	1	5	6
		Food and drink	1	4	5
		Bringing pleasure	2	3	5
		Gathering of people		4	4
		Family reasons	1	1	2
		Total		8	22
Listening to storyteller	11	Gathering of people	6		6
		Sentimental	5		5
		Traditional	5		5
		Cultural importance	4		4
		Uniqueness	2		2
		Total		22	
Wearing costumes	12	Traditional	4	4	8
		Uniqueness	3	2	5
		Occasional	2	3	5
		Identity	3	1	4
		Bringing pleasure		2	2
		Total		12	12

Continued from previous table.

Wedding ceremonies	12	Social interaction	4	5	9
		Sentimental	2	2	4
		Bringing pleasure		4	4
		Family reasons	2	1	3
		Traditional		2	2
		Good expectations		2	2
		Total	8	16	24
Going to burial grounds	10	Sentimental	6	3	9
		Remembering relatives	5	3	8
		Family reasons	2		2
		Spiritual	1		1
		Total	14	6	20
Visiting al-Gasaz café	9	Informal	5		5
		Social interaction	4		4
		Meeting people	3		3
		Traditional	3		3
		Spending time	3		3
		Total	18		18
Tramway tours	5	Knowing places	3	1	4
		Family reasons		2	2
		Social interaction	2		2
		Bring up memories	1	1	2
		Total	6	4	10
Attending public celebrations	3	Gathering of people	3		3
		Identity	1		1
		Traditional	1		1
		Food and drink	1		1
		Total	6		6
Total	111		132	90	222

(Q) 13. Mention three (3) important changes you like that occurred in the redeveloped areas of the city centre. Give two (2) reasons for each choice.

The table shows the piling of all responses to question 13 and reasons for each choice, according to gender.

Responses to Question 13	Freq.	Reasons	Gender		Total
			Male	Female	
Restoration works	26	Architectural character	2	3	5
		Attractive	2	4	6
		Essential	2	4	6
		Restore image	8	4	12
		Recapture the past	4	2	6
		Economic concerns	3	2	5
		High standard	7	5	12
		Total	28	24	52
Pedestrian zones	20	Convenient	4	2	6
		Inappropriate for elderly	4	1	5
		Safe for children	5	6	11
		Good for women	1	6	7
		Unnecessary	1	2	3
		Economic concerns	1	1	2
		High standard	4	2	6
		Total	20	20	40
New environment	17	Architectural character	2		2
		Attractive	4	1	5
		Cleanliness	7	1	8
		Essential	2	1	3
		Restore image	5	3	8
		Economic concerns	2		2
		High standard	4	2	6
		Total	26	8	34
Safety and security	15	Essential	1	3	4
		Safe for children	2	4	6
		Good for women		11	11
		Unnecessary	5		5
		High standard		4	4
		Total	8	22	30

Continued from previous table.

New road network	13	Convenient	7	2	9
		Essential	5		5
		Isolated city centre	2	1	3
		Diverted traffic away	3	1	4
		High standard	3	2	5
		Total	20	6	26
Organised events	8	Essential	2	1	3
		Restore image	2	1	3
		Recapture the past	4	1	5
		Inappropriate for elderly	2		2
		High standard	2	1	3
		Total	12	4	16
Provision of parking	6	Convenient	3	3	6
		Essential	3	3	6
		Total	6	6	12
Total	105		120	90	210

(Q) 14. Mention three (3) changes you dislike that occurred in the redeveloped areas of the city centre. Give two (2) reasons for each choice.

The table shows the piling of all responses to question 14 and reasons for each choice, according to gender.

Responses to Question 14	Freq.	Reasons	Gender		Total
			Male	Female	
Demolition of places	36	Loss of businesses	10	9	19
		Economic concerns	8	4	12
		Incomplete character	8	4	12
		Loss of attachments	3	7	10
		Inactive atmosphere	4	3	7
		Unpleasant state	2	3	5
		Withdrawal of public	4	1	5
		Inhumane	1	1	2
		Total	40	32	72
Vacant areas	23	Loss of businesses	7	3	10
		Incomplete character	7	3	10
		Inactive atmosphere	7	2	9
		Economic concerns	5	2	7
		Unpleasant state	5	1	6
		Loss of attachments	1	3	4
		Total	32	14	46

Continued from previous table.

Incomplete new souks	19	Inactive atmosphere	6	8	14
		Economic concerns	7	5	12
		Loss of businesses	3	3	6
		Incomplete character	4	2	6
		Total	20	18	38
Changing use of centre	14	Loss of businesses	5	5	10
		Inactive atmosphere	2	5	7
		Economic concerns	4	2	6
		Withdrawal of public	3	2	5
		Total	14	14	28
Burial ground clearance	11	Religious reasons	8	3	11
		Loss of attachments	5	2	7
		Inhumane	3	1	4
		Total	16	6	22
Dumping ground	8	Unpleasant state	5	3	8
		Withdrawal of public	5	3	8
		Total	10	6	16
Total	111		132	90	222

(Q) 15. Mention three (3) important qualities, features or characteristics that distinguish the redeveloped city centre and its public spaces, which were not available in the old city centre. Give two (2) reasons for each choice.

The table shows the piling of all responses to question 15 and reasons for each choice, according to gender.

Responses to Question 15	Freq.	Reasons	Gender		Total
			Male	Female	
Revealing ancient finds	26	Important heritage	7	6	13
		Cultural value	7	4	11
		Touristy	6	3	9
		Admiration	5	3	8
		Attractive	3	4	7
		Organised setting	2	2	4
		Total		30	22

Continued from previous table.

Aesthetical qualities	22	Sleek architecture	8	4	12
		Well-lit at night	1	7	8
		Admiration	4	2	6
		Clean Environment	3	3	6
		Touristy	3	2	5
		Organised setting	2	2	4
		Attractive	1	2	3
		Total	22	22	44
Bourgeois image	16	Attractive	5		5
		Touristy	5		5
		Clean Environment	3	2	5
		Sleek architecture	5		5
		Unsuitable for locals	4		4
		Safety and security	1	1	2
		Organised setting	2		2
		Well-lit at night	1	1	2
		Unaffordable	2		2
		Total	28	4	32
Management system	15	Well-lit at night	2	7	9
		Clean Environment	4	4	8
		Safety and security	4	3	7
		Organised setting	4	2	6
		Total	14	16	30
Suitable for investors	13	Organised setting	5	1	6
		Unsuitable for locals	2	2	4
		Safety and security	3	1	4
		Clean Environment	3	1	4
		Unaffordable	1	1	2
		Sleek architecture	1	1	2
		Well-lit at night	2		2
		Attractive	1	1	2
Total	18	8	26		
High quality construction	12	Attractive	3	4	7
		Organised setting	4	2	6
		Admiration	1	3	4
		Sleek architecture	3	1	4
		Unaffordable	1	2	3
		Total	12	12	24

Continued from previous table.

Modern road network	7	Unaffordable	3	1	4
		Accessible by car	2	2	4
		Unsuitable for locals	1	1	2
		Isolated	1	1	2
		Incompatible	1	1	2
		Total	8	6	14
Total	111		132	90	222

(Q) 16. Mention three (3) important qualities, features, or characteristics that distinguished the old souks and its public spaces, which have not been considered yet in the redeveloped city centre. Give two (2) reasons for each choice.

The table shows the piling of all responses to question 16 and reasons for each choice, according to gender.

Responses to Question 16	Freq.	Reasons	Gender		Total
			Male	Female	
Stalls and vendors	24	Affordable	10	6	16
		Bubbling with activity	5	3	8
		Displaying products	6	2	8
		Mix of social groups	2	3	5
		Improve dialogue	2	3	5
		Bargaining	3	1	4
		Good for pedestrians		2	2
		Total	28	20	48
Covered pathways	23	Protection from climate	7	4	11
		Good for pedestrians	6	5	11
		Pausing at shop front	4	5	9
		Bubbling with activity	5		5
		Improve dialogue	2	3	5
		Displaying products	2	1	3
		Safe	2		2
		Total	28	18	46

Continued from previous table.

Sense of familiarity	21	Courtesy	9	3	12
		Pausing at shop front	7	3	10
		Mix of social groups	7	1	8
		Safe	2	2	4
		Bubbling with activity	3	1	4
		Improve dialogue	1	1	2
		Good for pedestrians	1	1	2
		Total	30	12	42
User-friendly	17	Improve dialogue	5	2	7
		Safe	1	4	5
		Pausing at shop front	2	3	5
		Bubbling with activity	3	2	5
		Bargaining	2	2	4
		Courtesy	1	3	4
		Good for pedestrians	2	2	4
		Total	16	18	34
Informal setting	14	Improve dialogue	4	3	7
		Displaying products	4	2	6
		Pausing at shop front	4	1	5
		Affordable	3	2	5
		Courtesy	1	2	3
		Bargaining	2		2
		Total	18	10	28
Connected spaces	12	Good for pedestrians	5	3	8
		Bubbling with activity	3	3	6
		Improve dialogue	2	2	4
		Safe		3	3
		Shaded areas	2	1	3
		Total	12	12	24
Total	111	132	90	222	

(Q) 17. Mention three (3) important social, cultural, or traditional events, which occurred recently in the city centre and where it took place. Give two (2) reasons for each choice.

The table shows the piling of all responses to question 17 and reasons for each choice, according to gender.

Responses to Question 17	Freq.	Reasons	Gender		Total
			Male	Female	
Martyrs' Sq. celebrations	17	Attracting people		3	3
		Freedom of speech	2	1	3
		Cultural importance	3	2	5
		Mix of social groups	3	3	6
		Identity	3	5	8
		Sense of unity	5	4	9
		Total	16	18	34
Religious celebrations	13	Identity	6	1	7
		Social reasons	5	1	6
		Attracting people	4	1	5
		Mix of social groups	4	1	5
		Sentiments	3		3
		Total	22	4	26
Al-Maarad Street exhibitions	12	Attracting people	1	6	7
		Cultural importance	4	4	8
		Identity		4	4
		Social reasons		3	3
		Mix of social groups	1	1	2
		Total	6	18	24
Book exhibitions	12	Cultural importance	5	2	7
		Attracting people	5	1	6
		Identity	2	3	5
		Freedom of speech	2	1	3
		Mix of social groups	2	1	3
		Total	16	8	24
Charitable events	10	Good cause	4	5	9
		Sentiments	3	2	5
		Attracting people		3	3
		Social reasons	1	2	3
		Total	8	12	20

Continued from previous table.

Music Festival	9	Cultural importance	4	3	7
		Mix of social groups	4	3	7
		Identity	2	2	4
		Total	10	8	18
International conferences	8	Freedom of speech	5		5
		Identity	5		5
		Cultural importance	3		3
		Mix of social groups	3		3
		Total	16		16
International exhibitions	7	Attracting people	2	1	3
		Identity	2	1	3
		Cultural importance	2	2	4
		Mix of social groups	2	2	4
		Total	8	6	14
Al-Nijmeh Sq. political events	7	Freedom of speech	5		5
		Sense of unity	3		3
		Attracting people	2		2
		Identity	2		2
		Mix of social groups	2		2
		Total	14		14
Heritage day	7	Identity	1	4	5
		Cultural importance	2	2	4
		Sense of unity		3	3
		Attracting people	1	1	2
		Total	4	10	14
Sports events	7	Attracting people	1	3	4
		Sense of unity	3	1	4
		Identity	1	1	2
		Sentiments	2		2
		Mix of social groups	1	1	2
		Total	8	6	14
Total	109		128	90	218

(Q) 18. In your opinion, what are the three (3) important qualities or needs you require of a public space, which ultimately encourages you to visit the space again? Give two (2) reasons for each choice.

The table shows the piling of all responses to question 18 and reasons for each choice, according to gender.

Responses to Question 18	Freq.	Reasons	Gender		Total
			Male	Female	
Parking places	16	Location	6	3	9
		Convenient	5	3	8
		Accessibility	4		4
		Encourage prolonged visits	4		4
		Encourage walking	4		4
		Safety and security	3		3
		Total	26	6	32
Sense of security	14	Encourage prolonged visits	2	4	6
		Comfort	1	4	5
		Safety and security	1	3	4
		Relaxation	1	2	3
		Accessibility	3		3
		Encourage walking	3		3
		Good for the whole family	1	2	3
		Necessary		1	1
Total	12	16	28		
Open spaces	13	Relaxation	4	3	7
		Pleasant	3	2	5
		Resting	3	1	4
		Encourage prolonged visits	2	2	4
		Good for the whole family	2	2	4
		Contemplating	2		2
		Total	16	10	26

Continued from previous table.

Pedestrian zones	13	Encourage walking	8	3	11
		Good for the whole family	5	2	7
		Convenient	3		3
		Safety and security	2		2
		Cleanliness		1	1
		Location	1		1
		Encourage prolonged visits	1		1
		Total	20	6	26
Adequate seating	13	Resting	4	3	7
		Encourage prolonged visits	3	2	5
		Cleanliness	3		3
		Comfort	3		3
		Pleasant	3		3
		Relaxation	2	1	3
		Contemplating	2		2
		Total	20	6	26
Protection from climate	13	Comfort	5	1	6
		Shaded areas	4	1	5
		Pleasant	1	2	3
		Encourage prolonged visits	3		3
		Encourage walking	3		3
		Resting	4	2	6
		Total	20	6	26
Good lighting	9	Safety and security	3	4	7
		Encourage prolonged visits	1	5	6
		Location	1	2	3
		Encourage walking	1	1	2
		Total	6	12	18
Public toilets	8	Convenient	3	2	5
		Cleanliness		4	4
		Comfort	1	3	4
		Location	2	1	3
		Total	6	10	16

Continued from previous table.

Vendors	7	Convenient	1	3	4
		Location	1	3	4
		Encourage prolonged visits		2	2
		Encourage walking		2	2
		Entertaining		2	2
		Total	2	12	14
Programmed events	5	Encourage prolonged visits	1	3	4
		Good for the whole family	1	2	3
		Entertaining	2	1	3
		Total	4	6	10
Total	111		132	90	222

(Q) 19. In your opinion, what are the three (3) important qualities that souk al-Bargouth (*a flea market*) provides, which were not available in the old souks? Give two (2) reasons for each choice.

The table shows the piling of all responses to question 19 and reasons for each choice, according to gender.

Responses to Question 19	Freq.	Reasons	Gender		Total
			Male	Female	
Style of facilities	25	Attracting people	8	5	13
		Modern	4	5	9
		Street cafés	6	2	8
		Display of antiques	5	1	6
		Street market	1	4	5
		Entertainment	2	2	4
		Food and drink	2	1	3
		Economic concerns	2		2
		Total	30	20	50
Pedestrianised street	19	Safety	6	5	11
		Lively	4	5	9
		Entertainment	3	2	5
		Lingering	1	3	4
		Street market	1	3	4
		Clean Environment		3	3
		Street cafés	1	1	2
		Total	16	22	38

Continued from previous table.

Art displays	18	Encourage artistic activities	6	5	11
		Cultural	8	1	9
		Different location	3	2	5
		Attracting people	1	3	4
		Occasional	2	2	4
		Touristy	2	1	3
		Total	22	14	36
Programmed activities	13	Entertainment	5	2	7
		Lively	4	2	6
		Touristy	3	2	5
		Cultural	2	2	4
		Attracting people	2		2
		Encourage artistic activities	2		2
		Total	18	8	26
Controlled environment	11	Safety	6	6	12
		Clean environment	4	6	10
		Total	10	12	22
Imitation of the past	7	Street market	4	1	5
		Food and drink	3	1	4
		Display of antiques	3		3
		Street cafés	2		2
		Total	12	2	14
Urban image	6	Clean environment	2	3	5
		Modern	2	3	5
		Touristy		2	2
		Total	4	8	12
Attracting old merchants	6	Street market	2	1	3
		Food and drink	3		3
		Street cafés	2		2
		Different location	1	1	2
		Economic concerns	2		2
		Total	10	2	12
Temporary events	6	Street market	4	1	5
		Different location	3		3
		Occasional	1	1	2
		Economic concerns	2		2
		Total	10	2	12
Total	111	132	90	222	

(Q) 20. Would you prefer to see such occasional street markets as permanent souks?

Yes

No

Please give two reasons: a) -----

b) -----

The table shows the piling of all responses to question 20 and reasons for each choice, according to gender.

Responses to Question 20	Freq.		Gender		Total
			Male	Female	
Yes	28	Attracting businesses	9	8	17
		Attracting people	9	2	11
		Lively	5	2	7
		Space utilisation	4	2	6
		Touristy		5	5
		Friendly environment	1	3	4
		Evoke past memories	3	1	4
		Social interaction	1	1	2
		Total		32	24
No	9	Economic concerns	7	4	11
		Imitation of the past	5	2	7
		Total	12	6	18
Total	37		44	30	74

(Q) 21. Are you in favour of transforming some streets in the city centre to pedestrianised zones?

Yes

No

Please give two reasons: a) -----

b) -----

The table shows the piling of all responses to question 21 and reasons for each choice, according to gender.

Responses to Question 21	Freq.	Reasons	Gender		Total
			Male	Female	
Yes	28	Commercial activities	8	6	14
		Social interaction	7	5	12
		Safe environment	3	5	8
		Traffic free	6	1	7
		Friendly environment	3	3	6
		Lingering	4	1	5
		Free of pollution	3	1	4
		Total	34	22	56
No	9	Uncomfortable	4	4	8
		Congestion	5		5
		Economic concerns	1	4	5
		Total	10	8	18
Total	37		44	30	74

(Q) 22. If your answer is (YES) to Q (21), please mention three (3) important streets or areas you suggest should be transformed to pedestrianised zones. Give (2) reasons for each street or area and why it is important it becomes a pedestrianised zone.

The table shows the piling of all responses to question 22 and reasons for each choice, according to gender.

Responses to Question 22	Freq.	Reasons	Gender		Total
			Male	Female	
Al-Nijmeh Square	33	Architectural restoration	13	7	20
		Colonnades	3	8	11
		Aesthetical value	5	5	10
		Link	6	3	9
		Touristy	5	2	7
		Historic value	2	2	4
		Pedestrian friendly	3	1	4
		Good services	1		1
		Total	38	28	66

Continued from previous table.

Al-Maarad Street	28	Aesthetical value	9	3	12
		Architectural restoration	8	3	11
		Colonnades	5	3	8
		Link	4	2	6
		Pedestrian friendly	3	3	6
		Good services	3	2	5
		Touristy	3	2	5
		Historic value	3		3
		Total	38	18	56
Allenby Street	16	Aesthetical value	5	5	10
		Architectural restoration	3	4	7
		Link	3	2	5
		Historic value		3	3
		Touristy	3		3
		Pedestrian friendly	1	2	3
		Good services	1		1
		Total	16	16	32
Weygand Street	15	Link	5	4	9
		Aesthetical value	2	3	5
		Historic value	3	2	5
		Architectural restoration	3	2	5
		Good services	2	1	3
		Touristy	2		2
		Pedestrian friendly	1		1
		Total	18	12	30
Foch Street	13	Aesthetical value	5	7	12
		Architectural restoration	4	3	7
		Touristy	3	2	5
		Pedestrian friendly		2	2
		Total	12	14	26
Bab Idris	6	Historic value	6	1	7
		Link	3	1	4
		Touristy	1		1
		Total	10	2	12
Total	111	132	90	222	

(Q) 23. Mention the (3) three most important senses you use in appreciating the quality of public spaces. Rank them according to their importance and then give two reasons for each choice.

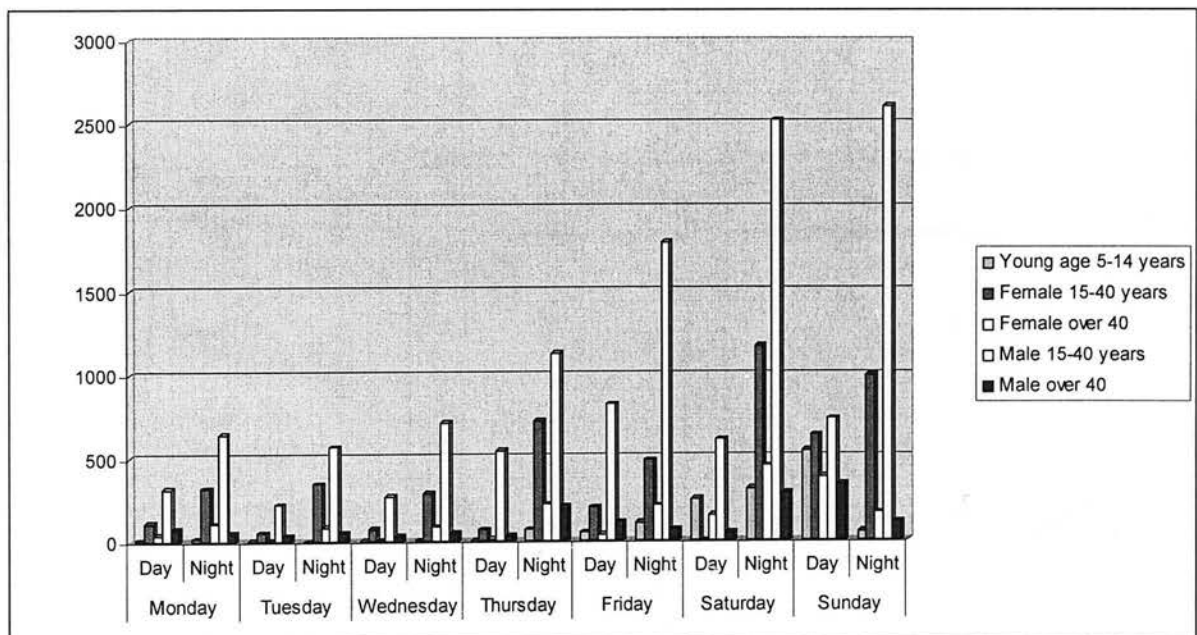
The table shows the piling of all responses to question 23 and reasons for each choice, according to gender.

Responses to Question 23	Freq.	Reasons	Gender		Total
			Male	Female	
Sight	35	Observing activities	12	6	18
		Way-finding	10	6	16
		Discovering places	8	4	12
		Admire surroundings	5	5	10
		Comfort	5	4	9
		Convey knowledge	2	3	5
		Total	42	28	70
Hearing	33	Social exchange	9	6	15
		Convey knowledge	9	4	13
		Comfort	6	4	10
		Attracted to sounds	6	4	10
		Listening to performers	3	5	8
		Way-finding	3	3	6
		Verbal exchange	2	2	4
		Total	38	28	66
Sense of smell	27	Comfort	7	4	11
		Pleasant	8	3	11
		Fresh air	6	4	10
		Hygiene	5	4	9
		Fresh products	5	4	9
		Nice aromas	3	1	4
		Total	34	20	54
Touch	9	Feeling the surrounding	5	4	9
		Comfort	3	2	5
		Examining products	2	2	4
		Total	10	8	18
Taste	7	Eating food	4	2	6
		Quenching thirst	1	3	4
		Drinking refreshments	3	1	4
		Total	8	6	14
Total	111		132	90	222

APPENDIX D: Pedestrian Movement Count

Table shows the pedestrian movement count in the area of al-Maarad Street/al-Nijmeh Square between 23 and 29 February 2004 (source: the author).

Day	Interval	Young age	Female	Femal	Male	Male	Total
		5-14 years	15-40 years	e over 40	15-40 years	over 40	
Monday	Day	10	112	40	315	75	552
	Night	20	320	107	641	50	1138
Tuesday	Day	5	53	12	221	36	327
	Night	0	346	87	569	52	1054
Wednesday	Day	7	78	10	273	34	402
	Night	11	289	90	712	48	1150
Thursday	Day	4	72	15	544	31	666
	Night	70	723	220	1130	213	2356
Friday	Day	52	204	41	822	115	1234
	Night	111	489	215	1794	70	2679
Saturday	Day	255	0	156	611	48	1070
	Night	314	1172	451	2521	287	4745
Sunday	Day	547	638	387	734	340	2646
	Night	59	994	170	2604	116	3943
Total		1465	5490	2001	13491	1515	23962



A bar chart shows the pedestrian movement count in the area of al-Maarad Street/al-Nijmeh Square between 23 and 29 February 2004 (source: the author).

APPENDIX E: The Respondents' Cognitive Maps

