

## ABSTRACT

**Al-Khalaileh, Eyyad Ahmad. Understanding Children's Environments:** the effect of outdoor physical environments on children's activities and quality of life within Al-Wihdat Palestinian refugee camp and environs in Amman, Jordan (Under the direction of Professor Robin C. Moore)

This dissertation examines children's experiences of growing up in urban environments based on research conducted in Amman, Jordan, under the direction of Professor Robin C. Moore of North Carolina State University, Raleigh, NC.

This dissertation represents the most recent addition to the UNESCO-MOST *Growing Up in Cities* (GUIC) programme and was preceded by three workshops and an international conference in Amman, Jordan, during 2002 and 2003.

The purpose of this dissertation is two fold: (1) to understand if the existing outdoor spaces support or limit everyday children's activities and experiences, necessary for healthy development, within low-material-resource neighbourhood in Amman, Jordan; and (2) to reflect on whether the *Growing Up in Cities* (GUIC) participatory research model is appropriate and applicable to the Middle East and North Africa (MENA) region. The dissertation focuses on the role of the physical environment in development, specifically the role of neighbourhood outdoor spaces in supporting the everyday activities that are important for normal, healthy development. Two components of children's everyday activity are important to understanding the role of neighbourhood spaces: (1) explorative outdoor environments, and (2) participatory, supportive social networks.

The focus of this study was children 10 to 14 years of age living in the Al-Wihdat refugee camp and environs of Amman, Jordan. The research methods applied in this case study include field informal observations (fields notes and photographic); interviews (with participating children, schools and public officials); children's drawings (cognitive maps), and photographs taken by children.

The methods used for this study proved useful in determining a wide variety of issues that the children had considered important and identified through their views, opinions and perceptions. These included macro issues such as pollution, politics, crime, traffic,

development, improvement and safety as well as micro issues such as friendships, family relation, television watching, praying, and outdoor activities. The methods also highlighted both differences and similarities among the boys' and girls' views, opinions and perceptions of the outdoor environment.

The result of data analysis indicated that the outdoors physical environment does not provide the children with reasonably viable explorative opportunities. The data showed that the constraints the existing outdoor spaces impose on children far outweighed the benefits they provided. The study found that a strong social network compensated the children for the lack of supportive physical environment. The children's views and opinions were mostly about societal and group issues. The trend in the relative importance of the children's views moved from the collective to the individual.

The research indicated that there is a clear divide between boys and girls' outdoors spaces, which means outdoor environment is gendered. While the boys dominated the public spaces, girls retreated to home-oriented sites. By comparison, the gender theme was not a critical issue in the previous GUIC studies.

In conclusion, the dissertation proposed a series of recommendations to improve the quality of children's outdoor spaces in Amman and make Jordanian laws geared more toward children's well-being. In order to achieve these recommendations, Jordan would have to pass strong child-friendly national legislation and find an effective means of its enforcement.

**UNDERSTANDING CHILDREN'S ENVIRONMENTS:  
THE EFFECT OF OUTDOOR PHYSICAL ENVIRONMENTS ON CHILDREN'S  
ACTIVITIES AND QUALITY OF LIFE WITHIN AL-WIHDAT PALESTINIAN  
REFUGEE CAMP AND ENVIRONS IN AMMAN, JORDAN**

by

**EYYAD AL-KHALAILEH**

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North Carolina State University  
in partial fulfillment of the  
requirements for the Degree of  
Doctor of Philosophy

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## Personal Biography

**Eyyad Al-Khalaileh** is an urban designer and planner. Since 1991, he has been principal of the Salem Design Group, Raleigh, NC. He received his Bachelor of Art in Architecture (1987) from Iowa State University, Ames, Iowa. He obtained his MCRP (Master in City and Regional Planning) and MARCH (Master in Architecture) (1991) from Iowa State University. His master thesis was entitled, "***Age Integrated Housing***"

His current research interests include international sustainable development, children's environments, impacts of globalisation on inner-city neighbourhoods and urban housing policies (national and international).

## ACKNOWLEDGMENTS

In the Name of Allah; The Most Gracious; The Most Merciful

I thank Almighty God, Allah, for His mercy upon my family, my friends and me. It is only by the mercy of Allah that we receive true guidance and the ability to follow the straight path, which leads to success in this life and the Hereafter. I pray that this work will be of benefit to all.

This dissertation is dedicated to my wife **Rima**, who deserves an award for her patience, understanding and prayers during my Ph.D. studies and the writing of this dissertation; and to my daughters **Hana and Sara** for being very patient, supportive and understanding. I am also grateful to my parents, brothers, relatives and friends in Jordan and the United States who provided moral and spiritual support.

I wish to thank my supervisor, **Professor Robin Moore**, for his encouragement, guidance and support during my entire study. Professor Moore gave me the freedom to pursue this research, even though sometimes it didn't quite fit into the mainstream of on-going projects. In particular, I want to thank him for helping me select the research site and teaching me how to set up the field work, how to look at data for analysis and to find my voice in this research.

I also wish to express my gratitude to a group of people who gave their valuable advice and time that enriched my experience and knowledge in various aspects of research. First, I wish to mention **Professor Shishir Raval** who showed me how to organize my dissertation and approach the data analysis. His very helpful advice and crucial discussions helped me improve the quality of my research. He also helped me with endless advice on various topics in the area of data reduction and analysis. I also thank **Professor Deborah Tippet** for helping me with various topics of research, particularly case study research processes and for very useful discussions, which led to improvements in my knowledge of child development issues. I am grateful to **Professor Frank Smith**, who agreed to serve on my committee and provided me with useful advice during my initial struggles with proposal development and data collection methodology.

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It is my prayer that Allah will forgive us our ignorance and shortcomings and guide us to the path to Paradise. All praise is for Allah. May the peace and blessings of Allah be upon His last messenger Muhammad, his family, companions, and those following the true guidance.

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## PREFACE

This dissertation is based on qualitative research conducted in Amman, Jordan in 2003. It explores the lives and environments of children in the Al-Wihdat refugee camp and environs. The study is part of the *Growing Up in Cities* (GUIC) project financed by the United Nations Educational, Scientific and Cultural Organization (UNESCO) -Management of Social Transformations (MOST) programme. The research is based on the principles of children and youth participation in the development process as stated in the United Nations Convention on the Rights of the Child (UN, 1989):

### **Article 12**

*States Parties shall assure to the child who is capable of forming his or her own views the right to express those views freely in all matters affecting the child, the views of the child being given due weight in accordance with the age and maturity of the child.*

*For this purpose, the child shall in particular be provided the opportunity to be heard in any judicial and administrative proceedings affecting the child, either directly, or through a representative or an appropriate body, in a manner consistent with the procedural rules of national law.*

### **Article 13**

*The child shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of the child's choice.*

This research is the first official GUIC project in the Middle East and North Africa (MENA) region to be sponsored by the UNESCO/MOST/GUIC programme. With the encouragement of Professor Robin Moore, I developed interest in this area. I thought the project in Jordan would be important to introduce new knowledge regarding a region with a different social, religious and political ideology than those covered by previous GUIC projects. I was the principal researcher, assisted by two senior architecture students from the University of Jordan's College of Engineering and Dr. Omar Amireh from the same school, who provided valuable advice and peer review. The presence of Jordanian research assistants on my project earned the needed local trust and provided knowledge of the way of life of Jordanian people. The assistance of Ms. Rusaila Bazlamit and Ms. Hanaan Amro in the data collection phase of the study was instrumental in achieving success, especially regarding female participants. Their communication skills and friendly personalities helped them gain

trust and friendship of all the participating girls and their teachers. This produced a wealth of information, which would have been impossible for me to obtain.

To prepare for the dissertation fieldwork research, I enrolled in graduate courses at North Carolina State University in preparation for the research, including quantitative and qualitative research methods, ecological design and community design. In addition, I studied the GUIC research projects and methodology. Additional studies influenced by GUIC were researched as well. Familiarization with existing research provided me with a clear understanding of the process, methodology, restraints and limitations needed to conduct this research.

The dissertation consists of nine chapters, and they progress from the general to the particular.

**Chapter 1:** The GUIC projects are introduced and discussed, particularly their relevance and application in the context of MENA in general and Jordan in particular. In addition, the problem statement and purpose of the study and research questions are presented to articulate the need for this project. The research questions are intended to answer the gaps in knowledge as revealed by a review of the existing literature in this field.

**Chapter 2:** Background information about the MENA region and Jordan are presented. The chapter also touches upon the opportunities and constraints for child development in the region in general, and Jordan in particular. Here the focus is on socio-economic, urban environment and cultural issues related to children's use of urban space in Jordanian society.

**Chapter 3:** Presents an interdisciplinary literature review that brings into focus the main concepts of children's environments from reshaping the physical environment to improving the quality of life for children and youth. The concept of place and place meaning for children is introduced, as this is a core concept in design research that links socio-cultural and physical environmental issues. Finally, children's perceptions and views within the framework of the *Growing Up in Cities* model are discussed.

**Chapter 4:** This chapter introduces the research design and methodology used in this dissertation. In this chapter, the research design is discussed beginning with population,

samples, and settings for the study. The methods used to answer the research question are also discussed here.

**Chapter 5:** The context of the case study in Amman, Jordan is introduced. The chapter's aim is to provide historical background of the city of Amman and the study area: Al-Wihdat Refugee Camp and environs. Because the case study area is located in Amman, this chapter outlines the growth and layout of the city, and covers the general economic and housing conditions and the recent rapid population growth.

**Chapter 6:** Outlines the data collection procedures. The chapter discusses and explains each research instrument used to gather data, the process of documenting the data, and narrative writing.

**Chapter 7:** Presents the analysis model, including two category sets: set (a) is a collection of favourite place and special place quality themes, mainly composed of availability of and access to a diverse range of places around the home. Also included is the habitual range of children's outdoor activities that allowed them to satisfy their physical, emotional and social needs. Set (b) includes two background themes: perceived social threat and fear that define the territorial range of children in this context. The overall picture (constructed by the different categories of GUIC, place quality and background themes) is that of the socio-cultural and environmental influences on children's networks, outdoor leisure and play preferences, and children's public behaviour.

**Chapter 8:** Discusses the emerging patterns and themes in the qualitative data. In addition, the chapter reflects the new possibilities of future GUIC projects, particularly those based on the cultural and religious dimensions of this research. The chapter concludes with a reflection on the issues highlighted by the methods used, such as differences and similarities among boys' and girls' opinions and perceptions of the outdoor environment.

**Chapter 9:** This concluding chapter reflects on the outcome of the research and brings forward the recommendations and policy design implications.

Finally, the intent of this dissertation is to provide the GUIC programme with a social, religious, and political perspective that has not been explored until now. Of particular

importance is the need to bring children's participation in decision-making processes to the forefront of national and regional debates.

## ABBREVIATIONS FOUND IN TEXT

**CRC:** Convention on the Rights of the Child

**DOS:** Department of Statistics (The Hashemite Kingdom of Jordan)

**DPA:** Department of Palestinian Affairs (The Hashemite Kingdom of Jordan)

**GUIC:** Growing Up in Cities

**MENA:** Middle East and North Africa

**MOST:** Management of Social Transformations

**NGO:** Non-Governmental Organization

**UNDP:** United Nations Development Programme

**UNESCO:** United Nations Educational, Scientific and Cultural Organization

**UN-ESCWA:** United Nations Economic and Social Commission for Western Asia

**UNICEF:** United Nations Children's Fund. Formerly known as the United Nations International Children's Emergency Fund

**UNPD:** United Nations Population Division

**UNRWA:** United Nations Relief and Works Agency

**USCR:** United States Committee for Refugees

## CHAPTER 1: THE FOCUS OF THE CASE STUDY AND ITS CONTEXT

### 1.1 Introduction

This dissertation examines children's experiences of growing up in urban environments based on research conducted in Amman, Jordan. This dissertation represents the most recent addition to the *Growing Up in Cities* (GUIC) programme and was preceded by three workshops and an international conference in Amman, Jordan, during 2002 and 2003. It is a replication and extension of a project conducted by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in the early seventies, and later reported in a book published by Kevin Lynch (Lynch, 1977), titled: *Growing Up in Cities*. During the 1990s, the project was successfully revived in eight cities: Buenos Aires, Argentina; Melbourne, Australia; Northampton, UK; Bangalore, India; Trondheim, Norway; Warsaw, Poland; Johannesburg, South Africa; and Oakland, California, USA. In each city, the research focused on low-income areas where children were most dependent on the resources of their immediate environment.

Interestingly, the eight-country GUIC programme has revealed similar constants in terms of the criteria by which children critiqued their environments as either satisfying their needs or failing them. All of the features that defined good environments in which to grow up in Lynch's original study remained in the GUIC revival. Criteria included: (1) the feeling of social integration and acceptance; (2) varied, interesting activity settings; (3) peer gathering places; (4) a general sense of safety and freedom of movement; (5) a cohesive community identity; (6) a community tradition of self-help and progressive improvement; and, where available, (7) green areas for informal play, exploration, and organised sports. Given a greater variety of locations in the 1990s including the extreme deprivation of a squatter camp in inner-city Johannesburg, two additional criteria were added. These were: (1) provision for basic needs like water and sewerage, and (2) secure land tenure that enabled families to invest in a progressive upgrading of their homes without fear of eviction.

As important as a project on children's perceptions and use of public space was in the early 1970s, when global discussions on the state of the environment were being played out in international forums, it is now even more timely 27 years later in the face of escalating trends

in urbanization, globalization and migration that are changing the micro-environments of urban communities.

## 1.2 Statement of the Problem

Many communities in which children are growing up today are rapidly becoming urbanised. In the industrialized world, the majority of the population already lives in urban settings. At the beginning of the 21<sup>st</sup> century, 44 percent of the world's children under age 15 lived in the urban agglomerations in Asia and Latin America (UNPD, 2000). Soon, more than half of the world's population will inhabit cities. As humankind approaches this historic turning point, meeting the needs of children has become a leading issue facing contemporary society.

The Middle East region not only has a high population growth, it also has high urbanisation rates<sup>1</sup>. According to United Nations Population Division (UNPD, 2000), six out of every ten children in developing countries will live in cities, and more than half of them will be living in poverty by the year 2025. The future of the world is unavoidably urban, and the well-being of our children will continue to be inextricably tied to that of the cities in which they live.

In the Middle East and North Africa (MENA) region<sup>2</sup>, the urban population is projected to reach 260 million (66 percent) by 2020 of its estimated total population of 395 million (UNPD, 2000). The Arab States comprise a great diversity of socioeconomic and human settlement profiles and characteristics: from least developed to developing oil rich countries; conflict and post-conflict situations; from very open economies to economic isolation; and highly urbanized to predominantly rural contexts. The region's considerable internal disparities are reflected in the conditions in its cities and have resulted in widely varying domestic needs and priorities: rehabilitation and reconstruction (Iraq, Lebanon, Palestine and Somalia); poverty alleviation (Egypt, Jordan, Syria, Morocco and Yemen); urban management and housing needs (Egypt, Jordan and Algeria); and capacity building (Gulf countries) (UNPD, 2000).

Growing up in an urban environment is no small challenge. Nonetheless, many children have shown astonishing resiliency as they cope with crowded urban environments and

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<sup>1</sup> Urbanisation rate can be defined as the rate of change in the proportion (or total number) of people living in urban areas, within a defined interval of time.

<sup>2</sup> The MENA countries are: Algeria, Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates, Palestine and Yemen. Some references add Djibouti, Israel and Malta to this list (<http://www.worldbank.org/html/schools/regions/mena.htm>).

adapt to existing conditions such as using streets as playgrounds due to the lack of designated play areas and green spaces. Children possess a unique capacity to derive enjoyment from even the smallest patches of garden, yard, street or school playground. However, countless children living in crowded urban environments are falling behind developmentally because of stress within the household, malnutrition, dangerous neighbourhoods, poor housing, and lack of privacy (McLoyd and Wilson, 1991). Living with such chronic stressors, low-material-resource urban children are put at various developmental risks. In the area of cognitive development, urban children are at increased risk for academic under-achievement indicated by being retained in grade more frequently (Lazar et al., 1982). They are also less likely to graduate from high school. Children failing to graduate are, in turn, at increased risk for juvenile delinquency (Ibid). In the areas of social and emotional development, negative urban living environment (e.g., poverty, overcrowding, noise, pollution) have been linked to relatively high rates of withdrawal, aggression, apathy, depression, and personality disorders (Belle, 1980). Although rapid urban evolution in the MENA region has not appeared to prompt rapid change in children's concepts, values, and beliefs, it has effected their behaviour, attitudes, and reactions (UNDP, 2000).

In Jordan, a wide range of human development indicators (e.g., health, education, welfare, municipalities and public agencies) are slow to meet the needs of children and their families. The accommodation of children within the urban infrastructure is particularly lacking (Benna, 2002). Jordanian children, like many other children in the MENA region and around the world, are facing the challenges of modern evolution, urbanization, technology, urban services, the job market and global economy (Alkadi and Kazaaber, 2002). At a time when more children are enjoying the profound transformation that modernization has brought, many of them, simultaneously, face the stress and uncertainties of such advancements. The impacts of change, with its positive and negative aspects, have undoubtedly affected children's social, cultural and mental evolution.

### **1.3 Purpose of the Study**

The purpose of this dissertation is twofold: (1) to understand if the existing outdoor spaces support or limit everyday children's activities and experiences' necessary for healthy development, within low-material resource neighbourhood in Amman, Jordan; and (2) to

reflect on whether the *Growing Up in Cities* (GUIC) participatory research model is appropriate and applicable to the MENA region. The dissertation focuses on the role of the physical environment in development, specifically those of neighbourhood outdoor spaces, in supporting the everyday activities that are important for normal, healthy development. Two components of children's everyday activity are important to understanding the role of neighbourhood spaces: (1) explorative outdoor environments, and (2) participatory, supportive social networks.

Neighbourhood public outdoor spaces are the site of so much of children's unstructured everyday activity; they are a particularly important setting in which to study children's physical exploration of the environment as well as the level of their community participation (Chawla, 2002; Hart, 1979; Moore, 1986). For children living in low-resource neighbourhoods, access to outdoor parks and playgrounds is often limited by busy streets and long distances, leaving children with only outdoor spaces adjacent to their residential building as play space options. Children generally prefer spending time outdoors (Matthews, 1992; Moore, 1986), usually in neighbourhood public outdoor spaces (Lynch, 1977; Sanoff and Dickerson, 1971). The purpose of this research is to investigate such spaces with children in a particular neighbourhood — Al-Wihdat Palestinian refugee camp and environs — in Amman, Jordan.

#### **1.4 Research Questions**

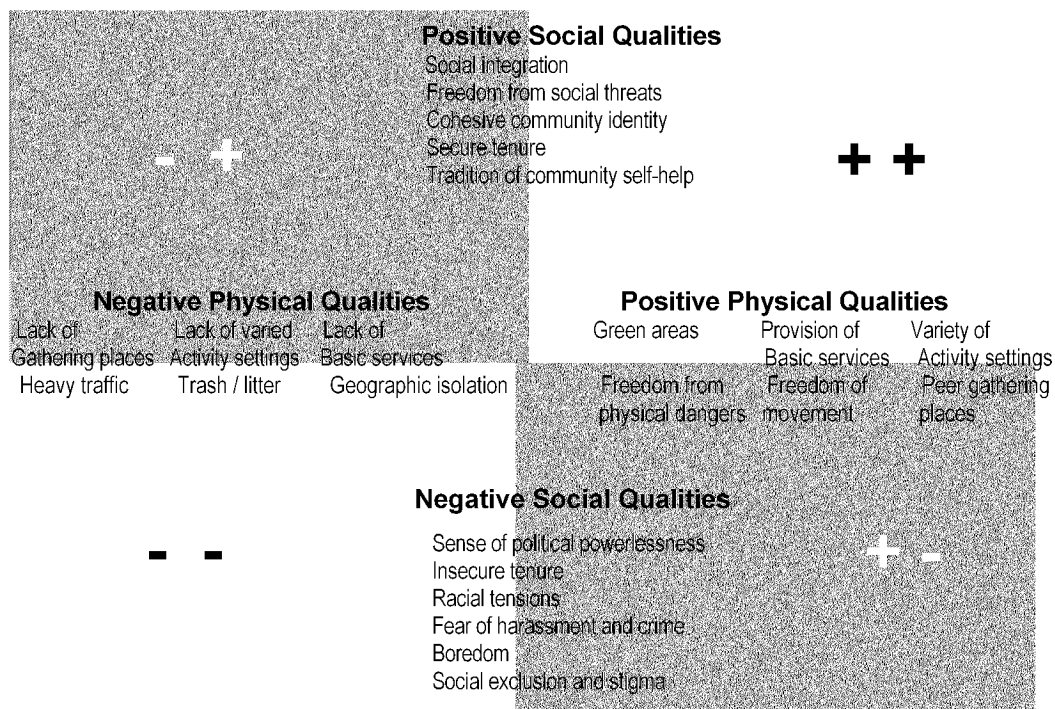
Urban neighbourhoods are the critical, but often ignored, natural childhood sites of work, socialization, and play. As characterized by the 1990 World Summit for Children (Chawla, 2002), urban neighbourhoods are viewed as the "third channel"<sup>3</sup> of informal education around the home and school. Here, children develop an awareness of the positive and negative aspects of their environment. In the residential community, children learn democratic processes by participating in collective efforts to improve their environment.

The results of *Growing Up in Cities* in the 1970s and 1990s produced a list of child-generated indicators of a 'good place' in which to grow up. In addition, these children's indicators included satisfaction or dissatisfaction with the places where they live, with respect to the socio-physical characteristics of their communities. These indicators ranged along positive

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<sup>3</sup> A representation of educational nodes: first channel being home and second channel being school and third channel being the community.

and negative poles of social and physical axes of place identity, as illustrated in Figure 1 (Chawla, 2002). Place experience itself, however, materialized in the quadrants where social and physical characteristics overlapped. Four negative versus positive poles of experience are apparent: (1) integration versus exclusion; (2) acceptance versus stigma; (3) security versus fear; and (4) engagement versus boredom. Some of the indicators pertinent to Jordanian research were tested, evaluated and compared with those indicators discovered by the proposed study.



**Figure 1:** Indicators of environmental quality from children’s perspectives based on the evaluation of 10-15 year olds in the 1970’s and 1990’s GUIC studies (Chawla, 2002).

Within the methodological framework of *Growing Up in Cities*, this dissertation raises the overarching question of whether and how existing outdoor spaces support or limit children’s everyday activities and experiences necessary for healthy development. While this is a globally relevant issue, it is particularly under-examined in the MENA region, which has the added dimension of non-Western cultural, social and political factors. The dissertation is set in an overcrowded refugee camp and surrounding neighbourhoods in Amman, Jordan.

To understand the children's current use of the outdoor environment and strategies used to overcome the restrictions imposed by existing conditions, the following research questions were addressed:

1. Which outdoor physical qualities affect children's outdoor social and physical activities and to what degree?
2. What specific qualities of these outdoor spaces support children's exploratory and participatory activities?

The difference between this and the previous GUIC projects is the social, cultural and political composition of the community as well as the physical settings. By replicating the *Growing Up in Cities* (GUIC) methodology, comparisons can be made with the previous studies. Further, this dissertation will help improve understanding of children's perceptions and use of the outdoor environment in low-material resource communities in Jordan, specifically Palestinian refugee camps and densely populated squatter settlements adjacent to the camp.

**CHAPTER TWO**  
**SCOPE OF GUIC IN THE MENA CONTEXT**

## **CHAPTER 2: SCOPE OF GUIC IN THE MENA CONTEXT**

### **2.1 Introduction**

The Middle East and North Africa region has long played an integral, if not pivotal, role in the history of human civilization. This is because three of the world's major religions (Judaism, Christianity, and Islam) originated in these regions. Some of the world's earliest and well-known cities flourished there; and universities thrived there long before they did in Europe. In modern times, MENA's politics, religion, and economics have been tied inextricably to global events. Economically, the MENA vast oil reserves (two-thirds of the world's known supplies) is a major reason for interest in the region. The influence of MENA, however, extends beyond its rich oil fields. It occupies a strategically important geographic position between Asia, Africa, and Europe, and has often been caught in a continuing struggle for land and influence that affects the entire world (Benna, 2002).

### **2.2 Childhood versus Urbanization in the MENA Region**

Nearly 60 percent of the populations residing in urban areas in the 20 MENA countries are under the age of 25 (WB, 2002). However, current planning practices in most of the region's municipalities seriously neglect the silent majority of children and young people. Yet this group is the most active, not only in making demands on urban resources and facilities, but also as potential consumers and suppliers. Benna (2002) drew attention to this neglect and proposed participatory partnerships among public, private and non-governmental organizations (NGOs) so as to advance more livable and sustainable urban environments.

Today, MENA's rapid population growth exacerbates the challenges that the region faces. For hundreds of years, the population of MENA hovered around 30 million, gradually rising to 60 million early in the 20th century (WB, 2002). However, in the second half of the 20th century, population growth has gained momentum. The population increased from around 100 million in 1950 to around 380 million in 2000 — an increase of 280 million people in 50 years (WB, 2002). During this period, the population of the MENA region increased 3.7 times more than any other major world region (Haub and Cornelius, 2001).

The implication of the region's high urbanization and youthful demographic profile raises two main issues (Benna, 2002; Haub and Cornelius, 2001): (1) water and environment, and (2) human development.

*Water and environmental issues:* Rapid population growth threatens MENA's sustainable development, as the region is faced with the most severe water shortage of any region in the world. In 2001, MENA had about 6.3 percent of the world's population but only 1.4 percent of the world's accessible fresh water (Benna, 2002). Between 1975 and 2001, population growth caused the available renewable fresh water resources per person in MENA to drop by more than half — from 3,300 to 1,500 cubic meters per person per year (Benna, 2002; Haub and Cornelius, 2001). The per capita fresh water resources available are projected to decline to around 1,000 cubic meters by 2025, the internationally recognized threshold for water scarcity (Haub and Cornelius, 2001). Future attempts to avert a water shortage require a sound water policy and strategy formulation with emphasis on an integrated approach to achieving simultaneous management of supply and demand. Many countries in the region have already taken steps to implement demand management programs including the application of proper economic criteria, (e.g., water pricing, water user associations, water market privatization, water legislation, and effective water policy). In all of these processes, the role of the silent majority of the water users' — children and young people — is critical.

Turning to environmental implications, it is clear that the rapid economic growth and urbanization processes in the last two decades have posed serious pressure on the region's limited natural resources and stressed its urban environment. Natural resource degradation mainly stems from the increased water scarcity and the decrease in water quality. This is partly caused by efforts to increase food self-sufficiency, as 88 percent of the region's water resources are allocated to agricultural use, compared to seven percent for domestic use (Benna, 2002; ESCWA, 2001; United-Nations, 2001). The aridity of the environment, deforestation, overgrazing and extension of cereal crops into rangeland have led to the deterioration of natural vegetation cover and accelerated desertification (Benna, 2002; ESCWA, 2001). In addition, major coastal cities are growing rapidly. Construction and pollution are placing severe stress on fragile coastal ecosystems; a problem

exacerbated by a lack of integrated coastal zone management. These trends can be reversed with the right approach to urban planning and development (ESCWA, 2001).

Urban environmental issues include air pollution, and solid and liquid waste management. An increase in the volume of personal vehicle use has greatly contributed to air quality degradation in major urban areas. Increased lead emissions are particularly harmful to children and young people. The management of solid and liquid wastes, both residential and industrial, is becoming a major challenge in a region with fragile ecosystems. There is also a need for appropriate technology to deal with hazardous waste. All these environmental problems have tremendous consequences for health, safety and the overall quality of life of urban residents in the region. These can be remedied with people-oriented planning approaches that balance the needs of both natural and human environments (Benna, 2002).

*Human development issues:* The main issues are creating employment that matches the growth of job seekers, a reduction in urban poverty, and improvement of the lives of refugees. MENA's working-age population has been growing rapidly without a corresponding increase in suitable job opportunities for young people. In 1996, for example, there were five Jordanians and eight Saudis under 15 years of age who were poised to enter the labor market for every Jordanian and Saudi age 45 to 60 nearing retirement (Benna, 2002; Haub and Cornelius, 2001; UNPD, 2000). Creating job opportunities will be a major challenge for governments (Benna, 2002).

Concerning urban poverty, there seems to be an increase in the affected population (WB, 1999; WB, 2002), thereby reducing the quality of urban life. According to the World Bank, poverty in the region, as defined by the percentage of people living below \$1 U.S. per day, declined slightly; however, the percentage living below \$2 U.S. per day increased from 25 percent to 30 percent of the population. Poverty reduction is strongly linked with economic growth. Past high growth has been accompanied by significant poverty reduction and sharp downturns have been accompanied by sharp increases in poverty (Haub and Cornelius, 2001; WB, 1999).

Finally, the refugee issue is one of the most intractable problems of the region. MENA, home to more than 6 million refugees, has the largest refugee population in the world (UNRWA, 1994; USCR, 2001). Palestinian refugees are the largest and oldest refugee

population in the world and recent global events suggest that solving this humanitarian crisis could enhance global stability (USCR, 2001).

### **2.2.1 Changing Social Relations and Values**

Relations between men and women, along with all other aspects of Jordanian society and other societies in the MENA region, have begun to change as people adopt values, attitudes, and customs vastly different from long-standing traditions. As new ideas reach all sectors of society, new perceptions and practices have begun to appear.

Increased social and physical mobility have undermined familial ties and the values that subordinated the individual to the kin group. Individualism has been growing, especially among the educated young. Many young people prefer to set up their own household at marriage rather than live with their parents (Alkadi and Kazaaber, 2002). Labour migration has had a considerable impact on family structure and relations (Marshy, 1999). In some cases, where men migrate without their families, their wives and children see the husband only once or twice a year (Marshy, 1999). When the wife and children live alone, it can lead to increased responsibility and autonomy for women (Alkadi and Kazaaber, 2002). In addition, the children in such families grow up without knowing their fathers well. However, when the wife and children live with the migrant's extended family, they are usually under the authority of her husband's family (Alkadi and Kazaaber, 2002).

Some of the most marked social changes have affected women's roles. In urban areas, young women have begun to demand greater freedom and equality than in the past, although traditional practices still broadly govern their lives. Since the 1960s, women have become more active outside the home (Alkadi and Kazaaber, 2002).

In the 1980s, girls' school enrolment was nearly parallel to that of boys, and female graduates entered the work force in increasing numbers (Alkadi and Kazaaber, 2002). Girls who attended school are not as closely chaperoned as they formerly were, although they still rarely go out with friends in the evening (Alkadi and Kazaaber, 2002). Educated women tend to marry later, often after working for several years. The average age of marriage for women rose from the mid-teens to the early twenties, and the average age for males was between twenty-six and twenty-eight years (Alkadi and Kazaaber, 2002). The narrowing age

gap between marriage partners signified a changing concept of the conjugal unit and its relation to the larger family group. Companionship and notions of romantic love<sup>4</sup> now play a greater role in marital arrangements than previously. Although marriages are still largely a family affair, the relationship between man and wife has assumed increasing significance. To some, this change reflects a dilution in the strength of families as social units with corporate interests subordinating those of the individual (UNDP, 2000).

By the late 1980s, some observers noted that couples tended to want fewer children (Benna, 2002). This trend appears to parallel the changes in women's position in society and shifts in the political economy, which had implications for family structure, relations, and values. Women's education and employment patterns means that child-rearing is no longer the only role open to women (Benna, 2002). The need for dual-income households means that women will now have less time to devote to child-rearing. In the transition from an agricultural and pastoral society to one based on services, where literacy is necessary, children require longer periods of education and thus are dependent for extended periods upon their families. Large families are no longer as economically feasible or desirable as in the past (Benna, 2002).

The spread of the nuclear household has encouraged the detachment of the individual from the demands of the extended family. At the same time, social security has lessened the dependence of the aged on their children and other relatives. The functions of the extended family, however, have not necessarily diminished. Economic upheavals and a weak infrastructure for state social services have obligated Jordanians to continue to rely upon the extended family, even if many of its members reside in nuclear units (UNDP, 2000).

Inter-generational conflicts, which observers believe to be increasing, strain family relations when young people attempt to adopt standards of behaviour different from those of their parents. Modern, secular education, with its greater emphasis on utility and efficiency, has tended to undermine respect for the wisdom of age and the rightness of tradition. Male wage

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<sup>4</sup> In this age of globalization, bride and groom rejecting the practises of pre-arranged marriages and demanding a greater say in their partner to ensure compatibility. Islam encourages men and women to know each other to develop an understanding of each other and compatibility. Islam permit male and female after the engagement to visit and meet with each other in the present of their families (never alone) to become familiars with each other personality and work together to develop an understanding of their new life.

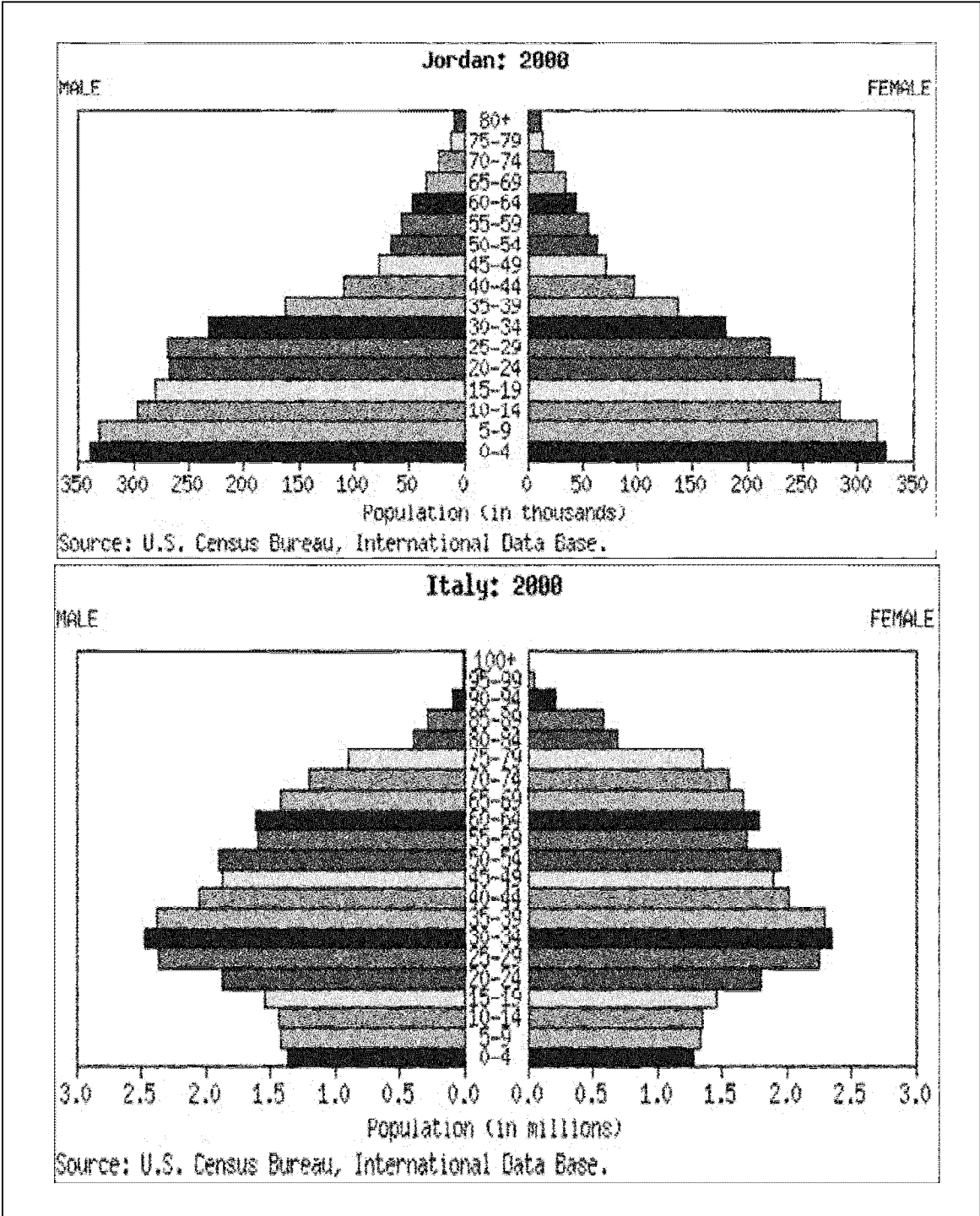
earners also are less dependent on older males for access to resources such as land and dowry.

### **2.2.2 Demographic Trends and Challenges**

As illustrated by the Jordanian population pyramid (Figure 1), about 40 percent of the country's population is under age 15 and nearly two-thirds is under 25 years. Over the next 15 years, these children and adolescents will reach their childbearing years and enter the job market. In comparison, the Italian population pyramid indicates that 15 percent of the country's population is under 25 years and about two-thirds are between the ages of 25 and 60. It is clear from Figure 1 that Jordan's population is very young and Italy's is aging. In most MENA countries, the number of women of childbearing age (15 to 49 years) will at least double in the next 30 years (WB, 2002). Providing quality reproductive health services to a growing number of women is a challenge and may hold the key to a controlled population growth. Additionally, societies and economies of these countries are undergoing significant changes with each new generation, and experiencing new challenges due to the fast-paced development of the information age and world economy. Thus, the skills needed by youth are demanding and continuously changing.

The region's economically dependent population, that is, the ratio of the economically inactive to economically active population, is the highest in the world (WB, 2002). Because of its young age structure and the low participation level of the female labor force, the proportion of the population that is economically active is lower in MENA than in all other global regions (Haub and Cornelius, 2001).

With the increase in the dependent population comes significant social and demographic changes including a decline in the fertility rate; rising levels of urbanization and migration; and changing gender roles. These changes have affected the size of the family, favoring a more nuclear pattern of household formation. Nevertheless, the importance of the family has not been reduced, nor has the role it plays in providing a safety net for its members, including care and support for the elderly and family members in need, and remittances from overseas employment (WB, 2002).



**Figure 2:** Comparison between Jordanian and Italian population pyramid by sex and age for the year 2000

### **2.3 Jordan in the Global Context**

According to Human Development Reports (UNPD, 2000), official Jordanian statistics estimated a 2002 population of 5,307,470. The annual growth rate is between 3.6 and 4 percent. United Nations statistics projected a peak in the annual growth rate at 4.11 percent in the period from 1990 to 1995, followed by a steady decline to 2.88 percent in 2020 (UN, 2001; UNDP, 2000).

Rapid development in the provision of health care services during the 1970s and 1980s has led to a decline in the overall death rate from 17 per 1,000 populations in 1965 to 7 per 1,000 population by 1986 (Haub and Cornelius, 2001). During the same period, the infant mortality rate, a major indicator of a country's development and health status, dropped from 115 to 46 per 1,000 live births (Haub and Cornelius, 2001). In 1986, life expectancy at birth was sixty-five years (sixty-three for males and sixty-seven for females). The lowered death rate, a high birth rate, and lowered infant mortality rate combined to generate a major demographic shift in the late 1980s. By the end of the decade, more than half Jordan's population was below fifteen years of age. This situation has strained the country's already limited resources, and employment has become increasingly difficult to provide (UNPD, 2000).

Accurate demographic figures are difficult to compile because of the substantial number of Jordanians residing and working abroad and the continuous movement of West Bank Palestinians with Jordanian passports between the East and West Banks. According to the United Nations Relief and Works Agency (UNRWA) for Palestine Refugees in the Near East, about 224,000 people were admitted to UNRWA refugee camps in Jordan immediately after the June 1967 war. In 1986, UNRWA cited 826,128 registered refugees living on the East Bank, of whom about 205,000 were living in refugee camps (DPA, 2000).

The exact number of Palestinians living in Jordan is unknown. Estimates usually range from 60 to 70 percent of the total population. Official government statistics do not distinguish between East Bank and West Bank Jordanians.

According to the Human Development Report (UNPD, 2000), the overall population density for the Jordan in 1987 was established at about thirty persons per square kilometre, although there was wide regional variation and the rate of urbanization was high. East of Al

Mafraq, an area encompassing almost two-thirds of the country, no towns had a population of more than 10,000 (UNPD, 2000). The bulk of Jordan's population was living in the governorate of Amman and the smaller urban areas of Irbid, Al-Salt, and Al-Zarqa. The 1987 population of eight governorates ranged from 1,203,000 in Amman to 101,000 in Ma'an Governorate (UNPD, 2000). According to World Bank (2002) figures, about 70 percent of the population lives in urban areas. More than one-third of the total population of Jordan resides in Amman. If the urbanization annual rate of 4 to 5 percent continues, it is estimated that by the year 2020, nearly two-thirds of the population could be living in Amman, Al-Zarqa, Irbid, Al-Salt, and Al-Ramtha (UNPD, 2000).

Refugee camps emerged in the wake of the Arab-Israeli War of 1948. The original refugee settlements were tent camps, later replaced by rows of galvanized steel, aluminium, and asbestos shelters. There were initially five refugee camps in Jordan: Irbid, Al-Zarqa, Amman New (Al Wihdat), Al Karamah (later dismantled), and Jabal al Hussein. However, six additional emergency camps were established for refugees from the June 1967 War: Al Hussain, Suf, Jarash, Baqah, Talbiyah, and Marka. Most of the camps are situated near major cities in the northwest (DPA, 2000).

The following section will reflect, in some detail, issues related to youth in Jordan: human development, social integration, urban environment, outdoor spaces, and culture. The information presented here is based in part on my personal experience as a Jordanian having once lived in that society and in part on other sources of information (Al-Khalaileh, 2004<sup>5</sup>; Al-Khalaileh and Moore<sup>6</sup>, 2002; UNDP, 2000).

### **2.3.1 Jordanian Youth and Human Development**

Youth in developing countries are 15 times more likely to die before the age of five when compared to their counterparts in developed countries. Those in the least developed

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<sup>5</sup> These were forums initiated by the author from 2001 to 2004. Participants were groups of Jordanian youth, professionals, and educators from around the globe collaborating to act as mentors to young Jordanians. The forums were in the form of posted messages and a community chat room. There were no specific numbers of participants or lengths of sessions. The purpose was to heighten awareness about Jordanian youth issues in the global economy.

<sup>6</sup> In February and October 2003, the author and Professor Robin Moore conducted three workshops with youth, NGOs and local government officials in Jordan. One workshop was held in the city of Aqaba and two workshops were held in the city of Amman, Jordan. The results of the workshops were compiled by the author in a hitherto unpublished report.

countries are 27 times more likely to do so (UNICEF, 2001). However, as illustrated by the UN Children's Fund (2001), there is considerable variation in life expectancy among developing countries. Moreover, boys and girls do not experience similar opportunities to become productive citizens, as is evident in the differentials in school enrolment rates (UNICEF, 2001).

Most Jordanian children and adolescents have reasonable levels of access<sup>7</sup> to basic health care, education, shelter, and other human services provided free of charge by the government for all citizens regardless of income, and they enjoy life choices that are much wider than those of any previous generation. Yet, when adolescents are given a voice, they tend to stress negative attitudes related to their lack of involvement in the process of decision making about the issues of greatest concern to them (Al-Khalaileh, 2001-2004; Al-Khalaileh and Moore, 2002; UNDP, 2000).

Profound economic, political and social changes in a predominantly urban society offer Jordanian youth tremendous new opportunities and challenges; they also compound the potential for stress and confusion that all youth experience as they make the transition from adolescence to adulthood. Social and economic distress is evidenced by signs such as high school dropout or repetition rates, child labour, crime, family violence, organized street commerce, drug and alcohol abuse, and other phenomena (UNDP 2000). These phenomena are seen as signs that some young people need a means of escaping life's stresses and uncertainties (Al-Khalaileh, 2001-2004; Al-Khalaileh and Moore, 2002; UNDP, 2000).

### **2.3.2 Youth and the Global Social Economy**

During the 2002 and 2003 Amman and Aqaba workshops, young people expressed a strong desire to participate in responsible decision-making at various societal levels and to end what many of them perceive to be a marginal role in society. To do so, young Jordanians need increased opportunities to make their voices heard in society and greater choices in their education, training, work, cultural, and leisure activities. Children's engagement in issues of public physical environment can provide an appropriate learning vehicle for

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<sup>7</sup> The government of Jordan under the Jordanian constitution guarantees every citizen free access and use of basic services such as education and healthcare in government run facilities.

exercising democratic skill-building, a sense of belonging, and a feeling of identity (Chawla, 1992-a; Chawla, 1992-b).

Knowledgeable professionals and government officials in Jordan agree that the majority of young people, in both urban and rural areas enjoy a warm family environment, experience satisfactory schooling, and make a relatively smooth entry into young adulthood — starting their own families, entering the labour market, and assuming adult rights and responsibilities (UNDP, 2000). At the same time, contemporary Jordanian youth live in a dynamic culture of fast changing values and identities. The identity and sense of belonging of Jordanian youth are still firmly rooted in traditional social structures (UNDP, 2000).

Simultaneously, youth are exposed to global, multicultural influences, even within their own homes. Educators and counsellors have identified a priority need for youth to receive guidance in processing often-conflicting information and lifestyle models, but such help is not widely available through formal institutions (e.g., schools, local government and national economic development programs) or informal institutions (e.g., clubs, community centres, and NGO's social and economic development training programmes) (UNDP, 2000).

Signs of social stress and alienation have started to appear among young Jordanians. According to the observations of educators, sociologists, and youth workers, some young people express identity confusion, a sense of insecurity, and concerns about the future (Al-Khalaileh, 2001-2004). The following examples echo these feelings:

*I don't know why we are studying hard...if you study hard or don't study at all is the same. We all going to be in the same miserable place with no jobs and poor (18-year-old male, Internet Forum, 2003).*

*Watching my ten brothers and sisters and my 57-year-old unemployed father, I get dippers. I dropped out of school when I was in sixth grade because I can't afford school, I didn't want to study...it is more important to me to help my family survive (21- year-old male, Internet Forum, 2003).*

Jordanian sociologists now speak routinely of 'value disorientation' among the young (UNDP, 2000). The young themselves express an interest in learning from and adapting the technological developments of the West, but they do not wish to fully adopt Western lifestyles (UNDP, 2000).

Young Jordanians' sense of belonging and support stems from their identification with family, tribe, religion, profession and country. In most cases, though, these institutions,

along with schools and workplaces, perpetuate patriarchal socialization of the young; this often delays young Jordanians' development of confidence, self-esteem, and a sense of autonomy (UNDP, 2000). Many young people feel caught between a traditional, communal social value system that promotes conformity and obedience, and a modern (Western), individualistic lifestyle that promotes personal initiative, creativity, and self-assertion (Al-Khalaileh, 2001-2004; Al-Khalaileh and Moore, 2002; UNDP, 2000). The young also feel that they have few channels for self-expression that could help them overcome this dilemma, or sources of assistance and guidance that could help them deal with it (UNDP, 2000).

### **2.3.3 Youth and the Urban Environment**

Within low-material resource communities, overcrowding, poverty, poor-housing conditions and large families lead to neglect of children. Parents do not have time to pay attention to the needs of individual children. The pressure to procure daily bread marginalizes children and can push sons to work too early or while still in school. Both at home and at school, the problems of children and adolescents are left unattended. This is most apparent among adolescent girls who complain there is no one "who listens or cares; instead everyone yells" (Al-Khalaileh, 2001-2004).

While boys, and to a lesser extent girls, can be seen playing in the outdoors, the reality is that public areas are male-dominated spaces. For young girls, the spaces in school playgrounds are places where they socialize with their peer groups and talk about their problems with friends. Even then, if they stay too long after school in the playground, they are literally 'kicked out' and ordered to go home. This generates a sense of frustration, fear and anxiety, especially among girls with a difficult home life (UNDP, 2000).

### **2.3.4 The Use of Outdoor Spaces and Cultural Factors**

Although boys and girls in their preschool years play freely with one another, the situation is different for older children and teenagers in Jordan, particularly in low-material resource neighbourhoods.

In Jordan, 90 percent of the population is Muslim (UNDP, 2000). Islam calls for separation of males and females in public and places of social interaction. In this relatively conservative society, males and females are discouraged from playing together beginning in their mid-

childhood years (8-10 years of age) and, instead, are encouraged to interact with same-sex peers. Girls up to eight or nine years of age may be seen playing near their homes. Beyond that age, they are confined indoors and usually carry out domestic responsibilities around the house, including house cleaning and caring for their younger sisters and brothers. Many girls do not leave their neighbourhood except to visit relatives who happen to live outside. One of the major complaints made by girls is that the boys are 'always in the streets' and that their parents do not allow girls to play outside, because there are boys and boys bother them if they walk in the streets (Al-Khalaileh, 2001-2004; Al-Khalaileh and Moore, 2002; UNDP, 2000). Consequently, girls ask the question, "Where can we go? Where can we play?" Their only option is to undertake leisure activities either indoors, or in private and/or semi-private outdoor spaces.

In sharp contrast, streets are the main play area for games such as soccer for boys. Many times, these are areas where the garbage bins are collected and where children play barefoot. This situation leads to health problems. Public space becomes a contested area and boys often fight with one another over who has the right to play in a particular place. Parents complain that street playing pushes their children into delinquent behaviour, such as smoking and in rare cases, drug abuse. After-school street gatherings imply a lack of other activities in which growing boys can participate, including sport, cultural or social activities, thus limiting their potential. Community responsibility is usually fostered for adolescents in youth centres, at school and in volunteer work, but these are absent or too scarce to have a substantial impact on the majority of youth (UNDP, 2000).

By the teen years, males are more likely to socialize with their friends in the street and public places. It is commonplace in Jordan for adult males to sit and socialize at doorsteps and along sidewalks, using the street space close to their homes.

### **2.3.5 Youth Concerns**

Whenever young Jordanians discuss issues of importance to them, they consistently express a range of common concerns and hopes, regardless of their age, education level, location, religion, or ethnic or geographical origin. The Internet workshops that were held in Jordan and Jordan Human Development Report identified the following typical concerns among the youth:

- A lack of sports facilities and leisure activity centres.

- A contradiction between youth's perceptions of their own roles and identities, and the society's perceptions of their place in it and in the family.
- A lack of communication between young men and women, which negatively affects their understanding of each other.
- Unequal educational opportunities and discrimination, particularly in university admissions.
- Economic pressures on youth, especially on young men; a high rate of expatriate labour (from Egypt, Iraq, Syria, Pakistan and India) working in oil rich countries appears to have reduced job opportunities for Jordanians; limited extracurricular programs that link education with employment; and, a serious lack of vocational training centres, combined with society's under-appreciation of vocational professions.
- Anxiety resulting from the secondary school (*tawjihi*) exam as the decisive factor that determines a student's future, and school curricula that are not relevant to market job demands or other aspects of Jordanian life.
- Shortage of social rehabilitation and counselling centres for young men and women.
- Restrictions on girls' involvement in decision-making related to all aspects of their lives.
- Limited political involvement of youth.
- Negative peer pressures on youth, reflected in phenomena such as smoking and drug use.

Adolescent females, more so than males, tend to describe a gap between their own self-image and that which society has of them, while male's self-image usually corresponds to that which society has of them. Many young people say they feel bored, empty, depressed, or constrained by social norms, with few outlets for their energy. They stress the lack of opportunities to express themselves, and an absence of adults who understand their needs, listen to them, or talk with them about their concerns (Al-Khalaileh, 2001-2004; Al-Khalaileh and Moore, 2002; UNDP, 2000).

## **2.4 Summary**

Successful normative youth development requires intact nuclear and extended families, supportive communities, realistic perceptions of opportunities, and predictable behaviour and experiences. However, in many MENA countries, past legacies, misinterpretation of religious teachings and mixing them with culture practices, and drastic socio-economic changes accompanying globalisation have eroded these resources (Tienda and Wilson,

2002). Greater numbers of children are growing up in poor, parent-absent households without the support of extended families in areas where the growth of social capital is hindered by the lack of material resources.

As is true anywhere in the world, youth represent a source of cultural innovation and vitality that is seldom acknowledged, much less nurtured. Unfortunately, once transformed, society often ignores the condition of its youth and confines them to a marginalized status that undervalues them. As young people grow up, their integration into society is a prerequisite for their normative development and well-being.

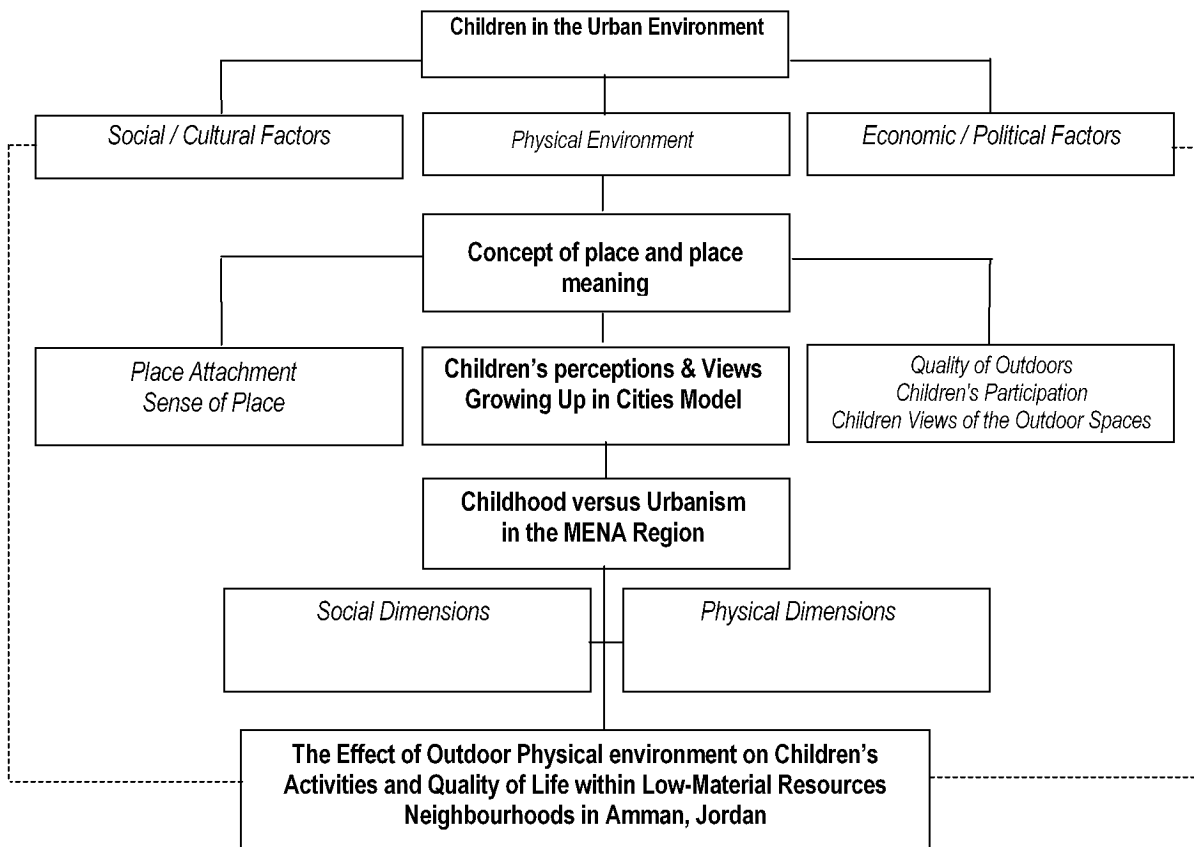
The gap between youth and the older generation creates tension and marginalizes youth involvement and participation in the community. Youth concerns are not much different from those of their counterparts in any other countries around the world. However, what makes their concerns unique is the intertwining of culture and religion. This creates confusion for many young people because they feel caught between a traditional, communal social value system that promotes conformity and obedience, and a modern (Western), individualistic lifestyle that promotes personal initiative, creativity, and self-assertion.

**CHAPTER THREE**  
**CONCEPTUAL FRAMEWORK**

## CHAPTER 3: CONCEPTUAL FRAMEWORK

### 3.1 Review of Relevant Literature

This section reviews the relevant literature related to: (1) children in the urban environment; (2) the concept of place and place meaning; (3) children's perceptions and views as documented through *Growing Up in Cities* model. A conceptual framework describing organization of review of literature is found in (Figure 3).



**Figure 3:** Conceptual framework

#### 3.1.1 Children and the Urban Environment

In the past 25 years, researchers have gained better knowledge of children's understanding of their environment. While topics and methodologies have varied widely, studies have focused on what children know about their environment; how they acquire their knowledge;

and what they like and use (Hart, 1979; Moore, 1986; Moore and Young, 1978). Psychologists, geographers, planners, and designers alike have studied such areas as cognitive mapping in children (Lynch, 1977; Matthews, 1980; Matthews, 1984); children's environmental exploration (Matthews, 1987); and children's wayfinding skills (Darvizeh and Spencer, 1984; Gale et al., 1990; Golledge et al., 1985). While these studies represent significant contributions, they often neglect children's attitudes and feelings about their environment. A child's feelings, beliefs, attitudes and values affect his or her behaviour (Patton, 1990). An exception is the work, *Growing Up in an Urbanising World* (Chawla, 2002). This book presents a collection of work from eight countries that focused on the importance of understanding children's feelings and attitudes about their environment. The volume also stressed how to learn from children themselves; how they evaluate their places; and how they would like to live in the future. This dialogue was used to bring children and adults together in participatory programmes to improve the urban environment (Chawla, 2002). The experience and the processes used in the eight GUIC projects were developed in 2002 into a manual for participation (*Creating Better Cities with Children and Youth* by David Driskell in collaboration with members of the GUIC research team). The manual advises on how to conceptualise structure and facilitate the participation of children in the community development process. Driskell described the goal of the manual in the Amman workshop as a road map to engage children in making improvements to the places where they live. One of the most effective strategies for creating better neighbourhoods and places for youth is through participation. This can help children listen to one another; respect differences of opinion; find common ground; develop capacities for critical thinking, evaluation and reflection; support processes of discovery, awareness building and collective problem solving; and help them develop the knowledge and skills necessary for making a difference in their world (Driskell, 2002).

Researchers espousing a developmental sequence of spatial information acquisition generally base their work on the theories of Piaget, who saw spatial understanding as passing through several separate stages during childhood. During this developmental sequence, children understand increasingly complex principles of spatial relations, maturing from an understanding of topological principles such as closeness, separation and closure,

to a cognisance<sup>8</sup> of projective space and later of Euclidean principles<sup>9</sup> (Matthews, 1992; Moore, 1976).

Piaget focused on small-scale models and small objects. However, Hart and Moore (1973) attempted to connect Piaget's ideas to children's understanding of large-scale environments. They offered a model in which a child's understanding of his or her surroundings becomes less egocentric and concrete and increasingly abstract with age. Hart and Moore (1973) believed that until the age of five or six, children tend to view the world egocentrically, considering the environment only as it relates to them. In addition, they found that, beginning around age three, a child's self-centred orientation is gradually replaced by a fixed reference system in which the environment is thought of in relation to important landmarks, such as the child's house or school. As children approach the age of ten or eleven, their reference system becomes more abstract and they view the environment in terms of coordinated reference systems.

While Hart and Moore's (1973) model has not been explicitly applied to environmental preference studies, it suggests the need to examine the attitudes of children toward their surroundings in a developmental context. It is reasonable to assume that if children's configurable knowledge of the environment changes as they grow their attitude towards that environment might also change. Thus, environmental preferences should be examined in a developmental context.

Garling and Golledge (1989) explained that children receive information from the outdoor environment. The information they receive is employed in intellectual development. In every society, children receive information that is life enhancing, provides a range of choices and experiences, and is stimulating and challenging. This has implications in the provision of texture, colour, sound, and aesthetics.

The outdoor environment provides settings that in many traditional societies have served the full range of normal childhood development and the various types of play that enable that

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<sup>8</sup> The range of mental observation or awareness

<sup>9</sup> Pertaining to the principles of Euclid's geometry

development (Moore and Young 1978). Physical development is associated with large-muscle or gross-motor activities, such as running, jumping, and climbing. Through these activities, children come to know their bodies; to be aware of their physical abilities and limitations (Millar, 1974); and to develop a sense of mastery or self-esteem by (learning and exercising) particular skills. Outdoor activities are an essential experience of childhood (Francis, 1985; Moore, 1986). Such activities affect the personality, character, and ability of the child (Michelson and Roberts, 1979). The importance of outdoor activities lies in the central role that activity occupies in the physical, cognitive, social, and emotional development of the child. They offer opportunities for physical exercise, sensory pleasure, testing and improving skills, emotional release, trying out autonomy and self-reliance, experimenting (learning to give and take), developing conversational and organizational skills, cognitive development, and adventure and exploration (Francis, 1985; Moore, 1986).

Since outdoor activity is so crucial to a child's development, it should be integral part of child development education (Moore and Young 1978). What makes a good place for children to play? Children need places free from hazards, such as excess traffic, yet diverse in character with different kinds of geography, surfaces and adequate space to play all the outdoor games in which children like to engage. It is a location where children can hide and build things. Children should be able to do these things without disturbing adults. Outdoor space is a learning environment (Moore and Young 1978). Children are attracted by nature. If there are people with whom they can safely meet, they can learn about social life. Learning about the urban context depends on children's freedom to roam safely in their neighbourhood away from vehicular traffic and other threats, such as kidnapping, drug dealing, bullying, and other crimes.

The inferences from these studies demonstrate that neighbourhood public outdoor settings may be an especially significant context in which to study physical development because creative activities are more likely in outdoor spaces than in indoor spaces. Neighbourhood public outdoor spaces may also be a particularly significant context in which to study children's social development. It is outdoors, rather than indoors, that children find interaction, communications, and associate with each other and with adults to develop their social skills (Chawla, 2002; Hart, 1979; Moore, 1986).

### 3.1.2 Concept of Place and Place Meaning

Places refer to areas such as streets, alleys, schools, open fields, playgrounds and other public centres such as mosques and community centres. In this respect, 'place' is a rich psychological concept, yet one which has been relatively neglected in the psychological literature. Canter (1977) drew together a number of psychological studies. "Place" is an experiential entity referring to specific physical settings and having three main components: "activities, evaluative conceptualisations and physical properties" (Canter, 1986). Sime (1995) pointed out that the emotional bond to place, which is central to the phenomenologists' and designers' use of the term, 'sense of place', does not feature as an essential component of Canter's 'model'. Nevertheless, Sime recognized that Canter's particular contribution to the development of a model of place is that he emphasized the necessity of understanding the perspective of the users. Groat (1984) pointed out that the concept of place, as outlined by Canter, may serve to integrate both the phenomenological and empirical approaches in environmental psychology.

Three psychological processes described by Fullilove (1996) link an individual to their environment: *attachment* (caretaking bond between a person and a special place); *familiarity* (the process of developing cognitive knowledge of environment — a function of time); and, *self-identity* (sense of self-extraction).

In relation to place identity, Korpela (1989) referred to the process as a result of "*active environmental self-regulation*," or the idea of using the physical environment as a catalyst in creating and maintaining one's self. Korpela's study reviewed essays from 9, 12, and 17-year-old children about their favourite places. These essays were found to correlate with the theories of balancing pleasure and pain and the unity principal (Korpela, 1989), whereby one can 'find oneself' and create coherence for one's self. Places referred to as "restorative environments" (Korpela, 1989), provide the place for this coherence and unifying process to occur. Places such as the cottage in the country; the holiday in some far off destination; or a walk in the bush, are examples of restorative environments. A further principal highlighted in Korpela's (1989) work is one of control over the favourite place. Control in the sense of naming it, attributing memories to it and even humanizing the place can be processes in connecting the physical environment to one's own self-regulation, self-esteem, and sense of belonging (Korpela, 1989).

In her review of a number of place meaning studies targeting children, Chawla (1992b) noted several differences that have been found in the favourite places of younger versus older children. Examining both studies of frequency of place use and favourite place, Chawla (1992b) concluded that:

*A general pattern exists of a life centred in the home, at friends' houses, or immediate site facilities at age 6, followed by an appreciation of diverse neighbourhood resources in middle childhood, culminating in adolescent investments divided among the home again, private outdoor places, and commercial establishments. (p. 81)*

The pattern Chawla observed emphasized the expanding activity spaces of youth, but no speculation was offered as to why this pattern emerged. Moreover, Chawla's combination of studies measuring frequency of use with studies documenting favourite places raises an issue that has not been adequately addressed in the literature: whether or not frequency of use, a common methodology in preference studies, predicts children's favourite places. Hart (1979) showed that many of the places that most interest children are outside parentally-approved activity areas.

Other studies have examined the development of landscape preferences in children. Zube (1983), although not directly examining place preferences, explored landscape preferences in a developmental context. While place preference studies such as Hart (1979) and landscape studies such as (Zube et al., 1983) differ in many ways, it is nevertheless important to ask whether Zube's developmental explanation (that younger children appreciate naturalistic settings less than older children do), can explain the trend found by Hart (that younger children prefer places for their social value while older children for their physical activity designations). Perhaps the increased preference for outdoor places with specific use designations (e.g. baseball fields and playgrounds) results from an increasing appreciation for naturalistic settings in general. Alternatively, older children may prefer outdoor places with specific-use designations because they have more opportunity and freedom to explore such places than do younger children. Preference for the familiar is a robust finding in psychological research (Mita et al., 1977).

The literature suggests that the importance of places for children is attributed to a range of interrelated reasons. First, individuals can achieve personal identity via place attachments (Altman, 1992; Cuba and Hummon, 1993). Second, individuals can gain personal

development and social integration via a knowledgeable and effective use of local resources (Furnham and Stacey, 1991). Finally, social and civic participation is dependent upon understanding how places work (Goodey and Gold, 1987).

Hence, environmental education and community participation can potentially link into the development of the self-concept, social identity, and active citizenship. There are implications, too, for environmental education and for the planning disciplines: the moral and the technical meet up in environmental education (Goodey, 1973), where environmental issues change position easily between scientific and political analyses. Similarly, architecture and town planning have been challenged to consider who really designs with the child in mind (Cooper Marcus and Sarkissian, 1986; Noschis, 1992).

Altman and Low (1992) have brought together evidence that indicates how individuals can achieve and develop aspects of their self-identity via an attachment to place. According to Altman and Low (1992), the reader in many autobiographies will be familiar with the prominent role accorded places. How often is place of origin high on the list of self-descriptors that people give? The empirical evidence of Altman and Low (1992) supports this:

*Place attachment serves a number of functions, providing a sense of daily and ongoing security and stimulation ...and the chance to control aspects of one's life; place attachment may link people with friends and kin in an overt and visible fashion. It may bond people to others symbolically, providing reminders of childhood or earlier life...and link people to religion, nation, or culture by means of abstract symbols associated with places, values and beliefs (p.10).*

Chawla (1992a; 1992b) links place attachments in children to concepts of bonding, and of rootedness. These describe necessary aspects of the healthy development of the individual, leading out from an initial secure home-base where nurturance is to be found, through a broadening circle of places as the child grows up and out. Absence of this place-based support, for example in the case of children who are homeless, may lead to high levels of psychological disturbance (Bassuk et al., 1986).

According to Chawla (1992a; 1992b), healthy place attachments balance the inward hold of an intimately familiar centre with the outward attractions of an expanding world. The child or

adolescent's success in coordinating these inward and outward pulls depends upon the quality of their social relationships, their sense of identity, and their understanding of places.

In adulthood, as Cooper Marcus (1992) has shown, many individual's most powerful memories relate back to favourite places: houses where they grew up, neighbourhoods; and the secret places of childhood and adolescence. Studies by Hart (1979), Moore (1986), and Torrel (1990), provide perceptive accounts of how children use and value these unofficial "secret" places. Their examples show how central these places are to the child's developing identity. Nor should we ignore the continuing importance of such places in adolescence and adulthood.

Detailed studies of the child's everyday world focus on the functional needs of children in travelling and exploring the world around them. The most influential studies include those by Hart (1979); Moore (1986), Chawla (2002), Torrel (1990) and Matthews (1992).

The child's personal development and social integration is facilitated by a realization of what resources are available locally, and then by using them effectively. The support for this assertion does not come only from the theories of developmental psychology, but also from empirical studies of the habitats of childhood. An example can be seen in Hill and Michelson's (1981) survey of a major North American city. They plotted where children lived in the city against child-relevant features. Given that children are entirely outside the political-economic decision-making processes of the city, it was not surprising that the distributions of relevant features and children were mismatched.

### **3.1.3 Children's Perceptions and Views**

The last thirty years have seen growing research interest in children and their relationship with the urban environment. Researchers from different countries and academic backgrounds as (Lynch (1977), Colin Ward (1977), Roger Hart (1979), and Robin Moore (1986) ) pioneered their approach of observing the experiences of young people in the city. First, Lynch (1977) in *Growing Up in Cities*, studied small groups of young people in diverse cities (Melbourne, Warsaw, Salta and Mexico City), in an attempt to discover how they used and valued their environment, and identified the importance of urban space as a vital to their development from adolescence to adulthood. Hart's (1979) major study, *Children's*

Experience of Place, aimed to discover the landscape, as it exists for children. His arguments were based on the findings of a case study carried out in a small town in New England, US. The core conclusion of his research was that within each child lies a primary urge to explore and come to know the larger environment. Meanwhile, at the same time as the above studies, the British anarchist and education reformist, Colin Ward (1977) carried out research in the UK to produce a qualitative record of children's experiences and explorations in the urban environment through education and play. His radical study advocated children's rights to participate in urban planning and design and suggested that they should be included in the public participation process through strategies based on the recognition of their independent capacity to hold and exercise rights.

The above studies proved to be very influential in inspiring future worldwide research on young people and their local environment — both urban and rural. A new era of social science research, environmental planning and design dawned in the late seventies with these researchers. Most studies have focused on children's perceptions and experiences of their local environment and their participatory role in planning and decision-making of environmental projects. However, since the mid-1990s, researchers have shifted their interest towards more fundamental studies questioning governmental policies and strategies, which lead to the exclusion of young people from public space through the criminalisation of certain activities (e.g. skateboarding, graffiti) and policing of their movement (e.g. juvenile curfews) (Percy-Smith, 1998). The following sections in the literature review present the most salient studies and critically discuss their findings.

### ***3.1.3.1 The Growing Up in Cities (GUIC) Model***

The notion that children should be accorded rights independent of adults is one that is now well established within the disciplines of child development, human behaviour and social science. The adoption of the United Nations Convention on the Rights of the Child (CRC) by the international community<sup>10</sup> has furthered the acceptance of children's rights across a

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<sup>10</sup> The US stands with Somalia (which currently has no recognised government) as the only two countries in the world to refuse to ratify the UN Convention on the Rights of the Child. Ratification means the convention has to be incorporated into national law (<http://www.cooperativeresearch.org/timeline.jsp?timeline=treaties>).

broad range of areas. Much of the Convention proceeds from a view of the child as capable of holding and exercising rights without the need for adult oversight (Chawla, 2002).

Although the adoption of children's rights has come far in the last few decades, most of the attention in this area has been on what might be described as traditional areas of study and research, in particular, child behaviours and child development. The rights of children in the educational system and labour market have come under some notice, while the legal position of children within the physical and mental health systems have been examined from time to time (James and Prout, 1990; Valentine, 1996). Beyond these areas, there is a lack of discussion. This is despite the emergence of interest in children's environments as presented by the *Growing Up in Cities* model.

Unquestionably, the most prominent study on young people's perception and experience of their local environment is Kevin Lynch's (1977) project *Growing Up in Cities* which opened the way for numerous similar studies around the world. Nonetheless, this study remains unique, mainly due to its longitudinal and cross-continental character. As mentioned above in the introduction, Lynch carried out research in four different cities. His main intention was to conduct research with children in urban areas characterized by rapid change, which is why his approach is also known as 'action research' (Chawla, 2002; Lynch, 1977). To foster improvement in the life of urban children and youth, he recommended:

- The collection of census demographics and maps showing local socio-environmental features;
- The collection of material related to the local culture of childhood;
- The observation of children's use of the community;
- Individual interviews with small groups of children and youth;
- Guided tours led by small groups of children; and
- Interviews with parents and local officials regarding their perceptions of how current environmental conditions and changes are affecting children's lives.

After almost two decades, his project was reinitiated with the support of UNESCO, including eight international cities: Buenos Aires, Melbourne, Northampton, Bangalore, Trondheim, Warsaw, Johannesburg and Oakland (Chawla, 2002). The main goal was to return to the original sites to investigate the longitudinal impact of urban changes on children and the cultural impact of global mobility, and to add new sites in Asia and Africa. Although Lynch's initial project did not include an economic analysis, as it focused entirely on documenting children's use and perception of their local environment, this time the research focused on

low-income areas where children were most dependent on the resources of their immediate environment.

The principal objective of the reinitiated *Growing Up In Cities* (GUIC) project was to document some of the human costs and benefits of economic development. This is achieved by showing how children's use and perception of the microenvironment affects their lives and their personal development and how that can be the basis for building participatory programs to reshape urban environments. The microenvironment in this case means the urban neighbourhoods of 10- to 15-year-olds from low socio-economic backgrounds. An aim of the GUIC research is to close the dualities and differences between rhetoric and reality, research and action. The project lightly explores these notions across time and culture through its longitudinal and cross-cultural dimensions.

Another unique feature of the GUIC project was its interdisciplinary nature. The revived GUIC programme, as in the past, was conducted by experienced interdisciplinary teams that included social researchers, city planners and designers, architects and geographers, psychologists and anthropologists, educators, community developers, and activists and social workers from cities around the world. To accommodate and develop a holistic and interconnected research design across all these disciplines, a multi-paradigmatic and multi-method approach was adopted by the original team leaders (a blend of both quantitative and qualitative methods). In the recent replication, the emphasis has been on a participatory research methodology.

An additional goal of the GUIC revival was to afford comparisons between children's experiences in the past and present at two sites from the 1970s that were revisited in the 1990s: an old working-class district in Warsaw, Poland, and an industrialised suburb in Melbourne, Australia. For example, in the case of Sunshine in Melbourne, the results of the 1990s GUIC study supplemented the findings of the initial study, showing that children still value places in similar terms (Owens, 1994). Twenty years after the original study, many of the old places are still frequented by teenagers and their activities without much difference. However, other places identified in the 1990s GUIC study, such as streets, stoops and waste places, were not included in the previous studies. According to Chawla (2002), the co-ordinator of the reinitiated GUIC project, even if 25 years have passed from the original project and eight nations have been involved, similar constants emerged in the criteria by

which children judged their environments as satisfying their needs or failing them. The following features that determined good environments in which to grow up in the 1970s re-emerged in the 1990s:

- A feeling of social integration and acceptance;
- Varied, interesting activity settings;
- Peer gathering places;
- A general sense of safety and freedom of movement;
- A cohesive community identity; and
- Green areas for informal play and exploration as well as organised sports.

There were also constants in the features that children associated with alienation and dissatisfaction:

- Social exclusion and stigma;
- Boredom;
- Fear of crime or harassment;
- Heavy traffic; and
- Uncollected trash and litter.

While geographic isolation was a major concern for children in the 1970s, racial and ethnic tensions as well as complaints about crime and environmental pollution were expressed more frequently in the 1990s.

The revival of GUIC also indicated that beyond the provision of basic needs, what the children wanted most was a sense of security, acceptance and positive identity within places where they could socialise, play with friends, and find interesting activities to join or observe.

Finally, the findings of the GUIC project showed that communities must take seriously children's and youth's views on environmental decision-making by doing the following:

- Investing in people who can facilitate participation;
- Investing in training and certification;
- Recognising action research as a significant contribution to agency planning and academic prestige;
- Institutionalising children's inclusion;
- Using qualitative as well as quantitative indicators of well-being;
- Creating community-based school and after-school curricula.

Inspired by GUIC project's cross-continental character, other studies carried out comparative research in more than one country. One such project, conducted in New Zealand, compared children's independent access to their local environment in vis-à-vis other cities in Australia, Germany and Britain (Tranter and Pawson, 2001). The authors

employed a variety of quantitative and qualitative research methods to chart the variability of children's freedoms and restrictions on their movement in the local neighbourhood and school. Their international comparisons revealed the determining role of cultures of outdoor activity, and individual versus collective responsibility in shaping parental behaviours and children's freedom of movement. In particular, comparisons between New Zealand and Australia, Germany and UK showed striking contrasts in the level of children's freedom, with German children enjoying the highest levels of freedom overall.

The differences among compared international cities relate to the state of public transport; a shared sense of adult responsibility for children's supervision in Germany as opposed to the culture of individualism in the other three countries; and the greater use of outdoor space by German people of all ages.

#### **3.1.4 Literature on Children and Outdoor Environments in Jordan**

Although there are very few published reports on children and outdoor environments in Jordan, two separate studies describe conditions close to ideal for young children's play in the Hashemite Kingdom. The first, from a squatter settlement in Amman in the 1980s, describes the stimulating social life of even the smallest children (Shami and Taminian, 1995). Because alleyways were too narrow for cars, children could move freely back and forth between households, finding other children to play with, visiting local shops, and watching people go about their business. Even infants, according to this report, could crawl beyond their home courtyards, their caregivers secure in the knowledge that they would return home safe.

A more recent description of children's use of neighbourhood streets in Jordan describes the many possibilities for play that the street provides for slightly older children (Abu-Ghazzeah, 1998). The study identified a number of factors that attract street play, such as close proximity, accessibility, design and layout within the habitual range<sup>11</sup> of childhood territory. Walking was the universal mode of transportation in the Abu-Nusier housing development

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<sup>11</sup> The environmental range of children can be broken into subcomponents: Habitual Range, Frequented Range and Occasional Range. The immediate home/neighbourhood environment is the Habitual Range

and the means by which children travelled around the neighbourhood (Abu-Ghazze, 1998). There were patches of dirt for building imaginary landscapes; piles of sand for digging in; hard surfaces for ball games and bicycles; building entrances to hide in; and flights of stairs and retaining walls to climb. Children were observed jumping, climbing, skating, sliding, running, chasing, sitting and watching.

Not all urban areas have streets this safe; these descriptions may have overlooked the piles of waste and open drains in many urban neighbourhoods that can make free play hazardous to the health of young children. However, even the smallest pockets of land can be improved to meet children's needs.

Another regional example of this program is "Growing Up in Lebanon". This was initiated in 1999 with the collaboration of the City Council and the Hariri Foundation of Lebanon in the ancient city of Saida or Sidon (UNESCO, 1999). The project was designed to address the social and physical fabric of the old city in an integrated plan for development, and as part of the goal of connecting the city's past with its future. Under the leadership of local dignitaries, other partners included a network of ten NGOs that worked on family, child and youth issues under the umbrella of the City Council at the Centre for Extracurricular Activities in the old city.

The key issues identified by the participating children in the Old City included the overcrowded conditions of study centres, lack of plants, insufficient green spaces, inadequate play spaces, lack of trash collection, and a high incidence of child labour. This led to the recommendation that the project should move forward on two key fronts: participatory planning and action for environmental improvement in the Old City; and then project replication in other districts of Saida and other Lebanese cities. Of the five issues outlined above, the two most suitable for participatory planning and action were a greening project and the development of play areas. The trash issue needed a solution, but children would play a limited role in developing and implementing such a solution. The child labour issue was of critical importance, and was explored further with key decision makers as well as the community to determine an appropriate course of action. The development of green and play areas was considered to be the most fruitful short-term direction for child and youth participation (UNESCO, 1999).

### **3.2 Summary**

This chapter presented an interdisciplinary literature review that brought to focus the main concepts in children's environment and how to reshape the physical environment to improve quality of life for children and youth. The chapter discussed the concept of place and place meaning for children as this is a core concept in design research that links socio-cultural issues to physical environment ones.

Two gaps in empirical knowledge of adolescent experience of public space were identified in this review: longitudinal and cross-continental studies. Together, they provide a better understanding of temporal and spatial parameters of the adolescent experience. Furthermore, the use of foreign language publications (e.g. the Arabic literature on the subject) by English-speaking researchers has been minimal. Moreover, the gender difference in the use of the outdoor spaces in social and cultural context is particularly underrepresented in the literature. The few studies that dealt with the gendered use of the outdoor spaces and cultural issues had a Western perspective. Finally, academic research should be available to local authorities, planners and policymakers as a helpful tool in devising future youth strategies. To formulate friendlier policies and initiatives that are more beneficial for children, decision-makers must gain a more in-depth view of the daily experiences, life expectations, and aspirations of children.

CHAPTER FOUR  
RESEARCH DESIGN AND METHODOLOGY

## **CHAPTER 4: RESEARCH DESIGN AND METHODOLOGY**

### **4.1 Introduction**

This chapter introduces the research design and methodology used in this dissertation. In this chapter, the research design is discussed beginning with population, samples, and settings for the study. The methods used to answer the research question are also discussed here.

### **4.2 The Selection of Research Design**

Case study methodology was selected for this dissertation because, as Braus and Wood (1994) state, one of the most effective ways to better understand a community is to talk to the people who live there. Further, Yin (1989) notes that case studies are the preferred strategy for dealing with "how" or "why" questions. Case studies are also used when the investigator has no control over the events and when the study focuses on contemporary phenomenon within a real-life context. This dissertation dealt with existing outdoor environments; the researcher had no control over the urban growth phenomena.

Case study methodologies have advantages and limitations. Even though interviews involve a high-labour, high-cost way to collect data, they allow for both objective and subjective interpretation of the results. They provide more face-to-face contact with the respondents. However, interviews are not without their limitations. Besides being time consuming, they produce a huge amount of detailed data. However, the case-study approach provides in-depth details (Fraenkel and Wallen, 1996; Sommer and Sommer, 1991).

Case studies allow for greater depth to the investigation. They tend to maintain the integrity of the whole with its multitude of interrelationships (Sommer and Sommer, 1991). Case studies also give the investigator the opportunity to apply a multi-method approach such as interviews, surveys, observations and drawings. Case studies are also difficult to repeat and their generalizations to other settings are limited (Sommer and Sommer, 1991; Yin, 1989).

In this dissertation, I have combined the benefits of multiple methods to minimize the limitations of the individual methodologies. While interview results have the advantage of drawing information directly from people, they lack the full picture. Although children's drawings lack breadth, they are rich in details. In addition, by using children's drawings,

interviews, and observations, I was able to compare and contrast the data for inconsistencies, which helps control for both construct and external validity.

### **4.3 Research Setting and Population**

The *Growing Up in Cities* model engages several concurrent goals. The model seeks to record how children use local environments and how they evaluate local resources and limitations. The results are then applied to understand how the urban environment affects children's lives. Furthermore, the model identifies indicators that are important for developing a healthy child environment, and creating urban policies that are sensitive to children's needs.

The GUIC model analyses urban communities' impact on children's lives and helps shape urban policy through its identification of important issues. This dissertation research replicated the GUIC research phase, which falls into three divisions:

- Objective descriptions of the study area's physical and social features through maps, census data and photographs.
- Extended interviews with a sample of children of both sexes, ranging in age from 10- to 14-years old. In this phase, I asked the children to draw and describe the area where they live. Additional information was gathered through child-taken photographs and observations. Parental consent was obtained before initiating contact with the children.
- Interviews with the schools and local officials to understand their viewpoints on children's environmental needs. Additionally, these interviews provided me an understanding of their perceptions of the environmental changes that have occurred since they were children themselves. Finally, the officials were queried on how they believe their policies affect the quality of children's lives. Written permission was obtained from the adult participants before I initiated any contact with them.

Since it was impossible to interview all the children of the study area, a representational sample was selected (Fraenkel and Wallen, 1996). In this study, 32 children aged 10 to 14 years (16 boys and 16 girls) were selected to be interviewed using open-ended questions.

All information related to research methodology was translated into the local language, Arabic. All responses documented and recorded in Arabic were then translated verbatim

into English. Data collection was performed with the assistance of two female senior architecture students from University of Jordan, local staff with the Department of Palestinian Affairs, and children's schools.

The data analysis of this dissertation was based on identifying the patterns of relations between the physical environment and children's use of and views about their environment.

#### **4.4 Site Selection**

Prior to selecting site for the study, I initiated contact with the appropriate local authorities and government agencies. The contacts were intended to build a professional relationship with individuals within these entities so that they would provide me with information and feedback about the process required by their agencies to conduct research in Jordan, point out potential study sites, and give support for this study.

##### **4.4.1 Initial Steps**

The planning for this dissertation started in the second half of 2000. Through coordination with UNESCO's headquarters in France, their regional office in Amman, Jordan, and cooperation from North Carolina State University, the process started with a visit to Jordan by the author and his advisor in February 2002. Two workshops were held in Amman and Aqaba with the objectives of introducing *Growing Up in Cities* as a viable programme in Jordan. The workshops served to promote awareness and spark interest in the impact of the urban landscape on children's healthy development in low-material-resource residential settlements; they forged partnerships and cooperation with governmental and non-governmental agencies, academic institutions, and community-based organisations committed to improving the quality of life of low-material-resource children in Jordan; they discussed the feasibility of influencing public policies in urban planning and community development with regard to the needs of children and youth and engaging low-material-resource residential communities in a participatory process leading to capacity building for self-help. Finally, the workshop served as a vehicle for site selection appropriate for this dissertation.

During this trip, Professor Robin Moore (dissertation advisor) and I made a number of visits to different sites in Amman facilitated by the Municipality of Greater Amman. The intention was to evaluate firsthand site conditions in terms of location, topography, density and

feasibility. At the end of the tour, with input from Professor Moore, I concluded that the Al-Wihdat Refugee Camp and environs in Amman met the basic conditions of urban location, diverse topography, high population density, economic and social conditions, and feasibility needed for this case study research.

In December 2002, Professor Moore and I were invited to present the GUIC concept to participants in the 'Children and the City Conference' held in Amman. During this trip, I visited a number of government agencies and organisations to establish contact with the appropriate groups, collect background information about the study site, and seek assistance and cooperation to carry out the research.

The proposed research methodology, instruments, interviews protocol, and consent forms were submitted early in the process to the Institutional Review Board (IRB) at the North Carolina State University for review. A letter of approval (Appendix A-1) was granted from the board to employ the research methodology and instruments in this dissertation research.

#### **4.4.2 Securing Permissions**

The fieldwork for this study was planned to begin in February 2003. However, due to the political conflict and heightened tension over the U.S. invasion of Iraq, the data collection for this project was delayed until late August 2003, when the security condition became calmer. During the months leading to August 2003, I coordinated with the appropriate government authorities in Jordan through electronic mail and telephone to secure permits and clearance to conduct the research. Upon Arrival in Amman, Jordan in August 2003, reapplying for permits was necessary in person at the Department of Palestinian Affairs, the Interior Ministry, UNRWA office, Municipality of Greater Amman, Jordan Geographic Information Centre, Amman Southern School District, and the individual schools that were chosen to conduct the data collection (see Appendix A-2 for example). This process was difficult and time consuming because it took three weeks to secure all the necessary permits and basic information about the study areas. Nevertheless, the agencies that controlled the information and maps about the study areas declined to release any documents or maps for security reasons. However, through contacts and coordination with the University of Jordan, basic information, maps, and student research assistants became available for this study.

On the first week of September 2003, I was ready to conduct fieldwork. Permits were in place, interview materials were translated into Arabic, and two female architecture students

from the University of Jordan were trained and ready to begin. Four schools were selected and arrangements were made with the principles of the schools to select the sample of students.

#### **4.5 Sample Selection Criteria**

The study population consisted of a sample of 32 children living in low-material-resource residential settlements. The units of analysis were children age 10 to 14 years from the refugee camp and low-material-resource residential settlements adjacent to the camp. The following criteria were used in selecting the sample of participants:

**Age:** I was interested in focusing on 10- to 14-year-old children, but my concern was: Are there sufficient number of children of this age group in selected communities? An examination of both Jordanian and Palestinian refugee demographics revealed that 40 percent of the population in Jordan was under 15 years of age; in the refugee camps this age group reached close to 60 percent. In addition, during my discussion with school officials about the study sample, they informed me that this age group was the largest in the school system.

**Gender:** As a Jordanian, I knew from experience that gender-related issues (due to social, cultural and religious reasons) existed in this community that might affect children's participation. Therefore, I asked the schools officials: Are girls allowed to interact in mixed groups? Will they feel free to speak their mind in the company of boys, or is it necessary to have separate gender-based groups for some activities? This dissertation took into account the impact these issues might have on the project and how to create a framework in which both sexes could participate fully and equally. I concluded that separate interview locations for boys and girls were needed. This arrangement helped to create a comfortable environment for the participants and myself to interact with each other freely.

**Residency:** For the purpose of this project, it was determined that children must be residents of the study area. The study area encompassed the refugee camp and neighbourhoods adjacent to the camp. These communities share many of the same characteristics (origin, refugee status, income, neighbourhood size, family size, length of residency and type of housing). This criterion was important in drawing comparison

between outdoor environments inside the camp and in the neighbourhoods adjacent to the camp.

**Availability:** Considering young participants' schedules and obtaining a signed parental consent forms in this study were very important. Participation was voluntary. Therefore, I asked the children a number of vital questions after explaining to them what the research was about to determine if they were good candidates for participation. Are you willing to participate in the study? Are you and your parents willing to sign a consent form? Do you attend school full time? Are you working? Do you have family or work obligations in the evenings or on weekends? According to the information gathered from these questions, a flexible project schedule was developed so that children with school and other commitments could participate.

**Sample size:** The sample of 32 participants is a GUIC standard. However, constraints on staffing, time, and financial resources prohibited using a larger sample size.

#### **4.5.1 Developing a Representative Sample**

In identifying potential participants, I was careful to ensure that the participants were representative of the community. This is essential for enabling comparisons with other project sites or developing generalizations about a larger population of children in Jordan and MENA region. To insure that participants were representative of the larger population, I obtained information about the population's breakdown in sex, age, ethnic group, type of schooling, work status, and type of housing from the Department of Palestinian Affairs demographic and schools enrollment record. Once I had a good understanding of the 'profile' of the population, I assembled a group of participants who represented a similar profile using the criteria stated in the earlier section. This 'representative sample' made it possible to draw conclusions that can be inferred as being generally true of the larger population as well.

Because the research was carried out at the beginning of the 2003/04 school year, schools were able to provide the sample children and a venue for interaction. Access to children and communicating with them was much easier in the school setting than would have been in homes or streets. It was also a secure setting for all involved. Teachers' knowledge about the area and their students was important in selecting a sample of participants. A representative sample of the 10 to 14 age group in the study area was developed using

classroom attendance rolls. From the attendance rolls in each of the four participating schools, the children were divided into three age groups: under 10 years; 10-14 years; and over 14 years. From the 10 to 14 age group, the principal of each school chose 100 names. From each school, a random sample of 20 students was selected from the 100-student list using the fifth name after the first random selection. I asked a child or a teacher present at the principal's office to choose eight random numbers from the list of twenty. Each of the final eight was given a consent form to be signed by their parents (see Appendix A-3). I selected eight children from each school for a total of 32 participants from the four schools. The sample was divided 50/50 by sex. Parental consent was obtained before initiating contact with the children in order to participate in the study.

#### **4.6 Instrumentation**

The methods and instruments selected were the ones used most frequently by the eight *Growing Up in Cities* projects. The *GUIC Manual; Creating Better Cities with Children and Youth* (Driskell 2002), was used as a research guide. This ensured consistency for comparison between the Jordanian case study and the other GUIC studies.

The GUIC manual's core ideas and methods have been field-tested in a wide range of urban settings in both developing and industrialized cities. Examples from project sites help to illustrate the methods and demonstrate how they can be customized to local needs. They also highlight the universal applicability and value of children's participation and provide lessons and insights to help ensure a successful project.

The 'Participation Toolkit' in *Chapter 6* of the manual provided me with an overview of basic methods that can be used to facilitate children's participation. I selected the methods that were appropriate for their needs, and customized them accordingly. I used the information as a starting point, and then created my own method variations and ideas.

Data collection employed the following instruments:

1. Archival Research: (see chapter 4)
  - Maps of the study area
  - Historical information
  - Background data
2. In-depth Interviews
  - Interviews with children (Appendix A-4)

- Drawings by children (Appendix C)
  - Interviews with key informants (teachers and local officials) (Appendix A-5)
3. Photographical methods
- Researcher-taken photographs
  - Child-led field trips
  - Child-taken photographs (Appendix D and E)

#### **4.6.1 Interviews**

##### ***4.6.1.1 Interviews with Children***

Interviews were used to gather information and gain input from the sample of children as well as an opportunity for one-on-one interaction (Moore, 1986; Björklid, 1982; Chawla, 2002). The interview was designed as a standardised format with open-ended questions. The interview protocol (Appendix A-4) was developed containing the list of questions and topics that I wanted to explore. It was prepared to insure that same information was obtained from each respondent. It made interviewing multiple subjects more systematic and comprehensive, and helped to keep interactions focused.

The interview instrument in this study sought to collect information directly from children about their outdoor environment. The questions explored opinions and perspectives on key issues. The interviews were translated into Arabic. The translation language was simplified and included phrases and terms commonly used by people in this region and readily understood by children. A pilot study I conducted in my home neighbourhood, in the city of Irbid, Jordan, resulted in modification of the interview instrument. The aim of the pilot study was to test the interview questions and the drawing activities. Ten children including my two children and their neighbourhood friends participated in the pilot study.

Based on the pilot study, adjustments were made to the order of the questions and the meanings of certain words were clarified to avoid confusion. In the Arabic language, some words have the same meaning, especially for children. Phrases such as “you like the most”, “your favourite”, “your most favourite”, “you frequently use”, and “you love the most”, have the same meaning in Arabic. Therefore, special care was required to avoid this problem. I enlisted children’s assistance to help them develop the right wording. The interviews were administered by my research assistants and me. Data from the interviews were recorded using handwritten notes and tape recorder.

#### **4.6.1.2 Interviews with School and Public Officials (key informant interviews)**

I interviewed school and public officials (Appendix A-5) to explore their attitudes; insights and opinions. These interviews provided insight regarding the neighbourhood's history and the positive or negative changes that occurred in the community over the years.

The questions explored adult perceptions of the neighbourhood, including their evaluation as a place for children. Additional questions were used to probe their knowledge about children's use of the neighbourhood, their activities, and what they liked most and least about the area. Questions also explored officials' own memories of their childhood environment and asked them to compare with the study area's environment. Lastly, and most importantly, officials were queried about their plans for the area. How did they believe their plans would affect the quality of the area and, specifically, the quality of young people's lives? They were also asked as to what types of data and criteria they typically relied on in developing plans. Most of the questions used in this interviews were based on the previous GUIC studies (Chawla, 2002; Lynch, 1977; Moore, 1986).

#### **4.6.2 Children's Drawings**

Research has shown that evaluation plans and instruments that are not appropriate for their audience can yield results that are tenuous and often unusable (Cronbach, 1982). The projective drawing technique I used was based in part on the work of Koppitz (1983). She believed that drawing is a natural mode of expression for children:

*"During the elementary school years, boys and girls can express their thoughts and feelings often better in visual images than in words" (p. 2).*

In addition, this technique also reflects the work of others, including Burns and Kaufman (1970), Knoff and Prout (1985), and Moore (1986) who have developed conceptual frameworks to interpret children's drawings. Many investigators have demonstrated that children's drawings can reflect self-concepts, attitudes, wishes, and concerns (Burns, 1982; Golomb, 1992; Klepsch and Logie, 1982; Koppitz, 1983).

Children's drawings of their local area provided a tool for discussing perceptions, activities, range of movement, and favourite and least favourite places. Observations of the drawing process and the drawings themselves provided insights about what was most and least important to the respondents. Drawings were conducted and integrated as part of the one-

to-one interviews and administered by me. Drawing was an engaging technique and as such a good 'ice-breaker' early in the process. Drawings provided a good starting point for conducting interviews and for launching exercises such as child-led fieldtrips and child-taken photographs.

#### **4.6.3 Child-taken Photographs**

Photographs taken by the respondents were used to gather information on their environmental perceptions and attitudes, enhancing information collected through the interviews. Photographs became the basis for discussions about the local area as well as providing a visual database. They were also used to initiate communication with the community officials and engaged the child respondents in fun and creative activities.

At the conclusion of the first interview, I met with the respondents and gave each one a disposable camera. I asked the children to use their camera to document places in their neighbourhood that they like or dislike, good or bad, dangerous and/or special to them. The children were given four days to complete the assignment and return the camera with them to the second interview. Although I administered the assignment, it gave the respondents the freedom to make their own judgment on what, where, and when to take the pictures.

#### **4.6.4 Child-lead Fieldtrips**

Child-led fieldtrips with me were used to visit and view places within the local area mentioned by the children firsthand to develop a better understanding of issues identified through interviews, drawings, and the photographs. These fieldtrips were conducted after the interviews, drawing activities and photographs. The fieldtrips were limited due to the restrictions placed by parents on children's interaction with strangers. Many parents would not grant their child or me permission to walk with the child in public especially with the girls.

### **4.7 Validity**

#### **4.7.1 Internal Validity**

To ensure internal validity, the following strategies were employed:

**Triangulation of Data:** Multiple sources of data were used including interviews, child-taken photographs, child-led fieldtrips, and cognitive maps to validate and crosscheck findings.

Patton (1990) described this process as triangulation. Stake (1980) further described triangulation as a method of increasing validity:

*One of the primary ways of increasing validity is triangulation. The ideas come from sociology and further back from navigation at sea—one of trying to arrive at the same meaning by at least three different approaches. Naturally, a finding that has been triangulated with several independent data holdings is usually more credible than one that has not.*

**Peer Examination:** To ensure validity, the researcher should make research documentation available to peers familiar with the research for review and feedback (Guba and Lincoln, 1989; Merriam, 1998; Patton, 1990).

I enlisted the advice of two of professors from the College of Architecture at the University of Jordan and asked them to serve as peer examiners for my data collection. During the fieldwork, I designated every Thursday afternoon to meet and review the work completed up to that point. Dr. Amireh, an urban design and architecture professor from the University of Jordan, served as peer examiner and adviser. I relied on his academic and research experience as well as his familiarity with the study to provide feedback and recommendation to ensure validity.

**Participatory Modes of Research:** The children in the study were involved in most phases of the research. The work was not kept secret from anyone, especially the participants. From the beginning of the study, I was keen on eliciting children's input (Guba and Lincoln, 1989; Merriam, 1998; Patton, 1990).

**Clarification of Researcher Bias:** Researcher bias can never fully be removed from an individual. However, personal biases should be acknowledged during the study and analysis of results (Guba and Lincoln, 1989; Merriam, 1998; Patton, 1990).

Particularly in qualitative research, the role of the researcher as the primary data collection instrument necessitates the identification of personal values, assumptions and biases at the outset of the study. As (Locke et al., 1987) stated, the investigator's contribution to the research setting can be useful and positive rather than detrimental. My perceptions of children's environments and the physical qualities of outdoor places had been shaped by my personal experiences. I was born in Irbid, the second largest city in Jordan and from April 1964 to August 1984, lived, grew up, went to school and experienced the outdoor environment in Jordan. My children (two daughters in the same age group of the children in

this study), live, go to school and use the outdoor environments in Jordan. I believe this understanding of the context and role enhanced my awareness, knowledge and sensitivity of many of the challenges, decisions, and issues encountered by children living in Jordan and assisted me in working with the children participating in this study. I brought personal knowledge of the community's social, cultural, political, and religious fabric and the role of the outdoors environment on child development. Particular attention was paid to the role of the outdoor environment in low-material-resource neighbourhoods in supporting healthy child development.

Although every effort was made to ensure objectivity, these biases had shaped the way I viewed and understood the data collected, and the way I interpreted my experiences. I began this study with the perspective that children's outdoors environments are diverse and often difficult issue to understand. Though expectations were immense, I questioned how much power the outdoor environment had in shaping behaviours in the context of low-material resource communities. I viewed the outdoor environment as a critical factor in healthy child development regardless of socio-economic conditions.

#### **4.7.2 External Validity and Reliability**

To ensure external validity, rich, thick, detailed descriptions were provided so that others interested in transferability have a solid framework for comparison (Merriam, 1998). Three techniques to ensure validity and reliability were employed in this study. First, a detailed account of the focus of the study was provided including the researcher's bias, and the context from which data were gathered. Second, triangulation or multiple methods of data collection and analysis was used to strengthen reliability as well as internal validity (Merriam, 1998). Finally, data collection and analysis strategies have been reported in detail in order to provide a clear and accurate picture of the methods used in this case study.

#### **4.7.3 Threats to Validity**

Threats to validity of this case study included:

1. The refusal of some parents to allow their children to participate in the study. Parent's permissions were obtained in order for the children to participate in the study (Appendix A-3).
2. Local authorities' imposition of limits and restrictions on where the study could be conducted and the type of photographs that could be taken in public.

3. Sensitivity to the social and religious traditions of the study communities.
4. Concerns about the sample:
  - Sample size: the study area was large, consisting of small communities grouped together and extended beyond the camp boundaries. A sample from each neighbourhood could provide a clearer picture of the differences and similarities between these neighbourhoods. However, time constraints and conformity to the GUIC-established sample-size mandated 32 participants.
  - Female representation was sufficient; however, their participation was limited and restricted by parents. Jordan is a Muslim country. Religious and social norms restrict females from engaging with conversation with opposite sex other than immediate family members. I overcame this issue by recruiting local female assistants to collect data and gain the trust of the female children and their parents.
5. Limited use of child-led fieldtrips as a method of data collection. This was due in part to cultural and parental restrictions on children walking around with strangers. Some parents granted permission for limited child-led field trips, which still provided valuable data.
6. The time-constraint was a drawback of the study. It would be more effective if the study was conducted year-round to observe children's daily use of the outdoors and evaluate the impact of climate change on their activities.

#### **4.8 Delimitation of the Study**

1. The case study was limited to a sample population that were selected through *school attendance rolls* in the UNRWA southern Amman school district. The district schools were grouped in one location in the Al-Wihdat refugee camp.
2. The sample of children was confined to 10-14-year-old boys and girls living within the established neighbourhood boundaries of the study area.
3. The participating boys and girls had 50/50 representation.

#### **4.9 Verification**

*Verification* is the process of checking, confirming, and making certain. In qualitative research, verification refers to the mechanisms used during the process of research to incrementally ensure reliability and validity and, thus, the rigor of a study. These

mechanisms are woven into every step of the inquiry to construct a solid product (Creswell, 1997; Kvale, 1989) by identifying and correcting errors before they are built in to the developing model and before they subvert the analysis.

Guba and Lincoln (1981) stated that while all research must have “truth value”, “applicability”, “consistency”, and “neutrality” to be considered worthwhile, the nature of knowledge within the rationalistic (or quantitative) paradigm is different from the knowledge in naturalistic (qualitative) paradigm. Consequently, each paradigm requires paradigm-specific criteria for addressing “rigor” (the term most often used in the rationalistic paradigm) or “trustworthiness”, the parallel term for qualitative “rigor”. They noted that, within the rationalistic paradigm, the criteria to reach the goal of rigor are internal and external validity, reliability, and objectivity. On the other hand, they proposed that the criteria in the qualitative paradigm to ensure “trustworthiness” are credibility, fittingness, auditability, and conformability (Guba and Lincoln, 1981). These criteria were quickly refined to credibility, transferability, dependability, and conformability (Lincoln and Guba, 1985). They recommended that specific strategies be used to attain trustworthiness such as negative cases, peer debriefing, prolonged engagement and persistent observation, audit trails and member checks. Also important are characteristics of the investigator, who must be responsive and adaptable to changing circumstances, holistic, sensitivity, and ability for clarification and summarization (Guba and Lincoln, 1981).

#### **4.10 Summary**

This chapter presented instruments used to gather data to answer the research questions and highlight new themes and concepts in this dissertation (Appendix A-4 and A-5). The research instruments applied to data collection included field observations (fields notes, systematic and photographic documentation), interviews (with respondents, schools and public officials) child-led fieldtrips, and child-taken photographs. These instruments measured children’s places of attraction and avoidance, and their degree of boredom or engagement. In addition, the instruments of drawing and photographs measured respondents’ degree of knowledge about their neighbourhood and surroundings. Children, school and public officials were interviewed. Their personal perspective about past and future urban changes and their effects on children’s lives provided valuable information. Differences between girls and boys experiences were evaluated.

Each one of the research questions was matched with the appropriate instrument(s). The multiple sources of data collection (triangulation) used in this study helped to validate and crosscheck findings. Patton (2001) advocates the use of triangulation by stating that “triangulation strengthens a study by combining methods. This can mean using several kinds of methods or data, including using both quantitative and qualitative approaches” (P. 247).

The research methodology, instruments, interviews protocol, and consent forms were submitted early in the process to the Institutional Review Board (IRB) at North Carolina State University to be reviewed. A letter of approval (Appendix A-1) was granted from the board to employ the research methodology and instruments for this dissertation.

## CHAPTER FIVE

### THE SPATIAL CONTEXT OF THE CASE STUDY AREAS

## CHAPTER 5: THE SPATIAL CONTEXT OF THE CASE STUDY AREA

The aim of this chapter is to provide historical background information for the city of Amman and the study area - Al-Wihdat Refugee Camp and environs. Because the case study area is located in Amman, Jordan, this chapter outlines the growth and layout of the city, and covers the general economic and housing conditions resulting from the recent rapid population growth.

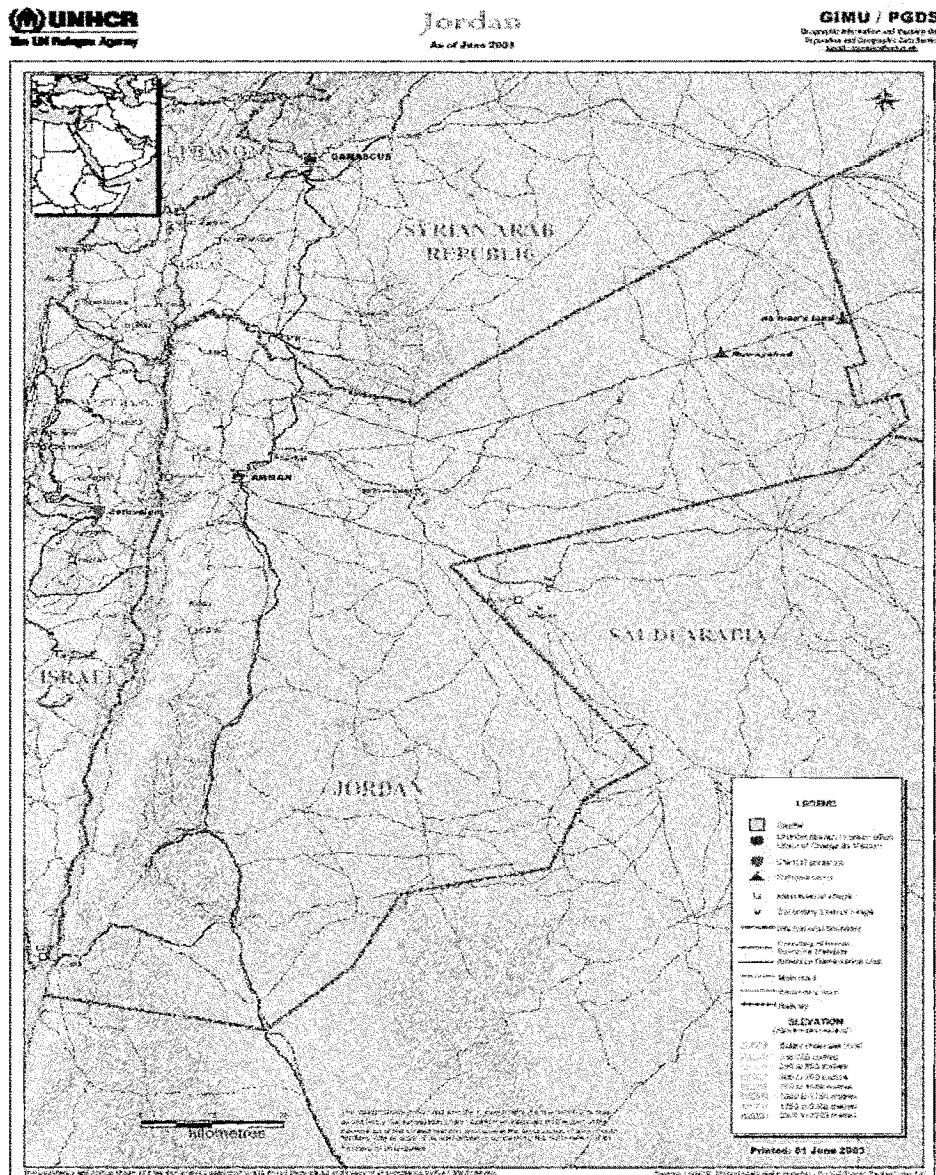
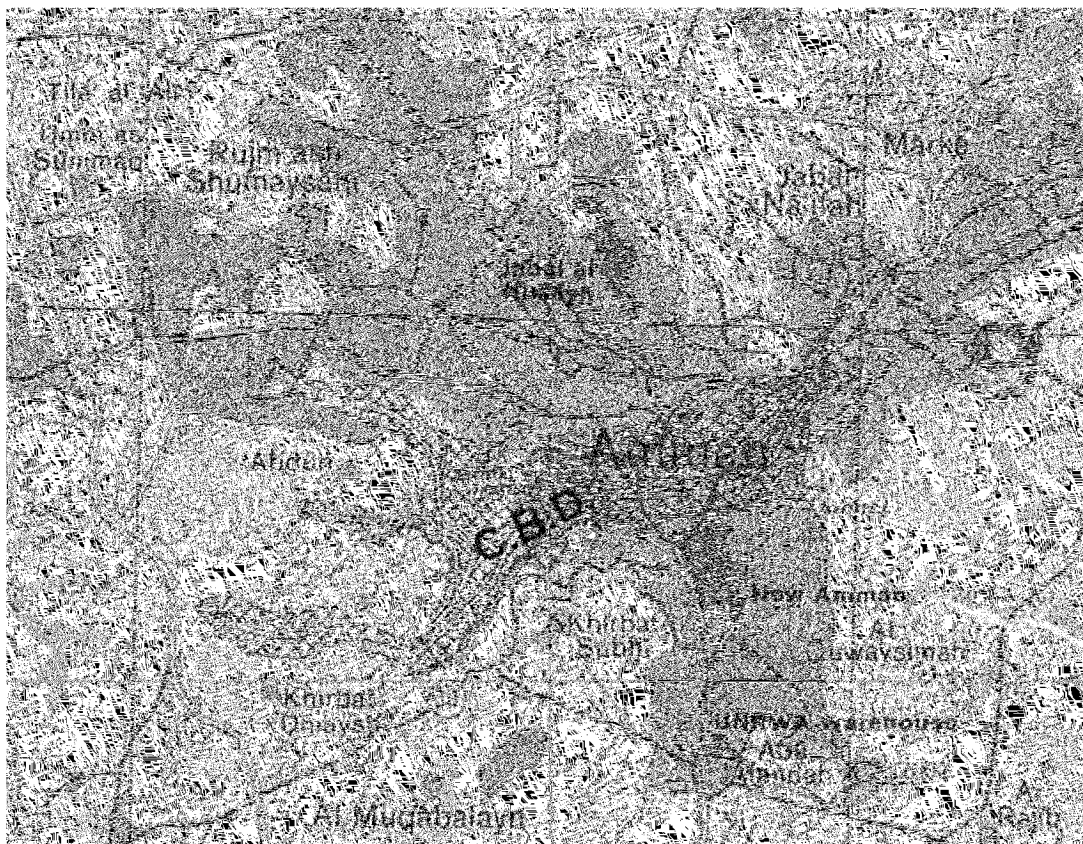


Figure 4: The geographic boundaries and road network system in Jordan

## 5.1 Amman: Physical Features

Amman is located in the northern part of Jordan, about 25 miles east of the Jordan Valley, and about 55 miles south of the Syrian border (Figure 4). The settlement grew originally in a *wadi* (valley), the 'Sail Amman' (Dry Stream), one of several wadies cut into the eastern edge of the Jordan Plateau and a headwater tributary of *Wadi Al-Zarka* system. Here the limestone of the plateau is folded to form a synclinal valley with south-west, north-east trend (Hacker, 1960) (Figure 5). Transverse valleys join the main valley at right angles. Winter torrents have cut deep flat-floored valleys in the easily eroded rocks. These flat valley bottoms, about 100 meters wide, with their cliff-like sides, formed the site for the early development of Amman.



**Figure 5:** The Central Business District area and boundary of early Amman

Between the 'wadies' or valleys area a series of hills, or 'jabals' on to which much of modern Amman has now spread. However, the pattern of the wadi floors has impressed itself on the city by controlling the lines of communication and building development. The steep

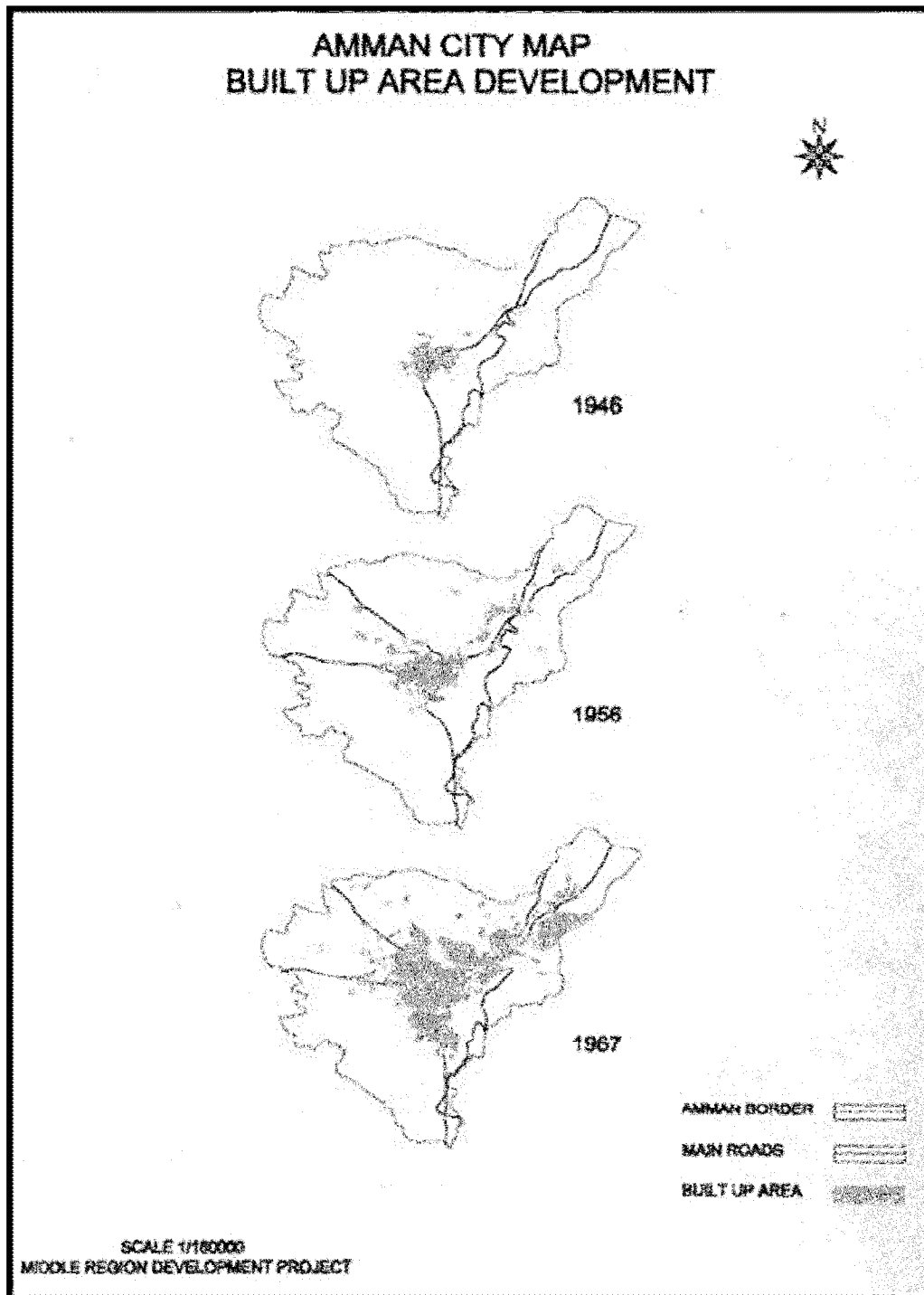
slopes, often acting as barriers to development, have also impressed themselves on the growth of the city. They have restricted road development in certain directions and increased traffic congestion. The steepest slopes, some in excess of 50 percent, are found on the sides of Sail Amman and its tributary wadis, close to the centre of Amman (Hacker, 1960). The wadi system further east creates a complex pattern of local topography, of which between 15 and 30 percent are slopes (Mosa, 1986). The majority of land to the north and south of central Amman has slopes of only 8 percent. In these areas, urban expansion has occurred more freely of topographic limitations. Water scarcity is one of Amman's most pressing problems, just as it is for the remainder of Jordan. Eighty-nine percent of the East Bank is defined as desert or semi-desert (DOS, 2002). Even in the few areas where rainfall is sufficient, in general, for dry farming, there is no surplus. Jordan suffers from limited water resources not only due to a dry climate, but also because of its relatively uneven and fluctuating rainfall amounts and high rates of evaporation.

## **5.2 Historical Background**

Amman has been inhabited for over 6,000 years, although but not continuously (Mosa, 1986). There have been two major breaks in its inhabitation. One lasted from about 1800 to 1300 B.C. after the collapse of '*Rabbat Ammon*', (Roman name for Amman) and the other from the 13<sup>th</sup> century A.D. to the later 19<sup>th</sup> century after Amman had been exposed to the Tartar invasion in 1260 A.D. (Mosa, 1986). The spread of plague wiped out most of its population in 1347 (Mosa, 1986).

Amman was deserted by the end of the thirteenth century, and it was not until the 1870s that it was inhabited again. New Amman, therefore, only really dates from about 130 years ago, and the modern city lacks much evidence of its long past. During the Ottoman rule, the a few hundred Circassians fleeing Czarist persecution were moved to Amman and surrounding areas. The population of the town grew gradually over the next few decades as additional Circassians as well as Arabs from nearby towns and villages moved to the city. When Amman was chosen as the capital of the newly founded state of Jordan in 1921, its population is estimated to have reached 5,000 inhabitants (Nelson, 2004).

Modern Amman is characterised by rapid growth since the first wave of Palestinian refugees in 1948 (Figure 6).



**Figure 6:** Amman municipal boundary growth from 1946 to 1967

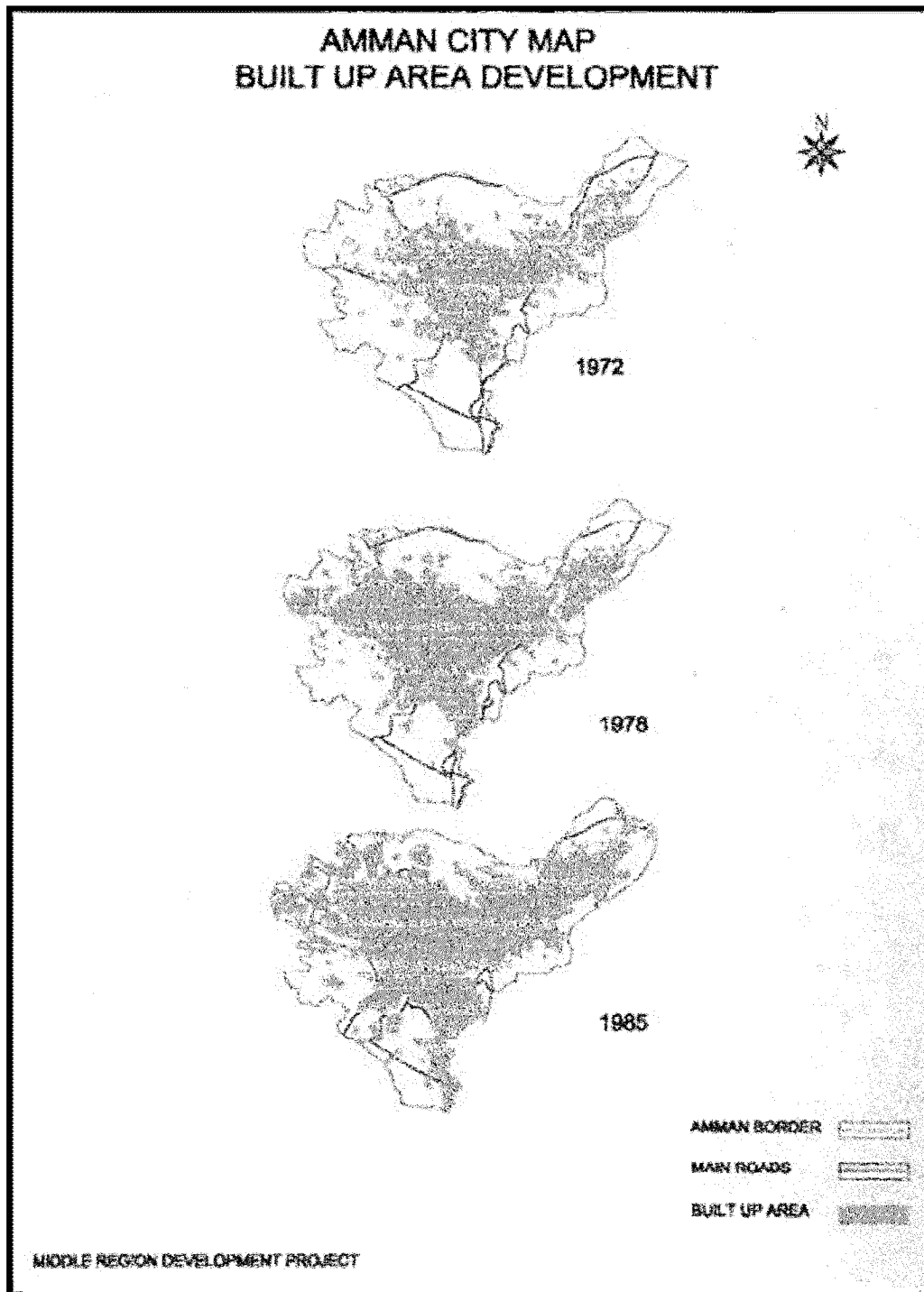
In 1943, the population of Amman was only 30,000. Today, over two millions inhabitants live in the city of Amman (Figures 7 and 8) (DOS, 2002).

The suburbs outside the downtown areas are spread over numerous hillsides within a diameter of around 20 kilometres and are surrounded by agricultural land. One facet of the new urban population is East Bank natives who have given up their traditional Bedouin life. Most of the urbanisation process, however, has resulted from Palestinian refugees, many of whom have settled in the capital or its surroundings. Statistics are not available showing the percentage of Palestinian residents in the different suburbs, though some areas are clearly dominated by Palestinians. The northwest part of the city is dominated by the middle and upper economic strata, while the southern suburbs are mostly populated by the lower middle class and low-income population.

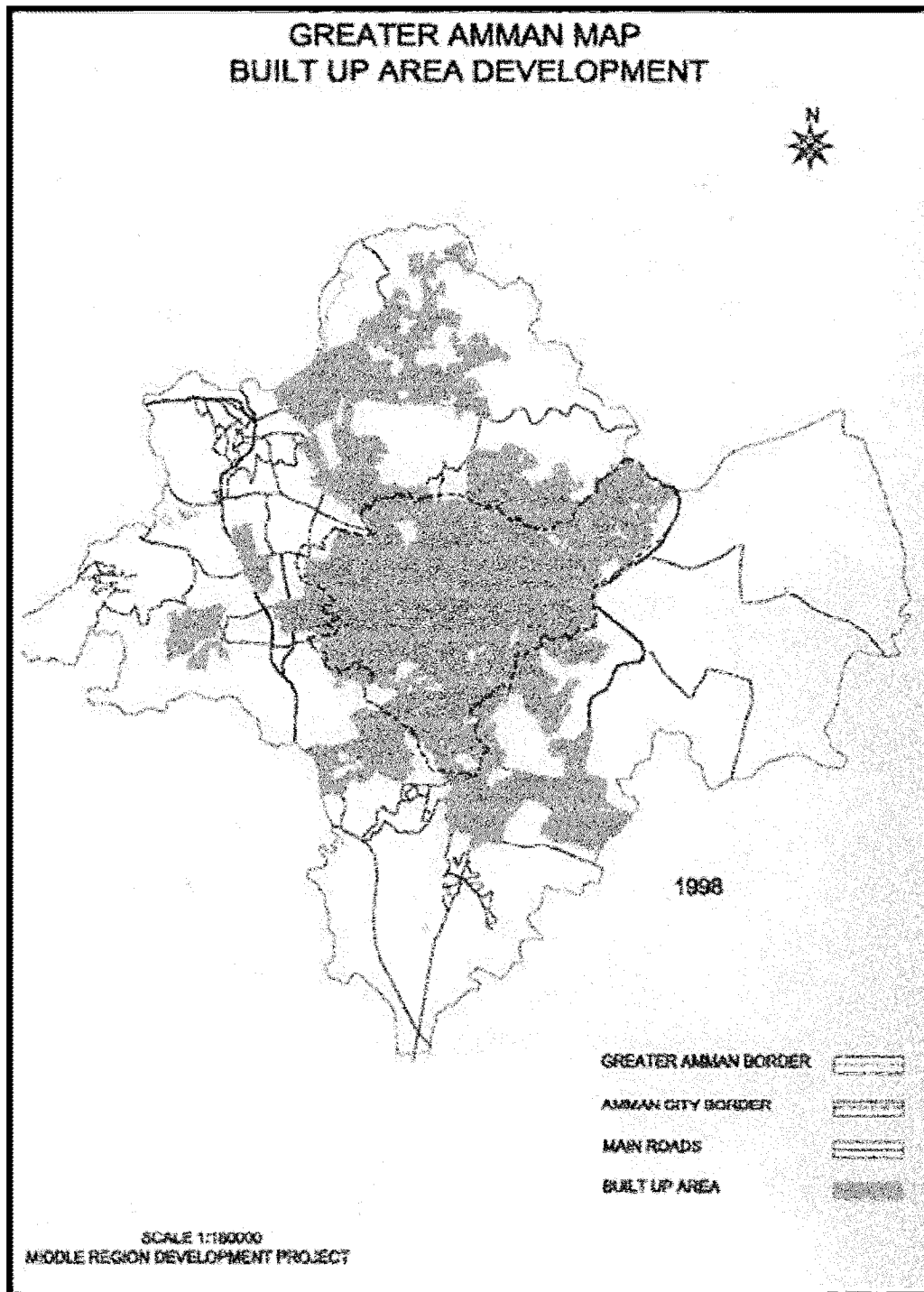
Amman has three types of urban areas. First are large areas outside the camps, inhabited by refugees who were slightly better off financially and who could move to the outlying areas of the camp such as Al-Manarah and Jabal Al-Nasr. Still, these "extended camps" are dominated by impoverished Palestinians. The border between the camp territory and the surroundings is not always marked, even though the streets are usually wider, and the houses higher outside than inside the border (Figure 9).

Second, there are islands of more or less exclusive Palestinian communities in Amman, where refugees from the same hometown or with a common background have settled together. One such area is a part of the al-Taybeh neighbourhood, where nearly all the inhabitants are originally from the Palestinian village of Dora (DPA, 2000; UNRWA, 1994). Another example is Umm Nuwwara, which is a new neighbourhood inhabited mostly by Palestinians who were forced to leave Kuwait after the Gulf crisis in 1990. Both neighbourhoods of al-Taybeh and Umm Nuwwara are examples of physical adaptation where Palestinians have formed more or less segregated neighbourhoods in Amman (Figure 9).

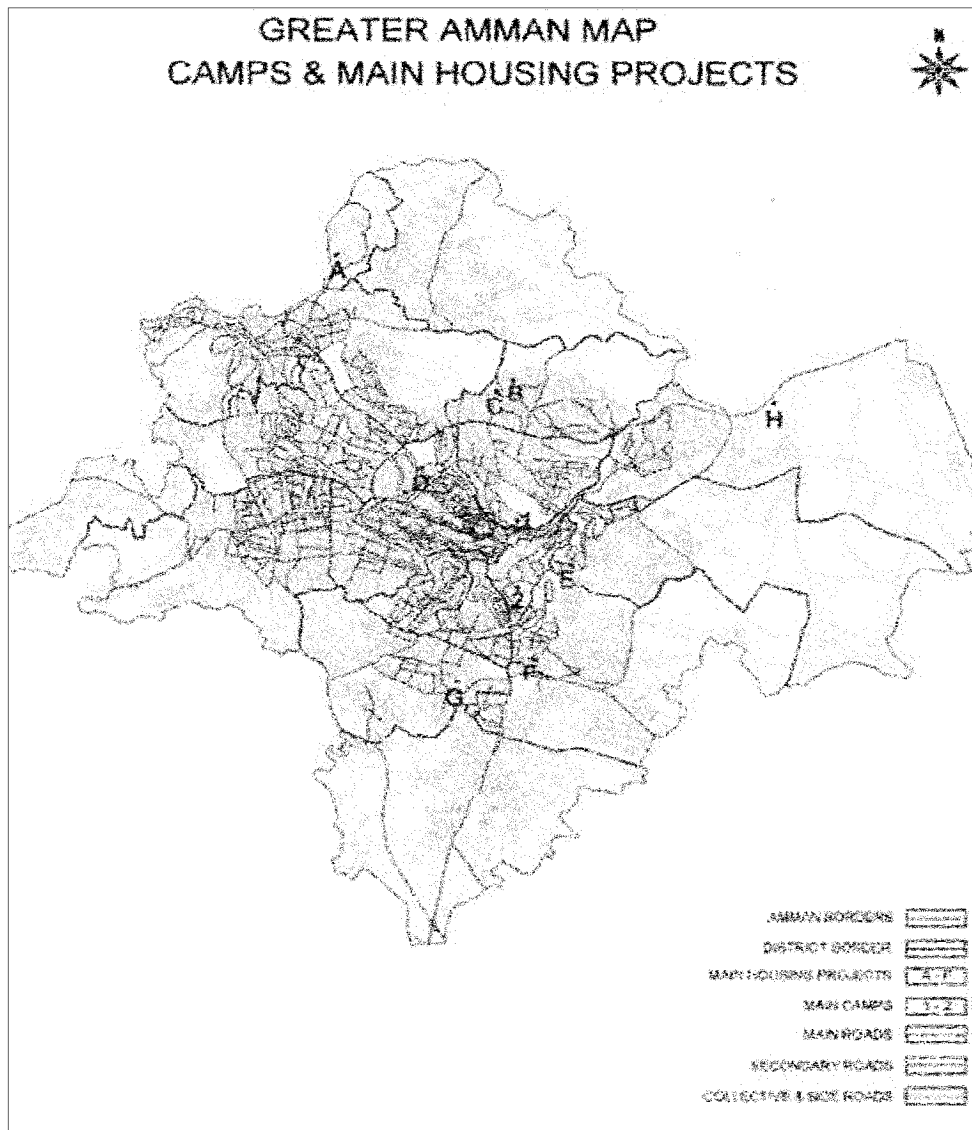
Finally, there are mixed areas, where Palestinians and Jordanians live together. One example is the upper class region called Jabal Amman where Palestinian housing units are assimilated, i.e. not physically separable from the housing units of their Jordanian neighbours who belong to the same upper social class as the Palestinians.



**Figure 7:** Amman municipal boundary growth from 1976 to 1985



**Figure 8:** Amman municipal boundary growth in 1998



**Figure 9:** Map of Amman showing main refugee camps and housing projects concentration including the Al-Wihdat Refugee Camp Site # 2.

Most Palestinians who came with the large influx of refugees in 1948 and 1967 had no choice but to stay in camps, at least for a while. Only the most prosperous people had the resources to settle outside camps. However, many Palestinians from the West Bank established relations with the East Bank during the 1950s and 1960s. They went there to study or work, and had therefore already established a home when the 1967 War made it impossible for them to return to their families on the other side of the Jordan River (DPA, 2000). This group of displaced persons have thus were not obliged to move into camps because of an external crisis.

This section presents a general description of the areas included in the study. The Al-Wihdat Refugee Camp and some areas adjacent to the camp will receive great descriptive detail; the remaining areas will receive general descriptive information because information was not available. In addition, these adjacent areas are a result of spill over from the camp, which has the same population characteristics, but less density.

### **5.3.1 Al-Wihdat Refugee Camp**

Al-Wihdat Refugee Camp was established in 1955 on a flat triangle-shaped area of 488 hectares in southeast Amman to re-house Palestinian refugees. Originally, the camp accommodated 5,000 refugees who lived in 1,400 UNRWA-constructed shelters (UNRWA, 2003).

During the 1971 Jordanian Civil War<sup>12</sup>, 1,100 units were destroyed. Shortly after the war, with grant funds from the Jordanian government and Lutheran World Federation, many of these houses were rebuilt (DPA, 2000; UNRWA, 2003).

Over the years, the refugee camp has swelled into an urban-like quarter and is surrounded by areas of high population density. Today, there are more than 2,660 shelters accommodating more than 72,000 persons registered by UNRWA as living in the Camp (UNRWA, 1994), in addition a large number of residents who are unregistered as refugees<sup>13</sup> (displaced Palestinians). The numbers indicate one of the main frustrations of the living conditions in the camp and its environs — lack of space. Each person has approximately seven square metres of space, and each shelter comprises 27 persons on the average. After the arrival of about 300,000 Palestinians, (DPA, 2000; UNRWA, 1994; UNRWA, 2003) following the Iraqi invasion of Kuwait in 1990, the Department of Palestinian Affairs which is responsible for the legal implementation of UNRWA directives, disregarded the illegal enlargement of houses and dwellings. Two- and three-storey buildings have therefore been raised in order to accommodate the rising population density in the camp. The overcrowding

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<sup>12</sup> Black September in Jordan 1970-1971, Jordan became involved in a civil war between the Jordanian Army and the Palestine Liberation Organization (PLO). The week-long war ended with the surrender of PLO. As part of the surrender agreement, the armed Palestinian fighters gave up their arms and renounced the PLO in order for them to stay in the country. The political body of the PLO and their fighters was disarmed and expelled to Lebanon and other Arab nations.

<sup>13</sup> The formal status-variance of 1948- and 1967-refugees, which UNRWA uses, differentiates between registered refugees who meet the Agency's definition of Palestinian refugees such as the 1948 refugees, and the "displaced persons" of 1967 who are recognised as refugees but are regarded as "unregistered".

means that the capacity of the sewage-, garbage and the water systems, constructed for a much smaller population, are now operating well above the design capacity, according to UNRWA officials.

All the buildings in the camp are aligned parallel to five main streets. These streets cross the camp from north to south, thereby dividing it into major blocks. Due to the buildings' encroachment of the streets, most of the streets are now too narrow for vehicular traffic.

The north and west boundaries of the camp are clearly demarcated. The boundaries to the south and east are less clear. To the northeast of the camp is Urban Development Department (UDD) housing project for 437 refugee households. To the south and east of the camp is a compact squatter settlement known as Naharieh. All these areas are part of the study (Figure 11).

The camp is located some three kilometres south of the city centre. It is the largest camp within the boundaries of the municipality of Amman. It lies between Madaba Street on the west, Taj Street on the north, and the uncontrolled settlement areas of Sha'aleih and Naharieh, and the Urban Development Department project on the north and east. The camp is known for its active and lively commercial business community. Because of its size and importance, it has good transportation links to the rest of Amman.

Because of its size and commercial status, the camp has attracted more settlers, exacerbating the overcrowding problem. The commercial centre is close to the camp schools in the northern part of the site. To the south of the commercial area are two main roads, El-Ledawee and El-Nadee Streets, which are one kilometre in length and head southwest through the camp and form active extension to the commercial area. Internally, there appears to have been six distinct parts to the camp, divided from each other along El-Rabtah, El-Nadee, El-Ledawee, El-Madares and Sumieh Streets.

Apart from the main dividing streets, interior connector streets are generally narrow ranging in width up to three meters. Facing each street, a series of buildings gives the appearance of row houses joined together through their side exterior walls. The presence of doors along the streets is the only indication of how many dwellings make up each block. Most houses in Al-Wihdat camp are now built of cement block, although some of the original metal huts remain. Metal roofs are rarely seen having been replaced by concrete roofs. The majority



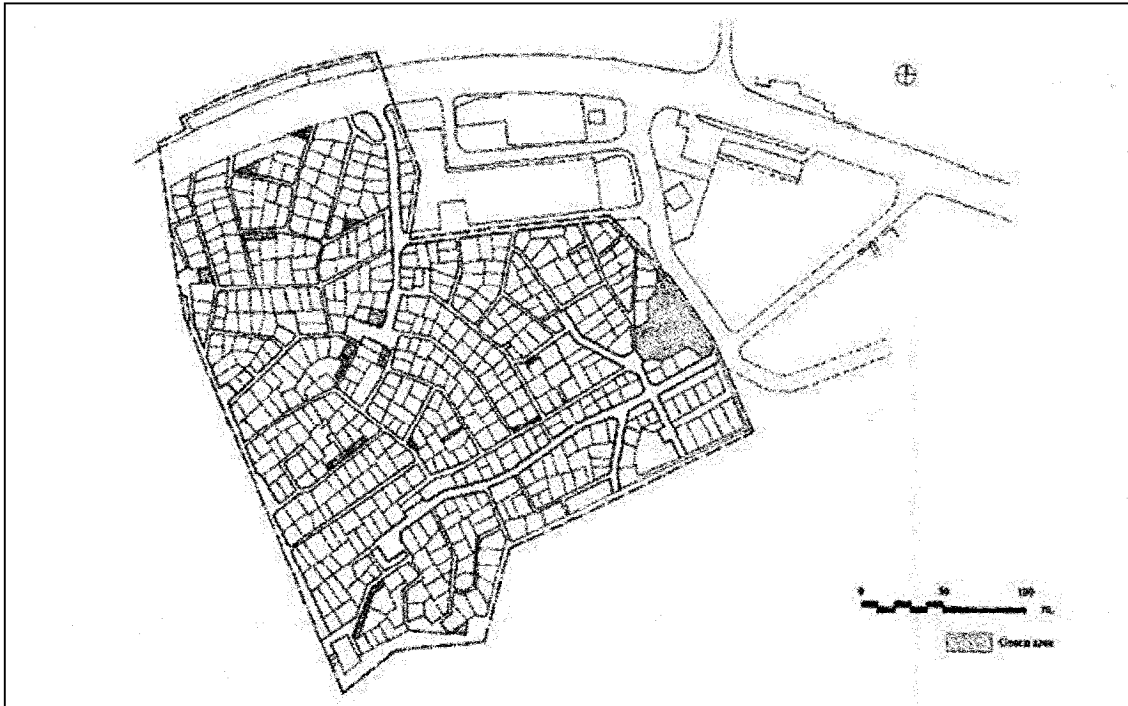
of the houses are simple one story, square or rectangular plan. Recent units are two and three stories high.



**Figure 11:** Aerial map of Al-Wihdat camp and environs south of the camp including the district schools where the interviews took place (shaded).

### 5.3.2 Population and Housing Density

It is useful to point out that the individual communities in the study area (Al-Wihdat refugee camp and its surrounding neighbourhoods) vary greatly in their population size and density. This could influence the quality of outdoor environments and housing conditions. The Al-Wihdat camp has the largest population and density among all the communities in the study area.



**Figure 12:** East Wihdat government sponsored upgrading plan.

There is no data specifically on the population of the surrounding neighbourhoods. Urban Development Department records only provide information on housing and population for particular squatter<sup>14</sup> and slum areas such as East Wihdat, which is more densely settled than other fringe areas (Figure 12). However, fringe areas such as Al-Manarah and Jabal Al-Nasr, which are considered "extended camps", are dominated by lower-class Palestinians. The border between the camp territory and the surroundings is not always marked; however, wider streets and taller houses outside the border provide a visual distinction

<sup>14</sup> There appears to be three distinguishable types of squatter areas as defined by the Urban Development Department. These are: (a) Permanent housing built on plots owned under informal title or "hejja". (b) Overspill areas around refugee camps. (c) Rudimentary housing built on difficult sites, e.g. along wadis, on steep slopes or in old quarries. Most of the areas defined as squatter areas are included in the second and third types.

between the two areas. In terms of physical adaptation, Palestinian households in Jabal Al-Nasr are more or less assimilated into their surroundings.

### **5.3.3 Camp Administration and Organization**

Al-Wihdat camp is governed by three bodies. UNRWA, as the originator of the camp, provides social services, health facilities and assists camp communities in self-help projects such as paving roads and installing drainage ditches for eligible registered refugees. UNRWA generally supplies materials and helps to organize these activities, whilst the inhabitants of the camp provide the labour (DPA, 2000).

However, UNRWA does not administer the camp, which is run directly by the Government of Jordan through the Department of Palestinian Affairs (DPA). The camp has no legal status either as a municipality or as that of a village within the Amman city limits. As a result, the government undertakes most of the normal municipal functions such as issuing titles to plots, and building permits. It is also the licensing authority for public services including water supply, electricity, sewerage, and solid waste collection (DPA, 2000).

Lastly, a six-member committee, in cooperation with the Camp Services Officer of UNRWA, and community leaders like school principals organise the self-help projects such as asphaltting school yards and constructing market stalls (DPA, 2000).

### **5.3.4 East Wihdat: Urban Upgrading Neighbourhood**

In 1980, informal settlements such as East Wihdat, built by squatters on privately owned land, comprised about one quarter of all new housing development in the city of Amman. On these sites, the urban poor built basic shelters of corrugated iron tacked to wooden frames. Because the occupants had no legal right to build and lacked secure tenure, no public or private investment in basic infrastructure, schools or health facilities had been provided. The Urban Development Department (UDD) was established in 1980 to formulate and implement its first project, the upgrading of East Wihdat, under the auspices of the Municipality of Amman (Figure 12 above). The main objective of the project was to improve living conditions for one of the most marginal urban communities in the city. The goal was to devise affordable measures that might be replicable elsewhere in Jordan (Payne, 2001). The land was bought from the original owners and mortgaged to the householders with monthly instalments based on 33 percent of the income of each beneficiary. Over a ten-year span, UDD provided over 500 serviced plots, accommodating 5,000 people, with water and electricity, paved roads,

footpaths, shops, workshops and community facilities. Each well-built new house was provided with a sanitary core connected to the main sewer. East Wihdat now has a health centre, a clinic, a mosque, a park and a community centre. Funds were organised through the World Bank (31 percent), the Government of Jordan (25 percent) and the privately-owned Housing Bank (44 percent) (UN-ESCWA, 2000).

### **5.3.5 Al-Manara: Urban Development Neighbourhood**

The Al-Manara area featured numerous underdeveloped scattered small quarries (located at the right side of figure 8). However, it was a suitable site for development as the provision of access roads and other services was relatively close to a main commercial spine in south Amman. After development, the site became a focal point for low-income settlement expansion.

The main project objective was to provide shelter, related infrastructure and community facilities to low-income population (10th-40th percentile of income groups) at affordable prices. It also aimed to improve social productivity, especially for women, by the provision of local employment and training opportunities and loans to small enterprises (UNDP, 2000; UN-ESCWA, 2000; UNRWA, 2003).

The projects and services in the Al-Manara neighbourhood were part of different urban development projects, sponsored by the Jordanian government. The first one was started in 1984 and was completed in 1986. Due to its success, two other sub-projects were launched within the second urban projects (1987-1991). Al-Manara's fourth sub-project was constructed in 1994-1995 as part of the third urban project. The total area of these sub-projects is 105.8 hectares, on which 3,320 residential plots were developed (UNDP, 2000; UN-ESCWA, 2000).

The above-mentioned sub-projects targeted the low-income groups in urban areas who were neglected in previous housing projects. These were defined as being in the 10th-40th percentiles of the national income distribution profile. At later stages of the project, and because of the economic recession in Jordan, the target group was extended to cover the 10th - 60th percentile of the Jordanian income distribution profile for Al-Manara fourth sub-project (UNDP, 2000; UN-ESCWA, 2000).

### 5.3.6 Public Spaces

In this dissertation, public spaces refer to areas such as streets, schools and other public centres such as mosques and community centres. In fact, due to overcrowding, almost all spaces become 'public'. The shelter or the 'home' is so close to the neighbours in most cases that 'privacy' or the 'private domain' becomes a theoretical construct. In addition, culturally the dichotomy between the private and public domains are ambiguous. Issues and spaces considered 'private' in Western societies may be very public in other cultures and vice versa.

Almost 80,000 refugees live on 500 hectares, which came to be known as Al-Wihdat Camp. As the population began to encroach on every vacant area, mostly in violation of building regulations, 'empty' spaces, once used as playgrounds or gardens had disappeared, so that today there are hardly any unused spaces.

In addition to the lack of space to build horizontally, the infrastructure in the camp, mainly streets and sewerage systems are not sufficient and failing under increasingly heavy use. Furthermore, the population density places pressure on the existing water supply, electricity and other public utilities. The camp's alleyways are often flooded with dirty water, usually from broken and disintegrating sewerage pipes.

Although many of the camp alleyways and streets are paved, many still need paving and/or repair. More importantly, many of the shelters are on the same level as the streets, it is therefore not surprising that some shelters are flooded with dirty water in the winter. This situation forces the inhabitants of the shelters to sleep and live in a smaller, unflooded corner of the house, until the water has been drained out.

As for public services, they are not sufficient, especially garbage removal. It is not uncommon to see children playing around overflowing disposal garbage bins. Although UNRWA provides regular sanitation and disposal services, the deficit and cutbacks in its budget hinders it from hiring more staff and employees to provide these services to a steadily growing population. Many of these disposal bins are placed in wider streets, at the entrances of camp or in areas making it accessible for collection. These areas are similarly attractive to boys who seek wider areas and spaces to play. Many of the boys play football and other games here, due to lack of other spaces.

With the increase in population, people began to build vertically, second and third levels, usually accommodating sons and their families. As horizontal expansion is no longer possible in the camp and to a lesser extent the adjacent areas too, the buildings are one, two, three floors high and in some cases rising higher, to four or five floors. This situation means that the sunlight never enters into many of these shelters and there is no air ventilation. Shelters, therefore, are very damp in the winter and humid in the summer. In addition to the health aspects, social problems are compounded as shelters come very close to one another and the neighbourhood becomes more and more overcrowded with large families. This severely compromises the right privacy and creates conflicts, over space, children's play and intrusion. Some streets have become so narrow from over-building that it is sometimes difficult for more than one person to walk through.

### **5.3.7 Social and Cultural Centres: Programs and Activities**

#### **5.3.7.1 Adolescents and Youth**

There is one Youth Activity Centre in the Al-Wihdat refugee camp. However, it is not very effective because it is limited to sport activities for boys above the age of 16. It certainly is not sufficient to accommodate camp population of 72, 000 where over 50 percent of the population is under the age of 14. All public facilities or centres in whatever form they exist respond to the needs of a small percentage of the youth population and are primarily male dominated. Their activities are mostly sports, especially football (soccer), which excludes young women. Although a few Youth Activity Centres have begun to include women, these remain extremely few or limited in application. Streets are also places where youth 'hang out' a great deal and there is generally a negative stereotype regarding the 'idle youth'. Youth are blamed for many of the social problems, such as fighting, getting into trouble, delinquency, and immoral behaviour.

The reality is that a large number of youth in the study area are unemployed and out of school, and there are not many avenues to grow and develop. Even vocational schools are sometimes difficult to access due in part, to the children's not meeting the requirements, being too poor or unable to attend due to distance. In many cases, they take the public transportation to get out of their neighbourhoods and hang out in major commercial centres in Amman or Zerqa. Besides a lack of facilities offering sufficient sports and social programs, there is also a shortage of vocational opportunities, such as in computers, technical training, and arts.

### **5.3.7.2 Children**

Before Al-Wihdat camp was established in 1955, children played in the space still available in front of their houses (DPA, 2000). Often these spaces were gardens with trees and constituted safe places to play. Today, gardens and spaces have disappeared, which means children do not have playgrounds, a vital space where they develop and grow through interacting with other children and playing safely and freely. Most children do not enjoy the simple activity of going down a slide or being pushed on a swing. This is particularly important since over half the study area population is fourteen years of age and younger, and the fertility rate at Al-Wihdat like other refugee camps in the Middle East region is one of the highest in the world, over 5 percent per year (Marshy, 1999).

### **5.3.7.3 Men and Women**

Lack of land area to create new centres and overcrowding means that existing social and cultural clubs are overcrowded and do not meet the requirements of the population. Social restrictions on women and girls have hindered their participation in the few existing clubs and centres. Public libraries, cinemas, theatre and art centres, computer training institutes, and affordable family outing places are lacking. Indoor sports are too few to mention or totally absent.

Women point out they have no place to go at all (Marshy, 1999). The UNRWA's Women's Program Centre is active in the camp; however, the majority of women are not participants in the programs offered. A large segment is also socially restricted from joining many community activities. They are home bound because of restrictions imposed by the male members of the family and/or because of family obligation such as taking care of children and siblings. In any case, women point out that one Women's Centre in the refugee camp is not sufficient to cover the needs of the population. A variety of programs are needed to respond to the needs and culture of the local communities (Marshy, 1999).

### **5.3.7.4 Private Spaces**

The basic social unit of the Middle Eastern society is the family, hence private space here refers mainly to the shelters in which the extended or nuclear family resides.

### **5.3.7.5 Shelters and the Extended Family**

Overcrowding is also related to the size of shelters housing large families. The size of an average housing unit is 7 square meters (UNRWA, 2003). In Al-Wihdat refugee camp, official figures point out that approximately 40 percent of households have a density of three persons or more per room (DPA, 2000; UNRWA, 2003). In most shelters, there is one room utilized more than others, at one time there might be four to six people in the same room. While the population continues to increase, the small shelters are no longer 'habitable', yet poverty hinders most families from improving, renovating, relocating or expanding their habitats. A person with some means simply push the camp boundaries by building along and near refugee camps illegally. These were individual initiatives and meant that the family had some means to invest in the materials needed to build houses, if not to buy the land (DPA, 2000).

A visitor to the Al-Wihdat refugee camp houses will observe that there is always a room, which needs painting, furniture, floor tiles or concrete ceilings. Sometimes, houses have huge cracks as families await better financial conditions to install a window or door. In addition, overcrowded and cramped neighbourhoods' means that the sun cannot reach many of these homes and the inhabitants suffer from chest problems and humidity related illnesses, such as rheumatism and arthritis. Most of the inhabitants of shelters sleep on mattresses on floors and this is particularly bad for children, when the floors are not cemented or tiled properly.

The cultural dimension impacts the way the daily life is practised in the private space. In some of the shelters, there is a room where only male visitors are allowed, which means that women and children are confined into smaller areas. The living room is the main room, which is used for several purposes. It is a living area, a place where visitors sit; a sleeping area at night; and a place where the family gathers to eat.

Although official figures suggest that the average family size is around 4.5 (UNRWA, 2003), field observation and the inhabitants of the study area suggest a higher figure. Many of the young participants interviewed had five or more members. The difference is because registration figures are based on the nuclear family. However, many of the newlyweds move in with their in-laws and hence there might be more than one nuclear family living in the same house. There are a few smaller families, but these families are single-parent

households and divorcees who in end up living with the extended family, in often cases three generations living in the same shelter.

At the very least, each nuclear family houses other members for periods of time and it is cyclical. When married children acquire the means to move out, they usually do so leaving elders behind with younger unmarried brothers and sisters. A return to the parent's home occurs in the case of divorce or economic hardship. In other words, the unit which belonged to the parents when they first registered remains as a form of security and final resort for members of the family who do not have the means to become independent. In the case of the refugee community, this is a necessity.

#### **5.4 Summary**

This chapter presented the historical and modern evolution of the city of Amman, its population, and the urban condition in the face of the rapid growth. The following summarizes the key points of this section in relation to the study.

High urban growth led to overcrowding in many neighbourhoods in Amman and other urban centres in Jordan. This kind of overcrowding and its associative effects in Amman and in particular in the study area derive from:

- High 'social density' in homes, schools and camps;
- High 'spatial density' of the camp, in particular congested buildings and roads, and lack of public spaces, including playgrounds and meeting places.
- Burden placed on the already insufficient infrastructure and utilities, including roads, water supply, and electricity, public services, health and education.

The social and psychological effects of the high urban density are immediate, long-term, cumulative, multiple, mutually reinforcing, direct as well as indirect, and critical. The phenomenon of urban growth in Amman is likely to worsen. Overcrowding in urban neighbourhoods affects all segments of population and more so of the refugee camps' population. The social and psychological effects of this poor urban environment are experienced among individuals and within relationships: within households; between families and households; within the camp as a result of crowded and overburdened social

services and increased physical congestion; and between camp residents and the wider society in Amman area.

The physical effect of high volume urban growth poses serious direct and indirect psychological and health risks to all segments of the population, particularly the elderly and young children. This urban overcrowding condition contributes to far-reaching social problems. For example, in schools and homes they contribute to substandard education and functional illiteracy, and may be related to increased child labour. It is a 'push factor' in the decisions leading to girls' early marriage (before the age of 18) as a protection for girls from any immoral behaviours and influences, which, in turn, leads to serious health and social ramifications for women (UNRWA, 2003). This living condition places a strain on social relations within the home and community and also affects women's access to social and economic resources as it increases their responsibilities in the home.

The psychological effects of overcrowded urban environments are interlinked with social effects. Poor urban environment contributes to psychological frustrations, which, in turn, has a bearing on behavioural responses and one's ability to cope with difficult conditions. Poor urban environment also has a bearing on refugees' perception of options and future prospects.

**CHAPTER SIX**  
**DATA COLLECTION**

## **CHAPTER 6: DATA COLLECTION**

### **6.1 Introduction**

The case study presented here is qualitative research grounded in a broadly interpretive philosophical tradition; the focus being on how the social world is interpreted, understood, experienced, or produced. It is based upon methods of data generation and collection, which are flexible and sensitive to the social context within which the data were produced. It employs methods of analysis and explanation building that involves understandings of complexity, detail, and context.

The qualitative methods of data collection and analyses of this study were interactive research processes that occurred in overlapping cycles. There were no rigid step-by-step procedures to follow; both data collection and analysis progressed simultaneously toward the completion of the research.

From August to November 2003, a series of interviews were conducted with children aged ten to fourteen residing in Al-Wihdat refugee camp and environs in Amman, Jordan. The purpose of this dissertation is to understand and analyse children's views, opinions and perceptions about their outdoors environments. The aim was to establish via the children's perspectives, views and opinions that would be used as lessons for policymakers, urban planners and architects.

### **6.2 Data Collection**

As stated earlier, this case study of qualitative research focused on 10- and 14-year-olds in Al-Wihdat refugee camp and surrounding areas. I employed a mixed methodological approach in the study area, which consisted of:

- 32 one-on-one interviews;
- 32 drawings;
- Child-taken photographs;
- Three child-led fieldtrips;
- Informal observation in the study areas;

- Key informant interviews (teachers and local officials)

The multiple sources of data, such as interviews, child-taken photographs, child-led fieldtrips and cognitive maps were used to validate and crosscheck findings. Patton (1990) describes this process as triangulation.

Data collection for this study began by interviewing child participants. The interviews were held at two school facilities, which the participants attended. Each school facility houses two independent schools of the same sex — morning school (7:30 to 11:30 A.M.) and afternoon school (12:00 to 3:30 P.M.). Each school has its own principal, teachers and support staff independent from the other school. All ten district schools are located on *Schools Street*. Interviews were coordinated with respective principals in a manner that would not disrupt the children’s classes. A quiet, private office space was provided by the principal from each school to conduct the interviews. Children were interviewed during school hours and during their physical education, art education, and library classes.

**Table 1:** Age, location and gender of participants

Age Group	# in group	By Gender		Wihdat Camp		Outside Wihdat	
		B	G	B	G	B	G
10 years old	5	3	2	0	2	3	0
11 years old	10	4	6	1	2	3	4
12 years old	7	3	4	2	3	1	1
13 years old	6	4	2	2	1	2	1
14 years old	4	2	2	2	1	0	1

Every morning before interview, I conducted a meeting with the two assistants from 7:30 to 8:00 to coordinate, discuss strategy, and any issues arising from the previous day’s interviews. The number of participants interviewed each day ranged from two children to a maximum of four children depending on the circumstances for that day (e.g., sick child, school dismissed early, class times switched because teacher was absent or school holiday). Each interview required 60-90 minutes to administer. The information collected at each interview was organized in notes immediately following the interview. The study timeline was defined by the number of children that could be interviewed each day. A maximum of four interviews were conducted each day; a total of ten days minimum were

required to complete all thirty-two interviews. An additional ten days were used to conduct the follow-up interviews.

In general, the children showed a great willingness to cooperate and answer the questions. They took the assignment very seriously and were impressed that an adult was interested in their opinions. It was striking how well they knew their everyday outdoor environment. Examples of their knowledge of their outdoor environment were plenty. Many of the respondents boasted about what they knew in their neighbourhood. They were very observant. They knew the name of every family that lived on their street or location and the name of every shop on their route to school. They provided detailed description about good or bad activities that went on outside the house. They were able to deal with traffic congestion and street crossing without fear.

### **6.2.1 Interviews with Children**

Each interview started with a general conversation about school, classes, and favourite subjects and thanked the child for participating in the study. The conversation with the child at the beginning of the interview was instrumental in establishing a one-on-one personal relation (comfort zone) and gaining the trust of the child. It gave the child time to become comfortable and speak freely.

The interview consisted of nine sections: (1) residential history, (2) general perceptions, (3) place knowledge and use, (4) favourite and special places, (5) problem places, (6) places ownership, (7) daily activities, (8) family network, and (9) places changes (Appendix A-4). The collected data were documented through written notes and tape-recorder. At the end of each day, the data collected was translated verbatim into the English language and saved on a computer as a Microsoft® Word document.

The first part of the interview asked the young participants about their *residential history* (name, age, where they live, how long they lived at their current address, type of house, current grade and if they worked before or after school). The aim was to generate demographic data about the respondent's population.

The second part dealt with the *general perceptions* of the respondents. At this time, two questions were asked to the respondents: did you visit places outside your neighbourhood for recreation or vacations? How would you describe the area where you live? The aim of

these questions was to measure the perception and the degree of knowledge of children about their neighbourhood and surrounding areas in the early stages of the interview before introducing any specific issue for discussion. This was done for two reasons: (1) to obtain untainted and unprepared perceptions and (2) to test the children's ability to articulate verbally their thoughts and views about their environments. For comparison, these two questions were asked again in a different form later in the interview.

The *place knowledge* and *use* section of the interview was investigated through questions such as: What is the furthest place where you have ever been to in the city? Can you tell me about all the places that you know or use in your area - indoors and outdoors? Additional, more specific probing questions were added:

- What do you do there?
- Do you go there alone or with others?
- What do you like or dislike about these places?
- What would you change in this place if you could?
- Which of these places do you use most often?
- In which of these places do you spend the most amount of time?

The aim was to collect data that measure the children's range of movements, views and uses of these places. This section sought to understand how much children knew about their neighbourhood and how far they explored their surroundings. I wanted to know the reasons "why" the children's views of the places were positive or negative, their movements were restricted, and the uses of these places were limited or otherwise. These questions engaged the children in a conversation that provided valuable information to be analysed.

Participants were asked about their *favourite places* / *special places* through questions such as: Which place were the most special to you or your favourite? Why? How would you describe this place to someone who had never been there what it was like? I was looking for responses that were considered positive perceptions according to the child's own definition. The children's attitude toward a place or places resulted from meanings and experiences attached to them by the child. These meanings and experiences provided ample data that led to greater understanding of their existing environment.

Moving from positive to negative attitudes and views, the interview investigated *problem places* through questions such as: Were there places in your area where you don't like to go? Why don't you like it? Were there places where you weren't allowed to go? Who forbade you? What were the reasons for forbidding? Were there places that you would like to enter

but cannot? What would you like to do there? Are there dangerous places in your area? What makes them dangerous? These questions explored the negative aspect of the neighbourhood or places within the neighbourhood from the child's perception.

The remaining sections of the interview dealt with place ownership, daily activities, family network, and place changes. These sections explored the child's social relationship with the community. The children were asked about their community involvement and participation. Exploring daily activities and family networks were important to understand the extent of the child community participation and social relations.

The interviews used in this study explored issues that were central to the child's activities and experiences necessary for healthy development. It investigated the physical qualities of the outdoor urban environment that affect children's outdoor social and physical activities.

### **6.2.2 Children's Drawings**

In preparation for the drawing exercise, the children were asked if they visited areas outside their neighbourhood and how they would describe it to someone who had never been there. This was done for two reasons: (1) to obtain untainted or preconceived images of the neighbourhood from the child and before the child became influenced through later discussions, and (2) to evaluate children's verbal abilities to articulate their thoughts and views about their outdoor environments. Children's abilities to articulate thoughts and views graphically were explored. Each child was given an 18" x 24" white sheet of paper, medium-point black marker pen and coloured crayon markers. At the start of the exercise, the children were asked to make a map or drawing of all their favourite places – where they go after school or on weekends. I emphasised that whatever the child drew or wrote down on the drawing was fine and assured the child that the exercise had nothing to do with his/her normal classroom work. At the end of the exercise, the contents of drawings were discussed with each child individually. The aim was to make sure that I understood what was being drawn. I made light pencil notes on each drawing for future reference.

### **6.2.3 Child-taken Photographs**

At the conclusion of the first interview, I met with the children of the morning school period and gave each one a disposable camera. The children were instructed to use only pictures 1 to 12 on their camera to document places in their neighbourhood that they liked or

disliked, good or bad, dangerous and/or special to them. Children had four days to complete the assignment and bring the camera back at the second interview. After collecting the cameras from the morning school children, the cameras were reassigned to the afternoon school children. Each camera had a code number corresponding to the child who used the camera such as B-1/ B-9 or G-1/ G-9 (see Appendix D and E-Child-taken photographs). The codes from 1 to 8 were those for the morning school and codes 9 to 16 were those for the afternoon school. All cameras were recovered and developed. All photographs were reviewed with the children as a group. The children were asked to look at their photographs and select the best six photographs s/he would like to use to make a poster. Individual meetings were conducted with the children to discuss the contents of their photographs. The aim was to make sure I understood what was being photographed and help them develop a title for the photographs using their own words. The child-taken photographs were used to verify and compare with data collected from the children's drawings, interviews and child-led fieldtrips as a form of triangulation.

#### **6.2.4 Child-led Fieldtrips**

The fieldtrips were an additional and important method for understanding significant details and individual differences among the children; they also served as a triangulation method to verify, collaborate, and compare with data collected from the children's drawings and interviews. Participants for these fieldtrips were chosen on the basis of drawings, interviews, and parental permission. Only four respondents' — all boys — were able to obtain parental permission; no girls were allowed to participate in the fieldtrips. Although permissions were granted from parents for the fieldtrip, it was a restricted consent. The fieldtrip was limited to the boundaries of the child's play areas that were visible to parents.

The fieldtrips lasted anywhere from 30 minutes to 90 minutes. The crucial thing was to make sure that the children took the lead and that the trip was conducted at their own pace.

All the fieldtrips began with and were led by a single child, but as soon we got to the child's neighbourhood, we were joined by many of their friends. The involvement of friends posed the risk of the child losing the lead. However, allowing the child's friends to talk and express their opinions for few minutes helped diffuse the situation and give the lead back to the selected child. During the fieldtrip, the child took me around the neighbourhood introducing the special features of his territory.

The recording device consisted of a digital camera, a 35mm camera, a reference map, and a small notebook. Where possible, photographs were taken without attracting too many spectators. However, in this part of the world, a person walking with a camera draws a lot of curiosity and objections. Therefore, in many instances the child was asked to pose for the picture in order to include the intended scene in the photographs.

As soon as possible after the fieldtrip, the events of the trip were documented in a detailed narrative based on the field notes. Usually, the narrative was written in the evening in the hotel room or during a two-hour bus ride to my hometown to visit my family. The narrative of the trips included a summary of each trip, listing all the places visited, play areas, bad areas, people and activities.

### **6.2.5 Informal Observations**

The informal observations conducted provided valuable anecdotal as well as general information about specific events or daily activities in the local area. On the average, approximately 30 minutes was spent daily recording informal observations, which were noted in project journals along with daily comments on the project's process and related evaluation remarks, providing a written record of what happened during the course of this study. In order to make the process participatory, the children were asked to record part of their daily observations in individual project journals. These informal observations by children were discussed in the follow-up interviews. 'Hanging out' in the study area was helpful to observe children's normal daily activities and their use of the local outdoor areas. The observation of children interacting with other children or adults indicated the level of familiarity of their surroundings and their use of the outdoors environment. The informal observation confirmed and clarified issues identified through other methods used in this dissertation.

### **6.2.6 Key Informant Interviews**

Key informant interviews were used to explore the attitudes and insights of school and local government officials. The questions used in this interview explored their own perceptions of the area, including their evaluation of it as a place for children, their knowledge about children's use of the outdoors, activities, and what they like most and least about the area (Appendix A-5). Other questions explored the officials' own memories of their childhood environment and comparison with one under study for this project. The interview was an

open format and a discussion session with government officials. The data gathered during the interview were documented as a narrative statement. Each narrative was labelled with the participants name, title, location and date of the interview. One of the interviews involved a fieldtrip to community volunteer facilities for job skill training, health clinic, and community assistance office. Interview included queries regarding plans for the area. Specifically, how they believed their plans would affect the quality of the area and the quality of children's lives; what types of data and criteria they typically rely on in the development of their plans; and how young people in the area and other community residents can be involved in the planning process. The responses from these participants were summarized, tabulated, and used as part of the narrative reporting in the discussion chapter.

### **6.3 Summary**

This chapter outlined the data collection procedures and the protocols followed by the research team. The chapter explained how each research instrument was used to gather data from the field, and the process of data documentation.

Data collection for this study began by interviewing the child participants. The interview consisted of nine sections. These sections were vital for determining children's views, perceptions and use of the outdoors environments.

The second data collection method used was children's drawing of their local area, which provided a tool for discussing their perceptions of the area, their activities, range of movement, and favourite and least favourite places. Observations of the drawing process and the drawings themselves provided me with insights about what is most and least important to young people. At the end of the drawing exercise, I discussed the drawings with each child. Light pencil notes were made on each drawing for future reference.

Using child-taken photographs was a good qualitative data-gathering tool. The photographs were used to collaborate and compare with data collected from the children's drawings, interviews and child-led fieldtrips. The children chose up to six photographs and made a poster giving each photograph a title. Many of the photographs mirrored what they drew or mentioned in the interview.

The fieldtrips were an additional and important method for understanding significant details and individual differences among children.

The informal observations conducted in this study provided valuable anecdotal as well as other information about specific children events and general community daily activities in the local area. The observation of children's interaction with other children or adults indicated the level of familiarity of their surroundings. The informal observation confirmed and clarified many issues important to this study.

Finally, interviews with the school and local government officials were helpful in exploring their attitudes and insights regarding the existing outdoor environments and their impact on child development.

## CHAPTER SEVEN

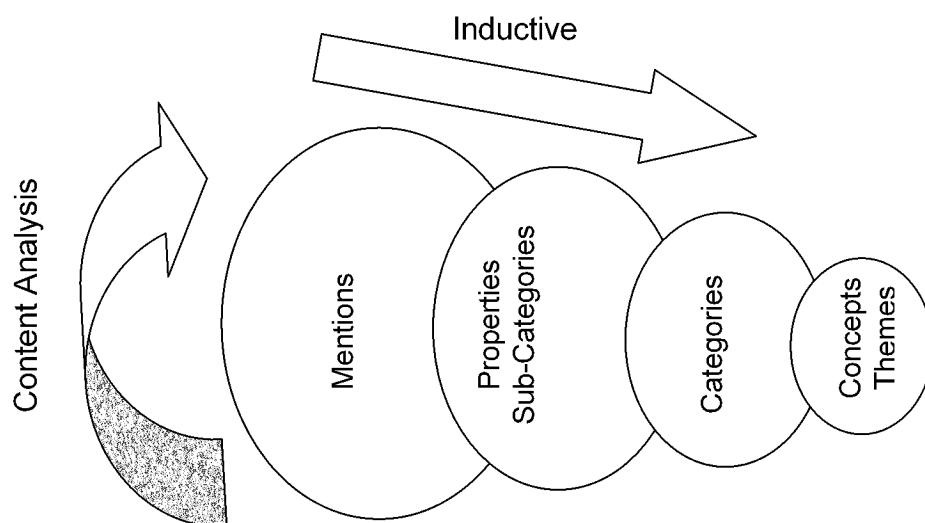
## DATA ANALYSIS

## CHAPTER 7: DATA ANALYSIS

### 7.1 Introduction

To cope with the issues described in the previous section this research is going to suggest the Grounded Theory (GT) methodology for data analysis. Grounded Theory is a "general method of comparative analysis" to discover theory with four central criteria, i.e. work (generality), relevance (understanding), fit (valid), and modifiability (control). This methodology can be applied to both qualitative as well as quantitative data (Glaser & Strauss 1967). It will answer the question of "What was going on in an area" by generating either a substantive or a formal theory. Stern (1995), in a brief introduction, argued "the strongest case for the use of grounded theory is in investigations of relatively uncharted water, or to gain a fresh perspective in a familiar situation."

However, GT is just yet another method with its own merits and weaknesses. Thus, it cannot be claimed that this methodology is the best. It is a "do-it-yourself methodology" (Strauss and Corbin, 1998). This application makes it especially suitable for research on the implementation of reform projects in the areas of technical, social, health, economic and ecological development, as well as citizen's participation projects. Thus, these interesting features could encourage research activities in a developing country.



**Figure 13:** Graphic representation of data analysis and reduction process (data sifting)

Grounded Theory (GT) investigates the actualities in the real world and analyses the data with no preconceived hypothesis (Glaser and Strauss, 1967; Stern, 1995; Strauss and Corbin, 1998). Data collection is usually, but not exclusively, by interviews. GT data analysis involves searching out the concepts behind the actualities by looking for codes, then concepts, and finally categories (Figure 13).

Analysing qualitative data is the heart of grounded theory through the constant comparative method. In this method, concepts or categories which emerged from one stage of the data analysis were compared with concepts emerged from the next. Relationships between these concepts and categories were sought and constantly compared to form the basis of the emerging theory. This process of constant comparison continued until it reached 'theoretical saturation', where there were no new significant categories or concepts emerging. In terms of the process of doing grounded theory analysis, several procedures were followed. These procedures were cumulative stages involving frequent revisiting of data in the light of the new analytical ideas that emerged as data collection and analysis progressed:

- Open coding (initial familiarisation with the data, list of mentions)
- Delineation of emergent concepts
- Conceptual coding (using emergent concepts)
- Refinement of conceptual coding schemes
- Clustering of concepts to form analytical categories
- Searching for core categories
- Identification of core theory

Two main sets of data (interview responses and children's drawings) were examined separately. The interview data referred to the existing reality in the respondent's neighbourhoods, whereas the drawings referred to an imaginary view of neighbourhoods (images of what they like to have in their neighbourhood) mixed with the existing reality. Other data gathered from child-taken photographs and child-led fieldtrips were used to verify the findings from earlier methods and to provide data triangulation.

The data were placed in the assigned categories (Dey, 1993; Stern, 1995). The classification established was similar to that used in the previous GUIC studies in which children were asked the same questions (Table 2), and thus limited comparisons could be made between the results of this and the previous GUIC studies.

## 7.2 Data Analysis

A critical data reduction decision in qualitative studies is to determine the unit of analysis (Strauss and Corbin 1998). In this dissertation, keyword analysis was used to extract sequences of words about the subject of interest along with their contexts. These sequences, called "mentions", were coded into categories (Strauss and Corbin 1998). The dissertation coding was based on a qualitative evaluation of each sentence for every response made in the interviews.

GT analyses and reduces data through iteration (repetition). Coding was used here to simultaneously reduce the data by dividing it into units of analysis and coding each unit. The dissertation also used a multiple coding protocol, where mentions could represent more than one concept category. The nature of responses from respondents during the interview was more realistically captured by a multiple coding protocol.

The coding conducted was a form of content analysis to find and conceptualise the underlying issues amongst the 'noise' of the data. During the analysis of the data collected from interviews, I became aware that the respondents were using words and phrases that highlighted issue of importance or interest to the research. This was noted and described in a short phrase (Table 2). This issue mentioned again in the same or similar words and noted again.

There were initial doubts about what a code is supposed to mean. The literature stated that coding should be performed with an open mind without preconceived ideas. Glaser and Strauss (1967) insisted that preconceived ideas should not be forced on the data by looking for evidence to support established ideas. The dissertation followed what Strauss and Corbin (1998) have recommended: "microanalysis which consists of analysing data word-by-word" and "coding the meaning found in words or groups of words".

**Table 2:** An example of data coding and classification used in the data analysis (similar to those used by Moore, 1986).

Patterns	Themes	Properties	Categories
<p>I love my neighbourhood; it is a commercial area more than residential area. I love it because it is my birthplace and I have many nice memories.</p> <p>I like our street because it is quiet and clean.</p> <p>It is just a refugee camp and the people are very close to each other.</p> <p>I don't like the whole area and I always cry for dad to move us out from this place...I don't like it just don't like it...I wish to leave...the streets are not paved, dirty, noisy, bad teens and crowded...there are no places for kids to go or play.</p>	<p>How do children describe the outdoor environment in their neighbourhood?</p> <p>What do children especially like or dislike about the outdoors in their neighbourhood?</p> <p>What types of outdoor problems do children perceive as bothersome about their neighbourhood environment?</p>	<p><b>Positive Physical Qualities:</b> beautiful, nice and very good place to live, good people</p> <p><b>Negative Physical Qualities:</b> boring, dull, doesn't have open spaces, dangerous, polluted, unsafe, busy, dirty, noisy, too many drunks, bad people, very tight and crowded area, narrow streets</p>	Physical qualities
<p>I go to the Qur'an Teaching Centre every day for two hours, my friend's house in the evening, mosque every morning at sunrise. Friday after morning prayers, I go with my friends to the schoolyard to play soccer</p> <p>I play in our yard or I go to my friends' houses to play in their yards or at their roofs.</p>	<p>What are children's favourite places after school and on weekends?</p>	<p>Home &amp; home sites Streets &amp; associated spaces Formal developed open space Informal developed open space Commercial places Community facilities</p>	Favourite places and special places
<p>I can go to any place as long it is not too far from the house and I might get hurt or kidnapped.</p> <p>My parents will not allow me to go to the main street and the industrial park located one street up from our house because it is a dangerous area and I might get hurt and attacked by drug users.</p>	<p>What are the farthest places children travel to with or without adult?</p> <p>Why children cannot visit some places in or around the neighbourhood?</p>	<p>Traffic danger Too Far from home / get lost Social disapproval Social Threat (strangers, teens, adolescents, drug &amp; alcohol, kidnapping, bullying) Lack of familiarity Physical hazards (other than traffic) water, industrial area, power station etc.</p>	Range of travel / territorial limits
<p>I like to go to Al-Kerawan swimming club but it requires membership that cost a lot of money my family or I can't afford to join, and the amusement parks and even regular parks I can't enter as a teen with out the company of my family</p> <p>We had to pay an entrance fee to get into these facilities even if we were only spectators ... because we had to be a member of a team before we could play on the courts</p>	<p>How often children do use community facilities for their daily physical and social activities?</p> <p>What prevents the children from access to the community facilities?</p> <p>Why children cannot visit some places in or around the neighbourhood?</p>	<p>Traffic danger Cost money to use Too Far from home / get lost Social disapproval</p>	Access to community facilities and outdoor spaces
<p>If I have the choice to live in other place I will do so, because it is very noisy, dirty and some bad kids hang out in the streets at night sniffing glue and use drugs. It is spreading everywhere in the camp.</p> <p>I don't feel comfortable to walk through the Al-Wihdat Club Street. It is not good for girls to walk in that street by themselves. One time I was walking through that street around 8:30 A.M. and I saw a drunken man...I was very scared and since I never walk from that street again</p>	<p>What types of outdoor problems do children perceive as bothersome about their neighbourhood environment?</p> <p>Why cannot children visit some places in or around the neighbourhood?</p>	<p>Social Threat (strangers, teens, adolescents, drug &amp; alcohol, kidnapping, bullying) Too Crowded Physical hazards (other than traffic) water, industrial area, power station etc. Lack of familiarity Too Dirty</p>	Social threat, dangers and fears

A list of mentions was established by identifying a keyword or words used in every sentence of the interview to describe an issue or subject. These mentions were later tabulated and collapsed into properties. Iteratively, the property lists were coded again and collapsed to create sub-categories. The coding process was repeated until themes and concepts emerged.

### **7.2.1 Preliminary Coding**

The case study recorded the raw findings of each interview and drawing on a coding sheet. To find and hear the voices of the respondents from an individual interview and drawing, each interview was reviewed to become familiar with the data at hand. This was followed by an identification of context, major themes and findings by using an open-coding scheme. While coding the second interview, it was important to constantly go back to the first interview and recode it in the light of the information obtained from the second interview. Throughout the whole coding process, I moved constantly back and forth between two interviews. The same coding process was used with children's drawings.

### **7.2.2 Synthesis**

After the categories were integrated and synthesized, the developed narrative explained the properties and dimensions of the categories and the circumstances under which they were connected. Themes resulting from the data analysis produced the grounded theory of this research.

### **7.2.3 Categorization**

While categorization similar to the one developed in previous GUIC projects was used for this study, the category of children's outdoor environments was devised inductively after examination of the data. The children's responses were transcribed and then categorized using a classification scheme based on the one employed by Moore (1986). By using this coding system, a large number of responses could be grouped under one heading, leading to data reduction. The categories established were:

- Favourite places
- Physical qualities of outdoor places
- Children's access to public facilities
- Range of travel / territorial limits
- Social threats, dangers and fears

Tables 2 and 3 illustrate typical responses for each category. Since the children were free to answer as they desired, some responses were later coded as combination answers (e.g. Range of travel / Territorial limits and Social Threat, Dangers and Fears).

**Table 3:** Classification scheme for children’s reasons for their views and opinions of the outdoor environment

<b>Categories</b>	<b>Representative responses</b>
<b>Favourite place and special place</b>	<i>I like to go to Al-bashaier Park, which includes gardens, library, playground, and very nice green soccer field. I also go to my grandfather house to play soccer with my friend in the street. The street is safe because there are not too many cars come through it. Also, I go to my school with my friends after school hours to play at the schoolyard.</i>
<b>Outdoor places physical qualities</b>	<i>My neighbourhood is... boring, dull, doesn't have open spaces, dangerous, polluted, unsafe, busy, dirty, noisy, too many drunks, bad people, very tight and crowded area, narrow streets.</i>
<b>Youth Access to Public facility</b>	<i>I can't go to the private parks because I have to pay entry fees and I don't carry money. Also, I can't go to the club street because there are too many crimes and murders.</i>
<b>Range of travel / Territorial limits</b>	<i>...my parents will not let me go close to the main street near our house because it is very dangerous. I can't go play without the company of my friends, and I can't go to any place far from home without the company of my family. I can't go to the market area because it is full off bad men and teens.</i>
<b>Social Threat, Dangers and Fears</b>	<i>I hated to walk in streets. There are a lot of bad guys. There was a crazy guy, he threw stones at the children try to hurt them. The street is safe because there are not too many cars come through it.</i>

This above classification gives an indication of issues the children considered important in relation to the outdoor physical environment qualities. It should be noted, however, that this is one possible categorisation for my dissertation; other categorisations might be devised which focus on, for example, children’s play, the street as playground, and the children’s use of community facilities.

The data analysis of the interviews and drawings will be discussed separately and sequentially. The data collected through various other collection methods will be used as supporting evidence. The data analyses will be guided by the research questions posed by this study.

**CHAPTER EIGHT**  
**RESEARCH FINDINGS**

## CHAPTER 8: RESEARCH FINDINGS

### 8.1 Introduction

This chapter discusses the patterns and themes that emerged from data obtained through 32 interviews and drawings; the child-led fieldtrips and photographs, and additional information provided through key informant interviews. Together, these emerging themes answer the primary research question: Do outdoor spaces support or limit everyday activities and experiences necessary for healthy child development, within a low-material-resource neighbourhood in Amman, Jordan? They also address the following secondary questions:

- Which outdoor physical qualities affect children's outdoor social and physical activities?
- What specific qualities of these outdoor spaces support children's exploratory and participatory activities?

The findings of these questions will be presented through the perspective of the GUIC model, introduced in chapter three.

In addition, chapter 9 reflects the new possibilities for future GUIC projects, particularly those based on the cultural and religious dimensions of this research. The chapter concludes with a reflection on the issues highlighted by the methodology used, such as differences and commonalities among boys and girls, and their opinions and perceptions of the outdoor environment.

The data gathered were examined and broad categories formed. These categories were further refined into a more detailed list before final classification decisions were taken. The data were placed in the assigned categories discussed in chapter seven.

The major themes that emerged from the content analysis, illustrated with direct quotations from participating children, follow.

## 8.2 Interviews with Children

For the children living in low-material-resource urban neighbourhoods, access to urban parks and playgrounds is too often limited by busy streets, long distances, and teen-harassment, leaving them with only cramped indoor spaces or outdoor areas adjacent to their buildings. The data analysis and reduction produced five main themes:

- Favourite places
- Physical qualities of outdoor spaces
- Access constraints to public facilities
- Range of travel / territorial limits
- Social threats, dangers and fears

Each one of these themes is discussed below.

### 8.2.1 Favourite Places

Favourite and special places reflect children's preferences for after-school and weekend leisure time use. Figure 14 shows eight categories in the order of most frequently mentioned:

**Home sites:** The respondent's own home, room, garden, courtyard, rooftop, relatives' home, friends' home, friends' garden, and friends' courtyard.

**Community facilities:** public swimming pool, youth club, mosque, Qur'an teaching centre, library, school, and soccer stadium.

**Formal/official open spaces:** park, garden, playground, play area, swings, amusement park, sports centre, playing field, and youth centre.

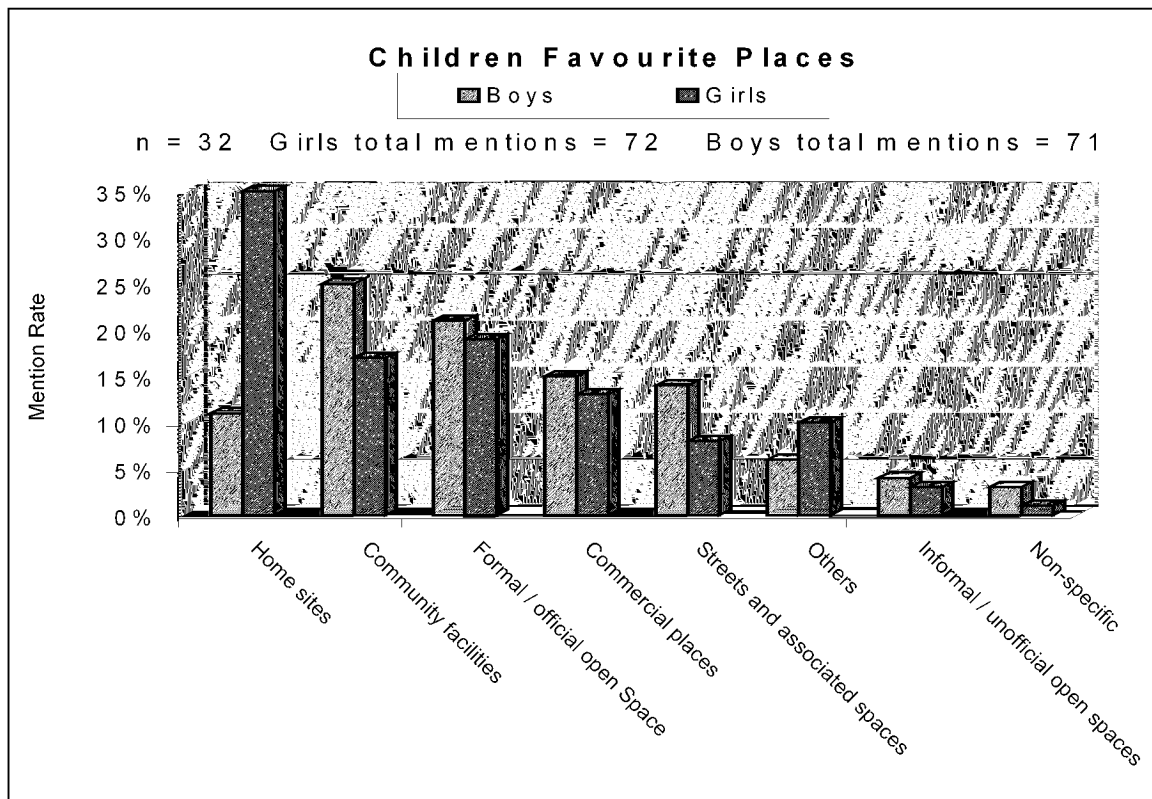
**Commercial places:** family's place of business, neighbourhood shops, shopping centres (Souq), transit centre, and other shopping area.

**Streets and associated spaces:** neighbourhood street, house front, alley, and area around the house.

**Others:** non-local recreation areas, rural / seaside area, fishing / swimming

**Informal/unofficial open spaces:** field / rough ground, hill, farmland, abandoned place, construction site.

**Non-specific:** anywhere/all the same



**Figure 14:** Favourite places to go after school and on weekends

- Community facilities and home sites:** Playing outside daily was a common way to spend leisure time after school and on weekends for the children living in Al-Wihdat refugee camp and environs; nearly three-fourths of them were involved in some type of outdoor activity every day. The majority of the boys spent the large proportion of their time in community facilities. Figure 14 indicates that from the 71 mentions by boys, 25 percent (18 mentions) represent community facilities. These facilities include the soccer stadium for watching games or for soccer practice (Figure 15). Another frequently used community facility was the neighbourhood mosque. Boys typically met and socialized while learning and memorizing verses of the holy Qur'an.

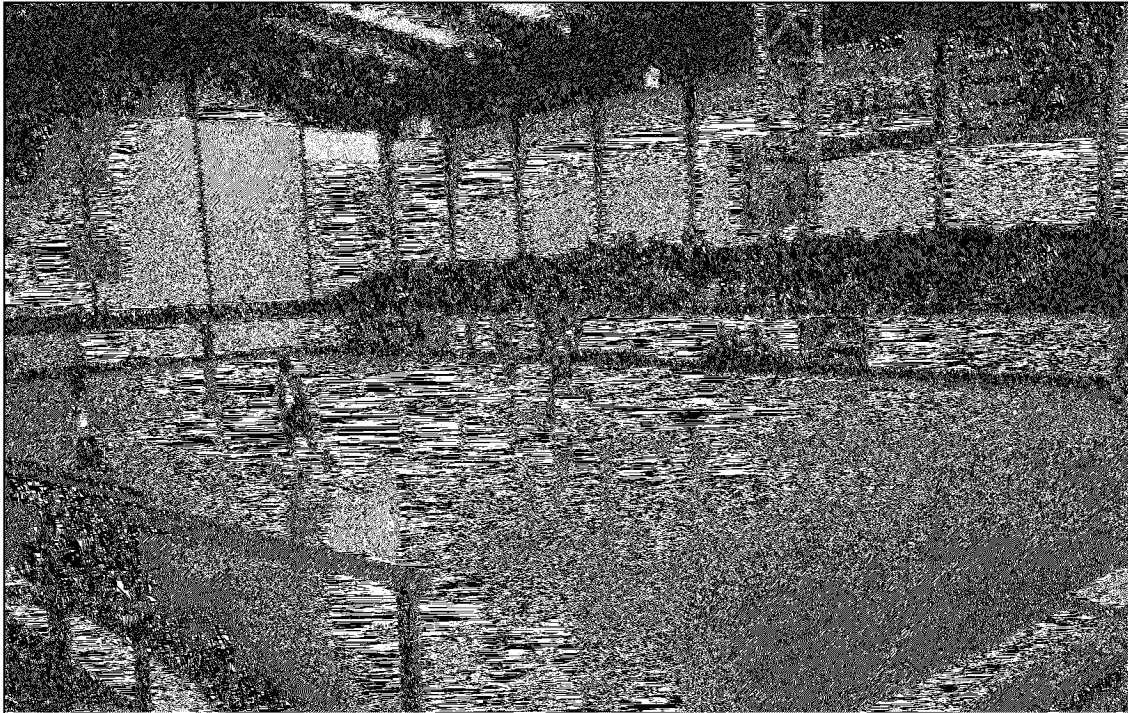
*I go to the Qur'an Teaching Centre every day for two hours, my friend's house in the evening, mosque every morning at sunrise. Friday after morning prayers, I go with my friends to the schoolyard to play soccer (12-year-old boy).*

Boys frequented schoolyards and the youth clubs to play soccer with their friends, or hung out at the library after school. By comparison, only 11 percent of the mentions by boys stated home as their favourite place to go to after school and on weekends. On the other hand, 35 percent of girls mentioned home sites. Girls' also preferred relatives'

homes after school and on weekends followed by their own home/room, courtyard and rooftop. Girls played outside less frequently than the boys.

*I don't like going out because there is no good place to go to (12- year- old girl).*

*When I play outside, I only play at my friends' houses, or in their yards or at their roofs (11- year-old girl).*



**Figure 15:** An example of community facility boys mentioned as their favourite place to go to after school and on weekends.

Only a minority of girls (17 percent) mentioned using community facilities. Even their limited uses of the community facilities were confined to the schoolyard during school hours and the neighbourhood mosque after school, as these places were believed by parents to be safe and appropriate for girls.

The data show distinct gender differences. Girls spent a majority of their time at their own home and other home sites.

- **Open spaces and commercial spaces:** The data show a smaller gap between genders in relation to the use of formal/official open spaces and commercial places. Both boys and girls enjoyed visiting official open spaces around the city of Amman (Figure

14). However, their use of space differed. While both boys and girls both enjoyed the openness and green view of the parks/gardens, the boys especially loved to be in the sports centre, playing fields and youth centres that are housed within the park. On the other hand, girls and boys both enjoyed the amusement park rides and games.

*I love to visit the Araaq Al-Ameer area. It is very nice area, a lake, fish, and nice hill and it has huge rocks....but does not have Historic buildings (10-year-old girl).*

*The most favourite place of all the places I like is to ride the kids train in the Zarqawi Park (13- year- old boy).*

While both boys and girls enjoyed being in these open spaces, both were subject to restrictions. Girls had to be in the company of family or adults, while boys could go to these places with friends and siblings as a group.

The data show that commercial places in and around the study area were a source of interest for children. Both boys and girls expressed interest and talked about places they loved to visit within the commercial areas. Boys expressed their interest in the shopping centre (Souq) and their “family business”:

*I love to go Al-Souq (Market) area and other shopping places in the city...but I can't go to these places without the company of my family (11-year-old boy).*

Girls expressed interest in neighbourhood shops and restaurants:

*The supermarket down the street from our house and the falafel restaurant...I go there with my aunt and my cousin. I don't go there alone (13-year-old girl).*

The data show that boys have a wider range of travel than the girls' very limited, short travel range. Cultural and religious traditions played a major role in allocating freedom of movement and travel. This is not to suggest that girls were not trusted and could not go anywhere by themselves. However, the issue of family honour and protection of girls from immoral and wayward people who prey on young girls is critical in Arab and Muslim societies. Overall, due to a lack of designated places for girls and religious and social values, the girls' outdoor activities remained much more restricted compared to boys'.

- **Gender use of street and associated spaces:** The issue of gender differentiation in the public realm is further illustrated by use of street and associated spaces. Boys dominated the streets where they were allowed to freely play.

*I always play in the street in front of our house...I spend most of my playing time or my outdoor time there (10-year-old boy).*

Boys in the Al-Wihdat area and other parts of Jordan normally play in the street by their home or friend's home because houses are small and lack any indoor play spaces to accommodate physical activities. On the other hand, girls spend the majority of their time inside the house or around the house within the privacy wall of the courtyard (Figure 16).

*The roof of the house is the place I use every day. I like to study on the roof or play on the swing or just sit there and relax (13-yearold girl).*

Frequently during the interviews, girls expressed their unhappiness about not having places to go to play and meet each other. They said that home and home sites were their "favourite" places; in reality, they were their only option rather than an actual preference.

The gender of the children was significantly associated with their freedom. Boys were given more freedom than girls (Table 8 - Appendix B) with the exception of being allowed to play on the street in front of their house, in which there was a negligible difference between boys and girls. Though playing on the street was an extremely important freedom for children, it did not involve travelling long distances from the home. Parents also believe that children needed to be subject to (at least) some level of passive surveillance and control for their own safety.

The hazards of traffic associated with the school commute and visiting places alone was the parents' main concerns for both boys and girls. However, for girls' parents the foremost fear was physical assault and molestation. From the age of about 8 years or less, a marked gender bias emerges in the access of young Al-Wihdat residents to their local environment. The bias continues into adult life, when women are deterred from travelling, particularly by public transport, partly because of the fear of sexual assault or harassment.

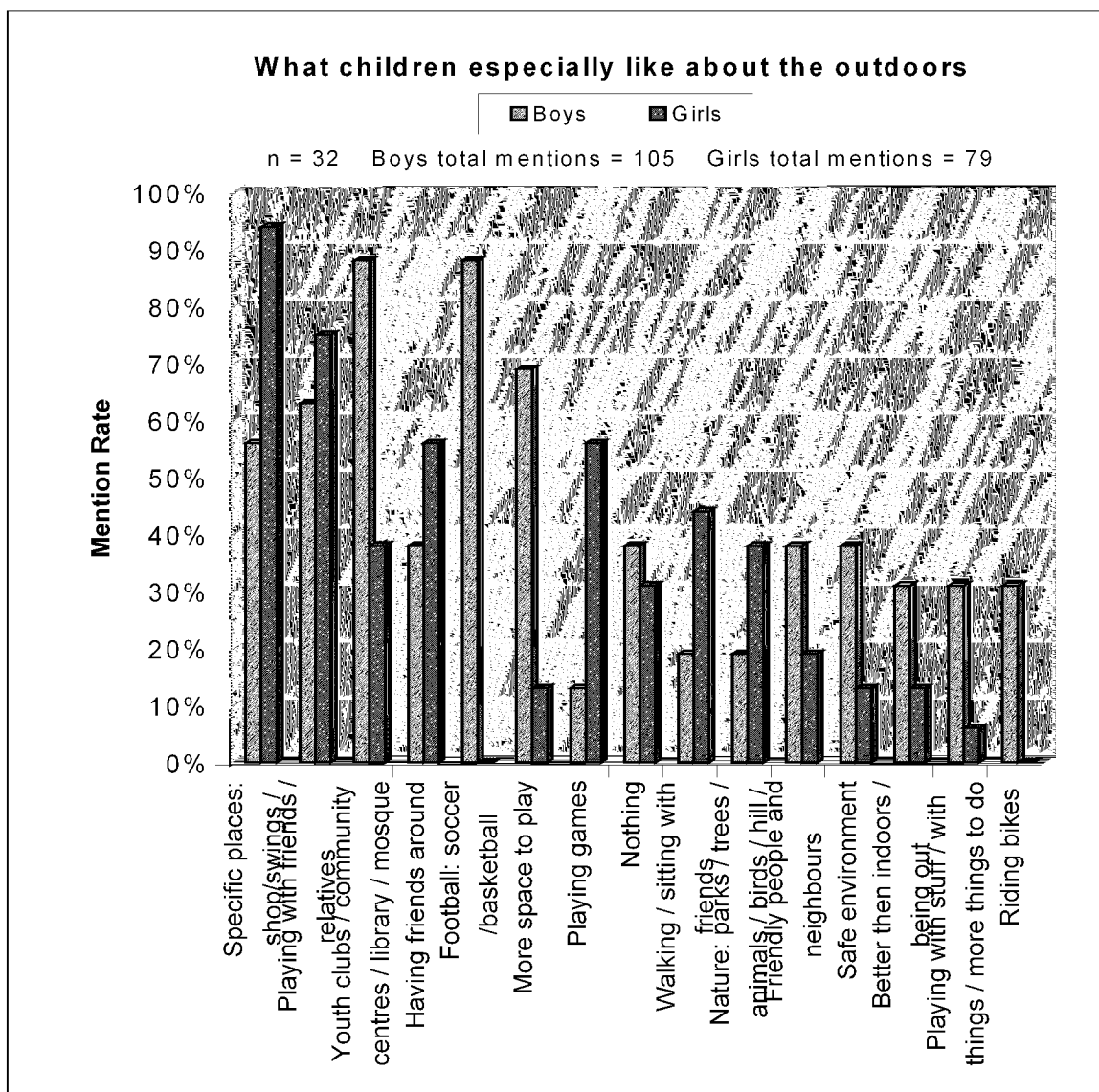


**Figure 16:** A majority of girls stated that home sites were their favourite place to go after school and on weekends.

The observed traffic levels within Al-Wihdat are almost three times those of the surrounding areas and were a particularly important determinant of children's freedom. Also, socio-economic status seemed to have some impact on children's freedoms.

### **8.2.2 Physical Qualities of the Outdoors**

The total open space in the Al-Wihdat refugee camp area is significantly below the minimum of any government standards. Not surprisingly, the child respondents revealed a sense of boredom with the social, physical and educational environment. Of the open spaces available for children, most were flat, featureless areas perhaps suitable only for boy's soccer game. They had practically no appeal for girls.



**Figure17:** What children especially liked about the outdoors

- Positive Aspects of the Neighbourhood:** Children gave conflicting responses about the quality of their neighbourhood. On many occasions (Figure 17 and 19), they described their neighbourhood as beautiful, nice and a very good place to live. However, my personal perception and observation is that it is dirty, crowded, noisy, and boring. When the children talked about positive elements of their neighbourhood, most of the elements were related to outdoor activities, more precisely, play activities.

*I love the neighbourhood; it is a commercial area more than residential area. I love it because it is my birthplace and I have many nice memories. But If I have the choice to live in another place, I will do so, because it is very noisy, and dirty (14-year-old boy).*

Figure 14 shows that 24 of the participants (75 percent) indicated elements located within their home or immediately near the home. It appears that 94 percent (15) of the girls preferred places closer to home because of safety reasons, whereas 88 percent (14) of the boys preferred youth clubs, mosques and community centres around their neighbourhood. Boys met, played, learned and adapted social skills and communication through interaction with people of their age and/or other age groups. In addition, the data showed that 88 percent of the boys (14) preferred to play organized sports such as soccer and basketball, while 75 percent of girls (12) preferred to play and chat with friends and relatives in private or semi-private places around their home.

- **Negative Aspects of the Neighbourhood:** When children were asked to describe the area where they lived, they generally described it as boring and dangerous. “Boring”, because there were no public spaces available that could address their specific needs. Children throughout the research supported these perceptions. “Dangerous”, because the area was crowded with buildings, and poorly-lit alleys and streets; it lacked facilities for teen activities, and had a number of abandoned buildings that were drug-dealing and violent activities were suspected. Boys and girls agreed in their description of their neighbourhoods. For example, the boys described their neighbourhoods as:

*Boring, dull, doesn't have open spaces, dangerous, polluted, unsafe, busy, dirty, noisy, too many drunks, bad people, very tight and crowded area, narrow streets.*

While the girls described their neighbourhood as:

*Too crowded, trashy, dirty, polluted, dark alleys and streets, getting worse, no privacy, old houses, lots of bad men, drugs, nothing nice, dangerous, no place for girls to play, noisy, heavy traffic, no trees, no open spaces or green areas.*

When the children were asked what they especially disliked about the outdoors in their neighbourhood, the majority did not hesitate to list all the problems that existed in their community. Figure 19 illustrates these problems. Seventy-five percent of the girls and boys identified heavy traffic as a major problem that added a negative value to their community.

*The street below our building down the hill, it is very noisy from cars and loud music and it is not clean. The street is also full of bad kids and dirty (12-year-old girl).*

*I don't like to go to the main street nearby because it is very crowded with cars and cars go by very fast (11-year-old boy).*

Children's priorities evolved around community, social, and environmental issues. The topics of children's places and play appeared to fall in the middle of the community assessment continuum.



**Figure 18:** Picture taken by 13 year old boy illustrating the dirty neighbourhood streets

To more than 50 percent of the children, heavy traffic, dirty streets (and wet all the time), very crowded community, many bad guys and teens in the streets, and getting hurt were issues of greater importance than having playgrounds and play areas. As stated by one of the girls:

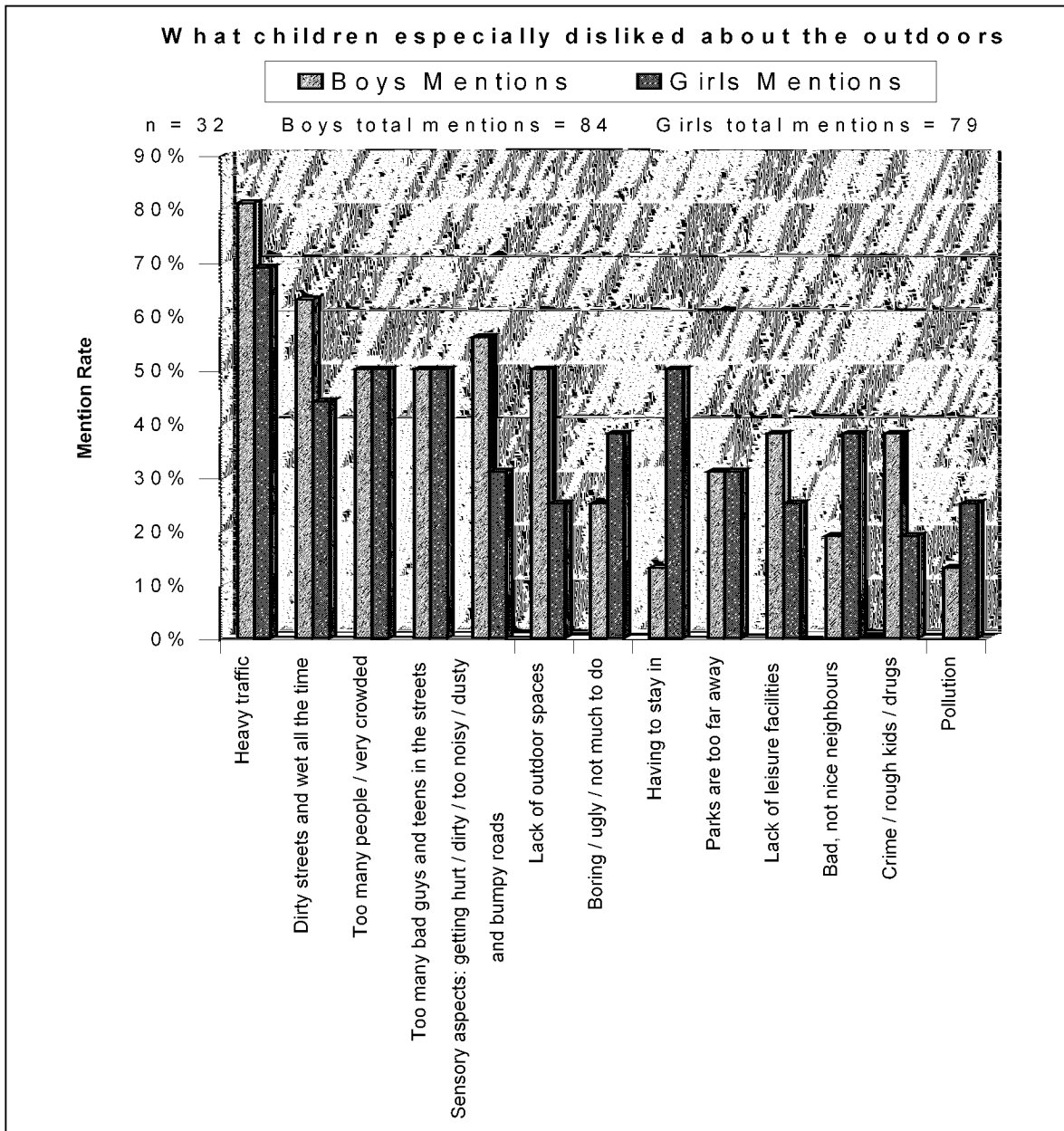
*If we make our neighbourhood clean, quiet, and safe, it will be good, because we will have a lot of places to play in and we can walk and play in the streets without been scared or worry to get hurt (13-year-old girl).*

Another girl stated:

*The Al-Wihdat Club Street...I don't feel comfortable to walk through it and it is not good for girls to walk in that street by themselves. One time I was walking through that street around 8:30 A.M. and I saw a drunken man...I was very scared and since I never walk from that street again (11-year-old girl).*

To summarise this section, gender differences were evident in the daily activity patterns of children. At first sight, there was a clear divide between boys and girls' use of the

outdoors. With reference to the frequency of both playing outside and using the outdoor spaces, differences between boys and girls are small but very distinct. In addition, being accompanied by parents or an adult member of the family was a common practice for all girls when they were out in public places, which made gender differences evident.



**Figure 19:** What children especially disliked about the outdoors

### 8.2.3 Access to Community Facilities

The most favourite and frequented places for young girls were the home sites. The greatest concern young girls expressed about using commercial, community, or open spaces was the possibility of encountering physical or verbal abuse. Consequently, even though community facilities were identified as a favourite place by a third of the young girls, they visited them infrequently. For young boys, favourite sites included community; formal/ official open spaces and commercial facilities. However, when it came to the use of these facilities, community rather than commercial or formal/official open spaces were more frequently used. The discussions accompanying these interview questions also revealed that 'frequenting' a place (such as the youth centre, a sporting centre, or library) did not necessarily mean actually entering it; rather it meant going to that place to meet someone for a trip to somewhere else or just hanging around that place.



**Figure 20:** Children dreamt about having a place such as a swimming pool in their neighbourhood

The findings indicate that although the area had a number of commercial and community outlets for children's use and access, they were not widely used by them except as a rendezvous. One such 'meeting place' in the neighbourhood was the Al-Wihdat Sports Club

- a place children described as interesting because there were “always lots of people coming and going”. However, a teacher revealed that these facilities were hardly equipped with any indoor courts or gym equipment to support youth activities. It attracted mainly young adults from the surrounding neighbourhoods. As this research reveals, such places were not frequented by young children because of either restrictions or lack of appeal. This directly conflicts with the data in (Figure 21), which reveals one quarter of the girls and two third of the boys indicated playing sports as a favourite activity.

When comparing this with time use, it became clear that “favourite activity” (such as soccer and swimming) did not correlate with actual activity (or frequented place). What would account for the discrepancy between more than one-half of children wanting to play sports, but only less than one in eight actually playing a sport when they had at their disposal a sporting facility (Figure 20)? The children’s responses were:

*Because we had to pay an entrance fee to get into these facilities even if we were only spectators (14-year-old boy).*

*Because we had to be a member of a team before we could play on the courts (11-year-old boy).*

*Because there were no facilities inside the centre where children could comfortably socialise (13 year old boy).*

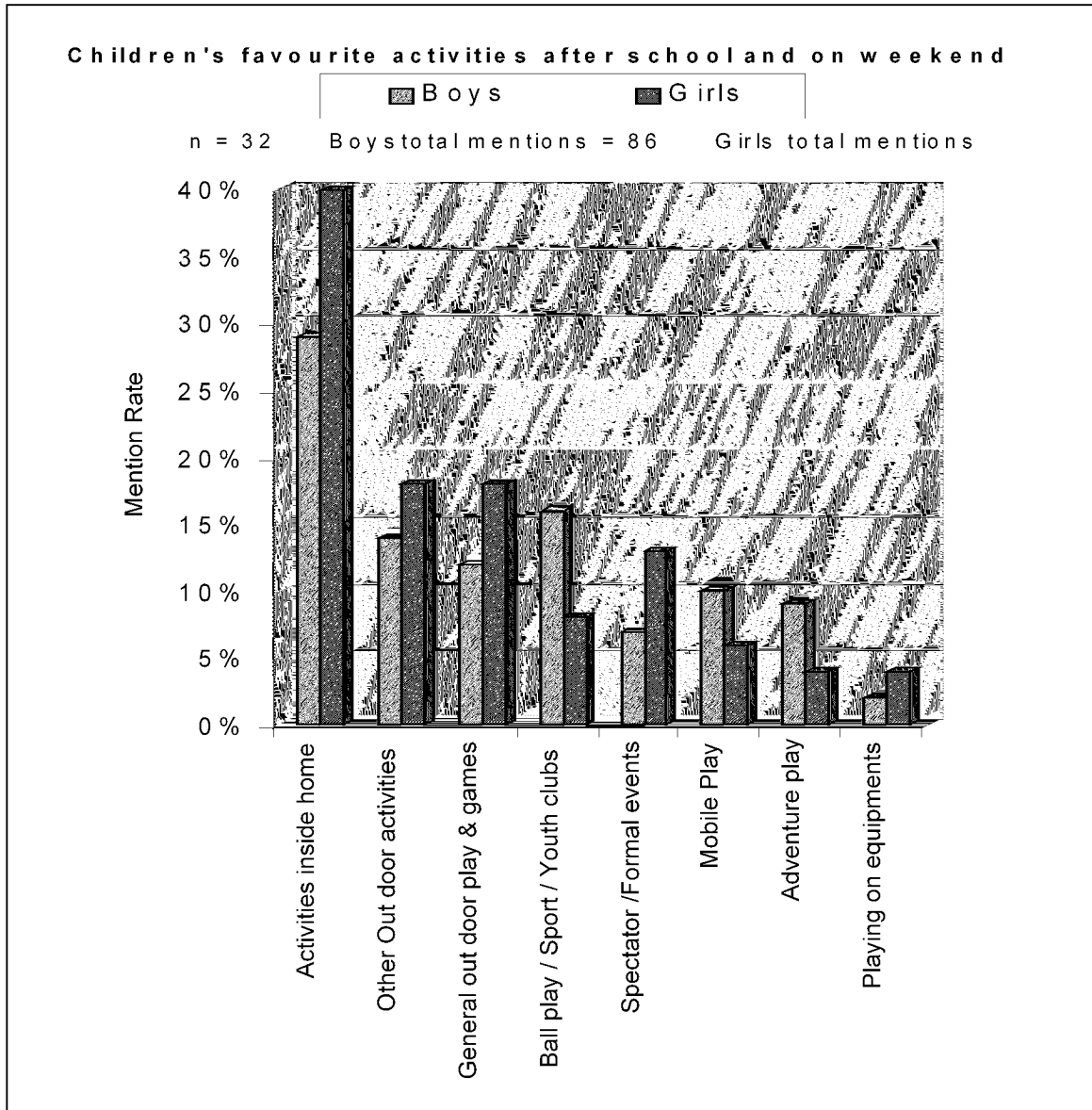
The data indicates that heavy traffic was the main reason why children were not allowed to go to certain places, followed by cost of use, distance from home and social threats (see Figure 24). The first three reasons scored the highest among the boys (20 percent mentions). However, among the girls, social disapproval (23 percent mentions) was the highest followed by distance from home and social threat (19 percent and 11 percent, respectively).

A 13-year-old boy said:

*I like to go to Al-Kerawan Swimming Club but it requires membership that cost a lot of money my family or I can't afford to join, and the amusement parks and even regular parks I can't enter as a teen with out the company of my family.*

The data demonstrate the gender difference between boys and girls’ perceptions of what they could or could not do. Also, families tended to be more protective of girls than boys due to concerns about sexual harassment or assault. Protecting the female from this kind of danger was regarded as protecting the family honour in the community. Speaking from

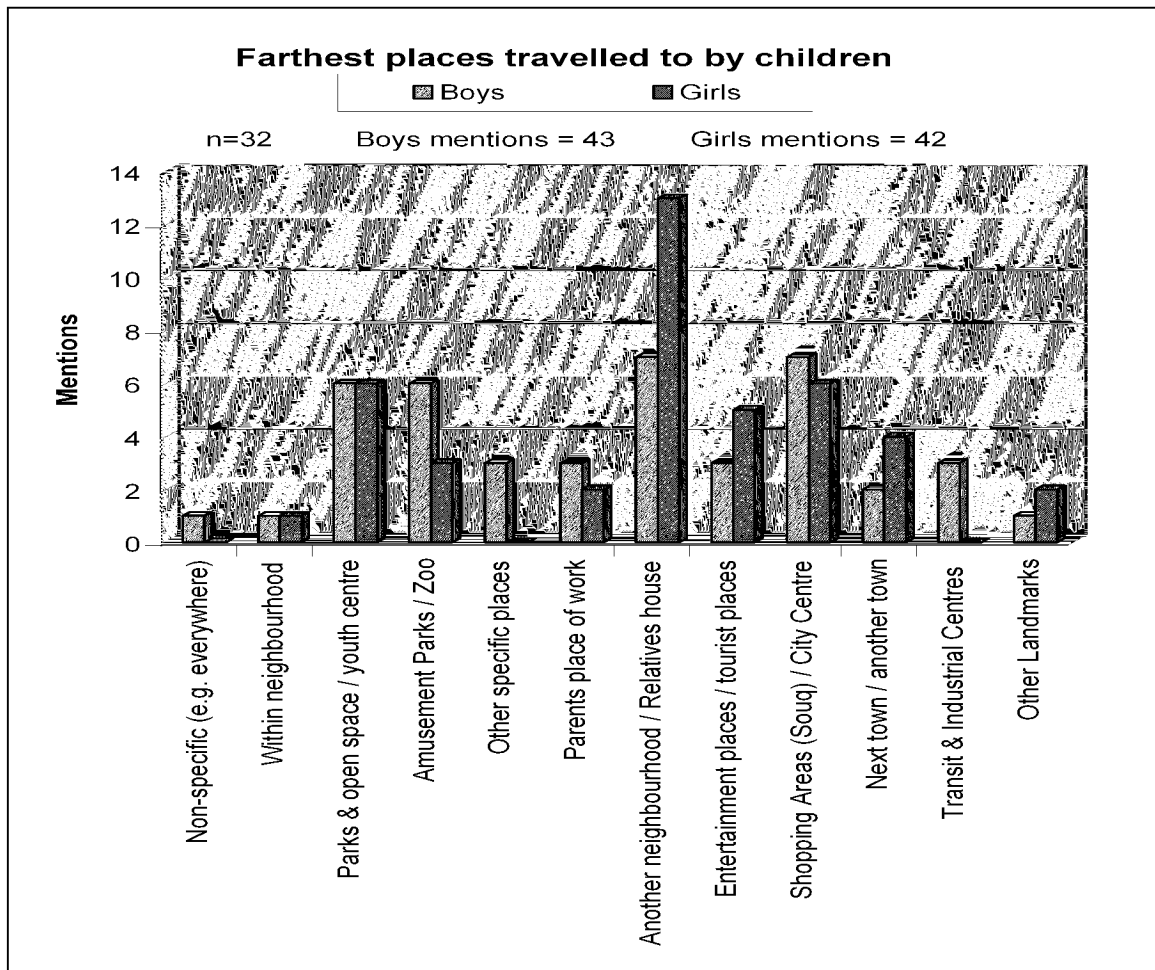
personal knowledge, if a female is subjected to this type of abuse, the public will not blame the attacker alone; they will blame the female for being out alone without an adult escort.



**Figure 21:** Favourite activities after school and on weekends

### 8.2.4 Range of Travel / Territorial Limits

The range of travel of children (without adults) was related to the quality of outdoor spaces and access to public spaces (Figure 20). With the help of an aerial map of the study area, the participants pointed out their spatial range on (moving outward from their homes). A large proportion of the children pointed out spatial range activities in areas quite distant from their homes.



**Figure 22:** Territorial limits – furthest places travelled to by children

The mention rate (Figure 22) indicates that children moved quite a bit around their neighbourhood. Many of them, especially boys, stated that they went to these places with their friends and siblings. Few of the boys indicated that they went to these places alone. The travel pattern of boys showed that they visited multiple places in the neighbourhood

and outside the neighbourhood. However, the highest rate (7 mentions each) was visiting places outside the neighbourhood (relative's house or shopping areas (Souq) / city centre).

For example,

*The farthest place I went to in Amman is Jabal Amman to visit my relatives. In the holidays, I go with my family to the Al-Saaha Al-Hasimiyah to play in the Arcade hall, go eat in the restaurants and visit the Roman Amphitheatre (13-year-old boy).*

Going to parks and amusement parks ranked high on the list of places they visited (6 mentions each). For example, they visit amusement parks

*Because it has family atmosphere. I like to go to Al-Jebaha area. It is nice and you will have fun, you will be comfortable, and no body bother you there. All the people come there are families with their kids (13-year-old girl).*

By comparison, a majority of the girls (13 mentions) stated that the farthest place they travelled to were their relatives' houses in a different neighbourhood.

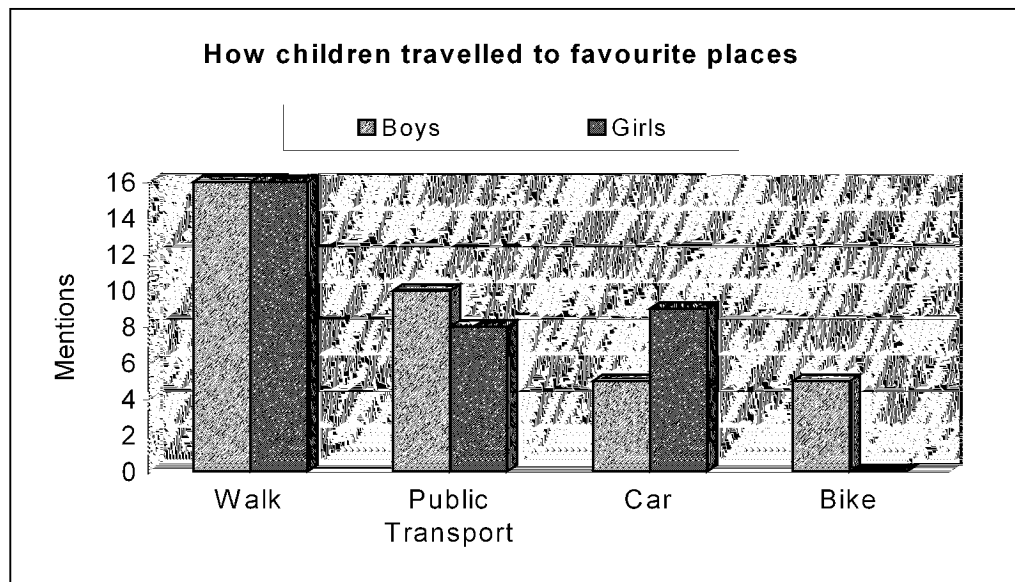
*My aunt's house is in Khalda area. We visit them once or twice a week (12-year-old girl).*

It is evident that girls preferred their grandparents and relatives not to live in the same neighbourhood nearby, since that will deprive them of the opportunity to travel outside of their residential area.

- **Children's Mode of Travel:** How do children travel? In Jordan, as the traffic volume, speed and noise increase, children are forced off the street and onto the alley or sidewalk. The heavy traffic forces their play activities to be in front of their homes or closer by (the home territory).

In Al-Wihdat, indications are somewhat weak. For 43 percent (14) of the children going places outside the neighbourhood meant travelling by car. For 53 percent (9) of the girls this was so (Figure 23). Nevertheless, walking was most often mentioned as a means of transport (more often than public transportation, which is traditionally a very important mode of transport in Jordan). In that sense, it is striking that the children living in the neighbourhoods surrounding Al-Wihdat were frequently transported by car or public transportation to destinations outside the neighbourhood. The reason is that these neighbourhoods are located in areas that were used for mining and as such are located a good distance from the main public transportation route. Therefore, many parents

(especially girls' parents), transport children to the closest public transportation point from where they can catch the bus for onward journey.

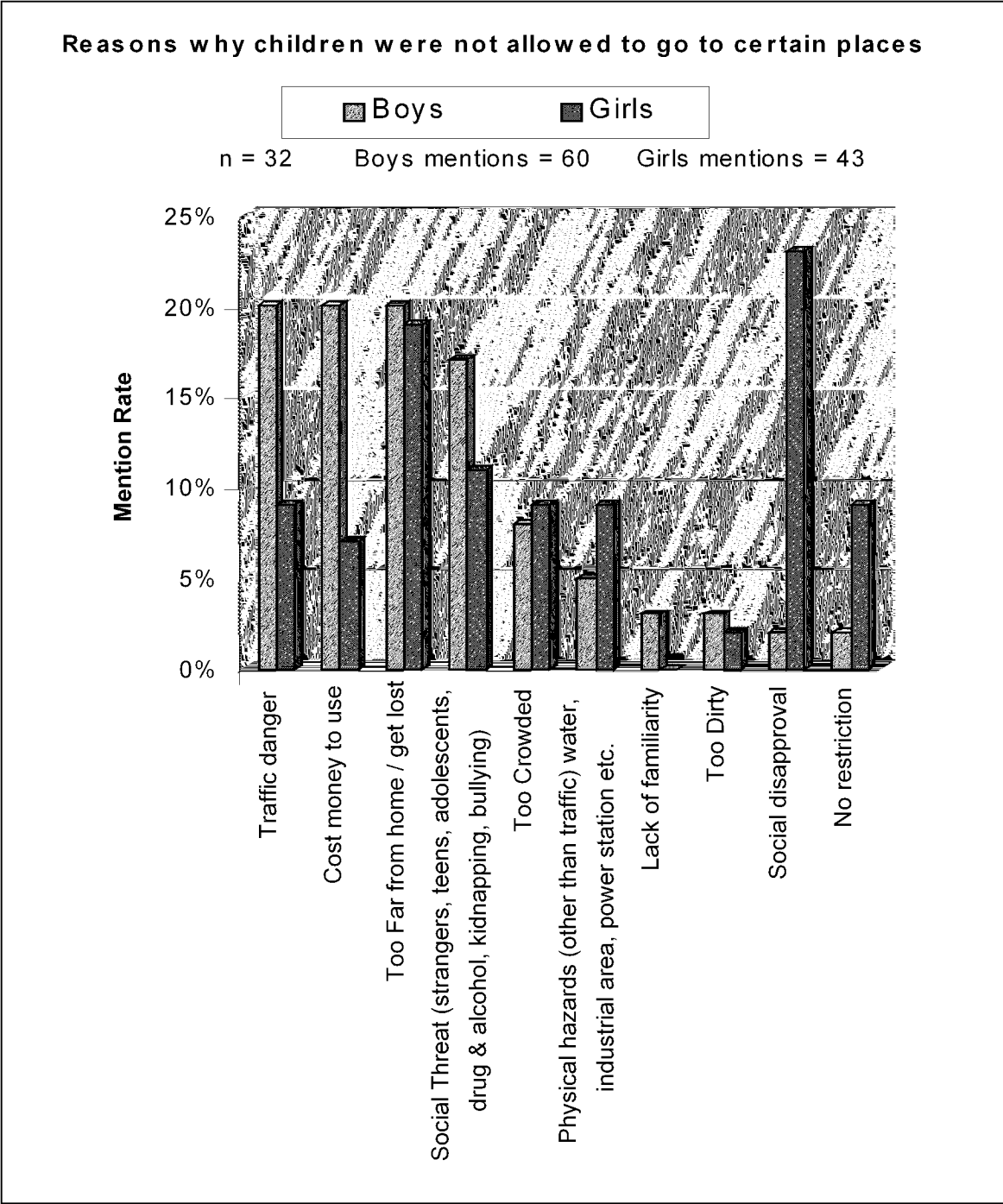


**Figure 23:** How children travelled to favourite places after school and on weekends.

Overall, children had very 'bounded' spatial ranges, usually no more than one to two blocks from their homes, and sometimes as limited as one house on either side. They defined their spatial range as restricted by certain streets, houses or activities, or threats to their personal safety. For example, the children were not using a certain street because there were bad teens hanging out there; not crossing over a particular road because of high traffic; or not walking through an alley because it was dark. The girls' responses illustrated a limited spatial range compared to some of the boys. This correlated with their most-frequented-place use response where all girls (100 percent) chose home or home sites.

- Reasons for territorial limits identified by the children included: having to stay home to help mother with younger siblings, traffic danger, cost of using public facilities, distance, fear of getting lost, social threat and fears for personal safety when venture outside. There were other reasons: water, industries, power station, lack of familiarity or cleanliness, and social disapproval (Figure 24).

The final issue identified by the children affecting their use of public spaces was their concern for personal safety. Concerns for personal safety were found to have an almost symbiotic relationship to issues of territorial limits.



**Figure 24:** Reasons why children were not allowed to go to certain places

### 8.2.5 Social Threat, Dangers and Fears

Many girls did not leave their neighbourhood except to visit relatives who happen to live outside their neighbourhood. One of the major complaints made by girls was that the teens are 'always in the streets' and that their parents did not 'allow them to play outside, because there are teens' and that 'teens bothered them if they happened to walk in the streets' (Figure 24).

Interviews revealed that up to 50 percent of boys and girls believed there were dangerous places in their neighbourhood. Many girls discussed the hazards of the street in the neighbourhood:

*If I have the choice to live in other place I will do so, because it is very noisy, dirty and some bad kids hang out in the streets at night sniffing glue and use drugs. It is spreading everywhere in the camp. (13-year-old boy)*

*I don't feel comfortable to walk through the Al-Wihdat Club Street. It is not good for girls to walk in that street by themselves. One time I was walking through that street around 8:30 A.M. and I saw a drunken man.....I was very scared and since I never walk from that street again (11- year-old girl).*



**Figure 25:** Teens hanging out made girls feel uncomfortable to walk in the street, fearing verbal, physical and sexual harassment.

It appeared that children in the study were using smaller spatial ranges than children from other neighbourhoods in Amman (Abdullah, 2004). Evidence of this surfaced in the study when children expressed feelings of insecurity when being outdoors, especially in the evenings, in the streets, and in the local centres.

The Al-Wihdat children tend to be more afraid and restricted in their use of the outdoors environment in the evenings than children from other neighbourhoods in Amman because of safety issues (Abdullah, 2004). Girls were especially critical of the risk when they go out in the public places alone:

In Al-Wihdat, I hated to walk in streets. There are a lot of bad guys. There was a crazy guy he threw stones at the children try to hurt them (11-year-old girl).

Even the boys were not immune from harassment, although that may not be to the same extent as the girls:

I hate to go through the alleys because there are always bad guys and drunks standing there and harass me (11-year-old boy).

Fear of crime and kidnapping and drugs seemed to affect the everyday life and restrict the use of public outdoor spaces especially of the camp's girls.

This study has noted danger and fear as a central aspect of the social dimension of space in Al-Wihdat refugee camp. Assessing danger was the first priority for children when thinking about different environments and their preferences within them. It was often the first thing children mentioned when talking about being outside the home. Danger and fear could come in a variety of forms, though a sense of danger was not always very specific.

In order of frequency and emphasis, children cited the following dangers:

- Traffic

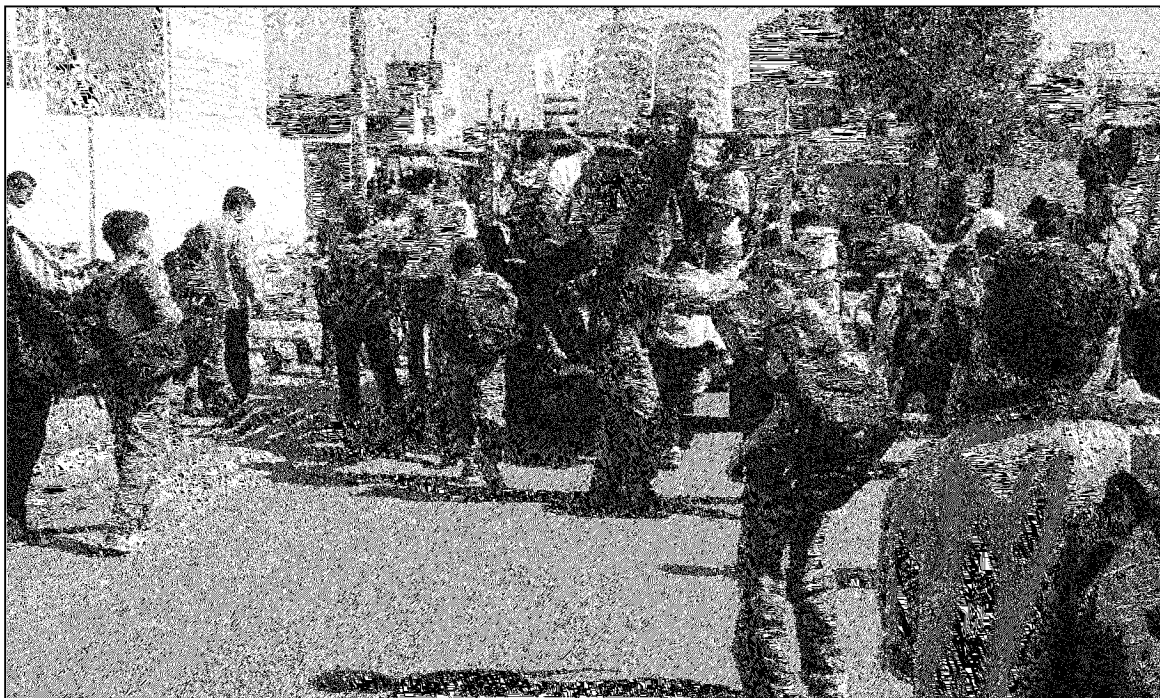
Direct personal experience caused in the children fear of traffic, with many being able to give examples of accidents or near accidents. Many wanted greater accommodation for pedestrians.

As Hillman and Adams (1990) explain:

*"The rise in the volume of traffic and its accompanying noise pollution, danger and unpleasantness have contributed to a feeling of insecurity owing to the continuing retreat of street life and, at the same time, to a*

*rise in the proportion of people outside the home who are strangers"*  
(p.20).

Another reason for the loss of the street as play space was the way in which parents assumed the responsibility for their own children's safety, in essence accepting the idea that "streets are for cars; yards and playgrounds are for children" (Figure 26). This is a strongly held belief, and parents have little choice — as individuals — but to keep their children off the streets if they want to ensure their safety. Yet little has been done in many cities to counter this belief and to withdraw the threats from the children, instead of withdrawing the children from the threats and hence from the streets.



**Figure 26:** Children utilizing all means of transportation to get from one place to another, in this case from school to home

- ***Strangers/criminals***

Children keenly felt the fear of strangers. Although the threat from strangers was not often articulated, one of four children mentioned the risk of being kidnapped or killed, and the implication of sexual predation was clear from others (Figure 24). The street was seen as the most dangerous place to be, even though, children named it as a place where they played. For a large number of children, the only outdoor space where they

could be sure to be safe from strangers was the courtyard or the space immediately in front of their house.

Children's images of **social threat and** the enculturation of 'fear' seems to have evolved through a number of mediums: lived or witnessed experience; manufactured or recycled 'stories'; and/or parents and schools projecting fears as a mechanism for scaring young people into containment. The reality is that crimes involving kidnapping, murder, molestation, or rapes are fairly low according to the camp administrator.

When the children shared their concerns for the physical safety, it was difficult to determine through which medium these fears had manifested and whether the danger was real or based on hearsay. However, one thing appeared certain: children participating in the study did not feel safe. Due to the fear factor, the children either retreated from the streets or found alternative ways of moving around the neighbourhood. The study found that the fear had a disproportionate impact on children's attitude.

#### ***Lack of Familiarity/Fear of Being Lost***

Fear of becoming lost, and therefore, becoming a prey to strangers and criminals was clearly a significant deterrent to breaking parental restrictions on access to public space. However, child-led fieldtrips of spaces in their neighbourhood revealed that children do not always tell their parents exactly where they had been (Figure 26). This suggested that children roamed more freely than their parents would wish, but this was generally spontaneous rather than a premeditated decision. Going to places beyond their immediate spatial range usually occurred when children travelled in group, which they relied on to find their way back. In the majority of instances when boys travelled beyond parent-authorized boundaries, they were spontaneously influenced by the group decision to explore new or additional areas within the neighbourhood in search of play opportunities.

#### ▪ ***Social Threat/Bullying***

Bullying was mentioned, although few children gave details of personal experience. Interestingly, children included destructive behaviour towards physical spaces and immoral behaviour by teens in their definition of social threat and bullying. Frequently during the interview, children, especially girls, discussed teen drug and alcohol use, and

their fear physical and sexual harassment walking around when teens were out on the street (Figure 25).

*The Arcade games hall does not feel safe because too many bad teens hanging there. The schoolyards are bad place to go to in the evening because of the bad teens and drugs... (13-year-old boy)*

*I do not like to go to the Al-Shwarah Gardens because it is very crowded and full of bad teens. There are a lot of policemen in the gardens. It is very bad... (11- year-old girl)*

Fear of assault among the girls, and fear of attack and fights among the boys kept children to tightly-defined areas mostly within their home site, where they felt 'safe' and free to do what they wanted.

The data also indicate that many young people feared playing out because of bullying by teenagers. From the sample, 29 percent of the respondents (31 percent boys and 25 percent girls) reported experiences of bullying (Figure 24).

Neighbourhood bullying was approached as an expression of contesting micro geographies, which are very limited in the Al-Wihdat area. Here parallels can be drawn to James' (1986), McLaughlin's (1993) and Percy-Smith's and Matthews (2001) insights into how different groups use particular places, such as the neighbourhood, to play out identity struggles between self and others. Shared interests, behaviours and circumstances often give rise to multi-layered micro-geographies co-existing in the same location.

The study suggests that the children's place fears were largely the product of how older groups (teens and adults) used places. The findings also revealed that being with friends when outside the home was very important to feeling safe.

### **8.3 Children's Drawings**

This section includes an interpretation of children's drawings. The reviews and analysis are primarily subjective. It is not the intent of the dissertation to develop a technique for quantitative analysis, as a number of these are already well discussed in the literature. Rather, to highlight issues and objects that children identified in their intimate neighbourhood landscape and to demonstrate the potential usefulness of children's drawings in informing policy makers, planners, and designers.

Each child was asked to make a drawing of their neighbourhood where he or she lived, including the most important places in it. The drawing was discussed with the participating child. To encourage discussion, some probing questions were introduced.

The analysis of the drawings provided insights into the children's perceptions and values regarding the outdoor environment. The analysis of the drawings and any subsequent oral comments were viewed as a whole. Using the drawings, cognitive responses were coded in one of the twelve subcategories (Figure 27), which were adapted from Moore (1986) (see tables Appendix C):

**Streets, Pathways & Associated Places:** neighbourhood streets, pavement, alleys, footpaths, public steps, and through streets.

**Home and Home Sites:** child's home, friends' and relatives' homes, building roofs, rooftops, private courtyards, and gardens.

**Vegetation and Landscape Features:** regular and fruit trees, flowers, grass, hills, sand, water body (lakes and ponds), sky, sun and topography.

**Non-residential Buildings:** schools, pre-schools, television broadcast stations, mosques, hospitals, and post offices.

**Open Space:** parks, gardens, amusement parks, playgrounds, vacant lands, play fields, schoolyards, and parking areas.

**Commercial Facilities:** shopping centres (Souq), local shops, repair garages, and machine shops.

**Children-Made Appropriate Play Places:** abandoned buildings, dirty places, concrete fence, walls, street plays, and girls outdoor play areas.

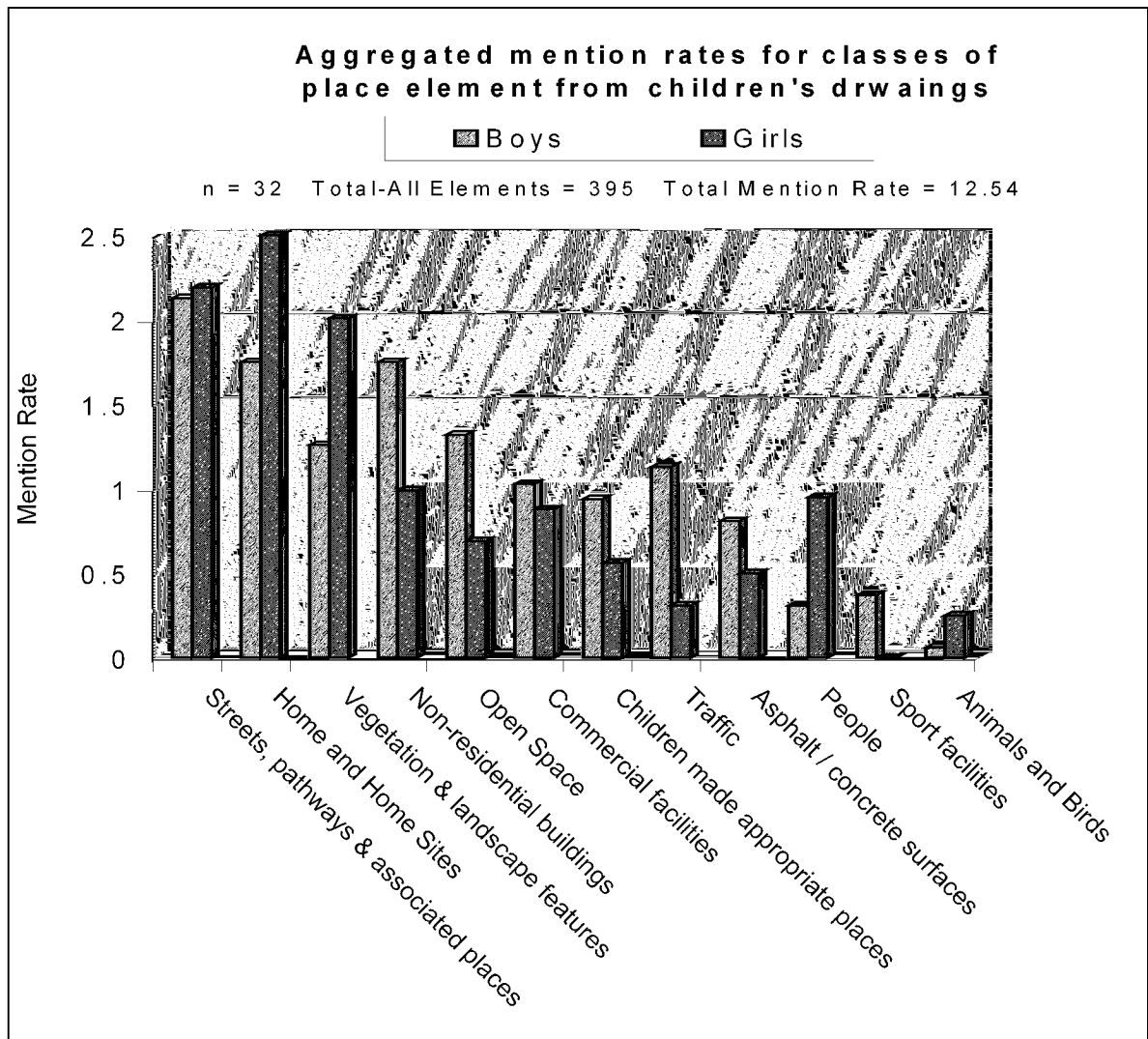
**Traffic:** vehicular traffic, traffic lights, pedestrian bridge, and cars.

**Asphalt and Concrete Surfaces:** schoolyards, parking lots and streets.

**People:** child's portraits, child's siblings, child's friends and others, kids playing and walking.

**Sports Facilities:** soccer fields, basketball courts, and swimming pools.

**Animals and Birds:** cats, dogs, sheep, rabbits, doves, and birds

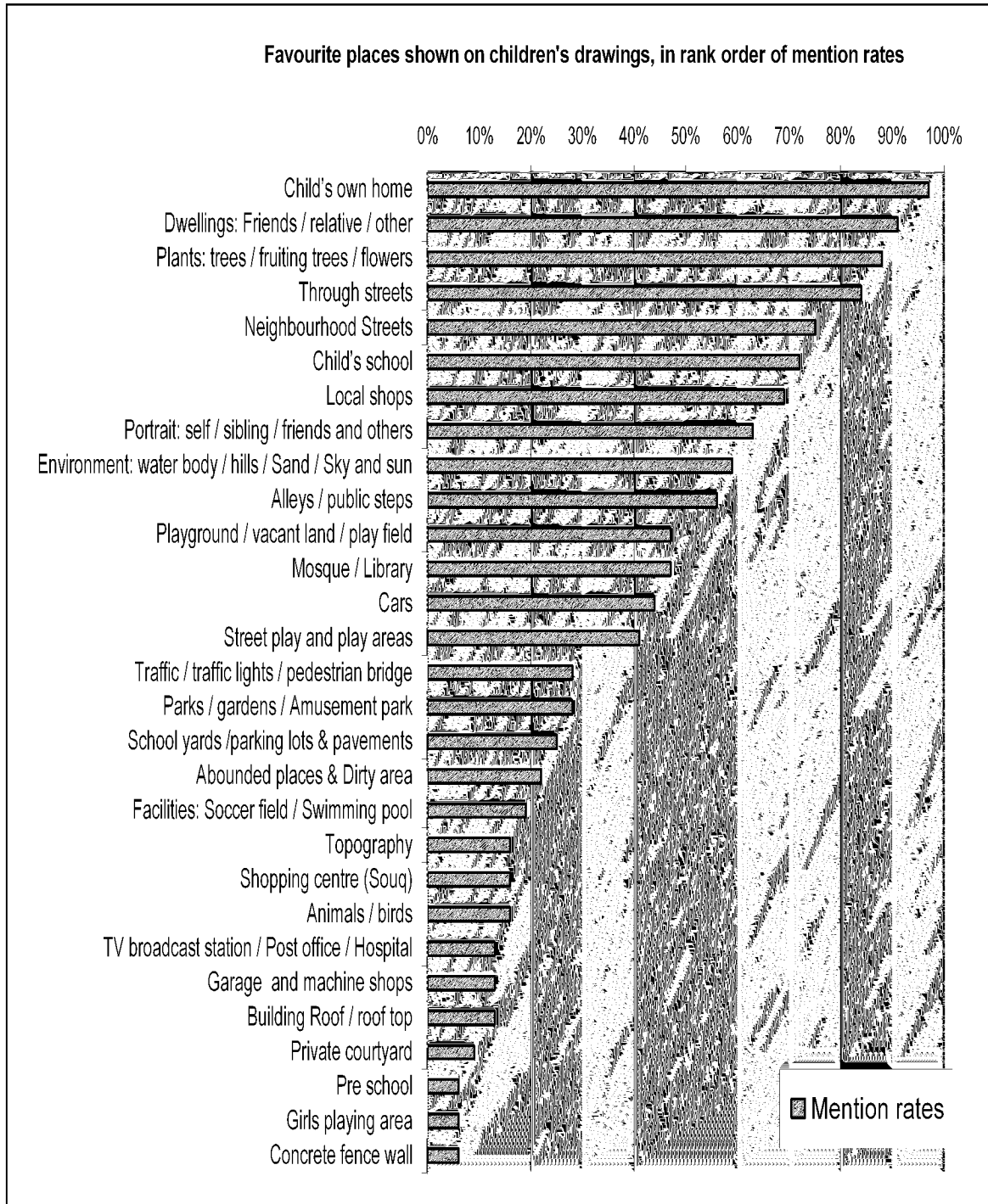


**Figure 27:** Aggregated mention rates for 12 classes of place elements, from children's drawings, by gender.

Children spend large portions of their days outside in their neighbourhoods. This exposes them to a wide range of social values, thus building and shaping their physical capabilities, personalities, goals, and directions. The neighbourhood is a primary setting in which child spends unstructured time. Figure 28 illustrates the results of the drawings' analysis.

A child carries certain cognitive images of his/her neighbourhood. These are images built through years of personal experience. Lynch (1960) pointed out that these images are used to interpret information and guide action. As children explore their neighbourhoods, they begin to learn the ways in which their culture defines territories. For example, they learn how far they can go away from home, the road to take when they go to school; or the road to avoid because of heavy traffic or physical danger. They learn what is public and what is

private. They learn that they can invite children into their homes, but they do not have the right to enter another person's house uninvited.



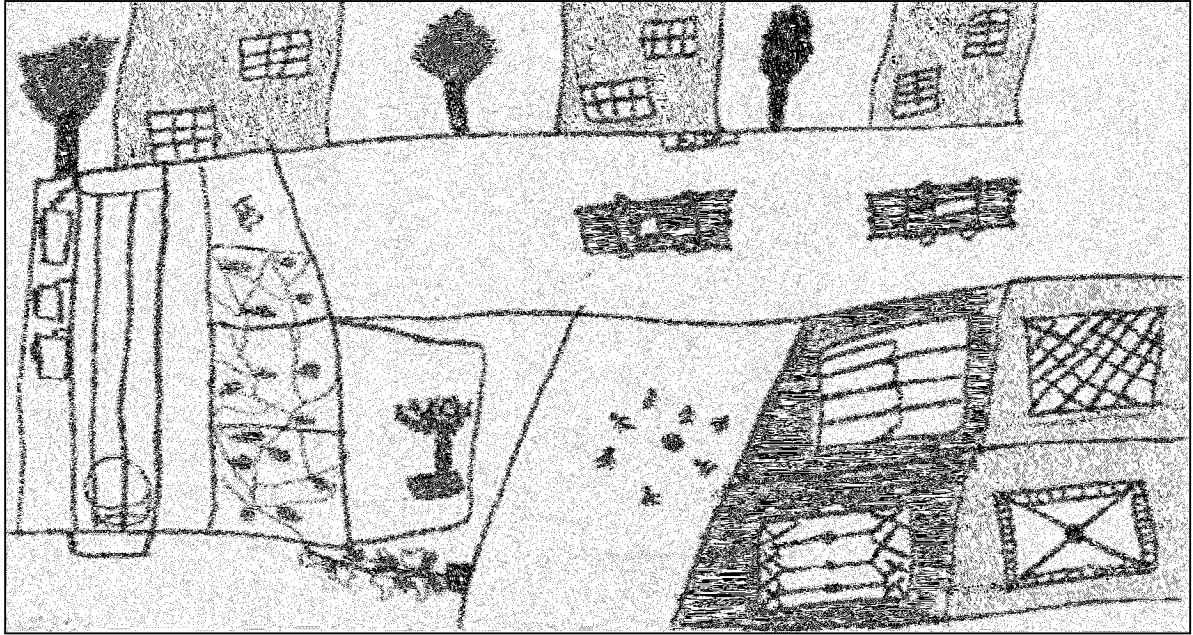
**Figure 28:** Aggregated mention rates of place elements from children's drawings

It was assumed that these drawings represented experiences that are memorable and of importance to the child. It was the child's own home and surroundings (mentioned in more than half of the drawings) that appear to be the most important places for the children. Additional items were mentioned in more than quarter of the drawings: playground, vacant land, play field, mosque, library, car, street play and play areas, traffic, traffic lights, pedestrian bridge, parks, garden, amusement park, schoolyard, parking lot and pavement. Other types of places shown on the drawings by children diminish in significance, without distinct gaps, across the children's frequented and occasional ranges.

Figures 27 and 28 indicate that there was minimal variation between boys and girls' representation of their favourite places, which contradict the findings from interviews and their behaviours. This variation was expected because it is the result of tabulating all the elements indicated on the drawings. In this case, the children drew their home because it is part of their habitual range — it is the starting and ending location of their activities. However, a closer look reveals that the majority of girls favoured home sites. As they demonstrated in the interviews, the drawing reinforced this theme by showing that the majority of the girls' drawings featured home. These places represented a safe and appropriate environment for girls within the Islamic culture, where they do not face harassment or social threat. When they were asked to explain why they considered home sites their favourite, the majority stated that it is safer for them and there are no teens around to harass them. In addition, their parents do not allow them to go to any other places in the neighbourhood for fear of assault and physical danger.

On the other hand, boys scored the highest most favourite for streets, pathways and associated places (35 mentions), followed by home sites (34 mentions). These two categories, while they appear different, are almost the same. The streets and pathway referred to most of the time by boys are those places in front of the house or a friend's house. Other streets referred to by both boys and girls are those streets between home and school. Thus, the interviews and drawings support the notion that girls have an extremely limited range and they only draw the places that they know from their limited experiences.

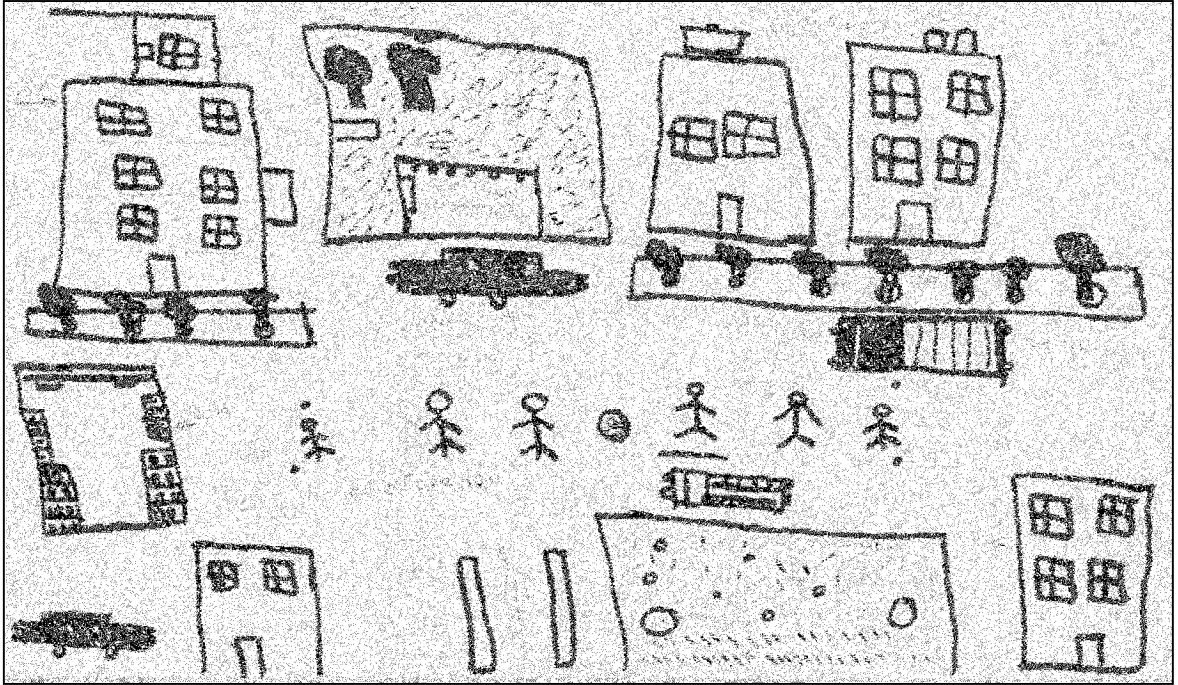
Figures 29, 30, 31 and 32 are examples of how children, from different gender and age groups, have portrayed the places they know about (See Appendix C for more examples).



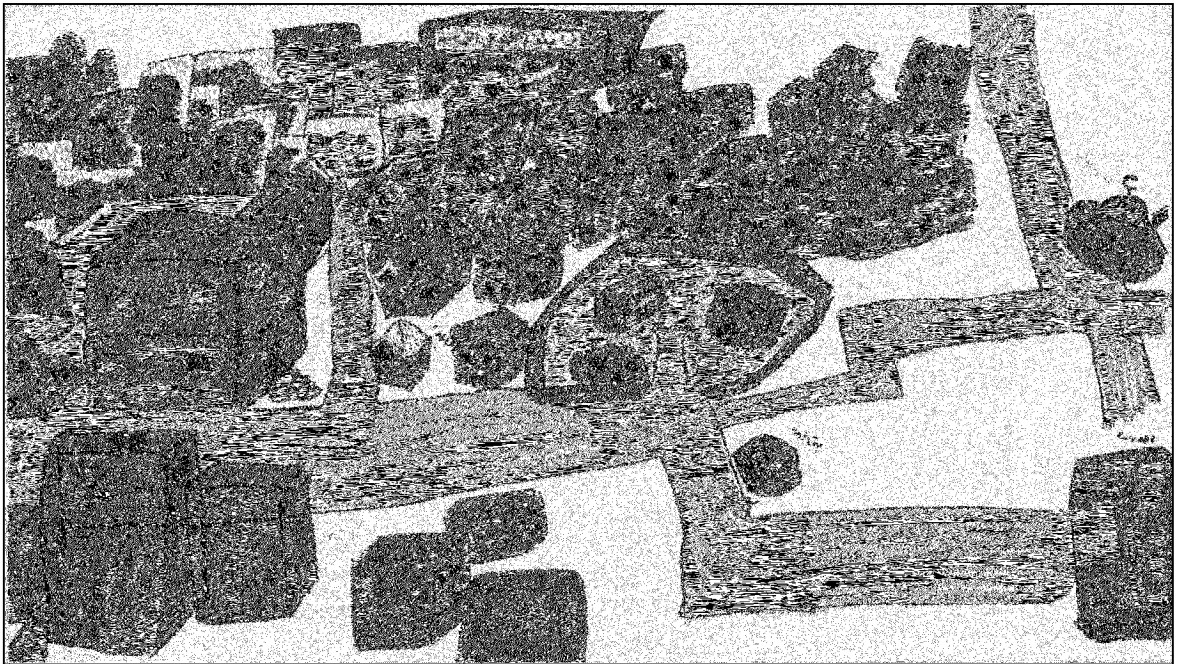
**Figure 29:** Birds eye view drawn by a 12 year old girl looking down from her room window showing security fence on the window of her house, vine tree, houses across the street, cars in the street and children playing in the alley next to the house.



**Figure30:** Photograph taken by the same child a week after drawing the picture in figure 29, depicting the same children's activity on the street.



**Figure 31:** Drawing by 13 year old boy showing children playing soccer in the street between cars, buildings, trees and two planted plots.



**Figure32:** Drawing by 14 year old girl showing her crowded neighbourhood, including the school, mosque, stores, long public access stairway in front of her house and community centre.

In addition to their favourite place, the drawings indicated the children's habitual ranges. It is clear that boy's habitual range wider but controlled by parental consent. In comparison, girls' habitual ranges are limited and very narrow due to restrictions placed on them by both parents and society.

As for the importance of vegetation and landscape between genders (Figure 27), girls scored twelve more mentions than boys, an indication that perhaps girls see natural elements as more important in the outdoor environment. The mid-range score of Al-Wihdat and neighbouring areas in the 'open space' category reflected a shortage of open spaces around them. This emphasizes two things: dependency on city parks and playgrounds; and the resilience of children who can adapt to streets and any other spaces that exist in their community for their daily activities (Figure 33).



**Figure 33:** An example of nature elements represented in children's drawings, the drawing on the left by a 13 year old girl, the drawing on the right by a 10 year old girl.

Since the similarities between genders are stronger than the differences, the scores for the remaining categories indicated a common core of childhood environment experiences. The similarities in perceptions and views of the outdoor environments of both boys and girls were a clear indication that the intense level of urban development had a strong impact on children's behaviour.

## 8.4 Discussion

The overall assertion of the findings supports the popular belief that the majority of children benefit from being outdoors and participating in outdoor activities. Given a choice between spending time indoors or outdoors, the children will choose outdoors (Moore, 1986).

Perhaps as a consequence, children living in low-material-resource urban neighbourhoods spend a great deal of their free time in neighbourhood outdoor spaces (Berg and Medrich, 1980; Lynch, 1977; Sanoff and Dickerson, 1971). They like to see what is going on (traffic, construction, water flowing, clouds moving, animals), go places, meet and greet other people and animals, experience the infinite and diverse sensory qualities of the world (the smells, the feels, the sounds), and experiment with the behaviours, such as shouting, running, climbing, and jumping (which are seldom accommodated well indoors). Not only is being outdoor pleasant, its richness and novelty stimulate brain development and function. As Gleitman & Liberman (1995) put it, cognition is rooted in perception. Outdoor environments are a prime source of perceptions.

The dissertation finds that children especially need the broad experiential base provided by being outdoors. The knowledge they gain there is fundamental to literacy and scientific learning. This finding can be supported by (Dewey, 1963), who described the farm visit of different generations of kindergarteners so they could read, write, draw, converse, and learn about plants and animals. Furthermore, unlike some childhood pleasures, that of being outdoors seems enduring. Any casual survey of children and adults will find a high percentage of happy outdoor memories, some of which have been formative (Chawla, 1994; Cobb, 1993; Moore, 1986; Sebba, 1991; Wilson, 1996-a). Another lasting benefit is that children can learn to care for the environment, if provided with numerous positive outdoor experiences under the support of suitable role models (Carson, 1998; Wilson, 1996-b).

As stated in previous chapters, this dissertation does not intend to solve children's urban problems; nor does it claim that it will hold the key to understanding its complexities. The overarching question in this dissertation is whether outdoor spaces support or limit everyday activities and experiences necessary for healthy development, within a low-material-resource neighbourhood.

The short answer is that the results indicate that the outdoor physical environments within Al-Wihdat and its environs do not provide the child residents with reasonably viable

explorative outdoor environments. The data shows that the existing outdoor spaces and facilities had far more limitations and constraints than benefits on child users. Children showed that they were very resilient, adaptable and content. The outdoor physical environment in Al-Wihdat refugee camp and environs do not fully support healthy explorative activities for children.

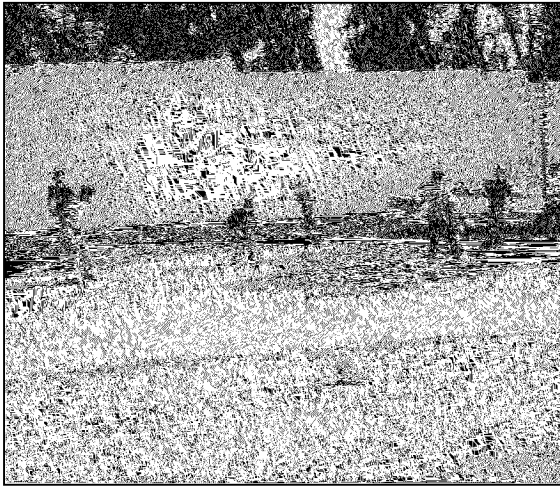
The data illustrates how a strong, supportive social network could compensate for the lack of a supportive physical environment. The children's views and opinions revolved around community issues, such as dirty streets, crowded community, and other societal issues, such as people taking drugs and alcohol, people swearing in the street, and bad manners of young children). The findings indicated that of the least concern to the children were personal limitations such as having no pocket money, a better home, getting injured or hurt in the street, and getting lost. The trend in the relative importance of the Al-Wihdat children's views moved from the collective to the individual. When a society has a shared common history of war, forced migration, military occupation, ongoing political conflict, high unemployment, and uncertainty, as has been the case of the Palestinian people, a sense of collectivism is strengthened.

The following section elaborates research findings and discusses emerging new themes.

#### **8.4.1 Outdoor Spaces Support Exploratory and Participatory Activities**

The limited existence of grassy or unpaved public outdoor spaces and the availability of residential streets in the study area mean that streets become an attractive play area for young boys, and to a lesser extent for young girls. It is a world as interesting as it is familiar. Children were observed playing in the narrow spaces between parked cars and along the curb side of the slopes. Children who played on the street witnessed the comings and goings of people, traffic and construction crews working on patching holes in their street, and the intricate details of their neighbours' daily lives. The street play area in front of the house offered patches of dirt used for constructing imaginary landscapes, and building materials, such as sand piles. The streets turned out to be an intimate extension of the home – a place outside of their cramped homes yet close enough to provide physical and psychological safety. These complex conjunctions of mundane issues opened the possibility for natural outdoor activities that are not available in indoor facilities (e.g., home, school playground). The streets of Al-Wihdat refugee camp offer a place for children living in this

extremely crowded urban community to meet, gather, and pursue their activities in a territory that is neither strictly supervised by parents nor completely far from their watchful eyes (Figure 34,35 and 36).



**Figures 34 and 35:** The scarcity of open public outdoor spaces and the availability of residential streets in the study area, mean that streets become an attractive play area for young boys and to a lesser extent, young girls.

Along with the gendered use of urban outdoor spaces, there were gender divisions in the perception of space. Girls experienced exclusion and marginalization due to their gender, in addition to the exclusion stemming from their (young) age. In particular, Tucker's and Matthews' (2001) study in rural Northamptonshire also found that girls were restricted from using many of the outdoor spaces not only due to their age but also due to their gender. The research findings revealed that where girls occupied public spaces, they were perceived by adults as being the 'wrong' gender in the 'wrong' place as well as being exposed to risks in an unsafe place. A number of girls reported feeling unwelcome in the very places set aside by adults for their use — recreational grounds, parks, and wooded areas. Vigilant adults considered young girls' presence in these recreational spaces, particularly after dark, as unacceptable since it is a time when young trouble makers roam the streets. In general, the ways in which the urban landscape is gendered excludes girls from outside recreational opportunities, which are considered boys' domain.



**Figure 36:** Girls playing in front of their house, always within the watchful eyes of parents.

The environmental competence of children is directly related to their ability to gain safe access to built and natural environments (Hart, 1979). The area in and around Al-Wihdat had a special attachment for residents, yet often it was given the least consideration in the design of community. Young children (ages 10 to 14) were especially dependent on the quality of the environment near their home to meet their needs for movement and exploration as well as to experience and learn from the outdoors (Berg and Medrich, 1980; Cohen and Horn-Wingerd, 1993; Heft and Wohlwill, 1987; Lidz, 1968; Moore, 1986). Children characteristically spend most of their leisure time with their own age group. At gatherings of teenage boys in Al-Wihdat, some invariably showed off and tried to attract the attention of others. Yet, what adults may view as “pointless hanging around” and “rough playing”, seemed to be necessary behavioural outlets for children seeking identity and territory in the transition from childhood to adulthood.

#### **8.4.2 Streets are Places for Children to Play and develop**

Developing a ‘sense of place’ is a term often synonymous with the relationship between place and an individual’s perception of the distinctive character of a physical location. The inability to construct physical images of place is often attributed to a person’s placelessness (Relph, 1976) or loss of ‘sense of place’ (Pocock and Hudson, 1978).

The data presented in the earlier section revealed children's sense of boredom with the social, physical, and educational environment. The total area of open space available was sharply below any minimum government standards, considering the population and density per square mile (Adas, 2001; Marshy, 1999). None was designed and developed by the local government. The open spaces available for all the Al-Wihdat children were suitable only for unspecified activities requiring flat, featureless areas of grass (possibly male-oriented activities such as soccer). This limited their flexibility and use (especially for girls). One of the tasks of this study was to determine if any of these 'physical form' issues had impacted children's development.

The children's drawings and photographic exercises served as a useful tool to analyse their views of the neighbourhood and what was present or absent in it. In the majority of drawings and photographs, there were very few depictions of public or natural places. In addition, the majority of drawings and photographs illustrated elements close to or inside children's homes. A number of the drawings illustrated icons that represented issues of importance to them (such as crowded streets, building very close to each other, trash, street play, shops, school and fast cars). The exercises certainly raised questions as to why the majority of children had interpreted 'neighbourhood' in social rather than physical terms. The results directly contrast with those from children in previous GUIC cross-continental studies (see Chawla 2002) and (Limb et al., 2000; Tranter and Pawson, 2001). In these studies, the 'physical' environment was most significant in the drawings and photographs, with children's drawings especially being colourful, rich and vibrant. One explanation could be to make a correlation between the 'images of the neighbourhood', as represented by the descriptive drawings and images. The majority of children had a negative view of their neighbourhood (e.g., boring and dangerous), a view created in large part the enormous mundane urban form.

However, positive elements of the neighbourhood were also described, drawn or photographed by children. Good neighbours, the mosque, a small playground, Al-Wihdat Sport Club, the youth centre and the library were included in the range of written and physical images (Figure 37). Children certainly knew these places existed; the question is whether these areas were utilized regularly by children and if not, why?

**My neighbourhood has everything children want...**

Muhammad, a twelve-year-old boy, was enthusiastic and eager to show everything in his neighbourhood. He knew several routes to get home from school and asked his friends' opinion about which one to take on that day, the one going through the "Souq" (market) or the "Zuqaq" (alleyways). The boys mentioned many activities such as soccer, hide-and-see, cops and robbers, war games, cycling, birds trapping as their favourite plays. They also knew exactly where the best views and short cuts to the King Abdullah soccer stadium and Queen Rania gardens were.

A place that Muhammad liked was a large local open field. "Here is the hill where we can go play war game, here is a football field, here is where young kids can play away from cars, we can do a lot of things in this field. And we can play "cops and robbers" and we can play hide-and-see - here is everything one could wish for".



**Top image:** dead-end street used by Muhammad and his friend for all kinds of outdoor play without being endangered by traffic.

**Bottom image:** From the edge of their neighbourhood children go out to soccer stadium, located in a another area, by crossing a major highway.



**Figure 37:** My neighbourhood is a big area with beautiful, natural areas... [It] has everything kids want (Muhammad, 13 year old boy).

Based on casual field observations, interviews, drawings, and key informant interviews with schoolteachers and local community officials, great differences existed between adults and children in their perception and use of the outdoors environment. Whereas outdoor environments were functional resources to adults (in this case, the streets and parking areas), children valued them as a place to play. Interviews with children showed that they determined the quality of the outdoor environment by the presence or absence of basic play

opportunities discovered in alley, parked cars, trees, piles of waste material, flights of stairs, fence walls, building entrances, and so forth — not by the ease of traffic flow and parking.

The persistence of street play in the study area was dramatic. Because of the lack of open communal spaces around residential buildings, more than 50 percent of the boys and girls interviewed made the street their primary play area. Streets were the most popular places within a broader category of hard-topped circulation spaces woven into the fabric of the neighbourhood. Of the 32 children interviewed, 10 boys and 6 girls stated that the majority of their daily activity occurred in streets near their home. The remaining activities occurred in street-associated spaces and on physical elements connected to streets (i.e., alleys, stairways, courtyard, front yard, etc.).

The findings drew a parallel to three British studies, which concluded that children's ability to independently visit places within their own neighbourhood has been decreasing significantly (Hillman et al., 1990; Tranter, 1993; Tranter and Whitelegg, 1994). One study revealed 68 percent of 9-year-old children were allowed to visit leisure places alone in 1971, but only 37 percent in 1990. Similarly, the percentage of 9-year-olds allowed to travel to school unaccompanied fell from 88 percent in 1971 to a mere 27 percent in 1990 (Hillman et al. 1990).

Today 'the street as a place for play' has been replaced by 'the street as a place for cars only' concept. This is indicative of the challenge children face playing in the neighbourhood in the midst of heavy traffic. Tranter and Doyle (1986) considered it "democratic deficit", meaning children are seen as a low political priority and as such their input is not important in neighbourhood planning. Their views on the use of streets are rarely incorporated by adults. If children were involved in the decision-making process, especially in designing of street space, they would give motor traffic lowest priority and open, accessible play spaces the highest (Tranter and Doyle, 1996).

#### **8.4.3 Streets are the Centre of the Habitual Range of Childhood Territory**

Children's own images and responses (i.e., how they use their local environment, feel about their surroundings, and evaluate local resources and restrictions), provided valuable insight into their relationships with the physical environment. One out of two children interviewed in the study area said streets and associated spaces were their preferred places for after-

school and weekend play. When asked where they went to meet their friends, 75 percent of the 32 children referred to streets.

Adult interviewees agreed that their children usually played in the street and complained about speeding vehicular traffic. The majority of the adults said the traffic on their street moved too fast and many would not allow their young children to play in the street, unsupervised. The second most common complaint was about reckless and speeding drivers. Adults complained that police enforcement in Al-Wihdat's streets and environs was rare. They believed that traffic offenders in their area were not likely to be caught. One of the major challenges of city planners everywhere is to build streets that are child-friendly.

The majority of the children interviewed preferred to have easy access to conventional playgrounds, sport fields, parks and standard equipments, swings and climbing structures. Unfortunately, such playgrounds in Al-Wihdat are rare and too far away from their homes to make daily use feasible. Streets, on the other hand, are extensively available. Some children were pushed to the streets because of the lack of play opportunities inside the house and elsewhere, whereas others were pulled (even if other play spaces were available) by the special attractions of the street not replicated elsewhere. All children prefer to be where the action is, where the life of the community takes place, where street vendors are, or where construction sites are. In Al-Wihdat, all this and much more takes place in the street.

Previous research findings confirmed that the Al-Wihdat children were similar to children elsewhere. They highly appreciated the value of streets as play space. For example, children's evaluations of their environment in suburbs throughout Sydney found that when 9- to 11-year-old children were asked, "What's good" about their neighbourhood, high on the list of "good things" was "quiet streets for play, bike riding" (Homel and Burns, 1986). High on the list of "not so good things" was "too much traffic". Indeed, "many streets can provide excellent play opportunities — depending on traffic density" (Moore, 1986). Young (1980) supports this argument, suggesting that even in an Australian urban context, "the view that children should not play in the streets, therefore they do not, is an evasion of reality" (Young, 1980). Recent data from Australia and New Zealand (Tranter, 1995; Tranter and Whitelegg, 1994) suggest that in some areas with low traffic levels over 60 percent of 9- to 12-year-old children were allowed to play in the street.

What attracts a child to play in the street? Streets in Al-Wihdat fell within the habitual range of childhood territory (i.e., they were close enough to home to be used everyday and they were available anytime that children wanted to play). The dissertation was able to unveil a number of factors that made the street attractive play area for children. Streets are the social hubs of the neighbourhood, where children meet and learn about each other and their adult neighbours (Cochran and Brassard, 1979; Keil, 1989; Matthews, 1992) and investigate their surroundings (Proshansky and Fabian, 1987; Sebba, 1991). Their hard, linear play surfaces are appropriate for many everyday games and play activities. Many residential buildings in Al-Wihdat lack private outdoor open spaces appropriate for children's activities. Because of the infrastructural constraints and overcrowding of the Al-Wihdat area, open spaces between buildings do not exist or are inadequate for play activities that require large, open spaces, such as soccer games and bicycling. Instead, children have been left with very limited choices of play areas. Thus, the near-to-home street has become the favourite and most appropriate location for children's play because it is basically the only convenient place available.

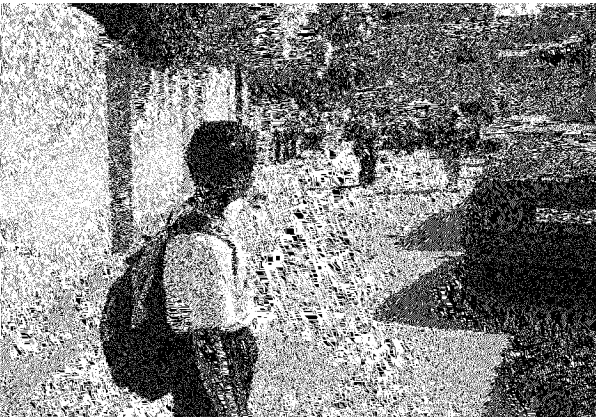
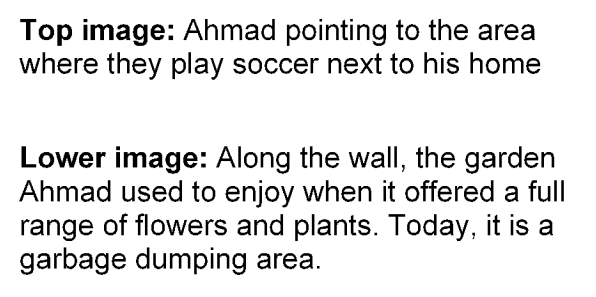

It is important to stress the very pragmatic reason why streets are so important in the lives of the children in Al-Wihdat area. Walking is the universal mode of transportation and the means by which children travel around the neighbourhood and, perhaps, the town to play. They mostly walk everywhere in the absence of affordable transportation options. In addition, streets are stimulating, affordable and cheap entertainment for the children. All of the children who were interviewed said that they got to their favourite after-school places by foot; however, this does not mean that they walked in the adult sense of the word. On the streets of Al-Wihdat, children were observed jumping, climbing, running, chasing, sitting, leaning, and so forth.

Another advantage of having streets where children can play is that children need to have some independent mobility to experience the life and activity of that neighbourhood (Tranter and Whitelegg, 1994). This is believed to be essential to children's development, socialisation and membership of their community (Kegerreis, 1993; Lennard, 1992). This depends on "active exploration", which is not provided for when children are passengers in cars being driven to playgrounds. Such children may "see more", but they "learn less" (Nicholson-Lord, 1987). As Lynch (1977) suggests, children should be "able to use the

diverse city as a learning ground". Keeping children off the streets denies them this experience.

#### 8.4.4 Commercialisation of Public Facilities Deny Children's Use and Access

The commercialisation of public facilities with their excessive access fees makes them out of the reach of most children. Such practice in essence excludes them.

<p><b>“My neighbourhood has no green places.”</b></p> <p>Ahmad, a 13-year-old boy lives two blocks from the school. He did not feel he had much to show me and only reluctantly agreed to do so. He told me he played football in the alley next to his very small house or at the girl's school across the street from his house, walked around with his friends and rode bicycles. In the residential area, there was not one single green place. His house was located on three-way intersection. He played soccer and other outdoor games between parked cars and traffic.</p> <p>Ahmad talked about a small garden that he liked but which has been turned by uncaring people into garbage dump. It was the only green area in the whole neighbourhood, he said with sadness. The conversation was hesitant until we sat down in the front of the house for a talk and looked at the map while his dad observed from a close distance. Ahmad and his friends talked about their bicycle routes and their school activities.</p>	 <p><b>Top image:</b> Ahmad pointing to the area where they play soccer next to his home</p>  <p><b>Lower image:</b> Along the wall, the garden Ahmad used to enjoy when it offered a full range of flowers and plants. Today, it is a garbage dumping area.</p> 
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**Figure 38:** I don't like anything in my neighbourhood. It is very noisy and crowded. I wish to live in a place other than Al-Wihdat (Ahmad, 13-year-old boy).

The data revealed that there is one public youth centre in Al-Wihdat refugee camp in addition to few privately owned ones that impose access fee. Not are they cost-prohibitive to most children, they cannot accommodate some 43,000 children living in the camp(UNRWA, 1994). All public facilities or centres serve the needs of a small percentage of the youth population and are primarily male dominated. According to a local NGO member, the public facilities activities are mostly sports, especially 'soccer', which excludes young women and girls. A few youth activity centres have begun to include women, but they offer limited services.

Not only is there a lack of sports and social activity centres for the youth, facilities that teach useful skills, such as computers, are also inadequate. A large number of the youth are unemployed and/or drop out of school and there are not many avenues to grow and develop. Even vocational schools are sometimes difficult for these youth to access in part because they are too poor, or can't afford to commute or in some other ways do not meet the requirements.

#### **8.4.5 Children's Freedom of Movement is Facilitated by Physical Features**

A Comparison of findings in this study with Hillman *et al.* (1990) study of children's independent mobility suggests there has been an increase in parental anxiety over safety in public space: parents do not allow their child out after dark. Key informants recollected a childhood unhindered by many of the concerns facing today's parents. They remembered walking to school themselves and felt they had more opportunities for going out on their own compared to their own children. Adults expressed worry about traffic and fear of stranger, indeed worry about most aspects of their children's lives.

However, many children of the study appeared to be 'making do' and getting by in their neighbourhood. Close inspection of children's daily life from the interview revealed that only boys 10 to 12 years old and girls in all age groups led highly restricted lives in several domains. For instance, boys 13 and 14 year olds did play outside without adult supervision; younger boys and all girls are always supervised and accompanied to school by adult member of the family or travel as a group, and never walk in public alone.

Uneven patterns of access to public space were apparent from the data, particularly in relation to gender. On most indicators, children's freedom to move around their neighbourhood was greatest in the Al-Wihdat refugee camp. The majority of the refugee

camp children said they were allowed to play out on the streets, cycle on the neighbourhood roads, walk alone to a friend's house, and go to the shopping centre not too further away from home.

In the Al-Wihdat, children's freedom to be mobile is facilitated by its physical features (e.g. flat and grid layout streets and alleys situated close to children's homes), the relative smallness of the area. In addition, Al-Wihdat school children were all attending their local schools. In comparison, refugee children residing in the neighbourhoods adjacent to Al-Wihdat camp were attending different schools in different school districts, Al-Wihdat school district being one of their choices.

In general, girls appeared to be more restricted in their use of urban space. Boys had greater freedom to roam and play outside more independently than girls. The tendency for girls to play less than boys was even starker in the Al-Wihdat camp than the environs. Exploration of the links between genders suggested that girls were particularly excluded from the public realm, although the reasons children gave for not playing out included personal preference as well as fears, social disapproval and parental restraint. The children's geographies were shaped largely by their Islamic religious cultural heritage. The population in the study areas were predominately Palestinian refugees from the same town in Palestine who were part of the 1948 and 1967 refugee waves. Protecting the honour of girls, particularly from the public gaze, was central to family values in this community setting and served to remove girls from many 'dishonourable' places and spaces. The dominance of boys in local public spaces, even around shop corners, made it hard for girls to move around their neighbourhood.

Several female teachers revealed high levels of parental anxiety about letting their children play outside. Parental anxiety is amplified in this poor, crowded and distressed urban environment.

#### **8.4.6 Male Dominated Outdoor Spaces Restrict Female Access and Use**

Describing the 'physical' form of the Al-Wihdat neighbourhood is difficult without immersing oneself in the life and drama that play out there. Walking around the study area to collect data was to sense the emptiness, silence and absence.

Drug use has been reported as a social problem for the neighbourhood. It has contributed to both environmental degradation (broken glass and graffiti and sexual abuse) and an increase in crime. Drug use and drug-related violence was concern of the children, who said they felt most scared being in open spaces where suspicious adults were around.

Such fear was evident in the children's responses. For example,

*I don't like the bad people and drunks in our area during evening and night time. In addition, there are guys who go to the girl's school at night to hide and sniff glue and drugs (13-year-old boy, interview 2003).*

*I hated to walk in streets. There are many bad guys. There was a crazy guy, he threw stones at the children try to hurt them (12 year old girl, interview 2003).*

Large proportions of girls did not leave their neighbourhood except to visit relatives who happened to live outside. One of the major girls' complaints was that the boys were 'always in the streets', which is the reason why their parents do not 'allow them to play outside'. Frustrated, the girls asked: "Where do we go? Where can we play?"

Interviews revealed that up to 50 percent of the boys and girls believed there were dangerous places in their neighbourhood. Most of the girls stated that streets everywhere in the neighbourhood were dangerous. In addition, the data showed that a decrease in independent use of public space for children happened because of the increase of parental anxiety over children's safety in public space.

Besides being marginalized and excluded from adults' public space, children also had to deal with the hostility of other teen-age groups who wanted to control the local areas where they hung out (Matthews et al., 1998; Percy-Smith and Matthews, 2001; Woolley et al., 1999). In their study, Matthews et al. (1998: 196) discovered that:

*"hassle' from other, often older 'kids' and fear of assault among the girls and fear of attack and fear of fights among the boys, kept these teenagers to tightly defined areas, where they felt 'safe' and free to do what they wanted."*

From the sample, 50 percent of the girls and an equal percentage of boys who reported being bullied, referred to it as "harassment". This led these children to their environmental behaviour by developing strategies of spatial and social avoidance because of bullies in their neighbourhood. As for the girls, they faced gender divide on two counts: their perception of space and young age.

Children in the study area tended to be more afraid and restricted in their use of the outdoor environment in the evenings because of real and perceived risks and parental prohibition. Fear of crime and kidnapping and drugs seems to affect the everyday life and restrict the use of public outdoor spaces for boys and girl in the camp. The risk of being alienated from the community due to rebellious attitude also seemed to be higher for the camp youth (Abdullah, 2004) Similar observations have been made about kids in poor black neighbourhoods in American and British cities.

## **8.5 Emerging New GUIC Themes**

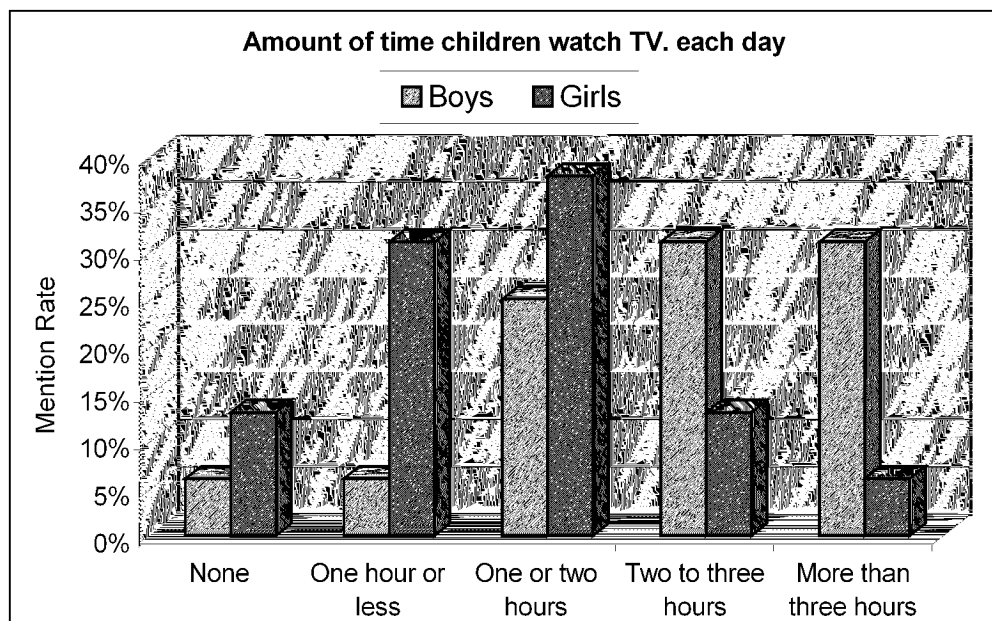
While many of the findings are similar to previous GUIC studies, several new themes also emerged. For example, the children said they enjoyed playing with friends, talking about sport, music, and fashion and watching TV, but at the same time nurtured a guilty feeling that them having fun was “haram” while their brethren were being martyred in Palestine. Boys in particular said that when they sang or talked about music, it was mostly about patriotic songs or Palestinian heroes. They also liked to tell jokes, which were dominated by their political situation. Girls appeared to have more opportunity for enjoying fashion and music.

### **8.5.1 Access to Schoolyard as Playground:**

Schoolyards were the best and safer alternatives to parks and playgrounds during the after-school hours and summer vacation. For communities lacking the financial resources to build playgrounds for children, schools made a practical alternative to dangerous streets. For example, a group of children was observed playing soccer in the street. A speeding car approached from the corner of the street, and the children ran away fast to avoid being hurt; during the frantic attempt to escape the car, one child fell and hit the edge of the curb. The car drove away, and children returned next to the same street to play; it was just another day. The young child who fell down the previous day was standing on the side with his broken hand hanging from his neck in a sling. This scenario is a daily occurrence in Al-Wihdat refugee camp. The children’s daily struggles to find ways to satisfy their physical and developmental needs are mounting. Dangerous streets as well as a profusion of satellite televisions, video games and the Internet, are contributing to the declining of outdoor activities among children.

There are ten schools in Al-Wihdat refugee camp; divided equally between boys and girls. The use of Al-Wihdat school playgrounds and youth centres will provide the children, especially girls, a safe and equal opportunity to the outdoor environment.

However, until improvements to neighbourhood streets and reform to urban planning and design practices and policies in Jordan take into account children's views and voices, outdoor environments will remain dangerous. To compensate for the loss of outdoor environment due to fear, children are watching an increasing amount of television: in the morning before school, in the afternoon upon return from school, in the evening with the family and before going to bed (Figure 39). Children who attend school in afternoon shifts do not seem to do much in the morning besides watching television. Children reported that they watch a wide range of programmes: cartoons and news in the morning, cartoons in the afternoon, films, TV contests and news in the evenings. Some of the programmes they listed were designed for adults or older age groups, especially Western shows broadcast late in the evening or at night.



**Figure 39:** Amount of time each day children spent watching television

Because hobbies and safe outdoor play opportunities are limited in Al-Wihdat camp, few boys mentioned any, while girls listed reading, drawing and playing with the computer. Play and sports for girls mainly took place in school during school hours. Boys studying in the afternoon shift said they came to school two or three hours before classes so as to play.

Others choose to stay in school after classes so they could play. One girl whose school started in the morning remarked that she wished school started at nine instead of eight so she could have one extra hour of play. Girls said they also played inside the house with cousins or siblings. Meanwhile, boys played football and marbles in the street. The girls seemed to envy the boys for being able to play outdoors, calling it “freedom”, and boys felt sorry for the girls because they were not able to leave the house like them.

### **8.5.2 Maturity and Self-Expression:**

Data from interviews show that children in the study exhibited insight into issues that were well beyond their years. This was observed in several ways, part of which was how the children projected themselves within their age and with younger or older children. They perceived those who younger as noisy, annoying, immature and irresponsible, and those older as arrogant and reckless. Nevertheless, they were keen to quickly enter into adolescence and adulthood so that their maturity would be acknowledged by the community and society. After 14 years of age, children began to expand their habitual range and loosen the restrictions on their movement imposed by parents.

As they entered teen years, girls and a majority of the boys said they were “too big” to play outside. Even when asked, “Do you mind playing with your brother or sister?” the majority of the participants replied that they were shy to do so. Children associated their mental maturity with their growing body. The majority of the girls above the age of twelve mentioned that they did like to walk in the streets and outside their houses, but they tended to stay away from places and streets where men (adults and even boys of their age), would watch them. Further, they considered that an improper behaviour. Sounding and behaving like mature persons was of immense importance to children, their families and communities. In all cases, children give up the joy and happiness of childhood for the sake of trying to convince their families and communities that they were mature adults. In this region and culture, physical maturity was key to judging a child’s maturity. Therefore, the children took physical maturity as a sign of coming of age.

Awareness of their surroundings, environments and community was another indication that children in the study were mature for their age. Children seemed to have recognized their situation – political and economic – which kept them from complaining about their standard

of living. Rather, their complaints revolved around traffic and noise pollution, and lack of safety and open spaces.

In terms of family's social status, privacy, care and integrity came before the number of rooms in the house and gadgets

Asked if the image of her neighbourhood changed from one year to another, a 12-year-year-old girl replied:

*In old times, everybody plays together; now each play alone, with family or extended family members.*

The answer exemplified how her maturity surpassed her youth. Relating to type of change she expected, (better or worse), may be for better she replied,

*In the old times, because of the intimate neighbourly relations, people found themselves in trouble because they do not know the limits of such relation; they enter the neighbour house with no permission, its better to bring back this relation but in an organized and controlled manner.*

The children freely expressed their opinions about themselves and others, even if the topics were impersonal. A female child said she stood in front of the mirror lecturing, studying and singing as a way of boosting her self-esteem. Children used phrases such as "I like, don't like, optimistic, pessimistic vulgar, lower class, no manners, nasty rude", and other words and terminologies, which indicated their strong opinions. They used expressive responses even when the interview did not warrant it.

The participating children's responses showed they had in one way or another accommodated themselves with their living conditions. None of the children displayed dissatisfaction with their values of life, or the standard of living. However, when asked to compare their standards with those in Western countries that saw on TV, they said they admired the standards of living of the West, including green lawns, beautifully designed homes with different rooftops (all roofs in the camp are flat), wide, spacious and clean streets, and plenty of well-maintained parks. Some of the children did point out that although they liked the urban centres of the West, they did not accept Western values and life styles.

### **8.5.3 Gender Preferences and Priorities:**

Gender is one of the main factors in the children's set of preferences and priorities. In general, both boys and girls defined their priorities according to their family's, with the girls being only more so. Their moms shaped most of their priorities. The boys were somewhat independent in their social thinking and connected better with their fathers. However, the frequent absence of fathers from the children's social activities due to jobs obliged the boys to rely on themselves or on their older brothers. Boys were enthusiastic about having their male relatives living near by; it meant direct and quick support in cases of trouble and emergencies. Education and reputation had a higher priority for girls, while career, admiration, and respect were higher for boys. Clean, quiet, safe streets, walkways and gardens were highly appreciated by girls, while the wide streets, spaces and yards, and parks were of great importance for boys. Girls tended to talk more about family, house and relations, while playing sports were the central topics for boys.

### **8.6 Summary**

The results of the study indicate that the methods adopted are useful in identifying a wide variety of issues that are important to children. They range from macro issues such as pollution, politics, crime, traffic, development and improvement and safety, as well as micro issues such as friendships, family relation, watching television, praying, and outdoor activities. The methods have also highlighted differences and similarities among the boys' and girls' views, opinions and perceptions of the outdoor environment.

The dissertation demonstrated that the GUIC model is universal in its applications. The action-research processes, methods and instruments developed by the GUIC projects are very beneficial and flexible for use in research involving child participants. This method was instrumental in preparing the research work for this dissertation, as it gave me a fully developed and tested system. I slightly modified the instrument protocols to reflect gender and cultural issues that were lacking in the original GUIC model. The ability to modify the instruments and methods to fit this dissertation, yet stay consistent with the GUIC basic framework, produced results that could be easily contrasted with other studies from the GUIC projects.

## ▪ Responses to research questions

The data analysis results indicated that the outdoor physical environments did not provide the children with healthy explorative experiences. The existing outdoor spaces and facilities were shown to have limitations and constraints that outweighed their intended benefits to the children. Many of these spaces were used because no other options for children existed. Despite these limitations and constraints, children showed that they were very resilient and content. They were also able to adapt to and improve the harsh realities of the physical environment of their neighbourhood to satisfy their developmental needs by transforming inhospitable spaces and streets into satisfying play and activity areas regardless of the size or location. It was noted that with official help and children's participation in decision-making, physical improvements of the outdoor physical environment and facilities were possible.

The data illustrated that much stronger supportive social network did compensate for the lack of supportive physical environment. The children's views and opinions were mostly about societal and group issues such as dirty streets, crowded community, jobs, and the violent deaths of Palestinian children under Israeli occupation. They also were concerned about drug- and alcohol-use, bad kids and crimes in the neighbourhood. The children's concerns were mostly of a collective nature; personal concerns, such as having no pocket money, a better home, and sports-related injuries were of the least concern.

The thrust of Al-Wihdat-area children's opinions stood in sharp contrast to the individualistic nature of complaints of children, for example, in the United States (Silverman et al., 1995) and Australia (MacMullin and Loughry, 2000). When a people have a shared history of war, forced migration, military occupation, and ongoing political conflict, as in Palestine, a sense of collectivism is bound to occur.

In the use of the outdoor environment, a predictable pattern was discernible: children around their homes; on their way to school; in and out of their residential areas; and around the city. These patterns were controlled and directed by available facilities, children's own interests, and communal participation. Children's physical movement, in reality, was different from that in their mental map. When asked, most of the Al-Wihdat children drew a conscious rather than a mental map of the area around where they lived. They painted a picture of the surroundings based more on their perception than reality. They added places, elements, trees, shapes, and colours that they thought should be there. When those maps were compared

and evaluated with their verbal response, I was able to construct and categorize the actual sequence of their facilities, interests, and participation. Everyday use, normal use and casual use of spaces and places formed the structure of the map.

Spaces of everyday use are facilities located within the child's habitual range such as schools, relatives' homes and adjacent play spaces, shops that sold items of daily consumption, such as bakeries and grocery shops.

Spaces of normal use are those located outside the habitual range but close enough to home such as, restaurants, candy and ice cream shops, accessories shops, places of walk and play, bus stops and other gathering places.

Spaces of Casual use are places located away from home that require adult escort to get to, such as public parks and gardens, playgrounds, mosques, markets, and tourist areas.

In Al-Wihdat, as in other communities in Jordan, neighbourhood streets form a vibrant, thriving social arena for the residents. It is where children are reared and where housewives and elderly people spend their time. Neighbourhood streets lie just outside the home and are the most important element of people's urban environment. Yet, transportation patterns within many of Al-Wihdat's residential areas are incompatible with, and often overlook human uses of these environments. Consequently, streets are dangerous and impersonal domains that residents were unable to change for the better.

This does not necessarily mean that children need special facilities such as equipped playgrounds. It is often assumed that playgrounds and other formal play settings are the best ways to meet children's play needs. In fact, playgrounds usually provide a limited range of possibilities, and even the most elaborately equipped formal play spaces will not meet children's needs if they have to be accompanied by caregivers. Furthermore, and more significantly, girls in the MENA region would not be able to get to these playgrounds by themselves, and would need separate facilities apart from boys. However, it does mean that urban planners, architects and community leaders need to identify and protect spaces close to home where children, particularly girls, can safely run, jump, explore, experiment, and pretend, ideally in the company of other children. Measures that eliminate thoroughfare traffic, particularly trucks, and restrict the use to local traffic only, as well as slow/calm traffic, can have dramatic, positive effects on the lives of residents, especially children.

**CHAPTER NINE**  
**CONCLUSIONS, RECOMMENDATIONS AND IMPLICATIONS**

## CHAPTER 9: CONCLUSIONS, RECOMENDATIONS AND IMPLICATIONS

### 9.1 Conclusions

Watching children play outdoors is inspiring: climbing trees; discovering insects, animals and birds; running and shouting; playing games; letting their imaginations run wild; and story-telling. We can relate to this as adults because we were all children once. However, children's ability to experience the outdoor environment is under threat. Fear and risk, lack of investment, overcrowding and poverty are all restricting their opportunities to spend time outside.

Children are a powerful symbol of the future. They provide us with a compelling reason to improve the urban environment. This symbolism has not been lost on policymakers. The most widely accepted definition of sustainable development is the one used in the 1987 Brundtland report<sup>15</sup>: "Development that meets the needs of the present without compromising the ability of future generations to satisfy their own needs". Yet, despite the frequency with which they feature in environmental discourse, children have played only a passive role in the development and implementation of urban and environmental policies.

This dissertation argues that children's well-being and urban environmental issues are inextricably linked. The worse a local urban environment looks, the less able children are to play freely and develop the habits and commitments that will enable them to address environmental problems in the future.

The starting assumption for this dissertation was that urban environmental policies – and policymakers – would benefit from listening more to children's views about their local environments that will help the officials address the local environmental challenges. Through a range of qualitative research methodologies, I talked to children about their perceptions of the environment and investigated whether a focus on children as active participants in

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<sup>15</sup> In response to environmental and economic pressures, cities and towns across Europe are introducing a wide range of new energy efficiency and renewable energy measures. The goal of the Brundtland City Energy Network is to promote a strategic approach to this process and to enable the exchange of information and experiences among European towns and cities.

environmental protection could change the way we think about environmental and children's policy.

The 32 interviews, 32 drawings, and other data collected through various methods reflect the consistency between children's views, opinions and perceptions of the outdoors environments and the actual conditions thereof. The results indicate that the outdoors physical environments fail to provide the children with viable options. The existing outdoor spaces and facilities came with many limitations and constraints. The Al-Wihdat refugee camp and environs do not support healthy children explorative activities, however, with physical improvements, modification and children's participation, improvement is possible.

Also, the data finds a strong supportive social network that compensated for the lack of healthy physical environment. The children's views and opinions were about societal and community issues. The trend in the relative importance of the children's views moved from the collective to the individual.

The data analysis produced a range of themes. Parts of these themes were similar to those produced by other GUIC studies. Themes such as favourite places, access to community facilities, range of travel, and social threat are universal among all the GUIC studies including this research. However, themes such as access to schoolyards as playgrounds, awareness and maturity, self expression, and gender preferences and priorities are the products of the local social, cultural and religious environment in Jordan.

#### ▪ **What Children Wanted Changed**

People and environments are interdependent. Each reflects the other. The social history of communities, accumulated in living spaces and buildings can be emphasized and preserved, or demolished and wasted, during each round of development and redevelopment. Old values may be supported and/or new ones introduced, depending on how trade-offs between economics and social needs are managed and the degree to which residents are involved in the process.

This dissertation has been concerned with identifying opportunities for supporting the development of children's physical environment, so that children's needs can be given more emphasis in the process of managing urban change.

When child participants were asked, "What would you like to see added or changed in the outdoors?" 46 percent proposed *adjustment to existing resources* such as "clean the area and pick up the garbage, add trees and lights to the streets, reduce and control traffic through our area, pave, fix and widen streets, fix or remove abandoned buildings, reduce noise, pollution and crime, change entry area to the camp, and increase lot size for homes". It is interesting to note that not one child was without an opinion - possibly reflecting a more pronounced self-expressive cultural style and a desire to convey a sense of personal maturity. This suggested that children attached most importance to the well-being of the neighbourhood as a whole. This attitude reinforced the notion of collectivism verses individualism.

*New fixed resources* such as "add sport fields and playgrounds", kids play area, outdoor pool, new schools, police station, libraries, hospital, parking areas for cars, central location of all play areas and equipments, seating benches, and sidewalks" were mentioned in more than 28 percent of the responses.

Few references (13 percent) were made to *natural resources* such as "add natural garden", "open space", "pool", "trees, flower and grass". This again should not be interpreted as a lack of interest. Most children realized the difficulty of having green areas all over the neighbourhood due to scarcity of available of open spaces and water.

Some children were well aware that aspects of their surrounding could be changed, and suggested to "reduce and control traffic through our area", add "parking areas for cars", "fix or remove abandoned buildings", and "reduce noise, pollution and crime". The bulk of suggestions were for modest and reasonably affordable changes.

Based on the current research, this dissertation makes a number of general policy directions and recommendations that, if adopted, may provide children with quality public spaces. The research states that it is important to get the children's input while designing public spaces.

## **9.2 Policy Directions and Recommendations**

There is an obligation in this final section to surface from immersion in a phenomenology of childhood environments and propose action. Yet the direction should be approached carefully. If the suggestions are less tentative, they become solidified answers. Actions imply responsibility and that must remind us of the full scope of childhood-environment

issues. The focus must be on the principles and policies that guide actions rather than actions themselves.

The approach stated in this dissertation began with an effort to collaborate with children and document aspects of their surroundings which they themselves found to be important. The data shows that children were losing their connection with the urban environment. Children's well-being are inextricably linked with urban environmental quality. The worse a local environment looks, the less able children are to play freely and develop the habits and commitments that will enable them to address environmental problems in the future.

In addition, the data highlighted gender disparity in the access of high quality urban environments. All children benefited from the opportunities provided by access to outdoor spaces but those benefits currently are not being equally distributed. Whilst children have universal rights and needs, poverty and gender places severe limits upon the extent to which they can be recognized. Such spatial inequalities adversely affect children's health, well-being, and personal development. Public policy must find ways to extend the benefits of access to the outdoor environment more equitably.

#### ▪ **Gender Disparity in Access to Public Spaces**

The gender theme was dominant throughout this study. The views, opinions and perceptions of participating boys and girls were obtained separately so they could speak freely and frankly. The research indicated that there was a clear divide between boys' and girls' outdoors spaces, which meant that the outdoor environment was gendered. While the boys dominated the public spaces, girls retreated to places within home sites. In comparison, the gender theme was not a critical issue in the previous GUIC studies done in different cultural settings.

Globally, urbanization and population growth will continue in the near and distant future. While policymakers and urban planners have tried to be more responsive to people's needs, much less is known about children's use of outdoor settings and their preferences, particularly in the Middle East and North Africa region. If community participation in the planning and design process of physical and built environments is a priority, then additional attention to including all stakeholders' voices is in order, particularly those of children.

Building neighbourhoods which function in a just and equitable manner for children should be an urban planning priority. The diversity of children, their gender, experience and the context of their lives are issues that need considerable reflection when planning and designing a neighbourhood. It is important to recognise that public spaces are not neutral – geographies of power, resistance and control are mapped out in real and imaginary boundaries across the landscape (Morgan, 1994; Sibley, 1995). To do wrong, as many children do, is to disrupt these boundaries and find one's self "out of place" (Malone and Hasluck, 1998; Valentine, 1996).

Pre-teen children, through classification and appropriation, are often considered too old for playgrounds and too young to be valued community members. When they cross these categories it becomes a source of concern for society as Sibley (1995, p.34) explains:

*"Adolescents may be threatening to adults because they transgress the adult/child boundary and appear discrepant in 'adult' spaces ... teenagers demonstrate that the act of drawing the line in the constructions of discrete categories and interrupt what is naturally continuous."*

The response by adults is often to "alienate" or exclude children from particular places – spaces that the adults think of as their domain (Valentine 1996; Malone & Hasluck 1998). When public spaces are taken up by "adults", children begin to occupy the fringes of the neighbourhood. They are constantly told to "move on", to find another space.

In Al-Wihdat refugee camp and surrounding areas, the youth population is high and of that almost 50 percent are girls under 15 years of age. Due to overcrowding, scarcity of outdoor spaces, and boys' usurpation of those spaces, maintaining gender equality in access is not possible. Girls then resign to the status quo and retreat to home sites. Nonetheless, by working with children in the field, the research concluded that the following improvements can be made or limited alternatives already exist:

1. Girls and children from disadvantaged backgrounds should be given more opportunities to access quality public space.
2. Spatial inequality between gender and social classes should be seen as a negative impact on child development. The development of quality private and safe outdoor places for girls is critical and culturally supported.

3. Community's use of schoolyards and industrial land after school hours, on weekends, and during school holidays provide a viable opportunity for safe and protected outdoor environment for children activities, particularly girls.
4. Public policy needs to address the problem that girls and children from disadvantaged backgrounds have fewer opportunities to access safe, clean public space.
5. Equitable spatial distribution of public parks and playgrounds by planning special places and activities for girls within these facilities.

This research highlighted the unique needs of female children in the MENA region. Underpinning the work is the belief that children and adolescents are capable of participatory citizenship from a young age, especially within their localities. Establishing an enduring national and regional network of environmental youth forums in Jordan and the Middle East is the surest way to ensure participation from all stakeholders in creating urban landscapes that better support social activities.

#### ▪ **Children's Participation**

There is growing recognition of the importance of involving children in assessing their environment and identifying how their neighbourhoods might be improved. Children have a right to a voice in matters that concern them. They are also experts on their own environments, well placed to identify the problems that concern them and the solutions that best address those concerns. "Having a voice" can take many forms, from the chance simply to describe the realities of their own lives to actually being involved in practical decision-making and planning (Chawla, 2000).

In international agreements, governments recognize children's right to participation –as in the relevant articles in the Convention on the Rights of the Child, Agenda 21 and the Habitat Agenda (Chawla, 1992a; 1992b). These all reflect an agreement that children and youth are not only a population with special needs but also one with special energies and insights that they can bring to the process of human settlements development. But even when children are consulted and given the chance to identify problems, they can seldom make changes on their own. There have to be processes and mechanisms that routinely institutionalise their inclusion (Chawla, 2000). In this way, their participation becomes not only an objective in its own right but also a practical instrument for creating better cities.

If neighbourhoods are to become child-friendly, children need to be part of the planning process. However, to participate constructively, they need to be skilled. Children who have limited access to different urban environments need environmental contact so they can read the environment and be critical consumers of designs and plans. To address the misunderstandings that the community and adults have about children, it is important that children are given the opportunity to take up space in public places.

Participatory planning means addressing power relationships through changes in the policing, regulation, monitoring and planning of public space for children. Planning with children is not just about changing or designing physical forms or structures – it is about understanding the culture of a community.

To do this, thorough research rather than shallow consultation needs to be conducted with and by the children about their lives. Nevertheless, it cannot be assumed that children are going to be “able” or “willing” to participate until a commitment to valuing their contribution is made. It is imperative that the children be involved in decision-making process on the principle that their participation will be central to a successful planning. The United Nations Convention on the Rights of the Child (UN, 1989) had the following to say:

**Article 12**

*States Parties shall assure to the child who is capable of forming his or her own views the right to express those views freely in all matters affecting the child, the views of the child being given due weight in accordance with the age and maturity of the child*

*For this purpose, the child shall in particular be provided the opportunity to be heard in any judicial and administrative proceedings affecting the child, either directly, or through a representative or an appropriate body, in a manner consistent with the procedural rules of national law*

**Article 13**

*The child shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of the child's choice.*

For planners, working with children means diversifying the types of community consultation processes they employ. Children like to be practical, mobile and motivated by their involvement; this is what stimulates them. Involving the children in urban planning means that policy-makers and designers should view the neighbourhood through the eyes of

children – the real consumers; and they should do so as part and parcel of decision-making. The following points would be helpful:

1. Action-based strategies point to potential benefits of involving children in undertaking environmental audits, developing realistic action plans, participating in and/or setting up community enterprises. The need for a range of ongoing environmental practices in the school, which do not fade away when a topic has been covered, also deserves consideration.
2. Better consideration should be given to children's needs in decision-making on the design of public space.
3. Children's participation in decision-making allows their voices to be heard early on in the design and maintenance of public space through regeneration strategies and land-use planning.
4. The link between children's well-being and the environment should be embedded in national policies.
5. Environmental education through exploration that provide for children's innate sense of exploration and self-discovery through out-of-school learning.
6. The environmental dimension of the public health agenda should give greater emphasis on public policies. Protecting children's spaces is critical.

▪ **Street Play**

Streets and public spaces are critical elements to achieving a sense of importance within the urban society. The main task of policy-makers, planner and designers should be to elevate the perception of the street in residential communities in MENA countries, from a design concept to a social institution.

Streets in residential neighbourhoods need to be safe for children and adults. They must also function as part of the symbolic environment, optimising the community's sense of place and expressing collective territoriality. None of this is possible as long as the automobile retains its supremacy in the residential neighbourhood streets. Children, in particular, should not be forced to withdraw from the street because of the hazards posed by traffic. The street environment should have places in which people can sit, converse, and

play. Inhabitants need to see the street of their neighbourhood as a place rather than a traffic channel. Residential streets should be destinations, not routes.

In Al-Wihdat refugee camp and surrounding neighbourhoods, as in other residential neighbourhoods in Jordan, streets are where most children are reared and where most housewives and elderly people spend their time; they are just outside the home, the most important part of the human's urban environment. Yet, the design of streets in most residential areas overlooks these considerations. The street is a dangerous, impersonal domain that residents have little control over.

Street play is not going away. This means that the renaissance of street space as a significant resource for people will continue to thrive. Urban streets in residential communities can be humanized; the balance between the needs of children and the needs of motor vehicles can be redressed. Many successful examples already exist around the world. Decision makers in Jordan and MENA countries are invited today to make a greater effort to ensure that children's needs are not only recognized but also thrust into the forefront and represented by children themselves.

Research findings emphasize that traditional modes of moral education (subjugation under adult authority) are no longer appropriate in a rapidly changing world. This is particularly true in MENA countries. An alternative education process based on children's experience, assessment, and decision-making about their personal world could offer greater advantage. This would introduce an essential base of sound urban environmental values and, at the same time, meet the conventional academic aims of self-motivated experiences as the springboard for acquiring knowledge and skills.

Public initiatives are key elements of the strategies that are needed to develop human areas within cities and residential communities in Jordan. Although this applies to residential areas that are already constructed, it is particularly needed in newly planned residential neighbourhoods. There is a need to include design gestures that will effectuate both aesthetic and functional improvement. Over the long term, this is expected to contribute to the development of more liveable urban environments.

This dissertation makes the following five recommendations to improve Jordanian policy on urban planning and play-area development:

1. Restore a sense of order by removing the litter, any graffiti or abandoned cars. These are visual signs of neglect that encourage criminals into believing that the street is uncared for. The collective impact of these maintenance problems is to deter people from using their streets. Key to restoring the residents' confidence is a rapid repair system responsive to resident complaints.
2. Traffic management to reduce traffic speeds and if possible to reduce traffic volumes by removing parking spaces and/or denying access to through traffic. These measures are necessary to minimise traffic danger to children playing outside their front doors, and people (especially older people) crossing the street, and to once again signal to people engaged in criminal or anti-social behaviour that there is a government present and actively working to improve conditions for local residents.
3. Increase the prospect of face-to-face chance encounters in the street by giving residents a reason for being in the street. This is best achieved by planting more trees, providing more pocket gardens or planters that are the responsibility of the street's residents, and play spaces. The streets should be restored as meeting places by using build-outs, entry treatments and/or road narrowing to give residents greater opportunity to engage in conversation. Build-outs should be both ends of the street to ensure that one space doesn't simply become the preserve of one group of people. Spaces that are popular with the community, benches should be provided to encourage them to sit outdoors in comfort. Play spaces should aim to encourage intergenerational mixing.
4. Improve the ease of movement for pedestrians. Upgrade the street lighting so that the pavement is lit at night and seen as a safe place.
5. Involve the community by giving them a greater role in deciding the appearance and management of their street. The greater the role of the resident the more distinctive and interesting the streets are likely to be, which in turn will both foster an area loyalty and make the neighbourhood a more attractive place to walk in.

The paradox is that we are fostering a generation that is likely to face the toughest environmental challenges yet, in terms of climate change and the ever-increasing pressure on natural resources. This generation, more than any other before, will need the environmental awareness and citizenship that is instilled through exploration in childhood.

### 9.3 Policy, Practice and Academic Implications

There are already a number of in-action models to show how residential streets and outdoor spaces can be reclaimed for children in European cities. However, in cities throughout the world, most residential streets are still dominated by motor vehicles, and are not seen as the legitimate territory for children's play. In this section, I raise a number of issues that should be of particular concern to the professionals whose activities impact, in both direct and indirect ways, the play opportunities of children.

Allowing children to play on the street is integral to the development of a truly child-play-friendly city. In such a city, children are not restricted to "children's areas" such as parks and playgrounds. Thus, the city planners and other professionals need to consider the argument that simply providing more parks and playgrounds will not satisfy the needs of children for play space, as Moore (1986) Ward (1990) and Matthews (1992) suggested, Parks and playgrounds perpetuate the idea that the worlds of adults and children should be segregated, kept artificially apart. They reinforce the restriction on children from certain parts of the city, and localise children's experience to groomed and controlled parklands. Also, unless the streets leading to these parks and playgrounds are also child friendly, young children, especially young girls, cannot get to them alone. Without reclaiming the streets for children, it may be necessary to have parks and playgrounds much more closely spaced than is the case at present.

Another important issue relates to the terminology used by professionals to describe changes to streetscapes. Streets should be primarily designed as play spaces - social places for children and adults. Thus rather than calling for "traffic calming" schemes, we should perhaps be lobbying for more "play street" schemes. Relatively few traffic-calming schemes have ever been designed with the explicit intention of reclaiming the street for children. They usually have a multitude of aims, including reducing accidents, reducing environmental impacts of traffic, and improving residential amenity. A change in terminology from "traffic calming" to "play streets" may help to challenge the attitude that "streets are for cars". It may also challenge the view that traffic engineers should have the main responsibility for the design of residential streets.

If streets are seen social places for children and adults, then it would be useful to involve other professionals, as well as the local community, in the design process. Urban designers

and landscape architects could work together with local residents (including children) to come up with play environments in their streets, while also allowing (controlled) access for motorcars.

To achieve this, it is important to actively encourage the introduction of more "street play" schemes, especially in areas where the necessary "traffic calming" can be supported by other strategies aimed at facilitating the actual occupation of the street by the children.

These other strategies include:

- Commitment to lower vehicle speeds through community pressure as well as through speed limits and through engineering means to lower speed.
- Commitment to the development of area-wide schemes of traffic calming, rather than to the individual streets.
- Government-supported advertising to not only allow children to play on the streets, but to actively encourage it.
- The widespread dissemination of the reasoning that children playing on the street will encourage the development of local neighbourhood-based communities, with potential benefits for adults as well as children.
- The strengthening of the idea that streets are social places for people (children as well as adults) rather than solely places for cars.
- The implementation of citywide traffic calming scheme to improve street place. This refers to a general policy or philosophy for transportation planning in Jordan, based on increasing the modes of walking, cycling, and public transport, all of which are child-friendly modes of transport. Not only can children use these modes independently of adults, but also when adults use them, children are not put into extra danger. Localised "traffic calming" or "play street environment" projects may simply not be enough to make Jordanian cities truly child-friendly.
- The application of the "play street environment" concept in all new residential developments in Jordan. This is of particular importance, because of the higher percentage of young children in such areas.

Inherent in all of these strategies is the importance of consultation with the community, including children. Such consultation is recognised as being crucial to the success of traffic calming schemes, but unless children's perspectives are incorporated into the process, it is likely that their views and need for play space close to the home will once again be overlooked.

This dissertation builds upon multi-disciplinary research on children and their environment. It contributes to the collection of a new body of data to enhance knowledge and understanding. The dissertation encourages the development of new research methods, which are sensitive to children's own perspectives. In addition, it suggests linking all child-centred projects in the city with one another, complimenting other research initiatives within an international context, and looking critically at experiments in other countries involving children's participation in planning and design of their environment. Finally, the project seems to inform policy makers, planners and architects and other children related professions about children's relationship with their physical and built environments and suggests mechanisms that will empower children in articulating their place needs.

There is a significant ongoing national debate in Jordan and MENA countries about how to change the deteriorating quality of life in the cities. The lives of children must have an even higher profile in this debate. The data from this research has shown that children have many useful ideas about urban environment; the predominant concerns in this research were more traffic, social fears, lack of good play/leisure spaces and quality physical infrastructure. However, children, like adults, navigate their city in complex and varied ways. The research found variation by gender and age. The decrease in independent use of the gender-based public spaces for 10- to 14-year olds, and radical change in the patterns of children's spatial stratification found in Amman, is cause for concern. Being home-based by choice in a considerably rich spacious house is a world apart from enforced exclusion in an over-crowded refugee camp and environs.

Whilst the research was based in Amman, Jordan, it is probable that many of the findings can be utilized to other urban settings in Jordan and MENA countries. The apparent greater freedom for children's independent mobility found in the previous GUIC research, undertaken in different cultural and economic settings, requires further research to better compare the contrasting findings.

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## APPENDIX A

### Fieldwork Experience

I made substantial preparation before embarking on my trip to Jordan to do the fieldwork for this research. In fact, I had to make multiple trips to Jordan to get the job done. I feel that the study enriched my understanding of how the ever-encroaching urbanisation is compromising children's developmental needs all over the world, but particularly in Al-Wihdat refugee camp and its surroundings.

My pre-departure preparation included training, passing of candidacy exam, making of research interview and drawings protocol, getting a study grant and securing the necessary permits and permissions from Jordanian government, Non-Governmental Organizations (NGOs) and colleagues at the University of Jordan.

In February 2002, prior to the fieldwork research, Professor Robin Moore and I visited Jordan and conducted two workshops in Amman and Aqaba. Following these important workshops, I gave a presentation in December 2002 about *Growing Up in Cities* (GUIC) model at the Children and City conference in Amman. The field research finally began after I made my third trip to Jordan in August 2003.

Growing tensions between United States and Iraq in the latter half 2002, followed by U.S. invasion in March 2003, delayed my project considerably. The whole atmosphere heightened anti-American feelings in the Middle East and anxiety about national security in regional countries. The delay of my fieldwork research was frustrating, especially when it caused the Jordanian government and agencies permits to expire; but I had no choice except to wait. However, in retrospect, this extra time allowed me to fine-tune the research instruments, translate the interview protocol into Arabic, and maintain communication with individuals in Jordan, even strengthen my friendship with them and develop a realistic plan of action. Eventually, from about mid-August 2003, when the tension-level in the Middle East subsided somewhat, until mid-November, I got a chance to select participating samples and interview locations, and conducting interviews with children, teachers and local government officials.

In Jordan, my home base was the capital city Amman, the site of Al-Wihdat refugee camp. After arriving in Amman the biggest challenge was to get the all the necessary government permits re-issued. Besides the permission to conduct research, I had line up the appropriate resources and logistical support before the actual work could begin.

Getting the permission required submitting the letter of introduction and intent, signed by the dissertation advisor Professor Robin Moore, to appropriate Jordanian government agencies. Although a native citizen of Jordan and fluent in Arabic, I had to pass through the bureaucratic red tape to get the permission to work in Al-Wihdat refugee camp. It took three trips to Jordan and nearly one full month of my last visit alone to get the go-ahead and pertinent information about the study site.

The government of Jordan is particularly sensitive to research requests, which require an investigator to go to the refugee camps for verification of claims; there is no short cut to this process. Prospective researchers should be prepared to establish credentials, justify the objectives, and spend several weeks, even months to go through the whole process. It helps if one can start the paperwork sufficiently ahead of their arrival in the study area or country.

Once I obtained all the necessary permissions and established contacts, it became an extremely rewarding experience to conduct the fieldwork in Jordan. In my initial contacts with the Department of Palestinians Affairs, University of Jordan, Jordan Geographic Information Centre, UNESCO, Municipality of Greater Amman, UNRWA, and other government offices, I was sceptical about their willingness to cooperate with me. I was afraid they would not take my work seriously or give me the necessary information, but for most part, I was pleasantly surprised with my contacts. The contacts from the first four public agencies I listed earlier not only were helpful, many of them became good friends by the time fieldwork was over in mid-November 2003. The initial interactions with government officials and NGOs allowed me to acquire maps, literature, and general background information about my study area.

One of the first things after settling down into my hotel room was to contact the DPA staff and Dr. Omar Amireh from the University of Jordan. In order to get necessary information and cooperation to start the work in and around the Al-Wihdat refugee camp, I needed to

establish rapport and confidence with the camp's administrative staff, the superintendent of Southern Amman School District, and principals and teachers of the participating schools. Fortunately, these people proved to be not only cooperative and competent professionals but also sincere about the success of my mission. I have since then corresponded with them through phone calls about my work over the last year. I have discussed with some of them my initial findings and in return received valuable insights and latest information on children's urban environment and outdoor places in Jordan.

Following Patton's classic advice (1990) on qualitative research and evaluation, I began to ease into the local setting without pretending to be "one of them." I also relied on the accounts and suggestions about fieldwork-related issues and methods from other published work (for example, Chawla, 2002; Moore, 1986; Stibbins, 1990; Whyte, 1984; Glaser & Strauss, 1967).

I performed an exploratory survey of the study site to become familiar with as much of the refugee camp and its immediate surroundings as possible by talking to people and observing. I deliberately chose not to jump right into research-related questions or hide the purpose of my visit. It took some time to gain the trust of the local residents, who were initially apprehensive about speaking their mind to someone whom they had met only recently. This is especially the case in areas such as the Al-Wihdat where many of the residents have learned to distrust any stranger with a camera and a nametag. Therefore, before selecting my study samples in-depth interviews, I tried to cultivate trust by talking with as many people as possible from all over the study area and responding to their concerns. In fact, with the passage of time gaining the trust turned out to be no so difficult. As I had expected, the majority of the people (men and children- boys and girls) were very friendly and "open", especially after they understood that my intentions and non-governmental affiliation.

As discussed in Chapters 4 and 6, the methods and instruments I selected were the ones used most frequently by the eight *Growing Up in Cities* projects. The *GUIC Manual, Creating Better Cities with Children and Youth* (Driskell 2002) for me served as a research guide. This ensured consistency for comparison between the Jordanian case study and the other GUIC studies.

The GUIC manual's core ideas and methods have been field-tested in a wide range of urban settings in both developing and industrialized cities. Examples from project sites help to illustrate the methods and demonstrate how they can be customized to local needs. They also highlight the universal applicability and value of children's participation and provide lessons and insights to help ensure a successful project.

In identifying potential participants, I was careful to ensure that the participants were representative of the community. These were essential for enabling comparison with other project sites, or develop generalizations about a larger children's population in Jordan and MENA region. To insure that participants were representative of the larger population, I found out as much as possible about that population; the breakdown in terms of sex, age, ethnic group, type of schooling, work status, and type of housing using the DPA demographic information and schools enrolment record. Once I had a good understanding of the 'profile' of the population, I assembled a group of participants who represented a similar profile using the criteria stated in Chapter 4. This 'representative sample' made it possible to draw conclusions about the larger population.

I conducted the research at the beginning of the 2003-2004 school year. Thus, schools became an appropriate place to select the sample of children. In addition, access to children and communicating with them in school was much easier than going to their homes or meeting them in the street. It was a matter of access, safety, and convenience for both the children and I to use the schools as the place of sample election and data collection.

Teachers' knowledge about the area and their students was important in selecting a sample of participants. A representative sample of the 10-to-14-age group in the study area was developed using classroom attendance rolls. From the attendance in each one of the four participating schools, the children were divided into three age groups: under 10 years, 10-14 years, and over 14 years. From the 10-to-14-age group, the principal of each school chose 100 names, of which 20 were picked using the fifth name after the first random selection. I then asked a child or a teacher present at the principal's office to choose eight random numbers from the list of 20. Each of the final eight was given a consent form to be signed by their parents (see Appendix A-3). In this way, I selected eight children from each of the four schools to 32. The sample participants were equally divided according to the gender.

Parental consent was obtained before initiating contacts with the children for the purpose of the study.

The interviews were held at two school facilities which some of the participants attended. Each school facility houses two independent schools of the same sex — morning school (7:30 to 11:30 A.M.) and afternoon school (12:00 to 3:30 P.M.). Each school has its own principal, teachers and support staff independent from the other school. All schools are located on a street called *Schools Street*. Interviews were coordinated with each principal to schedule the interviews in a manner that would not disrupt the children's classes. A quiet, private office space was provided by the principal from each school to conduct the interviews. Children were interviewed during school hours and their physical education, art education, and library classes.

Every morning before the interviews, I conducted a meeting with the two assistants from 7:30 to 8:00 to coordinate, discuss strategy and any issues arising from the previous day's interviews. The number of participants interviewed each day ranged from two children to a maximum of four depending on the circumstances for that day (e.g., sick child, school dismissed early, class times switched because teacher was absent or school holiday). Each interview required 60-90 minutes to administer. The volume of information collected at each interview required immediate attention to complete and organized notes immediately following each interview. I defined the study timeline by the number of children that could be interviewed each day. A maximum of four interviews were conducted each day; a total of ten days minimum were required to complete all thirty-two interviews. An additional ten days were used to conduct the follow-up interviews.

In general, the children showed a great willingness to cooperate and answer questions. They took the assignment very seriously and were impressed that an adult was interested in their opinions. It was striking how well they knew their everyday outdoor environment. Examples of their knowledge of their outdoor environment were plenty. Many of the respondents boasted about what they knew in their neighbourhood. They were very observant. They knew the names of every family that lived on their street or the location and name of every shop on their route to school. They provided detailed description of the good and bad activities that went outside their house. They were able to deal with traffic congestion and street crossing without fear.

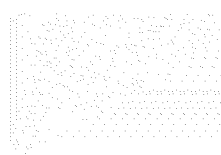
I was mindful that despite best efforts I could not do the research as efficiently as planned due to constraints of time and resources. Therefore, on occasion I had to sacrifice quantity in favour of quality (fewer child-led fieldtrips and photographs). However, complacency had no place in my endeavour. From one parent's denial of permission to another, from one neighbourhood to another, and from one street to another, I strove to follow the professional advice and rigorous standards of qualitative research. Overall, even though I feel could have done better if given the right resources, the data collected reflects in great detail the challenges children of Al-Wihdat camp and surrounding areas face everyday outside of their homes.

My experience was quite varied and wonderful. A taxi driver bilked me for twice more than what the trip cost, even though I spoke Arabic. Children gathered around me attracting attention whenever I tried to use my camera; twice I was pushed to the ground when children tried to snatch the camera from my hand. I enjoyed seeing children play and depict the political conflict that is going on in the occupied Palestine; I respectfully and gladly drank hot tea and Turkish coffee (Arab culture mandate the host to offer the guests some kind of drink as a sign of hospitality and generosity). I talked to people (children, parents, and grandparents) on the sidewalk, on the street, in the bus and taxi, in their living rooms, and in their offices and shops. I experienced cold bureaucracy and warm hearts. I sat, I walked, I hiked, and I looked at people going to and from work, and into tired faces, hungry eyes and happy smiles. I saw hope as well as hopelessness. I learnt from children's smiles and the grandparents' wisdom. I made and missed friends. I looked out and within; and I experienced my own country very intimately. It was an unforgettable experience, one that taught me many lessons and, without exaggeration, made me feel humble and grateful.

I may do things differently from the overall experience described here but I will not trade it or recommend anyone else, who may be interested in this type of work, to do otherwise.

## APPENDIX A-1

### NCSU Institutional Review Board approval letter

North Carolina State University is an equal opportunity and affirmative action institution and a member of the Board of Trustees of The University of North Carolina		Office of Research and Graduate Studies
<b>NC STATE UNIVERSITY</b>		
		Sponsored Programs and Regulatory Compliance Campus Box 7514 1 Leazar Hall Raleigh, NC 27695-7514  919.515.7200 919.515.7721 (fax)
From:	Debra A. Paxton, IRB Administrator North Carolina State University Institutional Review Board	
Date:	February 24, 2003	
Project Title:	Growing up in Amman, Jordan: The Effect of Outdoor Physical Qualities on Children's Activities and Quality of Life within Low-Material Resource Neighborhoods in Amman, Jordan	
IRB#:	025-03-2	
Dear Mr. Al-Khaleilah:		
The project listed above has been reviewed in accordance with expedited review procedures under Addendum 46 FR8392 of 45 CFR 46 and is approved for one year. <b>This protocol expires on February 24, 2004, and will need continuing review before that date.</b>		
NOTE:		
1. This board complies with requirements found in Title 45 part 46 of The Code of Federal Regulations. For NCSU the Assurance Number is: FWA00003429; the IRB Number is: IRB00000330.		
2. The IRB must be notified of any changes that are made to this study.		
3. Your approval for this study lasts for one year from the review date. If your study extends beyond that time, including data analysis, you must obtain continuing review from the IRB.		
Please provide your faculty sponsor with a copy of this letter. Thank you.		
Sincerely,		
Debra Paxton NCSU IRB		

## APPENDIX A-2

### Sample communication letter submitted to government offices in Amman, Jordan to obtain permission to conduct the research

August 31, 2003

To: Director of UNRWA Operations - Jordan

Dear Sir;

I would like to inform your excellence that the UNESCO- MOST office has awarded me a grant to do a study in Jordan. The Project called *Growing Up in Cities* (GUIC)-Jordan. And the title of the study is (Growing Up In Amman: The Effect of Outdoor Physical Qualities on Children's Activities and Quality of Life within Low-Material Resources Neighbourhoods in Amman, Jordan).

The study will focus on children's use of urban outdoor settings in residential environments. It also focuses on how children use their local environment and how they evaluate local resources and limitations. As a result, the study will apply these insights in order to understand how the urban environment affects children's lives. The units of analysis are two low-material resources residential settlements (Al-Natheef neighbourhood and Al-Wihdat refugee camp) in Amman, Jordan. The participating populations are children aged ten to fourteen. The research methods applied in this case study include field observations (fields notes, systematic photographic documentation, and behaviour mapping); interviews (with participating children, their parents, community leaders and government officials); children's drawings (cognitive maps), and child-taken photographs.

I understand that the schools at Al-Wihdat refugee camp fall under your jurisdiction. Therefore, I cordially request your approval and authorization to the appropriate department to facilitate my access to the schools at the camp to carry out the study. The schools will be used only as a place to hold the interviews with the children and in no way they will be the subjects of my study. Through the schools, I would like to select my children sample.

The Department of Palestinian Affairs had issued a permit for use to do the study at the Al-Wihdat refugee camp. This phase of the study is planned to start on the September 2nd 2003 with the selection of children samples from the schools located in these two neighbourhoods. At this stage, it is important to have access to the community and the schools and meet with the community members and schools principles to coordinate with them. The duration of the study is two months. I am hopping to have everything completed and present my preliminary report to the community by the first week of October 24th 2003.

I look forward to receive your reply

respectfully yours,

Eyyad Al-khalaileh

## APPENDIX A-3

### Children Participation Consent Form

A common practice in many participatory research projects is to ask participants to sign a 'consent form' giving their permission to be photographed and/or identified in project documents. This helps to ensure that participants are informed about the possibility of being photographed in the project and that they consent to the possibility of their picture appearing in publications.

I, \_\_\_\_\_ [PERSON'S NAME], agree to participate in the *Growing Up in City-Jordan* project. I understand that photographs may be taken of me during the course of the project, and that these may appear in published documents related to the project. I hereby consent to be photographed and authorize the use of photographs bearing my image in publications and other materials related to the project. When referring to me in any documents, I request that the project:

Use my actual name \_\_\_\_\_

Refer to me by the assumed name of \_\_\_\_\_

CHILD'S SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

PARENTS' SIGNATURES \_\_\_\_\_ DATE \_\_\_\_\_

## APPENDIX A-4

### Interviews Protocol

INTERVIEWER \_\_\_\_\_ SITE NAME \_\_\_\_\_

CHILD'S REFERENCE # \_\_\_\_\_

INTERVIEW LOCATION \_\_\_\_\_ DATE \_\_\_\_\_

#### Preparation

Arrange for a place to work where there will be minimal interruptions and distractions.

Begin by introducing yourself, and explain that you are trying to find out how young people use the place where they live and what they think about it. Obtain the child's permission to proceed with the interviews.

**I would like to ask you some questions about where you live and different places you go during the day. I am asking these questions to help me understand how children like you use and think about outdoor spaces. I hope that this information will help plan better outdoor areas for children like you. You don't have to talk to me if you don't want to, and don't have to answer a question if it makes you uncomfortable. Is it okay for me to talk to you?**

#### Identification

**1. Record the following information:**

AGE \_\_\_\_\_ SEX \_\_\_\_\_

ADDRESS \_\_\_\_\_

PHONE # (if applicable) \_\_\_\_\_

#### Residential History

**2. How long have you lived in this area?**

**3. Have you always lived in the same house? (if not, locate previous residences.)**

**4. What were the locations where you lived before? (if the child hasn't lived in the area all of his or her life)**

**5. What type of house do you live in now? (if there are different housing types that affect children's environmental experience)**

**6. Which school do you go to? Which grade? Do you go half a day or a whole day?**

**7. Do you work for anybody, here in the area or anywhere else? For whom do you work? Where? What do you do?**

**8. Do you visit places outside this area for recreation or vacations?**

**9. How would you describe the area where you live?**

#### Drawing

*The time required for this part of the interview will vary, but allow for approximately 45 minutes. Use large, durable paper, and have extra paper available if a child wants to enlarge the drawing space. A black marking pen of medium width is the basic drawing implement, supplemented with crayons for colour.*

**10. Would you please make a drawing or map of the area around where you live, and show me whatever you know in it?**

*Before discussing the drawing, ask the child's permission to make light pencil notes on the drawing as he or she explains it. To encourage discussion or additions:*

- Show me on your drawing the places where you do things or spend your time, and the routes you travel.
- Do you go to these places by yourself or with somebody else?

*At the end of the exercise, remember to ask the child to write his or her name, age, date, address and telephone number (if there is one) on the back of the paper. Also record the child's sex. If you think that you may want to exhibit or reproduce the drawing in any way, be sure to get the child's written permission, and determine whether the child would like you to use his or her real name or a fictional nickname. Whenever possible, involve the children in planning exhibitions or publications where their drawings will be used.*

**Place Knowledge and Use**

**11. Please tell me all the places that you know or use in your area, indoors and outdoors.** *(Record this answer as a list with two columns for the place names and the child's comments about each place. Discuss each place through the following questions, and probe for specific activities, rather than generalities like 'play')*

- What do you do there?
- Do you go there alone or with others?
- What do you like or not like there?
- What would you change in this place if you could?
- Which of these places do you use most often?
- In which of these places do you spend the most amount of time?

**12. What is the furthest place where you have ever been in the city?**

**Special Places**

**13. Of all these places, which are the most special to you or your favourite?**

**14. How would you describe this place to someone who had never been there, who wanted to know what it was like?**

**Problem Places**

**15. Are there places in your area where you don't like to go? Why don't you like it?**

**16. Are there places where you aren't allowed to go? Who forbids you? What are their reasons?**

**17. Are there places that you would like to enter but you cannot? What would you like to do there?**

**18. Are there dangerous places in your area? What makes them dangerous?**

**Place Ownership**

19. Do you help take care of any places in your area? What do you do there?

20. Are there any places where you feel as if you own them? Which places? Why do you feel as if they are yours?

21. Are there places where you feel uncomfortable, like an outsider? Which places? Why do you feel like an outsider there?

22. Are there any places that nobody owns, that are abandoned?

*At the end, close by thanking the child and asking:*

- How do you feel about the interview?
- Is there anything you would like to add or talk about next time?

***Explain that the next time you see them you want to talk with them about how they use their time and who they spend their time with, and any changes that they would want to make in their environment.***

## Protocol for follow-up interview

INTERVIEWER \_\_\_\_\_ SITE NAME \_\_\_\_\_

CHILD'S REFERENCE # \_\_\_\_\_

INTERVIEW LOCATION \_\_\_\_\_ DATE \_\_\_\_\_

### Introduction

When we met before, we talked about the places where you go, the things that you do, and what you think about them. Is there anything more that you want to say about it?

Today I want to talk with you about how you spend your time.

### Daily Activity Schedule

23. Please tell me about what you did all day yesterday, in detail: where you went, what happened there, what you did, and the time when you did it.

*Together with the child, record each event on a form that divides the day into 30-minute intervals. Be sure to record the day of the week.*

**24. Was there anything unusual about your activities yesterday? Was yesterday a typical day?**

**25. How does your schedule on the weekend compare? What would be different on a Friday? Do you have a special schedule on Friday?**

### Family Network

26. I also wanted to know about the people in your family and where they live. Who lives with you in your home?

**27. Do any other members of your family live in your area?**

Place Changes

**28. Has this area where you live changed in your memory?**

**29. Has it gotten better or worse? Why?**

**30. If you could travel into the future, what do you think this place would be like in 10 years?**

**31. If you could make changes in your place, what would they be?**

**32. Ten years from now, where would you like to live?**

Conclusion

**34. Everything you have told me has been very interesting for me, I hope these questions have been interesting for you too. Is there anything else I should have asked?**

*Explain how you plan to use the information, and close with the following question:*

**35. Do you have any suggestions about how this information should be used?**

## APPENDIX A-5

### Protocol for Key Informant Interview

These interviews are a useful tool for exploring the attitudes and insights of parents, community leaders, government officials, and other adults who affect children's lives. In general, the topics and questions listed here would apply to these groups.

Questions to be considered include:

1. What part of the day or night does your child normally spend outside the home?
2. In what places and at what hours?
3. What does he or she do there?
4. How often do you see him/her?
5. What did your child do yesterday, and where? (in some detail)
6. Are those places suitable for what he or she was doing?
7. If not, how should those places be changed?
8. Is any of this activity unsafe, or improper, or wasteful? Why?
9. How would you prefer your child's time be spent?
10. What could be done about it?
11. How much of the city does your child know, and how far does he or she go either alone or with friends?
12. Where in the city do you take your child? Why? How often?
13. What does your child need most?
14. What do you need in order to take care of your child?
15. How do you think your children's children will spend their time, and what will the places they live in be like?
16. What do you wish those places could be?
17. Tell me about what it was like when you were a child. What do you remember of the place you lived in, and what did you do there?
18. How does that compare with the place your child is growing up in today?
19. Which place was better to grow up in and why?

For officials, questions should explore their own perceptions of the area, including their evaluation of it as a place for young people, and their knowledge about young people's use of the area, their activities, and what they like most and least about the area. Questions could also explore officials' own memories of their childhood environment and comparisons with the project area environment. Lastly, and importantly, officials will be questioned about their plans for the area. How they believe their plans will affect the quality of the area and, specifically, the quality of young people's lives; what types of data and criteria they typically rely on in the development of their plans; and how young people in the area and other community residents can be involved in the planning process.

## APPENDIX B

### Interviews Data Tables

**Table 4:** Favourite places to go after school and on weekends (children's interviews)

Total Rate No. %		Favourite places	After School & Weekend by Gender			
			B	%	G	%
		<b>Home sites</b>				
		<i>Own home/own room</i>	2		7	
		<i>Own garden/own courtyard/ roof top</i>	2		4	
		<i>Relatives home</i>	3		10	
		<i>Friends home</i>	1		1	
		<i>Friends garden/courtyard/ roof top</i>			3	
<b>33</b>	<b>23%</b>		<b>8</b>	<b>11%</b>	<b>25</b>	<b>35%</b>
		<b>Community facilities</b>				
		<i>Swimming pool</i>	1			
		<i>Youth club</i>	3		1	
		<i>Mosque / Qur'an teaching centre</i>	4		4	
		<i>Library</i>	2		2	
		<i>School</i>	3		5	
		<i>Soccer game</i>	5			
<b>30</b>	<b>21%</b>		<b>18</b>	<b>25%</b>	<b>12</b>	<b>17%</b>
		<b>Formal / official open Space</b>				
		<i>Parks / gardens</i>	7		4	
		<i>Playground / play area / swings</i>	2		2	
		<i>Amusement park</i>	2		3	
		<i>Sports centre / playing field / youth centre</i>	4		1	
<b>25</b>	<b>17%</b>		<b>15</b>	<b>21%</b>	<b>10</b>	<b>19%</b>
		<b>Commercial places</b>				
		<i>Family own business</i>	3		1	
		<i>Neighbourhood Shops</i>	2		6	
		<i>Shopping centre (Souq)</i>	3			
		<i>Transit centres</i>	2			
		<i>Other shopping areas</i>	1		2	
<b>20</b>	<b>14%</b>		<b>11</b>	<b>15%</b>	<b>9</b>	<b>13%</b>
		<b>Streets and associated spaces</b>				
		<i>Streets</i>	3			
		<i>Front of the house</i>	4		2	
		<i>Alleys</i>	1			
		<i>Around the house</i>	2		4	
<b>16</b>	<b>11%</b>		<b>10</b>	<b>14%</b>	<b>6</b>	<b>8%</b>
		<b>Others</b>				
		<i>Non-local recreation areas</i>	1		4	
		<i>Rural areas/sea side/fishing/swimming</i>	3		3	
<b>11</b>	<b>8%</b>		<b>4</b>	<b>6%</b>	<b>7</b>	<b>10%</b>
		<b>Informal / unofficial open spaces</b>				
		<i>Fields/rough ground/hills/farmland</i>	2		2	
		<i>Abandoned places/construction sites</i>	1			
<b>5</b>	<b>3%</b>		<b>3</b>	<b>4%</b>	<b>2</b>	<b>3%</b>
		<b>Non-specific</b>				
		<i>Anywhere/all the same</i>	2		1	
<b>3</b>	<b>2%</b>		<b>2</b>	<b>3%</b>	<b>1</b>	<b>1%</b>
<b>143</b>	<b>100</b>	<b>Total</b>	<b>71</b>	<b>100</b>	<b>72</b>	<b>100</b>

**Table 5: Favourite places to go after school and on weekends (children's interviews)**

Total Rate		Favourite Activities	After School & Weekend by Gender			
No.	%		B	%	G	%
		<b>Activities inside home</b>				
		Watching television	13		15	
		Helping parents / relatives	2		9	
		Studying / Reading / writing / drawing	3		8	
		Playing games on computer	2		1	
		Playing around and on roof	5		7	
<b>65</b>	<b>35%</b>		<b>25</b>	<b>29%</b>	<b>40</b>	<b>40%</b>
		<b>Other Out door activities</b>				
		Library to read and use computer	3		6	
		Go to Qur'an learning centre	4		3	
		Meet my friends and chat	5		8	
<b>29</b>	<b>16%</b>		<b>12</b>	<b>14%</b>	<b>17</b>	<b>18%</b>
		<b>General out door play &amp; games</b>				
		Playing games	5		8	
		Singing and dancing			2	
		Playing on the sand and yard	3		2	
		Hide and seek / catch	2		1	
		Playing school			2	
		Hop scotch and jumping robe			3	
<b>28</b>	<b>15%</b>		<b>10</b>	<b>12%</b>	<b>18</b>	<b>18%</b>
		<b>Ball play / Sport / Youth clubs</b>				
		Soccer	12			
		Volley ball			2	
		Basketball	2			
		Badminton			3	
		Table tennis			2	
<b>22</b>	<b>12%</b>		<b>14</b>	<b>16%</b>	<b>8</b>	<b>8%</b>
		<b>Spectator /Formal events</b>				
		Watching soccer training or match	4			
		Concert			1	
		Shopping / eating out	2		12	
<b>19</b>	<b>10%</b>		<b>6</b>	<b>7%</b>	<b>13</b>	<b>13%</b>
		<b>Mobile Play</b>				
		Walking	3		4	
		Biking	5			
		Running	1		2	
<b>15</b>	<b>8%</b>		<b>9</b>	<b>10%</b>	<b>6</b>	<b>6%</b>
		<b>Adventure play</b>				
		Climbing school's concrete walls	3			
		Park playground	1		3	
		Gardens & sanctuary	1		1	
		Water balloons play	2			
		Setting up bike ramp	1			
<b>12</b>	<b>6%</b>		<b>8</b>	<b>9%</b>	<b>4</b>	<b>4%</b>
		<b>Playing on equipments</b>				
		Swings / slides	2		4	
<b>6</b>	<b>3%</b>		<b>2</b>	<b>2%</b>	<b>4</b>	<b>4%</b>
<b>187</b>	<b>100</b>	<b>Total</b>	<b>86</b>	<b>100</b>	<b>101</b>	<b>100</b>

**Table 6:** What children especially liked about the outdoors (children’s interviews)

What children like		Mentions					
		No.	%	B	%	G	%
Specific places: shop/swings / roof/yard/street/steps/ally	BBBBBBBBBBGGGGGGGGGGGGGGGG	24	75%	9	56%	15	94%
Playing with friends / relatives	BBBBBBBBBBGGGGGGGGGGGGGG	22	69%	10	63%	12	75%
Youth clubs / community centres / library / mosque	BBBBBBBBBBBBBBGGGGGGG	20	63%	14	88%	6	38%
Having friends around	BBBBBBGGGGGGGGGGG	15	47%	6	38%	9	56%
Football: soccer /basketball	BBBBBBBBBBBBBBB	14	44%	14	88%	0	0
More space to play	BBBBBBBBBBGGG	13	41%	11	69%	2	13%
Playing games	BBGGGGGGGGGGG	11	34%	2	13%	9	56%
Nothing	BBGGGGGG	11	22%	6	38%	5	31%
Walking / sitting with friends	BBGGGGGGGGG	10	31%	3	19%	7	44%
Nature: parks / trees / animals / birds / hill / water / flowers	BBGGGGGGGG	9	28%	3	19%	6	38%
Friendly people and neighbours	BBBBBBGGGG	9	28%	6	38%	3	19%
Safe environment	BBBBBBGGG	8	25%	6	38%	2	13%
Better than indoors / being out	BBBBBBGG	7	34%	5	31%	2	13%
Playing with stuff / with things / more things to do / always something to do	BBBBBBG	6	19%	5	31%	1	6%
Riding bikes	BBBBBB	5	17%	5	31%	0	0

**Table 7:** What children especially disliked about the outdoors (children’s interviews)

What children dislike		Total		Mentions			
		No.	%	B	%	G	%
Heavy traffic	BBBBBBBBBBBBBBGGGGGGGGGGGGG	24	75%	13	81%	11	69%
Dirty streets and wet all the time	BBBBBBBBBBGGGGGGGGG	17	53%	10	63%	7	44%
Too many people / very crowded	BBBBBBBBGGGGGGGGGG	16	50%	8	50%	8	50%
Too many bad guys and teens in the streets	BBBBBBBBGGGGGGGGGG	16	50%	8	50%	8	50%
Sensory aspects: getting hurt / dirty / too noisy / dusty and bumpy roads	BBBBBBBBBBGGGGGGG	14	44%	9	56%	5	31%
Lack of outdoor spaces	BBBBBBBBGGGGG	12	38%	8	50%	4	25%
Boring / ugly / not much to do	BBBBGGGGGGG	10	31%	4	25%	6	38%
Having to stay in	BBGGGGGGGGG	10	31%	2	13%	8	50%
Parks are too far away	BBBBBBGGGGG	10	31%	5	31%	5	31%
Lack of leisure facilities	BBBBBBGGGGG	10	31%	6	38%	4	25%
Bad, not nice neighbours	BBGGGGGGG	9	28%	3	19%	6	38%
Crime / rough kids / drugs	BBBBBBGGGG	9	28%	6	38%	3	19%
Pollution	BBGGGGG	6	19%	2	13%	4	25%

**Table 8:** Places prohibited by parents and farthest places travelled to by children (children's interviews)

Territorial limits	Mentions								
	Places prohibited by parents				Farthest place travelled to by child				
	No.	%	Sex		No.	%	Sex		
			B	G			B	G	
<b>Non-specific</b> (e.g. everywhere)	2	2%	1	1	1	1%	1	-	
<b>Non-specific</b> (e.g. not far)	15	14%	9	6	-		-	-	
<b>Within neighbourhood</b> <i>Front of the house / courtyard / roof top / to school only / local stores / not on major streets or Alleys / not out of the neighbourhood / to friends or relatives house/ local store</i>	22	20%	8	14	2	2%	1	1	
<b>Parks &amp; open space / youth centre</b>	15	14%	12	3	12	14%	6	6	
<b>Amusement Parks / Zoo</b>	3	3%	3	-	9	11%	6	3	
<b>Other specific places</b>					-	-	-	-	
Power station	3	3%	3	-	-	-	-	-	
Sand mining area	3	3%	2	1	2	2%	2	-	
Abandoned places	1	1%	1	-	-	-	-	-	
Swimming pool	1	1%	1	-	-	-	-	-	
The Al-Wihdat Club street	9	8%	5	4	1	1%	1	-	
<b>Parent's place of work</b>	-	-	-	-	5	6%	3	2	
<b>Across main roads/other geographic boundaries</b>	16	15%	9	7			-	-	
<b>Another neighbourhood / Relatives house</b>	4	4%	4	-	20	24%	7	13	
<b>Entertainment places / tourist places</b>	2	2%	1	1	8	9%	3	5	
<b>Shopping Areas (Souq) / City Centre</b>	6	5%	3	3	13	15%	7	6	
<b>Next town / another town</b>	2	2%	1	1	6	7%	2	4	
<b>Transit &amp; Industrial Centres</b>	3	3%	3	2	3	4%	3	-	
<b>Other Landmarks</b>	3	3%	1	2	3	4%	1	2	
<b>N=32</b>	<b>Total</b>	<b>110</b>	<b>100%</b>	<b>66</b>	<b>44</b>	<b>85</b>	<b>100%</b>	<b>43</b>	<b>42</b>

**Table 9:** Reasons why children were not allowed to go to certain places (children's interviews)

Total				Reason why	Mentions							
					Al-Wihdat				Fringe areas			
					Gender		Gender		Gender		Gender	
B	%	G	%	No.	%	B	G	No.	%	B	G	
12	20%	4	9%	Traffic danger	7	15%	5	2	9	17%	7	2
12	20%	3	7%	Cost money to use	8	17%	6	2	5	9%	4	1
12	20%	8	19%	Too far from home / get lost	10	21%	6	4	10	19%	6	4
10	17%	5	11%	Social threat (strangers, teens, adolescents, drug & alcohol, kidnapping, bullying)	6	13%	4	2	9	17%	6	3
5	8%	4	9%	Too crowded	3	6%	2	1	6	11%	3	3
3	5%	4	9%	Physical hazards (other than traffic) water, industrial area, power station etc.	4	8%	2	2	3	6%	1	2
2	3%	0	0	Lack of familiarity	1	2%	1	0	1	2%	1	0
2	3%	1	2%	Too dirty	0	0	0	0	3	6%	2	1
1	2%	10	23%	Social disapproval	5	10%	0	5	6	11%	1	5
1	2%	4	9%	No restriction	4	8%	1	3	1	2%	0	1
<b>60</b>		<b>43</b>		<b>Total</b>	<b>48</b>	<b>100</b>	<b>27</b>	<b>21</b>	<b>53</b>	<b>100</b>	<b>31</b>	<b>22</b>

**Table 10:** Children's mode of travel to their favourite places

How children travelled			Mention							
			Al-Wihdat				Outside Al-Wihdat			
			Sex		No.	%	Sex		No.	%
B	G	B	G	B			G			
16	16	Walk	7	9	16	100%	9	7	16	100%
10	8	Public Transport	4	3	7	44%	6	5	11	69%
5	9	Car	1	3	4	25%	4	6	10	63%
5	0	Bike	3	0	3	19%	2	0	2	13%
<b>33</b>	<b>39</b>	<b>Total</b>								

**Table 11:** What children wanted added or changed to the outdoors (children Interviews)

No.	%	Changes or additions	B	%	G	%
75	46%	<b>Adjustment to existing resources</b> Clean the area / garbage pick up Add trees and lights to the streets Reduce and control traffic through our area Pave, Fix and Widen Streets Fix or remove abandoned buildings Reduce Noise / limit construction hours Reduce Crime, Reduce Pollution Change entry area to the Camp Increase the lot size for homes / make buildings taller, flatten the hill area	35	41%	40	50%
46	28%	<b>New fixed resources</b> Add Sport fields / playgrounds / kids play area, outdoor pool, New schools, police station, libraries, hospital, mosque and stores in neighbourhoods, Build parking areas for cars, Centre location of all play areas and equipments, seating benches, sidewalks	31	36%	15	19%
22	13%	<b>New natural resources</b> Add Natural garden / Open space / pool / trees / flower/ grass	13	15%	9	11%
22	13%	<b>Changes to people</b> Get rid of nasty people and bad kids from our streets Provide financial assistant to the poor families in the neighbourhood Prevent kids from playing in the streets Punish the cheaters in the market Clean the neighbourhood of drunk people drug users, Listen to us and ask our opinion	6	7%	16	20%
165	100	Total	85		80	



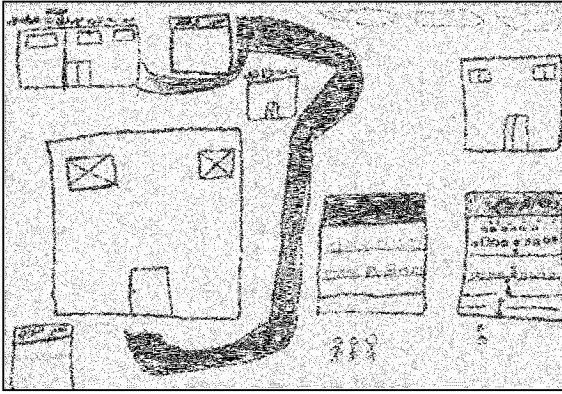
**Table C-2: Aggregated mention rates for classes of place element (children's drawings)**

Class of Place Elements	Mention Rate					
	No.	Rate	Boys	%	Girls	%
<b>Streets, pathways &amp; associated places</b>						
<i>Neighbourhood streets / pavement</i>	24	75%	13	81%	11	69%
<i>Alleys / footpaths / Public steps</i>	18	56%	7	44%	11	68%
<i>Through streets</i>	27	84%	14	88%	13	81%
<b>Average Rate</b>	<b>69</b>	<b>2.16</b>		<b>2.13</b>		<b>2.19</b>
<b>Home and Home Sites</b>						
<i>Child's home</i>	31	97%	15	94%	16	100%
<i>Friends' / relatives' homes / other</i>	29	91%	13	81%	16	100%
<i>Building roof / roof top</i>	4	13%	0	0	4	25%
<i>Private courtyard / gardens</i>	4	13%	0	0	4	25%
<b>Average Rate</b>	<b>68</b>	<b>2.14</b>		<b>1.75</b>		<b>2.50</b>
<b>Vegetation &amp; landscape features</b>						
<i>Trees / Fruiting trees / Flower and grass</i>	28	87%	13	81%	15	94%
<i>Hills / sand</i>	8	25%	2	13%	6	38%
<i>Water body (Lakes and Ponds)</i>	3	9%	2	13%	1	6%
<i>Sky &amp; sun</i>	8	25%	0	0	8	50%
<i>Topography</i>	5	16%	3	19%	2	13%
<b>Average Rate</b>	<b>52</b>	<b>1.63</b>		<b>1.26</b>		<b>2.01</b>
<b>Non-residential buildings</b>						
<i>School</i>	23	75%	15	94%	8	50%
<i>Pre school</i>	2	6%	1	6%	1	6%
<i>TV Broadcast station</i>	2	6%	1	6%	1	6%
<i>Mosque</i>	15	47%	10	63%	5	31%
<i>Hospital</i>	1	3%	0	0	1	6%
<i>Post office</i>	1	3%	1	6%	0	0
<b>Average Rate</b>	<b>44</b>	<b>1.37</b>		<b>1.75</b>		<b>.99</b>
<b>Open Space</b>						
<i>parks / gardens / Amusement park</i>	9	28%	6	38%	3	19%
<i>Playground / Vacant land / play field</i>	15	47%	12	75%	3	19%
<i>Schoolyard / parking area</i>	8	25%	3	19%	5	31%
<b>Average Rate</b>	<b>32</b>	<b>1.01</b>		<b>1.32</b>		<b>.69</b>
<b>Commercial facilities</b>						
<i>Shopping centre (Souq)</i>	5	16%	4	25%	1	6%
<i>Local shops</i>	22	69%	12	75%	10	63%
<i>Garage and machine shops</i>	4	13%	1	6%	3	19%
<b>Average Rate</b>	<b>31</b>	<b>.94</b>		<b>1.03</b>		<b>.88</b>
<b>Children made appropriate places</b>						
<i>Abandoned buildings/dirty places</i>	7	22%	4	25%	3	19%
<i>Concrete fence wall</i>	2	6%	2	13%	0	0
<i>Street play</i>	13	41%	8	50%	5	31%
<i>Girls out doors play areas</i>	2	6%	1	6%	1	6%
<b>Average Rate</b>	<b>24</b>	<b>.75</b>		<b>.94</b>		<b>.56</b>
<b>Traffic</b>						
<i>Vehicular traffic /traffic lights/ Pedestrian Bridge</i>	9	28%	8	50%	1	6%
<i>Cars</i>	14	44%	10	63%	4	25%
<b>Average Rate</b>	<b>23</b>	<b>0.72</b>		<b>1.13</b>		<b>.31</b>
<b>Asphalt / concrete surfaces</b>						
<i>School yard</i>	8	25%	5	31%	3	19%
<i>Streets</i>	13	41%	8	50%	5	31%
<b>Average Rate</b>	<b>21</b>	<b>0.66</b>		<b>.81</b>		<b>.50</b>
<b>People</b>						
<i>Child portrait</i>	2	6%	0	0	2	13%
<i>Child sibling</i>	2	6%	0	0	2	13%
<i>Child friends and others</i>	6	19%	1	6%	5	31%
<i>Kids playing / walking</i>	10	31%	4	25%	6	38%
<b>Average Rate</b>	<b>20</b>	<b>0.63</b>		<b>.31</b>		<b>.95</b>
<b>Sport facilities</b>						
<i>Soccer field</i>	5	16%	5	31%	0	0
<i>Swimming pool</i>	1	3%	1	6%	0	0
<b>Average Rate</b>	<b>6</b>	<b>0.37</b>		<b>.37</b>		<b>0</b>
<b>Animals and Birds</b>						
	5	16%	1	6%	4	25%
<b>Average Rate</b>	<b>5</b>	<b>0.16</b>		<b>.06</b>		<b>.25</b>

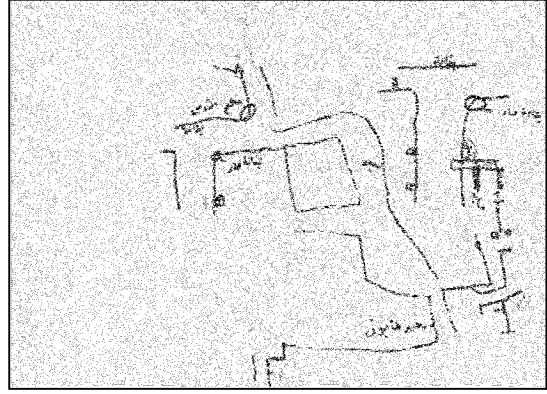


APPENDIX C-1

Children's Drawings - Girls



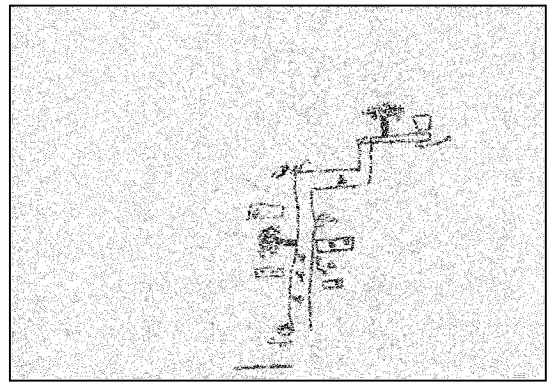
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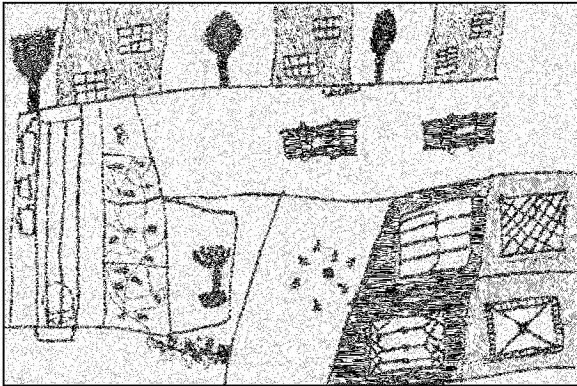
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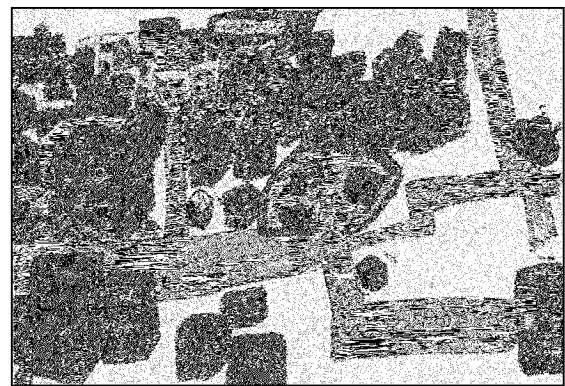
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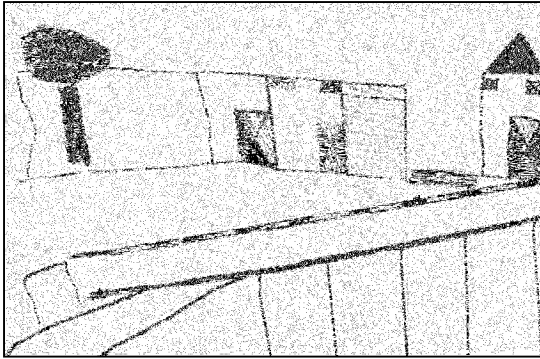
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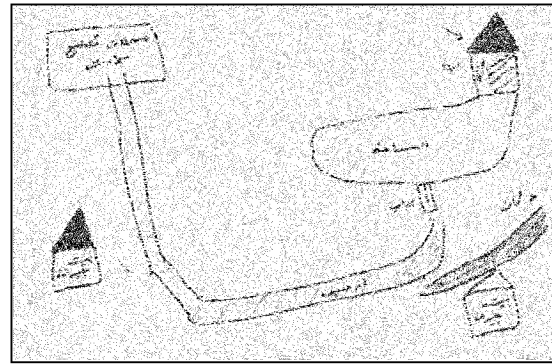
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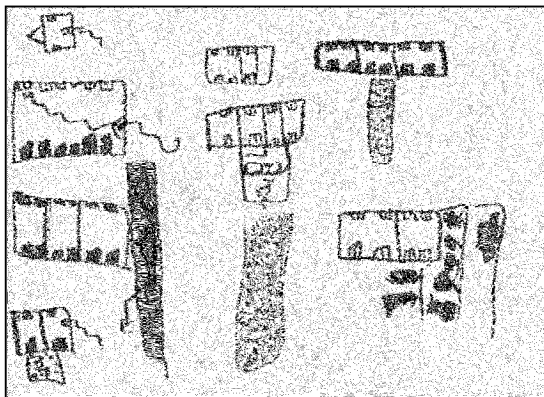
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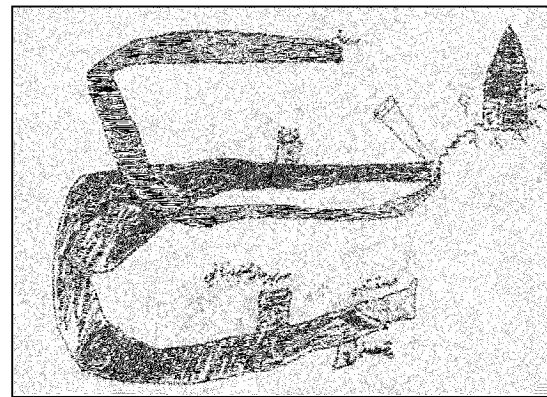
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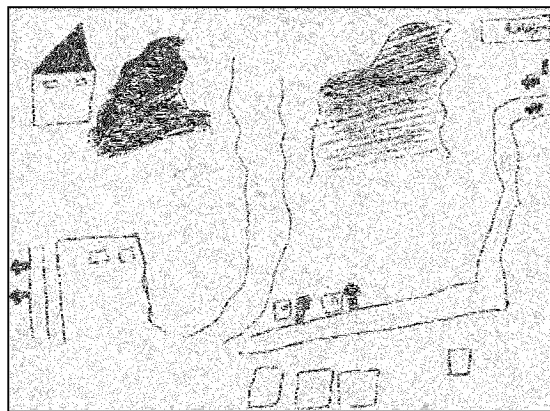
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G-9



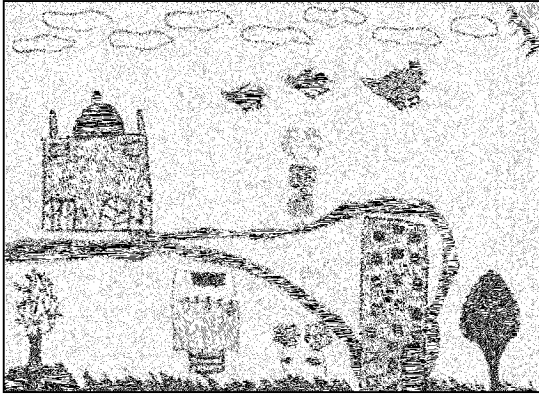
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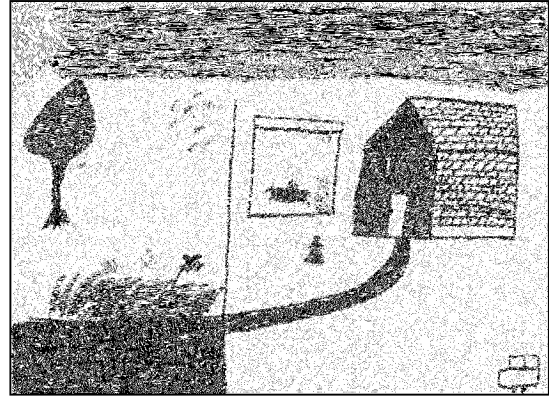
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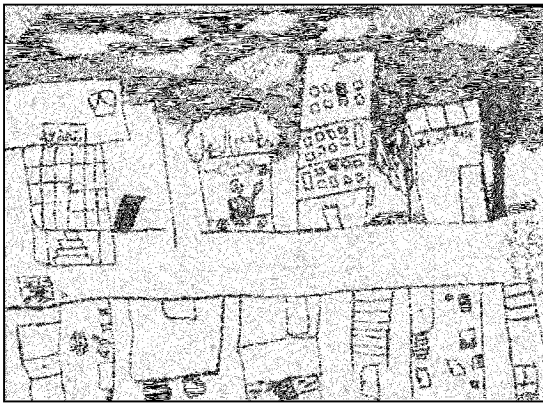
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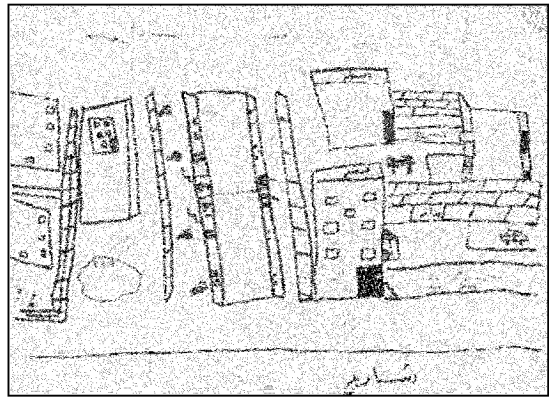
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G-14



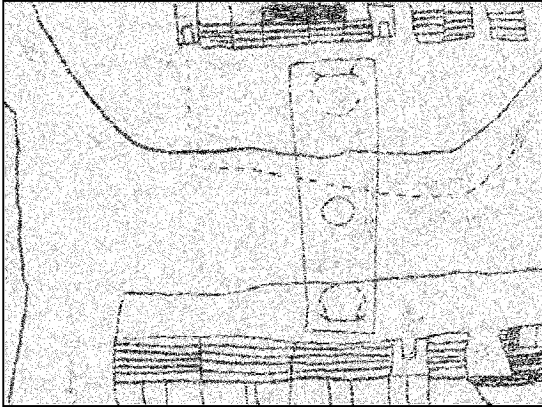
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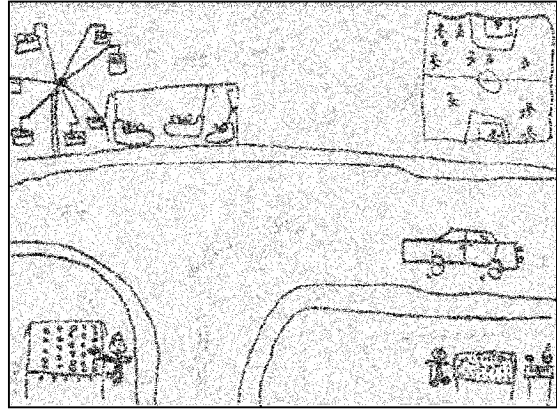
G-16

## APPENDIX C-2

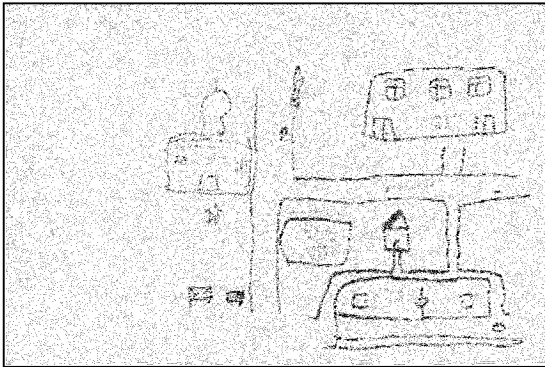
### Children's Drawings - Boys



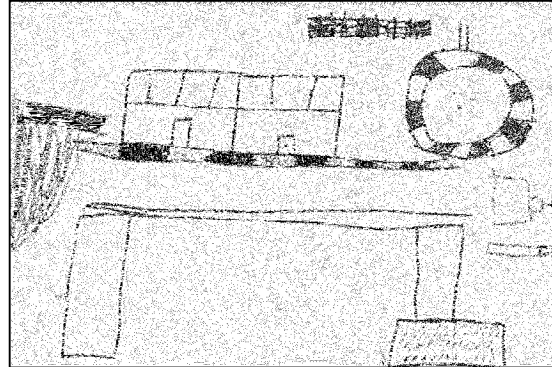
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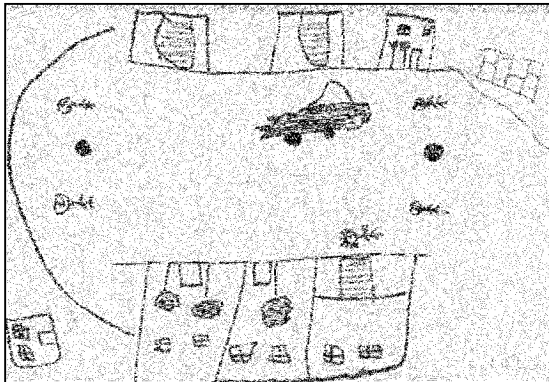
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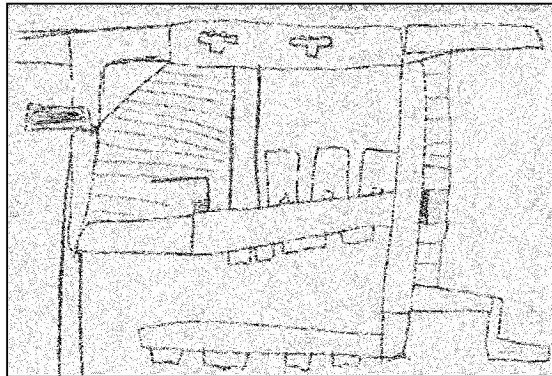
B-3



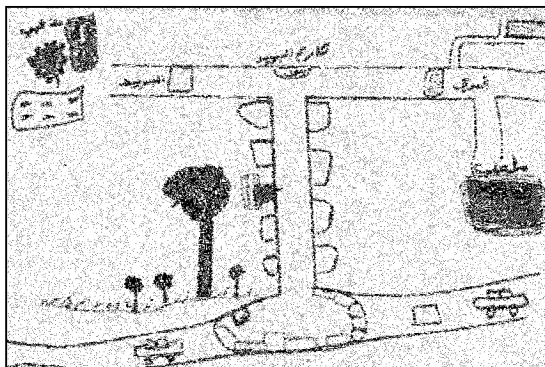
B-4



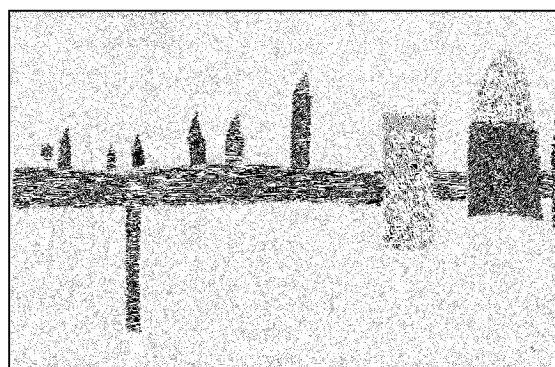
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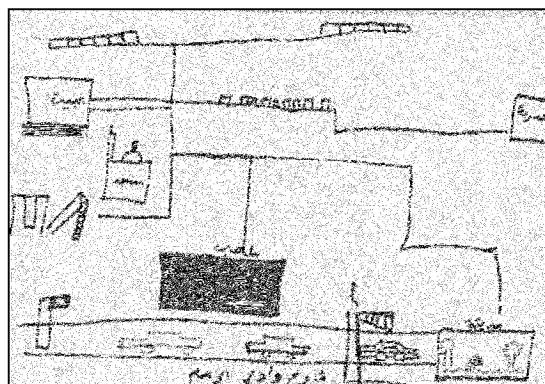
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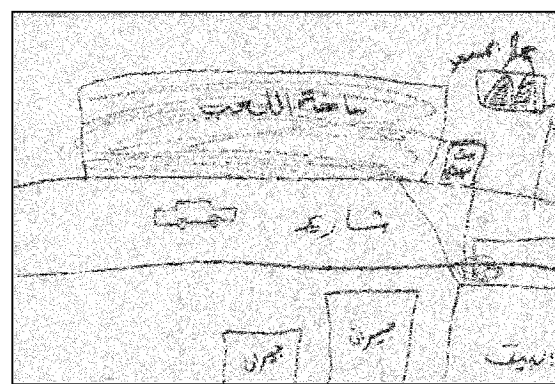
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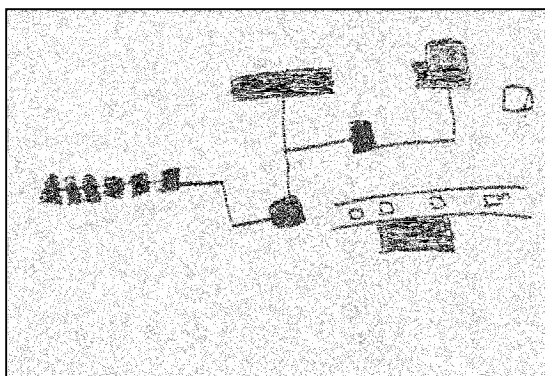
G-8



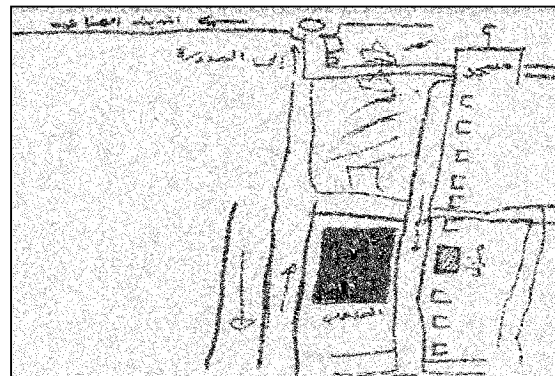
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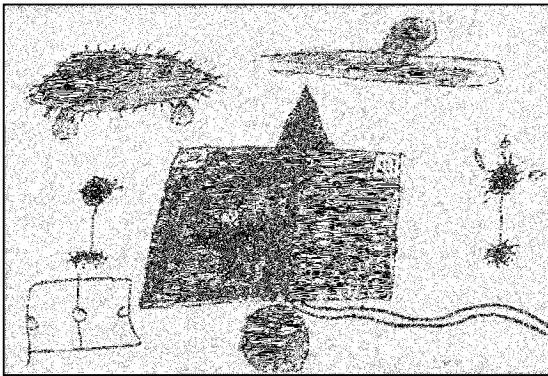
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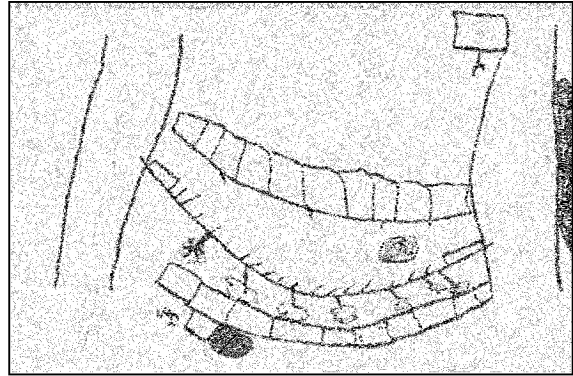
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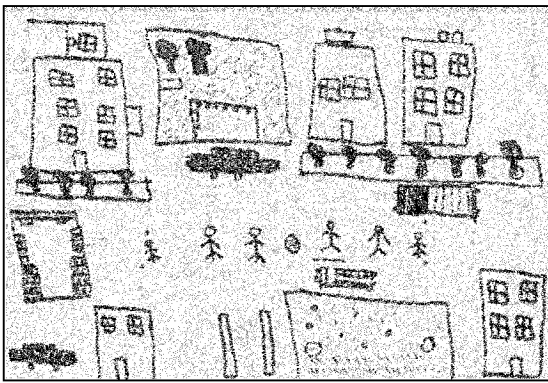
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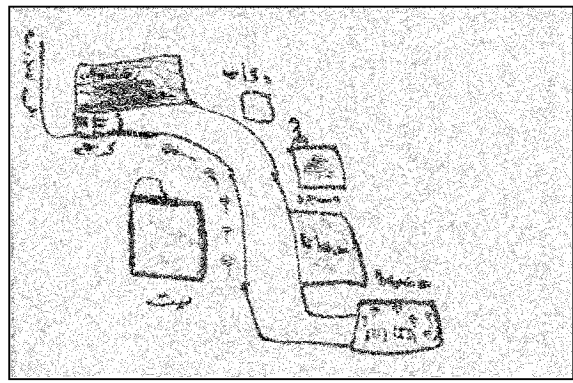
G-13



G-14



G-15



G-16

# APPENDIX D

## Child-Taken Photographs / Girls

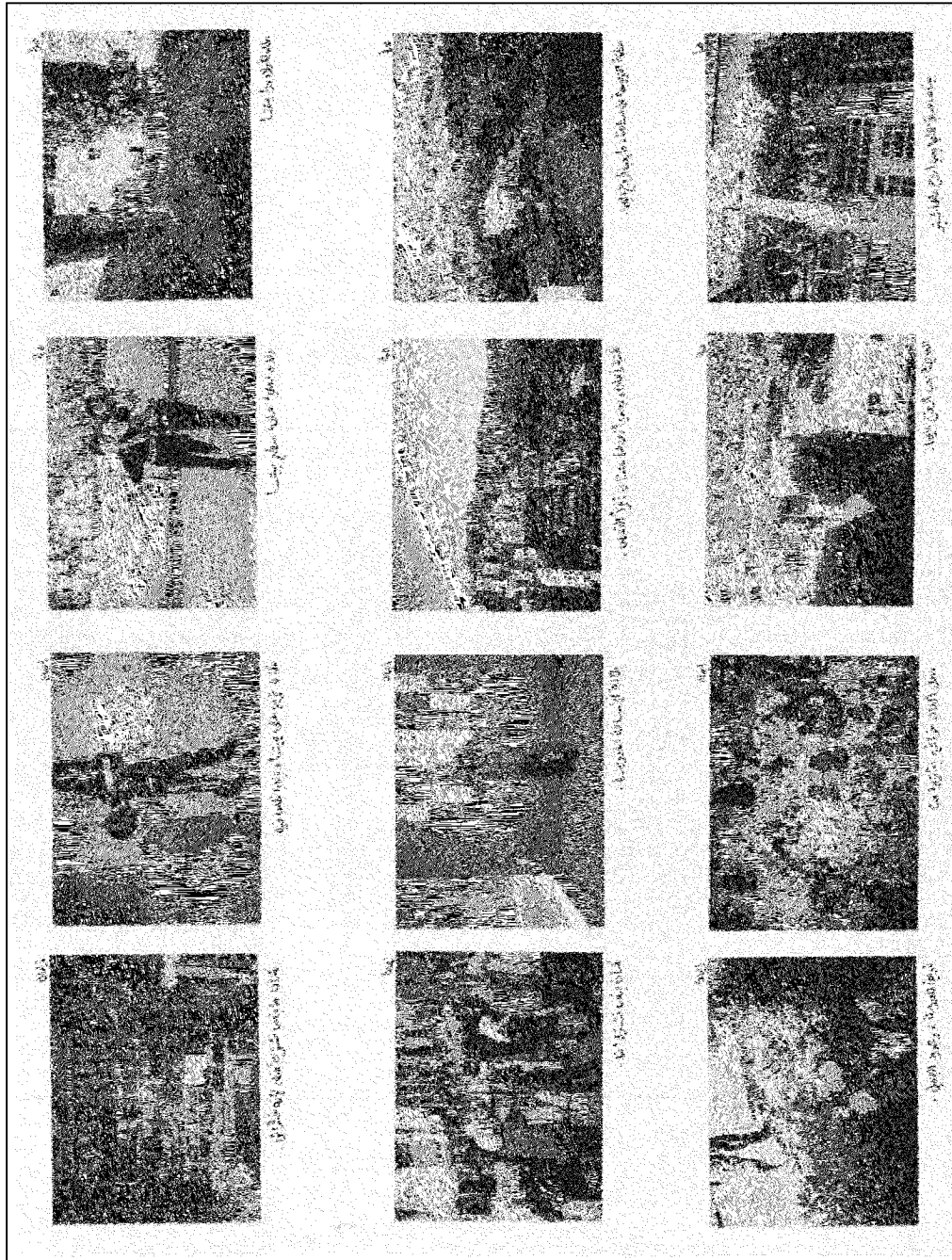


Figure D-1

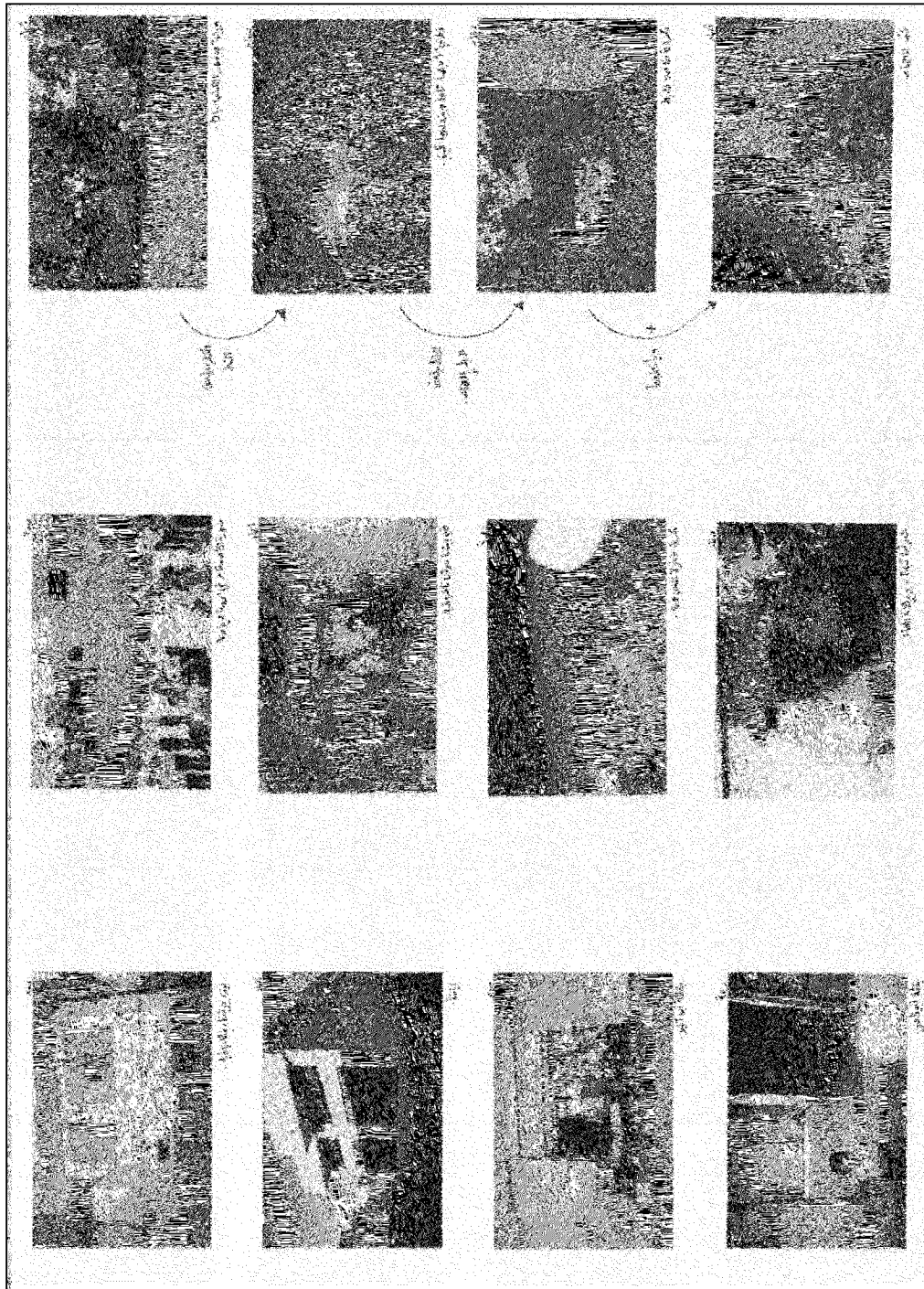


Figure D-2



Figure D-3

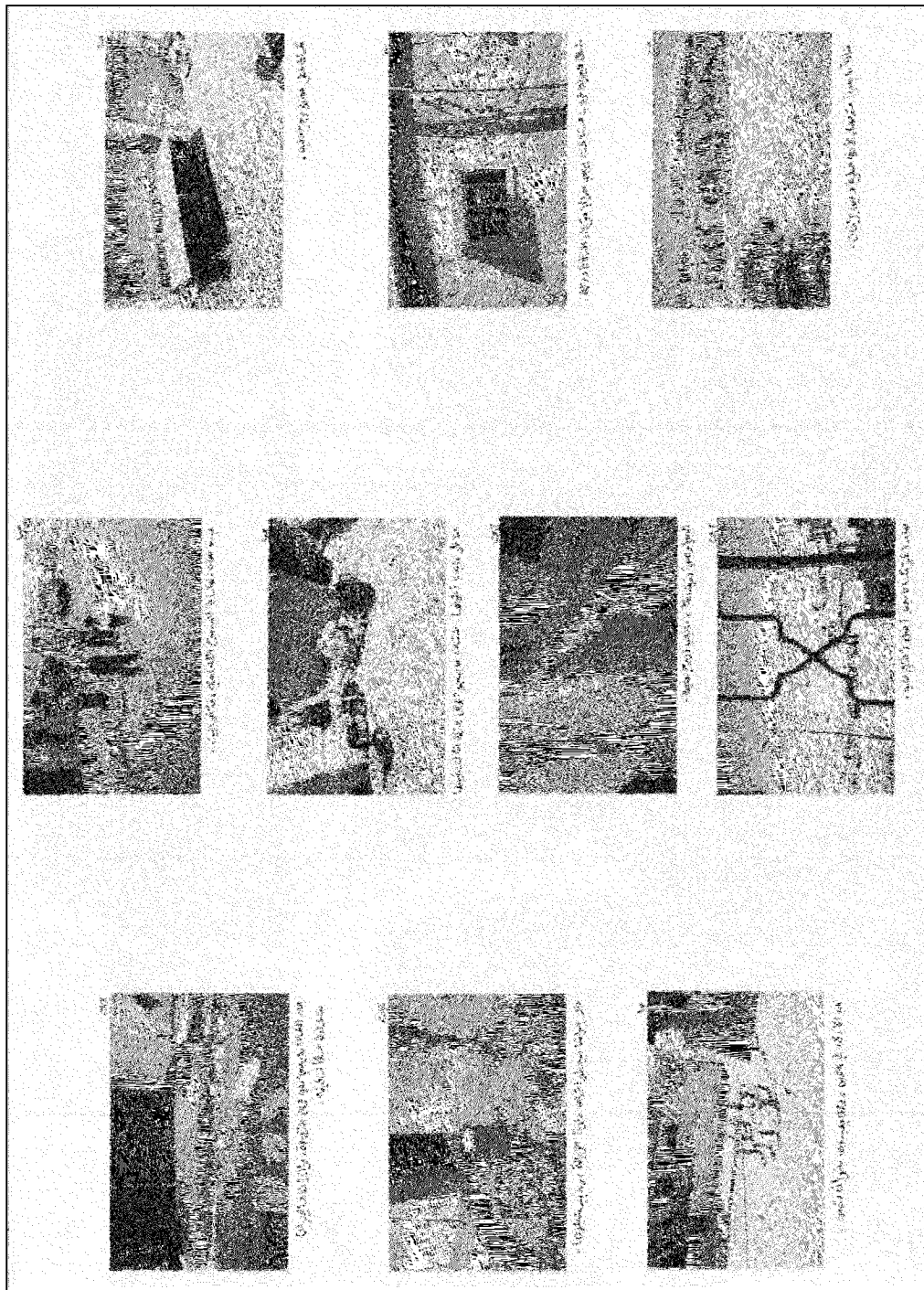


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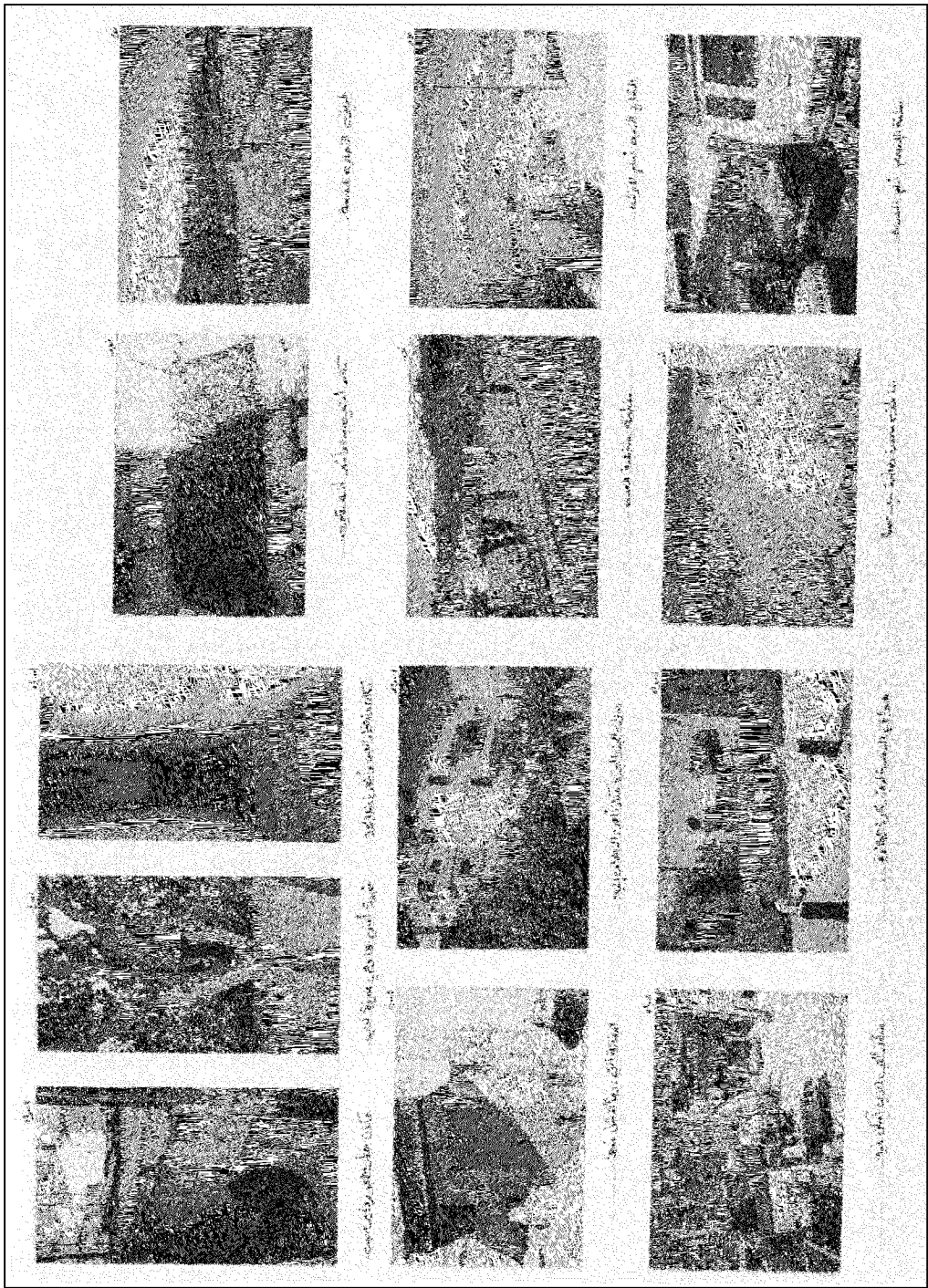


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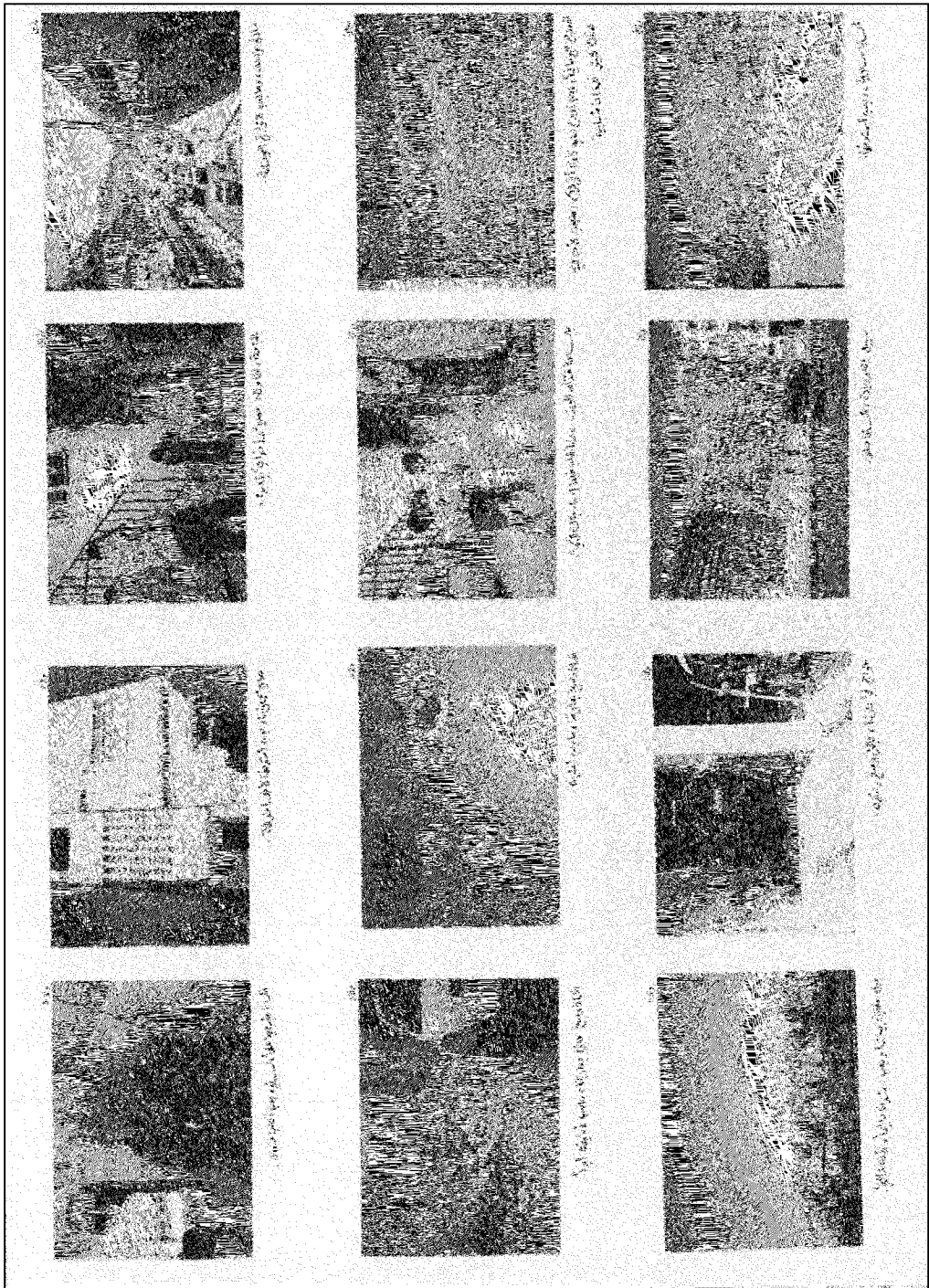


Figure D-6

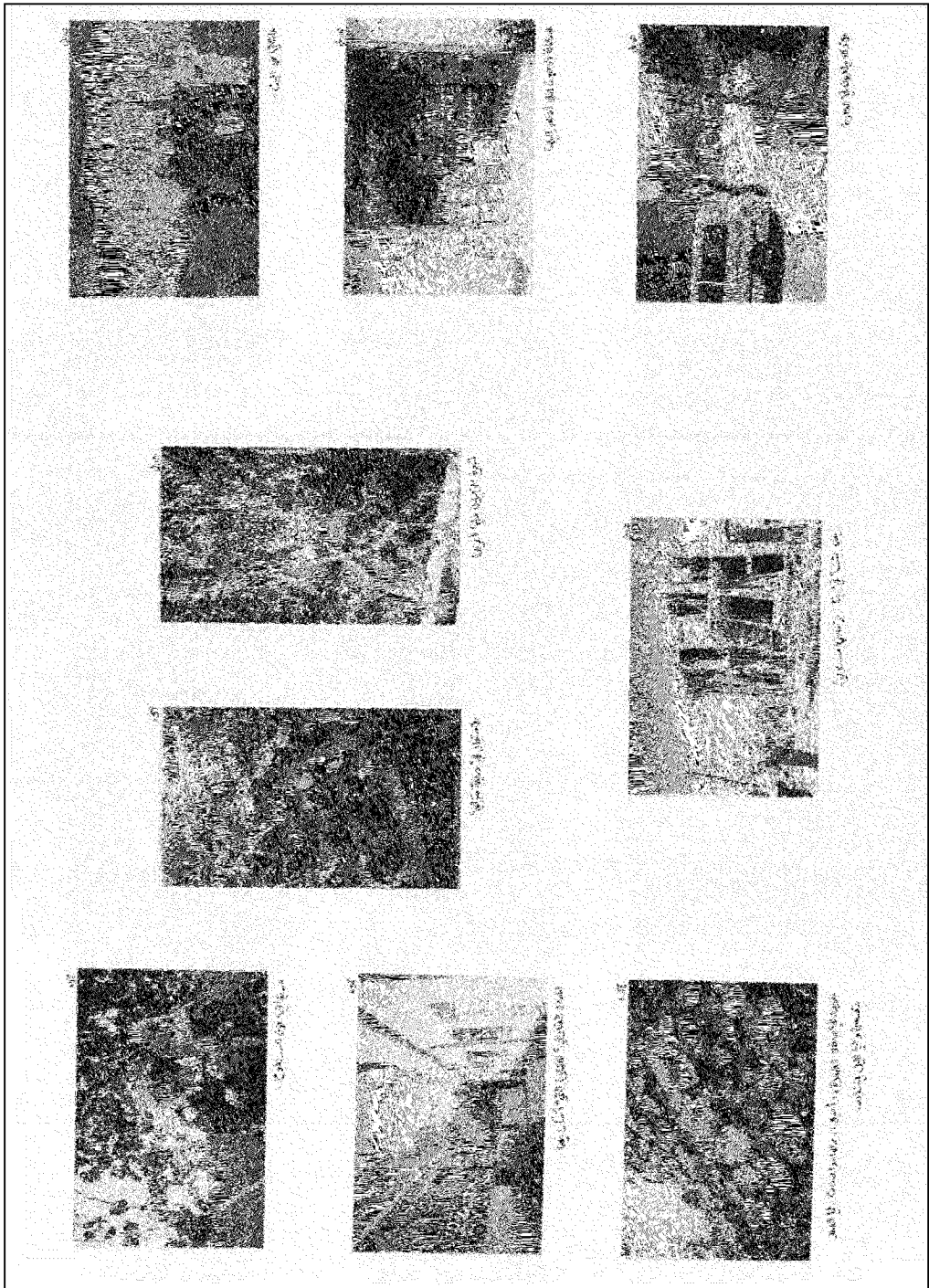


Figure D-7

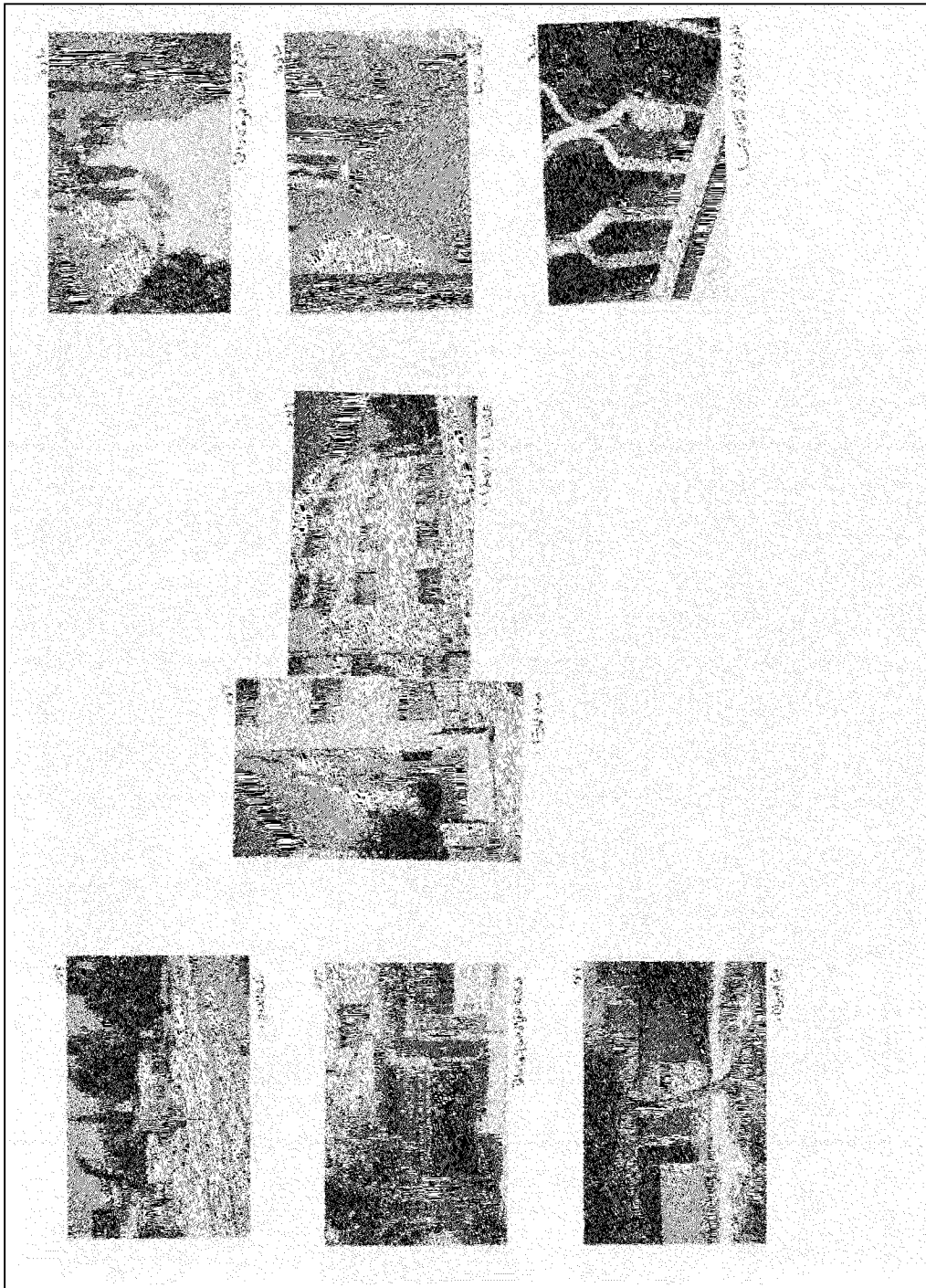


Figure D-8

# APPENDIX E

## Child-Taken Photographs / Boys

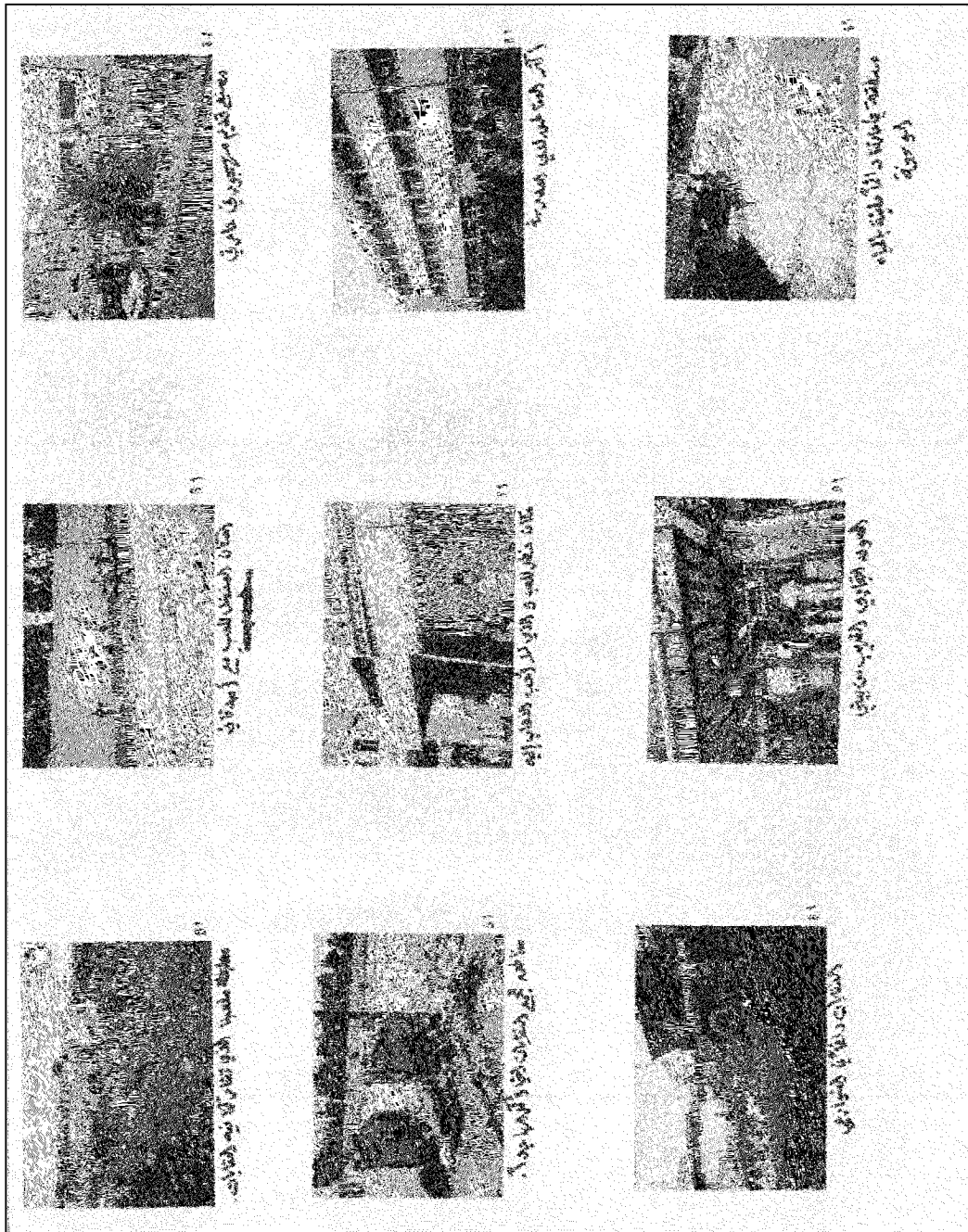


Figure E-1

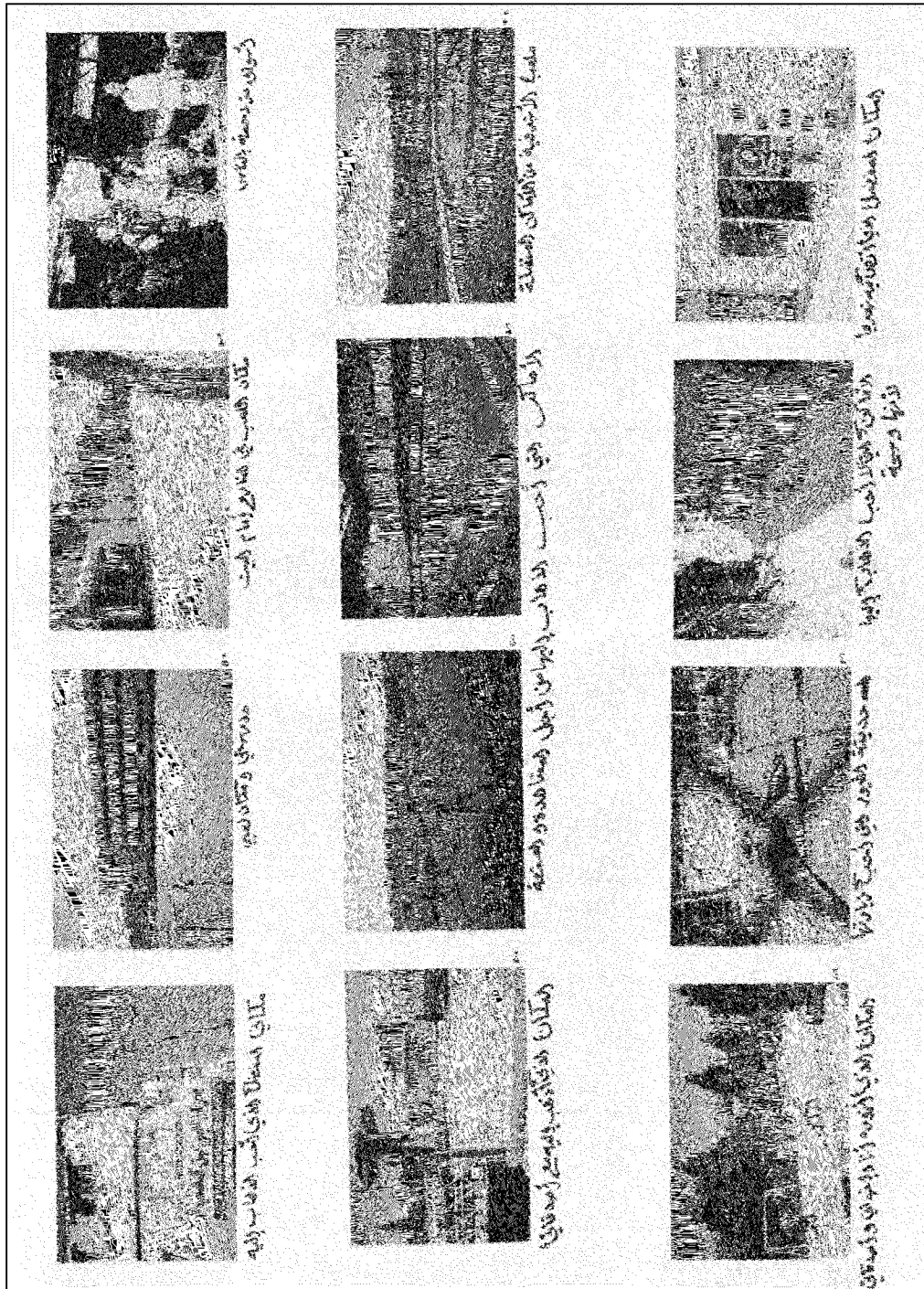


Figure E-2

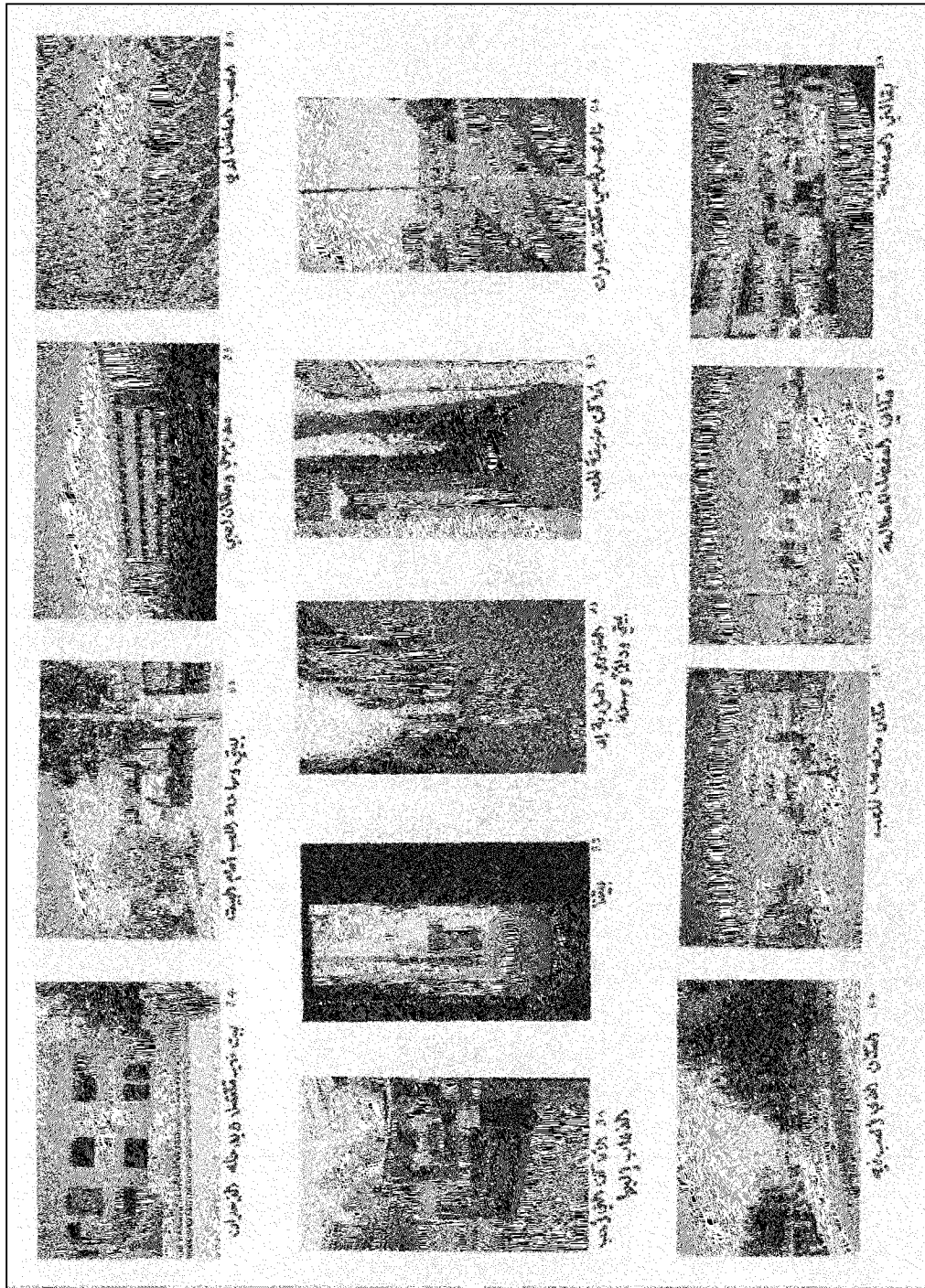


Figure E-3

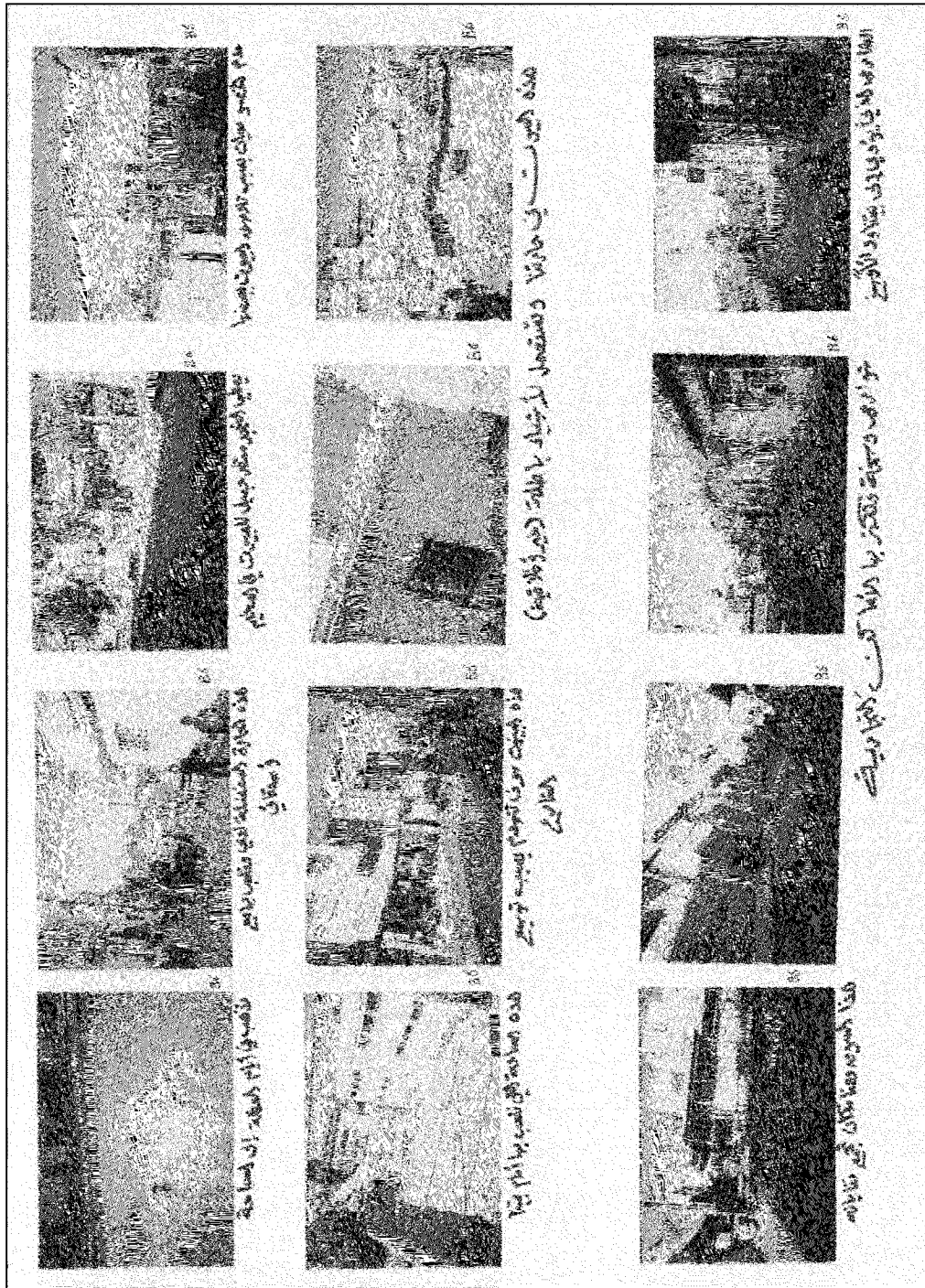


Figure E-4

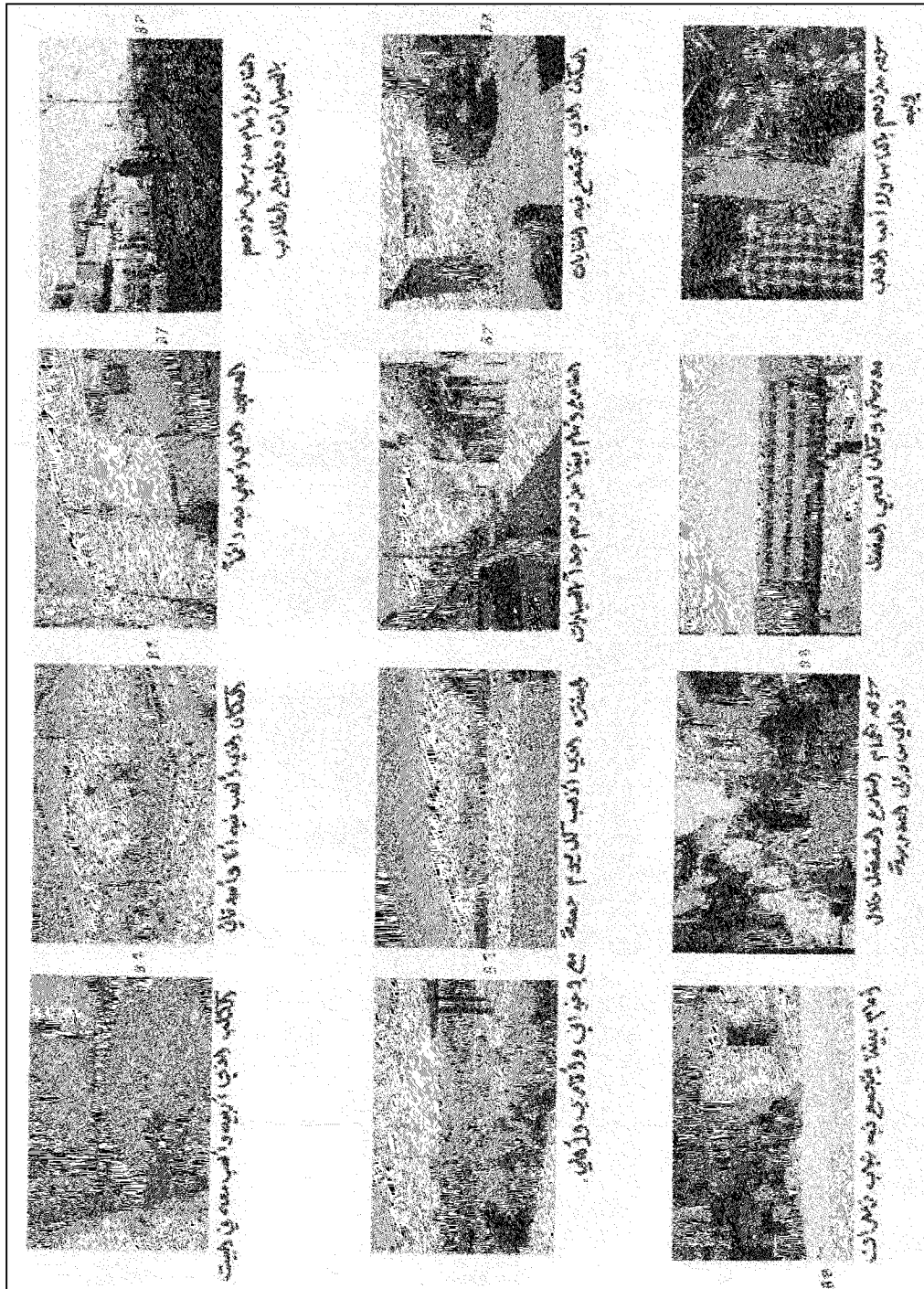


Figure E-5

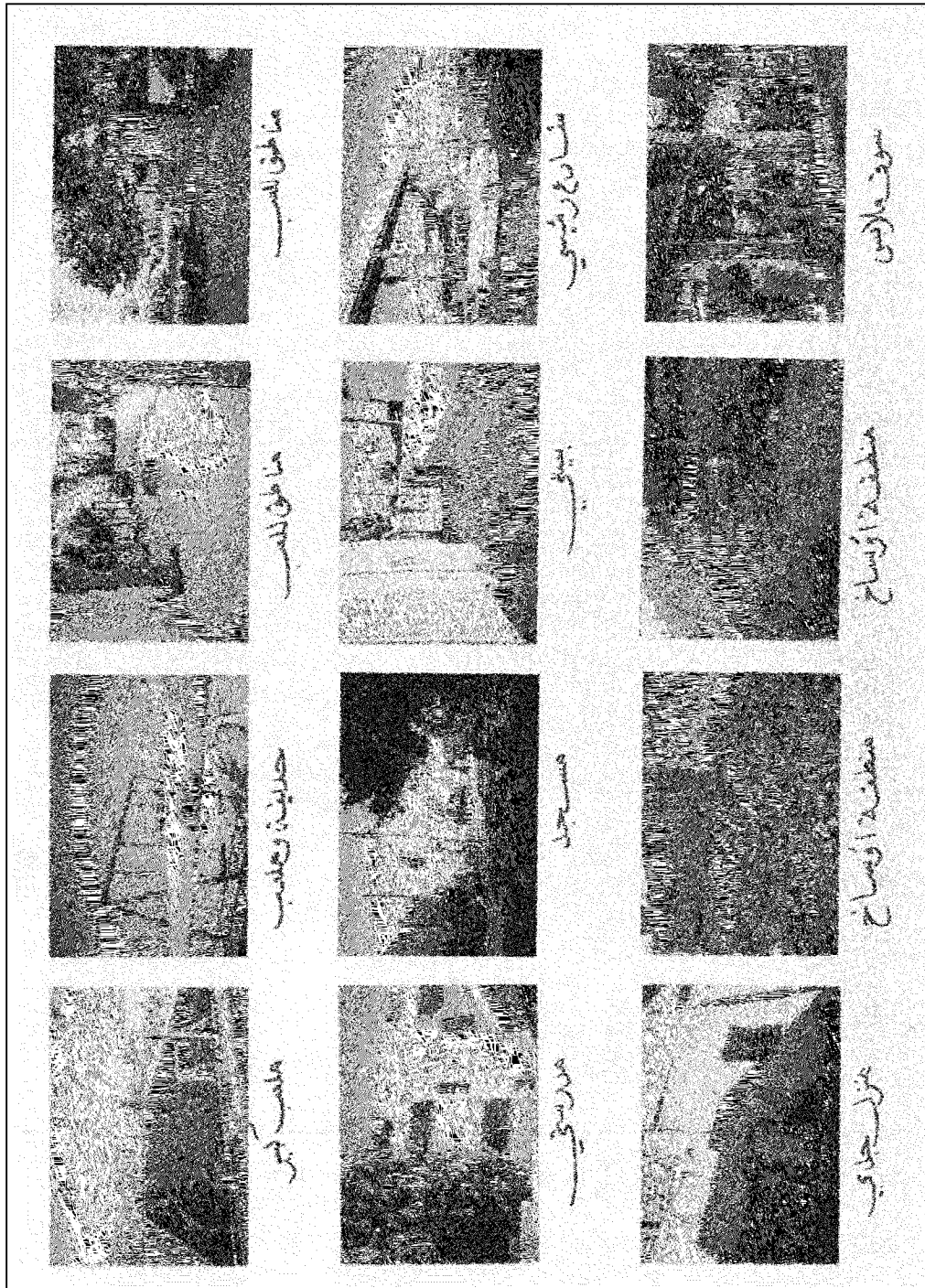


Figure E-6

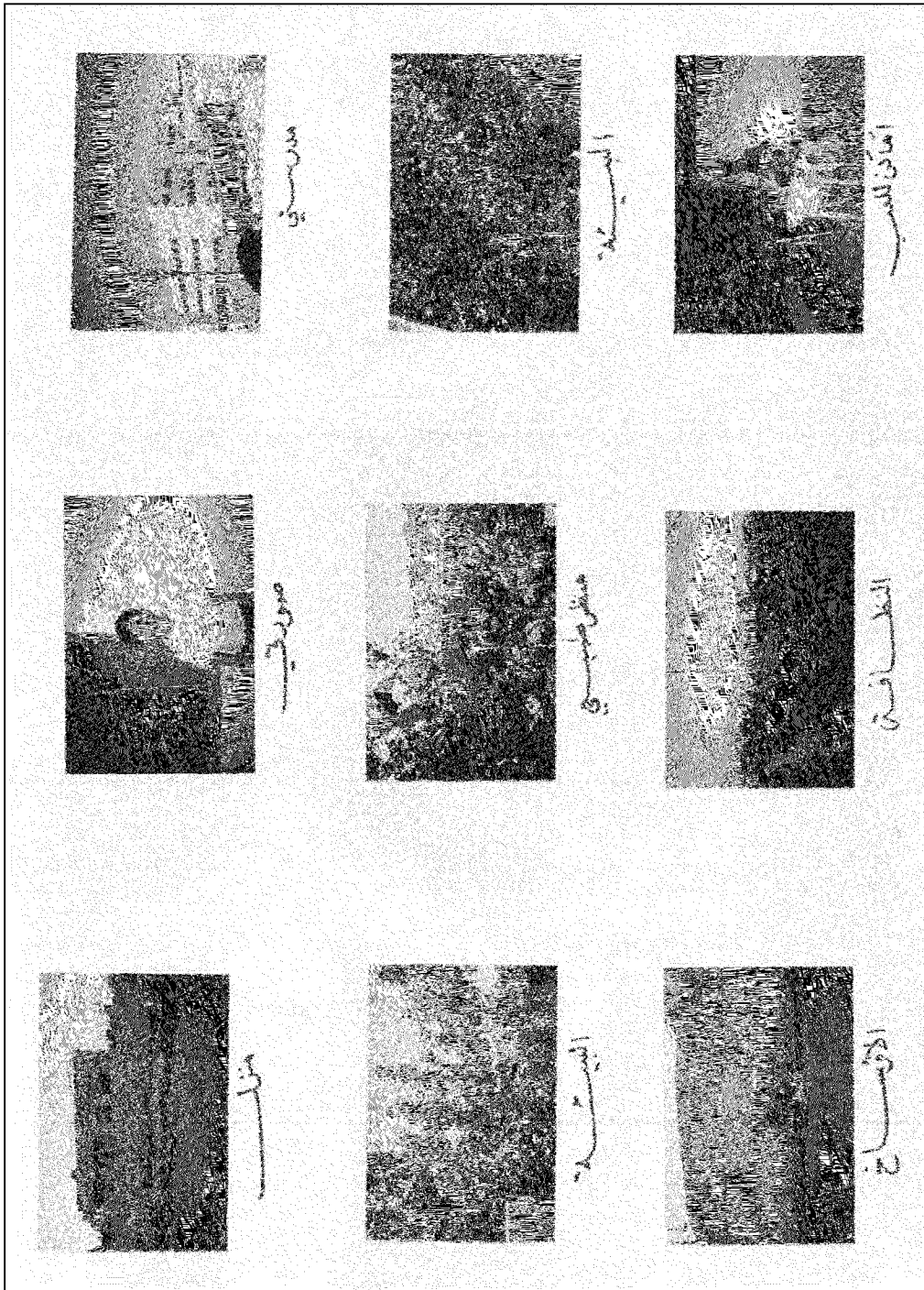


Figure E-7

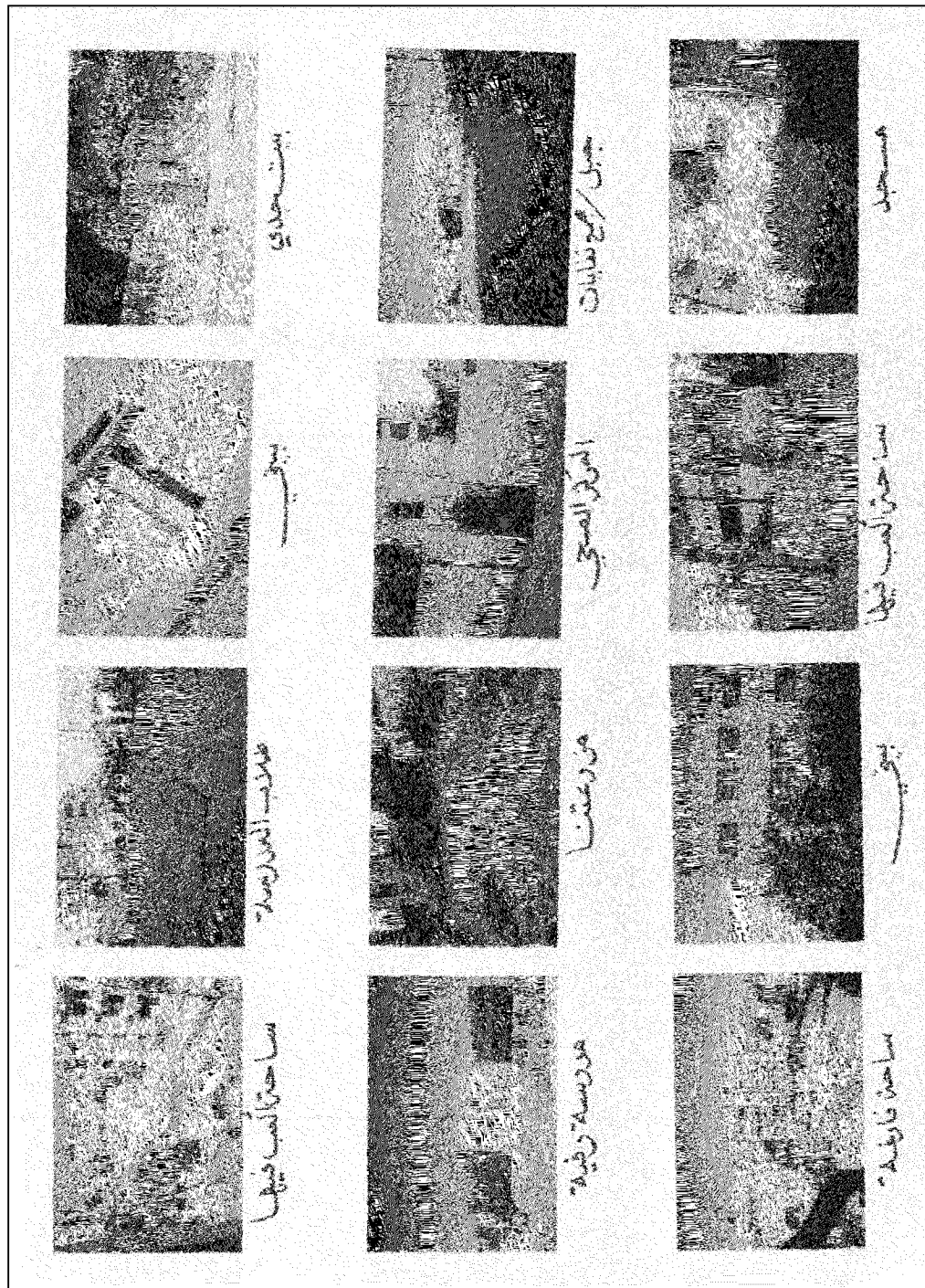


Figure E-8

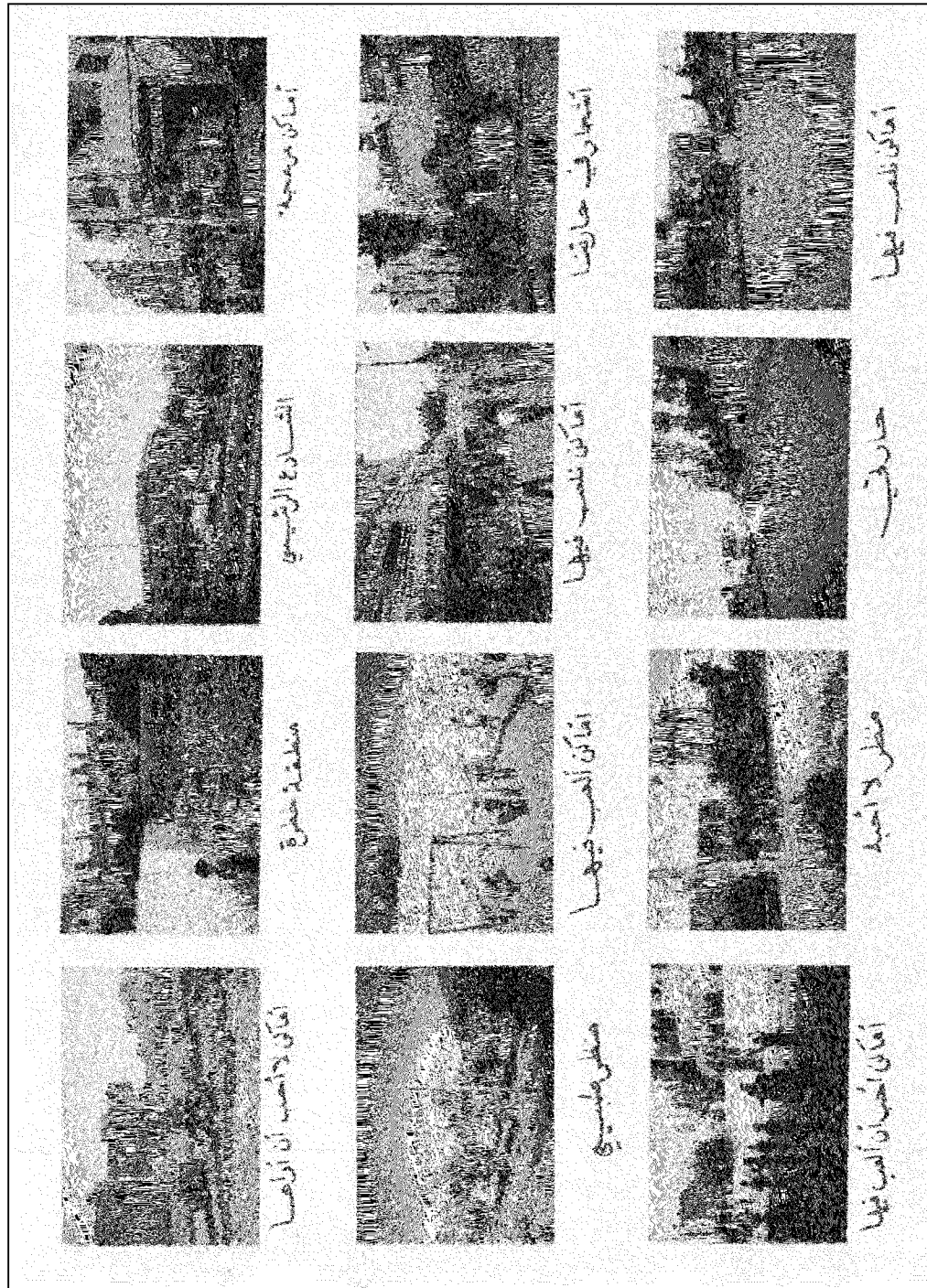


Figure E-9