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INTERACTION OF HUMAN BEHAVIOR AND OPEN SPACES

A dissertation presented to the Architectural Department

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TABLE OF CONTENTS

ACKNOWLEDGMENTS.....I

PREFACE.....III

TABLE OF CONTENTS.....V

LIST OF FIGURES.....XII

LIST OF TABLES.....XVI

APPENDIX A

Informal interviews in different areas of study.....199

APPENDIX B

A video tape of the field study observations

CHAPTER ONE

1. INTRODUCTION.....1

1.1 Objectives of The Study.....5

1.2 Methods.....7

1.3 Synopsis of The Study.....9

environment. The dilemma of why and how people behave in reaction to public urban spaces drew me to achieve this study. I started my study influenced by the work of William Whyte who studied the behavior of ordinary people on city streets. The applicability of his work was to analyze spaces that work, do not work, and the reasons why. Whyte published his Street Life Project in his book *The social Life of Small Urban Spaces* and a 55-minute film with the same title and the same general structure. In this study, I wanted to add a deeper social and psychological analysis for *activities* rather than observing *acts*, trying to derive an interpretation of causes of behavior, employing several methods in parallel.

My topic, then is environment-behavior research (E-B) - planning it, doing it, and using its results. In an E-B research, the most important problem is to found it on reliable methods. The choice of methods depended on the specific problems and the research situation. I argue that applied E-B knowledge should participate in design decisions, taking the benefits of natural environmental laboratories. The intention of this study is to raise the consciousness of designers to the new insights on the nature of the built environment and the use of a variety of disciplines in the design process.

CHAPTER TWO

2. URBAN CONTEXT AND BEHAVIORAL THEORIES.....12

2.1 The Urban Context.....12

2.1.1 Geography and Society.....13

2.1.2 History.....14

2.1.3 Religion.....16

2.2 Culture and Behavior.....21

2.3 Variability of Culture.....23

2.4 Socio-economic Status.....27

2.4.1 Objective Indications of Socio-Economic Status.....29

2.4.2 Subjective Indications of Socio-Economic Status.....31

2.5 The Physical Setting in Relation to The Socio-Economic Status.....37

2.6 The Physical Environment and Behavioral Theories.....40

2.6.1 Environmental Determinism.....41

2.6.2 "Affordances" of The Environment.....45

2.6.3 The Adaptive Ecological Theory.....47

CHAPTER THREE

3. HYPOTHESES AND METHODOLOGY.....50

3.1 Hypotheses.....50

3.1.1 Activity Classification.....53

"Active" Activities.....53

"Passive" Activities.....54

3.1.2 Propositions.....56

Socio-Economic Status Effect on Users.....56

Physical Factors as Activity Regulators.....61

3.2 The Study's Methodology.....65

3.2.1 Key Persons.....66

3.2.2 The Observational Method.....67

3.2.3 Observation Vantage Location.....68

3.2.4 Photography Problems.....69

3.2.5 Time of Observation.....73

3.2.6 Observing Physical Changes.....75

3.2.7 Interviews.....76

3.2.8 Informants.....77

3.2.9 Behavioral Maps.....78

CHAPTER FOUR

4. FIELD STUDY.....79

4.1 Ain El-Sira.....80

4.1.1 The Configuration of The Physical Setting.....80

4.1.2 The Behavioral Patterns in Context.....82

4.1.3 Additional Observations in another area in Ain El-Sira.....88

4.2 Abou Qetada.....90

4.2.1 The Configuration of The Physical Setting.....90

4.2.2 The Behavioral Patterns in Context.....95

4.2.3 Additional Observations in Abou Qetada.....97

4.3 El Ettehad Square.....98

4.3.1 The Configuration of The Physical Setting.....99

4.3.2 The Behavioral Patterns in Context.....99

4.3.3 Additional Observations in El Ettehad Square.....106

4.4 Degla Housing.....107

4.4.1 The Configuration of The Physical Setting.....107

4.4.2 The Behavioral Patterns in Context.....113

4.4.3 Additional Observations in Other Spaces in Degla.....114

4.5 Heliopolis.....115

4.5.1 The Configuration of The Physical Setting.....115

4.5.2 The Behavioral Patterns in Context.....116

4.5.3 Additional Observations in Heliopolis.....122

4.6 Osman Towers.....123

4.6.1 The Configuration of The Physical Setting.....124

4.6.2 The Behavioral Patterns in Context.....124

4.6.3 Additional Observations in Osman towers' Project.....131

4.7 Gameat El-Doual Street.....132

4.7.1 The Configuration of The Physical Setting.....132

4.7.2 The Behavioral Patterns in Context.....133

4.5.3 Additional Observations in Gameat El-Doual Street.....139

CHAPTER FIVE

5. RESULTS & SUMMARY 140

5.1 "Active" Activities.....140

5.1.1 Street Play as a Socio-Economic Value.....151

5.1.2 Types of Recreational Activities.....153

5.1.3 User Groups engage in Recreational Activities.....156

5.1.4 Private Activities.....158

5.2 "Passive" Activities.....162

5.2.1 Using Spaces for Aesthetical Needs.....163

5.2.2 Parking Cars.....166

5.2.3 Encroaching on a Part of Public Space.....167

5.3 The Effects of the Physical Setting on Behavior.....168

5.3.1 The Natural Features' Factor.....168

5.3.2 The Climatic Factor.....169

5.3.3 The Volume of Vehicular Traffic Factor.....169

5.3.4 The Furniture and The Lighting Factor.....170

5.3.5 The Degree of Enclosure Factor.....171

5.4 Results Summary.....173

CHAPTER SIX

6. IMPLICATIONS.....177

6.1 Choice.....178

6.1.1 Behavior Adjustment.....179

6.1.2 Reaction.....182

6.1.3 Withdrawal.....185

6.2 Territoriality.....186

6.2.1 Control.....187

6.2.2 Occupancy.....188

6.2.3 Attachment to The Space.....190

CHAPTER SEVEN

7. RECOMMENDATIONS.....193

7.1 Increasing The Competence of The Residents to Fulfill Their Needs.....193

7.1.1 Providing Homogeneity For The Residents.....194

7.1.2 Controlling The Territorial Factor.....195

7.2 Decreasing The Pressure of The Physical Environment.....196

APPENDIX A.....199

LIST OF FIGURES

1.1 A general model of the study.....10

2.1 Graphic representation of an ecological theory of adaptation.....48

3.1 Diagram showing the hypothesis of the relationship among: socio-economic status; behavioral settings; and behavioral patterns.....55

3.2 Pedestrians on a bus stop sharing the street with cars.....57

3.3 Extensions of buildings taking place on marginal immediate spaces.....58

3.4 A workshop building extension for auto repair in Ain El-Sira public housing.....59

3.5 Behavior should not be affected by the method of observation.....71

4.1 Multi-story extensions in Ain El-Sira.....81

4.2 Area of study in Ain El-Sira at noon.....83

4.3 Map of the site in Ain El-Sira.....84

4.4 Behavioral map 1 for Ain El-Sira (Space A).....85

4.5 Behavioral map 2 for Ain El-Sira (Space A).....86

4.6 Behavioral map 3 for Ain El-Sira (space A).....87

4.7 Some exttensions in the space B.....89

4.8 A view of the workshops in space B.....89

4.9 The area of study in Abou-Qetada.....90

4.10 Map of the site in Abou-Qetada.....91

4.11 Behavioral map 1 for Abou-Qetada (space A).....92

4.12 Behavioral map 2 for Abou-Qetada (space A).....93

4.13 Behavioral map 3 for Abou-Qetada (space A).....94

4.14 A view in the back street B in Abou Qetada.....97

4.15 The area of study in El-Ettehad Square.....98

4.16 Map of the site in El-Ettehad Square 100

4.17 Behavioral map 1 of El-Ettehad Square (space A).....101

4.18 Behavioral map 2 of El-Ettehad Square (space A).....102

4.19 Behavioral map 3 of El-Ettehad Square (space A).....103

4.20 Playing soccer games in a side street.....104

4.21 Using the green median for recreation.....105

4.22 Children playing soccer in the part B of El-Ettehad square.....106

4.23 A General view of the site of study in Degla (space A).....108

4.24 Spaces in Degla are well maintained.....108

4.25 Map of the site of study in Degla.....109

4.26 Behavioral map 1 of the site of Degla (space A).....110

4.27 Behavioral map 2 of the site of Degla (space A).....111

4.28 Behavioral map 3 of the site of Degla (space A).....112

4.29 Privatized side walks used for beautification in the street space B.....114

4.30 Map of the area of study in Heliopolis.....117

4.31 Behavioral map 1 of Heliopolis site (space A).....118

4.32 Behavioral map 2 of Heliopolis site (space A).....119

4.33 Behavioral map 3 of Heliopolis site (space A).....120

4.34 Shaded areas are used for parking cars.....121

4.35 Residents prefer to view the landscaped space from their apartments.....121

5.36 A view of the street in area B.....122

4.37 A view of one space in Osman Towers' area.....123

4.38 Riding bicycles and playing soccer in the streets of Osman Towers.....126

4.39 Non residents playing soccer in the quiet streets.....126

4.40 Map of the Osman Towers area of study.....127

4.41 Behavioral map 1 of Osman Towers' area of study (space A).....128

4.42 Behavioral map 2 of Osman Towers' area of studym (space A).....129

4.43 Behavioral map 3 of Osman Towers' area of study (space A).....130

4.44 A view of the street space B in Osman Towers' area.....131

4.45 A view of Gameat El-Doual street.....132

4.46 The area of study in Gameat El-Doual street.....133

4.47 Map of the Gameat El-Doual area of study.....135

4.48 Behavioral map 1 of Gameat El-Doual (segment A).....136

4.49 Behavioral map 2 of Gameat El-Doual (segment A).....137

4.50 Behavioral map 3 of Gameat El-Doual (segment A).....138

4.51 A view of the segment B in Gameat El-Doual Street.....139

5.1 A day in the life of Ain El-Sira Public Housing (area A).....143

5.2 A day in the life of Ain El-Sira Public Housing (area B).....143

5.3 A day in the life of Abou Qetada (area A).....144

5.4 A day in the life of Abou Qetada (area B).....144

5.5 A day in the life of El-Ettehad Square (area A).....145

5.6 A day in the life of El-Ettehad Square (area B).....145

5.7 A day in the life of Degla (area A).....146

5.8 A day in the life of Degla (area B).....146

5.9 A day in the life of Heliopolis (area A).....147

5.10 A day in the life of Heliopolis (area B).....147

5.11 A day in the life of Osman Towers (area A).....148

5.12 A day in the life of Osman Towers (area B).....148

5.13 A day in Gameat El Doual Street's median (area A).....149

5.14 A day in Gameat El Doual Street's median (area B).....149

5.15 A comparison of the intensity of use among

the different areas of study.....150

5.16 The percentage of male/female users in different areas of study.....159

5.17 The percentage of age groups of the users in different areas of study.....159

6.1 Dynamic relationship among territoriality, control,

and use of space by different socio-economic classes.....191

LIST OF TABLES

3.1 The relationship between the types of occupation of the users and housing types.....62

5.1 A comparison among different socio-economic residential areas.....174

5.2 The activities observed in the different areas of study.....176

CHAPTER ONE

1. INTRODUCTION

Egyptian cities, which are characterized by their high population density and an acute housing crisis, have led planners and architects to be pre-occupied with providing dwellings, thereby neglecting the human need for urban open space. The compactness of the built environment and the high density of population created an attempt to invest as much as possible of the valuable land to be built. The sparseness of the green areas in the urban context reflects a particular understanding of the term "*open space*."

An open space can be defined broadly to include all land and water in and around urban areas which are not covered by buildings. The location of an open space is as important as its size. Stanley Tankle identified a hierarchy of scales of open spaces and suggested the role of each scale in the urban development. He classified the scale of open spaces into four levels: the region; the county; the community; and street.[1] A regional scale includes large preservation areas, major water bodies, private farms, and woodland. A county's scale consists of golf courses, lakes, or minor conservation areas. A community's scale includes the public spaces in a neighborhood, such as school grounds and small parks. A street's scale refers to the building site and the group of buildings, such as yards, courts, rights-of-way, streets, piazzas, plazas, residential commons, and tot lots.

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[1] S. Tankle, "The importance of Open Space in the Urban Pattern," in *Cities and Space - The Future Use of Urban Land*, Essays from the Fourth RFF Forum, (ed. Lowdon Wingo, Jr. Baltimore: The Johns Hopkins Press, 1963), 57-71.

This study focuses on the street's scale of urban space in residential areas. This study is limited for two reasons. First, we are concerned with the activities of daily life, which relate closely to the immediate space of residential buildings. The second reason is that the insignificant amount of larger scales of open spaces, relative to densely-populated cities, emphasizes the role of the street level of open space as a locus of most of the outdoor activities. Therefore, it is important for architects and urban designers to identify the street as a place that serves a much larger need than merely that of traffic circulation.

The physical environment has a great impact on the type and intensity of human activities. Minimal floor space in low income housing apartments, among other reasons, intensifies the use of public spaces and causes a diversity of alterations in the physical settings. From a social standpoint, the Egyptians tend to achieve their recreational needs by socializing in homogeneous groups in terms of socio-economic status. This social pattern may, by physical analogy, be called "*centripetality.*"[2] This term refers to the tendency of people to spend their leisure time socializing. Any socio-economic class of people may achieve social "centripetality," but it seems that each class has different strategies of achieving it. Lower socio-economic classes, having fewer choices and means, perform many of their social activities within the residential community. Higher socio-economic classes, on the other hand, with greater means of transportation and ease

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[2] Alternatively, *"centrifugal"* movement occurs when the vacationing group, or single person, may seek isolation from all other groups or persons, S. Klausner, "Recreation as Social Action," in *Environmental Psychology -People and Their Physical Settings*, ed. Harold M. Proshansky, et al. (Holt, Rinehart and Winston, 1977), 420.

of communication, create their own communities which are not necessarily limited to their neighborhood. Consequently, physical settings are subject to competition between different socio-economic classes to use available spaces for differing interests.

This study emphasizes the importance of the *"animate environment"* as a part of the context and a factor in determining the residents' choice of behavior. The animate environment refers to the users of the urban spaces. For example, the residents of a high socio-economic class area withdraw themselves from using their residential spaces in case of using these spaces by a low socio-economic class people. In other words, the study uncovers the hidden conflict between the different socio-economic classes to use the urban residential space for the appropriate needs of each, focusing on the importance of "*homogeneity*" of the users.

This study discusses the *environment-behavior* or, *space-activity* over time. An interaction between man and the built environment is a continuous process of mutual affecting. On the one hand, there is the influence of the user's needs on the behavior taking place in urban open spaces; which, can be translated into a series of adaption of the physical setting in such a way as to fulfill these needs. On the other hand, a physical setting's configuration may influence the users' behavior by limiting one activity or facilitating another. Thus, this study focuses on the relationship between two sets of variables. The first involves life-styles that are a function of socio-economic status. The other set involves the properties of the physical setting.

The question of what effect the physical environment has on people has received attention by behavioral scientists. There are three positions of the relationship between man and environment.[3]

(a) *Environmental determinism* - the physical environment determines human behavior.

(b) *Possibilism* - the physical environment provides the possibilities that a behavioral pattern takes place.

(c) *Probabilism* - this dominant view is that the physical environment provides possibilities for choices, but that some choices are more probable than others.

The three views debate the influence of the "*physical*" environment versus the "*non-physical*" or cultural factors have on behavior. There was no absolute evidence for any of the three theories. However, environment-behavior research has contributed useful information on the mutual interaction of people and their built environment. Although the physical setting affords certain types of activities' performance, the different perceptions based on the cultural differences, involving the expectations, motivations, judgements, and symbolic meanings have more determination for the types of activities to be performed. This study associates the objective factors of the physical environment with the subjective factors of its users aiming towards an enhancement of the application of the social and socio-psychological knowledge to design.

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[3] A. Rapoport, *Human Aspects of Urban Form- Towards a Man-Environment Approach to Urban Form and Design*, Oxford: Pergamon Press, (1977).

1.1 Objectives of The Study

The major goal of this study is to understand "how do different socio-economic class people use residential spaces, under different physical conditions?" By comparing and analyzing different behavioral patterns taking place in various settings, we derive useful and relevant knowledge of users' needs to contribute information in a form that is meaningful for designers, especially for the many projects on which the users themselves may not be available. According to Robert Sommer, "user input acknowledged the importance of vernacular architecture and art in terms of *learning from the users.*" Thus, this study provides a ground to *design* and *control* the physical setting. I attempt to provide more information about the urban space users as a part of the first stage to solve design problems that Jon Lang has called the "*intelligence*" phase. This phase aims to improve our knowledge about the users' attitude that reflects their needs in their residential spaces and allows designers and planners to better predict the use of the physical settings they design.

This study has two principal objectives. The first is to verify the sociological and psychological disciplines to contribute in design decisions in the Egyptian context. Thus, the study helps architects to view design as a human science rather than just a creative art. In fact, to achieve a good design, it is important to have a cooperation among different professions that are significantly separated. On the one hand, planners, urban designers, landscape architects and architects are concerned primarily with the physical environment. These professionals tend to be highly visual people concerned with practical problem-

solving and aesthetics.[4] On the other hand, the psychologists are more involved in verbal theories and experimentation than to "things." There was always a problem in overlapping both directions of specialty, although they are concerned with the same environment, but from different sides. In fact, this overlap is necessary either for decision-making in design or the improvement of research studies to be able to solve more problems.[5]

The second objective here is to propose a set of design recommendations based upon my research findings to help designing urban open spaces that fulfill the human needs. The study implies a verification of the observation methods in E-B research to uncover these needs in the Egyptian context. Many of the traditional information-gathering procedures in the social sciences, such as experimentation and random sampling are inappropriate for the kinds of questions that are being asked and for the time-frame of design practice. In addition, the output of many social sciences is very general about a particular group of people, and is not necessarily related to the physical setting. This study aims to highlight social and psychological basics that are necessary to take into account in design, thus, avoiding the criticism that many behavioral science research findings are unable to be translated into useful architectural applications.

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[4] Robert Sommer, *Social Design - Creating Buildings with People in Mind*, Englewood Cliffs, N.J.: Prentice-Hall, Inc. (1983), 18.

[5] John Zeisel, *Inquiry by Design: Tools for Environment-Behavior Research*, California: Brooks/ Cole Publishing Company, (1981), 32-35.

1.2 Methods

Any research methodology depends on the nature of the study's problems, objectives, and hypotheses. This study combines two types of research according to the classification introduced by John Zeisel: the *applied research*, that seeks practical answers to immediate questions of human behavior, with the *action research*, which is concerned with the testing of theory and application. Therefore, the studies' assumptions (Chapter Three) should be both testable and applicable in reality.

Since this study is concerned with the socio-psychological effects of architectural products, it meets a challenge of *validity* and *reliability* that are points of criticism of many human sciences researches. In order to achieve *validity*, this study compares the behavioral patterns of different groups of people in physical settings with different configurations.

In order to carry out comparative research, this study adopts a classification of people according to socio-economic status in relation to their residential areas. It is suggested that differentiability by socio-economic status is a useful tool of research as long as we are concerned with people in a particular core culture (Cairo, Egypt). The comprehensive selection of social and physical contexts for the field study enriches the comparative process and uncovers the possible alternatives to behavioral patterns occurring in urban residential spaces.

Two strategies underlay the reliability of this study. Regarding the field study, the study employed a multi-method to annotate the behavioral patterns. Different techniques of observation and informal interviews were applied simultaneously to uncover possible shortcomings and to verify the information derived by each method. Secondly, in discussing observed activities, the study developed a non-linear empirical reasoning in

order to better understand and evaluate the behavioral patterns of different socio-economic classes. In fact, human behavior is too complicated to be analyzed linearly and simple causality reduces reality. This study manipulates the behavioral data from two different standpoints, using Urban Sociology in chapter five, and Environmental Psychology in chapter six.

From an Urban Sociological point of view, the study discussed the social groups' behavior using a "*positivist empiricist*" philosophy.[6] The physical settings' configuration and the objective factors of the social groups are analyzed to understand the impact of the external reality of the physical environment and of the socio-economic aspects of behavior.

Some psychologists argued that it is inappropriate to depend on "primary data" of the characteristics regarding the environment or of social classes to understand human behavior. Thus, we cannot apply Aristotelian theories of physics to interpret social reality. For example, Robert Nisbet explained that in ancient physics, "the behavior of objects was understood exclusively in terms of the object itself: A stone sinks when placed in water because it has the property of *gravity*; a piece of wood floats because it has the property of *levity*."[7] He argued that this "*naive view*" of the physical world is inappropriate to

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[6] The two philosophic traditions of "*positivist empiricism*" and "*rational idealism*," are explained in H.Smith, *Introduction to Social Psychology*, Englewood Cliffs, New Jersey: Prentice-Hall, Inc., (1987), 122-124.

[7] R. Nisbet R. "The Trait Construct in Lay and Professional Psychology," in *Retrospections in Social Psychology*, ed. L. Festinger (New York, Oxford,1980), 109-130. According to Robert Nisbet, the progress in psychology is like progress in physics, that it would come with the recognition that behavior is best understood in terms of the field of forces operating at the time the behavior occurs. For example, unlike the old "naive" view of physics, in modern physics, a stone sinks when placed in water because of the existence of a field of forces in which the most relevant are the earth's gravity, the

(...continued)

understand psychological facts in an objective way.

Therefore, this study employs the environmental psychology approach to discuss the individuals' behavior subjectively, using a philosophy of "*rational idealism*." The behavioral patterns of different socio-economic classes are discussed according to what goes on in the human's mind regarding different means of adapting to the physical environment.

1.3 Synopsis of the Study

This dissertation has four parts. The first part, chapter two, formulates a foundation for the study. The chapter starts by describing the cultural base of the daily life in the Egyptian cities, focusing on the metropolis of Cairo. Then, socio-economic stratification will be discussed as a useful tool of comparison research. The chapter highlights the man-environment theories that help to clarify the relationship between the human behavior and the physical environment, and which guide us to formulate the study's hypotheses.

The second part, chapter three and four, discusses the behavioral patterns in terms of a classification of activities. The terms "behavioral patterns" and "activities" will be used alternatively in this study to mean the same thing. It is assumed that activities are subject to two factors: the socio-economic status and the configuration of the physical setting. Chapter three formulates the premises of the major hypothesis and subsequent

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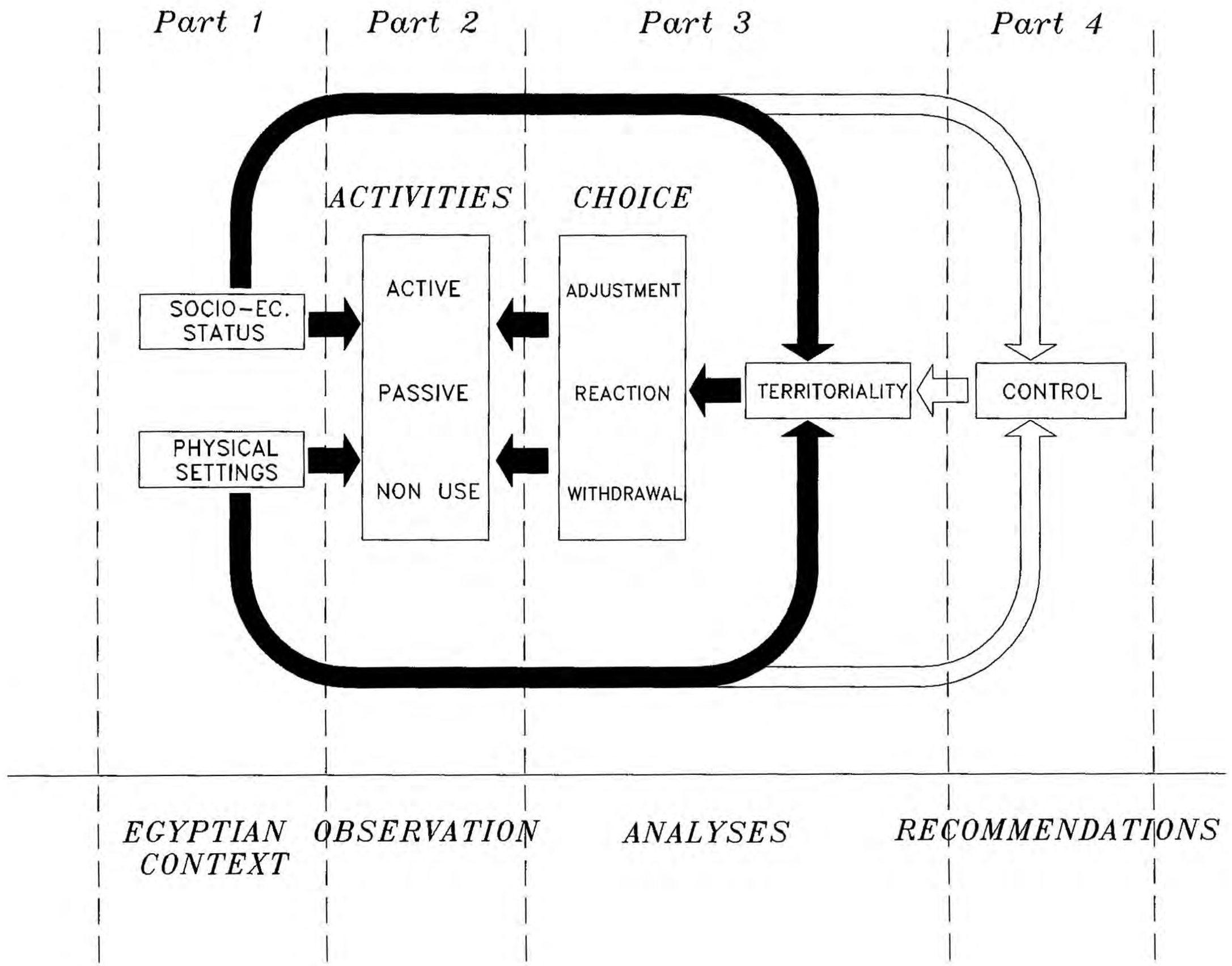
[7](...continued)
mass and surface area of the stone,and the density of the intervening medium, namely water. Thus, there are no properties inhering in objects such as gravity or levity."



(Figure 1.1) A general model of the study

assumptions of the study. The chapter describes the method for verifying the propositions in the field context. Chapter four describes the behavioral patterns observed in the selected physical settings, annotating them on behavioral maps.

The third part, chapter five and six, analyzes the observed behaviors from different points of view. Chapter five compares the behavioral settings of different socio-economic classes. Chapter six is concerned more with subjective motives of behavior for the individuals of different socio-economic classes.

The fourth part, chapter seven, proposes design guidelines and concludes this dissertation. The guidelines will be based on the actual situation. The study does not expect any significant change in the metropolis' extension process in the near future. However, it suggests that the use of urban space by different socio-economic classes can be guided by planners to achieve a better fulfillment of the users' needs.

CHAPTER TWO

2. URBAN CONTEXT AND BEHAVIORAL THEORIES

The human behavior in urban spaces often is governed by different factors that are lumped together and presented as a variety of life circumstances which can be called "*the environment.*" As Rapoport described it, the environment organizes four elements: (1) *space*, (2) *meaning*, (3) *communication*, and (4) *time*.[8] The complex interrelationships among these elements are organized according to different rules. They reflect the activities, values, and purposes of the individuals or groups using the space. These interrelationships were interpreted in a variety of theories that help predict the human behavior according to the environment where it occurs.

2.1 The Urban Context

The politic and economic factors directly affect the life-style of the people. But the study will highlight three other indirect elements that form the major stimuli of the people's behavior: geography, history, and religion. The first is concerning the effect of the physical environment. The second relates to an interaction with other cultures. The third is the normative spiritual motivator and regulator of the people's behavior.

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[8] A. Rapoport, "Cross-Cultural Aspects of Environmental Design," in *Human Behavior and Environment*, Vol. 4, Environment and Culture, ed.I. Altman, A. Rapoport and J. Wohlwill, (New York: Plenum Press, 1980), 11.

2.1.1 Geography and Society

The location of Egypt on the world map indicates its strategic position. Egypt is a leader country in Africa that is linked physically to Asia by the Sinai peninsula. A long coastline and the port of Alexandria have put it within the Mediterranean basin. The Nile links her with Africa. The country is thus uniquely situated to be a part of several worlds, the African, the Arab and the Mediterranean.

Herodotus' famous saying- "Egypt is the gift of the Nile," is largely true. The country is essentially a desert of about one million square kilometers. This desert, a part of the desert belt of northeast Africa, has been until modern times unlivable except for the Nile Valley. Historically, the Egyptians have lived on banks and delta of the Nile, and have drawn their sustenance from the waters of the river. Indeed, since the dawn of history, the land and the river have had great impact on the location of cities in Egypt. According to Dereck Hopwood, Egypt has been the prisoner as well as the gift of the Nile.[9] There was no opportunity to extend the urban life except on the green valley. The arable land of the Nile Valley and the delta amounts only to about 3.5 percent of the country's area.[10]

North of Cairo, the Nile divides into two main branches forming the fertile agricultural lands of the delta. Settlements were found along the Mediterranean coast in the north and Nubia in the south, but most were along the banks of the Nile. These

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[9] D. Hopwood, *Egypt: Politics and Society 1945- 1990*, 3rd ed. London: Harper Collins Academic. P.163.

[10] Planning and Development collaborative International, Inc. (PADCO), with ECG Engineering Consultants Group, National Urban Policy Study (NUPS). *Egypt: Urban Growth and Urban Data Report,* (1982), prepared for the Advisory Committee for Reconstruction, Ministry of Development, Egypt. Washington D.C.: PADCO, 3.

the north and Nubia in the south, but most were along the banks of the Nile. These settlements had to be on high ground to avoid inundation caused when the Nile overflowed once a year in the summer. The number of settlements increased with improved water control and irrigation systems. Normally, the value of agricultural land made these settlements compact and dense and that form remains.[11]

The most populated settlement is Greater Cairo, the capital, with a population of more than 11 million inhabitants. The word "Cairo" is the European version of the Arabic word, al-Qahira, "the victorious," that it was given to celebrate a new Fatimid ruler. Many people, whether urban or rural, still refer to the capital as *Misr*. Misr is an ancient Semitic word that refers to both their country and its Cairo.[12] The stability of the site of settlement has had a great influence on the common behavior of the generations born in these urban settlements.

2.1.2 History

Egypt has had a number of national capitals. The apex of the Delta seems to have been the most strategic site as a link between upper and lower Egypt. This site was the location of Memphis, the first capital; of Fustat, capital during the Islamic period; and is now the location of Cairo, the modern capital.

Cairo has a long history of involvement with other peoples and cultures. It took over from Fustat, the original Arab city which was founded as a military encampment (c.640) on the eastern bank of the Nile by the opening Muslim forces. Falling under the

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[11] Ibid.,2.

[12] Malise Ruthven, *Cairo- The Great Cities*, (Amsterdam: Time-Life Books, 1980),6.

Ottoman empire in 1517, Cairo became a provincial capital subordinate to Constantinople. The attraction of artistic and intellectual talents to the Turkish capital led to Cairo's decline in population and to some extent economically.

The city in a sense withdrew into itself until 1798 when Napoleon arrived with his army. The French invasion was too short basically to alter the city's characteristics. It, however, can be considered a turning point both in the history of Cairo and of Egypt. A western city grew separately from the old eastern Islamic one. With the new city's form, new western ideas were introduced to the country to grow alongside deeply-held traditional thoughts. The large population proportion of European immigrants resident in the new city popularized these ideas. A different life-style, hence, appeared plausible.[13]

The French withdrawal led to the establishment of a new dynasty of Albanian origin which ruled Egypt until 1952. The westward-looking dynasty introduced new patterns of westernization and modernization, both physically or socially.

The European style in planning and architecture had begun to be imposed by the French, and was adopted by Ismail Basha (1863-79) who undertook to rebuild the city of Cairo. By the end of the nineteenth century, the city stretched to the Nile river, was paved and lit, had new bridges built across the river. During the British occupation, new quarters were built and developed for residential and business purposes. The population then grew up to 600,000 split into two separate classes. The new European style city spread outside its

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13 A. Rugh, *Family in Contemporary Egypt*, New York: Syracuse University Press,(1984),3-4.

boundaries remaining socially and physically distinct from the old.[14]

The city changed dramatically in the new century. By 1970, the population reached six million.[15] The foreign minority which dominated many aspects of the city life and business introduced to the country additional manners, customs, and taste that were based on an imitation of certain aspects of a European life-style. New districts have been built, engulfing villages and rural areas. Planned and unplanned settlements were created, and continually crowding more people into existing ones. This increased the population of urban settlements created a diversity of urban patterns and life-styles.

2.1.3 Religion

Islam, the official religion of Egypt, has been particularly significant in shaping the Egyptian character of social life and behavior. It provides the moral authority that helps give patterns of behavior such persistence throughout the history. In its *Sunni* form, Islam is the religion of over 95 percent of the population.[16] Coptic Christians are the most considerable minority group.[17]

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[14] Derek Hopwood, *Egypt: Politics and Society (1945-1990)*, (London: Harper Collins Academic, 1991), 4.

[15] Ibid.,5.

[16] University of Newcastle upon Tyne, *Housing in Egypt,* (ed. A.D.C. Hyland, A.G. Tipple and N. Wilkinson, 1984), 3.

[17] A very few Jews remain from the considerable community that lived in Egypt, and especially in Cairo, before the Revolution of 1952. Protestant, Roman Catholic and Greek Orthodox Christians are small groups of foreign residents or the descendants of the city's elite of pre-revolutionary days.

The day-to-day life in the medieval city or in the new slum areas are particularly affected by religion. It is far more than just a system of belief; it is a code of conduct that regulates every aspect of a society's life.[18] Social cooperation, religious prayers walking to the mosques, and even the livability of the street during religious events, are all evidences of faith and piety. The non-religious are, however, unconsciously involved in customs that are inspired from Islam. A significant and interesting fact is that many of those who are openly secularists or agnostics still call themselves Muslims and seen by the others as Muslims (with deviant thinking).[19]

Islam has a great influence on the appearance of the physical environment in a diversity of contexts. The innumerable domes and minarets of Cairo indicates how religion contributed in shaping the perceptual qualities of the old urban residential spaces. The group of letters that spell the word *Allah* - God - or some verses of Koran - the holy book, make a familiar motif that can be seen in the most varied contexts throughout residential areas. The holy words are used as a decorative setting for many shops and cafes' facades, written in lights and hung across the streets, or garlanded on the door of trucks. The "*hajj*," or pilgrimage to Mecca - is celebrated by the pilgrim's family by painting a mural on the house's facade proclaiming the event.[20]

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[18] Malise Ruthve, *Cairo.*

[19] Dereck Hopwood, *Egypt, Politics and Society 1945-1990,* 164.

[20] The pilgrimage is a solemn duty that Allah enjoins all Muslims through the Koran to perform at least once in their lifetime. The pilgrim's family customarily proclaims his piety adorning the outside of his house with simple drawings expressing the journey to Mecca, the holy places in and near the sacred city, or the rituals that are required of the pilgrims. The murals include a representation of the "Ka'abah" at Mecca or the ritual

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Religion has been responsible of much of the moral quality of the urban life. A sound environment presented in the five times daily calls to prayer - the *adhan* - ringing out marks the religious atmosphere at the city, as it has done for thirteen centuries.[21] The adhan is a moving and beautiful sound that starts by claiming that "*God is greater.*" The hard life of the poor attaches them to the religion principles more than the rich. Simplicity of life, hospitality, social relations among the neighbors, are some of the distinguished characteristics of the social life in poor areas. These characteristics are derived from the religious traditions inherited from one generation to another. However, customs and norms are not identical with religion standards, but the gap between them is narrowing in the last two decades. The customs and norms are significantly changing according to the religion comprehension replacing the Egyptian ideologies dictated by the politic situations.[22]

20(continued..)
stone-throwing at Mina, and the means of transportation to go there: a plane; a boat; or sometimes a camel. Words of prayers are usually added to the drawings for blessing the trip. *See* Malyse Ruthmen, *Cairo, The Great Cities.*

[21] The only difference is that the "muezzins" (criers) recite the adhan in their piercing, sonorous voices using loudspeakers mounted on the minarets rather than going up to the minarets' balconies which had designed initially for such purpose. The adhan usually can be heard at a time from different mosques as a chant whose rhythm and melodic line are laid down by tradition, but each muezzin selects the pitch and tempo of his chant without reference to the others.

[22] The Egyptian ideologies in modern times varied from Pan-Arab nationalism, which is gone with the death of Nasser, to communism, which has never been popular for its agnostic base, to westernized capitalism that created too much corruption in many administrative sectors.

Indications of changes in religion principles are shown through observation of different aspects of life such as women returning to the Islamic dress replacing the western modern one.

Some activities are directly related to religion, and are carried out through the performance of religious ordinance. For example, the Friday prayer takes place on the sidewalks and pavements of the street as an extension of the insufficient indoor space of mosques. A phenomenon that has taken place for a few years is that of *"Maeda al-Rahman"* (tables of God the compassionate) spread throughout the streets of almost every district. Driven by a personal religious impulsion, neighborhood residents prepare a table providing food for the needy or passer-by at the time of *iftar*. Plates are brought eventually by individuals and families to share the food with their neighbors, either rich or poor. Some of these "Maeda al-Rahman" has been extended to feed more than five thousand.[23]

The urban activities that are related indirectly to religious circumstances are innumerable. For example, the city-life has a special flavor during Ramadan, the ninth month of the Muslim lunar calendar, when Muslims fast everyday from dawn to sunset.[24]

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[23] "Ramadan in Egyptians' eyes", a report in *Al-Ahram Newspaper*, March 20th, (1993), 7.

[24] The day in Ramadan is divided into two distinguished parts, before sunset and after sunset. Activities in the morning are to be relatively slow as a result of a long bustling night. After *iftar (breakfast)*, streets turn to be engaged by distinguished social and religious activities.

An interesting time is that of sunset when any foreigner is definitely struck by the sudden silence of such alive and crowded city like Cairo. It has been well described by Malyse Ruthmen that *"the fuming traffic miraculously vanishes and the city falls silent, except for the subdued murmurs of voices in the cafes and the tinkling of glassware"*. The streets are deserted as people return home to devour their *iftar*.

Children play with traditional lanterns associated with month in the streets. Lights, colored flags, and big lanterns hang across the streets of many districts. To eat or smoke in a public space is a vulgar behavior to most people. Even most Christians refrain from eating and drinking in public to avoid annoying the feeling of Muslims who share them the place.

The soccer contests, known as "Ramadanian tournaments" represent another form of street activities for the urban youth, related to the month of Ramadan. The competition includes most of the popular quarters of Cairo, who prepares their own teams selected from the best street players who usually play in the street.[25]

Recreational activities in the urban life can occur all the year round, but the religious events are special times to make a point of it. "*Id al-Fitr*", the feast at the end of Ramadan (traditionally lasting for three days) and "*Id al-Adha*" (Feast of the Sacrifices), the tenth day of the twelfth month of the Muslim calendar (traditionally it is four days) are the major two religious occasions that affect the use of urban spaces during the whole year. Families traditionally go for picnics in public spaces bringing food and drink to spend the whole day. Different bright colors of children's new clothes characterize the appearance of streets and gardens of the cities. People are everywhere; gardens, bridges,

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[25] "Ramadanian tournaments" have spread in most cities as well as in the metropolis. In Ismailia city, Abdel Moneim Emara, the former governor used to attend the tournaments in the city streets. Later on, the tournaments were sponsored by youth organizations. In Alexandria, the contests extended to include more sports, such as table tennis and volleyball. "Ramadan in Egyptians' eyes," reported in *Al-Ahram Newspaper*, March 20th, (1993).

streets' medians, and squares are all occupied by crowds.[26] In fact, consciously or not, traditions are impressively blended with religions and inherited from one generation to the other, forming the Egyptian *"culture."*

2.2 Culture And Behavior

"Any activity is primarily culturally based in that it is the result of unwritten rules, customs, traditions, and habits, the prevailing life-style and definition of activities appropriate to given settings."[27]

Culture is a global term used as a basic concept by both sociologists and anthropologists among many others. They agree about the centrality of *culture* in defining humanity. However, a stream of definitions and conceptualizations has been produced in many books make them disagree much more. In a sociological sense, culture includes any piece or attitude, value, or belief, any skill that human beings learn as members of a group.[28] Thus, the term includes everything that human beings learn to do, think, use, and make.

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[26] For more information on the contemporary life in Egypt, see Andrea B. Rugh, *Family in Contemporary Egypt,* (1984); James Aldridge, *Cairo,* (1969); and Malise Ruthven, *Cairo- The Great Cities,* (1980).

[27] Amos Rapoport, "Pedestrian Street Use- Culture and Perception", in *Streets as Public Property- Opportunities for Public/Private Interaction in Planning and Design,* (ed. Anne V. Moudon and Pierre Laconte, University of Washington, Seattle, (New York: Washington & Moudon Laconte, 1983).

[28] Reece McGee and others, *Sociology, An Introduction,* (1980), 50.

Rapoport suggests that all definitions fall into one of three general views of culture.[29] One defines it as a way of life typical of a group, the second as a system of symbols, meanings, and cognitive schemata transmitted through symbolic codes, the third as a set of adaptive strategies for survival related to ecology and resources. In fact, the three views are not in conflict but rather are complementary.

A definition of culture established by Sir Edward B. Tylor in his book *"primitive culture"* is: "that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society."[30] This definition, the first view of the concept of culture in its modern, social scientific sense, is still generally accepted and used in the social sciences as a base upon which to elaborate. Culture is viewed by Tylor as a totality, composed of various parts, and learned through the agency of society. Later definitions emphasize other dimensions of culture. For example, Kluckholm and Kelly, defined culture as: "All historically created designs for living, explicit and implicit, rational, irrational, and nonrational, which may exist at any given time as potential guides for the behavior of men."[31] This definition is found to be an important one since it stresses that humans learn culture from the past, like a set of rules or guides for behaving. Kluckholm and Kelly also point out that some cultural

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[29] Amos Rapoport, "Cross-cultural Aspects of Environmental design", in *Human Behavior and Environment: Advances in Theory and research, Vol. 4., Environment and Culture,* (ed. Irwin Altman, Amos Rapoport, and Joachim F., (New York and London: Wohlwill Plenum Press, 1980), 9.

[30] Edward Tylor, an English scholar of the last century, is considered to be not only the founder of anthropology, but an influential figure in the development of sociology as well. Cited in (Reece McGee, 1980), 51.

[31] Ibid., 51.

guidelines are stated consciously while others are hidden.

The definitions of culture just discussed, while they all refer to the same thing, each focused upon different aspects of understanding what culture is, and help to deepen the interpretation of the behavioral patterns. But for research, culture has been found a very general term to use, and that has difficulties of complexity; the most important one is its variability.

2.3 Variability of Culture

Culture is considered a dynamic system that is highly adaptive to context. As a pattern of habits, learning passes culture from one generation to another. It is commonly agreed that all behaviors are primarily the product of social, not biological heredity. Cultures may remain relatively constant for long periods of time when the ecology and population remains relatively stable and if they have little or no contact with other cultures. Culture in Egypt has been subject of variability between two rival poles: the inherited traditions, and the introduced western cultures.

Sociologists identify different aspects at cultural change, whether consciously or not, such as inventions, discovery, cultural imposition or cultural revolution. The *"diffusion"* effect is an important means of cultural change in modern times. It refers to the spread of a cultural innovation from other people or even from another society. For example, the computer games are introduced to the popular areas as a new leisure means for children, and that was never known before exporting the labor force to other rich

countries.[32] The cultural contact adds to our knowledge of other behavior, and expand the variety of behavioral choices.

In Egyptian cities, and especially in Cairo, there is a mixture of subcultures and a diversity of life-styles. The proximity of different socio-economic classes' generates an awareness of other behavioral patterns among the various classes. Because they come into contact with different types of life-styles, some people change their own culture according to the "*affordances*" of the environment.

As culture influences the human behavior, man also shape its direction. The individuals who learned patterns of behavior evaluate and filtrate them by the individuals to retain the capacity of self-reflection. They do not always accept traditions blindly.[33] A familiar example seen in the street is that of a mother in an old traditional dress walking with her educated European-style children. Both generations accept the change of dress towards modernization within a limited framework of tolerance. It implies a continuous filtration of the inherited culture and allows a careful change of its different aspects.

Culture not only changes from one generation to the other within a family, but it also changes according to the individual life-cycle. Education, travelling abroad, or simply changing a job or residential areas can change someone's beliefs. According to Rapoport,

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[32] In many popular areas, one can observe circles of children in a back street playing or watching a computer game. Devices are either owned by one of the children or rented from one of the residents. This type of activity is an addition to the children behavior in the residential open space and is getting to spread due to the new irresistible technology.

[33] Caroline Hodges Persell, *Understanding Society, An Introduction to Sociology,* (New York: Harper & Row Publishers, 1984), 114.

people live in a temporal environment, which can also be seen as the *organization of time*.[34] Furthermore, one might change his behavior from one setting to another in the daily life. The anthropologist Charles Valentine suggests that many individuals are *bicultural* that is, they are able to understand and function well in more than one culture group.[35]

Culture is a general term that can be used in a variety of prospects. The universal culture is one view that it is shared by all "normal" human beings. Universal culture refers to the common basic survival behavior of the human kind, such as eating , sleeping, and so on. On the opposite, regarding the level of individual's behavior, nobody can share the *"same"* culture of anybody else. At this level, the behavior differ according to personal traits, feelings, and expectations that never can be identical for two persons. This study concerns more about a level of culture that is between the universal culture and the personal one. It is culture that is shared within a particular society. All members of this particular society share a "*core*" culture, a basic set of common expectations regarding a social life.[36] Even in a complex heterogenous society that includes diverse life-styles, there are numerous commonalities. For example, when we focus on Egyptian society, and particularly the metropolis of Cairo, we minimize, in fact, the cultural factor in its broad

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[34] A. Rapoport, "Cross-Cultural Aspects of Environmental Design," in *Human Behavior and Environment, Advances in Theory and Research,* Vol.4, Environment and Culture, (1980), 13.

[35] C. Persell, *Understanding Society- An introduction to Sociology,* (1984), 99.

[36] Reece McGee and Others, *Sociology: An Introduction,* (1980), 58.

sense, and we funnel the concerns on groups of people who share many characteristics of a particular urban life.

Although we can use the core culture to limit our concern to a particular society with certain characteristics, we can not depend on culture as a useful tool of research because of its complexity and variability.[37] Instead, this study will be based primarily on the core culture of Egyptian society, and will classify groups of people by similarity of life-style. It is suggested in this study that the socio-economic status within physical context can be a good starting point for a comparison study since it correlates to culture but is more stable and can be measured. Stability results from a suggested correlation between dependent variables (socio-economic status) and independent variables (the physical environment) which will be discussed later in this chapter. For example, if one changes socio-economic status much of his behavioral patterns in public spaces will be unchanged until he changes his physical environment as well.

Thus, the behavioral patterns of individuals of any socio-economic class has a certain consistency as long as they live within the physical setting of a social group who has a similar life-style. Even though, many people who cannot choose their habitat because of the housing crisis, their behavioral patterns will have a limited range of choices according to their physical environment.

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[37] See for example Rapoport (1980) and Lang (1987).

Other people's behavior affect life-style along with socio-economic status. The characteristics of the people using a physical setting form the basic aspects of the *"animate environment's"* quality, which is an important part of the physical environment we are to discuss. The concept is that the human environment of humans contains other humans who are in themselves the source of simultaneous stimulations.[38] The quality of the behavioral performance may attract or rebuff other users. Behavior is, hence, affected by the homogeneity or heterogeneity of the users in a certain physical setting, and that behavior can be expressed by a socio-economic status.

2.4 Socio-economic Status

Based upon socio-economic status, an individual behavior depends on that individual's position within the system of social differentiation. Each position has certain prescribed rights, obligations, and expected behaviors that accompany it, putting into consideration that there is considerable variation in actual behaviors because of other aspects (such as the physical environment). Once socio-economic status is accepted as a primary criterion for understanding behavioral patterns, a question emerges of how to distinguish among classes based on socio-economic status.

The problem of class stratification still faces Egyptian sociologists either to study the socio-economic stratification itself, or to use the socio-economic status as a factor in

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[38] The animate environment concern humans or animals existing in a space. It is accepted that humans can provide visual, sonic, chemical, thermal, and mechanical stimulation to other humans, other animals, and to the world around us (Jon Lang 1987). It is suggested here that there is a hidden conflict or competition among different socio-economic classes' users when acting together in a same place.

studying other social issues.[39] The society is too complicated to have clear standards of social status, but there are some indications that can help to differentiate classes.

Many sociologists tend to view class in terms of social *rank*. As explained by Persell, there are three major views of class[40]: Max Weber (1920) based his discussion of class on the market position of individuals and groups. He emphasized the economic power of individuals, knowledge, skill, and scarcity. Therefore, his focus adds occupational position to social status. Weber's approach also emphasizes the role of property in social stratification,[41] which is in harmony with Karl Marx theory of class based upon property ownership.[42]

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[39] Zakariyah el-Shirbini and Yousryiah Sadik, *Al Moustawayat al-Iktisadiyah, al-Ijtimaiyiah, al-Thaqafiyah,* (Cairo: Maktabat Al Nahda Al Masryia, 1988).

[40] Cited in Caroline Hodges Persell, *Understanding Society- An Introduction to Sociology,* (1984).

[41] Ibid., 238.

[42] The Marxian concept emphasized the position of individuals in the social relations of production. The basic relations of production are that one group owns and controls the means of productions and distribution while another group provides its labor. These two groups form the two major classes in most societies, the master and slave, and in capitalistic system, the bourgeoisie and the proletariat (McGee and others 1980).

Wright and Perrone (1977) analyzed the Marxian concept of class for more complicated societies basing upon four criteria:

1- The ownership of the means of production.
2- The purchase of the labor power of others.
3- The control of other people's labor power.
4- The sale of one's own labor power.

(continued...)

Rolf Dahrendorf (1959) underscores the importance of the individual's position within a bureaucratic structure. Instead of stressing Weber's economic or status, Dahrendorf highlights power and decision-making capacity. For him, since class is based on one's position in an organization, class would change at retirement, when one no longer possesses authority within an organization. Therefore, this view stresses the growth and importance of organizations especially the state and down plays the importance of market position and property.

Warner, Meeker, and Eels (1949) mention occupation and wealth, but their primary emphasis was on prestige, and on the people who would associate with one another as social equals. Their emphasis on shared values, life-styles, and behavior, gave little attention to the social locations that shaped those behaviors. This view of social classes is significant for the purpose of this study since many outdoor activities for the Egyptians are based on social contact.

2.4.1 Objective Indications of Socio-Economic Status

Three main indications of socio-economic status are to be considered by this study: the person's occupation, education, and income. These factors touch on most of the dimensions noted in the theoretical views of class, but ignore the distinctions based on

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Capitalists own, buy, and control the labor of others, and do not need to sell their own labor. Managers are considered a separate class since they supervise others and may own some stock in the corporation. They are not capitalists unless they own a controlling interest. The class position of workers is set by selling their labor and having not any control over the labor of the others. The last class, called the "petty bourgeoisie," consists of small business people and shopkeepers who own their own stores but do not buy or control the labor of others in any major way (Caroline 1984).

property and position in the productive relations, because we are concerned with urban life in residential environments.

In a complicated society, it is necessary to focus on certain features of occupations. According to Caroline Persell, some researchers distinguish among occupations on the basis of whether they involve mainly mental or physical work. Other stress whether people spend most of their time on the job giving orders or taking them, while still others look at access to useful knowledge and information, opportunity for advancement, degree of autonomy, degree of exposure to occupational hazards, or finally in terms of an occupation's prestige.[43]

A useful classification of occupation is that of el-Shirbiny and Sadik. They classified occupation ranging from the highly administrative intellectual jobs to the manual jobs with low prestige.[44] The high bureaucratic occupations used to be the most prestigious in the time of president Nasser. Later on, the private section businessmen occupied high ranks and still raise up in the society's order, especially in the weak economic condition which increases the value of money-makers. Occupation has not become a clear dimension of social status. The low wages of employees forced them to run small businesses to help them provide the life expenses. Thus many people became members of both the working class and bureaucratic class simultaneously.

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[43] C. Hodges Persell, *Understanding Society- An Introduction to Sociology*, (1984), 240.

[44] Z. El Shirbini and Y. Sadik, *Al Moustawayat Al Iktisadiyah, Al IjtImaiyah , Al Thaqafiah*, (1988), 38.

Income is a factor that is increasing in its importance to distinguish social classes in the society. Income is derived from wages or salaries paid by someone else, income from self-employment, and income other than earnings. Income poses certain problems for research. People tend to be more reluctant to reveal their incomes than their occupations, either fearing to pay more taxes, or to keep away the evil eye. One can not use income alone as an indicator of socio-economic class because of the declining gap in terms of what people earn and how they spend it. Moreover, despite similar incomes, people may vary greatly in their life-style according to the educational and occupational factors.

Education is evaluated by the degree or the certificate that the individual has obtained. Unlike many societies, the Egyptians still appreciate the certificate holder. Students insist to completion of their studies in the universities for attaining the goal to be respectful in the society as a certificate holder. Education also may determine one's occupation.

2.4.2 Subjective Indications of Socio-Economic Status

Within this study's framework, which is based on a qualitative approach, the classification of socio-economic status will take a step beyond the conception known as *"positivist empiricism."* The later refers to a philosophic tradition accepted by the social psychologists in the 1940s and 1950s that viewed people as passive receptacles for the influence of external forces. According to modern research, this study will discuss the social status from a *"rational idealist"* view. This view posits that we construct reality from what goes in our minds. In other words, the assumption is that peoples' beliefs have

a powerful influence on the ways they live their life.[45] Two subjective factors will be considered as indicators of socio-economic status. One is a symbolism of materials, and the other is a value-based class consciousness.

Symbols are useful tools for measuring the socio-economic status in any society. According to C. Percell, "more than any other animal, humans fill the physical and social world with symbolic meanings."[46] For her, a social symbol is any object or sign that produces a shared response. A piece of rock, an animal, the moon, a piece of paper with the word "dollar" on it are all imbued with various meanings and sometimes with mythical or magical qualities. Symbols are only valid here as factors of social status when they are socially developed and shared with others.

Many examples can be given to interpret the importance of symbols. Unlike in American society, in Egypt, the ownership of a car is definitely a symbol of social status. The make and model are measurements of life-style and social status. For example, a "mercedes" is an important common symbol of wealth, however, it does not show the occupation. Owning a VCR used to indicate social status. Although many electrical devices may be more expensive, officials still give special consideration to video cassette recorders in import taxes as a symbol of luxury.[47]

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[45] Reece McGee and Others, *Sociology- An Introduction,* (1980), 122.

[46] Caroline Hodges Persell, *Understanding Society- An Introduction to Sociology,* (1984), 101.

[47] The video player is officially considered an "*irritating item.*" It is assumed to be
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The residential area and house condition are other important symbols of social status to be considered by this study. Many social researchers such as Hollingshead et Al., Werner and Meaker, El-Shirbini and Sadik, and others used this factor in indicating social classes.[48] The residential areas in Cairo are significantly distinguished in terms of life-style and residents' characteristics.

Marxian notions of class consciousness provide a useful start for our study of human behavior. For socio-political reasons, Marx believed that when the proletariat would eventually be aware of themselves as a coherent class, they will behave (in political terms) appropriately for revolution against the capitalist bourgeoisie, leading to the achievement of a classless society. Consciousness, in fact, is not only necessary for political action, it is to find people there seeing themselves along class line, and behaving in the daily life according to particular norms of their class. Either voluntarily or not, to belong to a particular class adjusts the people's behavioral according to norms and standards of the residential area. The subjective factors form the motif of action that construct a cornerstone for anthropology. In fact, the models people have of their surroundings form the basis for their actions, and should therefore, be taken seriously, if

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47(continued..)
unnecessary in the eyes of the poor people who can not afford them, and who, hence, should be compensated through the taxes paid by the rich who purchased the device.

Technology when plays a role in making life easier, are considered by many sociologists as indicators of social class in Egypt. Skilled laborers buy house gadgets to compensate low education or prestige.

48 Z. Shirbini and Y. Sadik, *Al Moustawayat Al Iktisadyah, Al Ijtimaiyah, Al Thaqafiyah,* (1988).

one wants to understand things as they are, not as he sees.[49]

The problem with subjective methods of determining the socio-economic status is that the people will not identify themselves appropriately if they are asked direct questions.[50] Few see themselves correctly as members of the middle, the upper middle, or the lower middle class. Therefore, we should consider the local self-image of class using the Egyptian folk terms rather than imposed social stratification labels.

In her book *"Ibn Al-Balad: A concept of Egyptian Identity,"* Sawsan El Messiri differentiated between two classes in Egyptian society, using the local significant terms *"ibn al balad"* and *"effendi"*.[51] Both terms emerged as a subsequent of westernization, foreign occupation, and the emphasis on foreign education.

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[49] Nadia Adel Taher, "Social Identity and Class in Cairo Neighborhood," in *Cairo Papers in Social Science,* Vol.9, Monograph 4, Winter 1986,(The American University in Cairo Press, 1986).

[50] Caroline Hodges Persell, *Understanding Society, An Introduction to Sociology*, New York: Harper & Row, Publishers, (1984).

[51] *Ibn* (pl. *awlad*) literally means "son," *bint* (pl. *banat*) means daughter. *Balad* is an ambiguous term used to denote a locality in any size, as big as Egypt, or as small as a village, but usually this term means the country. The concept of *ibn al-balad* relates to the Egyptian masses, but more specifically to the Cairene folk. Historically, it was the Cairenes who were identified as *awlad al-balad* since Cairo and Egypt have always been identified in Egyptian consciousness with the same word, "*misr*." In addition, a large percentage of the population resides in Cairo.

Effendi: The word *effendi* is one of the titles of address introduced by the Turks in Egypt, with a meaning of *"sir"*. During the Turkish rule, high status is denoted by the term *effendi*. The *Wali* of the Ottoman Empire and its representatives used to be addressed by this tittle. Other Turkish titles such as *Pasha* and *Bey* were less prestigious than *effendi*. But latter, the term effendi became the title of the government employees. Sawsan El Messiri ,*Ibn Al-Balad: A Concept of Egyptian Identity,* Leiden E.J. Brill, 1978).

The term ibn al-balad (son of the country) linguistically seems to have many implicit meanings. In some contexts, ibn al-balad refers to all Egyptians. According to El Messiri, Egyptian nationality is necessary, but not sufficient to identify one as an ibn al-balad. There seem to be certain characteristics and attributes that differentiate a "real" Egyptian, an ibn al-balad, from either foreigners or other Egyptians. On the contrary, "awlad al zawat" or the "effendi" are other terms that point out to those who are westernized or have other life-style than the Egyptian traditional one. The terms "awlad al-balad" and "awlad al zawat" or the "effendi" class are used metaphorically to denote certain attitudes of the popular class and the upper Egyptian class.

In peoples' minds, the ibn al-balad appears in a *gallabiyya* (long gown), or has a certain way of speaking, tone of voice, dialect or special vocabulary. An ibn al-balad retains such traditional Islamic values as generosity, cooperation, helpfulness, charity and sharing. Commonly perceived, the two most significant characteristics of an Ibn al-balad are *shahama* (gallantry) and *fahlawa* (cleverness). Nowadays, an ibn al-balad is identified among the middle class and the lower middle class group who preserve the traditional Egyptian values more consistently than any other.

> *"An ibn al-balad may become too rich, but when he changes his residence and life-style he is no longer possible to be classified as ibn al-balad.... For example, a coffee-shop owner, or a butcher, may become very rich, but by staying in the neighborhood, helping people, and keeping his values, he is still an ibn al-balad."*[52]

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52 Ibid., 42.

Therefore, the *ibn al-balad* does not belong to any class of income in particular, because he does not have to be either rich or poor to behave according to the *ibn al-balad's* attitude. However, he can be hardly identified as an upper class person.[53]

The *"effendi"* is a term that emerged with the modernization of Egyptian society. Muhammad Ali (1804-1849) brought the gradual Egyptianization of certain sectors of society controlled by foreigners. The demand for civil servants to replace foreigners was supplied by graduates of Muhammad Ali's and Ismail's (1862-1879) schools. These bureaucrats composed the nucleus called "*effendi class*" (bureaucrats) who dressed in suits and *tarboush* (a Turkish fez) instead of the traditional dress. This process of westernization intensified under the British occupation from 1882. The *effendi* class aspired to be part of the upper middle class or what was identified as the *awlad al-zawat* (upper class people).[54]

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[53] A self identity can be induced in terms of such classification. *Ibn al balad* dignifies an individual, and gives a honorable image of his personality. However, some of upper class interviewees by "El Messiri" expressed the notion that they might wish to be awlad al-balad: *"I have many things in common with the awlad al-balad, yet they would not accept me as one of them"*, or *"I wish I could be considered an ibn al-balad because although unconsciously I used to reject this group, lately I have come to feel that I am also rejecting my Egyptian identity."*

A wave of designing restaurants with original Egyptian styles and titles, serving the popular food is lately spread in the rich residential areas. It successfully attracts the upper class people, unconsciously fascinating them to the Egyptian originality, and partially fulfilling the psychological need of self identity. After all, it is a reaction of the modern time westernization.

[54] In classical Arabic, *"Zawat"* literally denotes "the chief attribute", and is used originally as "Zawat al-haythiya, i.e. "people of importance". Those who owned a lot of land were people of importance. Hence in colloquial Arabic the term zawat came to designate a rich or aristocratic person.

(continued...)

As we discussed above, the socio-economic status may be highlighted by the urban folk, which solves the dilemma of overlapping non separable factors of income level, occupation, and education. The subjective description of people according to the folk delineates a perspective of the entire personality, and thus, provides certain expectations of behavior.

2.5 The Physical Setting in Relation to The Socio-Economic Status

Cairo, as the city of our concern, is divided into different quarters and each is characterized by a life-style. In general, we can distinguish two types of neighborhoods: a *hitta frangi* or French neighborhood (European style) and a *hitta baladi* or folk neighborhood.[55] Folk neighborhood or *baladi* is related to ibn al-balad, while french neighborhood is connected to the effendi class or the modernized society. Each type refers to particular socially and physical configurations.

54(continued..)

According to El Missiri, the increasing distance between *awlad al balad*, and the emerging Egyptian bureaucrats is well illustrated by the magazine caricatures of *al-misri effendi* "the true Egyptian" in the late 1920's who was illustrated by a typical petty bureaucrat in western suit and Turkish fez and shared two worlds, the European and the Egyptian, although not absorbed completely in the former or integrated in the latter.

The revolution of 1952, ended the European occupation and dominance of the aristocrats. After Abdel Hakim Amer resigned, the first president, Gamal Abdel Nasser was seen as the first *ibn al-balad* to rule the country. (EL Messiri 1978).

[55] *Baladi* is the adjective of *balad* (as in *ibn al-balad*). It connotes simple, coarse, traditional , undeveloped, etc.

The *hitta baladi* is represented in either the medieval city districts or the informal housing and new slum settlements. The narrow streets in these areas are called *hara* "back streets." Whether paved or not, a car has no chance to coexist with the pedestrians who dominate the spaces. Some public housing projects were carried out by the government in the 1960s which have larger spaces among the buildings' blocks. Spaces in public housing were transformed latter to resemble the back streets and informal settlements by extending informal buildings to the existing ones. The residents of these areas were more related in the mind to ibn al-balad who used to live in the medieval city. The residents of back streets of old areas and informal settlements are mostly members of the working class or petty bourgeoisie. Their life-style have much of commonalities that allow us to classify these hitta baladi as low socio-economic class areas.

The *hitta frangi* has streets that are at least three times wider (or often much more), and far cleaner than in a *hitta baladi*. The streets are lined by larger houses and far better maintained facades. The terms *hitta frangi* indicate the upper class districts, where the foreigners and the westernized people used to live. This class can be generalized in the modern time to represent the high socio-economic class group based upon residents' characteristics of higher education, income that was related to the high bureaucratic class of the effendi. The residential areas were designed for car use, but that cannot withstand today's increasing traffic volume and the tremendous growth of population in the city.

The complexity of the city's growth does not allow us to classify simply the districts according to specific socio-economic classes. Although an image is established for different quarters, some pockets within these districts are unrepresentative. Many of

the modern extended districts in the metropolis could not avoid encompassing slum areas. Other wealthy areas are very close to popular quarters, so that they are separated by just one street (eg. Mohandesin and Mit Okba, Dokki and Boulak el-Dakrour) or are separated only by a bridge (eg. Zamalek and Boulak Aboul Ela).[56] This proximity of physical settings of different socio-economic groups eventually generates behavioral patterns that have never been considered in design. For example, the green areas that exist in rich areas for beautification are used by low income people for recreation.

The urban physical pattern of representing different socio-economic classes can be also represented through distinctive housing types. For example, high rise buildings exist only in upper class areas or on the Nile banks, and are never built for low socio-economic class people because of high building costs, elevators, and so on.

Housing for the low socio-economic classes is either built by the private sector in the form of informal housing or is built by the government in the form of public housing blocks. The informal housing is presented by buildings standing wall to wall in massif blocks. They are built mostly three stories high with two flats per floor, but some have four stories, and some have only one apartment per floor. Most houses are back to back in parallel lines. Massif blocks allow the apartments' to open on just one facade, except in some cases where a shaft of about 1.5 meters square is left for draining the lavatories.

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[56] The bridge of *Aboul Ela* has been considered in Egyptian novels as a symbol of changing the social and economic condition of a person.

The apartment blocks, known as *"aimarah,"* represent the average building type in urban Egypt. They are three to six stories buildings which are provided generally by the private sector. The term aimarah refers to the blocks existing only in medium or high socio-economic class areas. According to the design of aimarahs and their location, this type of housing covers a diversity of socio-economic classes.

One cannot separate the housing types and urban patterns from socio-economic status. The physical setting's form is a result of socio-economic conditions of the society. It can be considered a part of the residents' life-style because the physical environment has a role in shaping the behavioral patterns of the users. Therefore, the socio-economic status is a reliable factor to use in behavioral research. It is credible when established based on subjective factors, and consistent because of its relation to the physical setting.

2.6. The Physical Environmental and Behavioral Theories

Many theories correlate behavioral patterns with the environment. *Environment* is a broad term that is defined and classified in different ways. The term environment is used widely by different specialists referring to landform, climate, people, buildings or landscapes.

A general categorization of environment is to be *physical*, *social*, *psychological*, or *behavioral*. The physical environment consists of the geographical setting. The social refers to the interpersonal and intergroup organizations. The psychological environment embraces what goes on in their minds and the behavioral environment consists of the

response or the reaction to different elements. According to Jon Lang, this classification is based on the differentiation between the actual, real, or objective world that surrounds an individual and the phenomenological world that is perceived and that consciously or unconsciously affects people's behavioral patterns and emotional responses.[57]

As a matter of our topic, the physical environment is more about the built environment represented into urban spaces, in addition to a special attention to the animate environment or the human activity. It includes the superior natural factors such as climate and geography which determine much of the human behavior. Accordingly, the physical environment is a part of the terrestrial and cultural environments concerned with the habitat of humans.

2.6.1 Environmental Determinism

By creating an artificial environment of architectural arrangements, urban spaces are formulated where man faces new factors that in addition to his culture dictates his behavior. Several behavioral models have been proposed to explain such interaction. Three basic approaches of relating the physical environment to behavior are: *determinism theory; possibilism theory*; and *probabilism theory*.

The idea of determinism has been initiated by psychologists for a long time and raised up with the appearance of the socio-biology as a new field of sociology. The

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[57] Jon Lang, *Creating Architectural Theory: The role of the Behavioral Sciences in Environmental Design*, New York: Van Nostrand Reinhold Company, (1987), 77.

concern was directed to know whether the behavior is genetically or environmentally based, but transformed latter to ask which aspects of behavior are the one and which are the other. The concept of environment as the dictator of behavior became popular in the late nineteenth century.[58] Environmental determinism has been supported in a broad sense by the theory of evolution,[59] and by writers who tried to relate the natural environment such as the climatic factor to human behavior in a deterministic way.[60]

Jon Lang differentiates between *environmental determinism, physical determinism*, and *architectural determinism*. He suggests that each of these types of determinism has its special impact on people. Environmental determinism is the belief that changes in the geographical, social, cultural, or built environment shape behavior. Physical determinism concerns the influence of the geographic environment and the built form on behavior. Architectural determinism concerns only with how the built form which is composed of artificial and/or natural elements leads to changes in social behavior.[61]

Between the world wars, sociologists associated with the University of Chicago developed the concept of the neighborhood unit to promote walking to services, contact

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[58] J. Douglas Porteous, *Environment and Behavior: Planning and everyday urban life*, New York: Addison- Wesley Publishing Company, (1977), 135.

[59] The theory of evolution favors the concept that the fittest inhabitants came to occupy each particular place.

[60] J. Douglas Porteous, *Environment and Behavior: Planning and Everyday Urban Life*, (1977), 137-138.

[61] Jon Lang, *Creating Architectural Theory: The Role of the Behavioral Sciences in Environmental Design*, (1987), 101.

between people and a sense of community.[62] Sociologists were oriented to the belief that the physical setting determines behavior. Much of the ideology of Modernism in the industrial age is based on the implications of the deterministic approach. However, most of the normative thinking of architects and city planners was directed to design cities that serves new technologies not human needs.

In the first half of the 1950s, many studies have been carried out that reinforce the concept of determinism, such as the writing of Leon Festinger, William Whyte, and Leo Kuper. Leon Festinger and his colleagues (1950) concluded that the factor most clearly influencing friendship formation in a setting was the physical distance between the front doors of housing units. Whyte (1956) drew similar conclusions in his study of housing in Philadelphia. Kuper (1953) found that relationships between neighbors are influenced positively or negatively by the spatial proximity of housing doors. Other studies (Roscow, 1961; Adams, 1968; Gans, 1961) have proved that increased physical distance reduces both face-to-face and telephone contact.[63]

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[62] However, the concept of the neighborhood is very old. For example, It existed in the medieval city of Cairo, clusters of buildings in narrow closed streets called "hara" or "atfa" formed small commuities where these intimate spaces had gates that provided privacy for their residents. The neighborhoods were occupied by particular classes or groups classified by religion, such as the jews, or position, such as the carpenters, charcoal vendors.

[63] Jon Lang, "The Built Environment and Social Behavior: Architectural Determinism Reexamined," in *Via. Vol.4. Culture and the Social Vision,* (MIT Press, 1980).

Architects and planners tend, in fact, to believe too much in determinism. Sociologist Maurice Broady (1966) notes, "We are all inclined to see the whole world through our own professional spectacles, and thus see it distortedly." Brent Brolin (1976) and Gutman (1972) note that architectural determinism is a classic example of the simplistic cause-and-effect relationship between behavior and environment that leads modern architects and planners to believe that they can change the way people live by modifying their physical surroundings. Even the social outcomes are believed to result and to be controlled by that physical environmental design.[64]

As a reaction to determinism, a second view was put forward that the physical environment has no necessary influence on people, and that other factors are of major importance. Rapoport, for example, has concluded that environments, while never determining positively (they cannot generate behavior), can be so inhibiting as effectively to block behavior.[65]

Most recent studies on built environmental human behavior have emphasized the importance of social factors in understanding and predicting the usage of physical settings and interaction patterns. An example of Gans' study of Levittown (1967) on the impact of proximity in friendship shows that the homogeneity of values is the basic factor in social

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[64] Ibid., 149.

[65] Amos Rapoport, "Pedestrian Use and Perception," in *Streets as Public Property, Opportunities for Public/Private Interaction in Planning and Design,* (ed. Anne Vernez-Moudon and Pierre Laconte, Seattle: University of Washington, 1983), 6.

relations. Gans points out the dimensions of homogeneity: socio-economic status; stage of life cycle; as well as factors such as similarity in attitudes toward child raising; leisure-time activities; and general cultural interests.[66] Therefore, where a change in lifestyle accompanies moving to another residential environment, there is a predisposition to choose an environment that better affords the new life-style.

2.6.2 "Affordances" of The Environment

The belief of determinism, while has been largely rejected, no conceptually clear statement of how the physical environment does, in fact, effect behavior has been offered in its stead. One could accept the possibilist view; that physical environments provide possibilities and constraints within which choices are made based on other mainly social and cultural criteria. This matter is best expressed by the term *"affordances"* coined by James J. Gibson (1974). By affordances, Gibson points out that the concerned properties are the physical properties of an object or setting that allow it to be used for some activity. Basically, the affordances of a physical setting are what it offers for activity performance, whether in a positive or negative way. Architect Louis Khan used the term *availabilities* and landscape architect Lancelot Brown the word *capabilities* in much the same way.[67]

The term *affordances* gives us, in fact, more generalization than the *determinism, possibilism, or probabilism* approaches. The latter beliefs focus on a more simplistic

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[66] Ibid., 102.

[67] Jon Lang, *Creating Architectural Theory: The role of the Behavioral Sciences in Environmental Design,* New York: Van Nostrand Reinhold Company, (1987).

relationship between the environment and behavior. On the other hand, *affordances* has a flexible meaning. Jon Lang distinguishes between two categories of affordances: *direct* and *indirect*. Direct affordances consist of such thing as activities, while indirect affordances include such things as symbolic meanings.

In fact, both the concept of *determinism* and the concept of *affordances* refer more to the physical setting than to the users' characteristics. They point out the degree the physical setting influence behavior not how human factors affect the use of the physical setting. For example, a playground may afford recreational activity for people, but it will not be used unless the people *want* to use it. Many studies have shown that despite children playgrounds may afford the play activity by providing play equipments, they are abandoned by the children, while in other contexts, children may play in the streets creating their own physical affordances by having a high competence of imagination. Thus, the theory of affordances needs to be adjusted by involving more the subjective aspects of the users.[68]

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[68] In an analytical study of different studies of children's play,Beate Jansson noted that Dresel's study (1972) reported only 42% of observed play was recorded on playgrounds. It was the highest percentage in playground-related play compared with other observational studies. The other areas used for play were paved areas such as pathways, sidewalks, front yards,...etc. For more details about children's needs and preferences, see Beate Jansson, *Children's Play and Nature in an Urban Environment,* (ed. Peter Lang, New York: Frankfurt am Main, 1984).

2.6.3 The Adaptive Ecological Theory

The relationship between humans and the environment is better seen as a relationship between the *competence* of the users and the environmental *press*, that is governed by adaptive behavior. This relationship is well presented by Nahmow and Lawton in their model shown in (figure 2.1). Their suggested ecological theory posits that the individual operates best when the environmental press challenges moderately. If the environment offers too little challenge, the individual adapts by becoming lethargic and thus operates below capacity. On the other hand, it is possible that the environment is too stressful and the individual adapts by a total withdrawal.[69]

For our purpose, the lack of competence, can be not only physical disability (e.g. the elderly, the ill, children), but also can be a matter of socio-economic aspects that transforms a certain group to be "marginal."[70] The minorities in any social context have low competence, and thus, confront more press of the environment where they live. They have then a greater challenge of adaptability. Moreover, the competence of non-residents to use urban spaces may represent an environmental press for the residents. The unwelcomed users then have more competence than residents have, which needs prevents the latter to perform their desired activities that fulfill their needs. According to Nahemow

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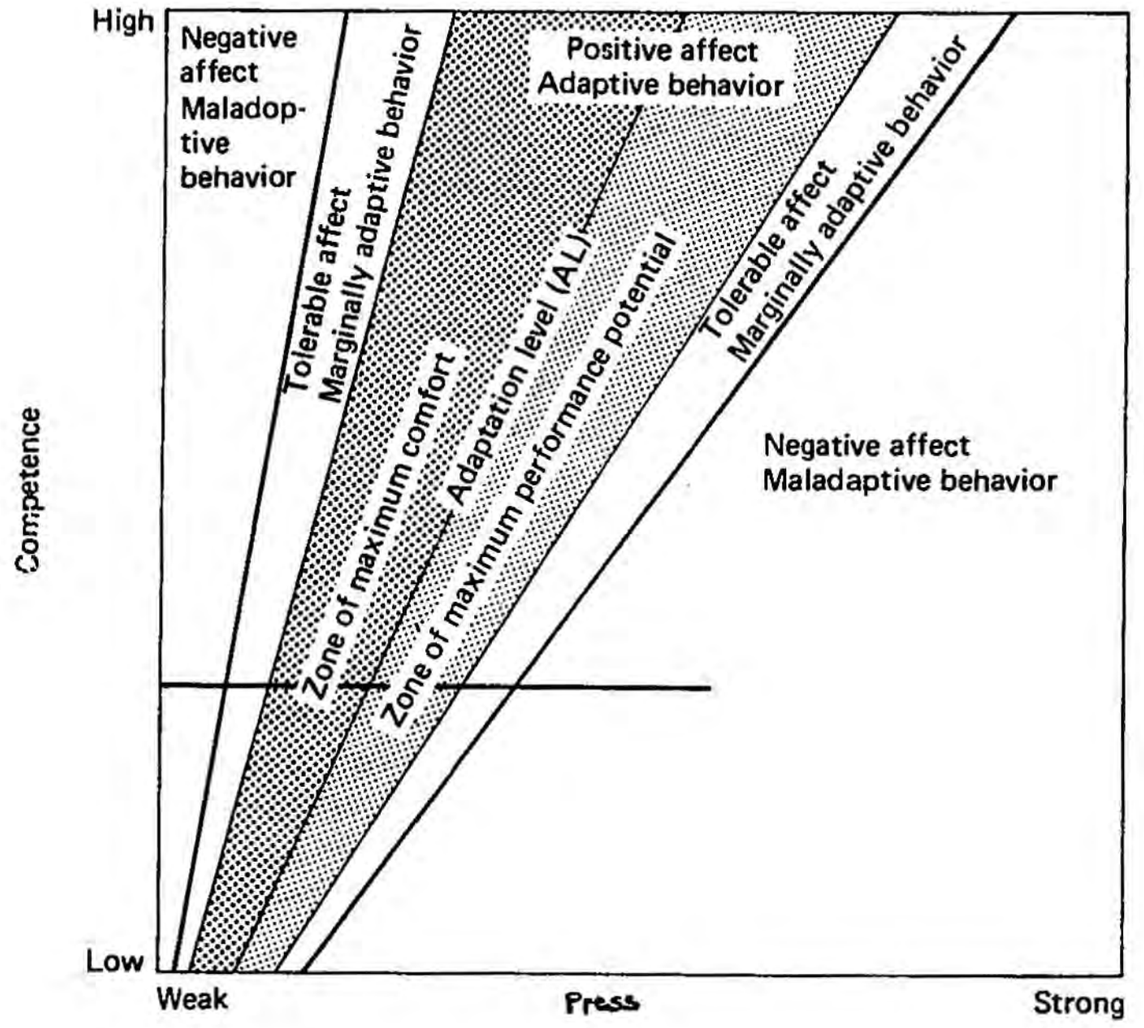
[69] L. Nahemow and R.Lawton, "Toward an Ecological Theory of Adaptation and Aging," in *Environmental Psychology: People and Their Physical Settings,* (ed. Harold M. Proshansky, William H. Ittelson, and Leanne G. Rivilin, New York: Holt, Rinehart and Winston, 1976), 315- 321.

[70] Amos Rapoport, *Human Aspects of Urban Form -Towards a man Environment Approach to Urban Form and Design,* Oxford: Pergamon Press, (1977).



(Figure 2.1) Graphic representation of an ecological theory of adaptation[71]

and Lawton, the individual's competence is provided for in many ways, such as intelligence, motor and perceptual ability, social tact. It can be added that competence goes beyond the individual's ability and enlarges to characterize the social group. People

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[71] L. Nahemow and P. Lawton, "Toward an Ecological Theory of Adaptation and Aging," in *Environmental Psychology, People and Their Physical Settings*, (ed. Proshansky, Ittelson, and Rivlin, New York: Holt, Rinehart and Winston, 1976), 317.

of a similar class are suggested to have more capabilities to cooperate, which enables the group to function from a start point of common interests, values, and objectives, forming a community sense. In low socio-economic class residential areas, high physical and psychological press of the environment is met by a high competence of strong social relations, and a sense of neighborhood, which is translated into a great social contact and alive residential spaces.

CHAPTER THREE

3 HYPOTHESES AND METHODOLOGY

According to Russel Jones, the phases of any social and behavioral research are referred to as description, theoretical elaboration, and verification.[72] The first stage of this research, a classification of residential spaces in the Egyptian context and an outline of the life-style of different socio-economic classes (discussed in chapter two) contributes to a description of the problem. Evolving practice-based theoretical and empirical research on behavior and spaces set the stage for formulating the research hypothesis. In this chapter, explanations of activities in relation to different physical settings are set forth that make behavior intelligible. The proposed explanations are the hypotheses of this study, and are latter verified in chapter four's field study.

3.1 Hypotheses

This study is based on the hypothesis that, the lower the socio-economic status of residents, the greater interaction between the residents and the physical setting of the street environment, according to, and depending on the configuration of space.

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[72] Russel A. Jones, *Research methods in the social and behavioral sciences,* Sunderland: Sinauer Associates, Inc.,(1985), 29.

The preceding statement is based on a the fact that a human being is a highly adaptive creature. Harold Proshansky expressed the adaptability of the human being as follows:

> *"Since man himself is one physical component of a total environment in any given setting, it follows that any attempt on his part to change his state must involve him, because he is also a goal-directed and cognizing organism, in interchange or interaction with other physical components of the environment."*[73]

On the one hand, man has the ability to accommodate his built environment to satisfy his needs. On the other hand, human beings are adaptable to environment conditions where they are not able to adjust their physical setting to fulfill their needs.[74] Adaptation of physical settings or user behavior depends on both the users' life-style and what is afforded by spaces to satisfy the required activities.

In order to identify a particular socio-economic class' user needs for a space, it is necessary to examine their environment and to translate their behavior and physical changes into needs. In other words, *the users' activities* clearly reflect their *needs*. According to Rapoport, the built environment provide a spatio-temporal framework for

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[73] Harold Proshansky, Ittelson, and Rivlin, "Freedom of choice and behavior in a physical settings," in *Environmental psychology: People and their Physical Settings,* ed. Proshansky, Ittelson, and Rivlin, New York: Holt, Rinehart, and Winston, (1980), 170.

[74] John W. Berry, "Cultural ecology and individual behavior," in *Human Behavior and Environment: Advances in theory and Research. Vol.4. Environment and Culture,* (ed. Altman, Rapoport, and Wohlwill, New York: Plenum Press, 1980), 100.

occasions and activities and to remind people what these activities are.[75] He suggested studying activity as a useful starting point for understanding behavior particularly since activity systems in space and time have been used by planners and environmental designers because they can easily be related to behavior setting systems.[76] Activities, however, can be useful to identify the users' behavior when considering the "*latent aspects*" as well as the "*manifest aspects*" of behavior. Therefore, through considering differences among apparently simple activities such as eating, sitting, playing, we can eventually get to more molar concepts such as life-style, images, values, and eventually, subcultures as they relate to built environments.[77] Activity studies deal with behavioral specifics not universals, and thus, the behavior in its global sens will be simplified to be studied. Although cultural differences will be neglected, they will be expressed by their manifest aspects. A vocabulary of determined activities and activity classifications (that serves the research goals) is necessary to understand the consequences deduced from the general hypothesis to compare different socio-economic classes' behavioral patterns.

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[75] Amos Rapoport, "Cross-Cultural aspects of Environmental Design," in *Human Behavior and Environment, Advances in Theory and Research, vol.4, Environment and Behavior*, New York: Plenum Press, 1980), 16.

[76] Amos Rapoport, *Human Aspects of Urban Form*, Oxford: Pergamon, (1977).

[77] Amos Rapoport, "Cross-Cultural Aspects of Environmental Design", in *Human Behavior and Environment, Advances In Theory And Research, vol.4, Environment and Culture*, (1980), 17.

3.1.1 Activity Classification

Behavioral studies classified types of activities in a diversity of ways. Some of the studies depend on the role of the urban spaces in classification. Some others count on the human needs as a base of categorization.[78] A classification of activities into two categories in order to fit the research objectives has been determined as follows:

"Active" Activities

The active type of activity is characterized by the presence of pedestrians in a space. They can be present to perform dynamic recreation activities (such as playing, running, strolling, sitting,...etc.), or non-recreational activities (such as using the public space for work, car wash,...etc.)

Some types of "*active" activities* occur more frequently in low socio-economic residential spaces and do not exist in high socio-economic spaces and are defined in this study as *private activities*. The term *private activities* derives from the explanation that "privacy" in a psychological sense, serves to maximize freedom of choice, to allow the individual to feel free to behave in a particular manner or to increase their range of options by removing certain classes of social constraints.[79] For example, a lack of floor area

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[78] See D. Appleyard, "Professional priorities for environmental psychology" in *Architectural psychology*, ed. Rikard Kuller, Strousbourg:Dowden, Hutchingon & Ross, Inc., (1973). Also see F. Stuart Chapin, *Human activity patterns in the city*, New York: John Wiley &sons, Inc., (1974), chapter two.

[79] Harold Proshansky, William H. Ittelson, and Leanne G. Rivlin, "Freedom of Choice and Behavior in a Physical setting," in *Environmental Psychology: People and their Physical Settings,"* New York: Holt, Rinehart and Winston, (1976), 173.

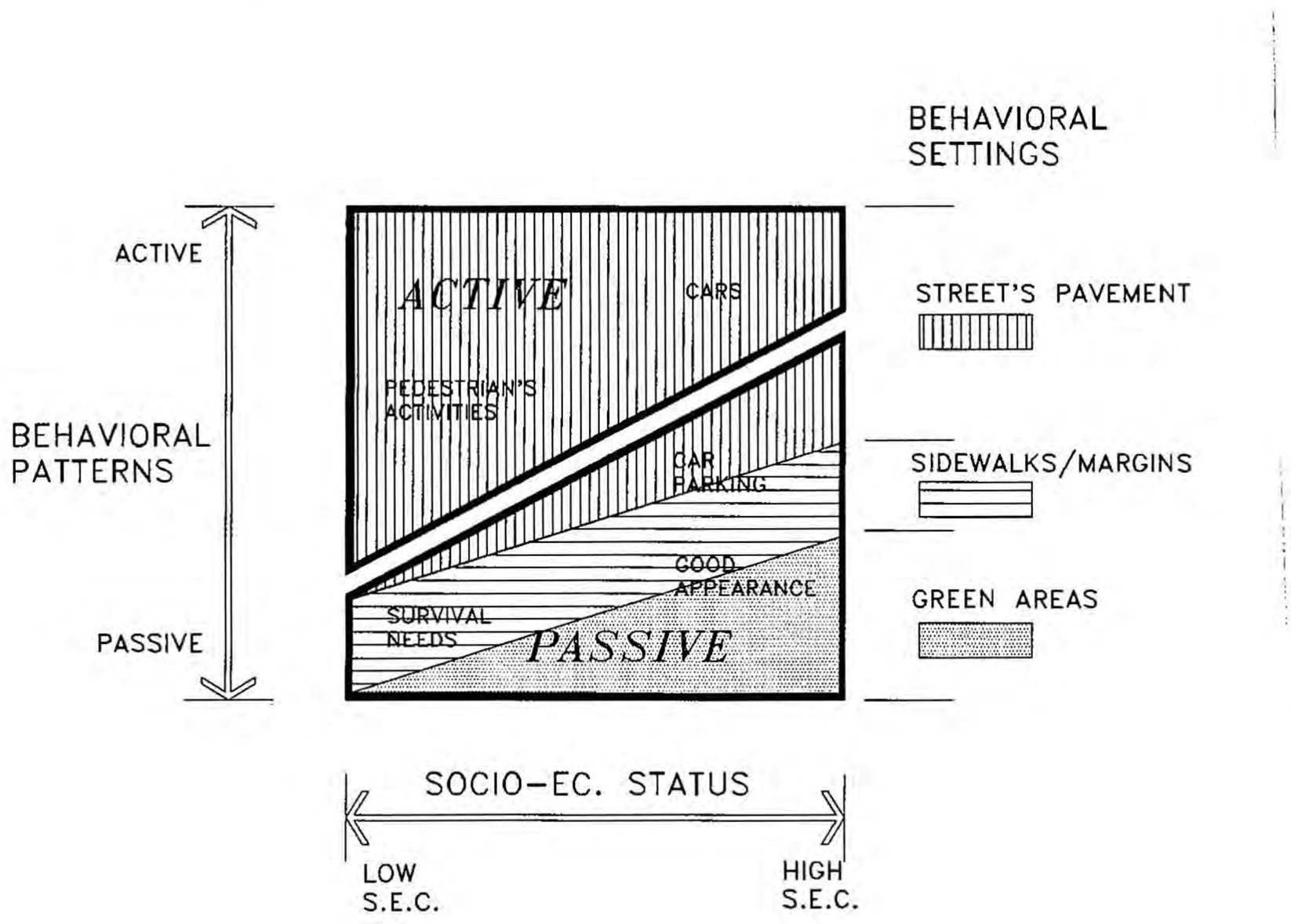
inside houses encourages some women in special contexts to do their housework before their front doors. Cooking, laundry, drying up clothes on ropes are activities that can occur in an outdoor space only if the users feel comfortable performing them. The street, in this case, is turned into a semi-private setting as an extension of the limited private range inside the users' houses. Thus, the "active" activity represent behavioral patterns that create a liveability in the space. It forms the animate environment in a physical setting.

"Passive" Activities

Passive activities do not require the physical presence of users all the time although they are to affect the space for cosmetic or functional objectives. Passive activities are based mainly on leaving a particular touch in the space that cause a physical change for a prolonged duration. A passive activity may be relatively temporary such as parking a car, and can be permanent such as building a flower box or planting trees in a public space. Unlike "active" activities which requires the presence of users in spaces while occurred, the "passive activities leave traces that indicates a performed behavior in the residential space.

The preceding classification of activities does not, in fact, demonstrate an explanation for what is going on in spaces, but it serves to read and express what is going on. The diagram in (figure 3.1) shows a model of human behavioral patterns according to the classification of activities into active and passive activities. The relationship between socio-economic status is represented on the abscissa, and behavioral pattern is shown as portions of active and passive activities of 100% of total activities on the ordinate. The

diagram emphasizes the active activities as we travel left on the scale of socio-economic status, and accentuates the passive ones as we travel right. The behavioral setting, represented in tones on the areas of activities is analyzed into three components that form the locus of different behavioral patterns. Streets' pavement as the major behavioral setting in low socio-economic residential areas, is used mainly for "active" activities such as pedestrian uses for lower socio-economic classes, while it is used in the high socio-



(Figure 3.1) Diagram showing the hypotheses of the relationship among: socio-economic status; behavioral settings; and behavioral patterns

economic residential areas for car circulation. It is also used for passive activities such as parking cars. Margins of spaces, such as sidewalks or greenstrips are usually occupied by passive activities. They take a form of survival needs for low socio-economic class areas or good appearance for higher classes. Green areas are behavioral settings provided more in high socio-economic areas, and shrink as we move toward lower socio-economic status as shown in the diagram.

3.1.2 Propositions

The interaction between the needs and activities of different socio-economic classes and the characteristics of the physical settings can be seen by itemizing the general hypothesis into more explicit, explanatory, and testable assumptions. These assumptions define socio-economic and physical factors in such a way that the problem can be clearly defined and, consequently, to decide the method to study it further.

Socio-economic Status Effect on Users

Socio-economic status affects the users' behavior in dealing with their residential spaces as follows: higher socio-economic class residential spaces are characterized by transpiring "passive" activities, while lower socio-economic class residential areas are distinguished by "active" activities.

The last statement is built on a proposition that street spaces are used mostly by pedestrians in low socio-economic areas, while in higher socio-economic areas, the presence of human activities is less intense because people mostly use their private cars for transportation, even for performing their short trips of daily shopping. A lack of floor

space in low income housing apartments, leads to increased activity in street spaces by the people of lower socio-economic class. In addition, the life style of low socio-economic users in a high density urban spaces allows a great social interaction. This point can be summarized as the proposition that high socio-economic class people do not spend as much time in their spaces as lower socio-economic class people do. This observation concerns not only the duration and intensity of individual activities occurring in street spaces, but also it concerns how long a space is occupied by activities during the day time. The street space in public housing projects and informal settlements encloses activity until late at night, while rich areas spaces have no activity late at night. One can see the residents in popular residential areas socializing at the front of their houses, interacting and spending most of their time outside instead of imprisoning themselves in their small apartments.

(Figure 3.2) Pedestrians on a bus stop sharing street with cars.

Encroaching on sidewalks or some parts of public spaces when available is common in all Egyptian socio-economic class residential areas. Most times sidewalks in Egyptian streets do play any role but for walking. They are almost always encroached on to fulfill different sorts of users' needs which are more "useful" than *walking*. Walking occurs on the street's pavement sharing the space with vehicles, especially in light traffic conditions (figure 3.2).

(Figure 3.3) Extensions of buildings taking place on marginal immediate spaces

Encroaching on public spaces would be achieved by any of the socio-economic classes to use to fulfill their needs. It is considered a passive activity since it alters the space's configuration and can be observed by its traces. For higher socio-economic classes, the encroached areas are used for passive activities such as planting a garden or parking cars in a suitable place. The encroachment would exist in lower socio-economic areas as well, using public spaces to fulfill some needs having a *essential* rather than ***aesthetic*** meaning. In other words, the encrochment on spaces for lower socio-economic people fulfills a more critical level of human needs. For such a class, the extensions of the residential buildings are accomplished having a purpose "*to live in*" (e.g. enlarging the apartments, as in figure 3.3), or "*to live by*," (e.g. building a workshop to increase their income,as in figure 3.4).

Where generous space is available, residents tend to compensate for their limited indoor space by building extensions for their apartments (whatever the floor) using the immediate public space. In some other cases, it is more preferable for the residents of the ground floor to build a workshop or a store to improve their income. One who does not have the resources to build may encroach on a part of public space to raise birds or plant vegetables. Many studies refer to this habit as a cultural factor of rural to urban migration. We assume that such a phenomenon is related to the residents' income level more than to a cultural factor. The concept that rural people are oriented to be productive and that urban people are oriented towards consumption should be revised in the contemporary poor economic circumstances of Egyptian urban life.[80]

(Figure 3.4) Aworkshop building extension for auto repair in Ain El-Sira public housing

[80] See, for example, Sayeda Saad, *Al Hejra Al Dakhelyah ila Medinat al-Quahira*, Cairo: AL-Azhar University, (1976).

Socio-economic status is a surrogate for important factors of occupation and education, in addition to the income. To be "white collar" or "blue collar" - employees or workers, is assumed to lead to a significant variation in the performance of behavioral patterns. Employees and workers may have similar income, especially for low and medium income classes, depending on the occupational position for employees, and the market position for the workers. The difference between the two categories is that a white collar employee, usually educationally certified, may be more experienced in dealing with rules and society regulations; while a worker depends on his skills to find a job and almost always deals with low ranked people in society. White collar workers in different sectors are characterized by earning a constant income and using discipline in spending it, while blue collar laborers in masonry or in factories are characterized by a variant income in an undetermined time, depending on the demand of the market for his specialty.

It is assumed that white and blue collar differ regarding their behavioral patterns in the urban residential spaces. Violence and vandalism in the residential spaces most often occur by blue collar workers' families. It may be explained by having a better chance to social contact, a more interaction with the physical settings where they live, a harder life-style, and a lower education. On the other hand, white collar have different forms of deviance that does not necessarily appear directly in the physical environment[81].

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[81] Crimes are committed by the middle and upper classes as well as the lower, but they are likely to be crimes of different kinds. The "white collar crimes" are often crimes committed by persons in positions of soceal responsibility. They include violations of trust associated with high status positions, as well as all forms of crime committed in the normal course of otherwise legal occupations. Tax evasion, embezzlement, and misrepresentation in advertizing are some examples of whit-collar crimes. See Reece McGee, *An Introduction to Sociology*, Holt Rinehart and Winston, New York, (1980), 463-469.

Although it is difficult to specify residential areas as to be completely inhabited by specific class, it is important to consider the occupational and educational characteristics of the majority of the tenants in the research method to identify the social dimension. The table 3.1 shows a relationship between housing types and the tenants characteristics.

Physical Factors as Activity Regulators

The preceding socio-economic status factors affecting behavior in residential spaces cannot be examined without considering the significance of the physical settings. According to Russel, "it is necessary to be precise about the conditions surrounding behavior because it is the functional significance, or meaning, of behavior that is important. The reason why something was done, the motives behind the action, are crucial; and that makes research on human behavior more difficult and challenging. On general level behavior is usually seen as being a function of both the person and the situation in which the person is immersed."[82]

The physical characteristics of an urban open space that constitute the main criteria for this study are the following:

- *Size, shape , and characteristics of space.*
- *Volume of vehicular traffic*
- *Natural features.*
- *Climatical conditions*
- *Furniture and lighting.*

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[82] Russel A. Jones: *Research methods in the social and behavioral sciences,* Sunderland: Sinauer Associates, Inc., (1985), 37.

INCOME CHARACTERISTICS		HOUSING TYPES						
		INDIVIDUALS	COOPERATIVE SOCIETIES	GOVERNMENTAL	BANK OF CONSTRUCTION	HOUSING COMPANIES	ORGANIZATIONS	INVESTORS
B	VERY LOW							
	LOW\VARIABLE							
W	LOW\STABLE							
	MEDIUM\STABLE							
O	MEDIUM\VARIABLE							
	HIGH\VARIABLE							

B	BLUE COLLAR
W	WHITE COLLAR
O	BUISNESS OWNERS

(Table 3.1) The relationship between the types of occupation and types of housing[○]

[○] Abdel Mohsen Barrada: "Housing Systems- An Approach to Housing Policies," in *Housing International Conference- Policies & Housing Systems for Low Income Communities*. General Organization for Housing and Planning Research. Cairo, (1992).

The volume of vehicular traffic affects the behavior in residential spaces especially that the street is considered a main part (if it is not the only part) of that residential space. Heavy traffic on a street will keep pedestrian activity from occurring on the pavement. Moreover, users are psychologically affected by the traffic volume. Appleyard has shown that people have more feelings of territoriality towards light traffic streets than those who live in heavily travelled streets.[83] Based upon Appleyard's results, traffic volume will be examined in this study as a factor affecting street use, particularly when the street includes a green area either as a median or as an adjacent green strip. A heavily trafficed street separating a green area from residential buildings, forms a barrier between residents and this green area. In addition, this barrier transforms the green area to be more public, which consequently encourages non residents to use it mostly for recreation.

The configuration of residential spaces can be an effective factor that affect the users activities performance. The area or width required in a space is a determinant factor to meet any activity requirements to occur. For example, playing soccer needs a spacious area for taking place. The degree of enclosure of a space has an influence on the behavior's performance as well. It is not expected to use an enclosed space exposed to the neighbors' sight as a recreational area for a family to relax (i.e. *static recreation*). On the other hand, an enclosed space may be more convenient for young children to play safely (i.e. *dynamic recreation*).

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[83] Donald Appleyard *Livable streets, protected neighborhood,* Berkeley: University of California Press, (1981).

The natural features and landscape elements are highly appreciated by humans whatever their socio-economic status. The difference between socio-economic classes is that the way they benefit these features. For high socio-economic class, green and water features fulfill an aesthetical need. The high rise buildings on the nile banks are too expensive for their affordances natural scenes. For low socio-economic class, green areas and the Nile river are important for dynamic recreation as well as for view.

Rapoport declared that physical environments, can be supportive or inhibiting activities. He stated that a physical setting can not generate a behavior, but it can effectively block behavior.[84] However, the phenomenon of recreation on green strips and streets' medians which are designed mainly for beautification, thereby generate a behavior.

Natural features can be presented in a space as one of its components (such as green areas), and can be adjacent to the space (such as a panorama of the Nile river). High socio-economic classes may inhabit areas that provide natural features for living an every-day-life enjoying a good view (*passive activity*). Low socio-economic class people, enjoy these features too, but only if they move physically to areas where such activity is available for recreation (*active activity*).

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84 Amos Rapoport, "Pedestrian street use: Culture and perception," in *Streets as public property, Opportunities For Public/Private Interaction in Planning and Design,* (ed. Anne Moudon and Pierre Laconte, Seattle, Wash: College of Architecture and Urban Planning, University of Washington, 1983), 7.

Climate is an important factor that determines what activity can occur and when. Whyte found that sun attracts people to a space. People enjoy sitting in New York city plazas when the plazas are exposed to the sun. In a hot country like Egypt, especially in Cairo where urban spaces are overburdened with crowds of cars and pedestrians, sun disinclines usage. In Cairo, most optional activities in an urban residential space occur after sunset.

Furniture and lighting may have an influence on the way a residential space is used. They attract some activities to occur, and sometimes discourage other activities' occurrence. Since climate is proposed to be a major factor affecting behavior, it is anticipated that spaces can be used more intensely in the evenings than in the mornings and afternoons. A well lighted street attracts people to use it at night for a particular activity; while a poorly lighted street may be abandoned at night. Furniture such as benches and seats represent, as well, a significant factor that encourages people to use a space, especially for recreation use.

3.2 The Study's Methodology

In order to examine the preceding assumptions, concerning the effect of socio-economic status or the physical setting on behavioral patterns, a variety of contexts' methods within the city of Cairo will be tested. This study is based on a multiple-method survey design because there is no ideal research technique in the behavioral sciences. Any technique for gathering information has its shortcomings. Although each method has its limitations, they all contribute to an understanding of how residential spaces work. This study is mostly based on "*ethnographic research.*"

Ethnography generally concerns primitive societies. More recently, ethnographers have turned their attention to the study of contemporary peoples in special settings. It depends on a diversity of observational methods to gather real information about certain groups of people. According to Amos Rapoport, the observer looks, listens, asks questions, and records what is seen and heard. Ethnography is considered in the social sciences as qualitative field work because it combines several research techniques, including interviews, observations, and physical trace measures."[85]

Although my time spent in the field was very limited, compared to prolonged periods that might be spent by ethnographers, it benefits from the fact that I was born and raised in Cairo. Meanwhile, it was important to achieve the study's observation as an outsider.

3.2.1 Key Persons

In Cairo, an observer can meet various difficulties. One significant problem was to be introduced in the areas of study. It was a common technique in all the areas of study to arrange beforehand to have access to certain people in order to make an observation.

The approach to contacting people varied according to the class composition at the area. For low socio-economic residential areas, it was necessary to have assistance from somebody who lives in the area, and is known to the people, or trusted by them.

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[85] Robert Sommer and Barbara B. Sommer, *A Practical Guide to Behavioral Research: Tools and Techniques,* second edition, New York: Oxford University Press, (1986), 35-36.

Under the ideal conditions, this person might have a strategic place to use for observation. If not, he helped to introduce us to the right person. An environment of amity with the informants or the residents was necessary.

For medium and higher socio-economic classes, finding a key person was not a problem because there was no difficulty in explaining the purpose of observation or in acquiring their acceptance. Residents in these areas did not care as much as those of the residents of lower socio-economic class areas about the study process.

3.2.2 The Observational Method

In this study, daily observations provided the major information on who does what, when, where, and how? This technique measures what people do in dealing with design features, not what they say they do. The strength of the observational technique is that it is possible to record and to measure the behavioral patterns in the actual setting and is ideal for studying common place nonverbal behavior, such as gesture or posture, in which people may not be conscious of how they act.

Theoretical methods had to be developed to match the Egyptian circumstances to the different socio-economic classes. A time schedule has been prepared to observe different contexts in a limited time.[86] An observation checklist was prepared and

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[86] A difference between three types of observational procedures has been distinguished: casual observation, participant observation, and systematic observation. Casual observation is done without prearranged categories or a scoring system. It refers to visual inspection of what is happening. The second type, the participant observation is where the observer becomes a part of the events being studied and has a role in the setting. The third type is the systematic observation used in this study when employs a

(...continued)

observed activities were recorded on behavioral maps. Categories on the checklist include those items of behavior that occur naturally in the situation and can be observed and recorded. A map could be filled by information every quarter of hour. A pilot test for this method has examined in a small park located in 23rd and Pine streets, in Philadelphia. It was a quiet place lightly used by a moderate number of people. Coding behavior and activities facilitated recording process of what was happening in the garden. The test revealed that one observer cannot write down too much activities in a crowded area of study. A team of observers could do such study by charging each individual to take notes on a category of activities. Instead, I used a video camera technique to record interactions which were transcribed later. An advantage of using a video camera is that its built-in microphones helped to monitoring the audio quality of the physical setting as well as the visual aspects.

3.2.3 Observation Vantage Location

Any socio-economic area includes different types of residential spaces or streets. In this study, segments of streets or spaces that could be videotaped have been selected to represent the activities undertaken by the residents of the subject residential areas. A selection of particular segments of streets within the study's residential areas helped to apply a video recording by fixing the video camera to be directed to these specific areas.

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[86] (...continued)
scoring system and prearranged categories which are applied consistently (Sommer and Sommer, 1986, *chapter 2*).

Several considerations determined the choice of these spaces. First, the usual activities occurring in the different spaces had to be represented. Second, a vantage point where a video camera could be mounted was necessary.

A fully accurate representation of all the possible activities that can occur in the various spaces of the residential areas needed more resources than were available for this research. As Sommer delineated observation, this method requires more patience and luck than any other method. There was no certainty about who would appear and what would happen.[87] Some activities occurred in an adjacent area to the specified area of study and did not appear in the range of the video-camera frame which was adjusted for a time-lapse photography. Such missing recorded materials should not affect the study results and were compensated for by a general observation for other spaces in the same residential areas. But the method served as a good indicator of the occurrence of most activities.

3.2.4 Photography Problems

In the Egyptian context, photography is always suspected. Sensibility concerning photography varies according to socio-economic status. In general, no one welcomed being photographed by a stranger for an uncertain reason.[88] The residents of higher socio-economic class areas did not care as much as the lower socio-economic classes.

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[87] Sommer and Sommer, *A Practical Guide to Behavioral Research*,(1986), 35.

[88] People do not like taking pictures for them while they are not aware of being watched. However, when informed, they like to be photographed.

Photography in compact physical settings and narrow spaces among buildings in lower socio-economic classes more noticeable by the residents which restricts the photography process. In addition, the tenants of these areas, who feel responsible to protect women of their area from any intruder, suspect any photography that include a woman, which can cause serious problems.

Each area of study had photographic challenges. Hidden observation was achieved in some areas by using a vantage point above the subject's eye level. Zeisel called the distant observer who is not noticed by participants in physical setting a *secret outsider.*[89] I found, however, that by choosing to record only an overview of a physical space, I would miss some indications of how individuals behave. To catch some of these dynamic attributes of behavior, I used a camera with a telephoto lens from the point of observation to supplement the video camera, or I took the video camera to ground level, thereby becoming a *recognized observer*.

In other lower socio-economic areas like "Abou Qatada," it was impossible to be a secret outsider because the video camera could not be hidden. Eyewitnesses (the residents using the urban residential spaces) remained watching me and my companions since we came in the street carrying the video camera bag. I introduced myself as a researcher and explained my study in a comprehensible way to people.

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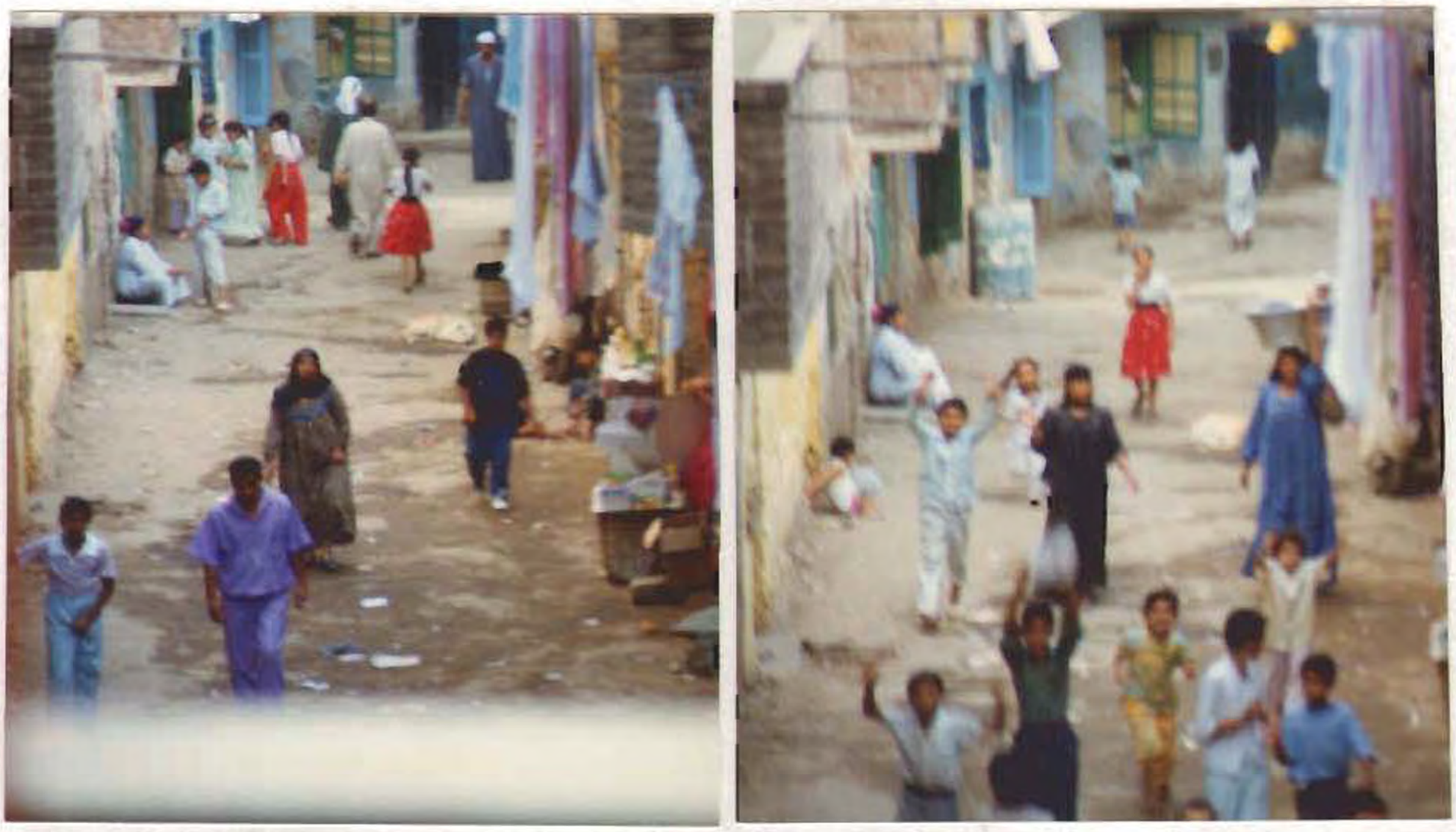
[89] John Zeisel: *Inquiry by Design: Tools For Environment Behavior Research,* Monterey, Calif.: Brooks/Cole Publishing Company, (1981), 117.

A disadvantage of a *recognized outsider* position is what is known as the *Hawtherne effect*.[90] It is about changing the behavior when being watched. Changes in behavior stemming from our presence, we had to spend enough time at a research site that people took us more for granted (Figure 3.5).



Observation of normal behavior in the area of study of Abou Qetada

Behavior is affected by observation in the same area

*(Figure 3.5) Behavior **should not** be affected by the method of observation*

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[90] The *Hawtherne effect* derived its name from the now-classic environmental experiments at the Western Electric Company's Hawtherne Plant in Chicago, where Roethlisberger and Dixon (1939) wanted to determine, among other things, how lighting levels affected worker's productivity. They carried out their studies as recognized observers. When they raised light levels, production increased. When they lowered light levels, production increased also. They concluded that consciously being under a microscope changes workers' behavior. (Zeisel, 1981), 117.

The video camera was installed on a tripod on an apartment terrace visible to all. We used to turn the camera on and to leave it while we were away. Using this technique, people did not notice that we were videotaping their activities. This technique did not work for the next day when we tried to repeat a video photography failure in the first day because the children understood our method and then changed their behavioral patterns. Since the behavior was affected by the way of observation, it was useless to keep on applying the observation any more. The noise caused by children in the street started to generate more serious troubles by annoying the adult residents.

From the point of view of ethics which confronts sociologists or behavioral observers regarding whether secret observation constitutes an invasion of privacy, is accepted commonly that behavior in public can be observed secretly so long as anonymity is preserved.[91] This technique was applied without problems in medium and higher socio-economic class areas, since the residents' activities in spaces were very limited. But in the case of streets where "*private*" activities occurred, such as where the street space was considered a residents' private property or as an extension of their homes, permission was obtained from people to take photographs before starting observation, particularly if the

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[91] Robert B. Bechtel and John Zeisel, "Observation: The World Under a Glass," in *Methods in Environmental and Behavioral Research*, (ed. Robert B. Bechtel, Robert W. Marans and William Michelson, New York: Van Nostrand Reinhold Company Inc., 1987), 19.

picture frames included *women*.[92] For high socio-economic class areas, it was not a problem of ethics as much as avoiding being suspected by the authorities when watching an important person's residential area. Although advance permission was issued by the national security authorities, photography was sometimes risky.

3.2.5 Time of observation

Any observation covers a slice in time and can never trace the full life history of an environment.[93] Activities occurring in residential spaces show marked differences in seasons. Observation should be made during times representative of each season. In practical terms, this is almost never done because results will not appear for a year. In this study, summer, as the most critical season for using public spaces, was chosen for observation. Within the chosen season, various times should be sampled, to better represent behavior in general. In this study, a time schedule was established to manage an observation of different areas during time samples that represent an entire day. Short term observation was useful for several reasons:

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[92]According to Howard Becker, Publication of field research findings often poses ethical problems. It is important to keep a study distant to record items of fact of conclusions that are not necessary to one's argument of that would cause suffering out of proportion to the scientific gain of making them public. *See* Howard S. Becker: *Sociological Work: Method and Substance,* New Brunswick, N.J.: Transaction Books, (1977), 105-120.

[93] Robert B. Bechtel, Robert W. Marans, and William Michelson, *Methods In Environmental and Behavioral Research* (1987), 16.

First, the presence of a stranger for any reason in a residential area is suspicious, and sometimes not acceptable by residents, especially in lower socio-economic class areas.

Second, an observer may annoy the assistant owning the place used to observe from. Nobody can spend too much time helping a study that will not serve him directly.

Third, the risk of exposure to danger is minimized when limiting the time of observation, especially when most people are not familiar to researches and studies done by this method.

Fourth, it was discovered by Wright,[94] that intense observation tires the observer within about twenty minutes. Therefore, observation should be spaced so as to increase observer accuracy.

Therefore, it was *necessary* to minimize the time of observation to three distinctive hours representing the whole day, one hour in the morning, the second in the afternoon, and the third in the evening.

Another methodological question was whether to study weekends. It is assumed that residential spaces have different characteristics than other public spaces. Residential spaces have no noticeable difference in use between weekdays and weekends in summer time when children are on school vacation. Intensity of use in residential spaces only varies if there is a recreational function.

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[94] Ibid., 17.

3.2.6 Observing Physical Changes

Passive activities, as described in chapter two, are the activities that occur in residential spaces and cause physical changes in residential open spaces. They are not produced at the time of observation to be examined, but reflect the physical appearance of spaces. In order to study how people interact with their physical settings, it was necessary to observe the physical traces of some activities that reflect a part of the residents' needs. Traces help environment-behavior researchers infer how an environment evolved, what decisions its designers and builders made about the place, how people actually use it, how they feel toward their surroundings, and generally how that particular environment meets the needs of its users.[95] Sommer used physical trace observation to study the impact of furniture placement in a mental-hospital ward and corridor (1969). An arrangement of chairs side-by-side in rows against walls, was changed by patient's relatives and friends to smaller face-to-face groups. The custodian's attitudes toward neatness and belief that furniture ought to be arranged for efficient cleaning and food service did not match with patients' behavior and needs.

Therefore, any change in the environment by the users indicates what their needs are, and should feed back designers' decisions. In this research, observing physical changes provided rich impressions and was highly illustrative to know about *passive activities*, and it helped to identify how different socio-economic classes present themselves.

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[95] John Zeisel, *Inquiry by Design: Tools For Environment-Behavior Research*, (1981), 89.

3.2.7 Interviews

Besides observation, informal interviews uncovered additional information about the users of spaces. For example, when applying the observational method to record physical traces, it does not clarify too much the *cause* of changing a physical setting.[96] In this study, an *unstructured interview*[97] added a supplementary perception to information gathered by observing residential spaces. As a known observer, one has a license to ask a great many questions that can elicit information far beyond what can be known only by looking and listening.

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[96] For example, in a brief evaluation of a housing project in Roxbury, Massachusetts, Zeisel found large, well-kept flowering shrubs in residents' backyards. At first he falsely assumed that residents beautified their small yards because they cared about the appearance of the project and wanted more scenic vistas. In later interviews with residents he found that shrubs had been planted years before in response to a management-sponsored competition for the best garden. A closer second look revealed that even good-looking plants in the backyards had been much neglected. *See* John Zeisel, *Inquiry by Design: Tools For Environment-Behavior Research,* (1981), 91.

[97] An interview constructed of questions and pre-formed answers is often called a "*structured interview.*" Such a device is also known as a "*scheduled interview*" or "*questionnaire.*" A flexible strategy of discovery is termed an *unstructured interview*. Its object is not to elicit choices between alternative answers to pre-formed questions but, rather, to elicit from the interviewee what he considers to be important questions relative to a given topic, his descriptions of some situations being explored. Its object is to carry on a guided conversation and to elicit rich, detailed materials that can be used in qualitative analysis. *See* John Lofland *Analyzing Social Settings: A Guide To Qualitative Observation and Analysis,* (1971), 76.

3.2.8 Informants

It often happens that observers, become more friendly with some members of the setting than with others. The *key person* and the persons who helped find vantage point of observation were often likely to cast themselves in the role of helpers. They volunteered information and were concerned that the work went properly. Developed, relatively adapted, and involving personal attachments, such persons are called *informants.*[98] By extending the range of observations, informants were extremely helpful. Typical and recurring questions included:

Who is he or she?
What does he or she do?
What do you think he or she meant by that?
Why is that done?
Why did he or she do that?
What happens after.....?
What would happen if.....?
What do you think about.....?
Who is responsible if.....?

Such questions helped to explain much of the people's behavior. Other interviews with users of the physical setting helped avoid the error of mistakenly distinguishing the users' identity. Questions for this purpose were:

Are you a resident of this area?
From where did you come?
What is your Job?
Do you often come here?

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[98] John Lofland *Analyzing Social Settings: A Guide To Qualitative Observation And Analysis,* (1971), 111.

3.2.9 Behavioral Maps

Using a video-camera recording is an effective way to document. From White's experience one of the significant users of this method, the time to see the film frame by frame is the critical point in the whole process.[99] To repeat time lapse photography does not save time, it stores it. There are so many bits of information as to be confusing, and, by looking at everything, we may see nothing. To evaluate the material that I have, it was useful to simplify the data into categorized activities and to illustrate them on behavioral maps. Some activities are easy to evaluate such as *static activities* that occur within a certain space and its time of occurrence is easy to measure. Other activities are more difficult to record such as *dynamic activities* like walking through the space. This activity could be marked by number of persons who traversed the space according to their sex distribution and age on the margin's of the map.

This methodology, in general, helped to achieve the field study successfully. The different characteristics of the areas of study required some changes in the general techniques according to the observational situation. Thus, one cannot apply a same method in details for two different contexts. In addition, in practical terms, any method cannot be completely determined in advance and is always subject of adjustment to the real context.

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[99] William H. White *The Social Life of Small Urban Spaces,* Washington, D.C.: Conservation Foundation, (1980), 109.

CHAPTER FOUR

4. FIELD STUDY

The last chapter discussed the study's hypotheses concerning the interaction between human behavior of different socio-economic classes, and the physical setting configuration. This chapter describes the field study that has been conducted in Cairo to examine the hypotheses based on a multi-method technique delineated in the last chapter.

The residential areas selected according to a two dimensional matrix. The first dimension is socio-economic status which is classified into three different levels: low, medium, and high socio-economic class residential areas. The second dimension is the form of urban patterns which differentiates between separated buildings with generous urban open spaces, and attached buildings enclosing more compact spaces. The study focuses on limited observable sites in seven residential areas that have been selected to represent this variety of built environment prototypes. The method was applied to observe seven particular spaces during the summer. Seven aditional spaces within the same areas have been observed in the winter to check the generalization of the behavioral patterns of the selected areas and to add a new perspective of the influence of the factor of the seasons upon the active activities. A comparison among them enriches the analyses of different effective factors latter in the study results. The seven residential areas are:

1- Ain El-Sira public housing (low socio-economic class).

2- Abou Qetada informal settlement (low socio-economic class).

3- El-Ettehad Square (medium socio-economic class).
4- Degla housing project (medium socio-economic class).
5- Heliopolis (high socio-economic class).
6- Osman Towers (high socio-economic class).
7- Gameat El-Doual Street (high socio-economic class).

The first six residential areas present three socio-economic classes, where each class is presented through two different types of urban form. The physical settings are distinguished by different characteristics (e.g. separated or attached buildings, the degree of enclosure, the building height, and the density of population).

4.1 Ain El-Sira

The Ain El-Sira public housing project was built in 1959 for low income people by Ministry of Housing and Reconstruction (M.O.H.R) working through the Governorate's housing and reconstruction administrations. It was funded from the state budget for this purpose.[100] This project represents several projects carried out in poor districts of Cairo such as Zainhom, Imbaba, and Shubra El-Kheima.

4.1.1 The Configuration of the Physical Setting

The project is a five-story housing as originally schemed, but have been "completed" by the users later. The physical pattern consists of separated blocks of buildings with generous public space in between. The buildings are served by local paved

[100] *Housing in Egypt*, Report of The Egypt Study Visit by Staff and Students of the Courses in Housing For Developing Countries, School of Architecture, University of New Castle upon Tyne, (ed. A.D.C. Hyland, A.C. Tripple, and N. Wilkinson, 1984), 10.

streets. Some have heavy pedestrian traffic and public transportation, while other streets are relatively quiet. The buildings are set back from the streets leaving a strip that was originally supposed to be green, but instead, it was left dusty and without maintenance.

The most striking aspect of this project pertains to the high degree of private building additions at the expenses of public space. One is able to look at the scheme not as a simple public authority rental housing, but as a multi-story core housing. The original blocks have been changed in different ways. Some residents added a sixth floor in brick, tin or wood. Horizontal extensions may take a form of an additional room, a shop, or a workshop on the ground floor. Multi-story extensions took place by users to extend apartments' internal space. In general, the built extensions or privatized gardens look ugly because of the residents' inability to maintain the changes (figure 4.1).

(Figure 4.1) Multi-story extensions in Ain El-Sira

The Ain EL-Sira project's maintenance is ignored by the authorities for a long time. The overflow caused by the blocked sewerage network is a normal scene in many of Ain El-Sira streets, which reflects the deterioration of the infrastructure. The uncollected garbage from the public containers, which were full over and spread around, shows an inefficiency of the public services for the area.

4.1.2 The Behavioral Patterns in Context

In order to establish an approach to study the Ain El-Sira area, prior visits have were conducted. These visits revealed useful information about the social conditions of the residents. The people living in that area mainly belong to the low bureaucrat class, but most of them have extra jobs that place them among the working class to improve their income.

Ain El-Sira is not fully a *baladi quarter* - or popular area.[101] The openness of the space among the buildings makes the area loose its community sense, relative to the back streets (hara). The percentage of white collar workers and the openness of the physical settings does not allow an intense socialization which best known for *"awlad el-balad."* The neighbors were well known to each other, but a family's deep relationships were limited to just few neighbors.

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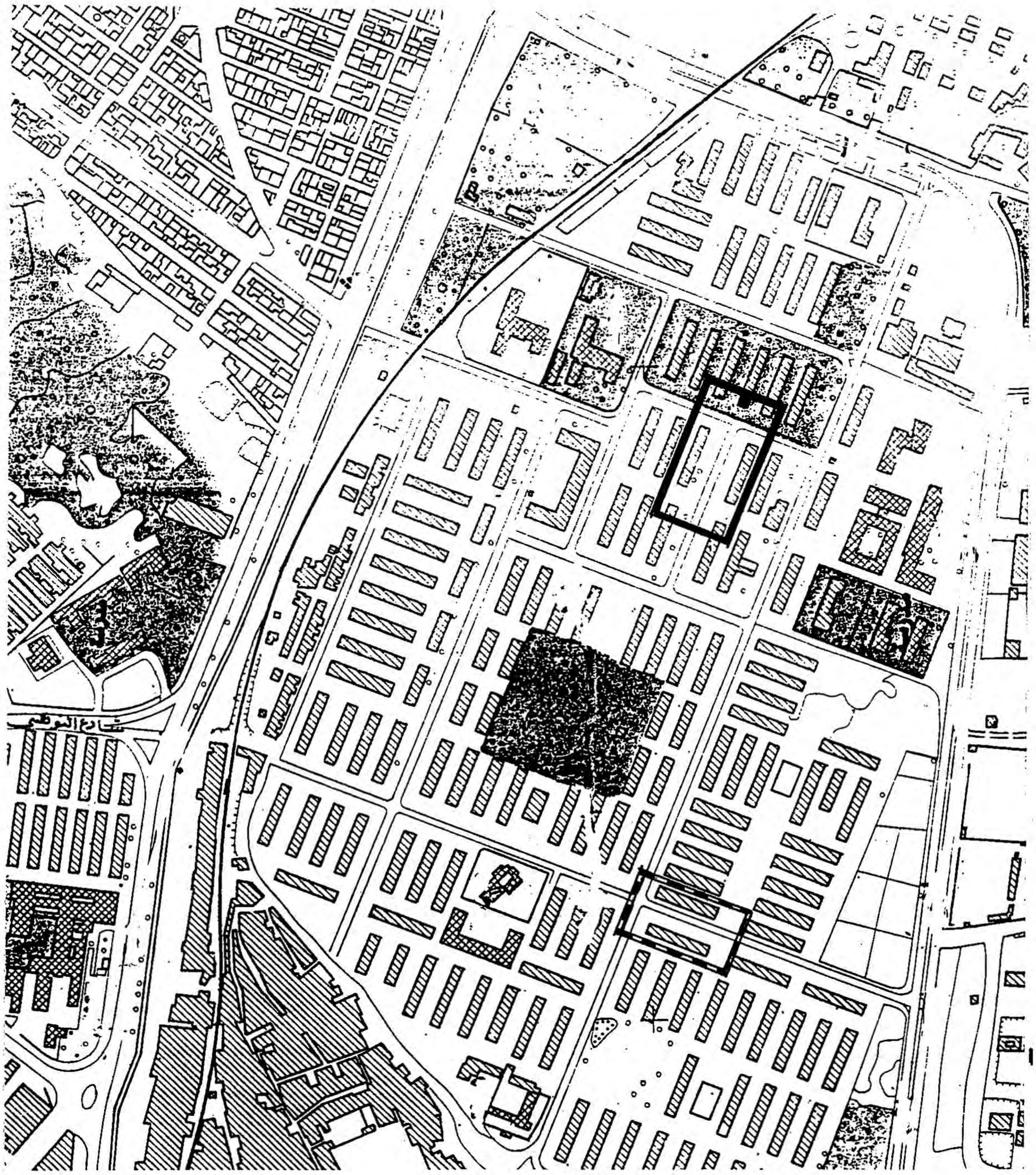
[101] See Chapter 2 for a description of "baladi" and "ibn el balad."

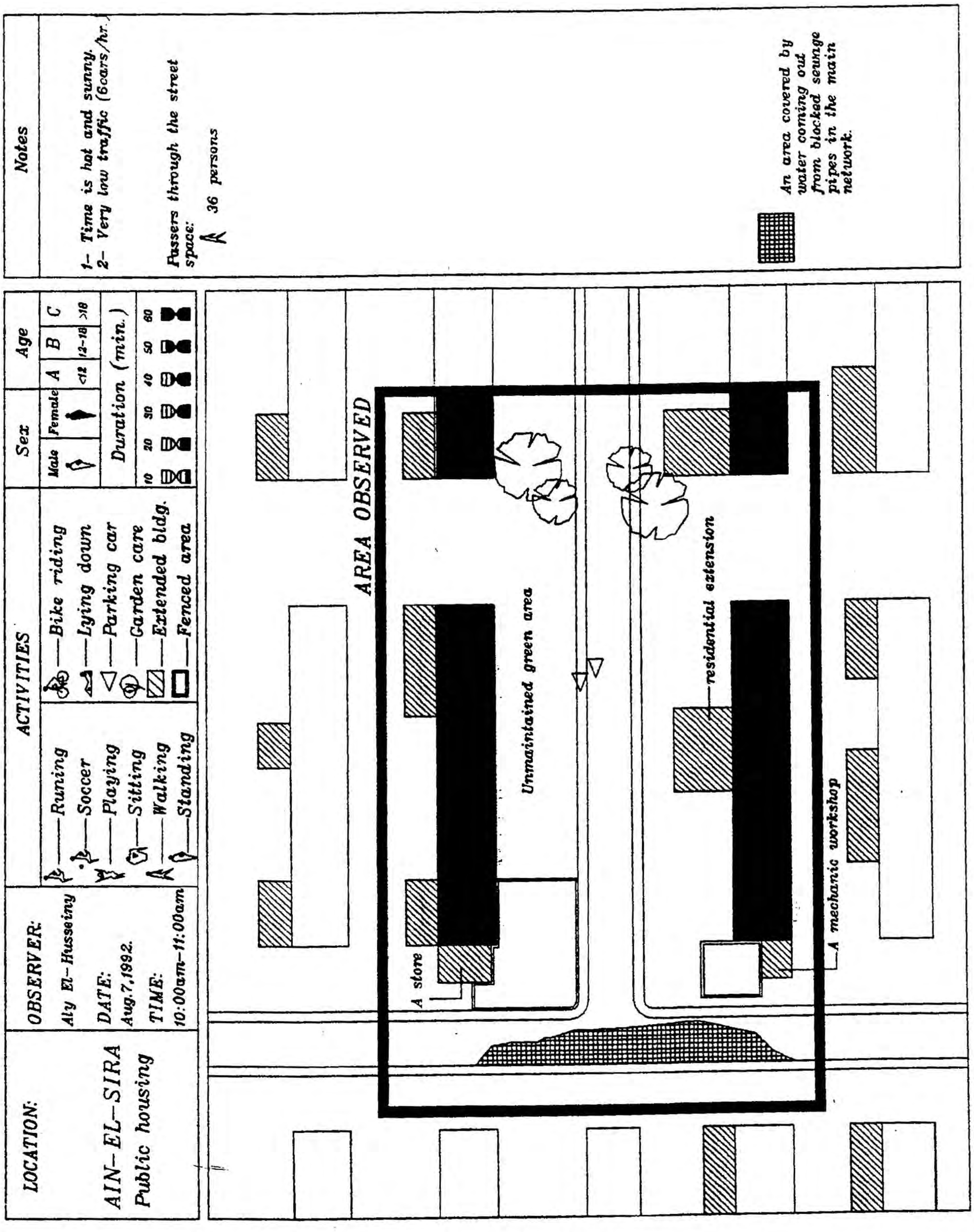
Although the informants were very helpful to the study, the public were opposed generally to any kind of photography or video recording. People opposed photography or recording because of concern about the illegal extensions, or to protect their women from any suspicion.

The heat during the day prevented the people from using the street for any activities except for walking to a store to purchase food for breakfast or lunch. Several trees exist in a small part of the space affording a few people to sit or stand together. Some other residents (only males) sat together sharing smoking "nerguileh," but, in general, the street was empty of activity. The space's abandonment lasted until late in the evening when male children started to play soccer on the street pavement. The ineffective street lighting ended the game when the darkness fell. The behavioral maps in figures 4.4, 4.5, and 4.6 demonstrate the activities deduced from the video tapes at three different hours through a day.

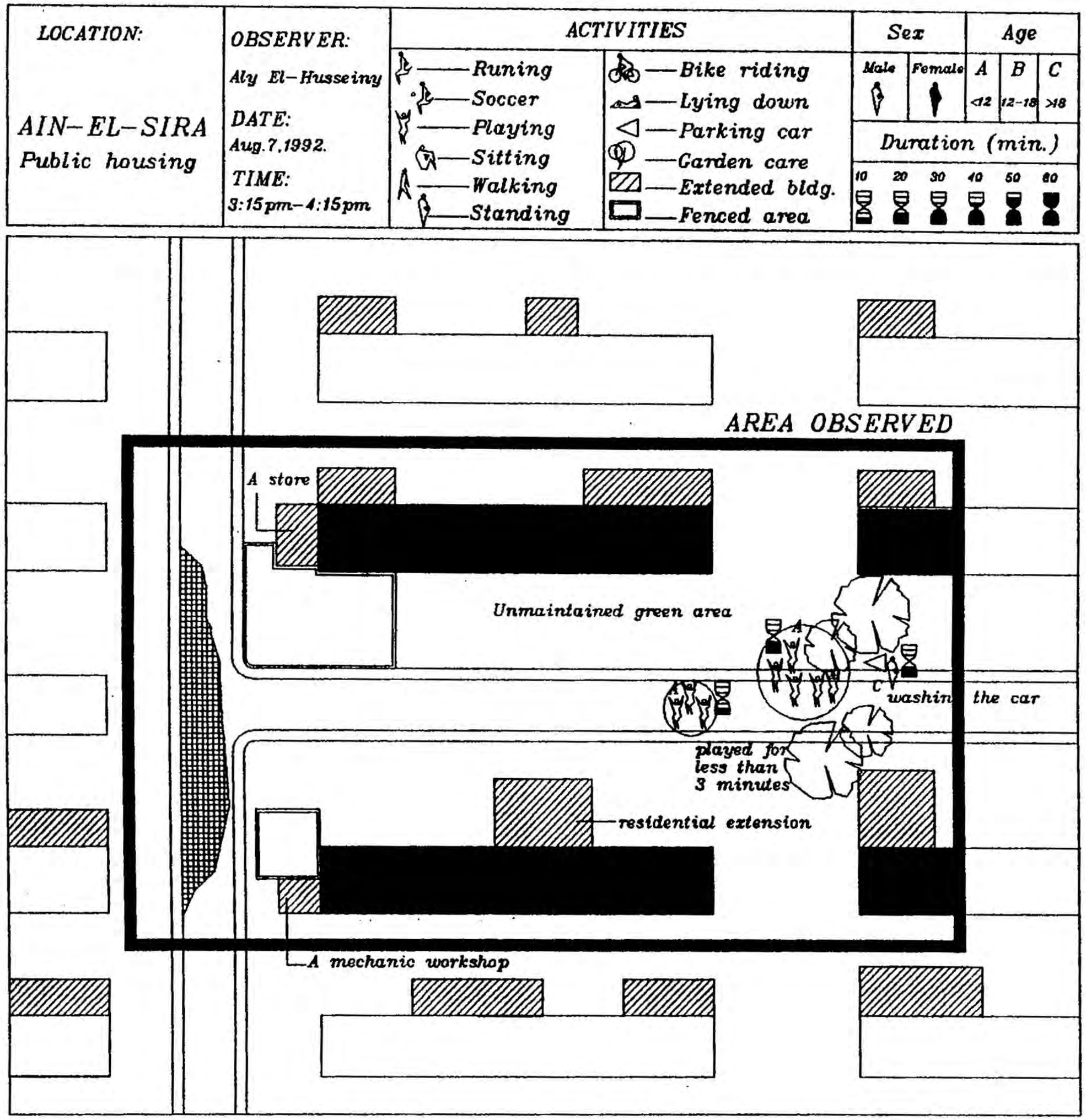
(Figure 4.2) Area of study in Ain El-Sira at noon



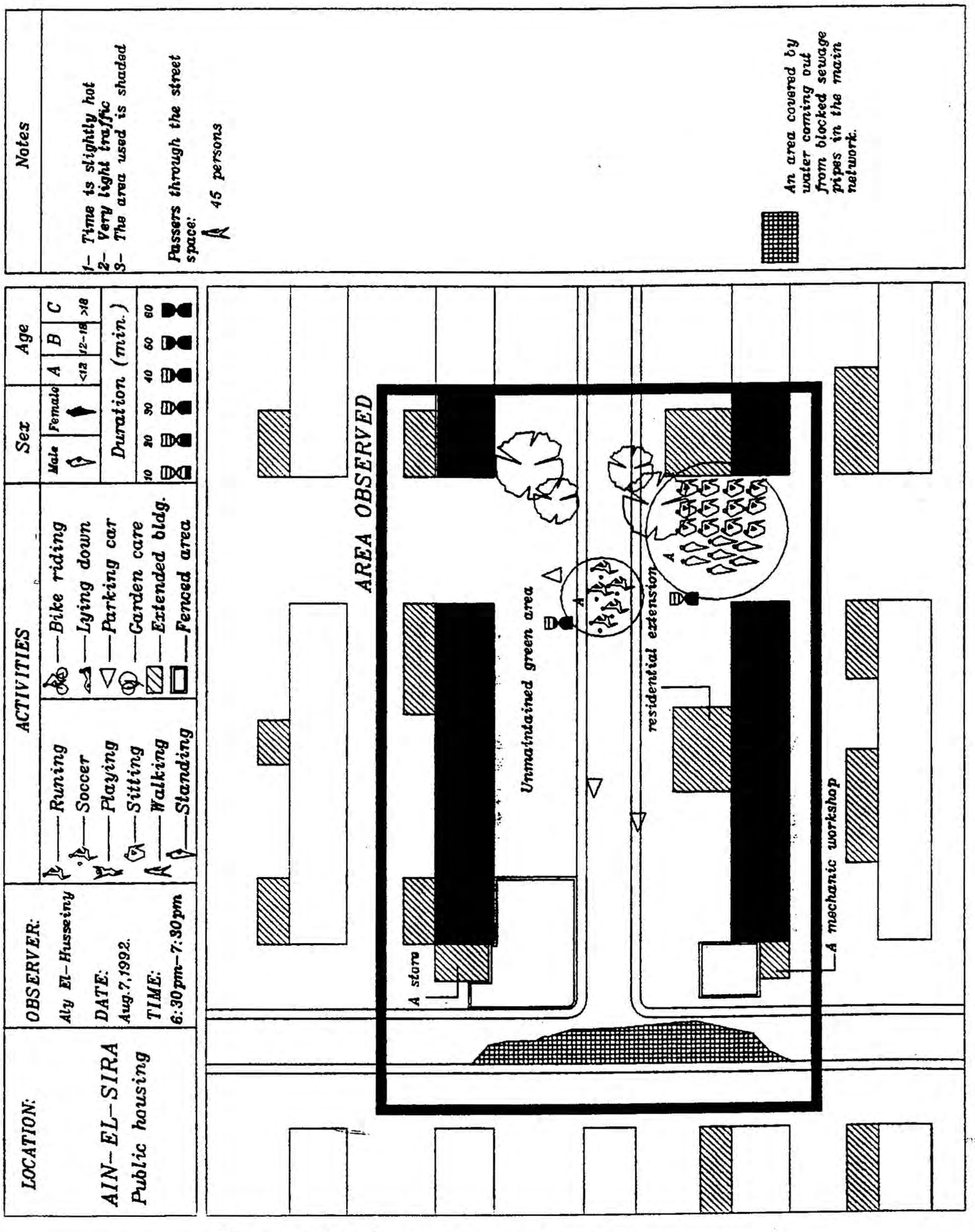
(Figure 4.3) Map of the site in Ain-El-Sira.



(Figure 4.4) Behavioral map 1 for Ain El-Sira (Space A).



(Figure 4.5) Behavioral map 2 for Ain El-Sira (Space A).



(Figure 4.6) Behavioral map 3 for Ain El-Sira (Space A).

4.1.3 Additional Observations in Another Space in Ain El-Sira

The observation of the area B shown in the map of Ain El-Sira (fig. 4.3) took place to check the behavioral patterns observed previously. The observation has been carried out in winter time during the mid year vacations for schools. The intensity of using spaces differed in winter from what have been observed during the summer field work.

The passive activities presented in the physical alterations had not great difference from what exists in Ain El-Sira in general. The physical setting, just as being within the general character of the Ain El-Sira public housing area, has been altered by the residents to meet their needs. The houses have been enlarged using both horizontal and vertical alterations. The pattern of encroaching on parts of spaces was the same as observed before. All the residential extensions took place on the back elevations of the building blocks, while the extensions for workshops were on the side solid elevation.

The presence of workshops restricted the use of space for soccer games. Cars (mostly cabs) parked close to the workshops waiting for being repaired. The ground surfaces were designed initially as green areas were transformed into a dusty area that does not allow too much "active" activities to occur except some young children play.

(Figure 4.7) Some extensions in the space B

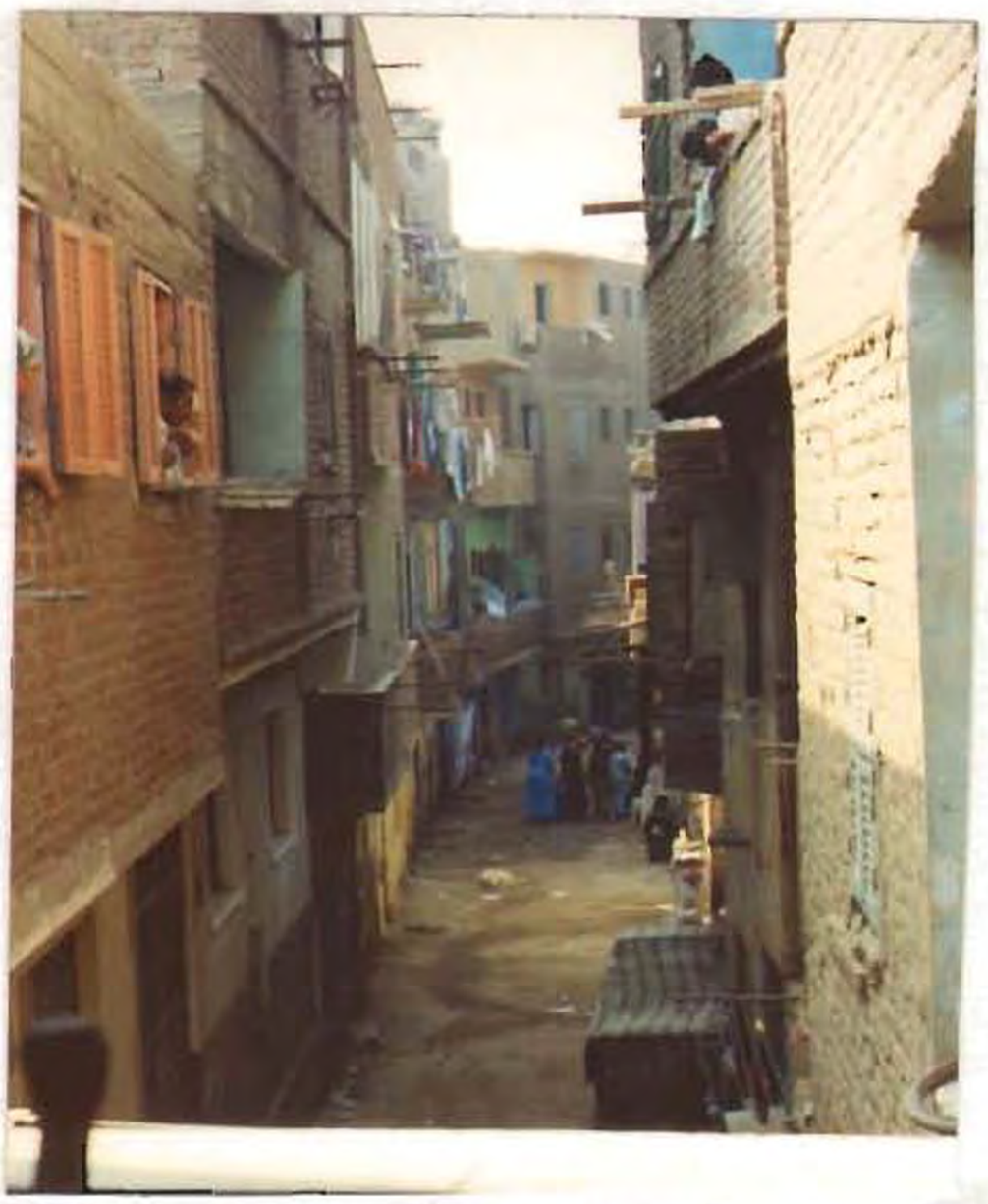
(Figure 4.8) A View for the workshops in Space B

4.2 Abou Qetada

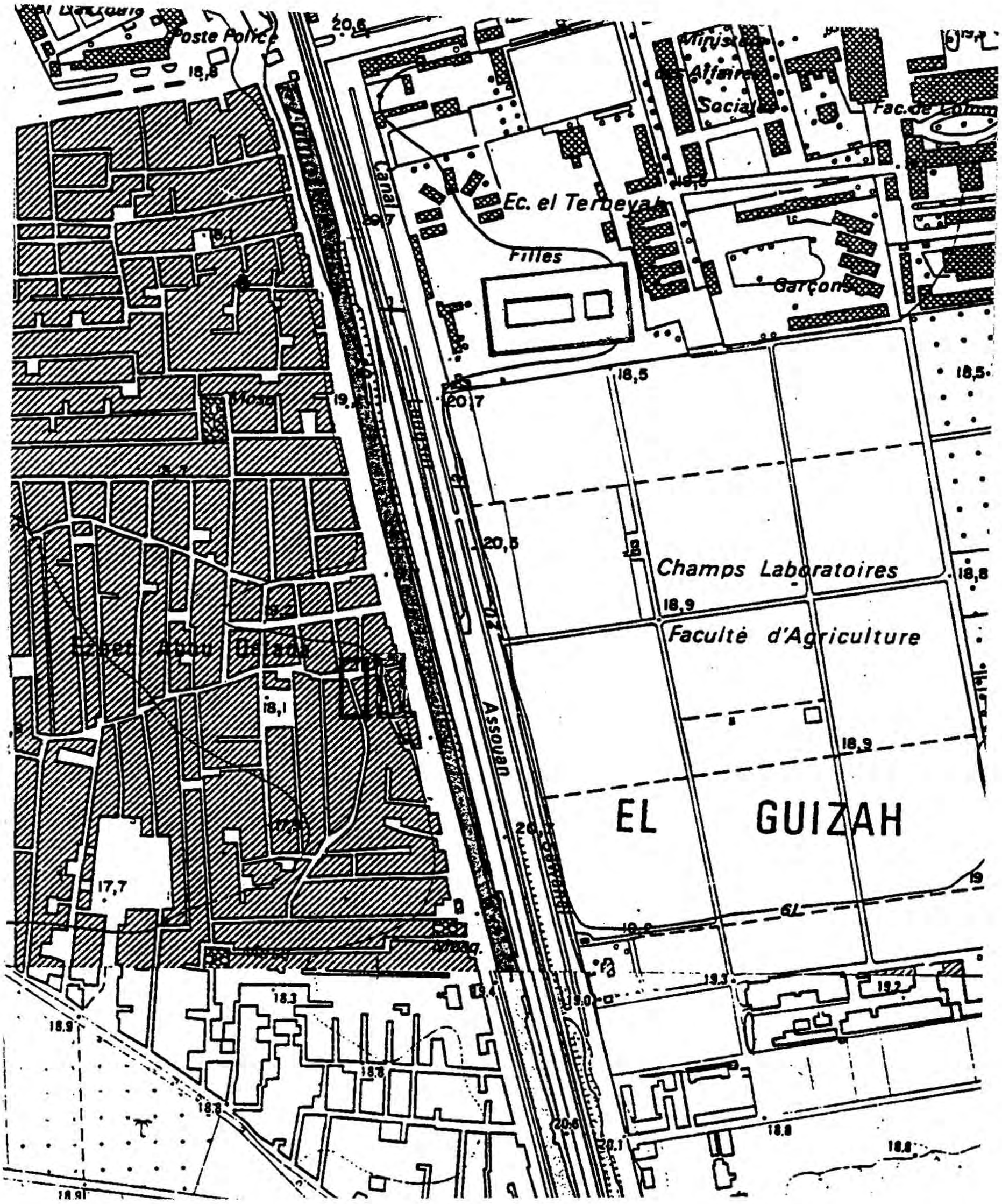
The informal housing of Abou Qetada is a slum settlement which built formerly on an agricultural land. Although the houses were built on a legal ownership land, this land was formally sold in an illegal subdivision that no zoning regulations were complied. The houses had no building permits, and consequently, did not meet the legal codes.

4.2.1 The Configuration of the Physical Setting

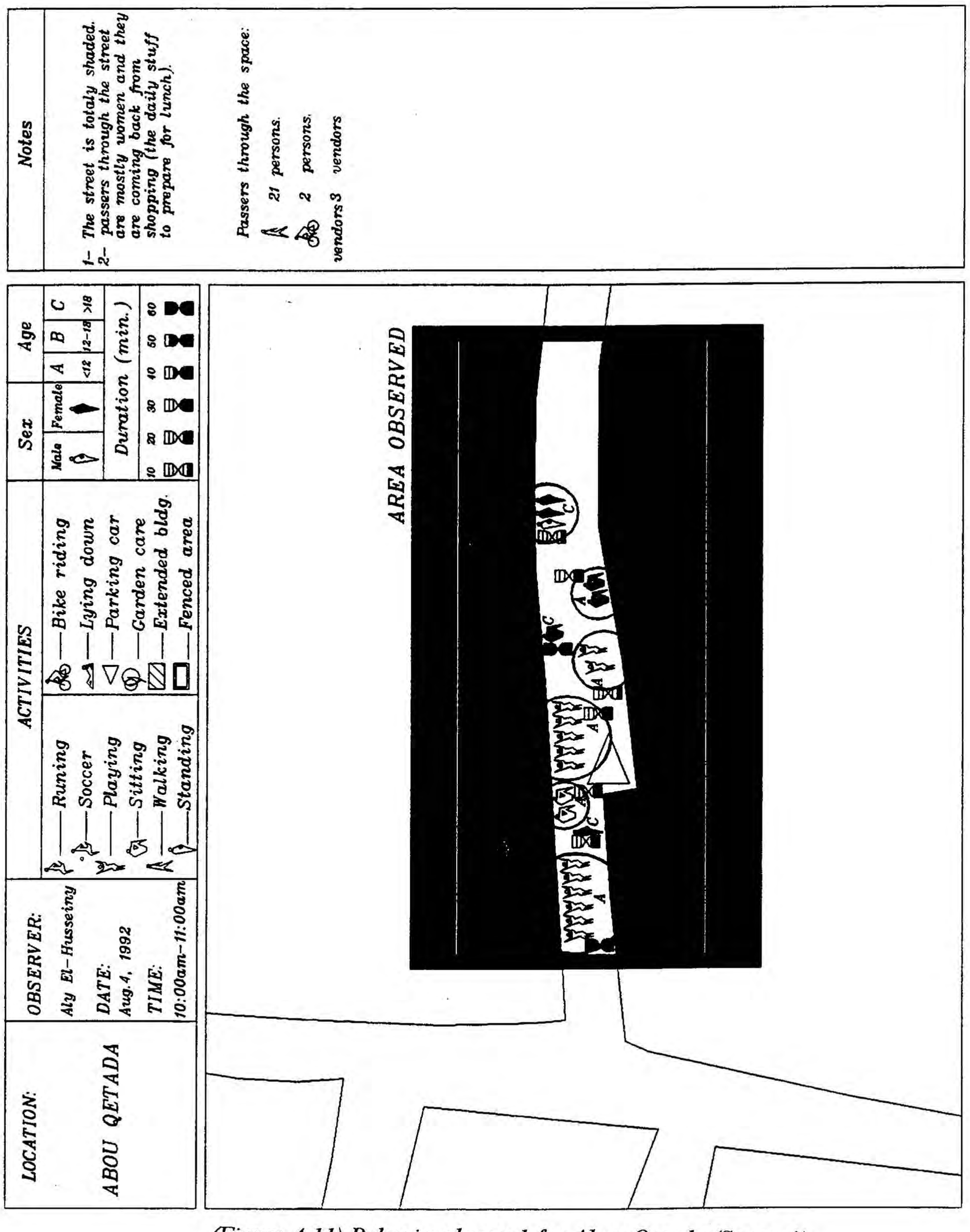
The dense area of Abou Qetada did not provide too much space between the buildings except for a minimum of light and ventilation. The brick buildings have no external finishing. The narrow spaces provide a shaded physical setting that was comfortable despite the heat on the day of observation. Three or four-story houses lined both sides of narrow back streets without any sidewalks. The few extensions in Abou Qetada were very limited to vertical building which depend on the strength of walls and foundations. There was no green area. Unpaved irregular streets permitted only pedestrians and donkey carts used by vendors to move.



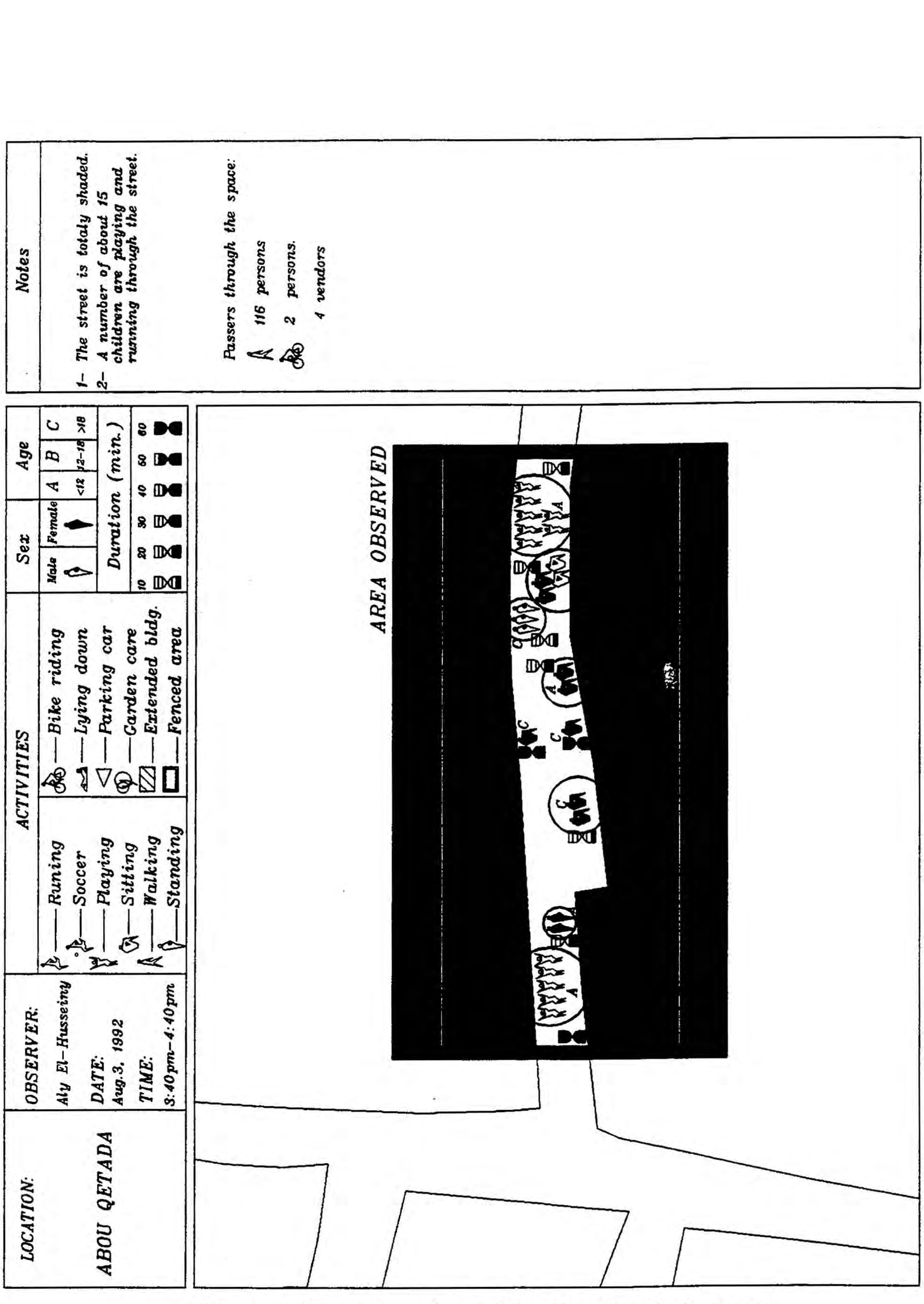
(Figure 4.9) The area of study in Abou-Qetada



(Figure 4.10) Map of the site in Abou Qetada.



(Figure 4.11) Behavioral map 1 for Abou Qetada (Space A)



(Figure 4.12) Behavioral map 2 for Abou Qetada (Space A)

LOCATION:

ABOU QETADA

OBSERVER:
Aly El-Husseiny

DATE:
Aug.3, 1992

TIME:
7:00pm-8:00pm

ACTIVITIES

- Runing
- Soccer
- Playing
- Sitting
- Walking
- Standing
- Bike riding
- Lying down
- Parking car
- Garden care
- Extended bldg.
- Fenced area

Sex: Male, Female

Age: A <12, B 12-18, C >18

Duration (min.): 10, 20, 30, 40, 50, 60

Notes

1- Sunset time. Good weather.
2- A number of about 10 children are playing and running through the street.

Passers through the space:
138 persons
4 persons
2 vendors

AREA OBSERVED

(Figure 4.13) Behavioral map 3 for Abou Qetada (Space A)

4.2.2 The Behavioral Patterns in Context

The physical setting in Abou Qetada provided intimate spaces that affected the behavioral patterns. Abou-Qetada is an area that has many characteristics of the "*baladi*"[102] quarters described in Chapter 2. The residents are mostly lower income and have a special dialect that distinguishes them from other Cairen social strata. A sense of humor that characterizes the "*awlad el-balad*" is significant among the residents.

The residents' informal interviews demonstrated a significant degree of socio-economic homogeneity. Any non-resident could easily feel the complete control of the residents on their space. A stranger, especially one without the same socio-economic class appearance is observed by many and the stranger's behavior is constrained.

In order to study Abou Qetada, I needed assistance from some residents of the area. "Osta Gaber," a mechanic owning a workshop in this place helped introduce me to the residents. Since he founded his workshop a long time ago, the residents consider him one of "their area." He helped to introduce me to "Haj Gaber," a retired employee who lived alone in his apartment where the video camera was installed finally on his balcony. This vantage point was extremely fortuitous for two reasons. First, it was not easy to use other apartments because they were occupied by families, and secondly, the balcony was a technically proper location to record the space.

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102 *"Baladi"* is an adjective of *"balad"* which means in general the country, and *"Awlad el-balad"* denotes sons of the country defining the real Egyptians. For more description, see Chapter 2.

Although the spaces were unpaved and dusty, they were empty of garbage or rubbish. The streets were cleaned out by the residents themselves, and the dusty ground was compressed as a result of the heavy pedestrian use. The residents controlled their space maintenance and collaborate to clean it eventually.

Numerous activities occupied the street from the early morning until late at night. In the morning, pedestrians occupied the space: women go shopping, usually in groups,[103] and working people go to work. Some women sat in front of their houses alone or more commonly they gathered in small groups. Some women prepared to cook (cleaning rice, beans,etc.), or displayed candies for sale, but most of the time, the women just sit talking together, watching the children scream and fuss. A large number of young children played in groups and ran in the street all day.

Passers-by, whether men or women, usually stopped to talk with the seated people and sometimes exchanged conversations with residents of first floor. The vendors (vegetables, gasoline, ice cream, etc.) were also familiar to the residents. They pass at regular times, and call or ring a bell to notify the residents of their presence. The patterns of behavior in Abou Qetada were annotated in the behavioral maps shown in figures 4.11, 4.12, and 4.13 representing the activities of one day.

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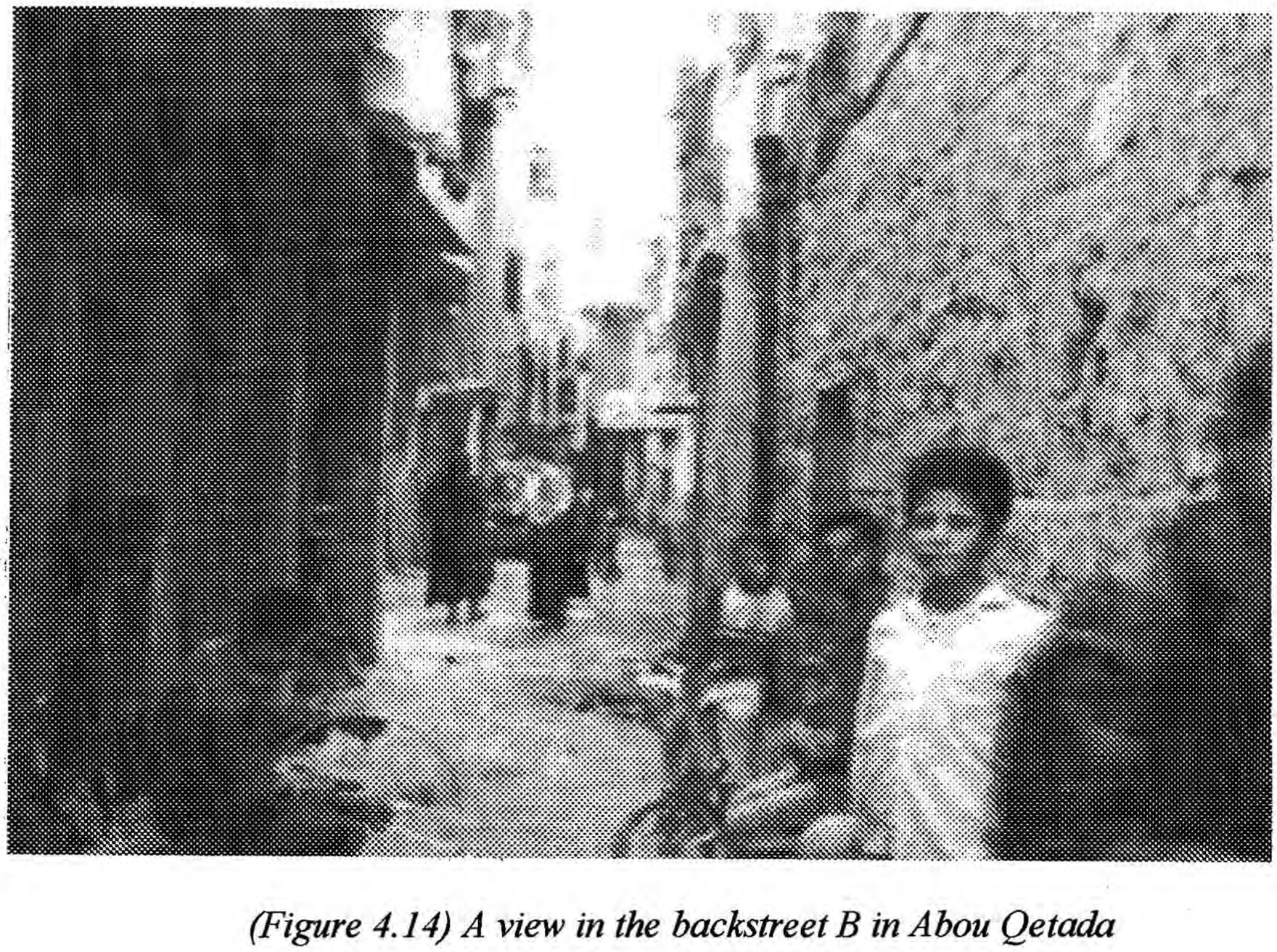
[103] Unlike *Ain el-Sira*, where individual children shopped for breakfast, shopping in this area is performed by adult females walking in groups.

4.2.3 Additional Observations in Abou-Qetada

The additional observation took place in a very close back street to the area A observed previously. This helped to benefit of the same key persons in the area. The physical configuration of the space B observed lately was very similar to that of the area A . However, the space B differed in width than the area A by being a little narrower. The type of activities in the space did not differ than what have been observed in the summer. But the density of people decreased a little especially in the evening because of the cold weather in the time of observation.



(Figure 4.14) A view in the backstreet B in Abou Qetada

4.3 El-Ettehad Square

El-Ettehad Square is located in south Cairo's Maadi district. The residential area was originally agricultural. It was owned and subdivided by the Maadi Company for Housing and Construction (M.C.H.C.). The current residents have inhabited the flat buildings for the last three decades. The general socio-economic class of the tenants is classified by this study as medium. Most of the residents belonged to the upper bureaucrat class who work in different government sectors or for large companies. El-Ettehad square is very near to a slum area occupied by low socio-economic people who are, in fact, the original farmers or their descendants who lived in the area.

(Figure 4.15) The area of study in El-Ettehad Square

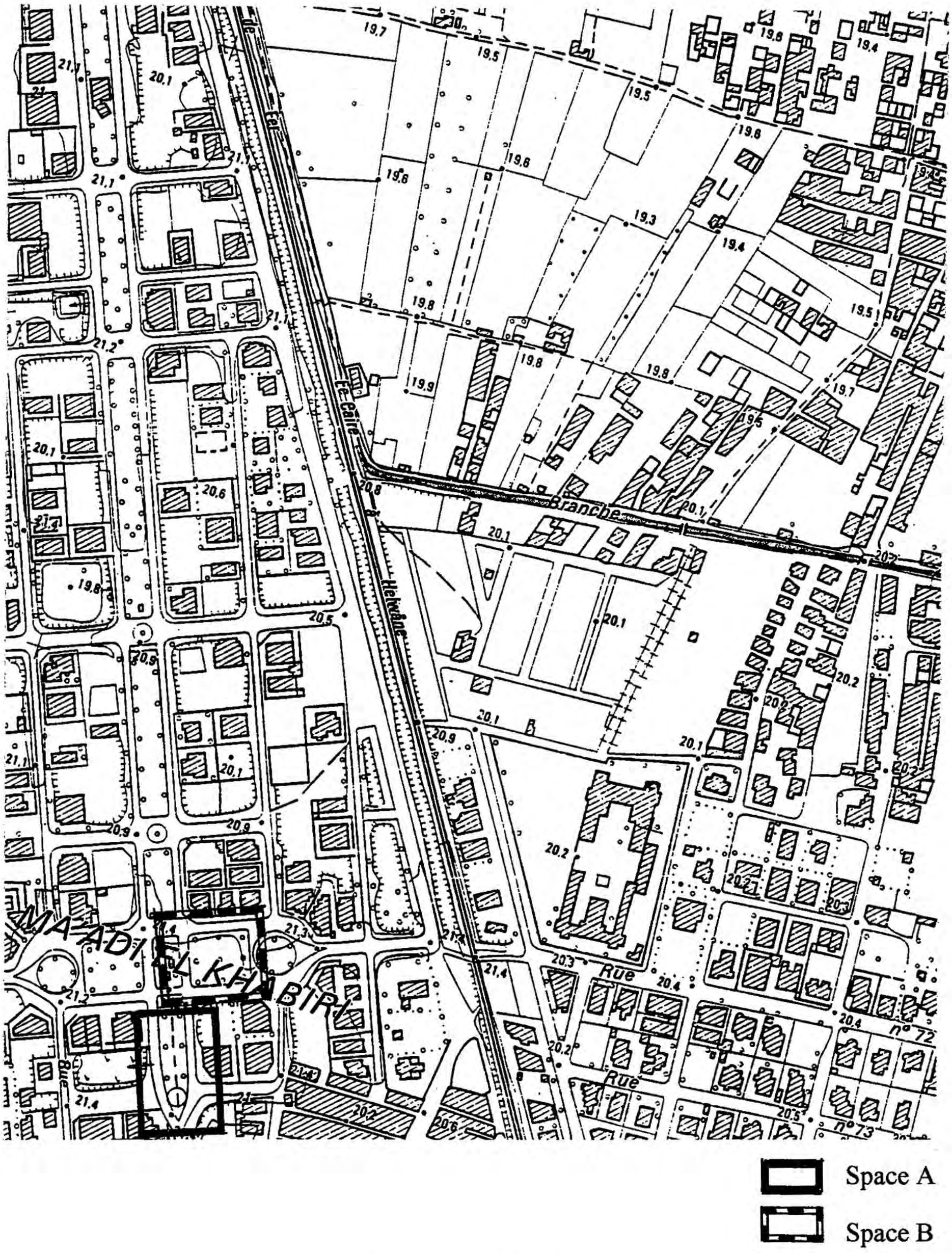
4.3.1 The Configuration of the Physical Setting

El-Ettehad Square is a quiet residential squares. The buildings were built according to the Maadi Company for housing and construction's (M.C.H.C.) design guidelines. The specific area of study is at the intersection of El-Ettehad Square with 105th Street and is characterized by a relative volume of high traffic (average 650 car/hour). The buildings average five floors with a moderately finished appearance as is typical for apartments' buildings in Cairo's new residential areas. The green area provided in El-Ettehad Square is poorly maintained. Street lighting is mediocre but supports some activities in the green median.

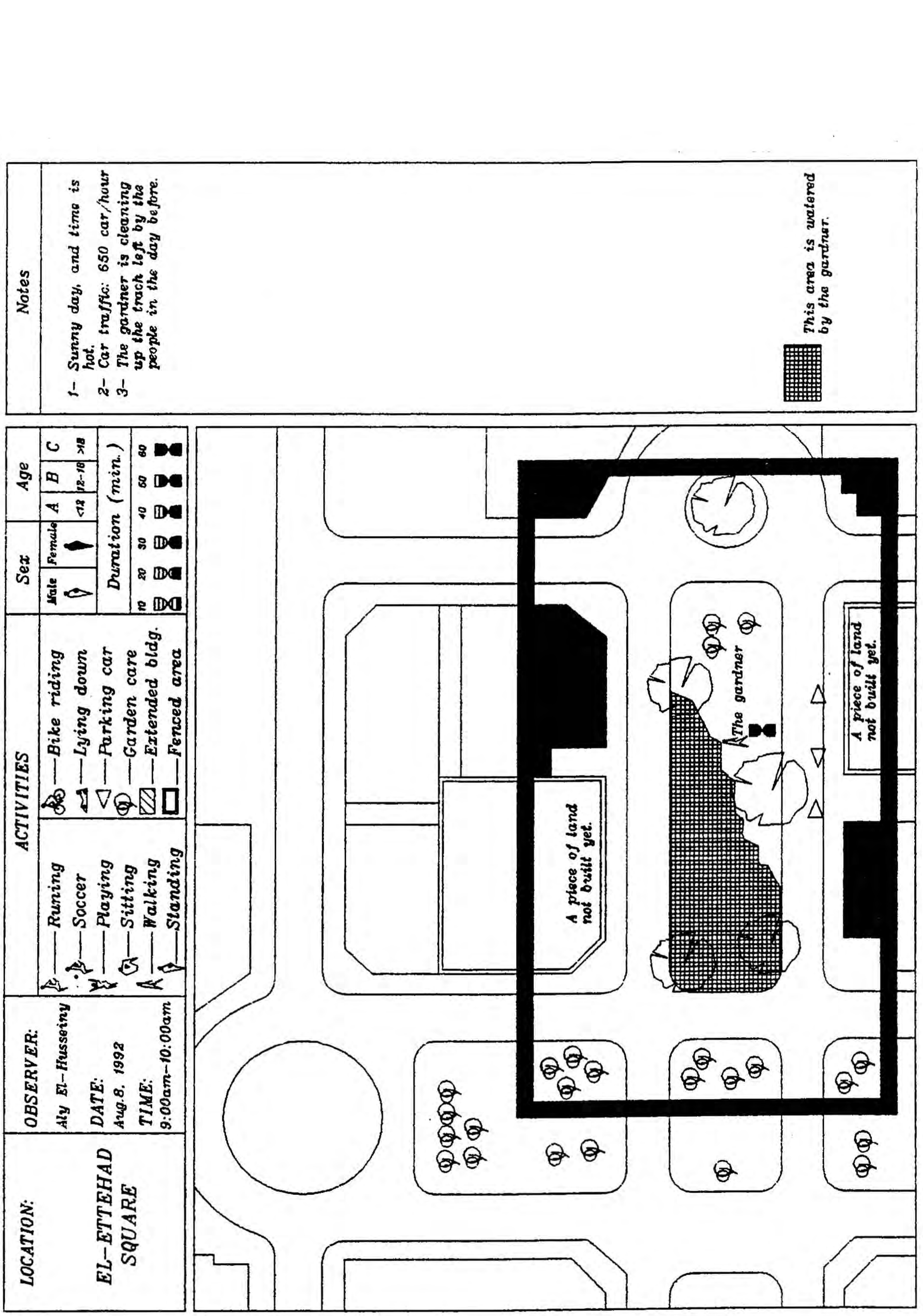
4.3.2 The Behavioral Patterns in Context

The residents of this area are known to each other, but the social relationship is very limited. Visual contact was considered by the residents to impose a superficial social relationship. The residents were mostly bureaucrats in high level positions belonging to a medium income stratum.

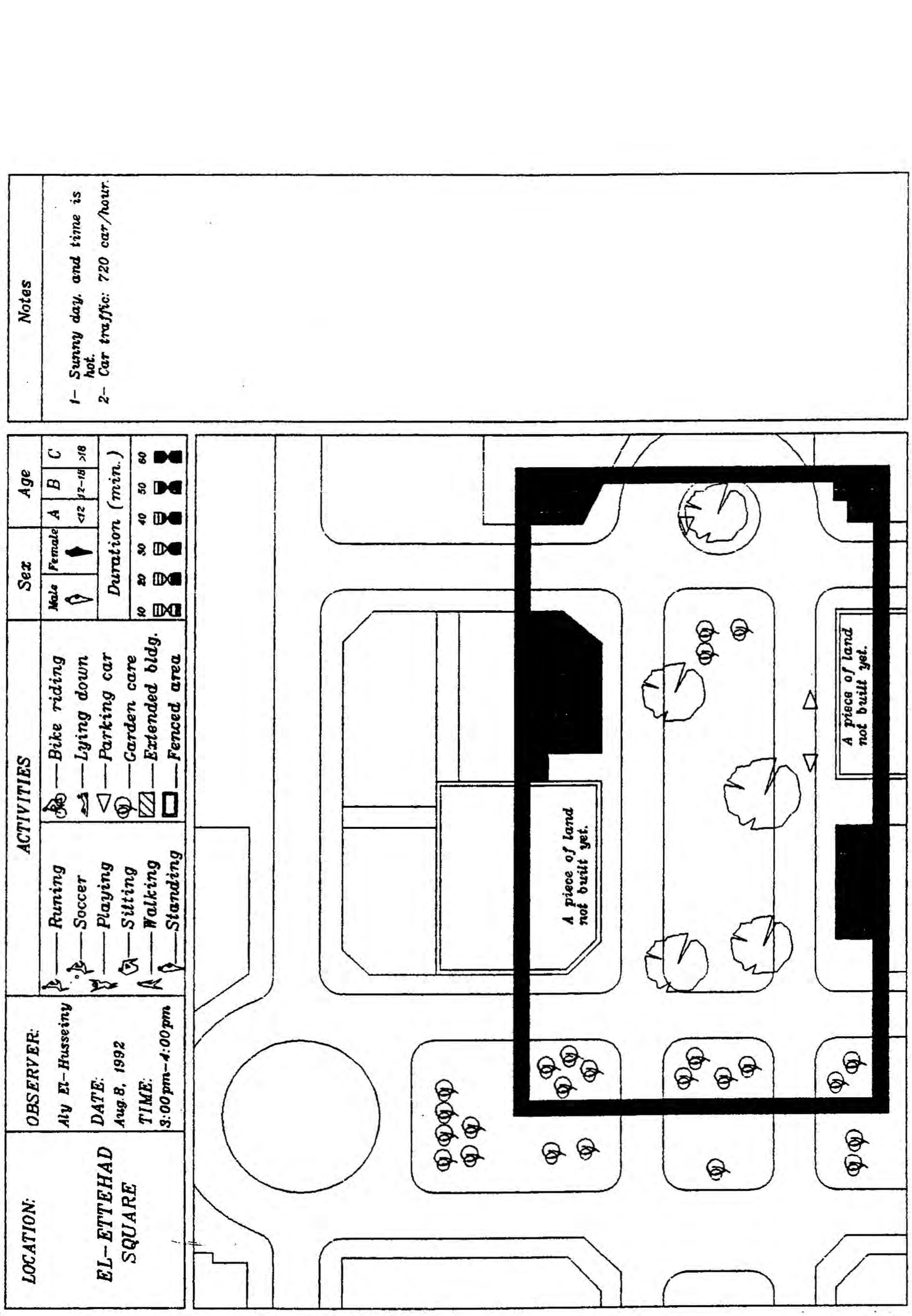
My access to El-Ettehad Square was not so difficult. I used a roof top of a building owned by a professor in the university. He understood the objectives of the observation. Determining the day to study was as easy as arranging an appointment with him. Because of an improper angle for photography in the evening, the vantage point was changed in to a friend's apartment located on the opposite side of the street.



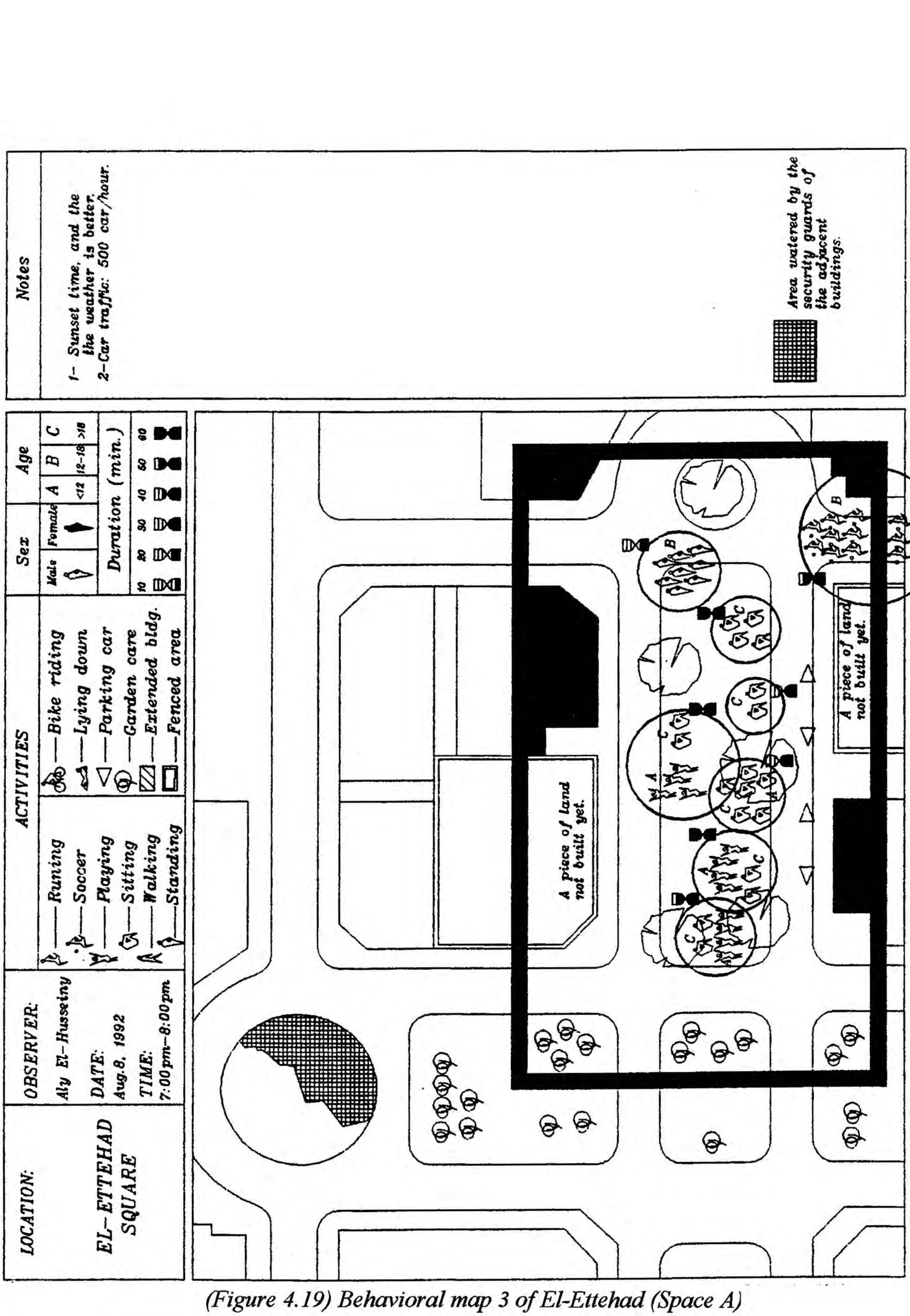
(Figure 4.16) Map of the site in El-Ettehad.



(Figure 4.17) Behavioral map 1 of El-Ettehad (Area A)



(Figure 4.18) Behavioral map 2 of El-Ettehad (Space A)



(Figure 4.19) Behavioral map 3 of El-Ettehad (Space A)

The green area concerned looked messy and full of waste in the early morning. Nobody used the green median except an official gardener who cleaned out the trash and watered the grass. The heat prevented the pedestrians from using the street for any recreation until late in the evening. Once shade grew, recreational activities started to take place. Some teenagers played soccer games on a side street with a light traffic. Other teenagers stood in a circle chatting on the street corner. Some groups of women and young children sat on the garden's grass to eat and play. The number of garden users increased in the evening, and the garden became densely occupied at about nine o'clock. The soccer players were identified to be residents of the area itself, but the garden sitters all came from the nearby slum area of "El Souk." Vendors of grilled corn and edible cactus came with their carts contributing to the recreational environment.

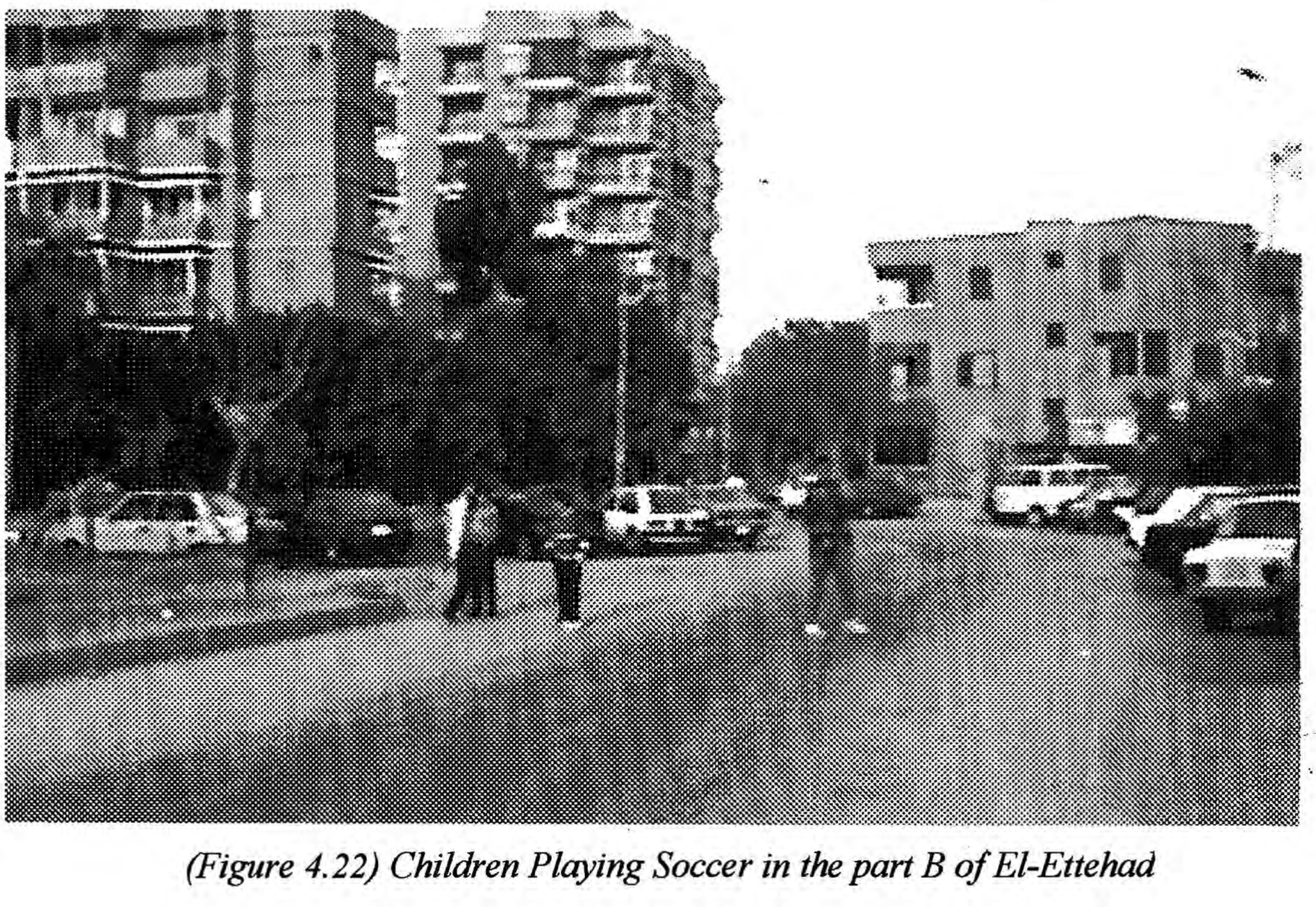
(Figure 4.20) Playing soccer games in a side street

The residents complained of the use of the garden by non-residents, but they could not control them. Compared to other green parts of El-Ettehad Square, the residents had less control of the public green area adjacent to their buildings. As a matter of fact, the other parts of El-Ettehad Square were characterized by very light traffic. In addition, the residents had contributed more to maintaining the common green area. The strategy used to prevent non-residents from sitting in these green areas was through guards working for the residential buildings or watering the grass in the evenings. Figures 4.17, 4.18, and 4.19 show the behavioral patterns in the specific area A of El-Ettehad Square representing the day's activities.

(Figure 4.21) using the green median for recreation

4.3.3 Additional Observations in El-Ettehad Square

The other side of El-Ettehad Square B was selected for additional observation to the area A observed previously. The area B had a better appearance of the green area which was maintained by the residents of surrounding buildings. The green area was restricted to be used by the comers from other areas by the guards paid by the residents. This helped to provide a better maintenance and an easier job for the gardeners. However, nobody could prevent the teenagers to play soccer on the street's pavement. Most of them came from slums near the souk of Maadi and some came from far away slums (El-Arab) in the New Maadi area. The soccer games took place in the sunny morning and afternoon. The light traffic encouraged the use of the pavement for play. But in the evenings the area started to be deserted because of the cold.



(Figure 4.22) Children Playing Soccer in the part B of El-Ettehad

4.4 Degla Housing

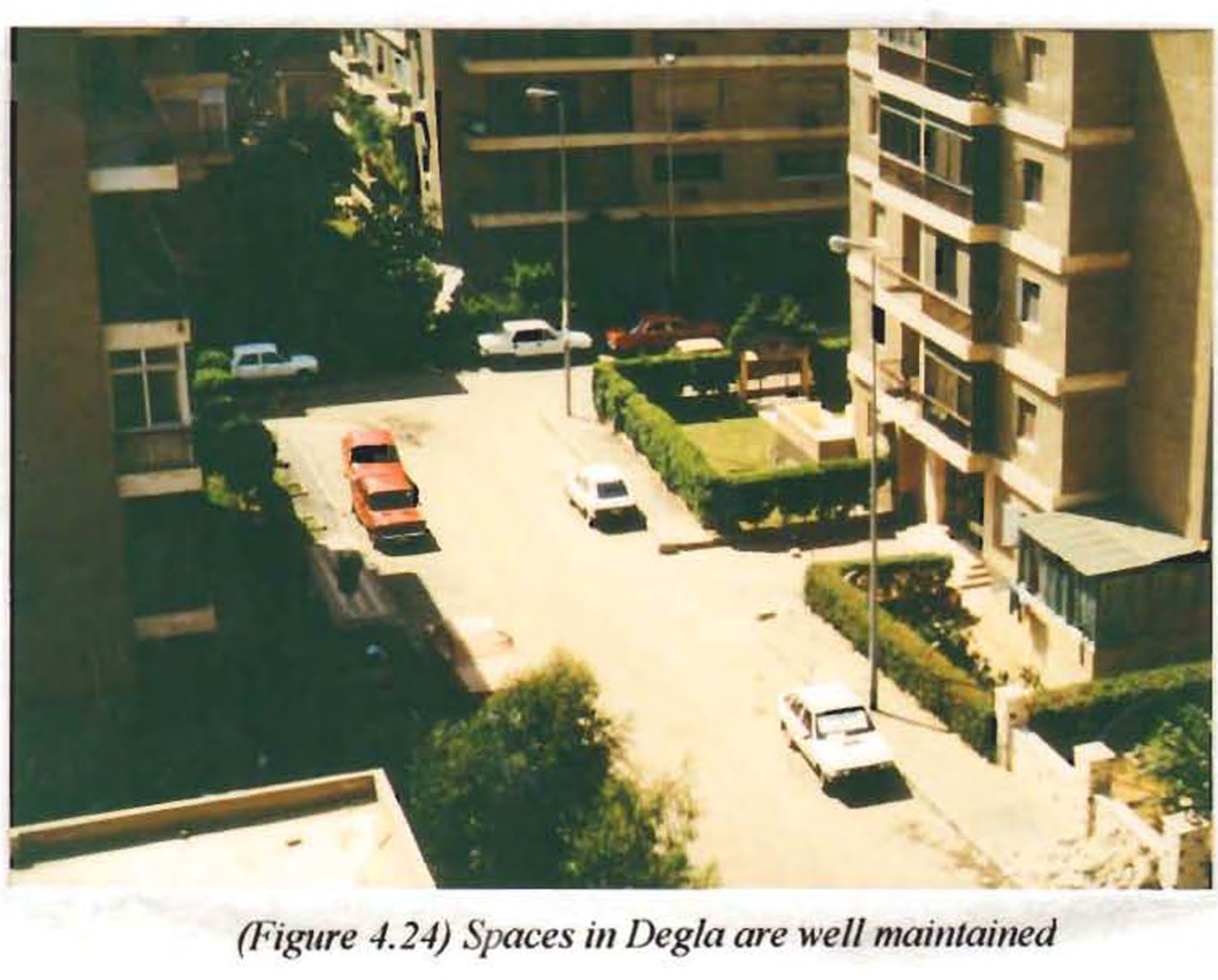
The Maadi Company of Housing and Construction (M.C.H.C.) built Degla Housing on its own land in The New Maadi district. The project consists of five-story walk-up housing units as a part of its development of the Maadi district of South Cairo. The units were intended for medium income groups, and were sold according to a purchase-scheme of twenty years.

4.4.1 The Configuration of the Physical Setting

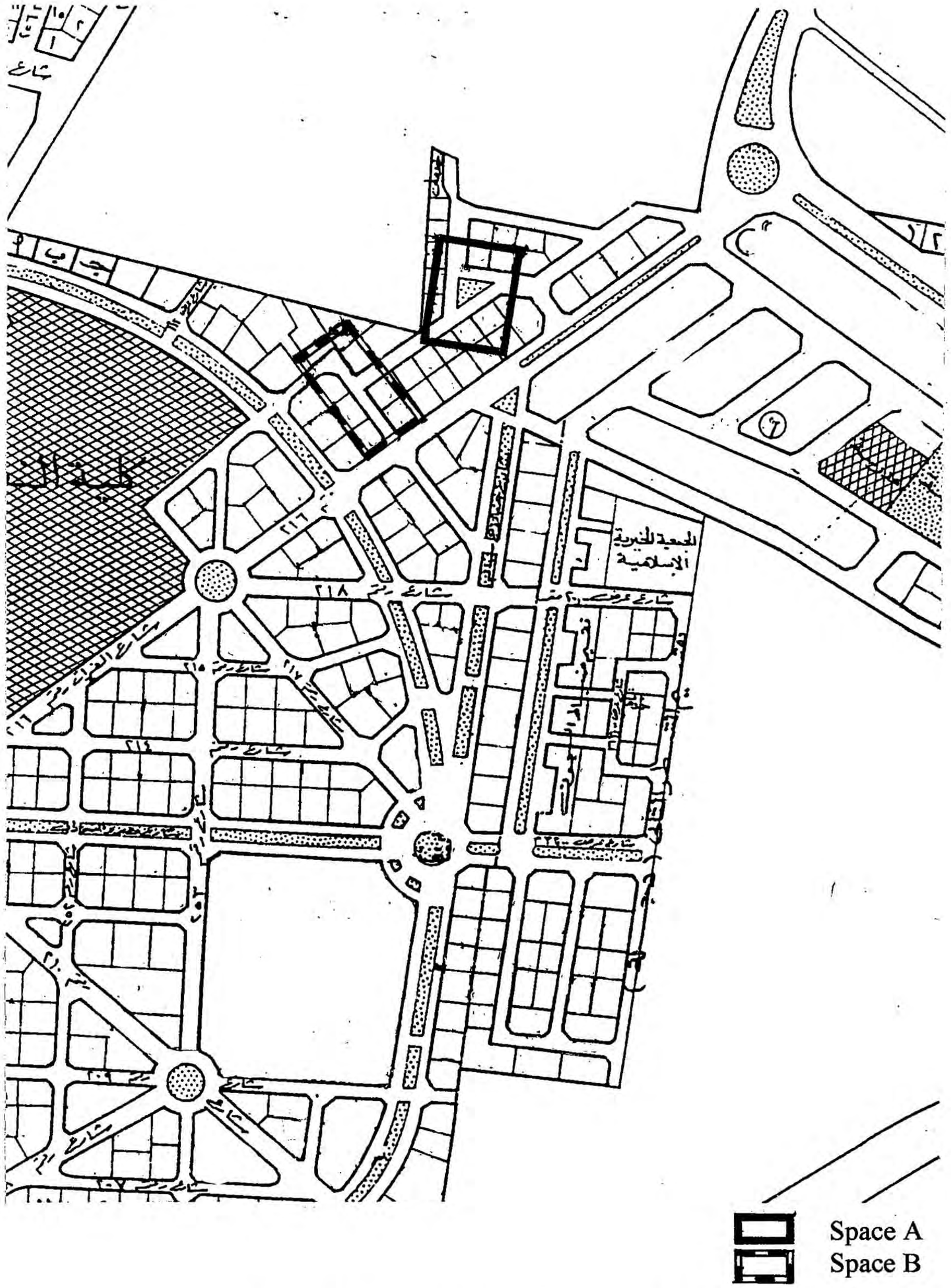
The project is designed as a group of typical apartment buildings. The housing units were set back of the street and separated by a distance of six meters according to the design guidelines established by the M.C.H.C. in the district of New Maadi. The specific area of study was a triangular space enclosed by the walk-up buildings. The local streets were quiet service roads that did not encourage the passage of non-residents.

The space includes a small triangular green median with an excellent appearance compared to any other common green space observed in this study. The clean space is planted by a knowledgeable building guard with planting. A contribution of all the residents of the buildings enclosing the triangular space funds the plants and labor. The strips separating the buildings from the street, in addition to the sidewalks, and the strips separating the buildings from each other functioned for the residents' needs. These margins of space appeared well landscaped and surrounded by planted fences.

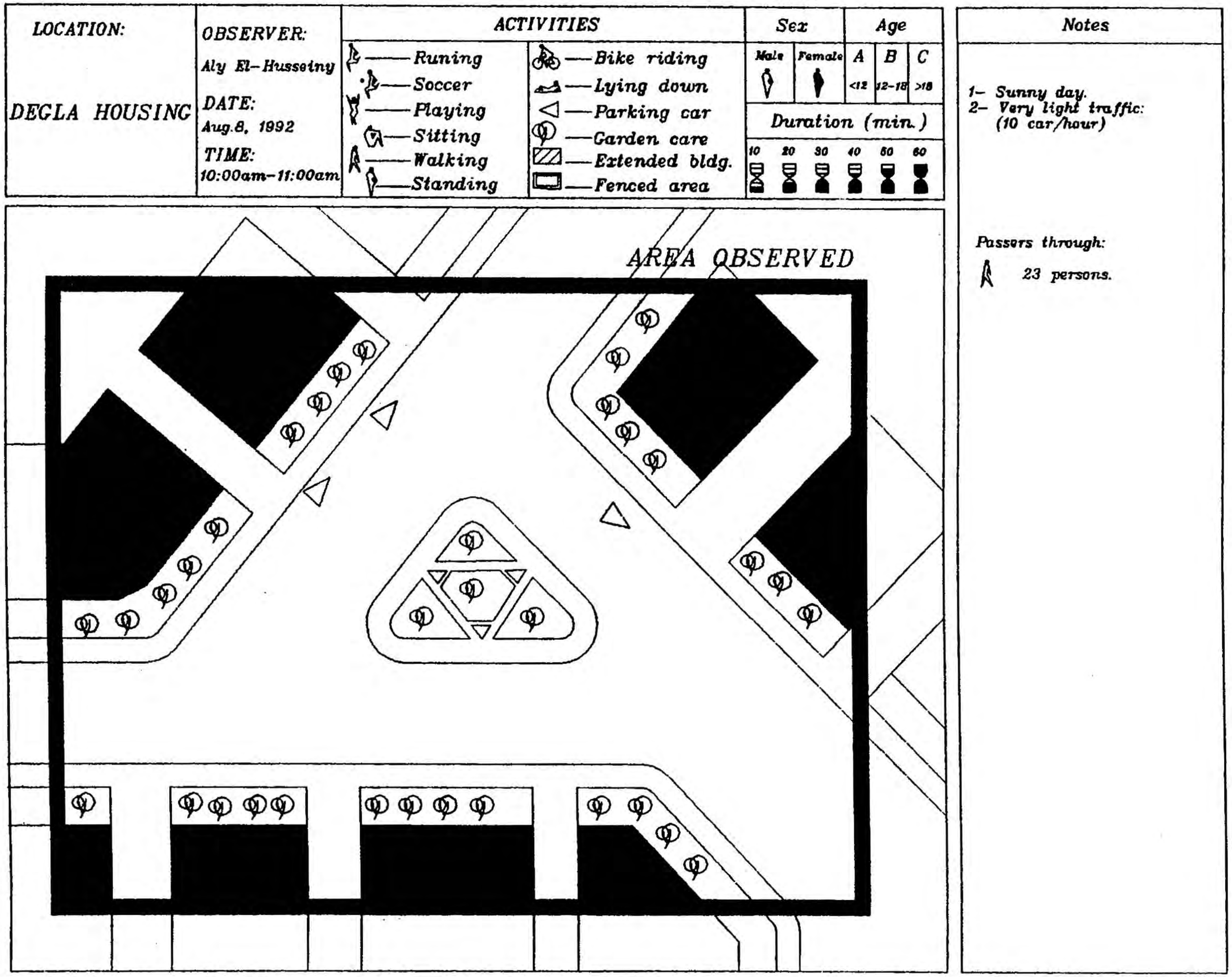
(Figure 4.23) A general view of the site of study in Degla (Space A)



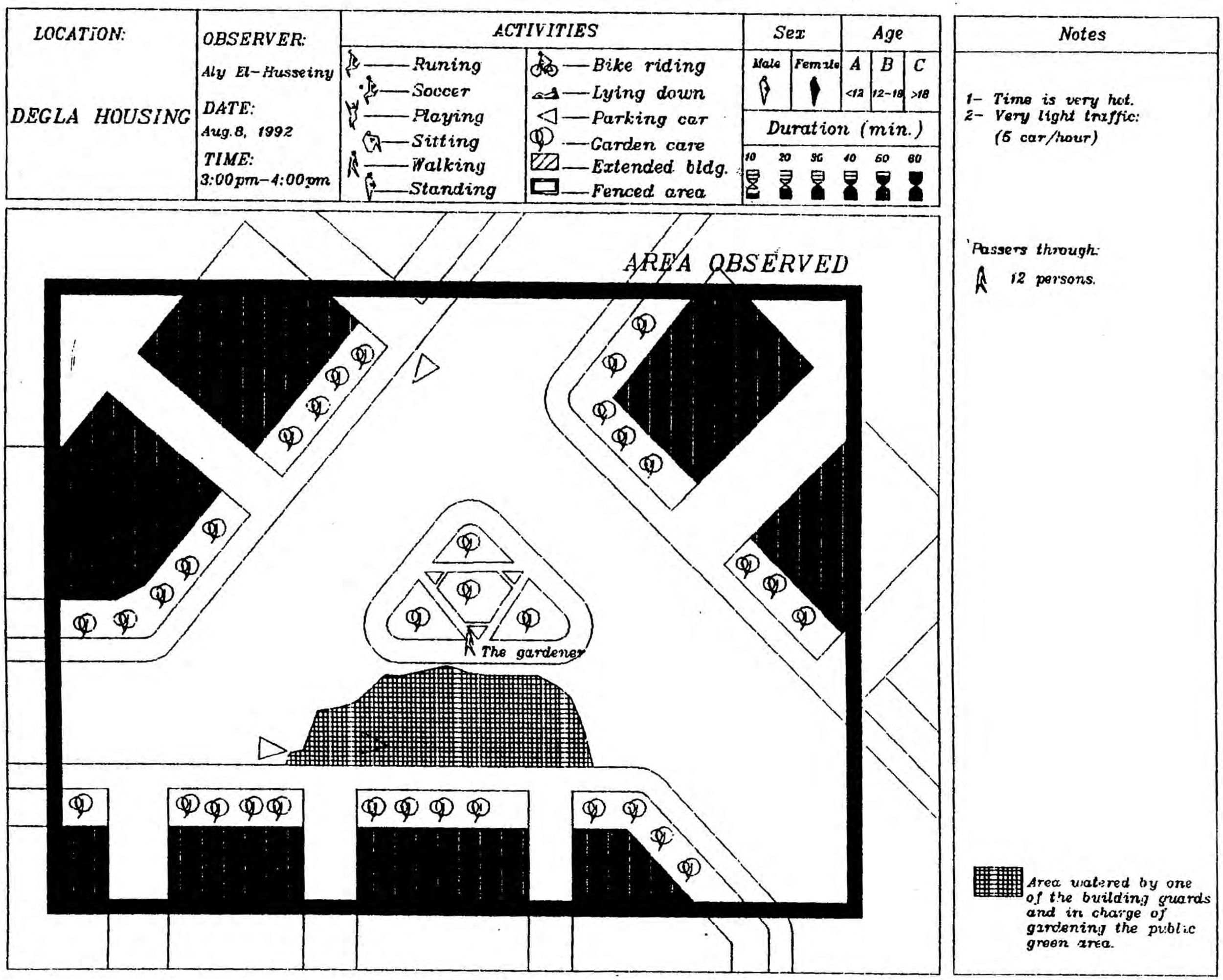
(Figure 4.24) Spaces in Degla are well maintained



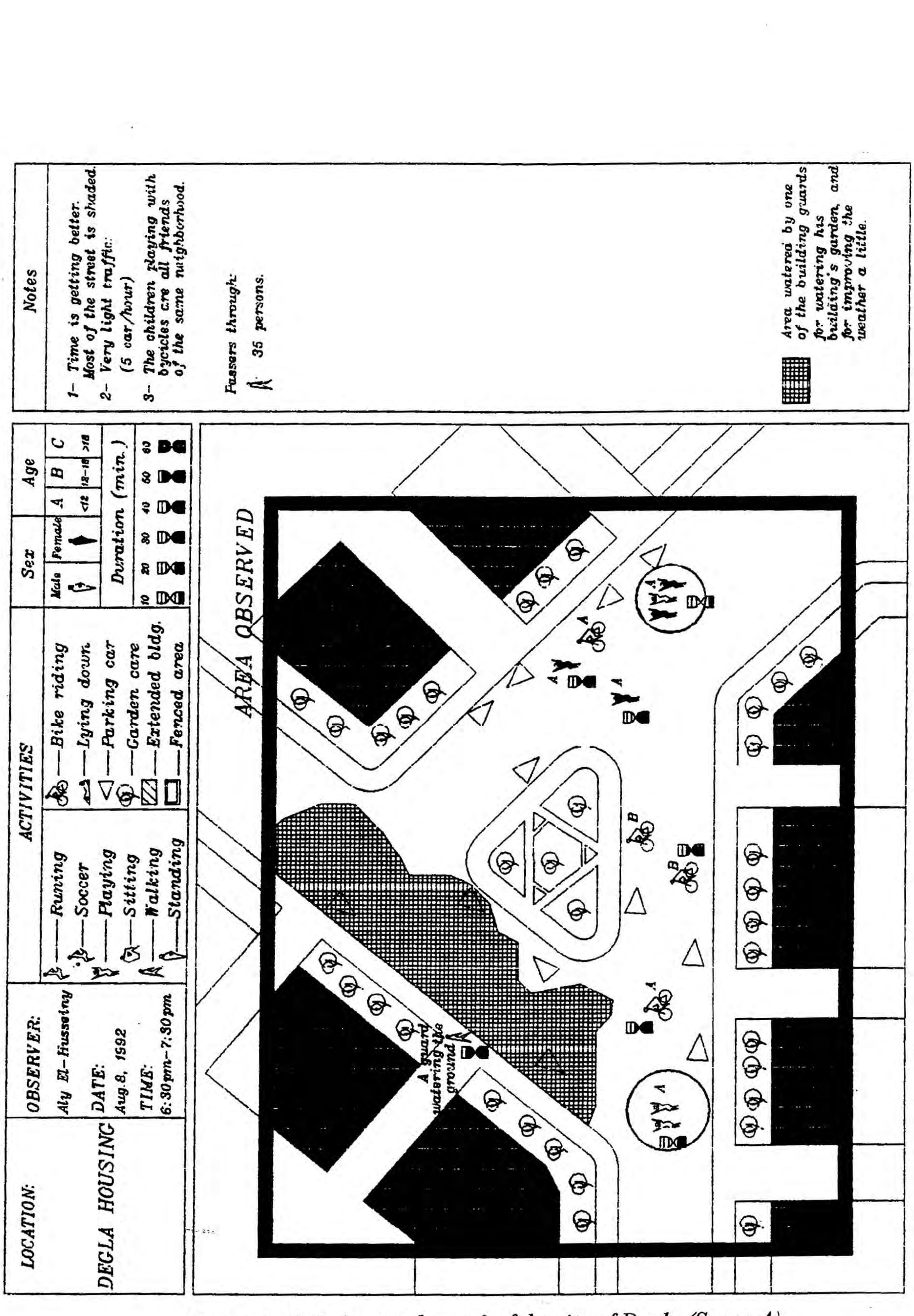
(Figure 4.25) Map of the site of study in Degla



(Figure 4.26) Behavioral map 1 of the site of Degla (Space A)



(Figure 4.27) Behavioral map 2 of the site of Degla (Space A)



(Figure 4.28) Behavioral map 3 of the site of Degla (Space A)

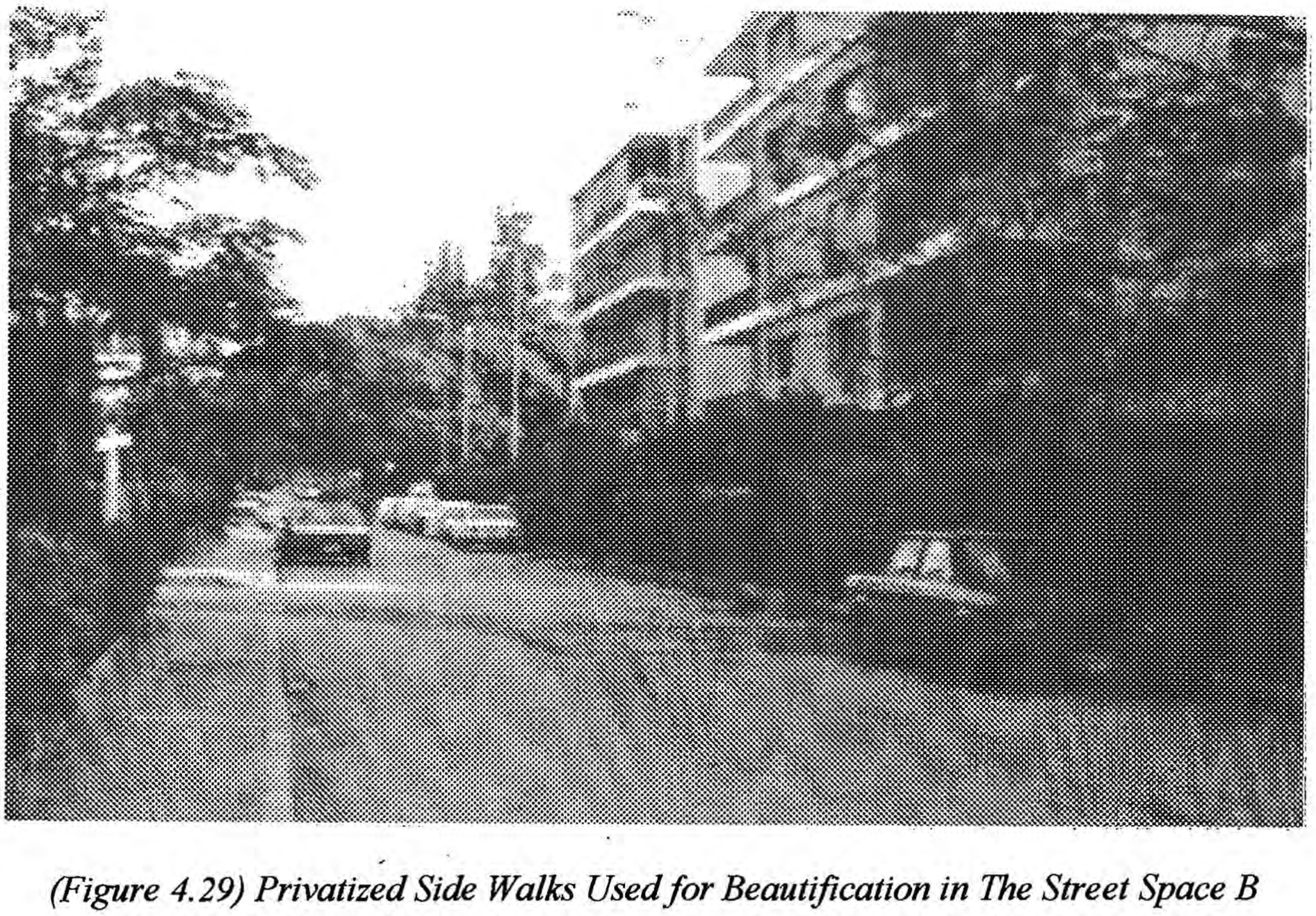
4.4.2 The Behavioral Patterns in Context

The residents of Degla housing seemed to be well organized and to cooperate. The Owners' Union of each building is a committee whose elected members are responsible for managing the building's maintenance services. A member of one of the building boards affirmed that the duties of the Owners' Union Board could not be achieved without the cooperation of all residents. The residents' occupations demonstrated that the majority of the tenants were well-educated. Most of the residents completed their studies in universities in different fields. This level of education facilitated the acceptance of the study in the area. After explaining the study's objectives to the head of the Owners' Union Board of one of the buildings, he supplied me with information and allowed to use the roof top of the building to apply the designed observation method.

No active activities took place in the morning or afternoon because of the heat. The main observed activity was that of a building guard who watered the plants on his building's property. Some few residents strolled to the mosque at proper time, as well. Recreational activities started in the evening. Teenagers of both sexes rode their bicycles on the safe street pavement. Some guards' young children played in the street as well. But the age differences between them and the residents' children avoided any contact between the two different socio-economic class users. The self-esteem of the residents emerges in the gardens created on the properties and side walks. The well presented green area and planted spaces were solely for appearance and were not used for any recreational activity. The figures 4.26, 4.27, 4.28 show the behavioral patterns in one space in Degla Housing area.

4.4.3 Additional Observations in Other Spaces in Degla

Another street space B has been selected in the area of Degla to extend the observation performed previously. The street was of the typical character of the entire quiet area. The silent street had a very light traffic and served as a local street for the residents. The tenants of the residential buildings used the margins of space and sidewalks for beautifying the area by transplanting trees and covering the allowed surfaces by green areas. The green areas, being attached to the buildings, were privatized and surrounded by plant fences. The street was only used for passive activities (such as parking cars and planting) and was empty of any "active activity all the day. Although it was sunny and warm in the morning and the afternoon relative to the cold weather in the winter in general, it did not attract the residents to have any activities in the outdoor spaces.



(Figure 4.29) Privatized Side Walks Used for Beautification in The Street Space B

4.5 Heliopolis

Heliopolis, the city of the sun, is a new city founded in the desert of Abbassiah in the extreme north east of the metropolis in 1905 by *Edward Empain*, a Belgian prince. The project was first connected to Cairo's urban center by means of an electrical tramway. The project targeted high socio-economic class people after elegant sites on both of sides of the Nile river have been sold and occupied. In addition, at that time many people saw the city of Cairo as a dusty, noisy city. The site of the new district constitutes a plateau that is higher than the urban city with an average altitude of seventeen meters. This rise in altitude decreases the temperature of one degree centigrade (21.9 versus 20.8).[104] The city was extended, and renamed *Misr Al-Guedida* (New Cairo). It still classifies as one of the highest socio-economic class residential areas in the metropolis.

4.5.1 The Configuration of The Physical Setting

The specific site selected to be studied, "Abou Jaafar El-Nahhas" is a local street in Heliopolis. The space rectangular and surrounded by six-story residential buildings on three sides and a primary school on the fourth. The school did not affect the study, since the study was conducted during summer vacation. In addition, the school had no entrance onto the concerned space. The space includes a rectangular green area in the center, with a pavement around it adjacent to the buildings. The street is characterized by very low

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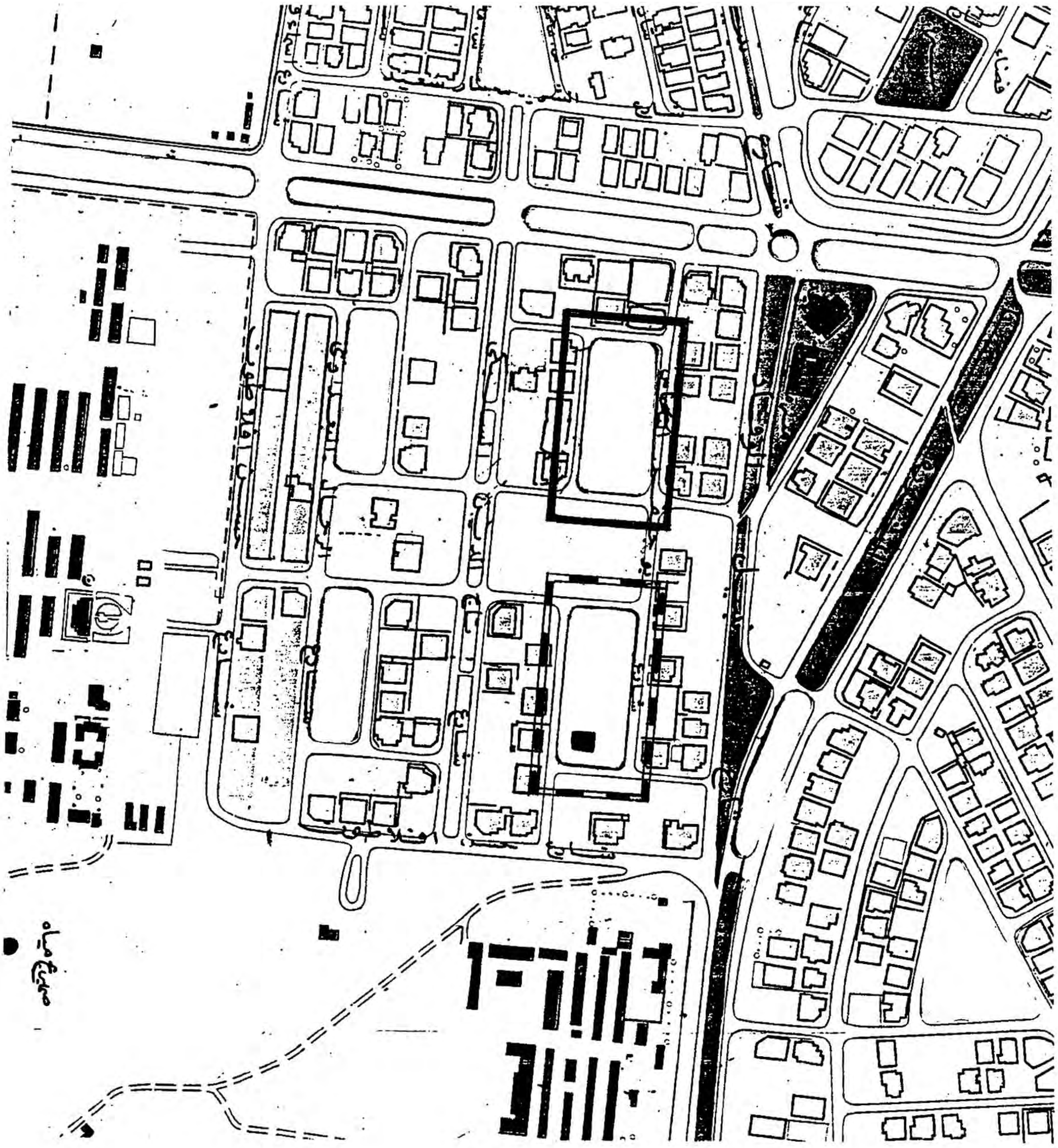
[104] Robert Ilbert, *Heliopolis: Le Caire 1905- 1922, Jeunesse D'une Ville*, Paris: Centre National De La Recherche Scientifique, (1981).

traffic which acts as a service road or parking for the residential units. The green area is planted and maintained by the community and is landscaped by a gardener hired by the residents of the surrounding buildings. A flower bed is in the center of the space, and some trees and palms were planted along the edges of the green area.

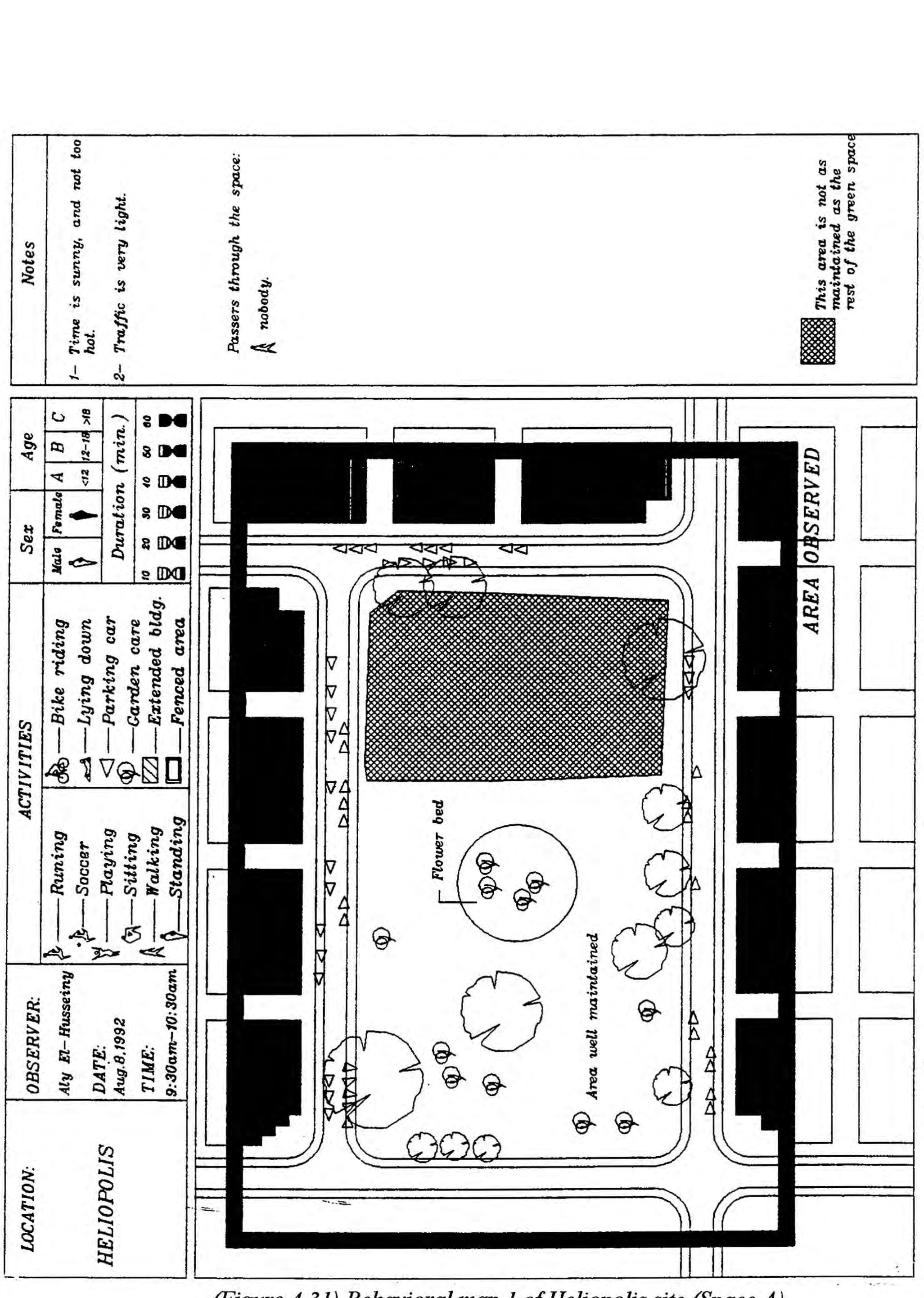
4.5.2 The Behavioral Patterns in Context

The social relationship among the residents of Abou Jaafar El-Nahhas street was very limited. Some interviewed residents did not recognize their neighbors' names or occupations. The flats were mostly tenant owned, and was managed by Owners' Union Boards to handle the buildings' maintenance concerns. A volunteer resident collected the necessary funding to landscape the common green area from the residents of the buildings who share a view of the space. Most of the buildings' residents positively responded except the tenants of two buildings who did not want to contribute. The green area was relatively well landscaped except for the area near the two buildings which was abandoned by the gardener to poorly maintained grass.

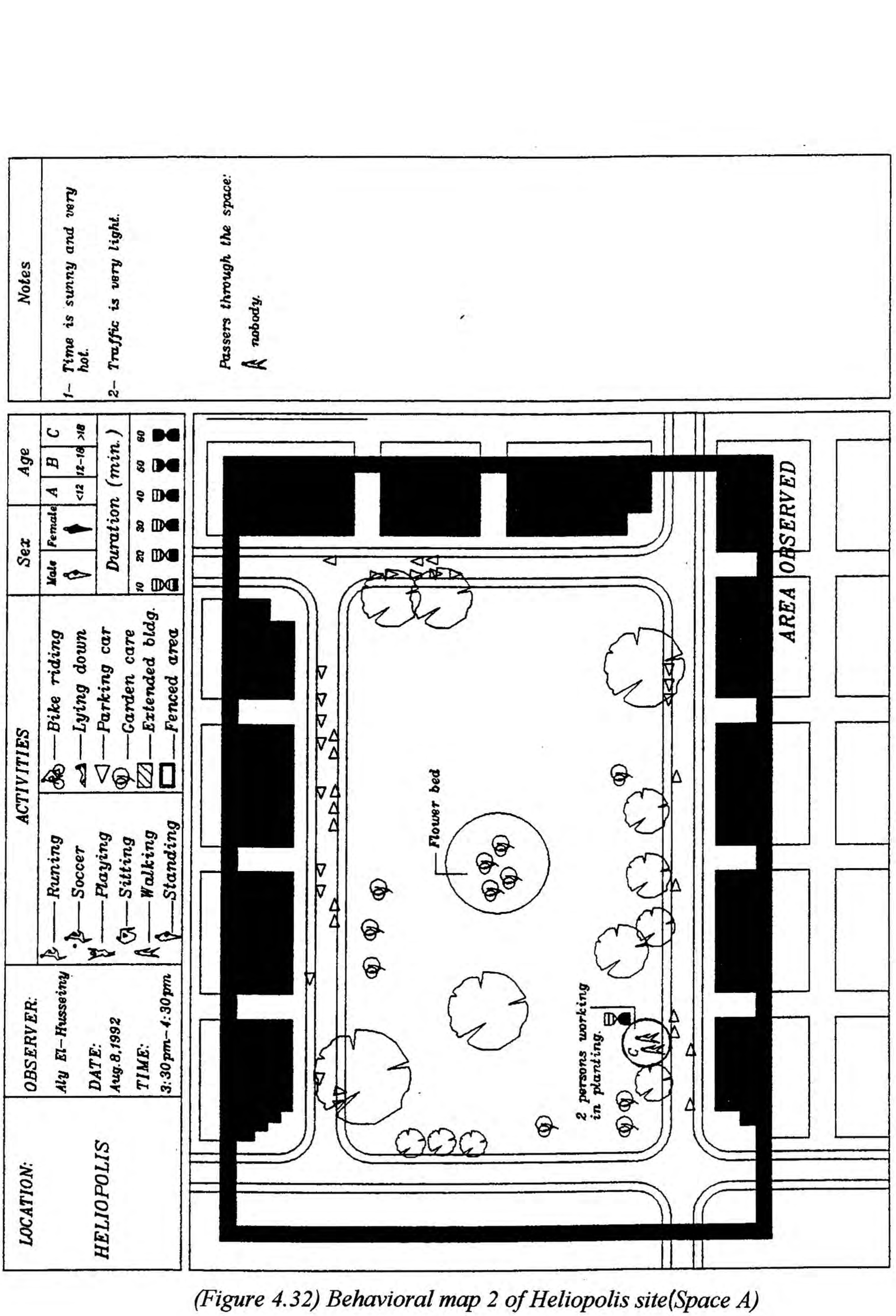
Some individuals planted the trees near their buildings on the edges of the green area. An interviewee who transplanted a large tree aimed to provide a shaded area to park his car. In fact, in whole area, the parts of sidewalks that were shaded by trees were all occupied by parking cars.



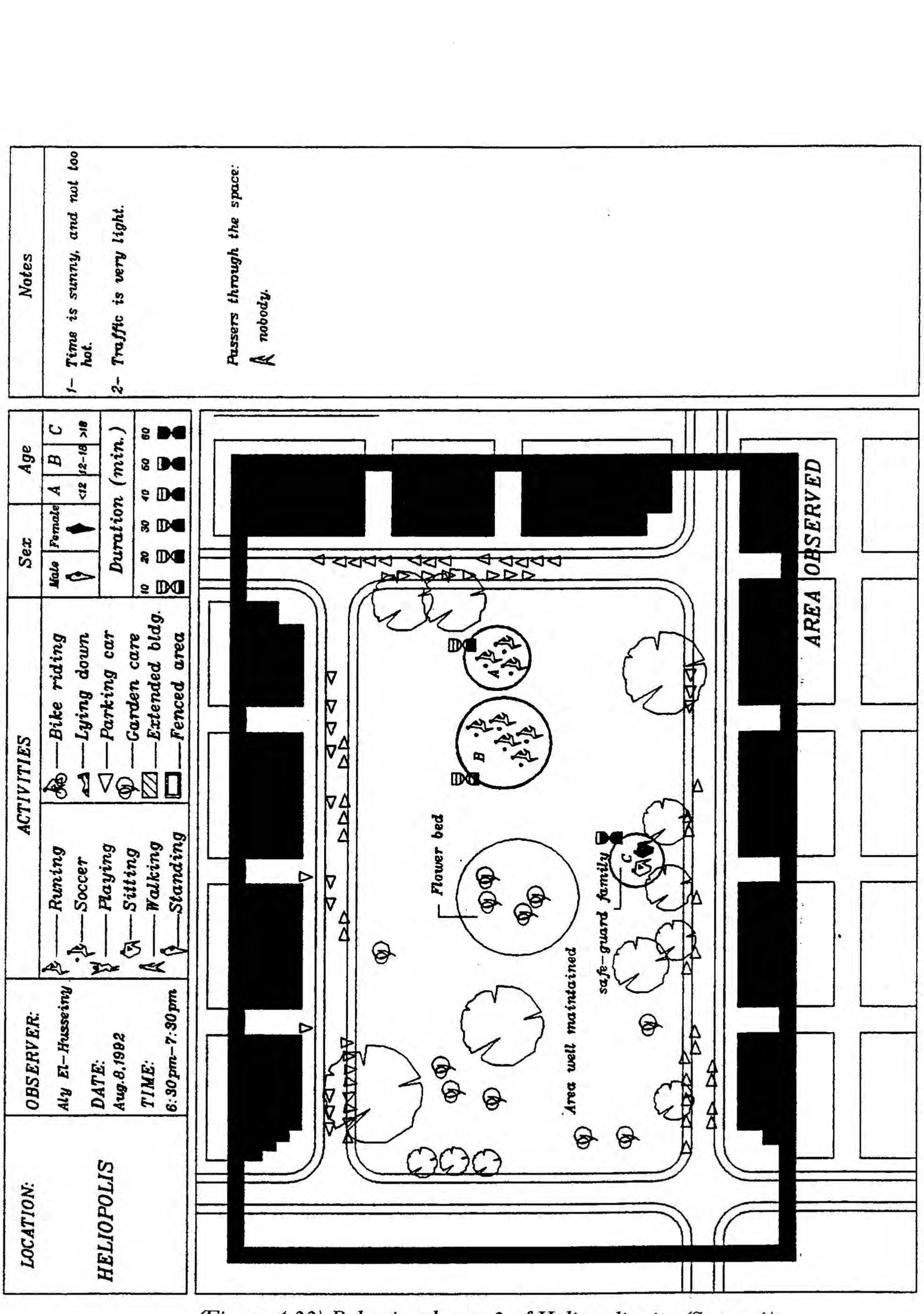
(Figure 4.30) Map of the area of study in Heliopolis



(Figure 4.31) Behavioral map 1 of Heliopolis site (Space A)



(Figure 4.32) Behavioral map 2 of Heliopolis site(Space A)



(Figure 4.33) Behavioral map 3 of Heliopolis site (Space A)

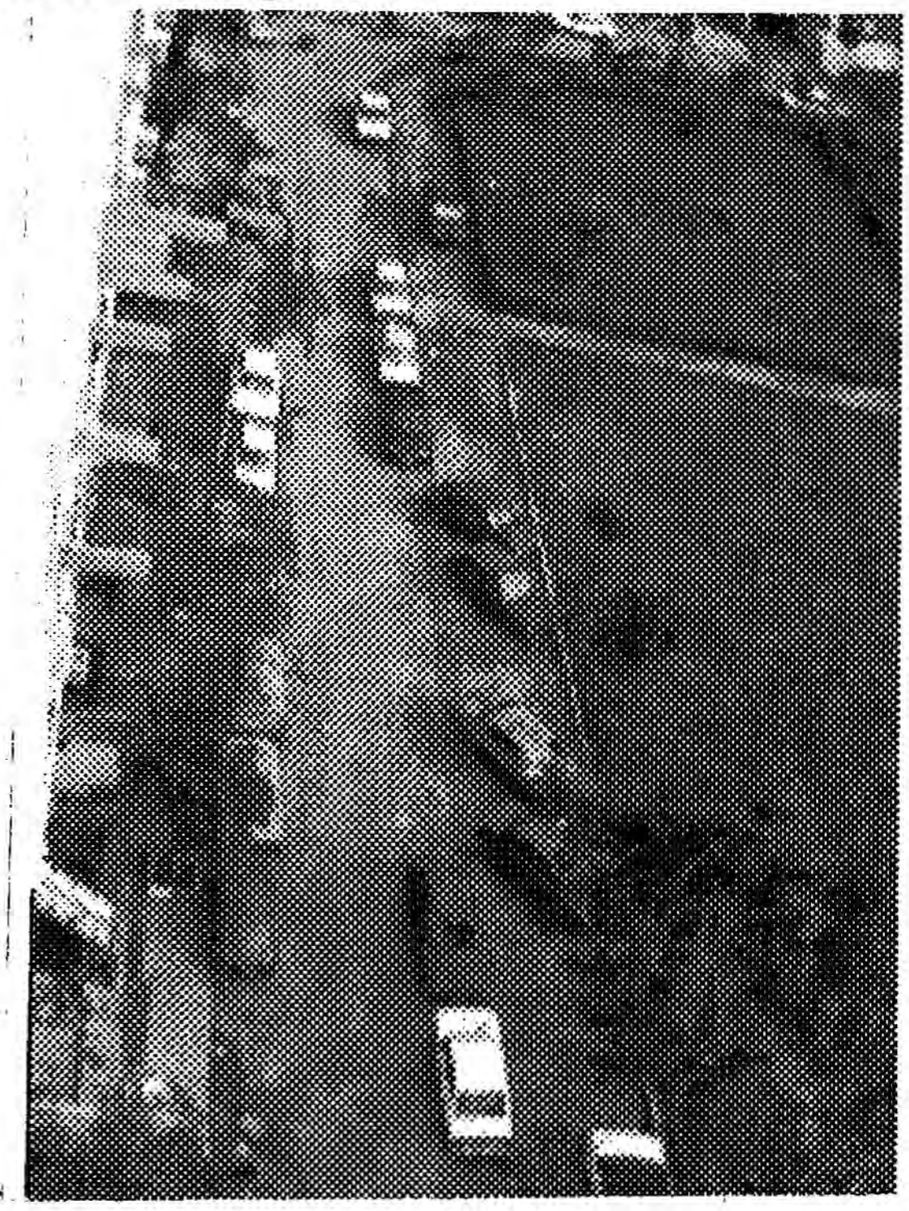
(Figure 4.34) Shaded areas are used for parking cars

(Figure 4.35) Residents prefer to view the landscaped space from their apartments

The pedestrian activities were very limited during all the day especially in the heat of the morning. The residents used the space only to park their cars. In the evening, the buildings guards and their children sat on the grass. Chicken and geese raised by them were strolling in the space as well. At the same time, some residents sat in their balconies to enjoy the better weather after sunset and look at the central garden. The figures 4.31, 4.32, and 4.33 show the activities in Abou Jaafar El-Nahhas street.

4.5.3 Additional Observations in Other Spaces in Heliopolis

The other side of the area observed previously and which is shown on the map as the area B is in fact a physical extension of the same space B but was separated by the primary school. The area B has similar configurations of that of the area A. Although the area B was out of the domain of the observation in summer, it was noticeably ignored by the residents at the contrary of the area A. This phenomenon had no clear explanation at that time . That is why the author preferred to extend his observation to this area in the winter. The unawareness of the residents towards this space did not continue for a long time. When thespace was observed in February, it has been found to be under a comprehensive process of beautifying and planting. It was only waiting for an initiative resident to unify



(Figure 4.36) A View of the street in area B

the neighbors for executing their needs. By meeting the people, it has been known that each apartment shared with one hundred pounds to maintain the common space. The pavements served for a very light traffic and as local residential street its space included many parked cars. The sidewalks served for parking as well as the street pavements. The street space did not include any "active" activities.

4.6 Osman Towers

The housing project known as *Osman Towers* was built by The Arab Contractors Investments Co. on a significant site on the Nile river bank, south Cairo. The project consists of twelve residential buildings that include 510 units intended for upper middle class housing. In addition, six other towers have 564 additional residential units. The high price of the apartments and the highly ranked people who owned them enables the site to be classified as a high socio-economic class residential areas.

(Figure 4.37) A view of one space in Osman Towers' area

4.6.1 The Configuration of the Physical Setting

The high rise buildings are huge blocks dispersed in a dot pattern. The space in between had no sense of physical enclosure. The vast no man's land was completely abandoned without any maintenance. A part of the accumulated rubbish was left after construction for years. The waste site was inhabited for more than ten years. Any one who visits the site is struck by such mistreated space in an expensive place to live. But when coming in any apartment, he realizes that the fascinating view on the river and the city is one of the most beautiful scenes in Cairo. The first residential floor (at the level of 25 meters height) to the 42nd floor all have attractive views. The rear is not as interesting as the Nile view.

4.6.2 The Behavioral Patterns in Context

Although the residents of Osman Towers are considered to belong to a high socio-economic class, particularly the residents of the first row of towers on the Nile, differences in occupation and nationality disturb the inhabitants' homogeneity. The tenants are all considered high income people, but some are businessmen with a diversity of educational levels, others are high ranked employees in the government. In addition,
some owners are from other Arab countries and they reside only for short terms. Social relationships are neglected which can be seen in local maintenance.

The maintenance of the different buildings were under the responsibility of the Owners' Unions that ignored the public open space and relied on the contractors of the project to accomplish the landscaping. The contractors claimed that landscaping comes

after the completion of all buildings in site. At the same time, the unbuilt towers are not expected to appear in the near future, which decreases the chance that the contractors will landscape the site at all. Obviously, the residents who lived for more than ten years in this site did not the intend to clean up the open space. A lack of cooperation concerning paying the service charges of building maintenance on an invoice on the entrance of an elegant tower threatened to restrict the non-payers' use of the elevator unless they pay their share.

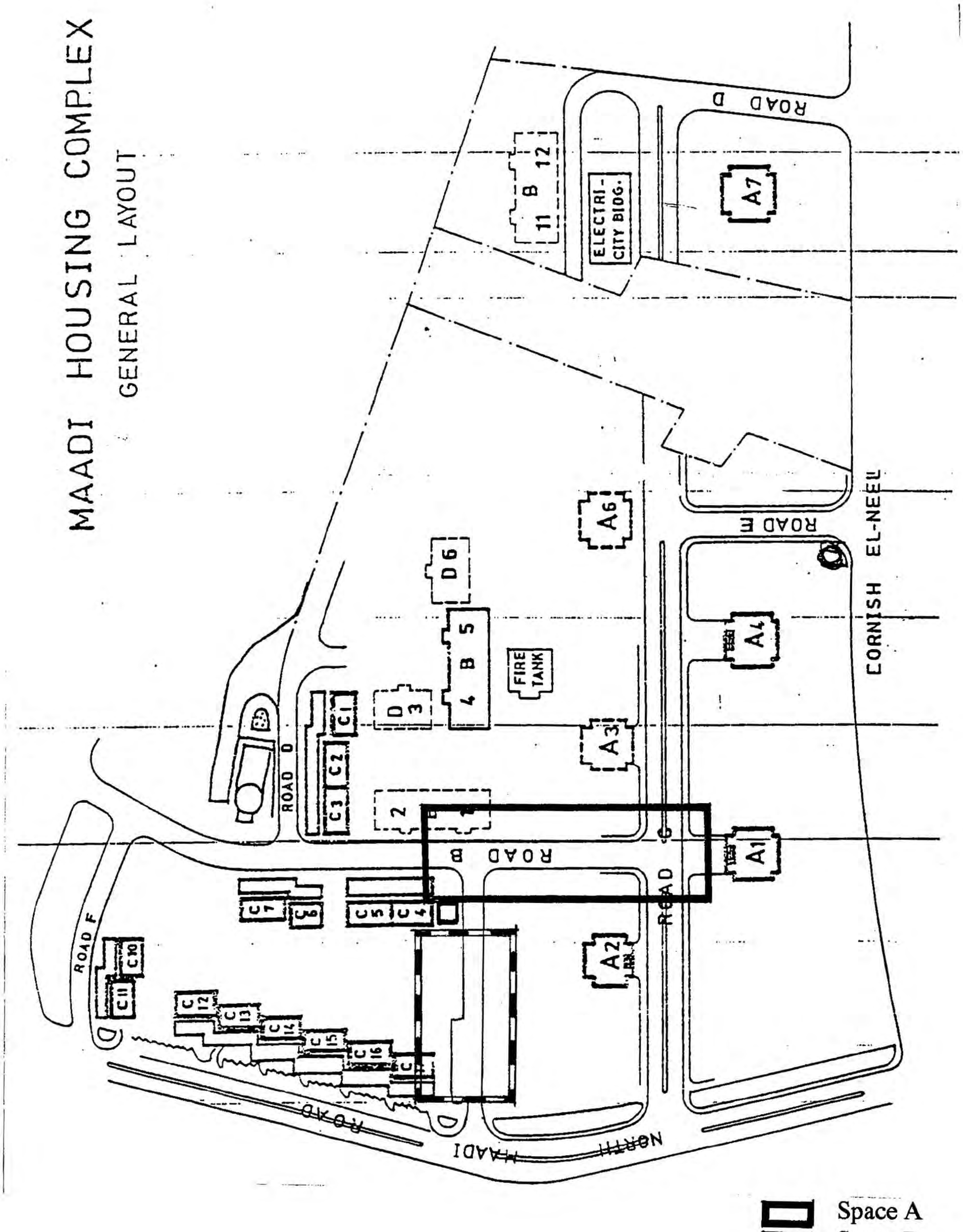
Since the generous space among the buildings was completely messy, the only space that was available for any activity was the street pavement. The residents used the street to park their cars. A few adult men strolled to pray at the mosque located on the site. In general, no active activities were observed in the morning or the afternoon. But, in the evening, a large number of teenagers used the quiet streets for playing soccer and riding their bicycles. By interviewing members of each group playing in the street, it was discovered that none of them was a resident of the Osman Towers. The bicycle riders came 105th street, a medium socio-economic class area, and the soccer players came mostly from the slum area nearby "El-Souk", the market. Good lighting allowed the recreational activities to last until late at night. The segments of streets that used for recreation were the parts that are not in front of the building entrances. The building guards prevented the children from playing in front of the entrances by spreading water on the street pavement. The figures 4.41, 4.42, and 4.43 demonstrate the behavioral patterns in one of the streets of Osman Towers.

(Figure 4.38) Riding bicycles in the streets of Osman Towers

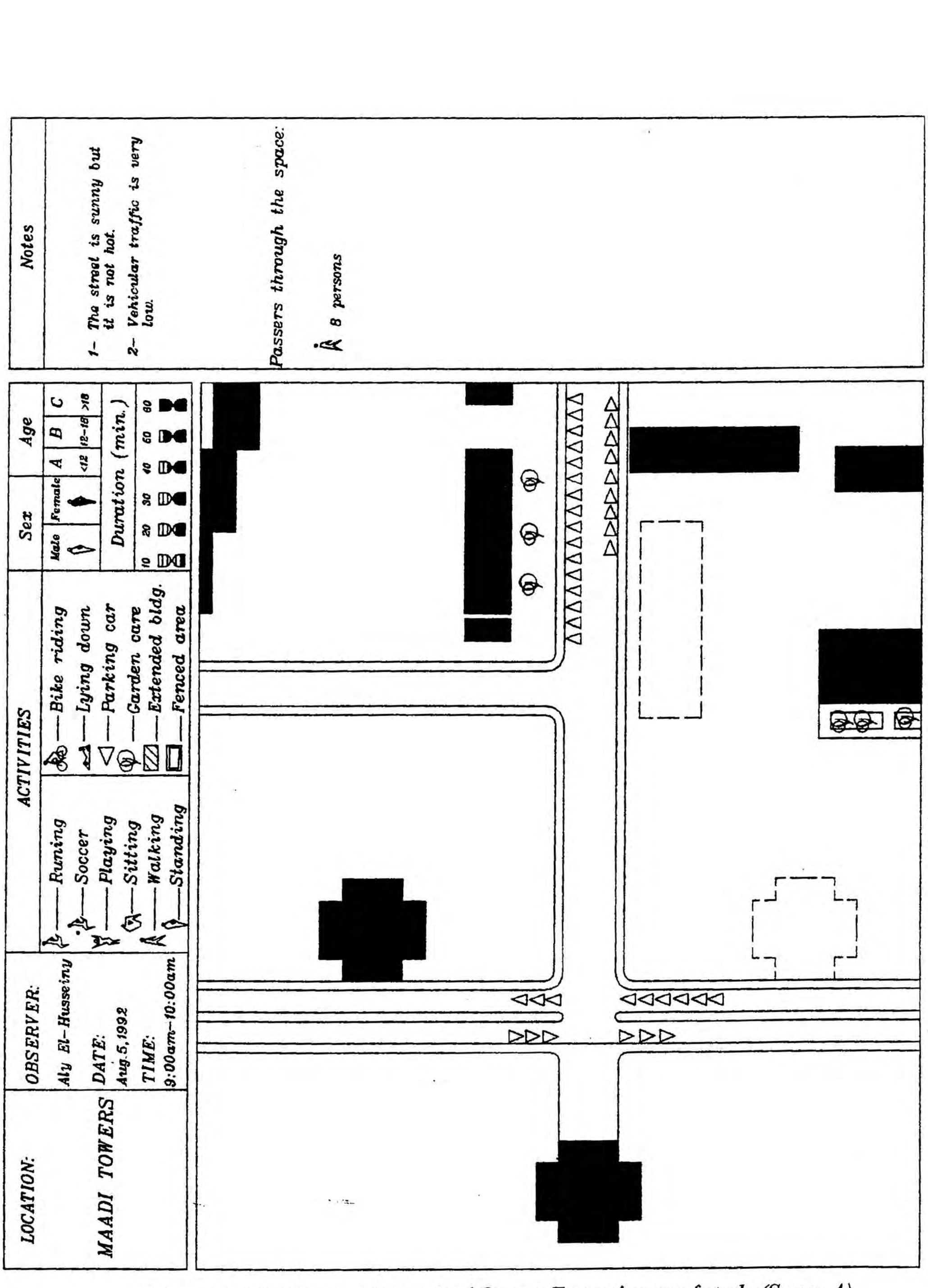
(Figure 4.39) Non-residents playing soccer in the quiet streets

MAADI HOUSING COMPLEX

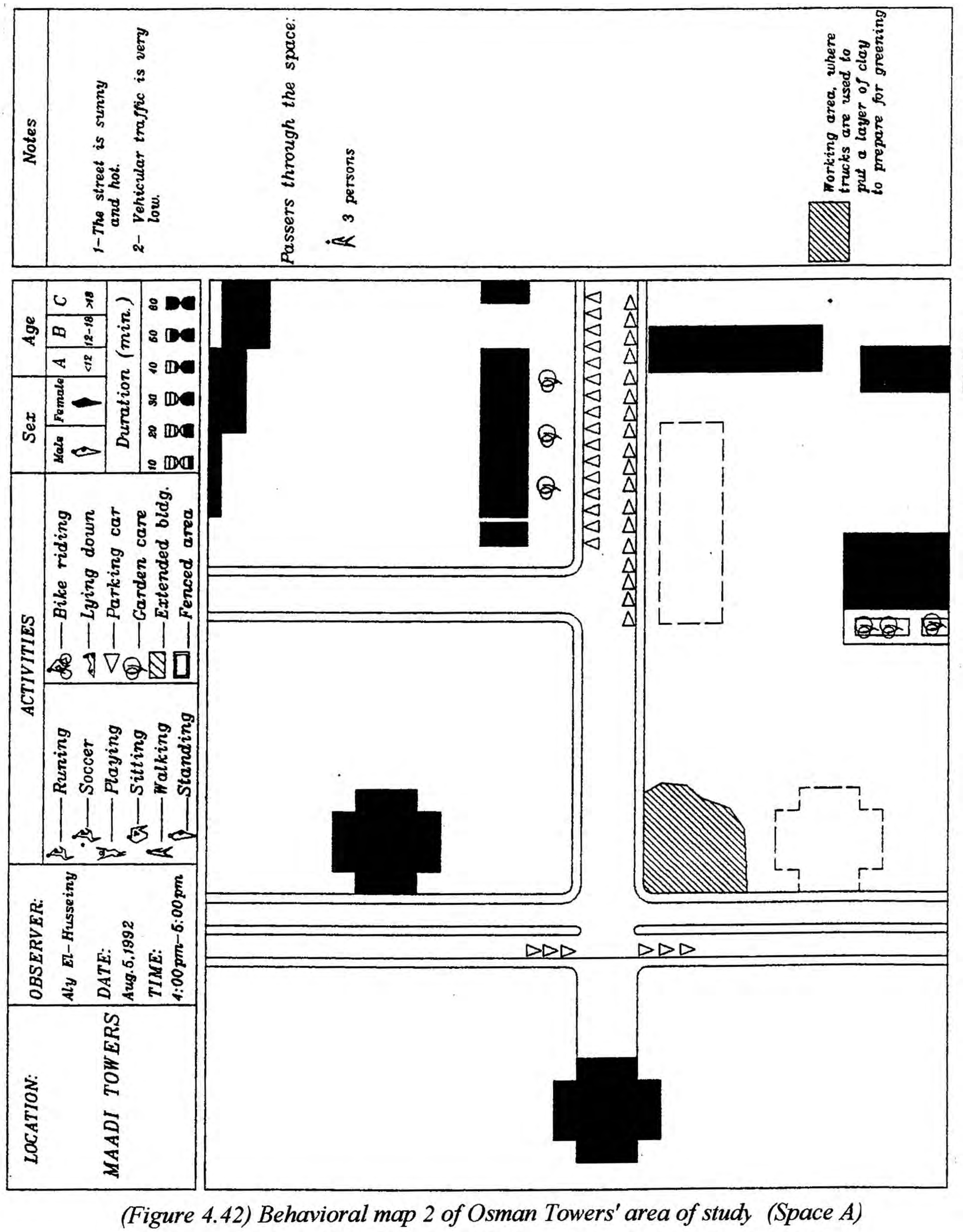
GENERAL LAYOUT



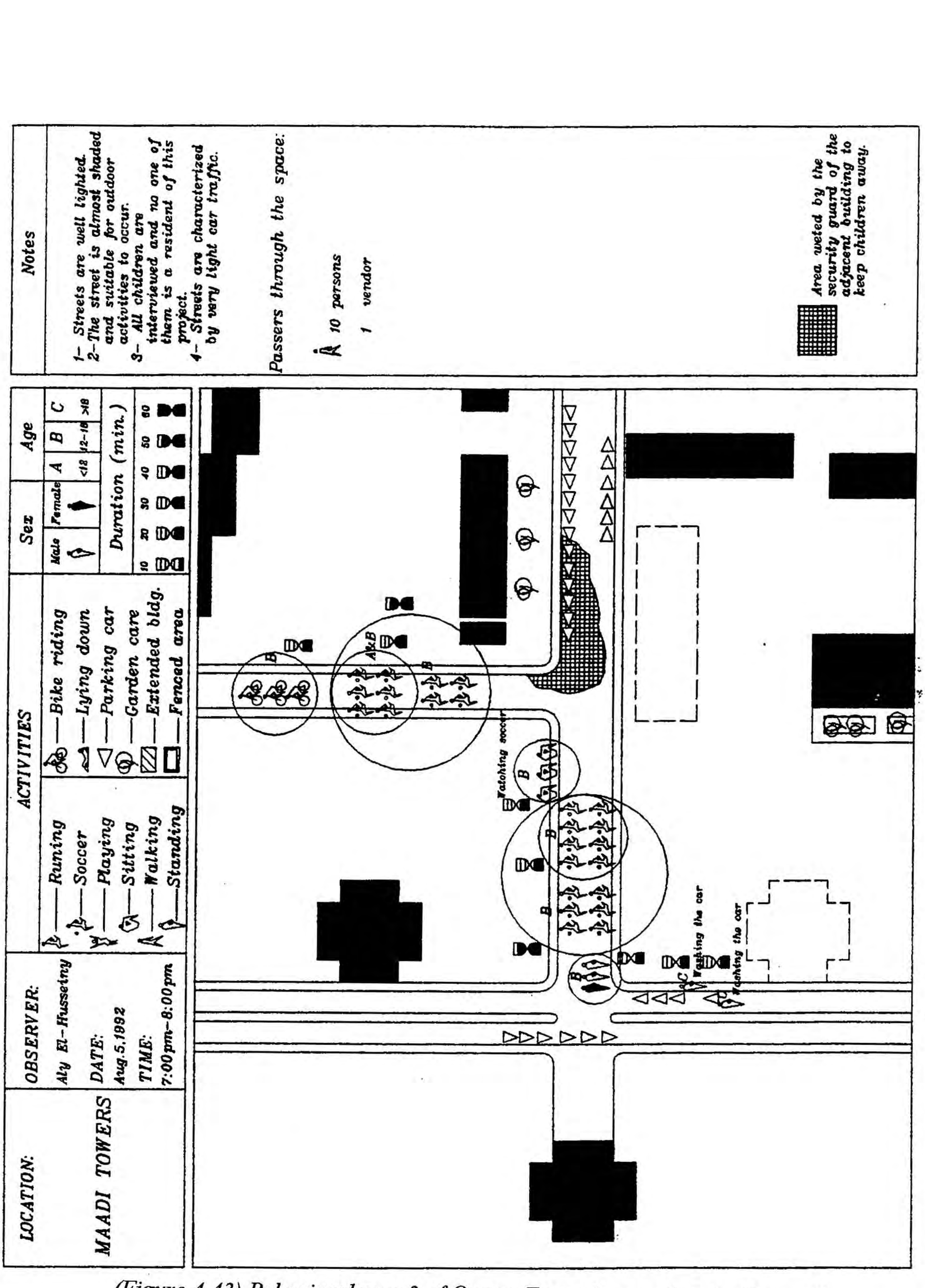
(Figure 4.40) Map of the Osman Towers area of study



(Figure 4.41) Behavioral map 1 of Osman Towers' area of study (Space A)



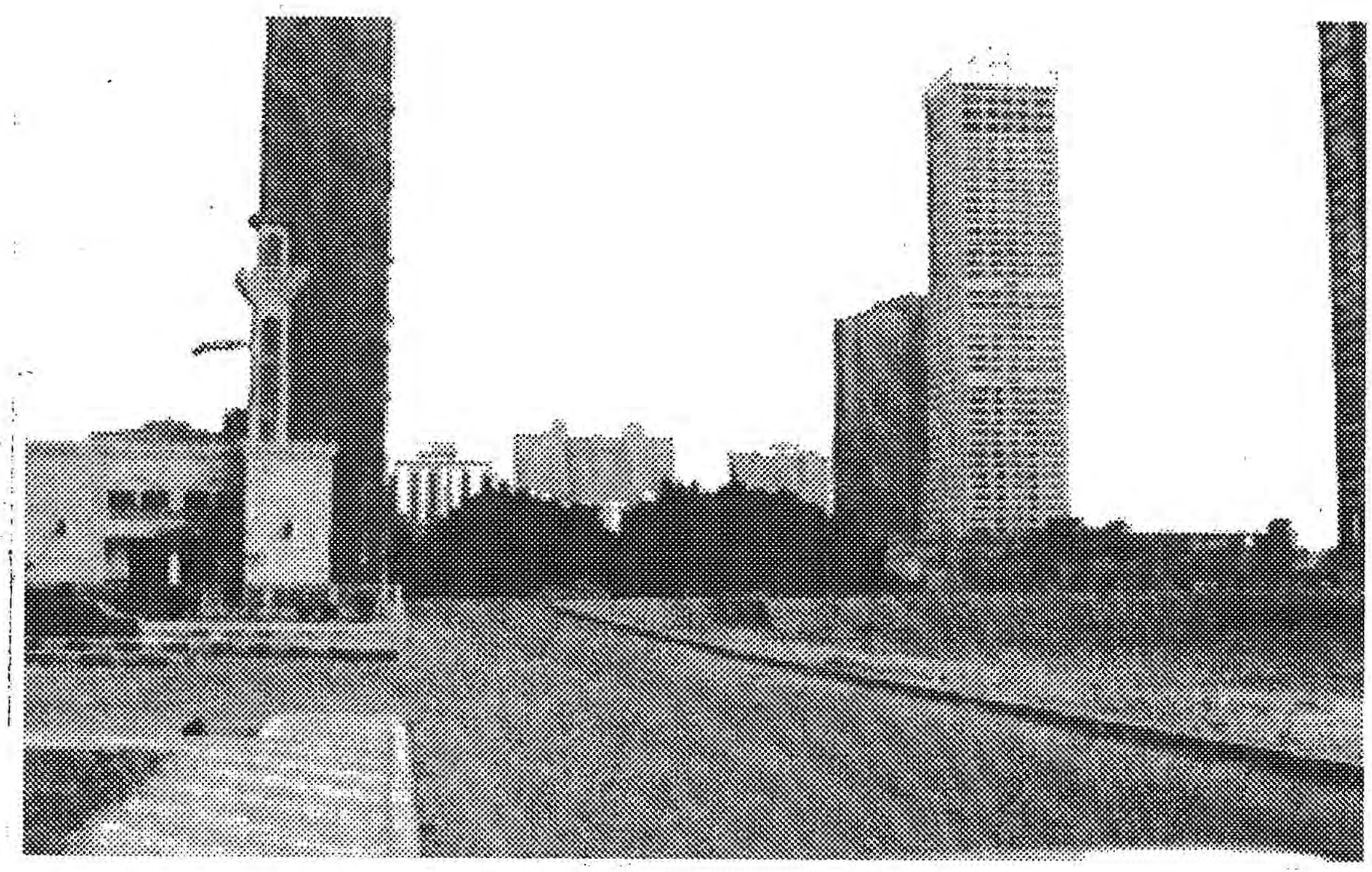
(Figure 4.42) Behavioral map 2 of Osman Towers' area of study (Space A)



(Figure 4.43) Behavioral map 3 of Osman Towers' area of study (Space A)

4.6.3 Additional Observations in Osman Towers' Project

Another street space has been observed in the Area of study in the winter time. The physical setting in the street B shown on the map had the same characteristics of the part of space previously observed. The spaces specialized for green areas were totally ignored. The pavements were used for parking. Some teenagers played soccer games but the activity was performed by a fewer number of users and also for a limited time because of the short day and the cold in February.



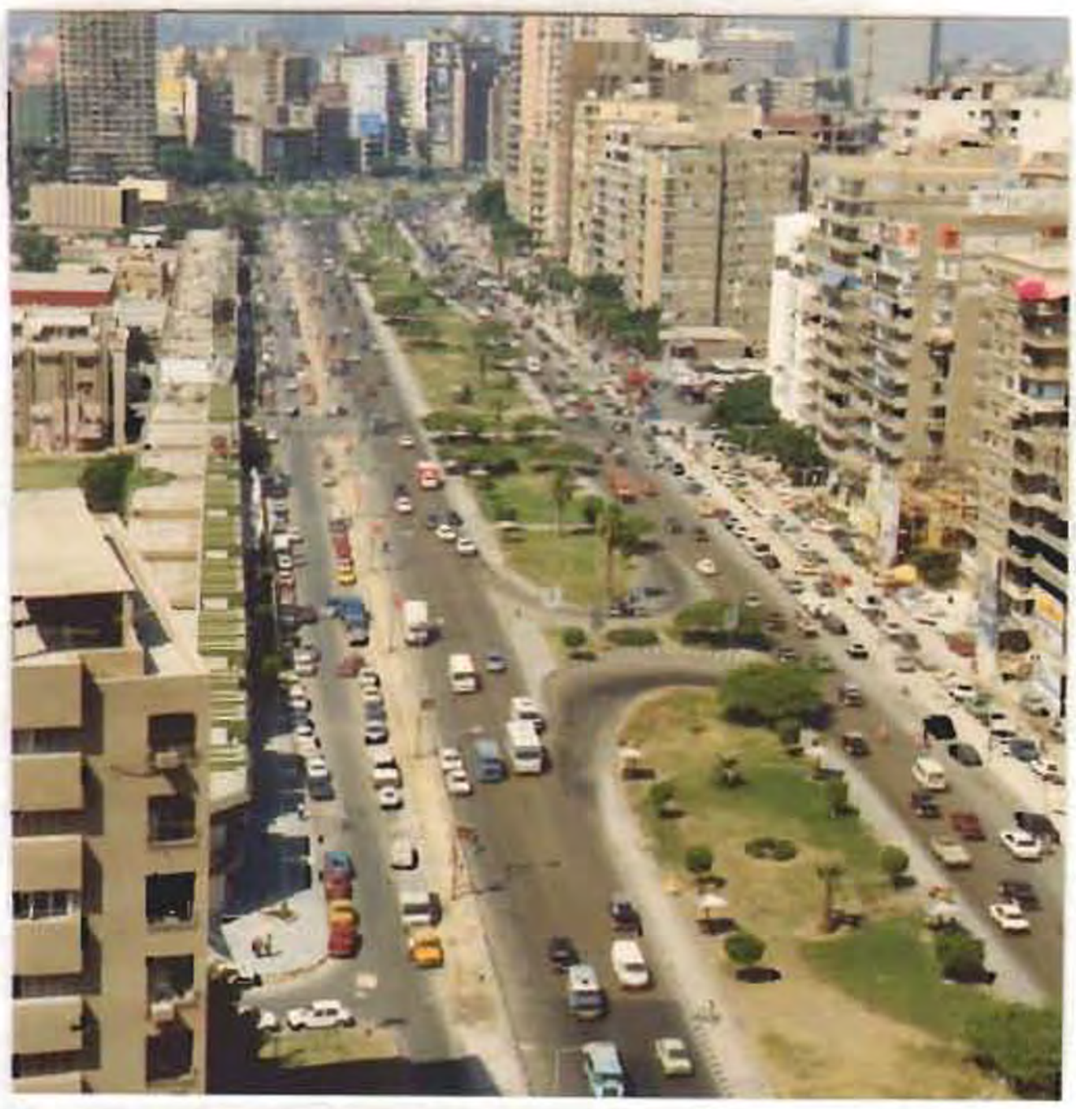
(Figure 44) A view of the street space B in Osman Towers' area

4.7 Gameat El-Doual Street

Gameat El-Doual Street is located in El Mohandesin district, one of the highest socio-economic class residential areas in the metropolis. This street is among residential areas of this study because it has become lately an important recreational public space. Although the residents are considered among the high socio-economic class, the users of the street space are members of a diversity of socio-economic classes.

4.7.1 The Configuration of the Physical setting

The Gameat El Doual Street is a wide with high-rise buildings lined on one side, a shopping strip on the other which has been designed as a boundary for the Zamalek Sporting Club's playing fields. Shopping activities had no effect on the median because of the high traffic that isolated it. The street is a long straight corridor characterized by a heavy pedestrian circulation and vehicular traffic all the day, which distinguish it from the other quiet areas of study. The median of the street is a 40 meters width and



(Figure 4.45) A view of Gameat El-Doual street

prolonged green area. It includes some trees without order that provide shades on some areas on the median. Two service roads are extended on both sides of the street used for light traffic and parking for the residential buildings and the shopping strip.

(Figure 4.46) The area of study in Gameat El-Doual street

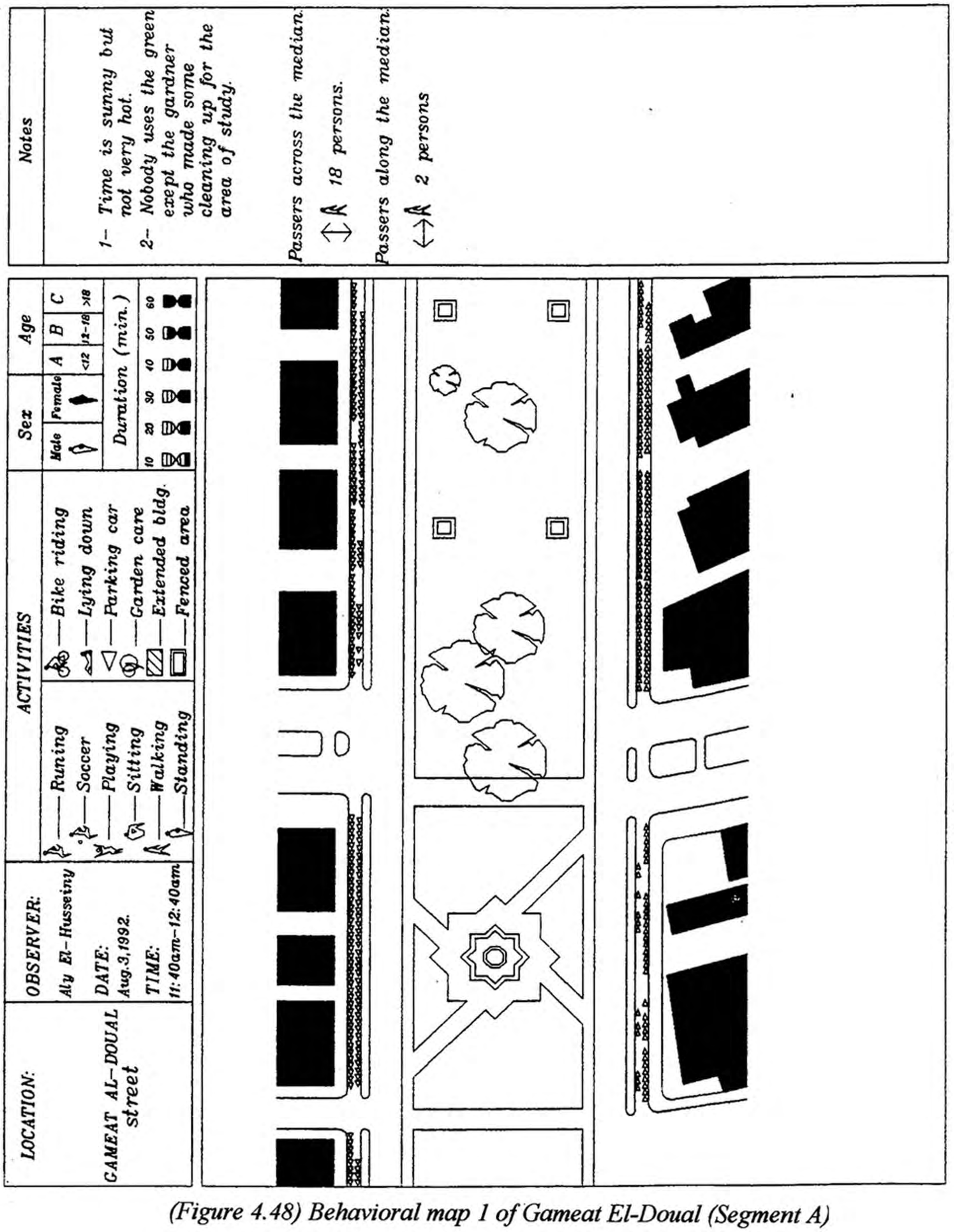
4.7.2 The Behavioral Patterns in Context

The Gameat El-Doual Street contains different behavioral patterns. The residents of the expensive high-rise buildings get the benefit of the good view of the street's green median and the extended view of the Zamalek Club's fields. The service road is crowded by their parking cars which sometimes occupy the sidewalks.

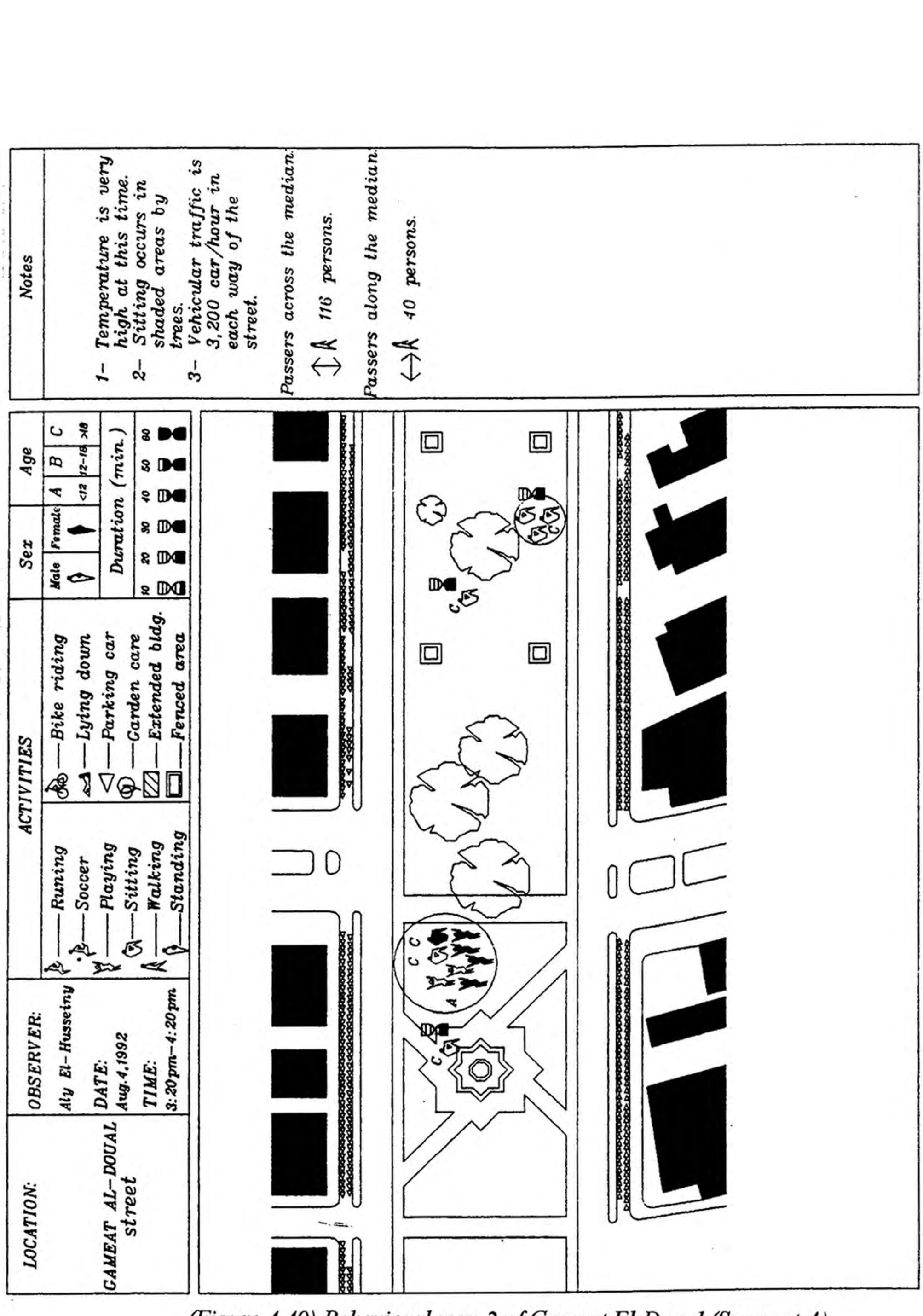
The green median, being isolated by the heavy traffic, is considered a public park for the low income neighbors particularly from "Boulak El-Dakrour," and others from "Mit Okba," and an informal settlement in "El-Agouza." Nobody used the median in the heat of the morning or afternoon. However, crowds of people, mainly families, came in

the evenings to sit in circles, to eat, and to play simple games. Some pedestrian vendors came to the area, who supported in turn the recreational activities in the space. The figures 4.48, 4.49, 4.50 demonstrate the behavioral patterns in a segment of the Gameat El-Doual street' median.

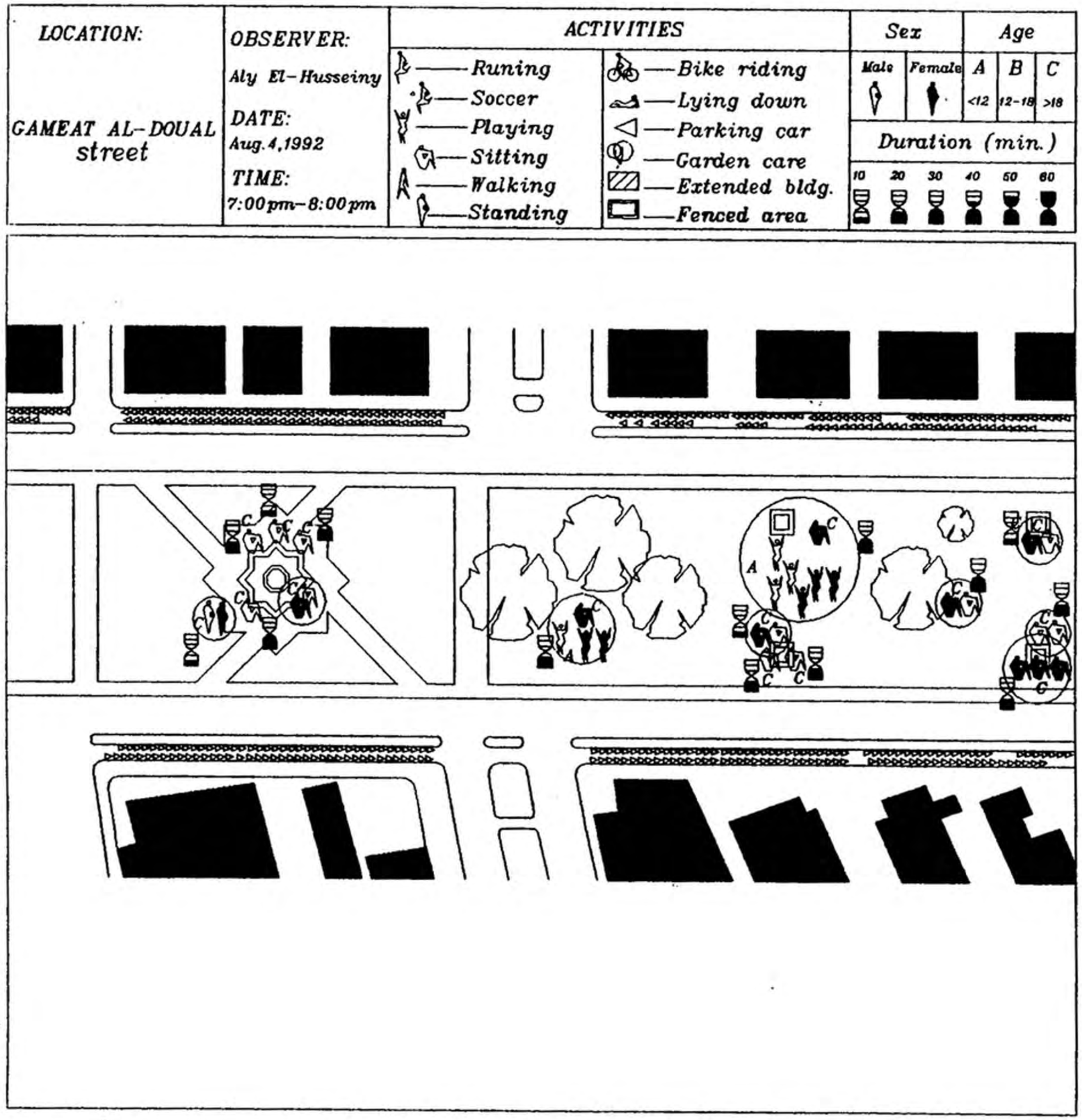
(Figure 4.47) Map of the Gameat El-Doual area of study



(Figure 4.48) Behavioral map 1 of Gameat El-Doual (Segment A)



(Figure 4.49) Behavioral map 2 of Gameat El-Doual (Segment A)



(Figure 4.50) Behavioral map 3 of Gameat El-Doual (Segment A)

4.7.3 Additional Observations in Gameat El-Doual Street

By observing another part of Gameat El-Doual street space in winter time, the author tried to verify the behavioral patterns observed previously. The recreational activities that took place in the green median almost disappeared during the winter. However some individuals used the space to sit or play in the afternoon time. But the green area was deserted in the evening . By interviewing some of the few users who were present there, it has been confirmed that almost all the users are comers from Boulak- the informal housing area very close to the street and none of the interviewees was a resident of the high socio-economic class area where the street is.

(figure 4.51) AView of The Segment B in Gameat El-Doual Street

CHAPTER FIVE

5. RESULTS AND SUMMARY

Field studies show that higher socio-economic class residents generally engaged in *passive* activities, while *active* activities occupy lower socio-economic class residents. These behavioral patterns are the outcome of an interaction between the objective aspects or the physical setting's "affordances," such as the configuration of spaces, and the subjective aspects including social and psychological factors. In other words, the active and passive activities result from a combination of environmental factors.

5.1 "Active" Activities

Active activities, as defined in the last chapter, include any activity that requires the presence of the users in a urban space. Recreation, working, passing through, and vendors' circulation are some *active* activities which have been observed in different residential contexts. According to the field study, recreation, and the private activities were the most important *active* activities wherever that was possible.

The diagrams in figures 5.1 to 5.14 indicate the timing, duration, and intensity of activity in relation to the location in the space for each observed area. The diagrams representing the areas A delineate the activities in the summer, while the diagrams representing the areas B are all for activities in winter. The activities are explained in the following points:

- The activities in Ain El-Sira area A differed from those in area B because of the physical configurations' differences as well as the variance of seasons. The pavements in area A allowed the teenagers to play soccer in the evening, while in area B, the dusty surfaces were occupied by repairing cars and young children play the day long.

- In Abou-Qetada, the quality of activities did not differ from space A to space B. However, the intensity of use decreased a little in the winter.

- In El-Ettehad Square, the people did not use the green area B for sitting in the evenings like what usually occurs during the summer and observed in the area A. On the contrary, the space B was occupied by the comers for playing soccer games in the morning and the afternoon, but was deserted in the evening.

- In Degla housing area, the recreation taking place in the space A by resident teenagers did not exist in the space B due to the observation of the latter in the school time.

- The activities in Heliopolis did not differ from the space A to the space B because of the negligence of the "active" activities in the area in both seasons.

- In Osman Towers' area, the pavements allowed the comers to play soccer games in the summer evenings. But in the winter, the space B was very quiet despite a limited number of teenagers who played for a short time in the sunny afternoon.

- In Gameat El-Doual Street, the median in the segment A was occupied by families in the evenings for recreation. But the median in the segment B was abandoned in the winter except for a few sitters in the afternoon.

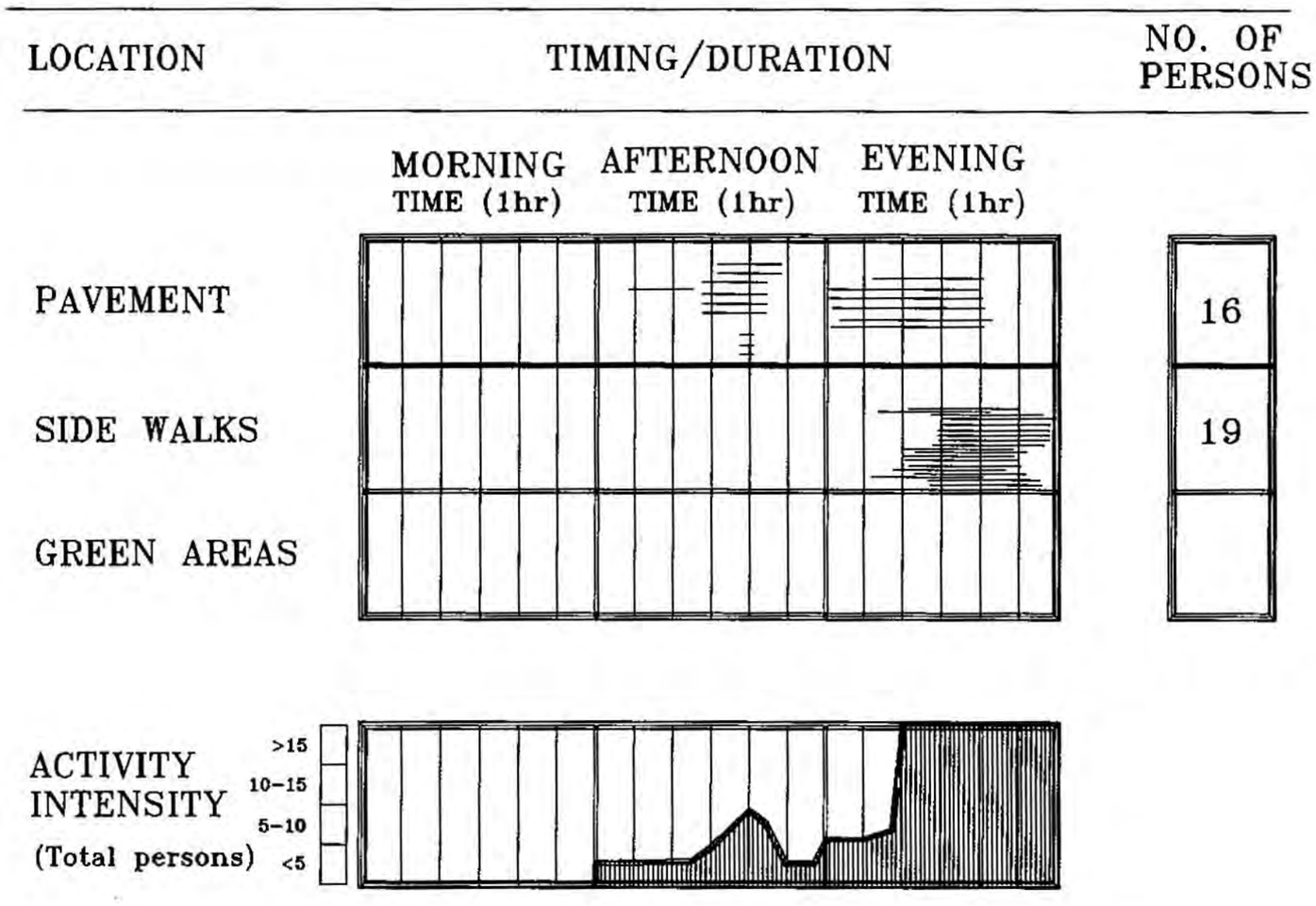
A collective comparison among the areas of study is represented in the figure 5.15 showing the difference in the intensity of use. The diagram reflects the following points:

- The intensity of use (active activities) increased in general in the lower socio-economic class areas.

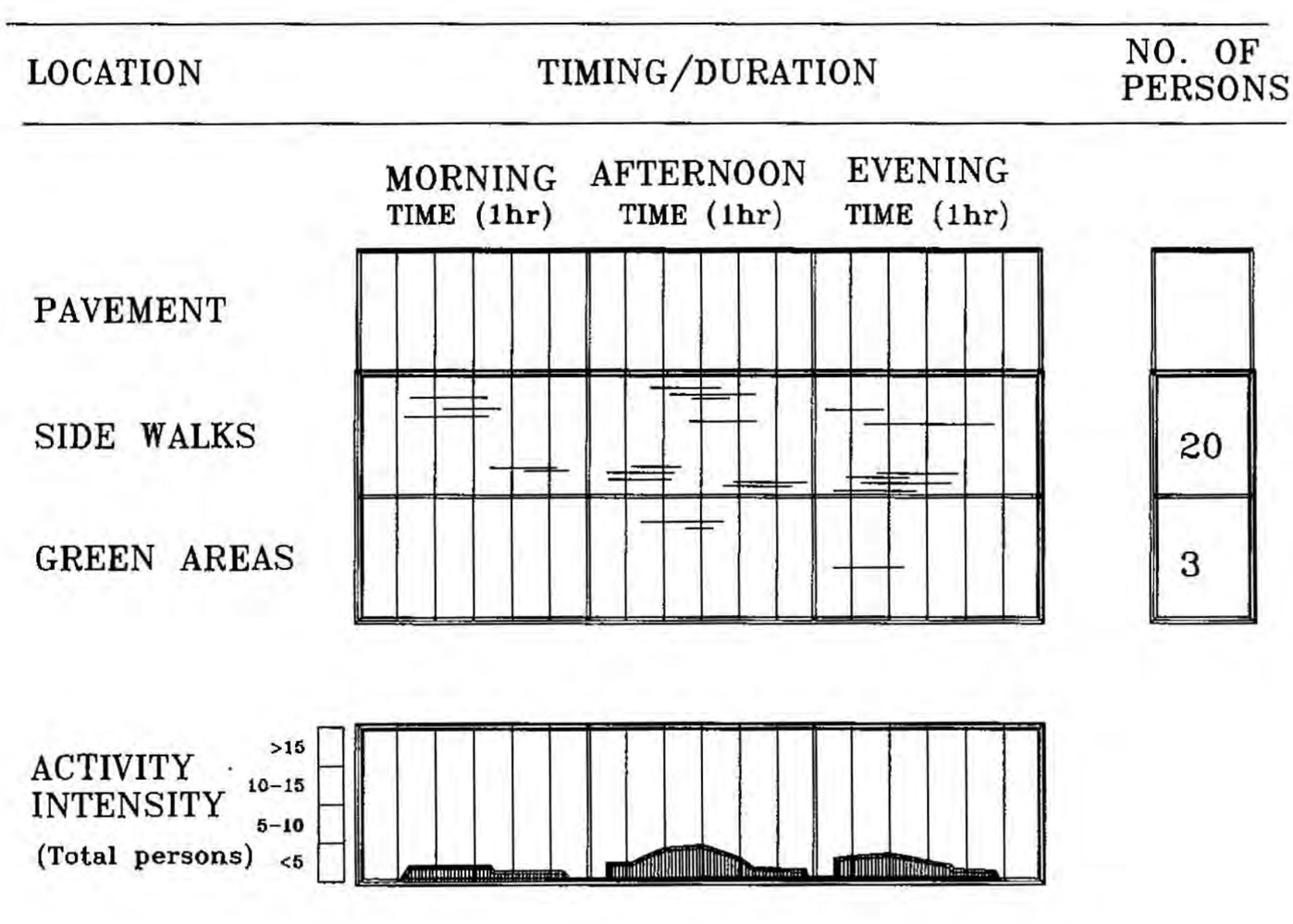
- The activities are more intense in the summer than in the winter.

- In summer, the activities increased mostly in the evenings, and decreased mostly in the mornings.

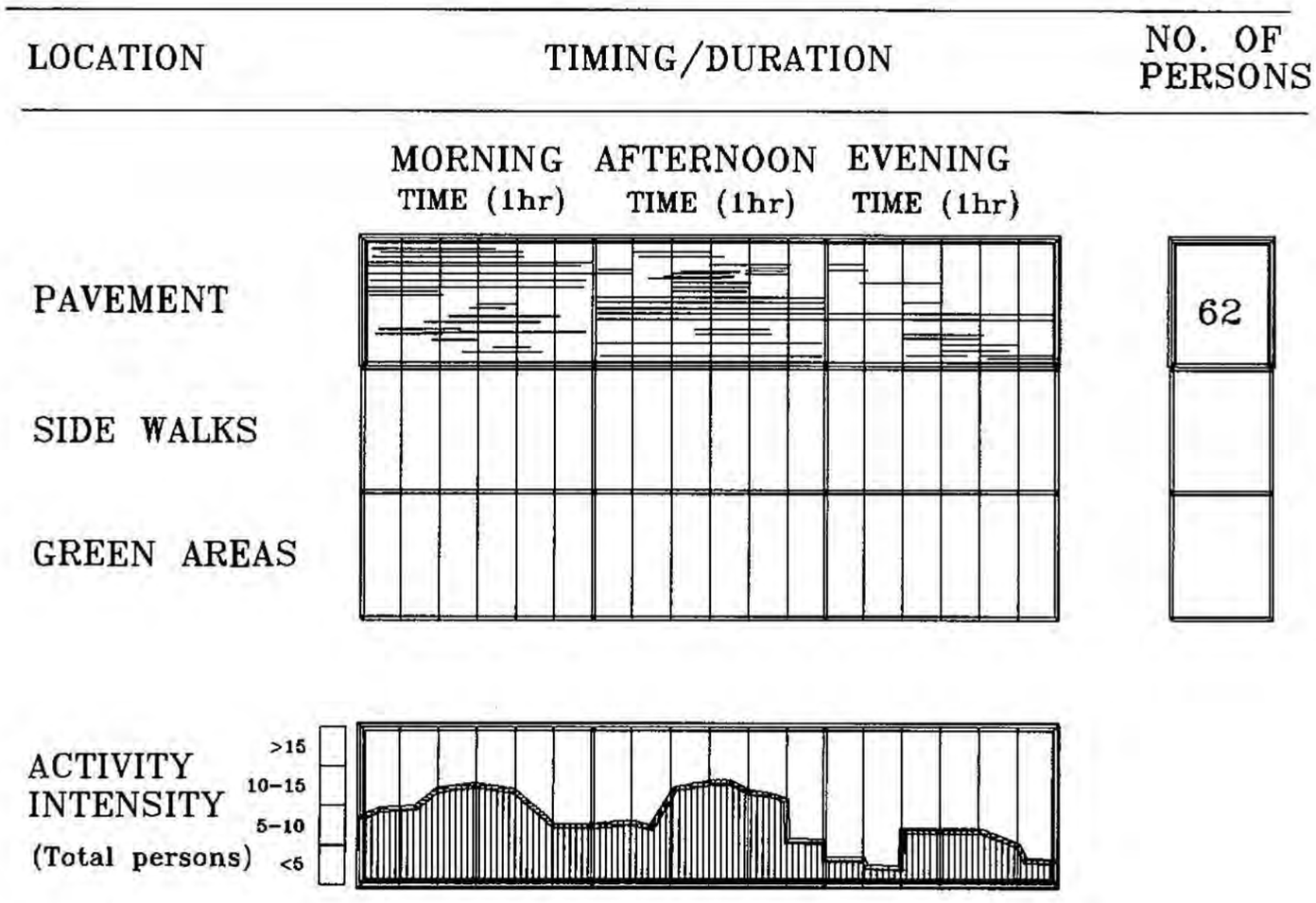
- In winter, the activities increased mostly in the afternoons and decreased mostly in the evenings.



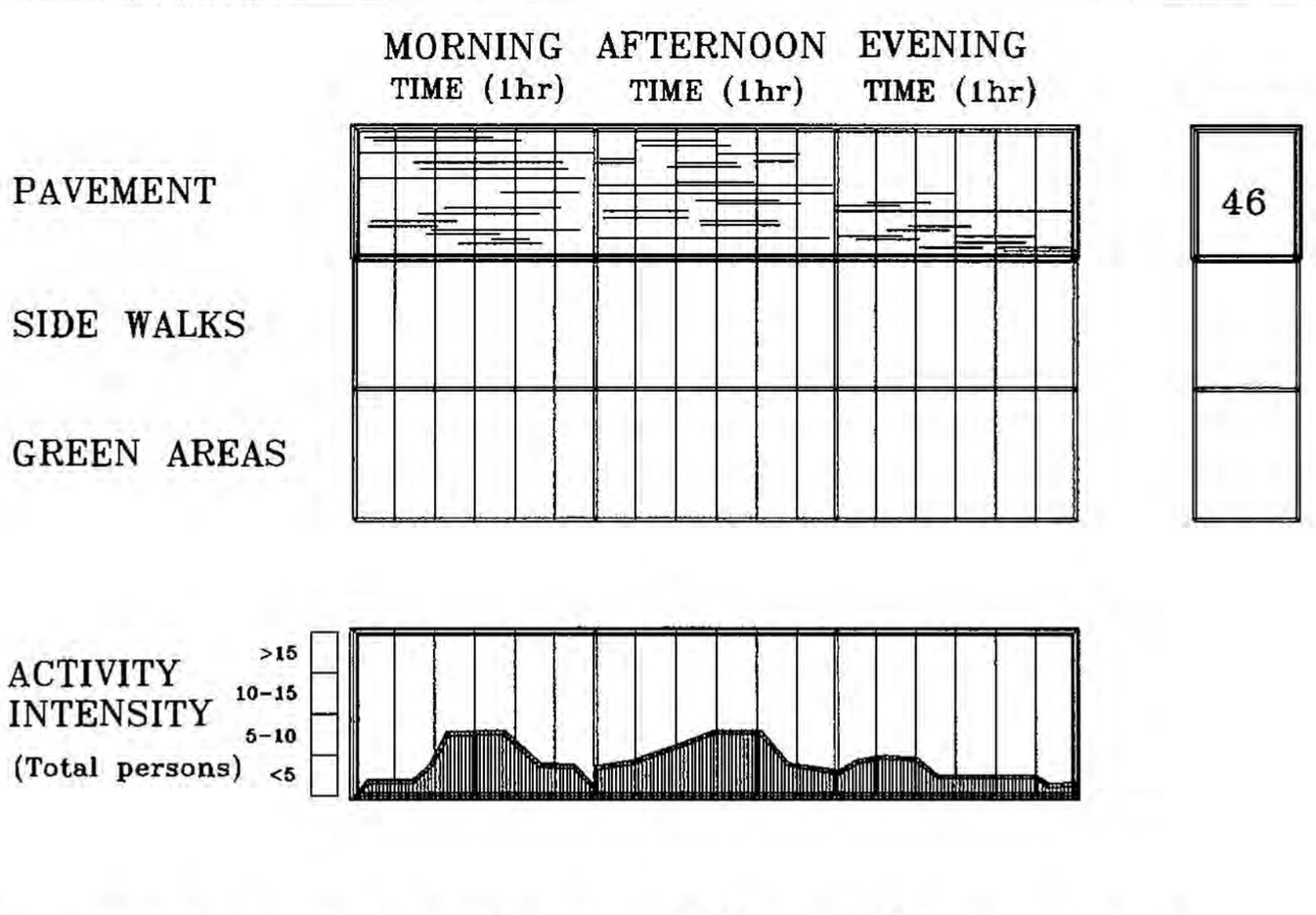
(Figure 5.1) A Day in the life of Ain EL-Sira Public Housing (area A)
(AUGUST 7, 1993)



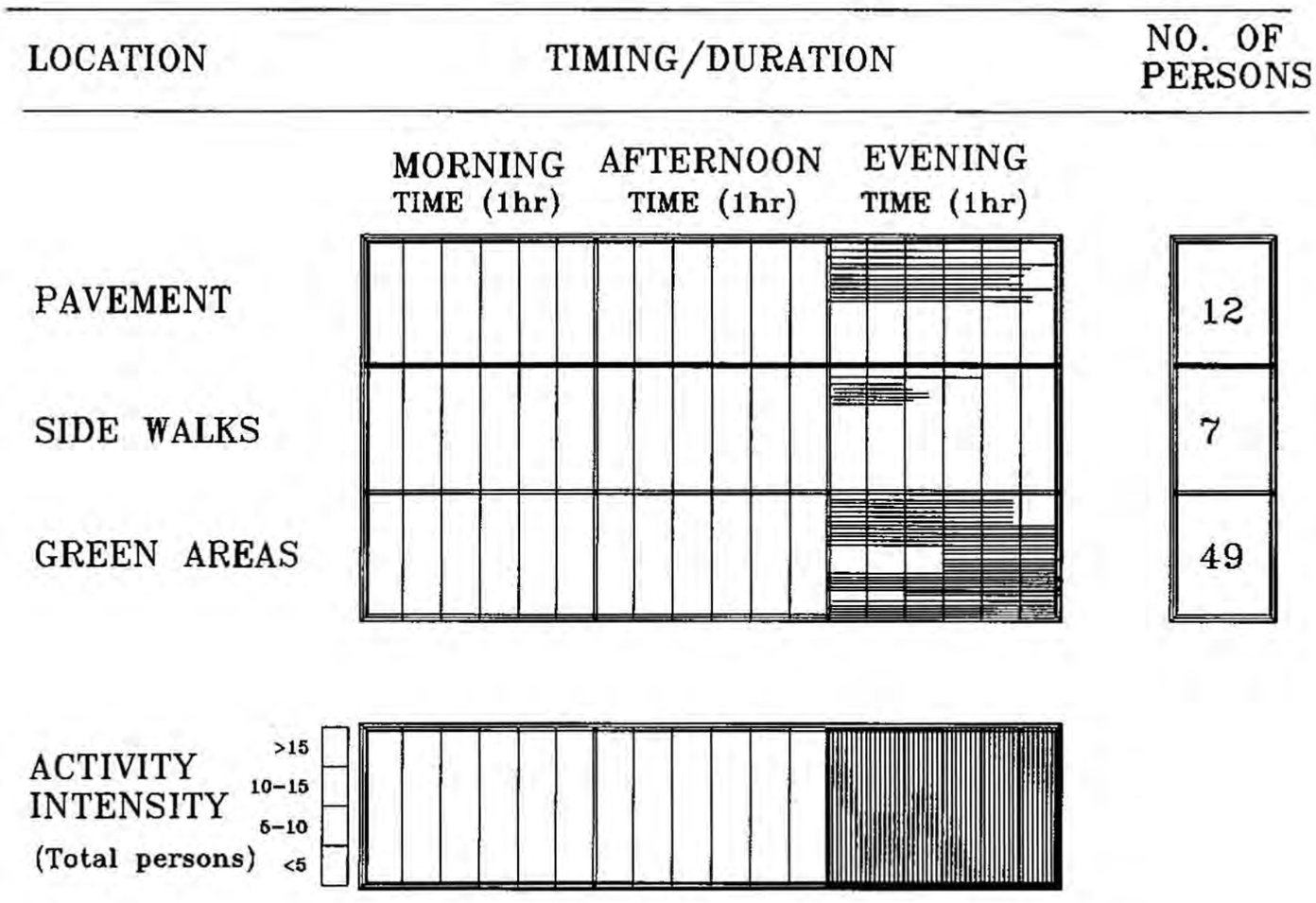
(Figure 5.2) A day in the life of Ain El-Sira Public Housing (area B)
(FEBRUARY 2, 1994)



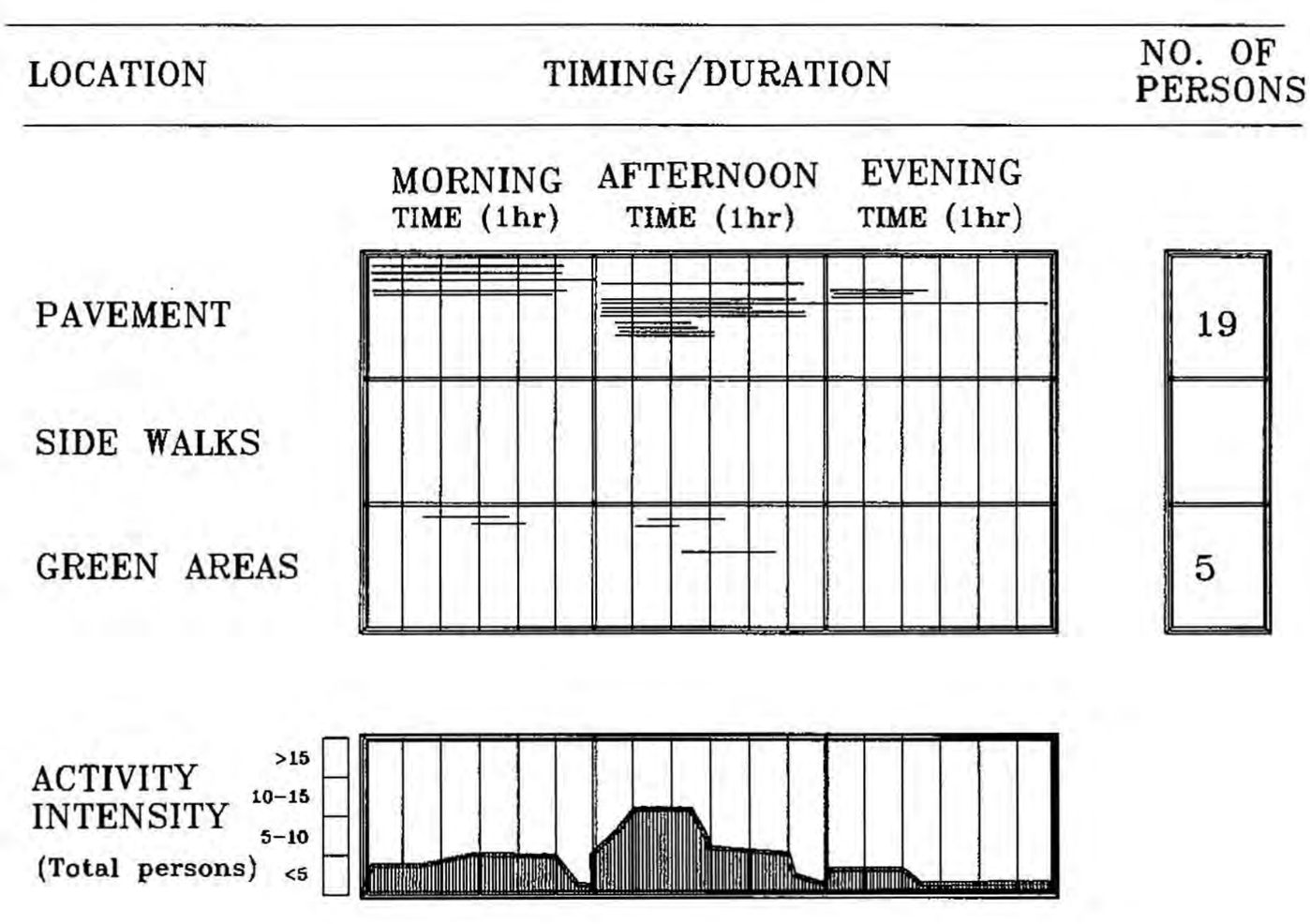
(Figure 5.3) A Day in the life of Abou-Qetada (area A)
(AUGUST 3, 1993)



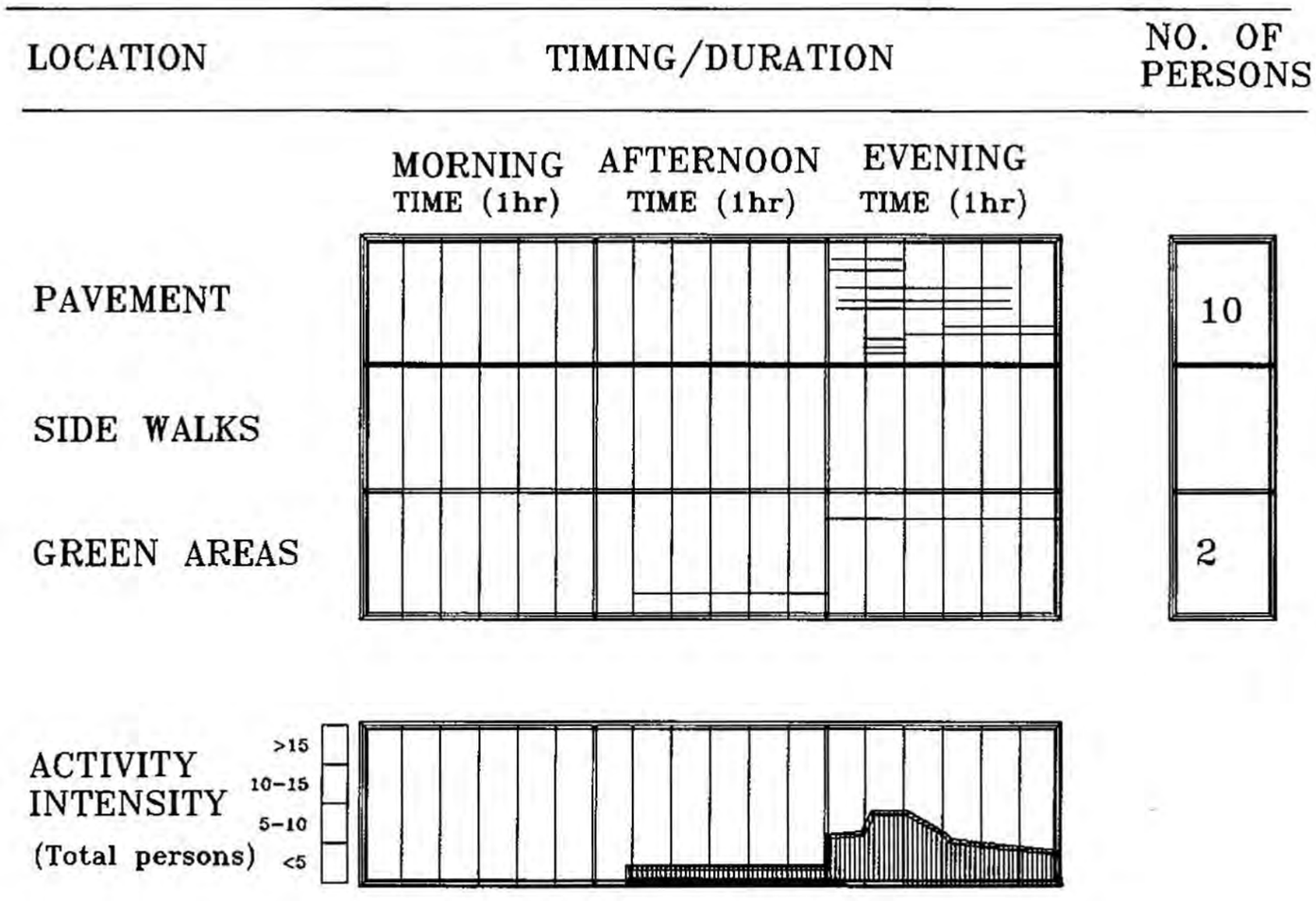
(Figure 5.4) A day in the life of Abou-Qetada (area B)
(JANUARY 1ST, 1994)



(Figure 5.5) A day in the life of El-Ettehad Square (area A)
(AUGUST 8, 1993)

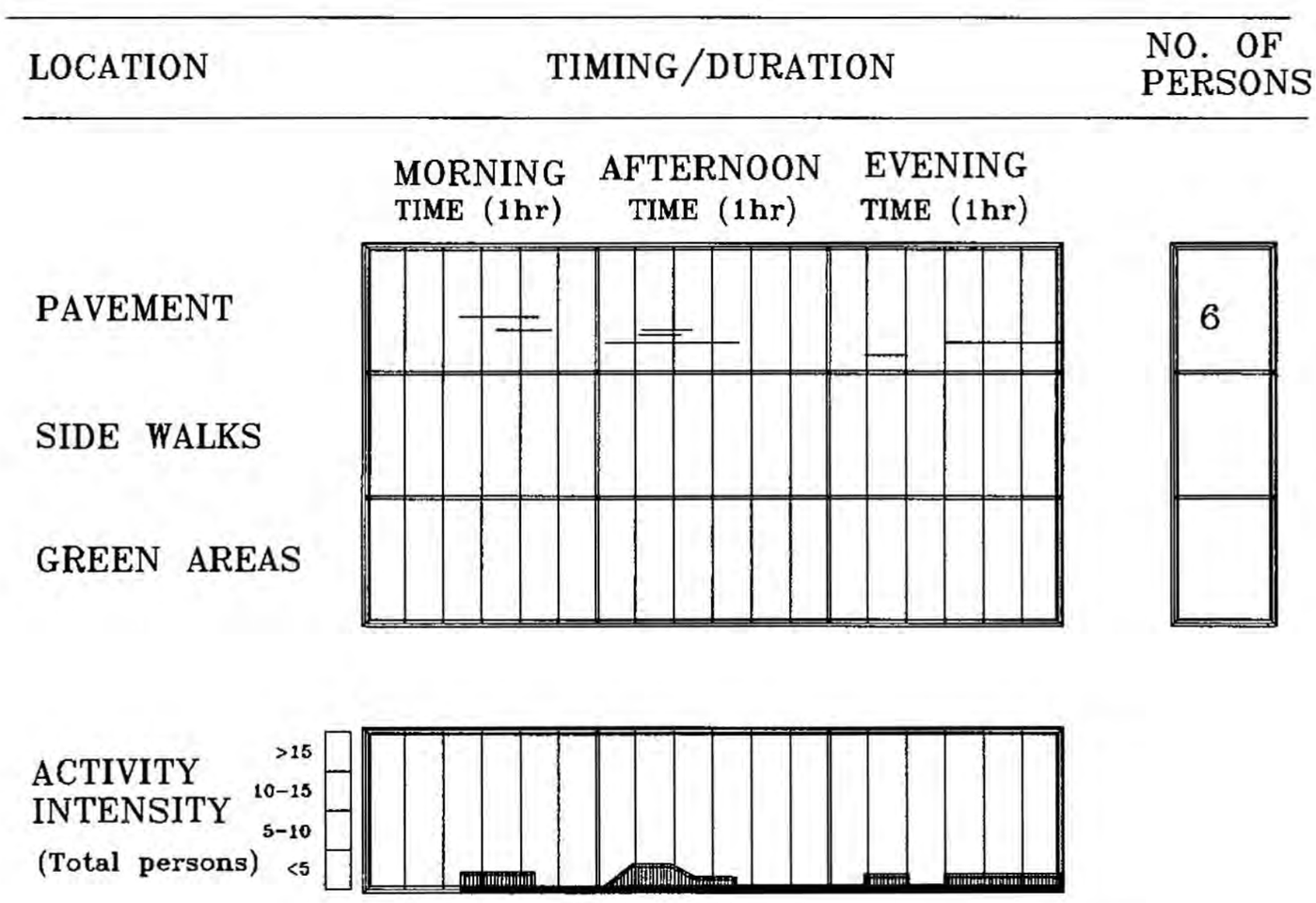


(Figure 5.6) A day in the life of El-Ettehad Square (area B)
(FEBRUARY 2, 1994)



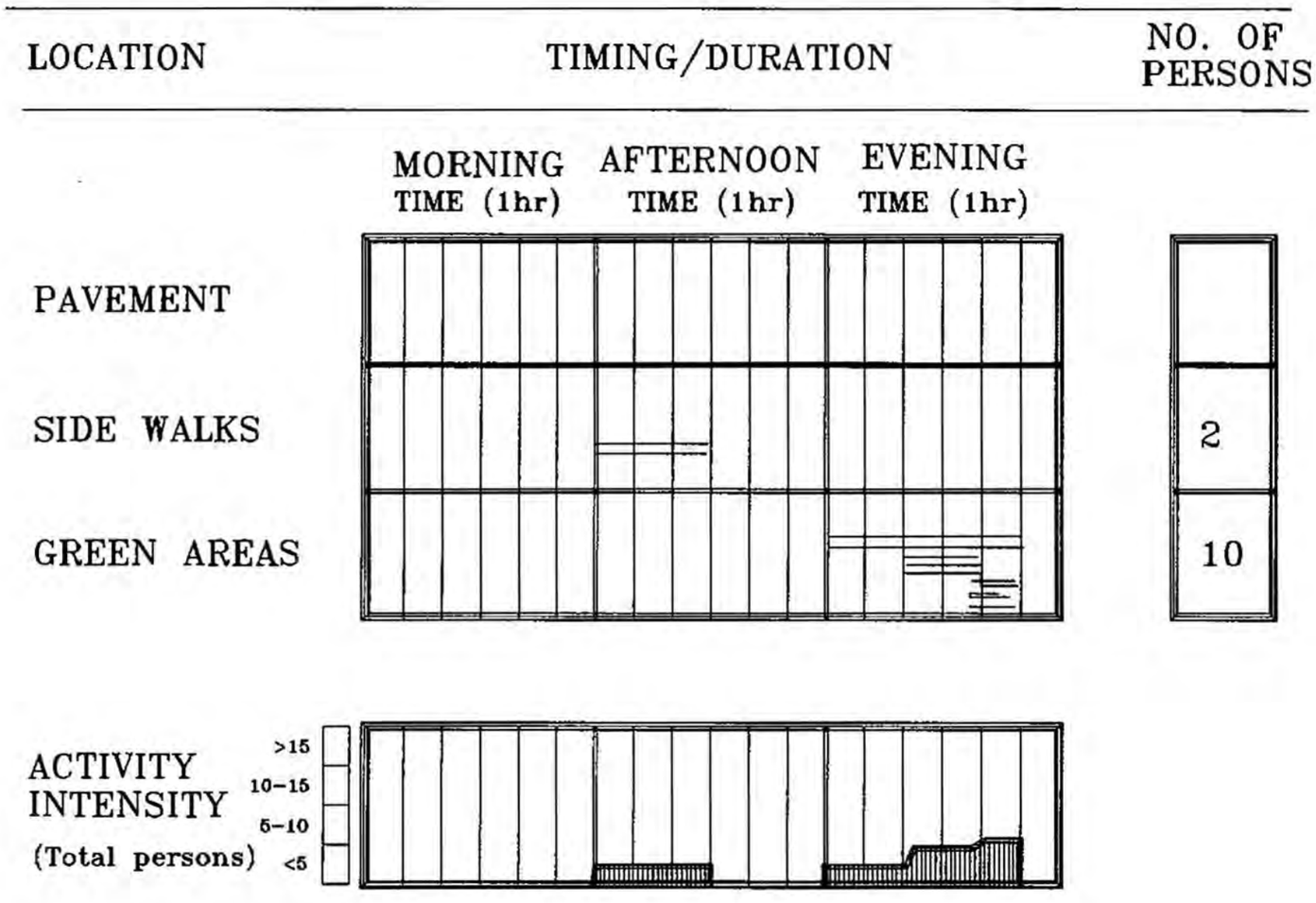
(Figure 5.7) A day in the life of Degla (area A)

(AUGUST 8, 1993)

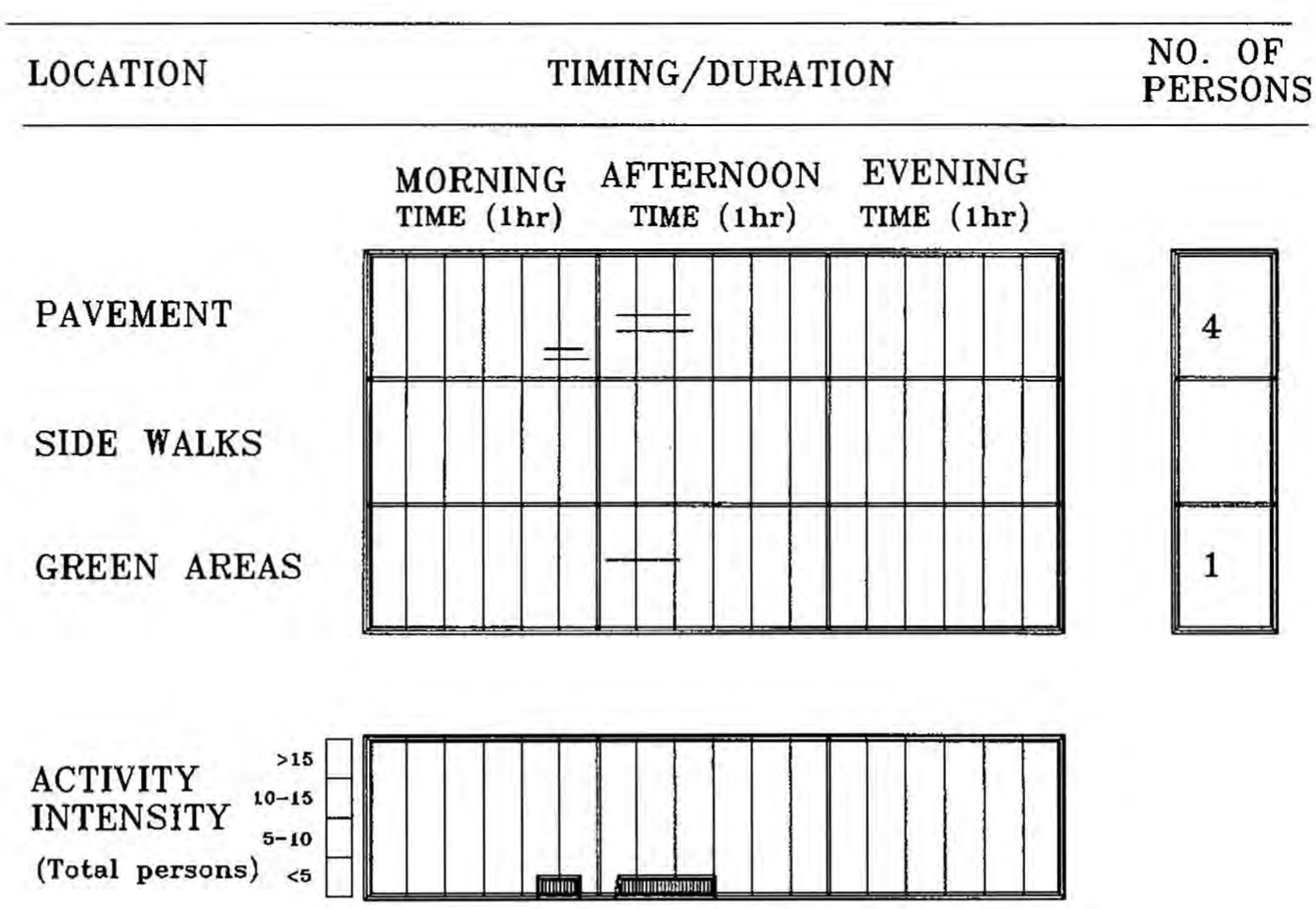


(Figure 5.8) A day in the life of Degla (area B)

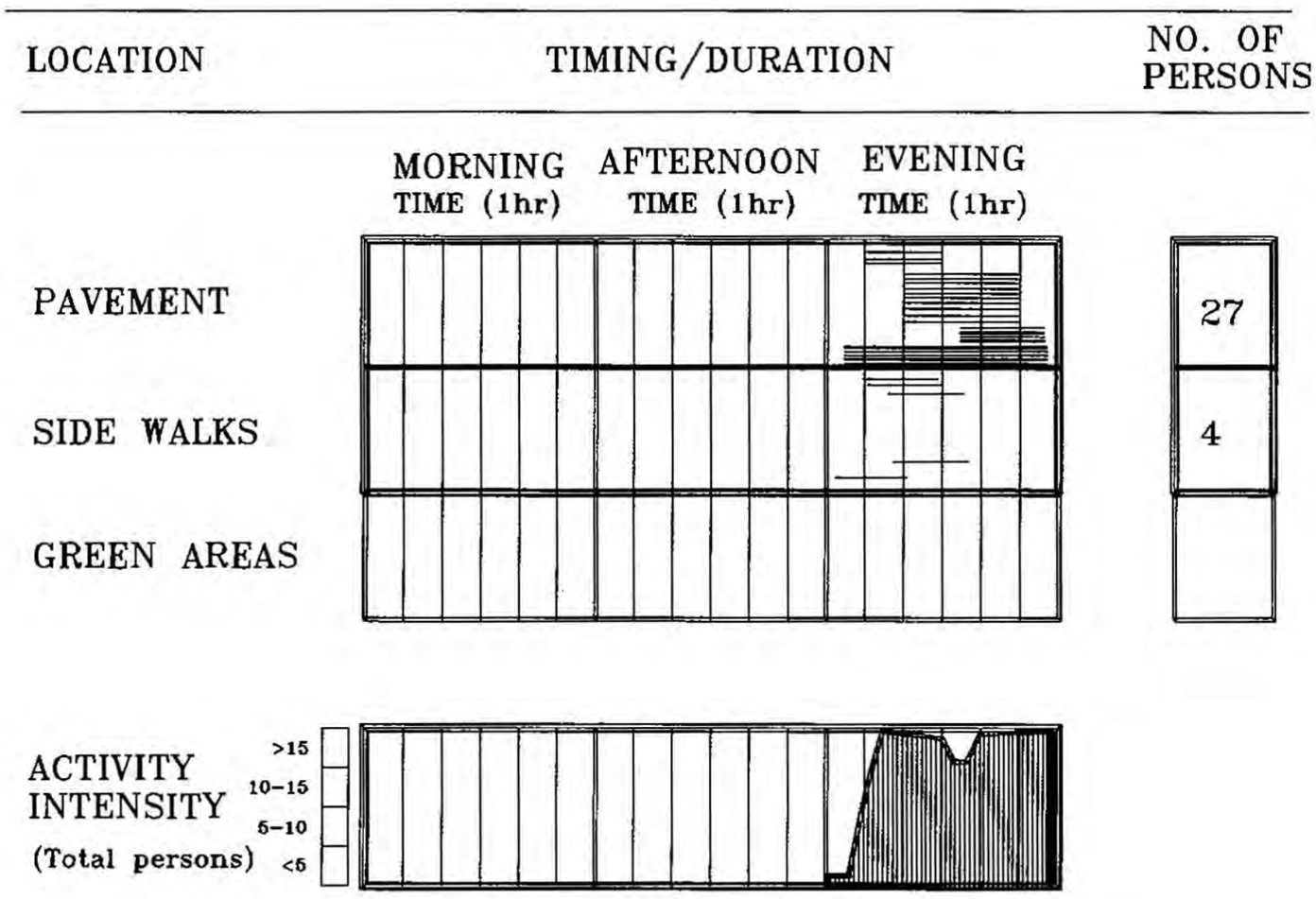
(FEBRUARY 3, 1994)



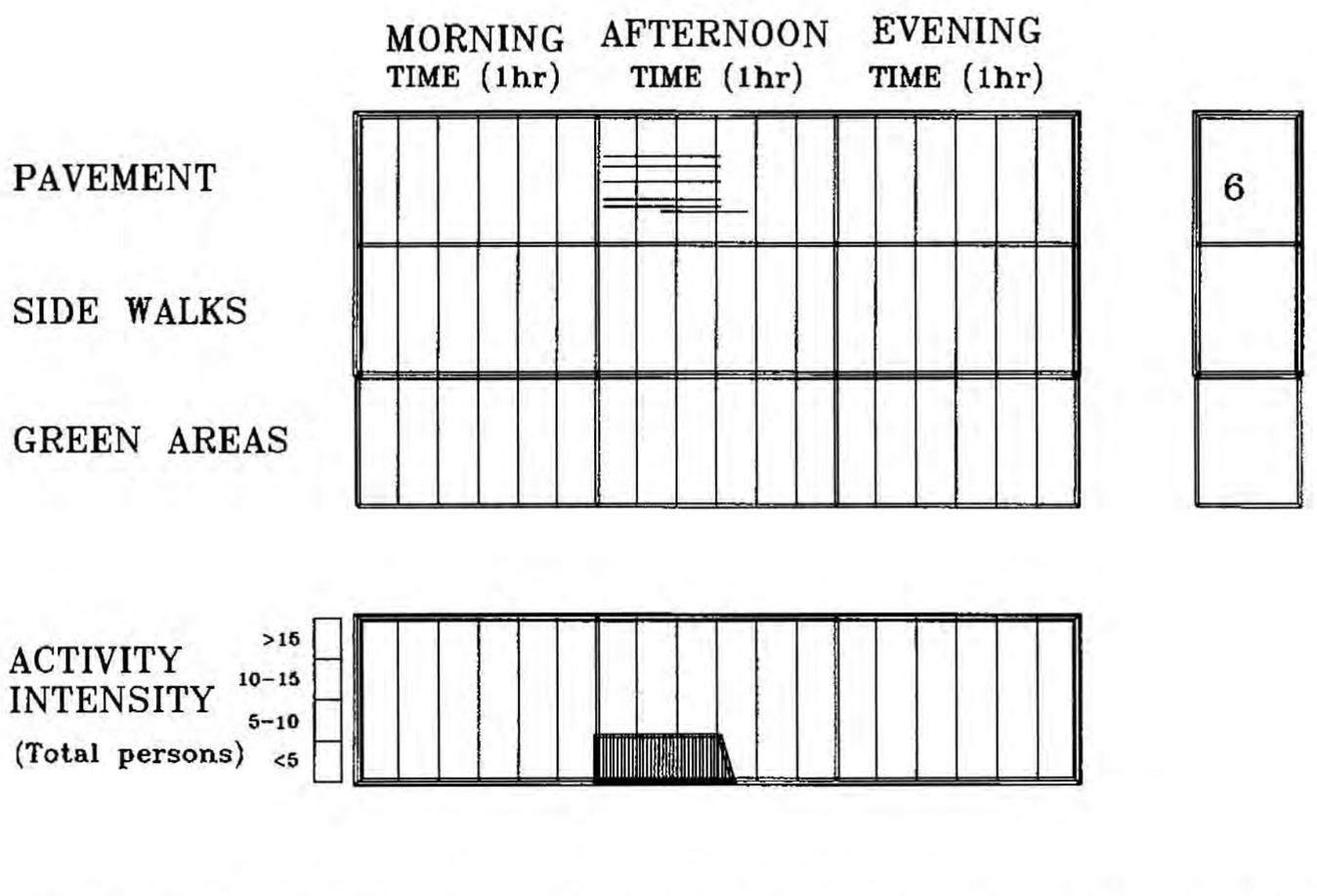
(Figure 5.9) A day in the life of Heliopolis (area A)
(AUGUST 8, 1993)



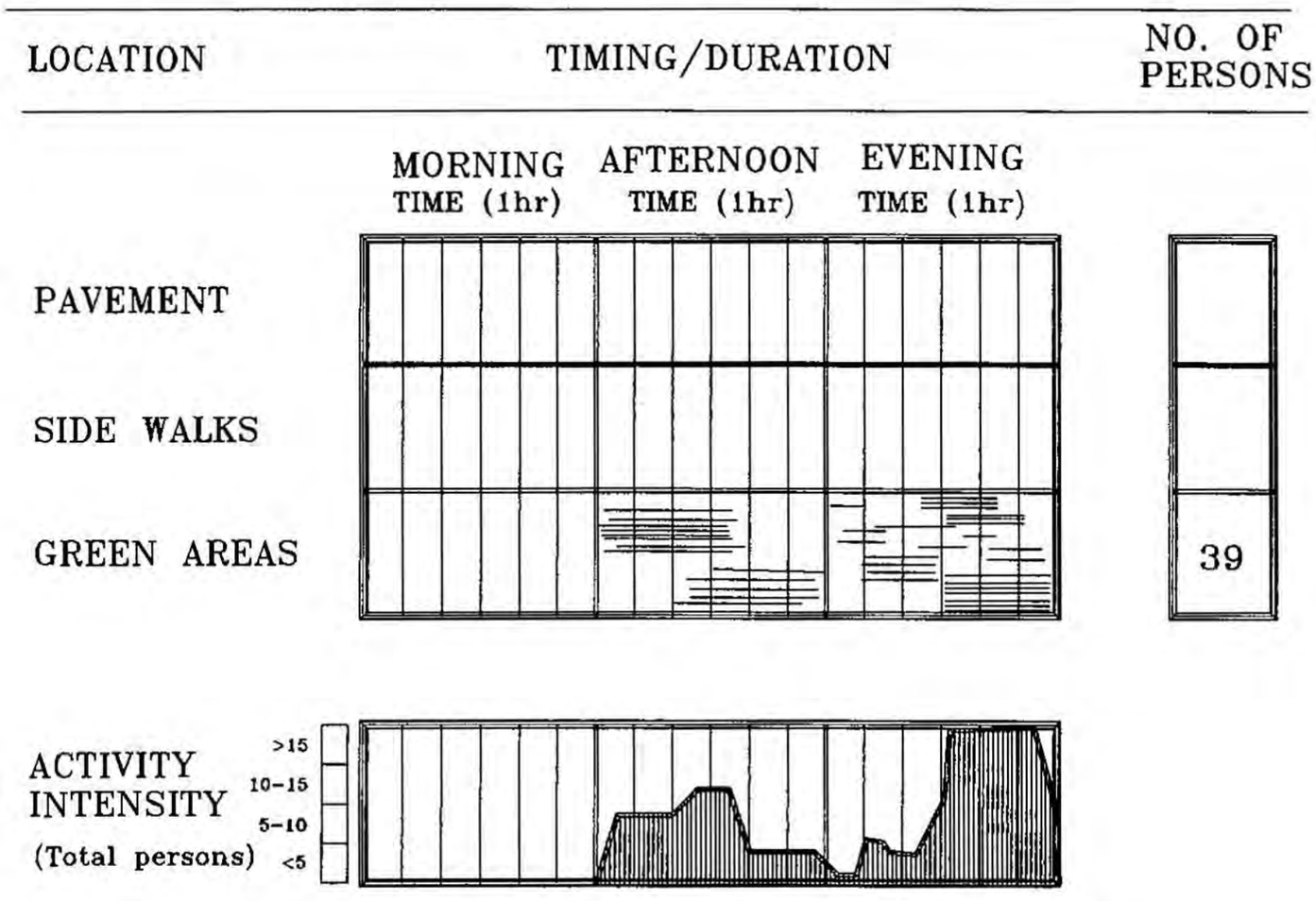
(Figure 5.10) A day in the life of Heliopolis (area B)
(JANUARY 29, 1994)



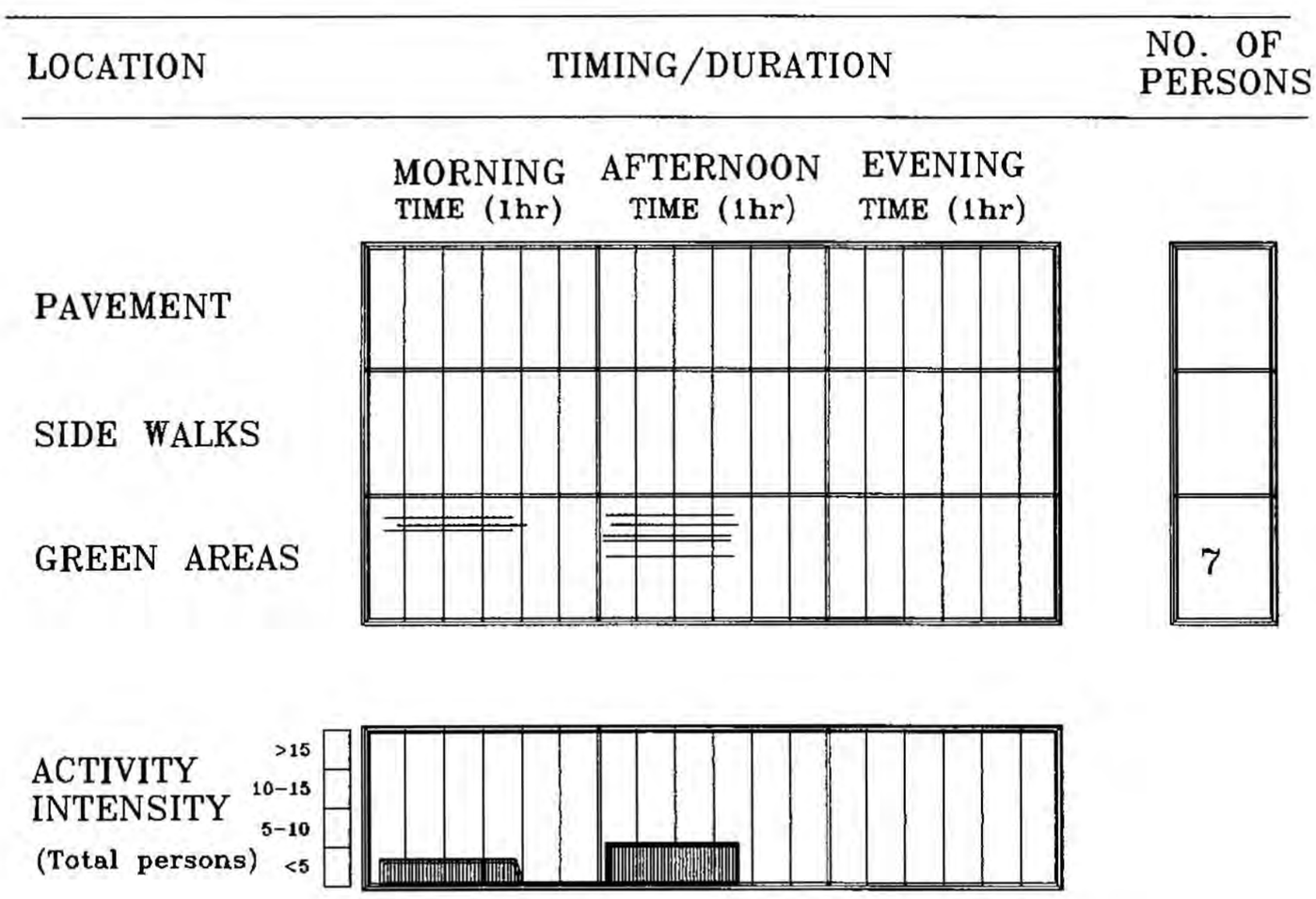
(Figure 5.11) A day in the life of Soman Towers' (area A)
(AUGUST 5, 1993)



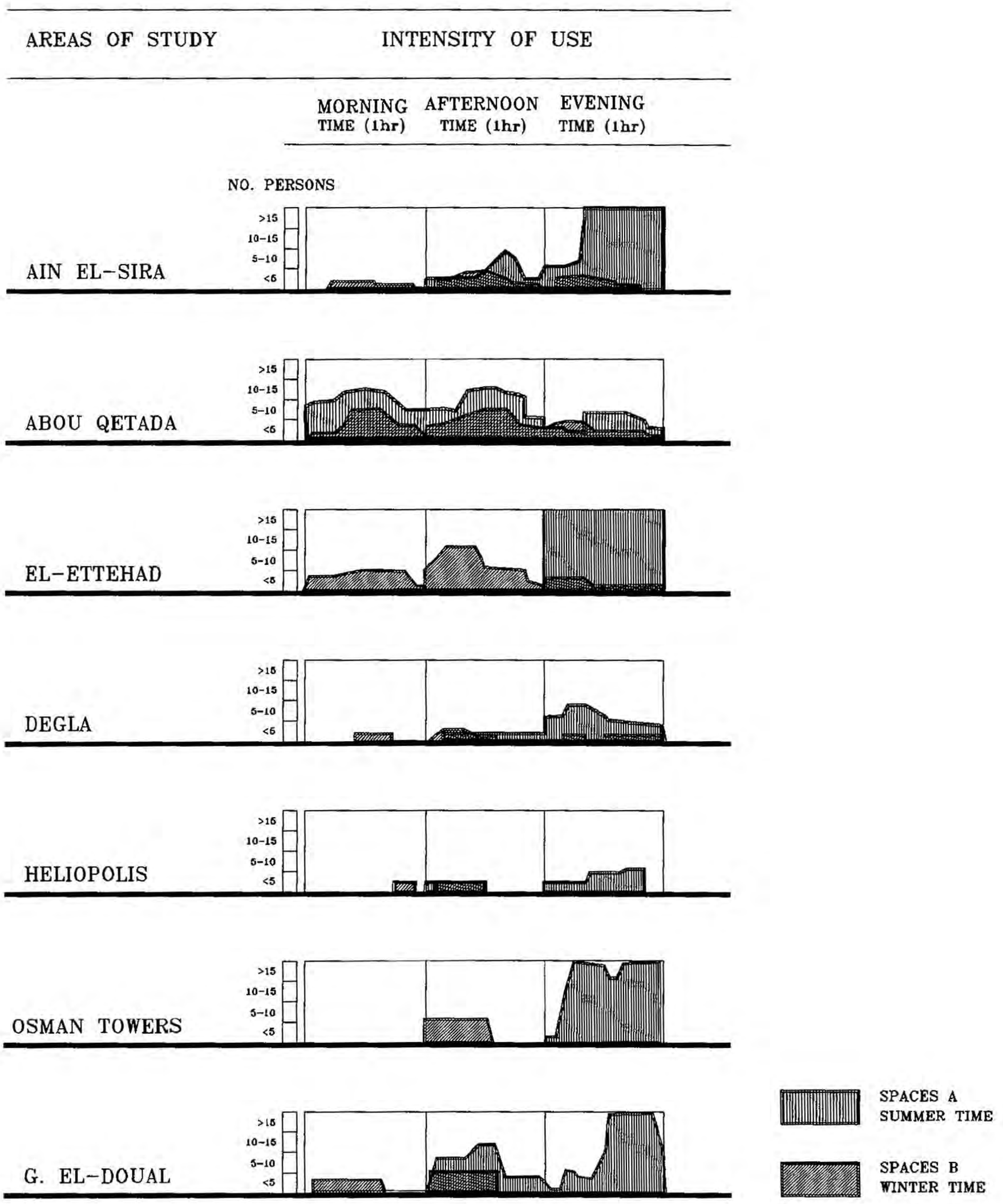
(Figure 5.12) A day in the life of Osman Towers' (area B)
(FEBRUARY 3, 1994)



(Figure 5.13) A day in the life of Gameat El-Doual street's median (area A)
(AUGUST 4, 1993)



(Figure 5.14) A day in the life of Gameat El-Doual street's median (area B)
(FEBRUARY 2, 1994)



(Figure 5.15) A Comparison of the Intensity of Use Among the Different Areas of Study

5.1.1 Street Play as a Socio-Economic Value

As one of the *active* activities, recreation in public spaces has been observed usually to be engaged in by lower socio-economic class users rather than those of a higher socio-economic class. The use of residential spaces and streets in particular for recreation has distinctive social meanings for different classes. The concept of "children playing in the street" is perceived by higher class residents as a low social status that correlates to the lower classes, and is inappropriate for their own children. Children usually play in popular "baladi" streets in the medieval and informal housing settlements, but for higher classes, it is not usually accepted.

As observed in "Abou-Qetada," a high birth rate and a lack of apartments' space, induces that low socio-economic people normally allow their children to go outside the home with little supervision. A large number of children decreases the ability of uneducated parents to take the adequate care of their children. Instead, they leave them to learn from, and interact with the street-life.[105] The result of such poverty and hard life is a buildup of a community characterized by a mixing of toughness and violence, yet they have sympathy and unity.

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[105] The way the parents raise their children differs according to their socio-economic class. Educated people are more careful to educate their children and prepare them intellectually, while the uneducated people appreciate education as a certification that improve the social status, but not in an intellectual sense. *See*, for example, Zakariya Al-Shirbini and Yusriyah Sadik, *Al-Mustawayat Al-Iktisadiyah, Al-Ijtimaiyah, Al-Thaqafiyah: Dirasah Amiliyah Litaqdiriha Fi Al-Ulum Al-Insaniyah*, Cairo: Maktabat Al-Nahdah Al- Misriyah, (1988),38.

In "Ain-El-Sira," a low socio-economic residential area where the residents are less homogeneous than the people in "Abou Qetada," some educated parents did not allow their children to play in the street. They were afraid that their children might pick up some bad "street language"[106] or learn bad manners by speaking and interacting with the lower socio-economic class children playing there. A government employee living in "Ain-El-Sira" said his children are not allowed to play in the street for the above reasons, and he preferred to take them (from time to time) to go to the new public park "El Fostat," which is very close to the area of study. Other residents said they were just protecting their children from traffic dangers.

The homogeneity of the medium socio-economic classes residents in "Degla" encouraged the parents to allow the children to ride their bicycles in the street. In the case of "Heliopolis," the residents were nearly homogeneous. Unity, however, has been interrupted by the guards who live with their families in the same buildings they watch. These people were not in harmony with the residents' life-style, and lived in typical conditions for the low socio-economic classes. A large family may live in only one room in the basement or on the roof. The guards' children were observed playing soccer in the available green area in the enclosed space. The presence of the guards in the residential open space, not only discouraged the residents' children to play in the common green area,

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[106] "Street language" is an expression still used in Egypt to signify a bad or impolite manner of speaking.

but also annoyed the residents themselves. The guards' behavior either by using the space to perform *active* activities (i.e. being in the space, or sitting, playing,..etc.), or *passive* activities (i.e. leaving behavioral traces, such as raising domestic birds in the common space).[107]

In fact, in addition to a conceptual unwillingness on the part of the high socio-economic class residents for social status reasons, "playing in the street" does not harmonize their attempts to distance themselves from other low socio-economic classes, particularly in heterogeneous residential areas.

5.1.2 Types of Recreational Activities

Two types of recreation took place in the studied areas, the *dynamic* recreation and *static* recreation. Each type is influenced by the objective factors of the physical environment, as well as by subjective factors. The physical setting's "affordances" play an important role in promoting particular recreational activities. The low socio-economic class residential areas noticeably illustrated inadequate recreational support for residents. A lack of space in the narrow back streets of "Abou-Qetada" encouraged young children to play in public spaces outside the neighborhood. Abou-Qetada normally did not provide

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[107] Good appearance is a needed *passive* activity for high socio-economic class residents that will be discussed latter in this chapter, is disturbed by the presence of the guards families' behavioral patterns. This use generated lately a reaction on the part of the residents. They employ expensive security companies to insure their buildings. Although this solution increases the residents' service costs, it provides a "*prestigious*" appearance for the building's entrance.

any green area, which is associated strongly in the Egyptian conception with "recreation," because of its compacted urban tissue. In fact, other low socio-economic residential areas that have more generous spaces, such the public housing of "Ain-El-Sira," suffered a lack of maintenance which transformed the planned green areas into places to accumulate dust and garbage.

Regarding *active* activities, the higher socio-economic residential areas usually provide more "affordances," thereby attracting lower class neighbors to use the spaces. In "Osman Towers" public spaces, teenagers from other areas were attracted by the quiet local streets suitable for playing soccer and riding bicycles (dynamic recreation) without fear of vehicular traffic. In "El-Ettehad square," families from other areas were attracted by the available green area mainly to sit and eat (static recreation).

In general, dynamic recreation occurs on the hard surfaces of local streets rather than in gardens (e.g. playing soccer games in El-Ettehad square's local streets). This is reasonable because a game in the street would not be interrupted by other activities that can take place in a crowded green area. A green area in a residential area is not usually spacious enough to accommodate a soccer game. In addition, hard surfaces are more suitable for soccer games.

For static recreation, subjective factors are the more important stimuli for the occurrence of urban activity. In fact, static recreation only takes place in a real "open space." According to the behavioral definition of the open space, "a space is open if it

allows people to act freely."[108] Unlike "dynamic" recreation, the users who perform "static" recreational activities (e.g. sitting, lying down, and eating), prefer to achieve them in a residential space unless it is an "open space."[109] Such activities were not observed taking place in an enclosed area where the participants could be watched by the residents. "Ain-El-Sira" has generous spaces among the buildings, which are not much used for static recreation because of the enclosure of spaces. On the contrary, "Gameat-El-Doual" street, being more public, has been transformed lately to one of the important recreational spaces in metropolitan Cairo.[110]

The green median of "Gameat-El-Doual" was a locus of intense recreational activities by non resident families, especially at the end of the street near "Boulak," a low socio-economic residential area. However, the crowd using this public space did not

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[108] Marcou, O'Leary and associates, *Open space for human needs*, prepared by Marcou, O'Leary in conjunction with Kevin Lynch, Marvin J.Cline and Carl Feiss, (ed. Donald Canty, Washington: 1970), 11.

[109] According to the field study, only adults performed static recreation. The males had no problem of being watched by other people. Therefore, they could achieve such activities in residential streets (e.g. Abou Qetada, Ain El-Sira). But, for females, it is less comfortable to be watched by the people.

[110] A green area on the edge of this residential area is used by families for recreation. But it can be defined as a public area.

forbid the users to act freely and comfortably.[111] The "*anonymity*" of the users created a state of privacy in the space freeing both the individuals and the families from identification and surveillance.[112] One user stated that his decision to take his family there was because in addition to the closeness to his home (in Boulak), his family felt more liberated there. In fact, they were surrounded by users not observers, and they were all engaged in recreational activities. Unlike their own neighborhood, the users in Gameat El-Doual's median had an opportunity for personal *autonomy* which refers to a sense of individuality and conscious choice to have privacy, that allows them to compensate for the lack of such need in their own environment.

5.1.3 User Groups Engaging in Recreational Activities

Based upon field observations, some of the low socio-economic class children were too young to be allowed to play alone in the street. In "Abou-Qetada," where no car traffic at all, children as young as one or two years old played in the street without control or were watched only by their older brothers or sisters who were also too young to be responsible for themselves. The residents declared that this situation exposes the children to a higher risk to get sick, but there was no other alternative for them to play.

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[111] According to Unni Wikan, low socio-economic class people who live in high density areas suffer a continuous lack of privacy in daily life. Door sitters and people watching through windows and balconies usually observe who comes and goes. People live so close to each other that neighbors can look straight into the opposite apartment if the curtains are open, which they have to be to let in both light and air.

[112] Alan F. Westin, *Privacy and Freedom*, New york: A Theneum, (1967), 174.

For teenagers, a larger recreational space is needed. The inconvenient narrow space in the back streets of "Abou-Qetada" was counterbalanced by some available wide open grounds out of the neighborhood where soccer games took place. Some local streets in "Ain-El-Sira" public housing served as "play fields" for teenagers. Playing soccer or running usually took place in the street.

Parents in medium socio-economic class residential areas permitted their teenagers to play in the street, but only under certain conditions such as limited duration or a short distance from home. For higher socio-economic class residents, with more resources, they had other preferences for their children's recreation than to playing in the street.[113]

Regarding adults, men used residential spaces noticeably differently than women. In low socio-economic residential areas, men recreate in public spaces by socializing and getting friends together to drink tea, smoke a nerguileh, or play backgammon.[114] These social activities may take place on a street corner or in front of a store owned by one of them as observed in "Ain-El-Sira."

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[113] Because of their resources, high socio-economic class residents have access to memberships in a social or sport club. They have more capabilities to perform "centrifugal" recreation (i.e. to recreate out of their neighborhood such as having vacations on seashores) rather than to be engaged by "centripetal" recreation which usually occurs within low socio-economic class residential areas and based on the social relationships among the neighbors.

[114] The way the men get together in the street in lower socio-economic residential areas is too much affected by the popular and traditional life-style. Sitting in front of a store or on the street corner substitutes the "cafe" in the popular areas which became fewer lately.

For women, recreation can only take place in the indoor residential spaces. Men spend most of their time outside, but women usually stay at home almost all day. In the every-day life of women, recreation means visiting a relative or a neighbor. Many women do not have higher expectations than to sit in any "garden" two or three times a year for special events such as the feasts. They define garden as any public green area where they can "take a breath." It can be a public garden, a green strip or a median in a street. Some other women do not think at all about recreation. For instance, a question directed to a woman about her favorite way of recreation has been answered by a laugh considered it a joke, because she has never thought in recreation.

5.1.4 Private Activities

According to the classification in chapter three, a "private activity" is considered part of the category of "*active*" activities. Private activities were observed taking place solely in the residential spaces of the low socio-economic informal settlements of "Abou-Qetada." Some women sat comfortably on a stone outside their front door, where they spent most of their time chatting with neighbors. The time spent in such activity was employed in food preparation, or to display some candies to local children.[115] Thus, *sitting* in front of the doors is an activity which occurred as a habit or part of a life-style, which is related more to necessity than to recreation.

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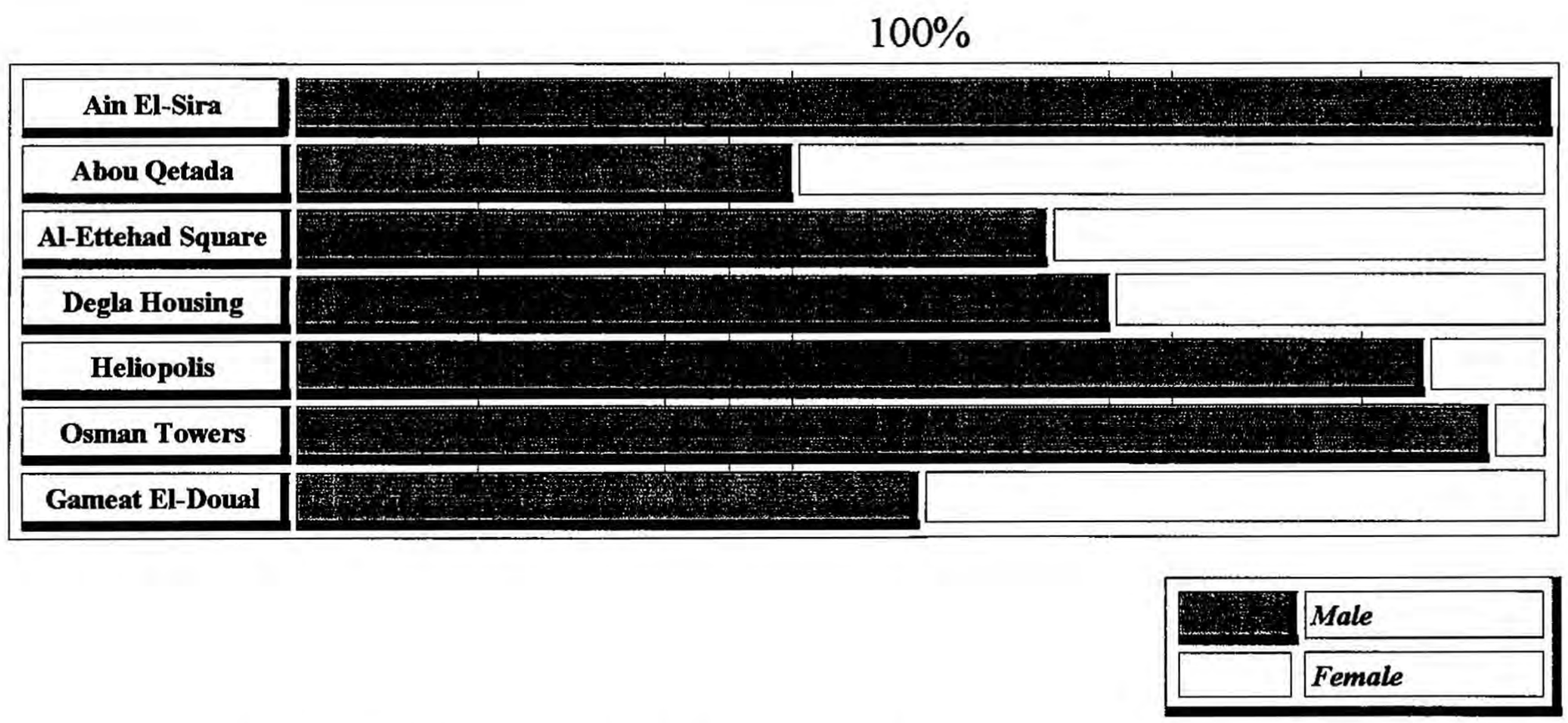
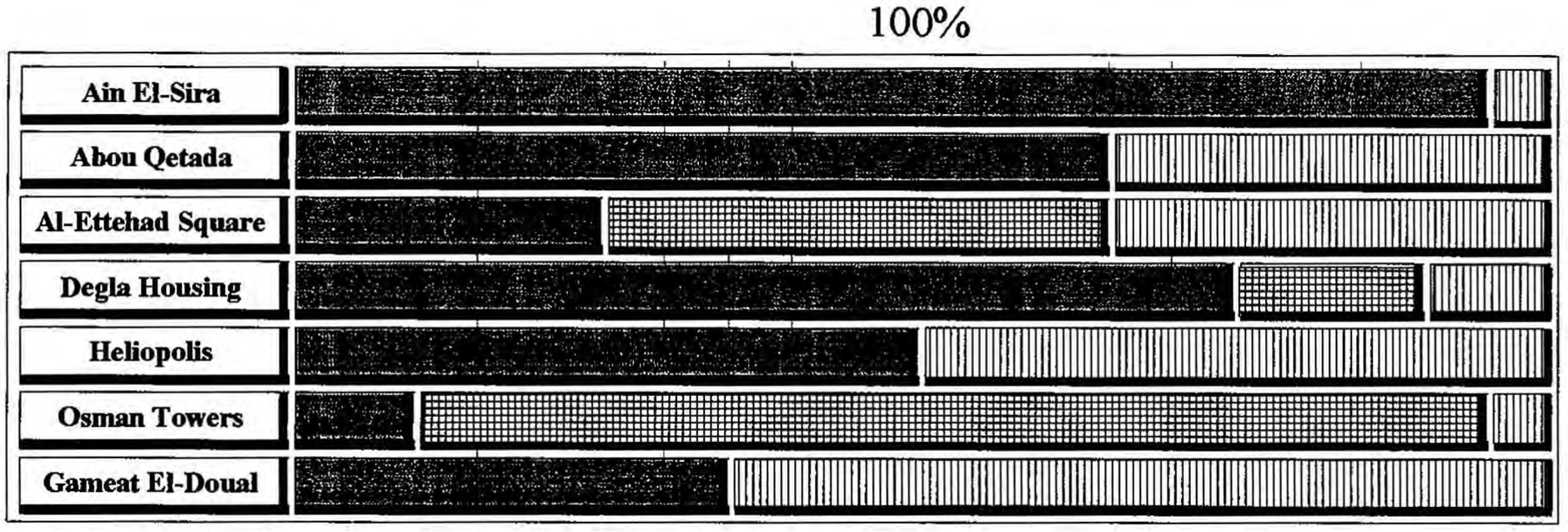
[115] cooking took place beyond the video-camera's range.



(Figure 5.16) The pecentage of male /female users in different areas of study



(Figure 5.17) The percentage of the age groups of users in different areas of study

Living in small apartments might be one reason that lower socio-economic class residents use street spaces for "private" activities. But comparing "Ain El-Sira" to "Abou-Qetada," the latter place had a larger diversity of user groups using the street for private activities, and a larger variety of social interactions. This implies that the lack of space in the apartments in both residential areas (which is common in all low socio-economic housing) was not the only cause of using public spaces for private activities, but the difference in physical setting's configuration had also a certain influence to differ the social life in each of the settings.

"Ain-El-Sira" and "Abou-Qetada" were both distinguished than other areas by a stronger and a more controlled social system. A stranger has to have a good reason to stay in a low socio-economic residential space, which was particularly clear in Abou-Qetada. As observers, we had to gain their trust to be accepted. The people were very social exchanging jokes and conversations with us. Contrary to the fact that women in general keep barriers between themselves and strangers in the Egyptian folk, the women who lived in Abou-Qetada were social and had a sense of humor as well. They displayed the typical attitude of "awlad el-balad" discussed in chapter 2. In addition, the behavioral patterns of women when contacting us demonstrated the "over confidence" they gained by being in "their area."

The high social contact uncovered the people's characteristics in the back streets of "Abou Qetada" which provided a shared public cognition about the individuals' quality and residents. "I know my neighbors in this area clearly and they know me as much as I do.

We know each other inside out. There are no games in dealing with each other," said our informant in "Ain-El-Sira." The social relations in "Abou-Qetada" were stronger than in "In El-Sira" as a result of the enclosure of the physical setting and the homogeneity of the residents. For instance, when we got back to *Haj Gaber*, our host in "Abou-Qetada" was sleeping and we could not enter his locked house. When we failed to awaken him by calling him from the street, a girl popped out from a neighbor's house with a key, opened the door, walked up to awaken *Haj Gaber*, and then she asked us to come up. This simple incident indicates the extended relationship and the confidence among neighbors. As a retired old man living alone in his house, *Haj Gaber*'s neighbors took care of him as a member of a big family.

The intimate relationships and social communications among the low socio-economic class residents allowed to extend indoor activities to take place in the street space. Laundry, cooking, or eating were all a part of the main activity of socializing. Therefore, the street is not just a semi private space, but it is merely a big living room.[116]

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[116] Proshansky et al. consider "intimacy" one of the basic states of privacy. It is sought by members of a dyad or a larger group that seeks to achieve personal relationships between its members, who are, for example, husband and wife, family members, or peers. "There is an attempt to minimize all sensory output from outside the boundaries of an appropriate physical setting."

Harold M. Proshansky, William H. Ittelson, and Leanne G Rivlin:"Freedom of choice and behavior in a physical setting," in *Environmental Psychology: People and their Physical Setting,* ed. Proshansky et al, New York: Holt Rinehart and Winston, (1976), 170.

5.2 Passive Activities

A passive activity has been defined as an activity that does not require the continuous presence of the subject in the space. According to the proposition that higher socio-economic class residents are more likely to use residential areas for passive activities than active activities, the field study has shown that the physical presence of the residents was very limited in the residential spaces, but their traces were clearly observed. Having the resources, the high socio-economic class people have apartments that are adequately lighted, ventilated, and fulfilled their indoor needs. In addition, they do not have the press of the housing environment in some poor residential areas and lack of apartments' space. Therefore, they could stay at home voluntarily. From a sociological point of view, high socio-economic class people use their resources to create their own communities, not necessarily within their neighborhood, through modern technology and ease of transportation.[117]

> "technology is creating an ever-expanding environment which is becoming increasingly hostile to the natural one. The conflict between the natural and the man-made has reached a point of unprecedented crisis; life's total habitat threats is created by transport and communications which destroy meeting places and the sense of community."[118]

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[117] Jon Lang, *The Foundation of the Design Response to Psychological and Behavioral Factors in New Community Design*, The introduction of papers presented at a panel discussion, American Institute of Planners Conference, Boston, Massachusetts, 9th October (1972), Philadelphia, Pa: University of Pennsylvania, Graduate School of Fine Arts, Department of City Planning.

[118] Serge Chermayeff and Alexander Tzonis, *Shape of Community: Realization of Human Potential*, Baltimore: Penguin, (1971).

Three important "passive" activities were observed through the field study. Aesthetic use; parking cars; and encroaching on some parts of public spaces.

5.2.1 Using Spaces for Aesthetical Needs

Being satisfied by "survival needs" in general and the efficiency of indoor space, higher socio-economic class residents normally look for more advantages in their residential spaces than lower socio-economic class people do.

One demand is that of the aesthetical need. This need leads to use a residential space for good viewing, one of the important passive activities. The maintenance of the green areas indicates that the residents care about preserving the appearance of their residential space.

It is understood that maintaining public green areas is a commitment of the governmental authorities. But this service clearly declined because of the decrease of budget and the number of the employed people to do it.[119] This situation forced the authorities in Cairo to concentrate on the main streets and on a limited number of public parks.

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[119] A mechanic supervisor working in the General Institute of Cleanliness of the Giza Governorate declared that the few modern sweeping engines used by the authorities had been donated by United States aid agencies, and most of them were out of order. The fund did not pay for spare parts to fix them. Consequently, some parts were removed from the working engines to replace parts in others. This policy left just one sweeping engine for the whole Giza sector.

As an adaptive reaction, residential communities were forced to maintain residential public spaces. In medium and the higher socio-economic residential areas, it is normal to see a green median watered by potable water from some houses through pipes and hoses across the streets. Low socio-economic class residential areas were left without maintenance. The following provides an interpretation of the appearance of residential spaces.

1. The authorities, obviously, paid more attention to the major spaces of higher socio-economic residential areas while ignoring poor areas such as "Ain-El-Sira." The streets in the latter area suffered a sewerage overflow, delays in the garbage collection, and a disregard for green area maintenance.

2. High ranked people living in the medium and high socio-economic class residential areas participated in the maintenance of the streets' spaces where they live.[120]

3. Higher socio-economic class residents have more resources to beautify their common spaces. They usually employ other people to do the job. In the poor areas, people must improve the spaces themselves. The official gardener in "Heliopolis" gets tips from residents to be maintain the common garden. In the case of "Degla," one of the building guards who had agricultural experience was paid monthly by the residents to beautify the common space.

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[120] For instance, a well maintained area in "El-Ettehad" square was supervised voluntarily by a General in the Police Department living in an adjacent house. In "Osman Towers", the building contractors ignored the site's landscape until the head of its executive administration moved into one of the buildings.

4. Active heavy recreational use by lower socio-economic class people of public spaces destroyed moderately-maintained green areas. In addition, irresponsible behavior of leaving behind trashes, as in "El-Ettehad" increases the difficulty of maintenance. Children had less direction from their parents. They did not learn to keep their environment clean. The residents in "Ain-El-Sira" reported that children throw stones to blow the public lighting lamps just for fun. No wonder that the children violate the public spaces when we observed the sidewalks' border stones removed intentionally were used by the adults as bricks to build a chicken cage or to surround an encroached area in the public spaces.

5. "Osman Towers" contradicted the research hypothesis because the site is classified as a high socio-economic area yet the residents do not maintain or beautify it. Perhaps the residents aesthetic needs are fulfilled by the attractive scene of the Nile river. Most residents can look at a beautiful landscape with a comfortable angle of view instead of the ground. In fact the higher floors provide a feeling of a complete separation from the ground.

As a result of the non-use of the common space, neither for "active" activities nor for "passive" activities, the residents disregarded any contribution to its beautification. The view from the apartments is more important than the view from the road for higher socio-economic class residents.

6. The outstanding appearance of the "Degla" residential space ranks the medium socio-economic class areas in the front of other classes in terms of maintenance. Social cooperation, homogeneity, using the space for "active" activities, and having the means to maintaining the common space are all significant causes of success.

Cooperation in high socio-economic residential areas depended on the form of the physical setting. Some cooperation of the residents of "Heliopolis" provided adequate maintenance of the common green area. Part of the green area was left without maintenance because of dissension with residents of the adjacent buildings over contributions to funding the maintenance. In the case of "Osman Towers," there was no interest in cooperation. The notice at the entrance of one of the buildings warning a long list of residents for delaying the monthly charges for the building maintenance, show a dissension between the wealthy residents.

Concerning the lower socio-economic class area, the cooperation between the residents clearly appears in many situations. But the priority of survival and the economic circumstances left aesthetics far behind. The large space among the buildings in "Ain El-Sira" suffered from neglecting maintenance and the individual attempt to beautify parts of the public space was unsuccessful.

5.2.2 Parking Cars

"Parking the car" is a passive activity that occupies residential space and is considered necessary for the medium and higher socio-economic class residents. For lower socio-economic class areas, it is not an important activity because of the low rate of car ownership. Finding a place in the street for park a car was not a problem in the areas of study. In most cases, additional places were available. This situation does not reflect the real problem of parking in the residential spaces of Cairo, because of the relative large streets in the medium and higher socio-economic class areas under study. A shaded area

is a highly preferred location to park a car to protect it from the sun. In "Heliopolis," the cars were parked under trees on the sidewalks to cover as much as possible of the car.

5.2.3 Encroaching on a Part of Public Space

Encroaching on a part of the public space is a passive activity undertaken by many residents of different socio-economic classes and different contexts. However, there are differences in the way and the purpose of encroachment which directly reflects the needs of different socio-economic classes and demonstrates the users' pragmatic behavior in adjusting to the residential environment. The purpose of encroaching on a part of the public space by lower socio-economic class residents is to satisfy a "survival need." In the case of "Ain-El-Sira," people build extensions to their buildings to live in a larger apartment. Stores and workshops are also built to improve some residents' incomes.

For medium and higher socio-economic class residential areas, once the sidewalks were used or maintained by the residents, a symbolic ownership has been initiated. In "Degla," the sidewalks were usually planted and fenced thereby adding them to the private properties. The purpose was mainly to beautify the space. In "Heliopolis," the sidewalks were usually occupied for parking cars. The residents were used to parked their cars in habitual places in the street monopolizing the particular parking locations. It was reported by the residents that the ones who planted a tree on a sidewalk in "Heliopolis" consequently reserved the space under that tree for parking his own car.

5.3 The Effects of The Physical Setting on Behavior

In addition to the socio-economic status, the physical setting configuration has a great influence on the use of residential open spaces.[121] The different physical factors proposed in the research hypotheses have been examined through the field study and analyzed as follows:

5.3.1 The Natural Features' Factor

As we discussed earlier in this chapter, green areas play a major role in encouraging the recreational activity among low socio-economic class people. Gardens, green strips, or street medians are different types of green areas which are all called "gardens" in the Egyptian conception (*guenena.*) The green area in an urban open space is considered one of its main components, as observed in "El-Ettehad" square and "Gameat El-Doual" street's median which characterize this space and determine its function.

Natural features are seen differently by higher socio-economic class residents. Although they did not use the residential spaces actively, they needed natural features for aesthetic uses. The "Heliopolis" study area demonstrated a need for the common green area to provide a good "view." This finding is confirmed in "Osman Towers," however, the common space was disregarded since a view of the Nile River was available from most apartments, and adequately fulfilled any aesthetic needs.

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[121] Amos Rapoport, *Human Aspects of Urban Form: Towards a Man-Environment Approach to Urban Form and Design*, Oxford: Pergamon Press, (1977), 3.

5.3.2 The Climatic Factor

The climate is a determinant factor to use a residential space to achieve a voluntary activity. For instance, all the residential areas studied (except "Abou Qetada") had no recreation (as an optional activity) during the hot and sunny morning. One reason that "Abou-Qetada" was livable all day is that the narrow space of the back street was shaded almost all the time.

Providing shade in residential spaces was an important need in any socio-economic class area. "Active" activities such as "sitting" or "lying down" took place in a shaded area during the morning. "Passive" activities such as "parking the car" also preferably took place in a shaded place to protect the car from the summer heat.

5.3.3 The Volume of Vehicular Traffic Factor

According to Rapoport, the street has different meanings for different cultures.[122] The street in Egypt, as an important type of open space, plays a larger role than just circulation. A relation between the volume of car traffic and the types of activities was observed through the field study. Light vehicular traffic made soccer games for teenagers possible (as has been observed in "Osman Towers," "El-Ettehad's" adjacent streets, and "Ain-El-Sira." In fact, the street is more suitable for popular soccer games than green areas as a matter of surface material because the ball used to play in street is smaller than

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[122] *See* Amos Rapoport, *Human aspects of urban form: Towards a Man-Environment Approach to Urban Form and Design,* Oxford:Pergamon Press, (1977).

the official soccer ball. The asphalt pavement was preferable for rolling the ball smoothly. In addition, in most cases the public green areas are usually inappropriately leveled and the grass is poorly maintained.[123]

In "Abou-Qetada," there is no competition between cars and pedestrians because no cars can pass through the narrow street space. The street space could not support teenagers to play soccer games, but it represented a safe play field for younger children. The car traffic volume, on the other side, has an effect on using the adjacent green space when available. According to "Appleyard," the residents have less territoriality feelings towards the street when the traffic volume is heavier in that street.[124] In the case of "El-Ettehad" square, where the car traffic was heavy, compared by the same other socio-economic class areas (Degla) or the lower socio-economic class areas, it was noticeable that the residents lost too much control of the street.[125]

5.3.4 The Furniture and The Lighting Factor

Seats and benches contributed to the use of the public spaces. Some passers through the "Gameat-El-Doual" street relaxed on the fixed benches there. The small

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[123] The green areas in the Egyptian cities are most commonly planted by "Bermudas Grass" (neguileh baladi), which does not look as beautiful as other kinds of grass. But this type has the advantage that it needs minor maintenance to survive.

[124] Donald Appleyard, *Livable Streets, Protected Neighborhood,* Berkeley: University of California Press, (1981).

[125] See the next chapter for more discussion of the psychological effects of the physical setting.

circular benches' design was only suitable for use by individuals or couples. They did not allow groups to contact each other face-to-face. Families and groups of people had to sit in rings on the grass in order to communicate. In general, sitting on the grass is a popular way of sitting in most cases. The built flower bed's height was comfortable for temporary sitting, as well. As a focal point in the linear green space, the flower bed served as a meeting location. Thus, the way a furniture is provided in a space encourages particular purposes of behavior patterns.

Since recreational activities mostly took place in the evenings and the early nights, "lighting" was an important factor, affecting such activities. Children played soccer until nine o'clock in the evening in the streets of "Osman Towers." The well-lighted street encouraged them to remain playing. In the "Gameat-El-Doual" green area "Sitting" or "eating", as observed , did not need as much light as was needed to play soccer.

5.3.5 The Degree of Enclosure Factor

Not only can the size and shape of a space physically block or facilitate an activity, it has a psychological effect on the residents' view of the space. By comparing the degree that spaces were enclosed by the buildings in the areas of the field study, it has been found that this factor may have an effect on users' behavior. Enclosure affects the residents' social relationship, the more it increases in a physical setting, the more the people socialize and cooperate. This social situation reflects the use of space and maintenance as well.

In "Abou-Qetada," the most enclosed space in this study, the residents showed maximum territoriality. In contrast, "Osman Towers" residential area represented the least

enclosed space in this study and demonstrated the weakest control on the project's territories. The openness of public space in "Ain El-Sira" is another example of the influence of this factor on behavior. The maintenance of space in "Ain El-Sira" was nobody's responsibility, and the sense of community was not as strong as in "Abou-Qetada."

In "Degla" and "El-Ettehad," both being categorized as medium socio-economic class residential areas, the latter is characterized less enclosed. In "Degla," the residents had more control over the common space. In addition, the well-maintained common green area in "Degla" indicates one reason of social cooperation among the residents and strong attachment to their spaces.

The behavioral patterns, being simplified into a classification of active and passive activities, distinguished among the different socio-economic classes' use of urban residential space. The physical configuration and socio-economic status both are interacting to shape the behavioral patterns emerging in different contexts. In other words, the social status of groups, and the social relationships govern the adaptation to the physical settings, which in turn, inhabit or facilitate a particular behavior. In fact, physical effects are mediated by *filters*, i.e., they are part of the perceived environment and involve expectations, motivations, judgements and symbolic meanings. The next chapter discusses these psychologic factors in light of the research findings.

5.4 Results Summary

The field study deduced two factors affecting the behavioral patterns in the residential spaces : the socio-economic status, and the physical setting characteristics. The table 5.1 indicates that the actual physical setting of each socio-economic class residential area has a range of specific characteristics that the designers and planners may consider. For example, the urban pattern of the low socio-economic class areas has either the form of the governmental housing types or the compact informal tissue, but never exists in high rise building types. The table represents some characteristics of the spaces' users of different socio-economic classes. The low socio-economic class people can be the closest to be identified as the "baladi" with the term's significance represented in chapter 2. Most of them lack a sufficient internal spaces and live in high densities. They have more tendency to socialize with a great limitation to their local areas (they have also constraints to movement and communication to outside their neighborhoods). However, within the low socio-economic class, the blue collar (mostly inhabiting informal housing areas) differ from the white collar (usually inhabiting the governmental housing) in behavioral patterns. The manual workers are more distinguished by a specific language, tend more to violence, and may achieve some sorts of vandalism.

On the contrary, the high socio-economic class residents have better opportunities to inhabit spacious apartments, and have more communication facilities. Thus, they have better chance to extend their own communities outside their neighborhood and tend to minimize the social interaction in their neighborhood.

RESULTS SUMMARY

SOCIO-EC. STATUS	PHYSICAL SETTINGS	USERS CHARACTERISTICS	BEHAVIORAL PATTERNS
LOW S.E.S.	- The low income housing has two distinguished patterns, either the typical governmental or the informal enclosed areas. - No highrise buildings exist for low income housing. - The governmental authorities have little attention to the public services in these areas. - Alterations in the physical settings took place to fulfill essencial needs.	- Although it is hard to generalize types of people in a specific area, the public housing is mostly occupied by white collars,while the informal areas are occupied by blue collars. -The social interaction is more intense in the "baladi" areas, which creates a sense of community in the residential spaces. - Norms control the behavioral patterns.	- The users of spaces are occupied by "active" activities. - People tend to perform recreation in public spaces when afforded and to socialize intheir own spaces. - Teenagers use hard surfaces to play soccer, while adults and seniors accompany young children to green areas out of their areas.
MEDIUM S.E.S.	- The urban pattern is usually composed of buildings known as "aimarahs" leaving street spaces of different forms. - The traffic volume depends on the locality degree of the roads in residential areas. - The available green areas are usually well maintained by the residents, especially when the spaces have more enclosure.	- The residents of the areas of study were mostly university graduated bureaucrats. - A cooperation for public benefit is reflected in the maintenance of common spaces. - The social interaction among the neighbors is less intense than in case of low income areas.	- The residents care about beautifying the available green areas in semipublic and privatized areas. - Teenagers use spaces for some recreational activities (like soccer games,) but most recreation is performed by comers from low income areas when the physical setting affords it.
HIGH S.E.C.	- The urban pattern varies according to the housing type. Spaces are generous among highrise towers, but in most cases the luxury "aimarahs" are lined along linear streets. - Common public green areas are maintained in the more or less enclosed areas, but ignored in case of being in highrise housing.	- The residents are mostly buisnessmen and some have high governmental occupations. - The tenants tend to be isolated from their neighbors preferring to minimize the social interaction. - A cooperation existed to beautify the common green median but broken by some individuals. - The ownership of cars is noticeably high.	- The residents use their spaces only for passive activities (mostly parking their cars or aesthetic use) - Spaces when available are used by comers for recreation.

(Table 5.1) A Comparison among different socio-economic residential areas

The most important activities observed in the field study are represented in the table 5.2. The table itemizes the activities into three categories: circulation, recreation, and encroaching on some parts of public spaces. Walking through spaces is more intense as we move to lower socio-economic class residential areas. On the contrary, the car traffic and parking increase as we move to higher socio-economic status. However, in Gameat El-Doual street, as an important arterial road in Great Cairo, the vehicular traffic is performed by non residents.

The recreation is devised into *static* recreation - represented in sitting/ standing, and *dynamic* recreation- represented in running, biking, and soccer games. Sitting, standing, playing, and running, which are defined as "active" activities, increased in the lower socio-economic class areas. However, the table shows a high intensity of these activities in El-Ettehad Square and Gameat El Doual Street's median, but which were performed by the non resident low socio-economic class neighbors. Likewise, soccer games were performed by low socio-economic class users, but there took place in Osman Towers' spaces because the pavements afforded such activity, while Abou Qetada, as a low socio-economic class area was not occupied by soccer games because of the narrowness of spaces.

Encroaching on spaces is itemized into three "passive" activities: Extending buildings, planting for beautification, and parking cars on sidewalks. Extending buildings increased in the low socio-economic class areas when afforded by the public space. The enlargement took place to enlarge the internal residential space as well as to provide spaces to run small businesses. Encroaching some residents on parts of the public spaces for aesthetical needs or parking increased in medium and high socio-economic areas.

S.E.S. RESIDENTIAL AREAS	OBSERVED SPACES	ACTIVITIES								
		CIRCULATION		RECREATION				ENCROACHING ON SPACES		
		WALKING	VEHICULES	SITTING / STANDING	PLAY &RUN	BIKING	SOCCER	Bldg EXT.	PLANTING	PARKING
ABOU QETADA	A									
	B									
AIN EL-SIRA	A									
	B									
ETTEHAD SQUARE	A									
	B									
DEGLA HOUSING	A									
	B									
OSMAN TOWERS	A									
	B									
HELIOPOLIS	A									
	B									
GAMEAT EL-DOUAL	A									
	B									

MORE INTENSE ACTIVITY

NON RESIDENT USERS

(Table 5.2) The activities observed in the different areas of study

CHAPTER SIX

6 IMPLICATIONS

In this chapter, we discuss behavioral patterns in terms of the personal motivations and subjective factors of individuals using the modern "normative idealism" approach in a different framework of socio-psychological analysis. The mutual interaction between human behavior and the physical setting is a continuous process that functions to fulfill human needs. This process can be seen from a psychological point of view as "*adaptation.*" According to John Berry, the term "adaptation" refers to the reduction of dissonance within a system; or in other words, to the increase of harmony among a set of interacting variables.[126] Thus, the adaptation process includes possible alterations in the physical setting and changes of behavioral patterns of the users as well.

This study's results deduce two important points of concern that regulate the adaptation process, to focus our discussion. The first concern is the "*choice*" of behavior, which allows subjects to achieve the appropriate behavioral patterns according to the environmental context. The second concern is "*territoriality*," the spatial behavior

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[126] John W. Berry, "Cultural Ecology and Individual Behavior" in *Human Behavior and Environment: Advances in Theory and Research, vol.4, Environment and Culture*, (ed. Altman, Rapoport, and Wohlwill, New York: Plenum Press, 1980), 100.

that correlates the residents to the physical setting and consequently *controls* the whole process of interaction[127].

6.1 Choice

According to Berry, behavioral choice is achieved through three strategies of adaptation: *adjustment*, *reaction*, or *withdrawal*. Any human behavior should be a fragment of one of the three strategies in interaction with the physical environment. The choice among behavioral actions varies according to the stress of the environment (i.e. the physical setting), and the competence of the individuals or groups (i.e. the values of different socio-economic classes). Both of "adjustment" and "reaction" choices reflect a high competence of users who are capable either to change their behavior or to change their residential environment. In contrast, "withdrawal" is a behavioral choice which occur in a high environmental press or a low competence of individuals.

As we generally compare the behavior of different socio-economic classes, it is necessary to distinguish between the *techniques* used by the individuals or groups to achieve a certain choice of behavior, and the *strategies* which these techniques make up. Depending on life-style, people perform a series of choices among alternative techniques and strategic patterns. For example, the children of a medium socio-economic class might

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[127] Territoriality as a tool of control of the interactive process will form a key or a base of the study's recommendations.

ride bicycles to fulfill a recreational need, while children of a lower socio-economic class who can not afford bicycles will fulfill their recreation needs by using a "cheaper" technique such as playing soccer.

6.1.1 Behavior Adjustment

Some theoretical positions regarding the relationship between environment and behavior are identified as: *a free-will approach; a possibilistic approach; a probabilistic approach; and a deterministic approach* (Porteous 1977).[128] When dealing with human behavior, the validity of any theory is a matter of uncertainty and complexity. Changes in life-style or technology often are unpredictable.[129] Thus, the environment is a combination of many physical and social components that constitutes the potential for human behavior at that place. A part of the complexity is that the *affordance* of a space also varies depending on the "location" and "time" of the occurrence of the behavior.

Adjustment of behavior is a choice of activity that depends on the difficulty of situation. Activity patterns are classified into two categories. The first category consists of *essential* activities. The second includes *optional* ones.[130] The ordering of activities is

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[128] Jon Lang, *Creating Architectural Theory: The Role of the Behavioral Sciences in Environmental Design,* New York: Van Nostrand Reinhold Co., (1987), 100.

[129] Robert s. Laufer, Harold M. Proshansky, Maxine Wolfe, "Some Analytic Dimensions of Privacy" in *Architectural Psychology,* (Ed. by Rikard Kuller, 1973), 360.

[130] F. Chapin pointed out that the activity pattern is subject of voluntary-nonvoluntary aspects. He classified activities into discretionary activities and obligatory activities. The
(...continued)

of course relative to the user's values and depends on the circumstances. But we may define essential activities as those which occur according to a goal of production-consumption and are subject to an obligation to participate. For example, the daily trip to work, shopping, or waiting for a bus, are all essential since they are concerned with survival. This type of activity is sanctioned by rewards and punishments that may take the form of money, but are also at times rendered as prestige or social acceptance.[131] In contrast, the optional activities are not subject to any obligation and no penalties are imposed for non-participation. For example, children playing in the street is optional if the individual could choose the time and place.

On the one hand, the physical setting, when facilitating the essential behavior's occurrence, increases the users satisfaction and attenuates the environmental stress. Since low socio-economic class people are pedestrians more often than higher class people, they are, in fact, more exposed to the physical environment when undertaking essential activities in daily life. On the other hand, the optional activities do not occur if the physical environment makes them impossible. But when possible, they increase a feeling of comfort and attachment of the users to the physical setting.

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130 (...continued)
difference between his classification and the classification used here is that by obligatory activities he meant survival needs themselves such as sleeping, eating, and so on, but by the essential activities we mean the activities which are taking place in the physical setting and have a direct or indirect relationship with survival needs. *See* F. Stuart Chapin, Jr., *Human Activity Patterns in the City,* John Willey & Sons (1974), 37.

131 Samuel Z. Klausner, "Recreation as Social Action" in *Environmental Psychology: people and their Physical Settings,* (Ed. Harold Proshansky, William H. Ittelson, and Leanne G. Rivlin), 419.

Recreation is one of the most important optional activities. Most of the observed residential spaces which served as a locus for different recreational behavior patterns were occupied mainly by low socio-economic class individuals or families, some of the middle class, but none of the high socio-economic class. Therefore, recreational activities in open residential spaces are considered an important adjustment usually engaged by lower socio-economic classes people living in dense urban areas, using different strategies to achieve it.

Recreational activities are relative to socio-economic status. Recreational activities vary in types and quality as any need and are subject of the user's perception. The recreational patterns are affected by the immediate physical environment as well.[132] Based upon the field observations of the behavioral patterns in different residential spaces, "walking" and "strolling" (i.e. movement through spaces for recreational purpose) took place less often than "sitting," "standing," "playing soccer," and "riding bicycles" (i.e. more persistent recreational activities). According to Rapoport, "liking" is the principal criterion for the more persistent types of activities in static spaces such as plazas, while "interest" is the principal criterion for "walking" and "strolling" in dynamic spaces such as streets. Liking is more (although not exclusively) a matter of *associational qualities* while interest is more (although not exclusively either) a matter of *perceptual qualities.*[133]

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[132] Dimitris a. Fatourous, "Perceptual Ecology and the Organization of Physical Environment" in *Architectural Psychology*, (1973), 281.

[133] Amos Rapoport, "Pedestrian street use: Culture and perception," in *Street as public property- Opportunities for public/private interaction in planning and design*, (ed. Anne V. Moudon and Pierre La Conte, 1983), 10.

Regarding residential spaces, the associational qualities are more important than the perceptional qualities because they often enclose static activities (which may be the contrary for other behavioral settings such as the case of shopping). For example, the "Gameat El-Doual" median is a dynamic space from a visual point of view, but the perceptual qualities were too weak to support walking or strolling activities.[134] Meanwhile, the space supported static recreational activities because of the green median.

6.1.2 Reaction

When adjustment of behavior is difficult because of a high environmental press, an individual's competence allows him to react by altering the environment according to his needs. Reaction in this condition prevents a negative effect over his physiological health, and self-esteem.[135] The problem of adjusting behavior is more acute with those who have no money, especially when they have less choice of where they live. Their built environment, determined by economic constraints, is imposed through a design that does not provide much of the residents' needs. Consequently, as a normal reaction, alterations of the built environment take place in poor areas. Alterations also took place in rich residential areas, but the phenomenon was much more intense in the poor areas.

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[134] This statement exclude the shopping strip existing in this street since we are concerned only with residential spaces in this study.

[135] Dennis Donnelly, "Are we satisfied with 'housing satisfaction'?", in *Built environment*, vol.6, no.1, (1980).

Some designers may look at the public housing in different locations of Cairo as an "architectural chaos." The unprepared visitor is struck by the range of vertical and horizontal physical additions to the original rectangular blocks in "Ain-El-Sira."[136] The designer must be careful to look at the residents' choices objectively and not to load them with his or her own preferences and prejudices. When looking at "Ain El-Sira," one can find that this "architectural chaos" is ordered by social norms. and implies good communications.[137] Growth and change became a way of living and they produced an enriched environment of impressive variation despite the limited architectural vocabulary in the original design.[138]

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[136] Florian Steinberg, "Ain El Sira in Cairo: The Architecture of Poverty," in *Open house international*, vol. 9, no.2, (1984), 35.

[137] A *norm* refers to shared rules about acceptable and unacceptable social behavior. In this case, all extensions took place on the balcony side, not on the front side of the buildings. When examining the original plan of the apartments, one realizes that the extensions could be achieved on both sides of the blocks to attain the internal enlargement goal of the apartments. Instead, the extensions took place on one side to keep a consistent distance among blocks. The residents created and established their own rules regarding alterations. Social cooperation was also required between the neighbors who share a multi-story extension. These extensions require good communication between the residents and collaboration regarding high expenses. The failure in cooperation is sometimes expressed by the extensions transpired by extending a room out from the original facade on concrete stilts. In general, these informal transformations proved organized and rational. This is "architecture without architects."

[138] Hala Kardash and Nicholas Wilkinson, "Development Within Development: User Extensions of 4-Storey Walk-up Housing in Cairo- The Case of Helwan," in *Open house international*, vol.16, no.1, (1991), 10.

Based on our contact with people in "Ain El-Sira," nobody complained about their neighbors' additions or extensions. Although the law in this case is against informal alterations, the extensions were spread in the area. One can correlate such behavior to the sociologic philosophy known as the "contagion theory," where a behavior lack of well-established leadership. Violating the law is occurred by individuals who act within a large group, which stands a good chance of losing his or her sense of individual responsibility.[139] This study's findings emphasize the concept that choices of behavior should not be blocked unless they can be shown to be harmful, or where they may interfere with the choices of others.[140]

Alterations in medium and higher socio-economic class residential areas do not necessarily imply an aesthetic defect as observed in "Ain-El-Sira." The alterations there were useful for survival objectives disregarding the good appearance. In higher socio-economic class areas, the alterations were in harmony, fulfilling the residents' aesthetic needs. For this class, the "view" of a space is more significant than its active use.

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[139] "Contagion theory" is more related to the collective behavior. It refers to a situation when a crowd is gathered and there is a spreading of emotional reaction from one person to the next, even to the point where the individual self-identity and self-control of each member is lost. In the case of "Ain El-Sira" the behavior of extending buildings on public space is not as temporal as collective behavior, but is spread on the basics of contagion. Moreover, one can see the physical alterations of the majority of residents as collective behavior against the public housing design at all. *See* Neil J. Smelser, *Theory oj Collective Behavior*, New York: Free Press,(1962).

[140] O. Greger and F. Steinberg, "Transformations of Formal Housing: Unintended Evolutionary Developments as Inspiration for Innovative Design," in *Open House International* 13, no.3, (1988),26.

6.1.3 Withdrawal

Humans can and do survive in habitats which are neither optimal nor preferred because their in-built adaptability allows them to do so. The cost to the individual and to the society of such adaptations may well be great.[141] Withdrawal behavior occurs in some physical settings in order to decrease pressure from the environment. In a sense, withdrawal behavior marks a person's removal from the adaptive arena. For example, once a residential area deteriorates in social status, the original residents tend to move to another area.

Migration as a solution is easier for higher socio-economic class people than for lower socio-economic class ones because of the housing crisis. Since total migration from an area is an inappropriate solution for the poor's problems, other different types of migration result instead.

In some residential areas, where the physical setting did not fulfill the need(s) for a certain group of residents, a "temporary invasion" took place to other residential spaces that provided more support for that need. In this phenomenon, lower socio-economic class people move temporarily into spaces in higher socio-economic class areas to fulfill a recreational need. This phenomenon took place in "Gameat El-Doual" and "El-Ettehad."

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141 Anne R. Beer, *Environment Planning for Site Development,* E.& F.N. Spon.,(1990), 160.

Higher socio-economic class residents usually do not use their residential spaces for recreation, especially when these spaces are occupied by lower class people. This situation is also a type of withdrawal behavior on the part of high socio-economic residents. In fact, the presence of different socio-economic class users in a residential space creates an uncomfortable situation led to withdrawal behavior of the "weaker" group. In other words, the group which had less control over space gave up its use to another group. This trend is discussed below as a *"territorial behavior."*

6.2. Territoriality

Territoriality is the relationship between an individual or group and a particular physical setting, that is characterized by a feeling of possessiveness, and by attempts to control the appearance and use of space.

The concept of territoriality was initially generated to increase security in residential spaces.[142] In the Egyptian context, the importance of territoriality is not directed to planning a defensible space, but to control daily life activities in this space and its maintenance which became more a community's duty than the authorities'

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[142] The concept of territoriality established by Oscar Newman (1972), following up on early propositions by Jane Jacobs (1961), discussed the occupant's feeling of security and the discouragement of criminal activity associated with a "territorial" feeling. The objective was then to design a "defensible space." The concept was generated to support the determinism theory. Later on, Brower and others drew attention that a design would make space defensible, but to an extent that occupancy has a community characteristics. See Sidney N. Brower (1980): "Territoriality in Urban Settings" in *Human Behavior and Environment: Advances in Theory and research*, vol.4, 180.

commitment.[143] It is found to be an important factor in people's interactions with the physical setting. By analyzing some of the study's results, one can refer the deviation from the hypotheses regarding the influence of socio-economic status on the behavioral patterns in the physical setting to the effect of the spatial behavior of territoriality. For example, high socio-economic class residential spaces are assumed to be used by their residents for passive activities, but the lack of the residents' territoriality allowed non-residents to use them for recreation.

We can refer territoriality to three social and psychological factors: *"control," "occupancy,"* and *"attachment."* These three factors are affected greatly by the physical setting configuration.

6.2.1 Control

The control of spaces may be achieved by legal ownership or symbolicly. Control is based on the authority to defend a space or to establish the rules of using it. The law in the Egyptian context suffers from a tolerance in application. Instead, norms are considered a more powerful tool that govern the social interaction anf physical alterations. Since a successful control is reflected by punishment for violating the rules, violating norms causes a certain punishment by residents, either socially or psychologically. Control

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[143] Two elements are interacting to confront the threat of insecurity. The first is "non spatial rules and customs," and the other is "territorial behavior." In the Egyptian context, the first factor is strong enough to provide security in residential spaces without a need to strengthen the territorial behavior.

over space in low socio-economic residential areas was stronger than in high socio-economic class areas because of the passive use of the later areas.

Territoriality in low residential areas is supported by a control implied in the norms that any stranger can feel it and should respect.

6.2.2 Occupancy

Occupancy is a major factor that controls the territoriality of a public space. For example, dumping trash in a residential area depends on occupancy. A public trash container's location is usually near vacant land where the owner is absent from the physical setting, or in the most public area in the space which has nobody to defend it. Vacant land can be transformed into a place of garbage (kharaba) for the whole area. In some informal settings where no container exists, garbage is dumped usually along the centerline of the street pavement because it is a neutral boundary for the neighbors on both sides of the street.

Different forms of occupancy are achieved by the individuals or groups through using the public space for their interest on the expenses of the public use, and are all based on using the space more intensely than others do. Physical occupancy of a public property for an individual's benefit is clearly demonstrated in "Ain El-Sira," where some residents extended their apartments or built a workshop. The extensions could be a result of that the inhabitants became owners of their flats through the ending of a rent-purchase

scheme.[144] This might be true concerning the internal alterations of the apartments, but the external extensions resulted from a lack of territoriality in the public space rather than to power of the users over the space.[145] The space being unclosed by buildings became a no man's land. Therefore, nobody defended it.

Occupancy can be symbolic. An individual or a group, when often using a part of the public space for a certain activity, they reserve a right to monopolize its use. The symbolic occupancy is gained by claims or by routine use. In "Heliopolis," when an individual planted a tree on the side walk, he consequently reserved the shaded area provided by the tree only for parking his own car in this location.[146]

Occupancy may be achieved by non-residents as well as by residents, which consequently yields a territoriality feeling toward a space. The median of "Gameat El-Doual" street, although located in a high socio-economic class residential area, was occupied by people who came from lower socio-economic class areas. The median was separated from the residential buildings by heavy traffic streets and was maintained by governmental authorities, which revoked the residents' territoriality. A similar situation

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[144] Otto Creger and Tlorian Steinberg, "Transformation of Formal Housing" in *"Open House International,* (1988), Vol.13. No.3, 27.

[145] The residents were living a threat condition of breaking down their extensions which appeared through their feeling of anxiety toward the goals of the study.

[146] This type of occupation needs a power of claiming territoriality in the residential area.

existed in "El-Ettehad" square, where the residents complained about the use of the street's green by lower socio-economic class non-residents.

Within a residential area characterized by low socio-economic status, the minority of higher socio-economic class residents do not tend to allow their children to play with other children in the street as observed in "Ain El-Sira." Recreation tends to take place within more homogeneous subsocieties composed of individuals sharing a common life-style.[147] In that case, the occupancy is achieved by the mainstream class children, and consequently territoriality increases for these occupants, while it decreases for others.

6.2.3 Attachment to the Space

Occupancy is not the only criterion that determines territorial behavior. A shopping center may be densely occupied by people, but they do not have any territorial feeling towards the space because they are not attached to that space. According to Brower, attachment refers to the feeling of possessiveness that an occupant has towards a particular territory because of its associations with "self-image" or "social identity."[148] The attachment of Abou-Qetada's" residents to their residential spaces was very high because of its association to the symbolic qualities of the area. The common hard life

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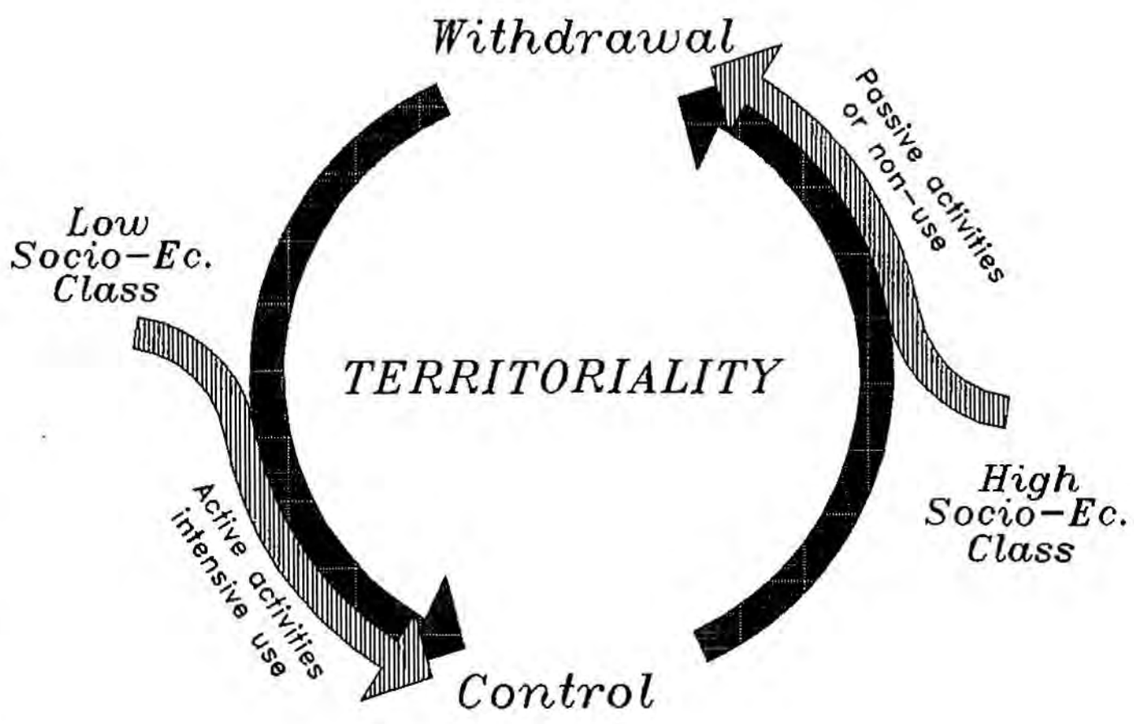
[147] Samuel Z. Klausner, "Recreation as Social Action" in *Environmental Psychology: People and their Physical settings*, (ed. Proshansky, Ittelson, and Rivlin), New York: Plenum Press, (1976),421.

[148] Sidney N. Brower, "Territory in Urban Settings" in *Human Behavior and Environment: Advances in Theory and Research*, (1980), vol. 4, 182.

conditions of the residents, the strong social ties among them, and the narrowness of the spaces created an identity in that place. When people identify strongly with a space, they tend to personalize it, and frequently the objects used as indications of the personality of the occupants also serve as signs of territoriality.[149] For example, the territorial signs of personalization in "Abou-Qetada" made strangers feel like outsiders. On the other hand, the residents of the "Osman Towers" had no attachment to the common space between the towers. These two examples emphasize the importance of the social environment and the physical setting's role in affecting the degree of attachment to the residential spaces as one of the components of territoriality.

The figure 6.1 summarize a cyclic interaction between the different socio-economic class users and the physical settings. The diagram highlights the hidden competitive process between different class users to benefit some physical settings. Each class has specific needs to fulfill-passive activities for higher socio-



(Figure 6.1) Dynamic relationship among territoriality, control, and use of space by different socio-economic classes

[149] Ibid., 193.

economic classes versus "active" activities for lower socio-economic ones. This phenomenon takes place especially in the spaces that afford recreational activities. As it was explained previously that the territoriality has three dimensions: control, occupancy, and attachment, it is clear that the lower socio-economic class users and residents have a larger opportunity to be stronger in each of these dimensions. The norms are more respectful because of the great social interaction, which consequently generates a good control on their own residential spaces. The intensive presence of the low socio-economic users in public spaces allows them to fulfill the occupancy factor. The intensive use (active activities), the optional presence, the memories related to public places (which are mostly recreational patterns,) duration and frequency of use are some factors that create an *attachment* to these places and that reinforce the side of the low socio-economic class in the competition of use. The low socio-economic class users may have stronger attachment to some high socio-economic class residential spaces than the residents themselves. The higher class people consider the use of spaces by low class people a sort of deterioration. Having other alternatives of recreation and other interests in general, the higher socio-economic class users withdraw. The withdrawal encourages in turn the use and control of low socio-economic class users over the spaces.

The significance of this study's conclusions is that the psychological aspects of social interaction play a major role in conducting different choices of behavior. A planner can control activities in a physical setting only when understanding the behavioral patterns of the users to be more predictable, and then using spatial qualities of spaces to support the desired activities.

CHAPTER SEVEN

7. RECOMMENDATIONS

Based upon the actual housing situation, this study assumes that the circumstances affecting urban open spaces will not change in the near future. Informal housing is expected to remain the major housing solution for the poor. The lack of space in low-income apartments will continue due to the economic conditions. Urban spaces will continue to suffer a lack of maintenance on the part of the authorities who are overwhelmed by management problems and budget limitations.

This study is realistic, and suggests only reasonable changes in planning techniques and policies. Hence, the study's recommendations focus on guiding people's behavior by providing them choices that are in harmony with their needs because they cannot change their social environment or life-styles.

These recommendations aim to improve the effectiveness of the residential spaces in two ways. The first is to increase the competence of individuals and communities to achieve their needs in the urban residential spaces. The second decreases the press of the physical environment to afford these needs.

7.1 Increasing the Competence of the Residents to Fulfill their Needs

Increasing the residents' competence can be achieved by providing the psychological conditions that help them to use residential open spaces for their needs. The

more they have control over their spaces and attachment to them, the more these spaces can be considered successful physical settings. Two factors are suggested to create a successful physical setting: the residents' homogeneity, and territoriality.

7.1.1 Providing Homogeneity For the Residents

Based on the findings that the low socio-economic class residents tend to use urban open spaces for "active" activities, while high socio-economic class ones tend toward "passive" activities, it is clear that needs and activities differ according to the socio-economic status. Therefore, the planners should attempt to create a homogeneous socio-economic status for the tenants within a residential area. Housing through leagues, syndicates, and corporations may help realize such homogeneity. To apply some recommendations into physical planning without controlling the tenants' socio-economic status may be useless because recommendations to design a residential area for a particular socio-economic class would be inappropriate for other classes. Thus, a better physical setting is one that avoids dissatisfaction of the minorities by achieving the most possible homogeneous community. In other words, it is important that design guidelines, when translated to physical applications, should fulfill the needs of the appropriate users. If the physical environment does not meet the residents' needs, it is much easier to adapt it through the collaboration of homogeneous residents.

Interaction between residents and their physical settings is more successful when the residents are homogeneous. Socializing often supplements any performed "active" activity in a residential open space. For example, any recreational activity is achieved by

people who have common interests in order to get together in a particular space. Cooperation within communities in low-income residential areas is not effective unless these communities are more or less homogeneous.

7.1.2 Controlling the Territorial Factor

Territoriality controls the different patterns of interaction in any residential space. Territoriality can be employed to make "active" or "passive" activities convenient to different socio-economic classes. For example, the low territoriality of high socio-economic class residents caused by their passive use of spaces can be improved by attaching the available green area to the residential buildings. The physical connection between the green areas and the buildings increases the psychological attachment as well. Consequently, it allows them to use the space to fulfill their needs. It decreases the non-residents' territorial feeling concerning that space, which prevents them from using it for "active" activities against the residents' preference. For example, "Gameat El-Doual" street's median could be controlled more easily by residents if it was attached to the residential buildings.

Lower socio-economic class people who need green areas for recreation should be provided access to a green public space. The publicness of a space can be only provided by decreasing any territorial feelings towards it. A high traffic street separating residential buildings from the green area was found to decrease territoriality. We suggest providing a green area wherever possible to split two different socio-economic class areas. Green areas work as a buffer zone between different socio-economic classes. At the same time,

green areas form an open space close to the low-income residential areas. Thus, it is recommended to monitor the informal housing extensions, and to yield selected areas from being built to provide public open spaces. We can not suggest to provide green open spaces within the informal settlements because the building pattern is out of the planners' control. Even in the design of the public housing, it was not successful to provide green areas among the buildings that the residents could not afford their maintenance.

7.2 Decreasing the Pressure of the Physical Environment

The configuration of the physical environment have a great influence on human behavior in residential open spaces. To decrease the environment's pressure is, in fact, aimed to provide more choices, not only in terms of the types of activities available, but also when they can occur. In other words, the study's recommendations aim to increase the "affordances" of the physical environment.

To provide "margins" of spaces next to residential buildings is a useful tool to allow the residents more choices to fulfill their additions or alterations within general guidelines. These spaces can be flexible to be privatized according to future needs. Either the higher or lower socio-economic class residents are in need to satisfy the need of a self identity by a contribution of adding or changing something in the residential space helps them being attached to their physical environment. If encroaching on some parts of the public spaces occurs, it aught to be regulated by design guidelines. For example, guideline allow individuals' efforts of beautification to be put into a comprehensive aesthetic framework for the area. In the case of lower socio-economic class, extending their

apartments, the process should be brought under control in terms of safety of construction.

The enclosure of spaces among buildings is one requirement for achieving a "sense of community" reflecting both the use and the maintenance of spaces. For low socio-economic class residential areas, the proximity of houses is an effective factor in terms of social interaction. For higher socio-economic class residential areas, enclosure is also important for creating a certain cooperation among the residents for achieving "passive" activities. For me, the openness of spaces in the public housing projects or in high rise buildings has been the major cause of the residents negligent maintenance.

The climatic condition, as one of the deterministic physical factors that affect the use of urban residential space, has to be considered when designing a new neighborhood or when improving residential spaces. In summer, the most active season in using open spaces (especially for recreational activities), hot sunny days prevent "active" activities. Even higher socio-economic class residents need to attenuate the climatic severity in using the urban spaces for passive activities such as parking cars. Planting trees in residential spaces fulfills the need for shade and supplies the natural features needed by people of any socio-economic class, but it does not require special maintenance of green areas.

The materials used in the residential space's surfaces have to be relevant to the types of activities expected in that space. Lower socio-economic class residential areas need to be provided with hard pavements more than higher socio-economic classes do

because higher class communities better maintain their green areas. The type of recreational activities within residential spaces is characterized by the dynamic activities of children and teenagers, such as playing soccer or riding bicycles. High socio-economic class residents to see green areas within their residential spaces (or to use them passively) and have more abilities to plant and maintain them, either by themselves or by hiring somebody else to do it.

The study's recommendations increase the residents' competence and reduces the press of the physical environment, which facilitates the adaptability of the users regarding the physical environment. The study does not aim to change dramatically the urban residential spaces conditions, but it might provide a smoother interaction between the users and the physical setting.

APPENDIX A

Since there is a strong relationship between the questions to be answered and the methods used to arrive at these answers, an understanding of the type of information gathered by observation becomes a critical element in environmental research.[150] According to Harold Proshansky, the field of environmental psychology must rely heavily on studies that are descriptive or exploratory in nature and not on studies that have causal hypotheses.[151] The concern of man-environment studies must be uncovering the dimensions and specific properties of the relationship between behavior and specific properties of the physical setting in which it takes place by applying a wide range of psychological and sociological techniques. According to Jon Lang, in conducting environmental research in the actual physical setting of concern the study must use field research methods that are non experimental in design. It is necessary to accomplish this without destroying the integrity of the study and disturbing the activities taking place. Much of the information has been obtained by interviewing users and informants in different areas of study.

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[150] Jon Lang, and others: Designing for Human Behavior: Architecture and the Behavioral Sciences- Development Series V.6. Stroudburg, PA: Dowden, Hutchingon & Ross Inc.(1974), 225.

[151] Harold Proshansky: "Methodology in Environmental Psychology: Problems and Issues," Human Factors, Vol 14,No.5 (1972), 451-460.

Informal Interviews in Ain El-Sira

Three families were met by the author in Ain El-Sira while trying to approach the area of study. The information has been obtained , in most cases, from men because of the norms prohibiting the contact with women.

The first family was that of Magdy, an electrician who own a small workshop built as an extension of his apartment in the ground floor. His family is composed of three members, he, his wife, and a three year son. The second family is that of Sayed, a friend of Magdy. He lived with his family composed of five in an apartment in the upper floor. His apartment has been extended vertically by building a part of the roof floor and an internal steel staircase. The rest of the roof was used for raising poultry. Sayed is a clerk in the national library *Dar El-Kotob*. He had an extra variable income from undetermined jobs. The third family is that of one of Magdy's relatives. That family was composed of five members and live in a regular two bedroom apartment of the typical housing type. The family had an access to the roof which was used for raising hens too. The husband and the wife's brother are both governmental employees. But they had extra income of an informal business as dress tailors in the evenings.

The recreational activities for the three families differed according to the sex and age. For the males who were friends, recreation was interrelated. They joined a fourth friend who was a hair dresser owning a car to long trips to Alexandria or the Red Sea every week or two. Magdy and Sayed used to spend the evenings socializing in the electrical workshop during the work time. Their contact with the people in the workshop was a source of earning money from unpredictable types of business such as trading in used goods. The wives did not have any specific recreational activity. They rarely join

their young children to El-Fostat Garden which is close to the area. Otherwise they stay at home without apparent complaints. The children of the three families were not allowed to play in the street, but other neighbors permitted their children to play there.

Magdy complained a lack of privacy in the Ain El-Sira. There was an exaggerated contact among the residents. The neighbors know everything about each other, which generated some problems. But an advantage of the intensive social contact was that of the cooperation in hard times.

Informal Interviews in Abou-Qetada

The author's access to the area was through Osta Ragab, The mechanic who lived and owned a workshop in the area. He played a big role to introduce the observer to the back street residents. Abou Qetada was a special case in which it was not easy to apply the study's method for two reasons. The first is that it was important to be accepted. The second was to find a good vantage point of observation that does not affect the behavior of the objects. Therefore, a number of meetings with some residents took place as an introduction to the observation.

Three important persons were very helpful to provide information. Osta Ragab, Osta Sayed , and Haj Ragab. Osta Ragab, being a popular personality introduced the author to Haj Ragab who allowed to install the video camera in his apartment's balcony. He was a retired employee who live alone in his residence. His apartment was composed of two bedrooms, a small kitchen, and a small bathroom. Both Osta Ragab and Osta Sayed lived in a one bedroom apartment. Osta Ragab's family was composed of five members. The one of Osta Sayed included four members.

The three families did not have any recreational activity either inside or outside the neighborhood. It seemed that recreation for the heads of the families was through socializing in their work's location. They all claimed that their wives stay at home except for the daily shopping. The lack of means of transportation was one important reason to limit their movement, but recreation was neglected by them as well.

The interviewees have seen a difference between their area and the "baladi" areas in Cairo. The people in Abou Qetada included low ranked residents who came from other areas in a short time. This created a diversity of people with unknown origin, which encouraged fugitives, accused people, and drug dealers to live within Abou Qetada. Thus, the residents had a specific way to socialize that is characterized by violence, *bad* language.[152] However, Abou Qetada has commonalties with baladi areas in the way of cooperation and social life.

Informal Interviews in El Ettehad Square

The author contacted some persons living in the area of El Ettehad Square, in addition to some of the space users. The interviewees from the residents had stable nature jobs: a University professor, a retired judge, an electrical engineer, a police officer, and so on. They can be classified as middle and upper middle stable income. They all complained the presence of the low income comers to the green median for recreation. In the mean time, they did not have an intention to use it actively. The area A was not able to be

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[152] Bad language is relative. The insults were just a manner of speaking but not considered a part of ethics. On the contrary, insults are just a part of masculin life, sens of humor, and cleverness.

maintained by the residents compared to the area B which was well maintained. The difference is that the residents in the area B cooperated by sharing the gardening expenses.

On the other hand, the users of the space were families coming from one of the close informal low socio-economic class areas. The sitters in the green median were most often coming from the very close informal housing near the "Souk." The soccer players interviewed were friends from the Souk area, or El Arab village five kilometers away. Their age varied from 10 to 20 year.

Informal Interviews in Degla Housing Area

Few interviews took place in the Degla housing area. One of the interviewees was Mr. Hassan, an accountant in a bank and the head of the board of united owners in a residential building. Concerning the residents' socio-economic class, Mr. Hassan declared that many of his colleagues live in the same area. In addition, he clarified that most of the residents were university graduated. A homogeneity to a certain degree existed among the residents who did not meet any problems concerning the maintenance and gardening of the common green areas. Mr. Hassan said the maintenance fees are shared by the all the apartments enclosing the concerned space of study. The guard of one of the buildings was committed to the gardening work of the median for a monthly payment of ten Egyptian pounds from each building. The homogeneity of the residents was emphasized because many residents were close in age as well of occupation. The project of Degla housing was accomplished and sold in the mid eighties. Therefore, the owners who were recently married formed a majority in the Degla area. Consequently, the children were also within the same age group. However, the area included a few senior residents whose one of them the author met was a retired employee. The children who played in the street in the

summer were all residents of the area. Some guards' children were observed running and playing too. But they were playing solely.

Informal Interviews in Heliopolis

Two architects were interviewed in the area of study in Heliopolis: Khaled and Ahmed. They lived in the area of study and were owners of the buildings where they lived. They clarified that their building is sold in a form of united owners as many buildings in the area. Almost all the apartments enclosing the studied space were owned by the tenants. Khaled and Ahmed complained the existence of the guards who lived in the same buildings for their life-style which is different from the resident's. The guards of the same area are the actual users of the green area of the space. Even the soccer games in the street close to the primary school were played by the guards' children of the close areas.

Being active and enthusiast, Ahmed and Khaled helped unifying the residents to share in the expenses of maintaining the common green area. and were active and enthusiasts. They did not meet problems of lack of cooperation except from one building owned by one person. The residents were unknown personally to Ahmed and Khaled, neither their occupation. But the author's interviews with the guards of some buildings clarified that the residents' occupation varied between professionals and businessmen.

Informal Interviews in Osman Towers Area

An interview took place with the project's engineers of Osman contractors who were still working in the internal finishing of some buildings in the project. They had a great knowledge about the residents and their occupations from the lists of owners, and their dealing with them frequently. The residents were businessmen, high ranked

employees in the government, and Arabs from the Gulf countries. An anonymity existed among the residents because a very limited contact.

The author's interviews with the users of the space uncovered that all of the soccer players came from the low socio-economic class areas around the Osman Towers.

Informal Interviews in Gameat El-Doual Street

The authors interviews in the street's median hi lighted that all the users of the space came from Boulak , the low socio-economic class residential area close to the street. They claimed that the green median is the only public space available for them in Gizeh. One of the interviewees, Sayed was a masonry builder who lived in Boulak. Sayed said the closeness of the street to their residence is an advantage to go there walking. The green space for him was not a beautiful place but it was the one available. Concerning the author's observation that only few teenagers came to the Gameat El-Doual street's median, Sayed clarified that teenagers prefer to play soccer on the pavements of quiet streets of El Sahafeyin (a high socio-economic class residential area close to Boulak and Mit Okba). He said some teenager boys come to Gameat El-Doual street only in the late evenings to watch teenage girls who come with their families. Other interviewees were low income users and were mainly manual workers. They expressed their enjoyment in the "garden" to be a take of breath because of their compact residences which were not well ventilated. The green area was open to all and a sense of privacy existed despite the crowds of people. They did not feel the place was unsafe for their children because of the heavy traffic of cars in the street.

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ملخص البحث

مقدمـــة :

يناقش هذا البحث أهمية إرتباط التصميم العمرانى وتخطيط الفراغات السكنية بدراسة توفير إحتياجات السكان ومراعاة النمط المعيشى والظروف البيئية . فقد إنشغل المخططون فى ظل مشكلة الأسكان وزيادة الكثافة السكانية فى المدن المصرية بتركيز جهودهم لتوفير المأوى دون مراعاة للإحتياجات الإنسانية من الفراغات الخارجية . كما أن محاولة نقل أنماط تخطيطية دون مراعاة للإختلاف الثقافى والإجتماعى قد أدى الى استغلال كثير من الفراغات السكنية على نحو لم تصمم الفراغات من أجله . ولذا تكمن أهمية هذا البحث فى التعرف على أشكال تكييف السلوك الإنسانى لملائمة البيئة العمرانية وتلبية إحتياجات السكان . كما يناقش البحث مدى امكانية التحكم فى ذلك السلوك من خلال تشكيل الفراغات العمرانية .

يركز البحث على دراسة الفراغات الخارجية على مستوى الشارع والمجموعات السكنية ، حيث يعتبر هذا المقياس من أهم الفراغات العامة تأثيراً على الحياة اليوميـة . كما أن النقص الشديد فى المساحات الخضراء والمناطق المفتوحة قد ساهم فى تركيز الأنشطة بتلك الفراغات وأصبح لها عدة معانى ترفيهية وإجتماعية بالإضافة الى وظيفة الإتصال والحركة .

أهداف البحـــث :

يشكل الهدف الرئيسى للبحث التعرف على مدى تأثير العامل الإقتصادى الإجتماعى للسكان على إستخدام الفراغات السكنية الخارجية تحت متغيرات ظروف البيئة العمرانيـة . وفى سبيل تحقيق ذلك الهدف الرئيسى يتعرض البحث لتحقيق هدفين ثانويين

الهدف الأول هو الإفادة من مناهج العلوم الإجتماعية والسيكولوجية لتوفير المعلومات عن مستعملى الفراغات والوقوف على إحتياجاتهم الفعلية ، ومن ثم توظيف التصميم العمرانى لتلبية تلك الإحتياجات . فالدراسات السلوكية والبيئية تفيد المصمم بالتنبؤ بقدر الإمكان بسلوك مستعملى الفراغات المستقبلى عند تفاعلهم مع البيئة المبنية . وبذلك يقرب هذا البحث التصميم العمرانى وتخطيط الفراغات من العلوم الإنسانية لتوازن الميول البصرية والفنية لدى المصمم والتى قد لا تلائم الواقع المعيشى للسكان .

ومن ناحية أخرى ،فأن الهدف الثانى هو توظيف أنماط الدراسات الإجتماعية والسيكولوجية للوصول إلى توصيات تصميمية قابلة للتطبيق العملى . فإنه من أبرز المشكلات التى تواجه التواصل بين علم الإجتماع والتخطيط العمرانى أن طرق البحث الإجتماعى من تجريب أو إختيار للعينات العشوائية لا تجيب تساؤلات المصمم المحدده . كما أن البحث الإجتماعى عادة لا يتناسب مع إطار الجدول الزمنى لتصميم المشروعات . وعادة ما تنم الأبحاث الإجتماعية عن توصيات عامة لظواهر إجتماعية لمجموعات محددة دون الإهتمام بدراسة الحياة اليومية العادية والخروج بتوصيات تطبيقية للبيئة العمرانية

منهج البحـــث :

فى سبيل الوصول الى الهدف من البحث ، يبدأ المنهج بدراسة الإطار العلمى أو الفلسفى لموضوع الرسالة (أى الإطار النظرى) ، ثم تطوير الفرضية النظرية التى يرتكز عليها ، ثم محاولة التحقيق العملى لهذه الفرضية بالتحليل الميدانى لعدد من الحالات المناسبة تم إختيارها فى مدينة القاهرة الكبرى .

أعتمد البحث على أسلوبى البحث التطبيقى والتحقيق النظرى . فمن ناحية ، يحاول البحث الإجابة على تساؤلات محددة بالسلوك الإنسانى . ومن ناحية أخرى يختبر مدى صحة النظريات وتطبيقها على المجتمع المصرى . ولذا فإنه قد تم وضع فرضيات البحث بحيث تكون قابلة للإختبار بالإضافة الى صلاحيتها للتطبيق .

أهم الوسائل التى لجأ اليها البحث الميدانى هو أسلوب المقارنة بين السلوك السكانى فى ظروف بيئية مختلفة . وتعد هذه الرسالة أول عمل يتخذ المستوى الإجتماعى الإقتصادى كمتغير للمقارنة حيث ركزت الأبحاث والمراجع السابقة على إختلاف الثقافات بصـــفة عامة ، مما لم ينم عن توصيات تطبيقية لهذه الدراسات . وللتغلب على تأثير العنصر الثقافى على السلوك الإنسانى ، تم حصر البحث داخل إطار ثقافى محدد وهو البيئة العمرانية فى المدن المصرية . وقد تم إختيار سبعة مناطق للبحث الميدانى بالقاهرة الكبرى تتدرج فيها المستويات الإجتماعية الإقتصادية وتتنوع من حيث النسيج العمرانى .

أبرز النتائج :

تنقسم نتائج البحث الى نتائج أساسية مباشرة من البحث الميدانى وأخرى إستنتاجية مترتبة عليها . من أهم النتائج الأساسية أنه كلما ارتفع المستوى الإجتماعى الإقتصادى للسكان كلما كان التفاعل مع الفراغات الخارجية أكثر سلبية . ومن مظاهر ذلك قلة التواجد الفعلى للسكان بالفراغات . وعلى العكس ، كلما إنخفض المستوى الإجتماعى الإقتصادى ، كلما كان التفاعل إيجابياً ، أى القيام بأنشطة حيوية تعتمد على التواجد الفعلى بالفراغ . ويتوقف التفاعل بصفة عامة على ما توفره الفراغات السكنية من إمكانيات للإستخدام .

يشكل السلوك الترفيهى أهم أنواع النشاط الإيجابى بالنسبة للمستويات الإجتماعية الإقتصادية المنخفضة . أما إهتمام المستويات الإجتماعية الإقتصادية المرتفعة بالقيم الجمالية يجعل التجميل أحد أهم الأنشطة السلبية للفرغات السكنية .

بمناقشة النتائج الأساسية للبحث ومقارنتها بالنظريات تم الوصول الى نتائج إستنتاجية هامة . فالسلوك الإنسانى هو إختيار بين ثلاثة إستراتيجيات للتأقلم مع البيئة العمرانية :

- التأقلم على معطيات البيئة .
- تكييف البيئة لتناسب الإحتياجات .
- الإنسحاب .

ويزيد من تعقيد التفاعل بين الإنسان والبيئة العمرانية التفاعل بين المستويات الإجتماعية الإقتصادية المختلفة فيما بينها وتنافسها على تحقيق إحتياجاتها فى الفراغات السكنية العامة . فبسبب إنتقال المستويات الإجتماعية المنخفضة الى فراغات مناطق سكنية ذات مستوي أعلى فى سبيل تلبية الإحتياجات الترفيهية ، يكشف البحث عن أهمية نوعية الوجود الإنسانى بالفراغات {Animate Environment} كأحد مكونات البيئة العمرانية المؤثرة على الإستخدام . ويشكل هذا التواجد والسيطرة من قبل المستعملين للفراغ سواء من السكان أم القادمين من مناطق أخرى صراعاً خفياً يفصل فيه درجة التحكم ومدى الإنتماء للفراغ .

على هذا الأساس تركز توصيات البحث على كيفية تصميم المفردات التخطيطية لتوفير إحتياجات المستويات الإجتماعية الإقتصادية المختلفة فى فراغاتها السكنية . كما تساهم فى تنظيم العلاقة بين مستعملى الفراغات من المستويات الإجتماعية المختلفة فى إستخدام الفراغات العامة عن طريق توجيه المصمم للموازنة بين الضغوط البيئية ودرجة الكفاءة الذاتية * .

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* حسب نظرية – Lewton & Nahemew الإيكولوجية ، تعتبر الضغوط البيئية ودرجة الكفاءة الذاتية هما العنصران المتحكمان فى التكيف البيـــئ . والمقصود بالضغوط البيئية هنا هو مدى توفير الإحتياجات الإنسانية فى البيئة . أما درجة الكفاءة الذاتية فهى مقدرة المستعمل على التفاعل مع البيئة .

مكونات البحـــث :

تنقسم الدراسة الى أربعة أجزاء أساسية . يبدأ الجزء الأول بعد المقدمة فى الباب الأول ، ويتكون من الباب الثانى . فى هذا الجزء يبدأ الباحث بعرض الخلفية الثقافية للمدن المصرية مع التركيز على مدينة القاهرة وأسلوب الحياة اليومية فيها . بالرغم من أن الخلفية الثقافية هى حجر الأساس لأنماط السلوك الإنسانى ، الا أن الثقافة هى عنصر هلامى غير محدد لا يمكن الإعتماد عليه كأداة بحث للسلوك الإنســـانى . فينتقل الباحث الى كيفية تصنيف مستعملى الفراغات على أساس المستوى الإجتماعى الإقتصادى كأداة أكثر تحديدا من الخلفية الثقافية . وينتهى الجزء الأول بعرض النظريات المتعلقة بالتفاعل الإنسانى مع عناصر البيئة والتى تمهد لإرساء فرضيات البحث فى الجزء الثانى .

يتكون الجزء الثانى من البابين الثالث والرابع . ففى الباب الثالث يتم شرح فرضية البحث الأساسية والإفتراضات المفسره لها والمتعلقة بها . ثم ينتقل الباحث الى شرح المنهج الذى إتبع فى البحث الميدانى لإختبار صحة فرضيات البحث . ويركز البحث على الطرق المستخدمة فى البحث الميدانى لما لها من أهمية بالغة فى كيفية رصد السلوك الإنسانى والتى يتوقف عليها مصداقية النتائج . وفى الباب الرابع ، يتم عرض السلوك الإنسانى الذى تم رصده وإبرازه فى صورة خرائط للسلوك الإنسانى دون شرح أو تحليل .

يتكون الجزء الثالث من البابين الخامس والسادس . وفيهما يتم تحليل ما تم رصده وابراز النتائج . ففى الباب الخامس ، يتم عرض النتائج الأساسية المباشرة للرصد الميدانى وتحليلها على أساس مقارنة المستويات الإجتماعية الإقتصادية للسكان مع التركيز على الدوافع الإجتماعية للمجموعات . أما فى الباب السادس ، يستمر الباحث فى مناقشة الدوافع السيكولوجية لسلوك للأفراد . وهى تمثل مدخلاً هاماً للوصول الى توصيات للتحكم فى إستخدام الفراغات .

أما الجزء الرابع والأخير ، فهو يتكون من الباب السابع . وفيه يتم عرض توجيهات تصميمية وتوصيات البحث . وقد روعى فى هذا الباب عرض توصيات تتناسب مع الواقع المصرى للوصول الى تحقيق أكبر قد ممكن من الإحتياجات لمختلف المستويات الإجتماعية الإقتصادية لسكان المدن .

بسم الله الرحمن الرحيم

"سبحانك لا علم لنا إلا ما علمتنا إنك أنت العليم الحكيم"

صدق الله العظيم

جامعة المنيا
كلية الهندسة و التكنولوجيا
قسم الهندسة المعمارية

التفاعل بين السلوك الإنسانى و الفراغات الخارجية

رسالة مقدمة لقسم الهندسة المعمارية بكلية الهندسة جامعة المنيا
للحصول على دكتوراة الفلسفة فى التخطيط العمرانى

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