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**PARAMETERS OF PEOPLE'S SATISFACTION TOWARDS
STREETS IN NABLUS CITY**

(The Case of Rafidia Street)

By

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**Submitted in Partial Fulfillment of the Requirements for the Degree of Master of
Science in Urban and Regional Planning, Faculty of Graduate Studies, An-Najah
National University, Nablus- Palestine**

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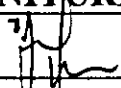

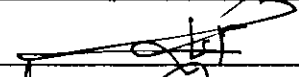

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STREETS IN NABLUS CITY- (The Case of Rafidia Street)**

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PARAMETERS OF PEOPLE'S SATISFACTION TOWARDS STREETS IN NABLUS CITY

The Case of Rafidia Street

ABSTRACT

Each environment contains distinctive physical objects that characterize its unique personality. The same prevails for the street built environment; it has different parameters that contribute its physical character and quality characteristics, which determine its significance.

This study attempts to understand and interpret the contents of the built environment of the street in one of the streets of Nablus City, which has been attractive for handling various activities as well as containing various elements. The main aim of this study is to define the different parameters that represent the built environment of the street that may affect and influence people's satisfaction towards their street. In order to understand the complexity of the subject, the study examines both parameters featuring the built environment of the street, the technical parameters and the quality parameters.

The research approach has been both qualitative and quantitative, and from discussing the technical parameters and how it influence the quality parameters of the street environment. The methods used to collect information include: personal observations, semi-structured interviews, questionnaires and computer analysis using Statistical Package for Social Science (SPSS).

For on in-depth investigation, a case study street was chosen namely Rafidia Street in Nablus City. The study starts by analyzing the existing contents of the physical built environment of this street. Then it examines the potentials, problems and expectations of the case study. People add to the study their expectations as a way of measuring the level of satisfaction of the built environment of Rafidia Street. The study reveals that people's behaviors, in addition to the elements and/or activities are very related to the quality of the street built environment.

In addition, the study concludes the importance of having a distinguished street environment in design and planning process and most of all on people's lives. It also provides feedback about the existing conditions of the streets of the city in order to translate the insights gained into practical solutions.

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“People say it is people who make great streets. That may well be true, but I cannot design people and would not want to if I could. I cannot design or build activities. Those non-physical qualities may be more important than the physical, designable qualities. But I do not control them. As a designer I might be able to control the physical qualities.”

(Jane Jacobs, 1995: 189-191)

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CHAPTER ONE

INTRODUCTION

1:1 PROLOGUE

Any attempt to understand the meaning of streets and their role in the process of human communication and interaction, requires a conception of nature of the relationship between man and his environment, as well as some comprehension of the specific role or roles played by the streets in this relationship, (Anderson, 1986).

Streets are open to all, and their role extends just being the linkage between destinations, they are channels for vehicles, as well as being a place or an open space for people meeting and interaction. It seems that the definitions and differentiation of systems of streets have grown increasingly complex as the society itself has increased in complexity (Anderson, 1986).

In order to reach the quality of streets that we desire in our city, we have to know what constitutes the different images for users, and the character of the surrounding environment they want. This can be achieved through study of the specific parameters on both levels, the human perception, and the standards that help to obtain such a perception.

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Every place or street has something that makes it identical, and everyone has his/her own image towards such a place or a street, but what gives the street its distinguished image and structure varies and depends on different observers. However, Streets historically have played many roles in our communities, serving often as marketing and gathering places as well as traffic channels. For a street to function as a true public place, increased non-vehicle space is absolutely essential.

Today, the role of the street and nature and content of social life and interaction vary with class, ethnic group, age structures, and the type of specialization of the neighborhood. It is clear that increasing specialization of the society have removed indoors many of the socially cohesive once found in the street. Entertainment, marketing, information and personal services, once available on the street, are now rarely there. With

suburbanization, streets have disappeared; the physical sidewalk is often narrowed to a footpath, and in some developments there is no sidewalks.

The subject of this study is to draw attention to the role the streets can share in Nablus City, in particular and in Palestinian Cities in general. It is what to be done to upgrade and raise the quality of the outdoor physical environment of our streets in order to take its proper function for people comfort as well as for vehicles maneuvering. In other words and for the purpose of this study, street parameters will be divided into two parameters, technical parameters and quality parameters. The first is related to the physical layout, elements and dimensioning of the streets itself. The second is related to people perception and interaction and the image they have towards their streets.

So streets have a significant role as communication network to link a variety of groups together, and how these streets are read and function depend on the interaction between people and their environment. The investigation of this research, therefore, will be guided by several considerations. **First**, the image created when experiencing a place has to be examined. **Second**, the conceptual meaning of image has to be related to other features and activities of the built environment of the street. **Third**, the dimensioning components of the physical elements of the streets will be considered. **Finally**, the characteristics of the case study will be highlighted in order to gain the main target of establishing a basis for the relationship between people and their streets.

1:2 THE PROBLEM

The components of its physical characteristics and the elements of its context define the street characteristics. Therefore, the image of the street is configured accordingly as a consequence of this interrelationship of the street context as a whole.

There is a vital need to plan according to what people priorities and desires. Our entire community must be accessible. It must accommodate all transportation modes. Nowadays, the importance of having comfortable outdoor environment has to be a part of a comprehensive Master Plan. Our design standards must change. Our point of view about the built environment of our streets has to be reconsidered. In most of our travel, we can make the time we spend outdoor more enjoyable simply by enhancing the characteristics of the physical features of our streets.

Nablus is a city with special features and topography, but with limited open spaces. In our case study, Rafidia Street, in the west of Nablus City, and through observations, our urban community, leisure time is increasing and the emphasis on cultural and community activities is strengthening. Therefore, people are aware of other places to be and a more accessible streets to facilitate the time they spend in.

This research will try to identify the built environment of the street from one side, and will try to find the effects and impacts of street's environment on its users, and the different images for different users from the other side. In other words, this research will be studied in two aspects the technical aspect and the quality one. This will assist in having the entire environment accessible to all. In order to do so, our streets have to be reclaimed. In addition, full awareness of parameters of people's satisfaction towards using their streets has to be considered.

Moreover, what is happening now is beyond people's expectations. The approach of planning and development is taking traffic and congestion needs into consideration and neglecting or forgetting about what do people like to have in their streets. The question is how to make this concept closer to people's minds, and to put them in front of their real need for accessible streets within their communities. The research methodology depends on people's ambitions and expectations in order to answer the research concept. Accordingly, based on the two parts of this research, the problem is to define what consists the physical environment of the street, in order to be accessible and properly used for people from one side, and how to create a good and rich image for users to spend their time. On the other side, the approach in any of streets' planning only the vehicle scale is taken into considerations, while the other user's scale is negligible. Therefore, the point is to discuss the various characteristics of the street built environment in order to reach people's satisfaction. In most of the Palestinian cities and in Nablus, in particular, this problem will be highlighted with all its aspect through this research.

In the face of the above problems, the study is for the elements that form and reflect the street characteristics and give it its atmosphere and image, and the physical layout of the street itself. In other words, it is how to proceed the two parts of the research, by

defining the accessibility of the street, the function of the street, the image of the street and its elements and the street furniture and its boundary.

1:3 THE SETTING

The fieldwork was conducted in the western part of Nablus City. The extension of the city, for geographical reasons and other constraints, is noticed to be towards the west. In addition, in the western part of Nablus a dense distribution of people as well as vehicles has been observed. All these attracted the researcher's attention to that there is a real need for planning Rafidia Street as an acceptable place to be in, and as a proper street to walk through that respond to people's needs.

The changes in the street development in Nablus City through different periods of times help to direct people towards Rafidia Street. The special characteristics and features this particular street has made it distinguished to study what attracts people attention on streets from one side, and what makes the street comfortable and accessible from the other side. This, of course, after analyzing the built environment of Rafidia Street, and clarifying the parameters, both the quality parameters or the technical ones according to the research approach, that may consider certain street achieving people's satisfaction. The approach of this study, as mentioned, is to highlight the conflict of the mixed use of our streets for both people and vehicles. Also to define the properties of the street to work efficiently on both aspects and parameters.

Recently, many projects had been carried out considering streets development and rehabilitation, but our ultimate concern has to be oriented towards a new physical planning concepts in altering our hierarchical approach to streets planning, in mixing land uses, and in seeking proper residential densities. Therefore, the research object is to discuss what consists each part of this study and to set the essential parameters to obtain as much of these parameters in the design process of our streets so as we can achieve the a satisfaction level for users.

1:4 SCOPE AND OBJECTIVES OF THE STUDY

Peoples need safe, comfortable, and accessible routes covering the entire city. Nevertheless, in recent projects of new streets, as the construction efforts motivated by

increases in number of cars, there was lack of planning, little integration and less thought about the impacts on nearby residents or pedestrians. This quick planning and execution of plans lead the street network to serve only limited users and neglecting people's images and need of accessible streets together with a well-furnished street that serve all type of users. It is obvious that our overdependence on automobile travelling will lead to serious problems. This implies another deep thought regarding what type of streets do we really want?

This study has three main objectives: **First**, to highlight the conceptual meaning of the built environment of the street. **Second**, to develop an understanding of our streets as a place to stay and enjoy being in and the level of satisfaction people desire. **Third**, to instruct for future applications to be considered regarding the concept of street and its parameters towards people's satisfaction.

These objectives are achieved through the following processes:

- 1.To develop an understanding of the theoretical perspective of the conceptual aspects of street image. Moreover, to set and to identify the characteristics of the built environment of the street. In other words, to develop a major outline for eliciting the public image of any street.
- 2.To investigate people's interaction with their street environment, therefore, to set parameters for their satisfaction and perception level.
- 3.To put a conceptual meaning for the design of our streets, through dividing the process into two sectors technical and quality.
- 4.To investigate the tidiness and existing of physical elements help in orienting and guiding people in their paths.
- 5.To understand the functioning of streets in Palestinian Cities and to set general qualities and technical parameters for its streets.

1:5 THE RESEARCH METHODOLOGY

The orientation of this research is exploratory and relies as far as the research methodology is concerned on qualitative approaches with analysis of some quantitative data. In the process of representing feature for defining the image of the street, the study uses the inductive argument. The purpose was to reach the aim of this research for

elaborating other elements that can help relate the concept of the built environment of the street and its image (Fig. 1.1).

For the reason of in-depth investigation, a case study is performed. Rafidia Street in Nablus City was chosen for the analysis. This particular street was chosen because of the dense presence of peoples and heavy traffic load in different times of the day, as well as the variations of the elements constitute this particular street. Accordingly, it is the diversity of both, elements and activities, which direct the study approach.

The strategy of investigation is to start from the street network of the city of Nablus, in order to analyze and evaluate this network according to the nature of the city. Then to highlight Rafidia Street, the case study, and to define its features and characteristics. For this purpose, the street was divided into technical parameters that form the street physical characteristic, and quality parameters that determine the street image and social interaction.

For the data collection, multiple-research techniques are applied because the question of the research, with its complexity and uniqueness, direct the process of investigation. Preliminary observations and interviews with key figures derived primary information. In addition, information gathered through a questionnaire especially designed for the purpose of the study and distributed to a sample of people in Rafidia Street. Secondary information relevant to the study was obtained from municipality, literature, and in addition to showing people picture of different streets to measure their acceptance level. While it was possible to compare the street dimensioning with the standards of similar streets, measuring people's satisfaction was not so easy. A questionnaire was conducted as a method for measuring how do people interact with their streets, the different images they have and the elements that help in processing this image. This examines the two aspects that formulate the street environment, the technical and quality parameters, thoroughly in this research.

This is, in short, an overview of the research methodology, of which a full discussion is presented deeply in chapter two.

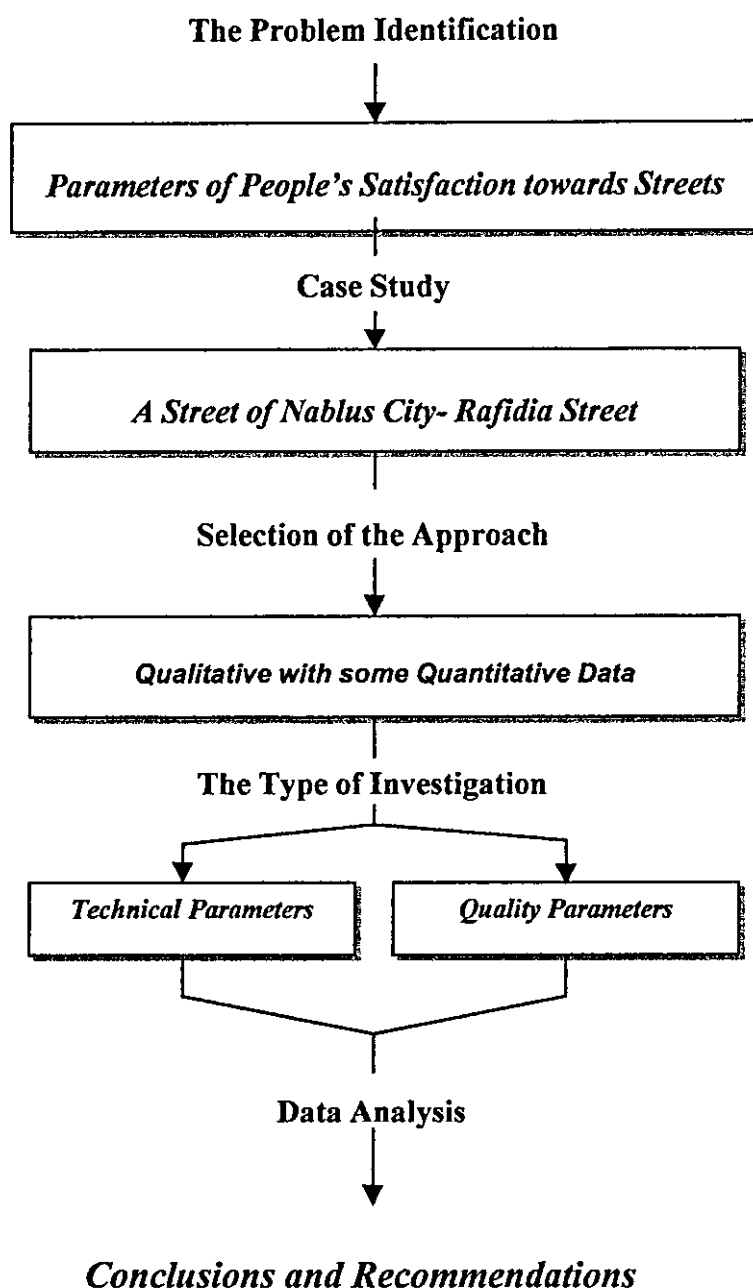


Fig. 1.1: The research methodology and the procedure for investigation

1:6 STRUCTURE OF THE STUDY

Since the purpose of this study is to investigate the built environment of streets, its structure aims to set and define the parameters of people's satisfaction towards their streets. Accordingly, this thesis is presented in six chapters.

The First Chapter serves as an introduction, whereas the problem, ideas and set of arguments that provide the basis for this study are presented.

Chapter Two reviews the research methodology adopted during the fieldwork for investigating the built environment of the street. It explains the approach to the study, the strategy for investigations, the techniques adopted for collecting information and the analysis strategy. Moreover, it points out the difficulties that faced the researcher during the fieldwork.

Chapter Three discusses the theoretical perspective of the concept of the built environment of the street and its structure. In addition, it explains the relationship of the built environment of the street and the elements of this enclosure both in social and physical characteristics. This chapter also points out the theoretical background for proceeding street characteristics as well as its elements. Finally, it constructs a theoretical guideline as a basis for investigation in this study.

Chapter Four introduces Nablus City and Rafidia Street as the context within which this investigation is carried out. It gives an overview of the characteristics and forming of the Streets of the City and the specialty it has. In addition, this chapter describes the categories of streets in Nablus City, and presents an assessment of the existing traffic condition.

Chapter Five concentrates on the built environment of Rafidia Street as the case study, and analyzes its components. It discusses the quality of the physical characteristics this particular street has. It clarifies the relations between these physical elements and people's acceptance. In other words it expresses the interaction relationship between people and Rafidia Street. Then analyzes and evaluates the potential it has to reach people's satisfaction.

Chapter Six summaries the results of the investigation. It discusses the insight in the investigation of the physical characteristics of the built environment of the street. It discusses the research findings at the scale of the street and the city in general. This chapter also points out several principles enhancing the conceptual aspects of the built environment of the street. Moreover, it presents recommendations regarding the quality of the built environment of street towards people's satisfaction to guide professionals in architecture and planning process.

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CHAPTER TWO

THE RESEARCH METHODS

2.1 PROLOGUE

The aim of this study is to identify the physical elements of the street environment that contribute in formulating the people's perceptions and images of their surroundings in general, and for streets in particular.

The main emphasis of this study is to clarify the characteristics of these elements of the built environment that affect the perception level, in order to achieve a certain level of satisfaction. Also, this study tries to specify the ways that different people view and accept the different paths.

This study is handling two parts relating the satisfaction level of people: - The research approach would base on people's perception of the physical elements within the study area. From which they could realize then identify what is depending on the image, or to what the emotional events are attached or corresponded to these elements. According to studies of environmental perception of physical elements, different things could have different meanings for different people, and the result could range from one person to another (Lynch, 1981).

There are many factors affecting the characteristics of the elements of the physical environment, part of these factors are depending on technical characteristics of the elements themselves, the other part is depending on the quality characteristics of these elements. While the first part can be examined and justified through analyzing and dimensioning different elements of the street environment, the other part is not so easy in processing, and will be examined through observations, interviews and other similar techniques. Therefore, the approaches and methodologies of the research are to be adjusted to suit different aspects of the problem in order to cover all aspects. In addition, it will consider people's perception of the physical elements of the built environment of the street in order to assess the parameters of their satisfaction level.

Once the objectives and the key questions have been identified and the theoretical basis of the study have been conceptualized, the next step will be to examine how the data was collected from the case study area in order to achieve the objectives and to answer the questions raised.

On this basis, the discussion of the fieldwork which was conducted in Rafidia Street in Nablus City, including the approach, the strategy and the methods would be examined. This constitutes the major part of this chapter. It describes and justifies the methodological approach used to collect information during the fieldwork. Starting with a brief discussion evaluating the approach to the study, it then states the strategy for investigation. After that, it introduces the research methods that has been used for data collection and the techniques used for analysis. It also discusses the credibility and the quality of the information collected, and concludes with the difficulties that faced the researcher during the fieldwork.

2:2 THE RESEARCH APPROACH

The competence of research activities is strongly affected by the clarity and precision with which the researcher is able to translate the abstract meaning of the key variables within a theoretical framework into operational definitions of practical explicit description that guide the research for information (Blalock and Blalock, 1982).

The choice of any research method depends on what the investigator wants to know, the type of the research problem, and what kind of results he/she is looking for. So, in trying to specify the elements of the physical environment of the street, we have to set the technical parameters of similar physical environment elements. The personal parameters affecting satisfaction level of perception, has to be analyzed and tested, taking into consideration the whole characteristics of the surrounding environment. This implies to set and understand the interrelationship between people and their environment.

The orientation of this study is based on qualitative approach, and to evaluate some quantitative data as well. In short, the approach adopted in this research is exploring rather than testing, examining rather than proving, and getting insight rather than informing (Senan, 1993).

2:3 THE STRATEGY FOR INVESTIGATION

The first step for investigation is the selection of the case study as a way to specify and promote the subject under investigation. In this study, one of the main streets of Nablus City, called Rafidia Street, is chosen for the investigation through the study, different research techniques will be used to investigate different criterion and different parameters for people's satisfaction.

The fieldwork was conducted between June 2000 and September 2000. The main issues to focus the investigation on are: the elements of the street environment against people use and satisfaction, to clarify the different elements that share in determining the street personality and character, consequently, these accommodate the different needs for each user and to investigate how people interact with their environment. For the purpose of this research, Rafidia Street will be studied in its two aspects. The first will be to define the technical parameters of performance for this particular street, while the second will define the quality parameters of elaborating the image of the street.

Accordingly, there will be two levels for investigations related to dimensioning and analyzing the existing condition of the case study through fieldwork, including the analysis of the components of the technical part of the streets. The other level deals with elements of the quality of the street and the personal images which people believe reflect their acceptance through the physical environment of the street. In other words, it is to examine people interaction with this street, and the level of satisfaction they feel towards their streets. This implies a differentiation between the different elements of the street context that is responsible of shaping its image. The approach to be used will depend on data collection of the existed physical elements of Rafidia Street, and to evaluate their performance level and how close they are related to the standard level. Then how do people view these elements? and accept the different paths they pass through? also, what makes a certain path special and favorable than the other? In other words, it is the personal experience of seeing and interacting with physical environment.

The hierarchy of the study will be from measurements of the street network of Nablus City and its characteristics, to Rafidia Street and its elements that affect its performance level. Then the relationship between the street environment and the level of satisfaction will be defined as a consequence. In short, the research will test the real measurements of

the street with its element and how it affects personal satisfaction. The approach is to set a relationship between the physical built environment of the street, to reach a level of satisfaction for people within the street environment. This procedure of sequence will be in order to identify the interaction between people and street’s elements as built environment as in (Fig. 2.1). In other words, It is a way of measuring people’s interaction with their environment, and the level of satisfaction they feel towards their streets, or the corresponding between the technical parameters and the quality parameters of the street environment.

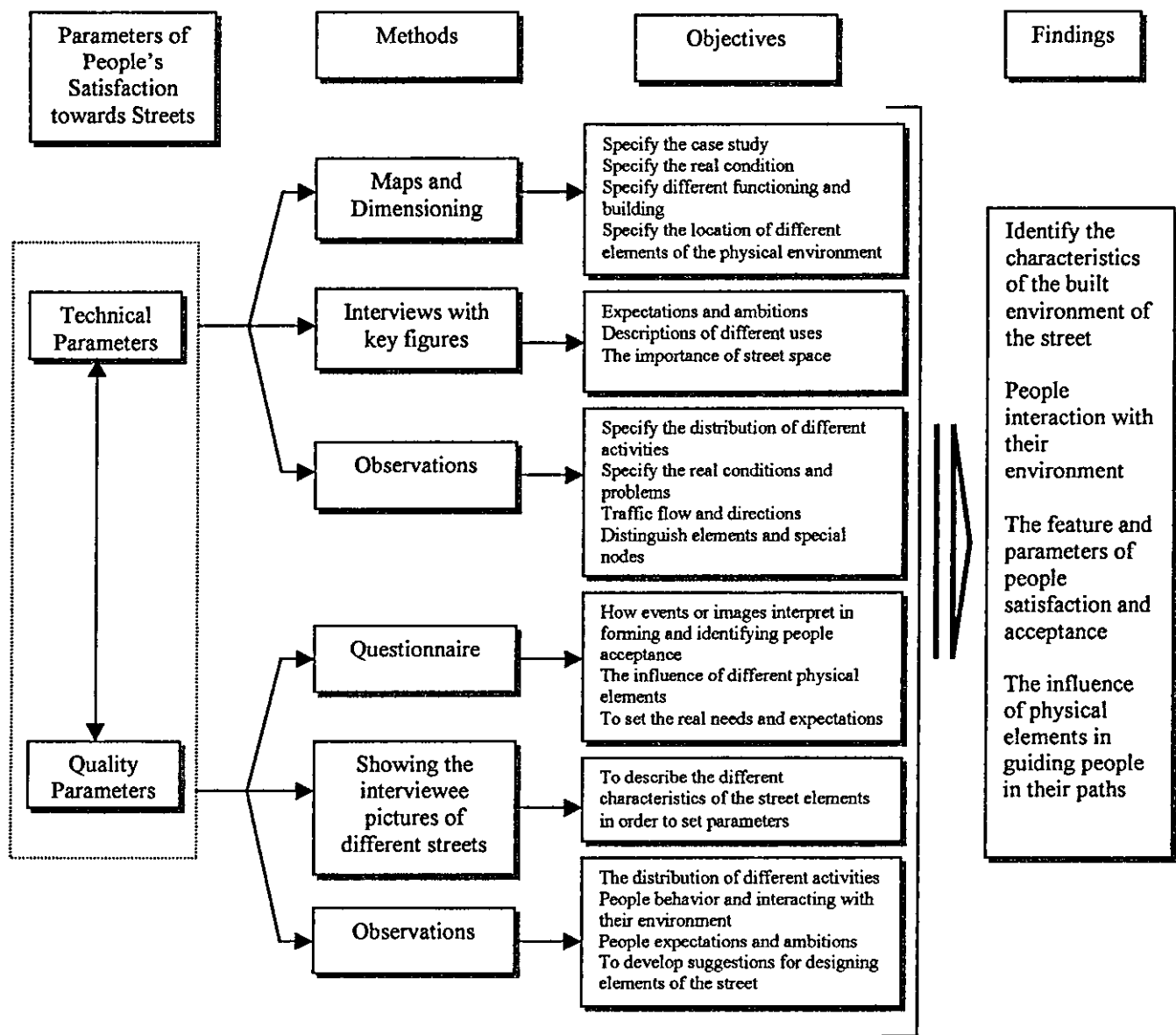


Fig. 2.1: The research methods adopted in the fieldwork

2:4 EXPLORING THE STREET NETWORK IN NABLUS CITY

The aim of investigation at this level was to collect information about the street network of the Nablus City; and to see how this network was affected by the topography of the City in order to show the hierarchy of the streets of the city as a whole. This was as an introduction for studying the problem of this research. To measure the level of satisfaction from one side, and to relate this measurement to the components of the street environment on the other. The basis for any reaction towards the street environment is its contents, consequently, to set any parameter that determine people acceptance of their physical environment is conditioned by this context. It is "the relation between what you see and what you have".

According to the division of this study into two parts, the technical and the quality, and in order to do gain the research targets, several techniques were used. Among these and for the technical part, semi-structured interviews were carried out with Palestinian key figures to discuss the built environment of the street, and to clarify the problems of Rafidia Street and the future planning. In addition, observation techniques were utilized to collect information about the distribution of different elements and activities that attracted people's attention and the performance of the existing physical elements of the street and the problems resulted of the mixed use. Moreover, supplementary methods for the dimensioning and the distribution of elements including maps for the street network in general and for Rafidia Street in particular, photographs to focus on the problem of the research and show the conflict of the mixed use and the distribution of the Rafidia Street's spaces.

The other technique for measuring the level of satisfaction was to distribute a questionnaire through the fieldwork. Parallel with preparing the questionnaire, a group of pictures for different streets with different characteristics but with common features was chosen to show the interviewees while answering the questionnaire. Thorough observation was carried out to show the different locations for concentration of the different activities, and to focus on the different functions of Rafidia Street

Accordingly, a group of seven students of the Department of Architecture of An-Najah National University volunteered in distributing these questionnaires. The structure of the research problem and the key variables the researcher wants out of the fieldwork were

explained to the group in advance. A follow up for this process of group working was made continuously to report the results from the fieldwork and to discuss how to present the questionnaire with people of Rafidia Street.

Another step was made before distributing the questionnaire, which is, sample selection. It was random but stratified selection. A sample of 103 respondents was chosen randomly. There were 40 of the passengers along Rafidia Street, 21 of the drivers, 21 of the housewives and 21 of the shopowners. The selection of each sample depended on the counting of odd and even of each side of Rafidia Street. For example, every odd shop of the right side of the street and every even shop of the left side of the street. The most important issue while choosing the sample was to make sure the difference and variability in its structure. This has enhanced the understanding of people needs and expectations of the streets they like to be in.

2:4:1 INTERVIEWS WITH KEY FIGURES

The fieldwork was designed to start by interviewing key figures who either have knowledge of the subject or whose occupation related to the developing and planning of the City as a whole and streets in particular. The purpose of these interviews was to clarify what constitutes the built environment of the streets, and to distinguish the elements that shape of the physical environment of the street.

The type of interview was a semi-structured interview, and sometimes the interviewee felt it as a questionnaire. These interviews were conducted with people who share in a way or another in making decision regarding city planning in general and streets planning and developments in particular. The strategy was to choose from various subjects and occupations (Appendix 2.1).

The main purpose of these interviews was on one side to set a specific definition of the built environment of the street, and on the other side to highlight the real problems and future expectations of Rafidia Street in particular. To identify its features and the distinguished element, and to set the problems of the mixed use. The names of the interviewees were selected according to their specialty and occupation. The strategy was to choose from various subjects and occupation and mostly those who are related to city planning and executor for all the street's of the city. A list of twenty-one names was

prepared in advance. However, after conducting seventeen interviews, the process stopped because most of the information then had been repeated.

All the interviews were arranged in advance and the researcher carried out all. The time spent in each interview ranged between one hour and one and half an hours. The sets of information were recorded on separate sheets. Before starting, a cover letter introducing the researcher and the objectives of the interview was handed out. The interview covered the biography of the respondent, including sex, age and occupation; the definition of the built environment of a street; the distinguished elements of Rafidia Street and the problems of this particular street. Lastly, the evaluations and predictions to be followed in the design and planning process in the future were discussed.

2:4:2 OBSERVING THE PHYSICAL ENVIRONMENT

Patton (1990) highlighted the importance of data collected through observations. He wrote:

“The purpose of observational data is to describe the setting that was observed, the activities that took place in that setting, the people who participated in those activities, and the meaning of what was observed. The description must be factual, accurate, and thorough without being cluttered by irrelevant minutiae and trivia.” as quoted by (Senan, 1993)

In order to understand the situation in a holistic perspective, to see things as they are and to be open and inductive in approach, physical observations had been carried throughout Rafidia Street. The purpose of these observations was to determine the different locations where people walk, gather and socialize, and to support the information collected from other methods. Also, to specify the different elements that shapes the spatial structure of the physical environment of the street.

Moreover, to determine the traffic flow and directions and to figure out the real conditions with its problems. The main object of these observations was to highlight the physical built environment of Rafidia Street and the distribution of different functions and activities in order to know the level of property for suitable and comfortable functioning. For example: if the street is the right place for jogging, eating, walking,

socializing and entertaining or not? In addition, what are the features and characteristics that should exist or be provided in the street to be as people want it to be?

Observations could be carried out in different ways; the most important issue is to help in clarifying the raised questions of the research. The researcher had specified the elements to be observed and the features to be studied in advance.

In about ten days and while walking through Rafidia Street, the researcher was taking photographs and notes about the street's condition and the existence of its elements. All these information were put on maps to help to know how these elements are distributing. It should be mentioned that observation had been taking place together with other techniques in the most stages of the fieldwork (Appendix 2.2).

2:4:3 ANALYSIS STRATEGY

Having obtained the information and data from the fieldwork, further analysis consisting of the conceptual structure and the physical features of the street's elements is needed.

Patton (1990), in explaining the process of analysis in research, wrote:

"The process of data collection is not an end in itself. The culminating activities of qualitative inquiry are analysis, interpretations and presentation of findings. The challenge, therefore, is to make sense of massive amounts of data, reduce the volume of information, identify significant patterns and construct a framework for communicating the essence of what the data reveal." as quoted by (Senan, 1993)

This study was carried out through two approaches in studying the quality parameters of the built environment of the street on one side, and the technical parameters of the same environment on the other side. Also, this study is based on people's experience in using their streets and the researcher's observations. It is meant to determine the influence of the context of the spatial structure of the street on people's satisfaction of this street.

All the collected data and information categorized according to subjects and issues, then analyzed in a process that leads to the desirable solutions for the existing situation. The maps for Rafidia Street as well as the aerial photography were taken from the Municipality of Nablus, and the researcher collected the data of the field. Moreover, an inductive approach was employed to extract the information and point out the elements that had been most frequently mentioned or discussed.

2:5 INVESTIGATING RAFIDIA STREET

The street of Rafidia was chosen as a case study for detailed and depth investigation. The area of the case study expands from Prince Muhammad Street in the eastern part of the case study, until the intersection of Abd-Al Raheem Mahmood Street with Rafidia Street. The selection of this street was based on different criteria depending on the street characteristics itself on one hand, and the problem of the research on the other. It was because of its typicality, familiarity, and accessibility.

Inspite of some variation, Rafidia Street is considered one of the typical streets in Nablus City, in size, functioning, and future expansion of the City. Therefore, it is working as a representative sample for the other streets and can be generalized. Also, it is considered, more or less, accessible and people like to spend time either moving or gathering, depending on time of the day. Rafidia Street is one of the mix use street depending on what time of the day is. Besides its role in connecting the eastern part and neighborhood with the western part and neighborhood of the Nablus City, Rafidia Street has many other different functions and activities, this strengthens and adds to reasons for choosing this particular street as the case study.

We can say that what is happening now is like orienting decision-makers in the development process. In this accelerating progress, many thoughts have to be considered. In addition, the multi function and mix use of this street makes it interesting for deep investigation. Recently, Rafidia Street, in the Municipality of Nablus, is categorized as local commercial; this strengthens its variety and diversity of functions and activities, accordingly there are more that attracts people to be in this particular street.

The familiarity with the street as being in the neighborhood of the researcher's home affect the choice of Rafidia Street to be the case study. This will make it easier to carry out the needed fieldwork for this study. Indeed, this trust between the researcher and the residents, increase the possibility of maximum benefits from the fieldwork.

2:5:1 INTERVIEWS AND QUESTIONNAIRE

In order to understand the type of street people like to spend their times in, and to know how do observers read and understand their streets, taking Rafidia Street as the case

study; people had to be asked to express the different images they have. Prepared questionnaires were distributed among the users of Rafidia Street. The whole questionnaire is presented in (Appendix 2.3). The questionnaire was structured in three parts. The first part concentrated on the biography of the respondents. The second part consisted of different questions about the physical elements of Rafidia Street, and the influence of either the existence or missing of any of the street's elements. The third part was to show the respondents different photos for different type of streets, and the respondents had to choose the street that he/she likes to be in. These photos were selected according to certain criteria and common characteristics for the built environment of the street. Before starting a cover letter introducing the researcher and the objectives of the interview was handed out (Appendix 2.4).

The sample selection was randomly but stratified selection. The most important while choosing the sample was to get differentials and variations in its structure. The basis of this choice was in trying to include as many as possible of variability and scale. In other words, choosing different categories of occupations, shopkeepers, housewives, pedestrians and drivers as well. This sample was taken in the same way, randomly but stratified, on both sides of Rafidia Street.

One hundred and three questionnaires were distributed in two weeks. This was carried out with the help of students from the Department of Architecture of An-Najah National University. The time spent in felling each questionnaire, and with the help of the member of the group of students, ranged between half an hour to one and a half-hour. This team was formed of seven students set in sub-groups; each two took thirty questionnaires to be distributed, while the last three members took forty questionnaires.

The approach of sample selection was stratified according to certain variables that guarantee a balance distribution of different users of the case study according to the purpose of being in Rafidia Street. The reason for this approach of selection is to get a representative sample of all users. As many different function occur within Rafidia Street, this indicate the selection of respondents, the sample contains 40 of walkers, 21 of drivers, 21 of housewives and 21 of shop-owners. The reason for this variation is to serve the purpose of the study, and to gain insight about the different background that might affect the interrelationship between respondents and this street.

For the reasons of the fieldwork process, and to make it easier and quicker to deal with the questionnaire for the respondents, the questionnaire was translated and carried out in Arabic. Finally, the respondents express their expectations and ambitions for the future. Moreover, a software program named Statistical Package for Social Science, (SPSS) was employed to point out the elements which had been most frequently mentioned or featuring the different images for the observers of Rafidia Street.

2:5:2 OBSERVATIONS

Observations at this stage were concerned with the collection of information about the case study Street of Rafidia through inspecting the physical characteristics of its elements and their spatial relations. The main advantage of this technique is that it describes the settings as it is, taking into account all the variables which have been interacted to shape its physical features (Senan, 1993). There are many techniques for gathering observational data, including participant observation, field observation, qualitative observation, direct observation, and field research (Senan, 1993). This study adopted the direct observations in which the Rafidia Street's elements were observed and on different times of the day. Researchers try to understand the meanings of the actions they observe to those in the setting, the observational data still do not "speak for themselves". What gets observed as well as how the data are organized into an analysis is still on the observer's perspective and purpose.

Observations took place in the case study Street by the researcher as an architect, and separated from the questionnaire distributions. The techniques for handling the observations were accomplished through photographs and taking notes by written checklists. The observations were held out for people's attitudes and behaviors within the different spaces of Rafidia Street, and for the existing elements that shape the spatial structure of this street. Also, the observations were for places of walking, talking, gathering, setting, eating, driving, parking and even if its just a stop for shopping, in addition to the existence of the street furniture and the performance of its components and street's façade and boundary as well.

Moreover, other observations were made for other streets of Nablus City and on different times of the day. The reason for these observations is to see the difference in both

functioning and using these streets. This was for the researcher to know where do people concentrate and the activities that attract their attentions. All the information gained through these observations were put on maps for analyzing the street character and to figure out the strengthening elements and location of the case study.

2:5:3 ANALYSIS STRATEGY

After distributing the questionnaire and collecting the information, and the observation in Rafidia Street, the data was coded to be analyzed. A computer program named Statistical Package for Social Science, (SPSS) was used for data analyzing and processing. The technique of this program depends on statistical analysis. It is statistical software include a lot of package's use to test and analyze any data in any field of since specially for social since, and it is used to prove or disprove some assumption that the researcher built his/her research on. Through this study, it will be used to estimate the frequency of choosing any of the parameters set either by the researcher or the observers themselves. The questionnaire was structured to study the built environment of Rafidia Street, also to highlight the richness or poverty of its spatial structure. People were asked to express their reaction and interrelationships toward the different elements and activities carried within this street. These elements were the basic of the environment of the streetscape. Actually, people were supposed to define their image towards these different elements, spatial structure and the distribution of activities along this street.

2:6 DIFFICULTIES IN PROCESSING FIELDWORK

In anywhere in the world, conducting fieldwork faces problems. Well, our case is not very much different of any other case, but with different type because of its special criteria. It is obvious that the data collection in the area of the case study was constrained by the time people found in this area, in other words, the contrast density of people gathering in Rafidia Street between daytime and nighttime made it difficult to follow up the fieldwork. At the same time, this also influences the function of Rafidia Street in both mentioned times.

People needed more explanation about the research problem, and more to imagine the elements of their environment. Even though they got used to being in Rafidia Street, but the questions raised by this particular research made the respondents see things

differently. This elongate the time needed to finish the questionnaire. There were some surprises while conducting this type of the fieldwork, some even unexpected for the researcher and will be mentioned in details through discussing chapter four when analyzing the case study and the fieldwork process.

Another difficulty was to distribute the questionnaires. A group of seven students from the school of Architecture of An-Najah National University volunteered in distributing and explaining the research problem to the respondents. Before that, an explanation and discussion had been held with this group to clarify and understand the research problem. In addition, it was difficult to arrange a proper time for most of the interviews with the selected key figures; they were busy most of the time. Sometimes the researcher needed to leave the semi-structured interviewee and be back the other day.

2:7 SUMMARY

The aim of this chapter was to describe the methods used in this study. It was intended to discuss the relationships between the objectives of the study, methods of investigations, and the data analysis.

However, various methods were employed for investigations of certain aspects. Each method related to the other and all constructed an insight about how people interact within the built environment of their streets and the influence of the different elements in forming the different images for the observers. Also, the adaptation of several methods for investigations enriched the accuracy of the research problem being examined.

The methods for investigation used were described in details, so as to analyze, evaluate the potentials and characteristics of the built environment of Rafidia Street, and to explain the strong and weak points of its different elements, then the problems facing people towards achieving their satisfaction. In fact, the main objective of this study is to set a measurement method named parameters in this research for people interaction or satisfaction towards the spatial structure of their streets. Therefore, all the appropriate techniques were employed to achieve this target.

CHAPTER THREE

THEORETICAL PERSPECTIVES

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CHAPTER THREE

THEORETICAL PERSPECTIVE

3:1 PROLOGUE

In order to establish an intellectual framework for understanding of the notion of street's parameter, it is necessary to investigate and grasp its essential aspects and characteristics. This investigation will serve as a source toward the construction of theoretical guidelines that will help to develop a coherent view of built environment of the street.

The aim of this theoretical perspective is to formulate more clearly the outline that emphasizes the concept of the built environment of the street. In addition, the attempt here is to establish a framework that will be carried out through the investigation in this study.

Mostly, in perceiving an element it may be studied directly or through other relations that correspond to it. Therefore, the purpose of this study is to interrelate components and to define towards understanding the conceptual process of investigation. These include the built environment, the people and the signification and characterization of the elements introduced. In addition, this research considers the psychological and social aspects, and interaction between peoples and their environment. In other words, in order to achieve the research objectives we need to set the characteristics of its assumption.

The approach of discussion starts with the theoretical part and ends with the practical one on special case study related to the subject. Therefore, this chapter is divided into three main parts. The first part discusses the concept of the built environment of the street, including the theoretical approach of other planners. The second part serves in highlighting the technical parameters of the street, its definition, function, categories, dimensioning and components. The third part covers the quality parameters of the street that affect people's satisfaction, its sense, image, and element's characteristics including ways of expression and proceeding the built environment of the street and its elements. Finally, this will elaborate the theoretical perspective for the study.

3:2 THE CONCEPT OF THE PHYSICAL ENVIRONMENT OF THE STREET

3:2:1 PLANNERS INTERPRETATION OF THE CONCEPT OF THE PHYSICAL ENVIRONMENT OF THE STREET

In order to gain insights and pick up the essential conceptual aspects of the physical elements of the built environment of the street, the relevant works of some planners are reviewed. The planners chosen are, Jane Jacobs, Christopher Alexander, Le Curboier, Kevin Lynch and Gordon Cullen. The selection of the planners based on their comprehensive view and their varied treatment of the concept of the built environment of the street. In fact, their explanation and interpretations were crucially important for the development of the ideas of this research. Based on the readings of Broadbent (1990), the following approaches for different planners were derived:

3:2:1:1 JANE JACOBS

For Jane Jacobs, indeed, streets of the village and city were the very stuff of which real urban fabrics are made. She says: "Think of a city and what comes to mind? Its streets. If the city's streets look interesting, the city looks interesting; if they look dull, the city looks dull." Unlike suburban or even small town streets, city streets are full and lively with people. Jacobs goes on her argument to analyze the things that give a street that liveliness. She suggests there are three main conditions:

- Firstly, if a street is to be safe, there must be a clear demarcation between public space and private space, between the territory which belongs to a particular house, a particular household, a particular shop or whatever and that which "belongs" to all.
- Secondly, a constant watch must be kept; the eyes of those whom Jane Jacobs calls: "the natural proprietors of the street" must be scanning it all the time. Their scanning will be all the easier if the buildings which line the street are oriented towards it, planned with projections and recesses, bay windows, balconies, stoops, steps and so on. All of which will make it easier for the "proprietors" to see up and down the street thus maintaining their constant vigil.
- Thirdly, the street must actually go from one place where people want to be to another, and there must be enough attractions along the street itself for them to want to linger there. An empty street has nothing much to offer but those who love their fellow human beings find it fascinating, not to say hugely entertaining, simply to

watch the world go by. Quite simply we enjoy “people watching” and if that is made easy for them then the “proprietors” of the street will spend large amounts of their time doing it.

So the street will gain and maintain a reputation for being interesting, lively, and secure. People will enjoy going there to see and to be seen. The street will take on a life of its own. Any street, which lacks these basic conditions, may be perceived as insecure, hostile and indeed actively dangerous. Given such a street then according to Jacobs people will try to cope in various ways. They may simply stay away, thus leaving the street exclusively to those who have no option but to use it.

Jacobs’s view about urban life is that people must be free to come and go as they please with no outside interference or constraints. People must be given choices and the kind of diversity is offered, as grocery stores, pottery schools, movie houses, candy stores, florists, art shows, immigrants’ clubs, hardware stores, eating places of many kinds, and so on. Every natural street needs things of this kind and each street too should have its own specific amenities. So for Jacobs the essence of urban life lies in exuberant diversity, in the making available to anyone, at any time, a vast range of choices of things to do. The form of the street itself can generate that diversity. Indeed one can design for it by observing four basic rules. They are:

1. That the district as a whole serves at least two, and preferably more, primary functions: living, working, shopping, eating and so on. These should be varied in kind that different kinds of people come and go at different times, working to different schedules, come to the same places, the same street for different purposes, using the same facilities at different times and in different ways.
2. That no block along the street exceeds a certain length, which Jacobs then goes on to specify. That is far and long streets and avenues to be crossed by several short streets thus making access easier between parts of the city and giving many corners sites.
3. Those buildings of different ages co-exist in what she calls a “close-grained” mingling. There should be quite a high proportion of old building because of their importance to the economy of the street.
4. That there be a high concentration of people in the street, including that essential nucleus of those who live there, work there, and act as its “proprietors”.

Jacobs's plea for mixed uses, of course, contradicts directly and absolutely the argument for zoning on which so much post-Corbusean planning had been based. As for the concentration of people; as Jacobs points out, there are subtle but compelling differences between crowding and density. For if given area contains enough buildings, of the right kind, then very considerable densities can be achieved without any one's feeling overcrowded.

3:2:1:2 CHRISTOPHER ALEXANDER

Christopher Alexander thought it is important not so much to look for examples of good form as to search for underlying principles. And those principles could best be expressed, not in pictures, in words (as Jacobs had done), or even in built examples, but in terms of more abstract relations. Hence the Tree of his title in his essay "*A City is not a Tree*" is not "green ... with leaves"; it is an abstract pattern of thought from Set Theory. As he says: "A set is a collection of elements which for some reason we think of as belonging together".

Thus we might think of sets of people, blades of grass, cars, bricks.... houses, gardens and so on. When the elements of a set belong together, because they work together or cooperate in some way then Alexander calls the set a "system". Each system has two categories: the fixed parts of his system and the changing parts. A collection of sets forms a tree if and only if, for any two sets that belong to the collection, either one is wholly contained in the other; or else they are wholly disjoint. One can on the whole sort humans biologically into male and female, thus forming wholly disjoint subsets. But the humans may be sorted in other ways: as teachers or students, as university or non-university people and so on. Each can belong to many different subsets.

Alexander also draws such more complex relationships in plan and section and his section in this case is a semi-lattice. As he says: "A collection of sets forms a semi-lattice if and only if, when two overlapping sets belong to the collection, then the set of elements common to both also belongs to the collection".

So clearly the city which is zoned, say, into working, residential and service areas forms a tree in Alexander's sense whilst a milange of houses, shops and so on of the kind which Jane Jacobs describes is, in his terms a semi-lattice.

3:2:1:3 LE CORBUSIER

Le Corbusier and on his views on "the street". The definition of a street which has held good up to the present day is a roadway that is usually bordered by pavements, narrow or wide.... Rising straight up from it are walls of houses, which, when seen against the skyline present a grotesquely jagged silhouette of gables, attics and zinc chimneys. At the very bottom of this scenic railway lies the street, plunged in eternal twilight. The sky is a remote hope, far above it. So, for Le Corbusier:

The street is no more than a trench; a deep cleft, a narrow passage. And although we have been accustomed to it for more than a thousand years, our hearts are always oppressed by the constriction of the enclosing walls.

Not only that:

"The street is always full of people; one must take care where one goes. For several years now it has been full of rapidly moving vehicles as well: death threatens us at every step between the twin curbstones. But we have been trained to face the peril of being crushed between them".

Le Corbusier in his thoughts about designing cities so that traffic could move fast says:

"All modern motor vehicle are built for speed. But given the actual state of our streets... the highest speed obtainable ... in the city ... is about ten miles an hour! ... The street is no longer a track for cattle, but a machine for traffic, an apparatus for its circulation."

New forms of street must be designed so that traffic can flow freely at optimum speed, or, at least, at 60 miles an hour. Le Corbusier's Plan therefore includes elevated motorways, each some 120 feet wide, running north-south and east-west.

3:2:1:4 KEVIN LYNCH

One of the first coherent analyzers of the urban scene in empirical terms was Kevin Lynch (1960) in his *The Image of the City*. Lynch was concerned, above all, with *The Image of the Environment* for, as he says: "Every citizen has had long associations with some part of the city, and his image is soaked in memories and meanings." He also says: "Moving elements in the city, and in particular the people and their activities, are as important as the stationary physical parts." Whilst he points out that "Nearly every sense is in operation" as we perceive the city, Lynch's primary concern is with the visual quality of the city and mostly the American city which he approaches "by studying the

mental images of (the) city which is held by its citizens.” In particular he looks for clarity and legibility in the cityscape, “the ease with which its parts can be recognized and ... ordered into a coherent pattern. “We read it, he says by:

“... The visual sensations of color, shape, motion, or polarization of light, as well as the other senses such as smell, sound, touch, kinesthesia, sense of gravity, and perhaps of electric or magnetic fields.”

Lynch is concerned with how we locate ourselves within the city, how we find our way around, and so on. He suggests, quite rightly, this is easier in a regular, gridded city- such as Manhattan- given “a structural understanding of (which) ... one can order a substantial quantity of facts and fancies about the world we live in.”

To know where we are within the city, therefore, we have to build up a workable image of each part and each of these images will comprise, first of all, identity- our recognition of its “individuality or oneness” within the city as a whole- secondly our recognition of its spatial or pattern relationships to other parts of the city, also to ourselves and thirdly its particular meaning for each of us, “whether practical or emotional.”

Lynch calls: “that quality in a physical object which gives it a high, probability of evoking a strong image in any given observer” its imageability which turn depends on “that shape, color, or arrangement which facilitates the making of vividly identified, powerfully structured, highly useful mental images of the environment.”

Having conceived this notion of imageability, Lynch then tested it by field studies in Boston, Massachusetts, Jersey City, New Jersey, and Los Angeles, California on which basis he concluded that several key elements come into play as we construct our images of the city, which he identified as paths, edges, districts, nodes and landmarks.

Lynch’s definitions, paraphrased, are:

1. Paths, the channels of movement which people take, regularly, occasionally or may, potentially, take. They may include paths, streets, walkways, bus or tram lines, canals, railways and so on. As Lynch says, we observe the city as we are moving through it and for many people, the paths themselves, and those elements of the city they perceive as they move along them predominate in their images of the city. They are, as Lynch put it “coordinate axes”;

2. Edges which for Lynch is linear elements which people do not use as paths. They perceive them, rather, as linear breaks or boundaries of some kind. They may be physical boundaries such as walls; railway cuttings, canals, shorelines, or they may simply be boundaries between adjacent developments. Whilst not so dominant as paths such boundaries are "important organizing features" for many people especially when, in the form of, say, water or city wall they play the role of "holding together generalized areas";
3. Districts which for Lynch are "medium to large sections of the city which people visualize as having two-dimensional extent. Not only do they form districts on the map; they are also recognizable, especially from within, as having some common, identifying character, which indeed may be so strong that one has a distinct, mental impression of entering "inside of". This may be recognizable also from outside. Most people, according to Lynch, find this idea of district to be most important in building up their "Image of the City". Indeed, according to the city- and individual perceive- they may be more important than paths;
4. Nodes are strategic points within the city to or from which the observer travels. They may be crossings or convergence of paths, junctions, places where one changes from one mode of transport to another. Or they may be concentrations of some kind, which are important because of their physical forms: such as urban squares, street corners. They may be condensers of particular uses. Some nodes in fact will be "the focus and epitome of a district, over which their influence radiates and of which they stand as a symbol";
5. Landmarks too are reference-points but the observer does not actually use them. They consist, rather, of "simply defined physical objects" such as a building, a sign, a store or even a mountain. A landmark in this sense will be a physical object which, because of its form, may be singled out from the surrounding environment. They may be large, man-made objects such as a tower, a spire or a dome, soaring over the rooftops and acting as a radial references from many points within the city. They may be distant mountains which serve a similar purpose; the sun itself, even though it moves, may act as a landmark in the sense. Its movement, after all, is slow and its directions known. Landmarks also occur at smaller scale; a tree within an urban squares a particular sign, a shop front, and a door or even a doorknob. These and other urban detail ... fill in the image (for) most observers.

As Lynch suggests we make frequent use of such cues in our search for the identity of elements within the city and even for our understanding of urban structure. What is more we seem to rely on them more and more as our journey becomes increasingly familiar.

Having identified these elements as making the city imageable, Lynch then goes on to describe their use during the process of design. Paths, for instance, should be planned so that each plays its part in the hierarchy of movement systems. The key lines, he says, should each be identified by some specific quality such as:

A concentration of some special kind of activity, along their margins, a characteristic spatial quality, a special texture of floor or facades, a particular lighting pattern, a unique set of smells or sounds, a typical detail or mode of planning.

Again he insists on perceivable clarity of direction since, he says, the "human computer is disturbed by long successions of turnings, or by gradual, ambiguous curves which in the end produce major directional shifts". But at the same time he recognizes the "kinesthetic" qualities of paths, our sense of motion as we move along them; turning, rising, falling which, collectively, make deep impressions. If we are moving at high speed in, say, "a great descending curve which approaches a city center" those impressions can be even deeper producing, as he says, "an unforgettable image".

And so Lynch describes applications for each of his major elements. It may, for instance, be difficult to design specific edges for, say, a certain street but there are clues as to how this might be done in using different forms of facades, the clear transition between solid and void ...

The inside-outside nature of a district may be reinforced by the use of contrasting materials, careful planting, by use of gradients, identifiable points placed at intervals along it, "recognizable anchors" at the ends, and so on.

The most prominent nodes, he suggests, are those that occur at "route decision points" which may not even have been designed consciously as such. Landmarks, on the other hand, will be designed specifically to serve that purpose although, as he reiterates, whilst a "tower silhouetted over low roofs" may be an obvious landmark so may a doorknob also, if it is of the right kind in the right place.

3:2:1:5 GORDON CULLEN

Cullen began to develop the idea of *Townscape* at the end of the war in 1945. He argued that just as there is an art of architecture, so there is an art of relationship, in which all the elements which go to the making of an environment, buildings, trees, nature, water, traffic, advertisements and so on are woven together in such a way that drama is released (as Christopher Alexander had done). This cannot be achieved by scientific research or by the technical half of the brain, although Cullen accepts the need for demographers, sociologists, engineers, traffic experts and so on. The result of their work according to Cullen is:

“... that town could take one of several patterns and still operates with success. Here then we discover a pliability in the scientific solution and it is precisely in the manipulation of this pliability that the art of relationships is made possible ... the aim is ... simply to manipulate within the tolerance.”

That manipulation, according to Cullen of *Townscape*, will be a visual matter:

“For it is almost entirely through vision that the environment is apprehended ... vision is not only useful but it evokes our memories and experiences, those responsive emotions inside us which have the powers to disturb the mind when roused. It is this unlooked-for surplus....”

According to Cullen we are dealing with this unlooked-surplus, which we appreciate in three ways. These are matters of:

1. Serial vision, which is, stimulated when, in addition to the view that is immediately present, *the existing* view; there are also hints of a different, *emerging view*. A long straight road or an open square can only give us first of these whereas delight and interest are stimulated by contrasts, the “drama” of juxtaposition.
2. Place-especially the sense of being in a particular place- a street or a square- of being “here” with the equally strong sense that around and outside it there are other places which we may think as “there”.
3. Content which is a matter of architectural style, scale, materials and layout. Cullen cites color, texture, style, character, personality and uniqueness.

Cullen's message was clear enough, and brilliantly presented, with his highly appealing sketches showing examples of his serial vision, ways of defining "place", by means of enclaves, enclosures, focal points, precincts, outdoor rooms, hereeness and thereeness, closed vistas, deflections, projections and recessions, undulations, not to mention punctuation, the sense of possession, advantages and so on. He also looks at contexts, metropolitan, urban, arcadian, rural, industrial and so on; and at a whole range of details and devices by which we actually "read" our environment. Cullen, and in one of his studies in planning, is concerned with the fabric of the town: the roads, the paths and the buildings.

3:3 DEFINING PARAMETERS OF STREETS

3:3:1 TECHNICAL PARAMETERS

The street in addition to being a physical element in the city is also a social fact. It can be analyzed in terms of who owns, uses and controls it, the purpose for which it was built and its changing social and economic function. The street provides a link between buildings, both within the street and in the city at large. As a link it facilitates the movement of people as pedestrian or within vehicles, and also the movement of goods to sustain the wider market and some particular uses within the street. Its functions also includes its use as a site for causal interaction, including recreation, conversation and entertainment, as well as its use as a site for ritual observances.

Many changes have happened to the social pattern of life, and it is unwise to ignore this change. The direction of the future social change must correspond with the existence of different streets, and for sure the street would have a role. For the next coming years, the private car will remain an important mean of urban transport, so both pedestrians and cars have to share the same space each with its characteristics.

"Walking is also an integral part of many other matters, such as looking at shop's windows, admiring the scene, or talking to people. In all, it does not seem to be far from the truth that the freedom with which a person can walk about and look around is a very useful guide to the civilized quality of an urban area" (Moughtin, 1992).

The most street activity occurs when it is convenient for a large numbers of pedestrians to use the street in a variety of ways. Activity in streets increases when densities are high enough to inhabit the use of motor car and to support other facilities within walking distance. It appears that the variety of land use stimulating many activities is a

prerequisite of lively streets. The elimination of all non-confirming uses from the residential area reduces the prosperity of social contact and interaction in the street. Both things, the linking of street activity with high density and a mix land uses, may be true in a very general way, and these propositions have to be examined carefully with regard to the function of street.

The precise form of pedestrian-vehicular interaction is conditioned by the function of the street. Total separation of vehicles and pedestrians can be harmful to the development of a lively and active street. The success of pedestrian areas is dependent on a variety of attractions they offer so that people in large numbers have reasons for remaining. It is also conditioned on good access for both private and public transport. Therefore, for a successfully functioning street a standard dimensioning has to be constructed. These technical parameters affect the comfortable and proper use of the street, the level of performance and the availability of components.

3:3:1:1 DEFINITION OF STREET

Dictionaries give multiple meaning to word street, such as, a road with houses or other town buildings on one or both sides. It is the way to a place or the path of a journey from one place to another (Longman Dictionary, 1978). In this sense, it is like the channel that links two destinations together.

Streets- “ A road in town or village (comparatively wide, as opposed to a lane or alley) running between two lines of houses usually including the sidewalks as well as carriage way. Also the road together with the adjacent houses” (Anderson, 1986).

There is a distinction between road and street. Road is at once an act of riding on a horseback and an ordinary line of communication between different places, used by horses, travelers on foot or vehicles. Or it is any path, way or course to some end or journey, see Appendix 3.1.

The emphasis is on movement between places, the principle line of communication places is a two dimensional ribbon, running on the surface of the landscape, carried over it by bridge or beneath by a tunnel. A street may have these attributes, but its more common meaning is a road in a town or village comparatively wide as opposed to a lane or alley.

“More important it is a road, that is linear surface along which movement occurs between two lines of houses or shops, say a dictionary definition. However, the street is considered as an enclosed, three-dimensional space between two lines of adjacent buildings” (Moughtin, 1992).

The street is a product of the spread of a settlement once houses have been built on all available space around its central square. It provides a framework for the distribution of land and gives access to individual plots. It has a more pronouncedly functional character than the square, which by virtue of its size is a more attractive place to pass the time than the street, in whose confines one is involuntarily caught up in bustle of traffic. Its architectural backdrop is only perceived in passing. The street layouts that we have inherited in our towns were devised for quite different functional purposes. They were planned to the scale of the human being, the horse and the carriage. The street is unsuitable for the flow of motorized traffic, whilst remaining appropriate to human circulation and activity. It rarely operates as an autonomous isolated space, as for example in the case of villages built along a single street. It is mainly to be perceived as part of a network. Our historic towns have made us familiar with the inexhaustible diversity of spatial relationships produced by such a complex layout (Krier, 1979).

The relationship between Buildings, blocks and streets is interdependent. Each one contains to some degree the ingredients of all the others. Any decision to design a street in a particular manner seals the formal fate of blocks and buildings. Blocks of specific character determine correspondent streets and buildings. Buildings of particular qualities dominate the blocks that contain them and the streets that surround them.

3:3:1:2 FUNCTION OF STREET

A complete functional design system provides a series of distinct movements. The six recognizable stages in most trips include main movement, transition, distribution, collection, access, and termination. This hierarchy in function affects both dimensioning and speeds of vehicles. Each of six stages of a typical trip is handled by a separate facility designed specified for its function. Because the movement hierarchy is based on the total amount of traffic volume, arterial travel is generally highest in the movement hierarchy than travel on collectors and local access streets.

Although many trips can be subdivided into all of the six recognizable stages, intermediate facilities are not always needed. The complete hierarchy of circulation facilities relates specially to conditions of low-density suburban development, where traffic flows are cumulative on successive elements of the system. This deletion of intermediate facilities does not eliminate the functional design components, although it may change their physical characters.

Inadequate acceptance capacity of the collector circulation deficiencies within the traffic absorber create the danger that traffic may back up onto arterial. Successful internal design that provides facilities to accommodate all the intermediate functions between the high-speed and the terminal parking facility will alleviate such a situation.

In the case of arterial leading to a large traffic generator, deceleration from rapid movement on the arterial occurs on the exist ramp. Primary distribution-type streets or lanes within the parking facility then accomplish distribution to various parking areas. These streets or lanes supplant the collector function. Collector streets or lanes within the parking facility may then deliver segments of the entering flow to the parking bays. The parking aisle, in leading to individual parking space terminals, then becomes the equivalent of an access street. Thus, the principle functions within the hierarchical movement system are recognizable. It can be pointed out that each functional category also is related to a range of vehicle speeds.

3:3:1:3 CATEGORIES OF STREETS

The streets making up the functional systems differ for urban and rural areas. The hierarchy of the functional systems consists of principal arterial (for main movement), minor arterial (distributors), collectors, and the local streets. However, in urban areas relatively more arterial with further functional subdivisions of the arterial category; whereas in rural areas there are relatively more collectors with further functional subdivisions of the collector category.

The definitions and characteristics of the streets in urban and rural settings based on their functional classifications. *Urban and rural Areas* have different characteristics with regard to density and types of land use, density of street network, nature of travel pattern, and the way in which these elements are related.

Functional classification thus groups streets according to the character of service they are intended to provide. This classification recognizes that individual streets do not serve travel independently. Rather, most travel involves movement through networks of streets and can be categorized relative to such networks in a logical and efficient manner. Thus, functional classification of streets is also consistent with categorization of travel. A schematic illustration of this basic idea is shown in Fig. (3.1).

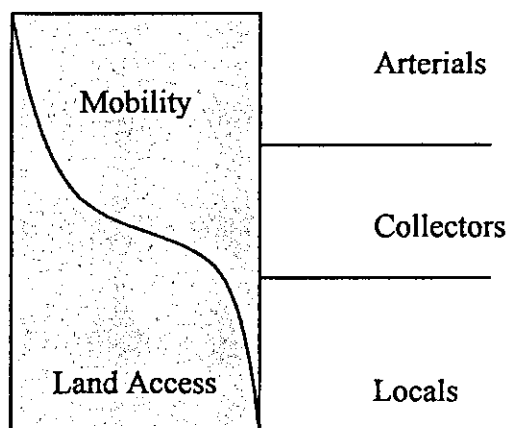


Fig. (3.1): Relationship of functionally classified systems. (ASSHTO, 1994)

Allied to the idea of traffic categorization is the dual role that the street network plays in providing:

- Access to property
- Travel mobility

Access is a fixed requirement of the defined area. Mobility is provided at varying levels of service. Mobility can incorporate several qualitative elements, such as riding comfort and absence of speed changes, but the most basic factor is operating speed on trip travel time.

The two major considerations in classifying street network functionally are **access** and **mobility**. The conflict between serving through movement and providing access to a dispersed pattern trip origins and destinations necessitates the differences and gradations in the various functional types. Regulated limitation of access is necessary on arterials to enhance their primary function of mobility. Conversely, the primary function of local streets is to provide access (implementation of which causes a limitation of mobility). The extent and degree of access control is thus a significant factor in defining the functional category of a street.

3:3:1:4 PERFORMANCE MEASUREMENTS AND DIMENSIONING COMPONENTS

The Performance level of any street for both, the driver as well as the pedestrian, depends on the proper design and operation of the street. The suitable design makes the street work efficiently and safely. The users of the street find it compatible to their needs, capabilities and limitations as well, their performance is aided.

The task of using the street depends on receiving and using information. The information received in transit is compared with the information already possessed by users. The task of performance, the activities fall into three levels: control, guidance, and navigation. These activities are ordered on scales of complexity of task and importance for safety.

Both drivers and pedestrians use the streets, and each has to use it safely and without causing any conflict. Driving task may be complex and demanding. Several individual activities may be performed simultaneously, requiring smooth efficient handling and integration of information. The driving task may at other times be so simple and understanding that a driver becomes inattentive. The key to safe, efficient performance is error-free information handling.

An involvement of people in traffic is a major consideration in streets planning and designs. People are part of every roadway environment, and attention must be paid to their presence in rural areas as well as urban areas. The urban pedestrian, being far more prevalent, more often influences roadway design features than the rural pedestrian does. Because the demands of the vehicular traffic in congested urban areas, it is often extremely difficult to make adequate provisions for people. Yet, this must be done, because people are considered the lifeblood of our urban areas. In general, the most successful shopping sections are those that provide the most comfort and pleasure for people. People facilities include sidewalks, crosswalks, traffic control features, curb cuts and ramps for the older walkers and persons with mobility impairments.

To effectively plan and design people facilities, it is necessary to describe the typical pedestrian. The pedestrian will most likely not walk over 1.5 km to work or over 1.0 km to catch a bus, and about 80 percent of the distance traveled will be less than 1.0 km. The typical pedestrian is a shopper about 50 percent of the time that he/she is a pedestrian and

a commuter only about 11 percent of the time. As a consequence, a plot of pedestrian volumes peaks at about noon rather than at the commuter peak times. The pedestrian volumes are influenced by such transit conditions as weather or, in specific locations, advertised sales (AASHTO, 1994).

The physical dimensioning criteria for human body and vehicle character has to be considered in the design process and facilities layout of the streets and its elements. Regarding the physical dimensions of human body, knowledge of the width and depth of the body or the effective body area is most useful. This should be reflected in the design of sidewalks, stairs, refuge areas, or transit loading areas or any other street furniture. Studies have shown that nearly all adults males have a shoulder width less than 525 mm and a depth of less than 330 mm wide and 450 mm deep (AASHTO, 1994). These minimum dimensions apply only to situations where individuals are forced into close proximity. If a greater degree of comfort or mobility is required, a larger body area per person must be assumed.

While the physical characteristics that should be considered in the design process of the street for the traffic use are based upon factual information. Factors relating to traffic indicate the need for the improvement and directly affect the geometric features of design, such as widths, alignments, and grades. These traffic data can be easily obtained or they are generally available. Such data should include information about traffic volumes for days of the year and times of the day, as well as the distribution of vehicles by types and by weights. The data also includes information on trends for the designer to estimate the traffic to be expected for the future.

There are different sections for streets to be designed and each depends on the results of deep studies. Accordingly, different categories of streets are realized depending on the function of each. For these different sections, and depending on the German Standards, Fig. (3.2) shows these cross-sections for different street's categories.

3:3:2 QUALITY PARAMETERS

Public spaces are quite evidently differentiated. There generally is no confusion between a park and a street, a square and an avenue etc.... This differentiation is obviously of a

morphological nature, but it is also chiefly social since it originates both from the commonly accepted rules for the use of a space and from its actual uses.

Moreover, although it is true that outdoor public spaces do have some functions in common; like passage for example; this function gets a different emphasis in each case. Thus parks may be crossed on the way to another place rather than used as a destination in themselves. But in that case, the passage function underscores the primacy of the current uses and images of the park, i. e. a place where one may stroll or stay quietly in. In other words, the social image of the park concentrates around the themes of rest, relaxation, silence, that is, an emotion links the subject to the park, seen as a quiet place. The image of the place is not a pure representation; it is “an emotion that attracts towards or repulses from an object, that terrifies seduces” (Serfaty, 1980).

Therefore, the point here is certainly not to limit a kind of space to a function, but rather to underscore the variety of the components within the image of a space. Outdoors public spaces are multi-functional, but all the functions of one space do not carry the same weight, they do not contribute in the same way to the development of that image. The components of a collective image of a space should besides be viewed as a temporary result. The nature, the characteristics of these components as well as their relationships are constantly evolving. The image of the street is exemplary in this respect.

Nowadays, the passage function seems to be by definition that of the street, defined as an expanse or “way bordered by two rows of houses”. Yet its historical functions are complex and manifold and cannot be dissociated from the production process of social space through the commonly accepted and the actual uses.

In the course of its history, the aspect of the street was different, shaped, for instance, by the dynamic presence of merchants, of innumerable craftsmen, hawkers, pedlars and children.

3:3:2:1 SENSE OF STREET AND ITS ELEMENTS

It is the clarity with which the place or the street can be perceived and identified, and the ease with which its elements can be linked with other events and places in a coherent mental representation of time and space. The representation can be connected with non-

spatial concepts and values. It is the join between the form of the environment and the human processes of perception and cognition. It is the interaction between person and place; this quality lies at the root of personal feelings about places. Perception is a creative act, not a passive reception (Lynch, 1981)

Sense depends not only on spatial form and quality, but also on the culture, temperament, status, experience, and current purpose of the observer. Thus, the sense of a particular place will vary for different observers, just as the ability of a particular person to perceive form varies for different places.

Places have a greater or lesser sense, and so do events. The simplest form of sense is identity, in the narrow meaning of that common term "a sense of a place". Identity is the extent to which a person can recognize or recall a place as being distinct from other places as having a vivid, or unique, or at least a particular character of its own (Lynch, 1981).

There is a sheer delight in sensing the world: the play of light, the feel and smell of the wind, touches, sounds, colors and forms. A good place is accessible to all senses, makes visible the current of the air, and engages the perceptions of its inhabitants. The direct enjoyment of vivid perception is further enlarged because sensible, identifiable places are convenient pegs on which to hang personal memories, feelings, and values. Place identity is closely linked personal identity. "I am here" supports "I am" (Lynch, 1981).

Events can also have identity, this is the "sense of occasion", and special celebrations and great rituals have it on a heightened degree. Occasion and place will reinforce each other to create a vivid present. The result is an active involvement in the immediate, material world and an enlargement of the self. The identity of a place or event can be analyzed and crudely measured by simple tests of recognition, recall, and description.

The next element of sense is formal structure, it is at the scale of a small place, is the sense of how its parts fit together, and in a large scale is the sense of orientation: knowing where (or when) one is, which implies knowing how other places (or times) are connected to this place. Orientation may be an articulate memory of the act of navigation "follow me", or more or less structural mental map (ranging from one which is a vague

topological network to a scaled geometrical representation), or a remembered series of sequential images (turn left at the huge tree beyond the old house), or a set of verbal concepts (wealthy suburbs surround the city center slum), or some combination of these.

Some people may highly prize good structure, others will not, except as they move along their accustomed paths. People use many different clues to establish structure, the recognition of characteristic form or activity in areas or centers, sequential linkages, directional relations, time and distance, landmarks, paths, or edges continuities, gradients, panoramas, and many others. According to Lynch (1960), many tests may be made for structure recognition, such as: sketching and mapping exercise, route descriptions, interviews while travelling, distance and direction estimates. We considered the origin destination equation, so we can add to these tests, choosing the route for a specific journey of a particular destination, and so on.

Identity and structure are those aspects of form, which allow us to recognize and pattern space and time in them. Next come those qualities which help us to connect street form in specific- and settlement form in general- with other features of our lives.

There are different components of sense; these are **congruence**, **transparency**, and **legibility**. The urban environment is a medium of communication, displaying both explicit and implicit symbols. But there is a deeper level of connection one much more difficult to specify and measure, which might be called the experience or symbolic significance of place, and this varies among persons and culture.

Identity and structure are the formal components of sense. Congruence, transparency, and legibility are specific components, which connect environment to other aspects of our lives. According to Lynch (1981), there are two important qualifications to the ideal of good sense:

1. There are limits at which individuals may wish to deny further knowledge of their affairs, or beyond which the human mind is overloaded.
2. A settlement or a place should permit an unfolding creation of meaning, that is, a simple and patent first order structure which allows a more extensive ordering as it is more fully experienced, and which encourages the construction of new meanings, through which the inhabitant makes the world his own.

Sense is an important functional concern, since the ability to identify things, to time behavior, to find one's way and to read signs; all are requisites of access and effective action. It is also a basic component of the emotional satisfaction of living in favored places, and for that reason, people compete for sensibility, which has often been used to impose and maintain some permanent setting of power, or the religious center. It may be important and effective in pluralistic and dynamic situations, where the image created is one of the linked multiplicity and of process rather than stasis.

Sense is a matter of knowledge and attitudes, it can express values congenial to one group but abhorrent to another. Clearly, one crucial feature sensibility is the degree to which the image of a place is widely shared. Since the quality is a join between mind and setting, the means of achieving it naturally divide themselves into two operations; changing street form in one hand and changing mental conceptions on the other.

We can apply this to clarify the circulation system as the key to settlement structure by making understandable street pattern, heightening the identity of streets and destinations, making intersections intelligible, or creating vivid spatial sequence along some important paths. It is possible to increase sensibility by improving the human ability to perceive the environment; we may educate users to attend to their environment, to learn more about it, to order it, and to grasp its significance (Lynch, 1981).

Indirectly, sense is affected by the nature of control, and by the fit of form to behavior. The consideration of sense is based on the analysis of the physical environment. Then concepts of harmony, beauty, variety, and order have been thought of also as attributes of the thing itself. We have to begin with images and priorities of the users of a place or a street, and then we must look at place and person together.

In this research, the different aspects of sense for different streets will be clarified. In order to achieve this, different users have to clarify the surrounding environment, and how it can be identified according to different components and features. This matching between these elements and their mental experience will help to strengthen the value of one street to another. Also this will define the interaction between the object and the place.

3:3:2:2 IMAGE OF THE STREET AND ITS ELEMENTS

There is always more than the eye can see, or the ear can hear; always a setting or a view waiting to be discovered. In this experience everything is related to its surroundings and the past of this experience. Every individual has his own image, which is developed accordingly and depending on his memories and meanings.

The visual quality of any street can be studied by lightening the mental image of the street and its elements, and the ease with which these elements can be recognized and then organized. The street is legible or recognized if it is easily identifiable, and its elements are easily grouped into specific and clear pattern as well.

In the process of way finding, which is the original function of environmental image, and the basis on which its emotional associations may have been founded. Image is valuable not only in this immediate sense. In this way, it is like a body of belief, or a set of social customs; it is an organizer of facts and possibilities (Lynch, 1960).

The strategic of the environmental image is the generalized mental picture of the exterior physical world that is held by an individual. The image is the product of both, the immediate sensation and the memory of the past experience, and it is used to interpret information and to guide action.

An acceptable environmental image gives its possessor an important sense of emotional security; this helps in establishing a harmonious relationship between the individual and his/her outside surrounding world. However, a legible environment and a distinctive one as well not only offer security but also heighten the potential depth and intensity of human experience.

The creation of environmental image is a two-way process between observer and observed "What he sees depends on exterior form, but how he interprets and organizes this, and how he directs his attention, in its turn affects what he sees. The human organism is highly adaptable and flexible, and different groups may have widely different images of the same outer reality" (Lynch, 1960).

The definition of what might be called imageability is “that quality in a physical object, which gives it a high probability of evoking a strong image in any given observer. It is that shape, color or arrangement, which facilitates the making of vividly, identified, powerfully structured, highly useful mental images of the environment. It might also be called legibility, or perhaps visibility.” (Lynch, 1960)

The aim of studying street image is to state and consider the need for identity and structure for the physical environment, and to specify and illustrate special criteria for the quality of our streets and its urban environment.

There must be different images for different individuals, and such group of images is necessary if an individual is to operate within his/her environment successfully, and to communicate and cooperate with his/her society as well. There are other influences affecting imageability, such as the social meaning of an area, its function, its history, or even its name.

Paths or streets are considered the channels along which the observer moves, while walking or passing different images will be formed and arranged depending on observing and viewing different elements. But what helps in clarifying the street structure and makes its key image significant depends on many important characteristics of its contents of element. According to Lynch (1960) these elements are:

1. Concentration of special use or activity along a street may give it prominence in the mind of observer. Characteristics of spatial qualities in a certain street will attract attention to it, like being extremely either wide or narrow; this quality will strengthen the image of a particular path.
2. It is important to have special facade characteristics in order to give the street a special identity. This is sometimes more efficient than pavement texture unless needed in specific cases, and the same for planting if not in a great amount, otherwise this will reinforce the image of the street very effectively.
3. Proximity to special features and places of the city will increase the street importance and image, and the same if the visual exposure is available to other parts of the city.
4. Structural reasons may increase the importance of a particular street. Sometimes it is difficult to decide or to find out orientation, but if the street or the way is related in our

memories with specific events, both the street and the way will be identifiable. The street that has a satisfactory degree of continuity is considered dependable in the environment. But what makes our way or paths continuous, or the characteristics of continuity are planting and the continuous façade along the boundary, or building type itself. The name of the street has also a role in the image of continuity.

5. Changing the direction of movement of a street steadily is also a gradient. A well-known origins and destinations of streets help in tying the city together, and give the observer a stronger identity of the city and the street as well. Having a close building or other elements at a side of the street heighten the visual perception and the sense of direction. Once the street has this quality of direction then it will be scaled, or at least be able to state one's position along the total length. (*Definition of the scale and the proportion of street will come later*). Another thing to strengthen the directional quality if the street is aligned, and whether the spatial corridor is limited or separated by other elements.

When more than one street is considered, then there will be intersections between streets, then there is more than one entrance; each has to be obvious and identified. The controlled space and character between these intersections serves to bring out the angled relationship between streets, and helps to unify its structure. The same perceptual appears approximately and on a larger scale, when we discuss street branches to make alternate street, both of relative importance. As long as different or cohesive streets have a consistent general relationship, then they may be imaged together as a simple structure.

All these qualities regarding how users experience viewing streets with different background and history, may be examined on different times and different users, as will be done through this research, in order to define and clarify what kind of physical environment we are looking for.

3:3:2:3 FORM OF THE STREET

The human perception is flexible and adaptable, in addition to the role of the shape of the physical environment. Whenever a difficult perception arose of the environment, this indicates the influence of the outward shapes. There are environments that invite or reject attention, which facilitate or resist organization or differentiation. This is analogous to

the ease or difficulty with which the adaptable human brain can memorize associated or unassociated material.

The configuration, shape or form of the street has not received the detailed consideration given to the design of the public square. Even though many streets have been designed, built and admired, little work on the analysis of form has resulted. Scholars such as Sitte and Zucher have preferred to concentrate their effort on the high points of urban structure, the nodes, where major activities occur.

According to Moughtin (1992), there are two quite distinct physical conceptions of European City. In the first conceptions it appears that the streets and public squares are created from an original block of solid material. The other main conceptions of the city that has the form of open parkland into which buildings have been introduced as three-dimensional objects sitting on and within the landscape. This is the concept associated with developments like the Ringstrasse in Vienna or the ideas formulated by Le Cubosier and others in Modern Movement of Architecture.

The form of the street can be analyzed in terms of a number of polar qualities such as straight or curved, long or short, wide or narrow, enclosed or open, formal or informal. Street form can also be analyzed in terms of scale, proportion, contrast, rhythm or connections to other street. No matter which analysis is followed the street has two main characteristics directly related to form; it is, at one and at the same time, both path and place. It is common practice to regard street as a route for motor vehicles that its function as a place has been quite overlooked. "Street should be for staying in, and not just for moving through, the way they are today". Christopher Alexander. Therefore, he suggests making a bulge in the middle of the public path, and to make the ends narrower, so that the path forms an enclosure which is a place to stay, not just a place to pass through. Defining a street as a road for vehicles is not the same as designing it as a path according to Moughtin represents a basic property of human existence, and it is one of the great original symbols. The street conforming to traffic engineering does not fulfil with what Lynch's requirement for a memorable path. Such a path has both a beginning and an end, definite places or nodes along its length, places of special use and activity, such paths can be scaled, have contrasting elements, but above all else, they must present to the observer a stimulating and a memorable image of connected places.

A sense of place in street design is best achieved if spatial volume defined by the frontages is perceived as a positive form. For a street to function as a place or exterior room in a city it must possess similar qualities of enclosure as a public square. The ideal street must form a completely enclosed unit, the more one's impressions are confined within it, and the more perfect will be its tableau. One feels at ease in a space where the gaze cannot be lost in infinity.

The absolute dimensions of the street must therefore be kept within reasonable proportions; when the street is long and wide with houses on a common frontage, it is most difficult to obtain a sense of enclosure. There have been a number of suggestions for terminating an overly long street. The ancient have thrown an arch over a street so as to interrupt over-long perspective effects, or effect of buildings frontage. If the street or a section of a street is to possess the quality of enclosure then it must be considered to have three main elements:

- An entrance
- The place itself
- Termination or exit

Since the street is also a path, and a path is two dimensional, the place must terminate or close in two directions.

3:3:2:4 PROPORTION AND SCALE OF STREET

The proportion of the square may define the lower limit for the street. The upper limit for uninterrupted length of street is probably in the order of 1500 m (1 mile). Beyond this distance human scale is lost (Moughtin 1992). Even with vistas considerably shorter than 1500 m, the closure of the view causes considerable difficulty. According to Heggmann and Peets, (quoted by Moughtin, 1992), the distance to the terminal building should not be too far, they suggest that below an angle of 18° even a prominent building will lose its dominance and begin to merge into silhouette with the surrounding neighborhood. The condition is exacerbated when tall buildings are ranged on either side of vision. Moreover, the winding of the street will make the passenger at every step discover a new structure. The street is something more than simple pathway, it is a series of connected places, somewhere for staying in and not just for moving through, as Alexander point of view.

"The street in the past.... was a small universe where the character of the distinct and of the town as a whole was presented in condensed form to the visitor. The street represented, so to speak, a section of life-history had shaped its details." (Moughtin, 1992).

In Lynch's terms the street is a path enliven by a series of nodes where other paths meet it or activities intensify to such an extent that place the rest vie for dominance with function of pathway and movement. Such places or nodes should be at intervals of 200 to 300 m. While Alexander instructs to make a bulge of the middle of a public path. A number of techniques have been suggested for the design of comfortable streets either by using offsets as Essex proposed or by using gates as Heggmann and Peets commend. The idea of this is beyond an understanding ratio of length to width to height: the concept is broadened to include the relationship of the street to each other and to the proportions of the total composition. The ratio of width of street to height of enclosing buildings is critical for good street design. When, for example, a street is long and wide with two-story houses ranged a long a common frontage, all sense of the space is lost. Without dense planting and an avenue of trees such streets do little to lift the spirit and relieve monotony.

The wide street so favored by road engineer is most unsuitable for shopping. The narrow pedestrianized city street with continuous enclosing walls slightly higher than street width are most successful for their purpose as well as being an attractive place. They are still to be found, despite traffic engineer's best effort.

The Essex design guide suggests that ratio; height to width, of 1:1 is not too tight for comfort but that 1:2.5 is as open as can be tolerated. Narrow streets also facilitate shopping; movement from side to side for window gazing has no impediment and is invited by the physical form of the development.

Aesthetic factors such as scale and proportion are by no means the only considerations in street design; other factors may of necessity be greater significance. One such practical consideration conditioning street form is climate. As streets ought to be ample and wide wherever coolness is required, and the more the city therefore is in a hot place then streets should be made narrow with high buildings.

There are a number of factors which contribute to a unified street design, possibly the most important being that the form of the buildings should appear as surfaces rather than as a mass. When buildings take on strong three-dimensional form the mass of the buildings dominates the sense and the space loses its importance. When the buildings ranged a long a street have varied forms, styles and treatment the space loses definition.

Unified street design in contradistinction elevates the spatial volume to figural position against a background of two dimensional planes, walls, pavements and sky above. According to Gibberd the street is not a building frontage but a space about which dwellings are grouped to form a series of street picture. The use of common materials, details and architectural elements strengthen the unity in many street scenes. More important, are the imposition of common rooflines and the repetitive use of similar bay sizes for development. The roofline establishes the lid for space and grater the variation in its height the more unstable the volume.

Absolute similarity of the individual buildings that comprise a straight street is not necessarily essential. It is often sufficient to have one strong activity at ground level which pulls the group together. The classic way of achieving this is by the introduction of colonnades or arcades at the lower floor levels. There are some important factors that have conditioned the development of the street scene. Many of these factors are of thoroughly practical nature such as:

- The form of the land
- The order of development
- Evolving exploitation of the local environment
- Changing social stratification pattern of population distribution

Knowledge of these practical factors helps not only in aesthetic appreciation of present physical structure, but also enhances understanding by relating form with function.

3:3:2:5 STREET'S ELEMENTS AND CHARACTER

What gives the street its scale and image is part of the city as a whole, and this depends on the elements which are the basic inputs of the physical environment. When the elements are patterned properly together, they provide a satisfying form. The concept is

to consider the interaction between different elements and to see how they may reinforce one another, or conflict and destroy themselves.

There are five types of physical element form and structure for the contents of the city image, and these referable elements according to Lynch are paths, edges, districts, nodes, and landmarks. These elements may be of more general application, since they reappear in different types of environmental images.

These elements may be adaptable for the purpose of this research. To apply these elements to be as street elements, and then to define their characteristics, taking into consideration the scale of the street as part of the whole city, so what might be applied to the scale of the city, is more or less adjusted to these elements. To heighten the imageability of the urban environment is to facilitate its visual identification and structuring.

Streets are dominant in many individual images; therefore they organize the whole scale of the city. They are given identity by both, their form and the regions they pass through, the edges they move along, and the landmarks distributed along their length (Lynch, 1960). All these elements are components of structure and identity and they operate together in a context.

They are more than a single comprehensive image for the entire environment, but a set of images, more or less, correspond together according to their arrangement and sequence. Of course this varies depending on how large and complex the environment is.

Images may differ not only by the scale of the area involved, but also by the viewpoint, time of the day, or season, walking or driving, raining or shining. Depending on this, the observer has to adjust his image to the changes in the physical environment and reality around him. This is important to keep the continuity through these changes; this continuity is necessary to obtain the value of the desired image.

Through this attempt to study what image is wanted to be achieved, and what image do an observer has, we must be sure that the image of the greatest value are those which most closely approach a strong total field, either being dense, rigid, or vivid; which

makes use of all types and form characteristics with wide concentration. This can be put either hierarchically or continuously depending on culture type to satisfy the varying demands of the individuals (Lynch, 1960).

Talking about streets or paths, then we are talking about city form and structure, the other elements are of no less importance, and they are considered to be interrelated.

Seeing an element from any place of a particular street gives the image of unity and rhythm to this particular place. In addition, if the landmark is a distant element which is visible near and far; by day and night; unmistakable; dominant by size and contour, it can be a distinguish landmark for the city as a whole, and for the street as part of the whole.

Local landmark which are visible only in restricted localities and from certain approaches, can guide the inhabitants living in the surrounding neighborhood, and this depends on how the observer is familiar with this landmark, and with his environment as well. Sometimes other features like smell and sounds strengthen the visual landmarks, although they do not constitute landmarks by themselves. They may be signs, store fronts, trees, doorknobs, and other urban detail that fill in the image of most observers.

Landmark may be isolated, single events without reinforcement, these are weak references, since they are easy to miss and require sustained searching. Local points are remembered by context as clusters, in which they reinforce each other by repetition. The single traffic light or street name demand concentration to find. A sequential series of landmarks, where one detail requires the anticipation of the next, and this motivates the observer to continual moving. This gives clues whenever a decision of turning is made and confirms the direction the observer is going to as a result. In addition, other details help to give a sense of nearness to final destination or goals. This sequence facilitates recognition and memorization. The observers who are familiar can store up a vast quality of point's images in familiar sequences, although this recognition may breakdown when the sequence is reversed or scrambled.

These elements are simply the basic inputs or the environmental image at the city scale in general and the street as a part of the whole. They must be patterned together to provide a satisfying form. None of these elements type exists in isolation in the real case; elements

overlap and pierce one another, or conflict one another. These elements are considered the total pattern of the city structure, but here we are aware of the parts rather than the wholes. Although it is easier to identify these featuring elements on the whole scale as mentioned, but in the previous discussion, it is how we match these elements, our concern in this research about the path or street.

Streets are dominant in many individual's images; they have intimate interrelations with other element type. It has the junction nodes, by their form they reinforce the moment of journey. These nodes besides strengthening the presence of landmarks provide a setting that guarantees attention for specific place. Street are given identity not only by their own forms or nodal junctions, but by the regions they pass through, and the landmarks distributed along their length, the edges they move along. They are the boundary of the street and the street façade, in our case it is the origin destination equation. All these elements operate together in context. The goal is to study the observers' different images towards these interrelation elements, and to justify their perception to these different elements.

3:3:2:6 PSYCHOLOGICAL NEEDS OF PEDESTRIANS

The planning and development philosophy for pedestrian environments should be sensitive balance between people needs and environmental dictates. It is proposed, therefore, that with an awareness of substantial cross-section of human needs and resultant physical design implications, we can plan and develop pedestrian spaces more sympathetic to both human and environmental conditions.

Interaction between humans and their surroundings is a two-way imposition: that is while humans affect their environment by imposing themselves, it (the environment) in turn affects and to a certain degree "imposes" upon them. David Dempsey says:

"That we act like students when we are in school are reverential in church, and lackadaisical in parks is because these environments tells in advance how to behave" (Dempsey, 1972).

Since we are assuming that the environment influence behavior and that planners and developers influence the environment, we can conclude that planners and developers

influence human behavior. Planners and developers of urban spaces should be more aware of human psychological needs in away to avoid mental stress for pedestrians. Parks are good examples of how city spaces for pedestrians can be designated to fulfill human psychological needs rather than denying them. Parks can be “naturalistic” to bring people together on a casual basis, and at the same time can also promote for those who want to be alone.

3:4 SUMMARY

This chapter discussed the qualitative aspects of the built environment of the street for setting the parameters that affect people’s perception and satisfaction. The aim is to explain how the built environment of the street is constructed as spatial structure, and the interaction relationship between people and their streets’ built environment. The intention of this chapter is to clarify and identify both parameters regarding streets, the technical parameters and the quality parameters. Moreover, it presents an explanation of other planners’ theories who have experiences in analyzing the concept of the spatial built environment.

The approach adopted in this study is to investigate both parameters in order to clarify how people perceive their paths and the impacts of the built environment of the street on the people. For example, the existence of street furniture or not.

The sense of the built environment of the street, the image, character are discussed here as an outcome of the mutual interactions of people and their built environment. This study aims to clarify how do people read their streets, the feature that attracts their attention, and the specific existing characteristics which represents their likeness and satisfaction towards their paths.

The intend is to make our streets accessible and interesting either for walking or spending time. For example, what attracts people’s attention in their streets? What activities do they like to have? What are the distinguished elements of the built environment of the street? How can we define and reach people’s satisfaction towards streets?

CHAPTER FOUR

ANALYSIS AND EVALUATION OF THE PHYSICAL LAYOUT OF THE CHARACTERISTICS OF STREETS OF NABLUS CITY

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CHAPTER FOUR

ANALYSIS AND EVALUATION OF THE PHYSICAL LAYOUT OF THE STREETS CHARACTERISTICS OF NABLUS CITY

4:1 PROLOGUE

There is a close relationship between environment conditions and human reactions and acceptance. In order to design a good street environment, a complete aware must be given to the range of human needs. Thus, street spaces should be based upon the social, economic, or other cultural characteristics of people, taking in consideration the existing urban environment. The planning and development philosophy for street environments should be a sensitive balance between people needs and environmental dictates.

To establish a comfortable street circulation, several factors should be considered simultaneously: What makes a good street? What origins/destinations exist? What conceptual ideas are to judge a good street? What are the “pinch points” that prevent a street from being ideal? What funding is possible? And, what design opportunities can be determined? Discussing the above questions and other factors will lead to a list of dimensioning and qualities that streets have to include. The availability of different elements as well as activities is the reason for the success of any street role in any city. The street circulation has to be varied and connecting everybody to almost everything. Moreover, the designing process has to consider the types of users who would use these routes. This study is to specify the attractive elements and activities that form and shape the physical characteristics of the street.

This chapter investigates the process of development of people’s interaction towards their built environment and mostly towards their streets. This study is constructed for the streets in Nablus City and Rafidia Street in particular. It starts by pointing out the physical layout of the streets characteristics of Nablus City, then the traffic characteristics for the street network of Nablus City in general. In order to clarify what constitute a good street environment, a brief assessment of the traffic situation is structured. The street categories and function for Nablus City is presented and the problems are highlighted as well

4:2 LOCATION OF NABLUS CITY AND GEOGRAPHICAL CHARACTERISTICS

The city of Nablus is located 60 km north of Jerusalem at an altitude between 600 and 800 m above sea level. With more than 150,000 inhabitants (according to the Palestinian Central Bureau of Statistics, 1997), Nablus is the central place for the villages and refugee camps in the District of Nablus. It is one of the largest cities in the West Bank. The location of Nablus is at the crossroad of major corridors of Palestine, see (Fig. 4.1). Here, the central north-south link from Haifa and Jenin to Ramallah and Jerusalem meets the east-west link from Amman and Jordan valley via the Damiya Bridge to Tulkarm and Qalqilia. Both links overlap in the city and cause a considerable amount of through traffic.

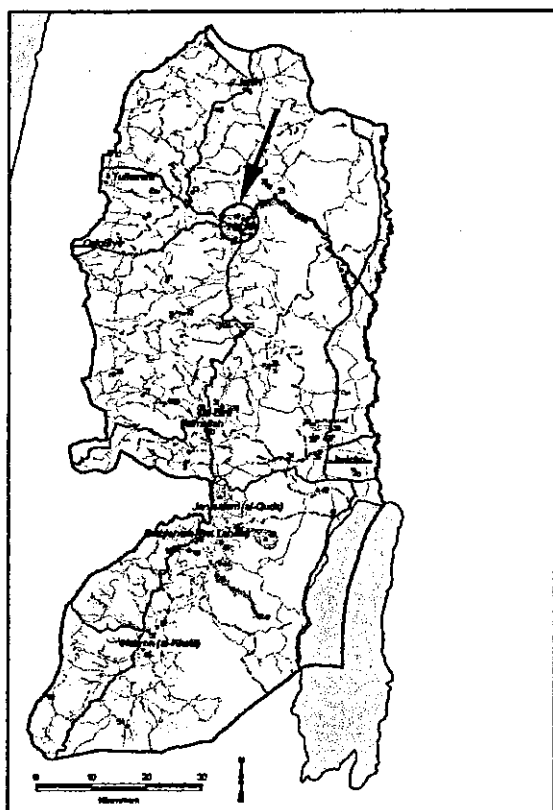


Fig. 4.1: Nablus in the local context.
Source: Ministry of Planning and International Cooperation.

With a political and economic stabilization in the region, the importance of Nablus will rise, resulting not only in an increase of commercial activities, but in a considerable increase of traffic volumes. Nablus starts to become an attractive location for investors. The spatial shape of the city is influenced by the location in a valley between steep mountains rising up to about 1,000 m above sea level. The mountains concentrate

commercial activities and traffic streams in that valley and constrain an extension of the city towards the North or the South. They complicate furthermore the construction of bypasses close to the city.

This special feature of the topography of the city of Nablus makes it difficult for the continuity of the network of the streets either for vehicles or for pedestrians. This encourages the planners and researchers to study the situation of the city in order to reach an acceptable layout of the street's network for the city in general.

Nablus is an important location of employment and schooling opportunities and is the seat of governmental and educational institutions. The central commercial and public office areas of the city are thus extensively used throughout the day. Traffic of pedestrians and vehicles concentrates in the city center.

Although infrastructure improvement was kept at a minimum during more than 25 years of occupation, the Municipality managed to keep urban and transportation planning and traffic engineering at a high level. Recently challenging visions have been developed for inner-urban reconstruction, like the construction of malls and bypasses for the relief of traffic burdens. These visions demand an integrated view on land use, transport requirements, traffic flow and traffic management to become feasible.

The number of vehicles registered in Nablus according to the (Dornier System Consultant and Universal Group, 1999), increased during the past ten years at an annual increase of 10% related to all vehicle types. With this rate, the number of vehicles doubles within seven years. Related to the population, the present vehicle ownership rate amounts to 14%, including taxis, buses and trucks. The ownership rate of private vehicles is roughly 10%. In the immediate and medium-term horizons it would appear that the present trend of the vehicle ownership rate is expected to continue to rise because of socio-economic improvement program, expected increases in income levels, and the population increases of at present 3.5%.

4:3 CATEGORIES OF STREETS IN NABLUS CITY

The structure of the road network of Nablus is affected by the nature of the City and its topography as presented in (Fig. 4.2). As the City expanded towards outside the Old City in

the first half of the century, roads were planned and opened in the area located mainly to the north of the Old City. The distinguished location of the City in a valley between two large mountains, Jersim and Eibal, pushed towards a linear type of development of the City. Therefore, the road network development followed a linear pattern as well. (Fig. 4.3) show the Master Plan of Nablus City 1995, (Municipality files), and the linearity of its expansion towards the west/east. It should be mentioned that the distinguished location of Nablus at the heart of the northern area of the West Bank makes it lie at the cross road of major north-south and east-west national corridors.

According to (Dornier System Consultant and Universal Group, 1999), the street network of Nablus is oriented to the main arterial along Faisal, Ghazali and Haifa Streets. This arterial acts as a kind of backbone collecting the main traffic movements and distributing to the side streets. The main arterial leads in its west end towards Jenin and Haifa (highway 60) and towards Tulkarm (highway 57), in its east end towards Ramallah and Jerusalem (highway 60) and Damiya Bridge (highway 57). Highway 55 from Qalqilia follows Rafidia and Al-Kfair Streets and intersects with the main arterial via Prince Muhammad Street. Closer to the city center, several streets provide access to the city center and to the main arterial of Faisal Street.

Village local roads of minor traffic volumes provide access from the villages in the North on Aseera El-Shamaliah Street and from the South on Tel Street.

Within the area in the inner city, two streets act as both collectors and residential areas and as unofficial bypass of the main arterial: Ibn Rushd Street on the slopes of Eibal mountain in the North and Ras El-Ain Street on the slopes of Jersim mountain in the South. Since both streets are narrow and have steep grades, they are not suited for through traffic.

In the East of the city center, the valley opens and the built-up area spreads along Al-Quds street (highway 60) towards the South and along Amman Street (highway 57). Both streets are linked by a bypass, which was built by Israelis to allow Israel settlers to bypass the heavily populated eastern parts of the city. The area between this bypass, Al-Quds and Amman Streets is partially densely populated, in particular in the refugee camps, and partially industrial area. Roads crossing the bypass provide access to the villages east of Nablus.

Figure 4-3

Future Land Use Plan
For The City of Nablus



MUNICIPALITY OF NABLUS

MASTER PLAN LEGEND

MUNICIPAL LIMIT

EXISTING STREETS

FORESEEN STREETS

'A' ZONES

'B' ZONES

'C' ZONES

RURAL BUILDINGS

NATURAL AREAS

GREEN AREAS

GRAVEYARD

INDUSTRIAL AREAS

PUBLIC SERVICES AREAS

OLD CITY

ARCHAEOLOGICAL AREAS

RURAL AREAS

TRADING AREAS

PARKING AREAS



Source : Master Plan for the City of Nablus (1995) .

The Municipality of Nablus has adopted a classification system for city streets consisting of:

- **Main Streets,**
- **Feeder/Collector Streets,**
- **Local Streets, and**
- **Roads within the Old City of Nablus.**

These streets are connected via intersections of different geometry and dimensioning. Such intersections may sometimes be considered distinguished points of concentration where people and traffic are both combined to make a decision in order to change direction. A short description of the structure of each system and intersection is presented hereafter.

4:3:1 NETWORK OF THE MAIN STREETS

The network of the main streets within Nablus consists of many streets; these are shown in (Fig. 4.2). This network forms the framework for the important circulation of traffic in Nablus and the connection of the different parts of the city between themselves and with the surroundings, see Appendix 4:1.

The width of the roads is in general sufficient to provide at least two lanes for both directions. Additional parking spaces are available for most of the length of these roads. The other parts of the main road network provide only partially more than one lane for each direction but additional parking space. However, for a number of main roads, there exist two lanes per direction for at least sections of these streets, such as Faisal, Al-Hurreyia Street, Al-Ghazali, Amman, Al-Quds and Haifa Streets. In general there is no adequate space for the movement of pedestrians.

4:3:2 NETWORK OF THE FEEDER/COLLECTOR STREETS

The network of Feeder/Collector Streets (Fig. 4.2) provides the connection between the Main Street Network and the various residential, commercial and industrial areas and opens Central Business District, (CBD) to the main streets.

The conditions for the traffic and of the different kinds of misuse are similar to the main roads especially in the CBD. Many Feeder/Collector Streets traffic, mainly in the west part

of Nablus City flow through Rafidia Street adding more factors that affect its characteristics. Moreover, pedestrian movements is usually more noticeable within feeder/collector street, but without real attention of the needed facilities and space requirements.

4:3:3 NETWORK OF THE LOCAL STREETS

Local streets form the main bulk of the entire network as presented in (Fig. 4.2). These are the roads within the residential areas, the streets within the industrial and commercial zones, and even the streets and footpaths inside of parks and areas of recreation. This network is heavily influenced by geographical situation of the city and provides in general insufficient space for the necessary parking lots of the inhabitants and a safe flowing traffic. The neighborhood context around Rafidia Street is connected via a network of local streets that carry out all the traffic/people flow through the main streets of Rafidia. Usually, pedestrian movement is very distinguished within local streets.

4:3:4 STREET NETWORK IN THE OLD CITY

The Old City of Nablus is one of the most ancient and historical valuable areas of the Palestinian cities and is only comparable to the old city of Jerusalem. The street network in this area should be kept as it is and necessary transportation within this area has to follow the conditions given by the street structure. The maintenance for these streets should be done in accordance with the traditionally used material and handicraft. Rafidia Street is not connected directly with the network of the Old City, but via other local streets that complete the connection of the parts of the whole street network of the city. Pedestrians' movement is mostly recognized within the context of the old city.

4:3:5 STREET'S INTERSECTIONS

Until 1999 and according to TSM Study for the City of Nablus, a total of 39 major intersections were identified within the street network of Nablus. These intersections are the joints of connection and changing direction. Most of these intersections are concentrated in or around the city center. Most of these intersections are three or four leg intersections. Except at the Martyrs Square at the city center it is of a circle type. Recently, some of these intersections had been controlled by traffic signals and the rest by stop or yield signs.

A special concentration will be for the intersections that are located within the case study of Rafidia Street. The 12 intersections along Rafidia Street as shown in (Fig. 4.4) will be discussed to highlight its physical features and characteristics in order to define weaknesses and strengths for either people gathering or distribution of different activities around each intersection.

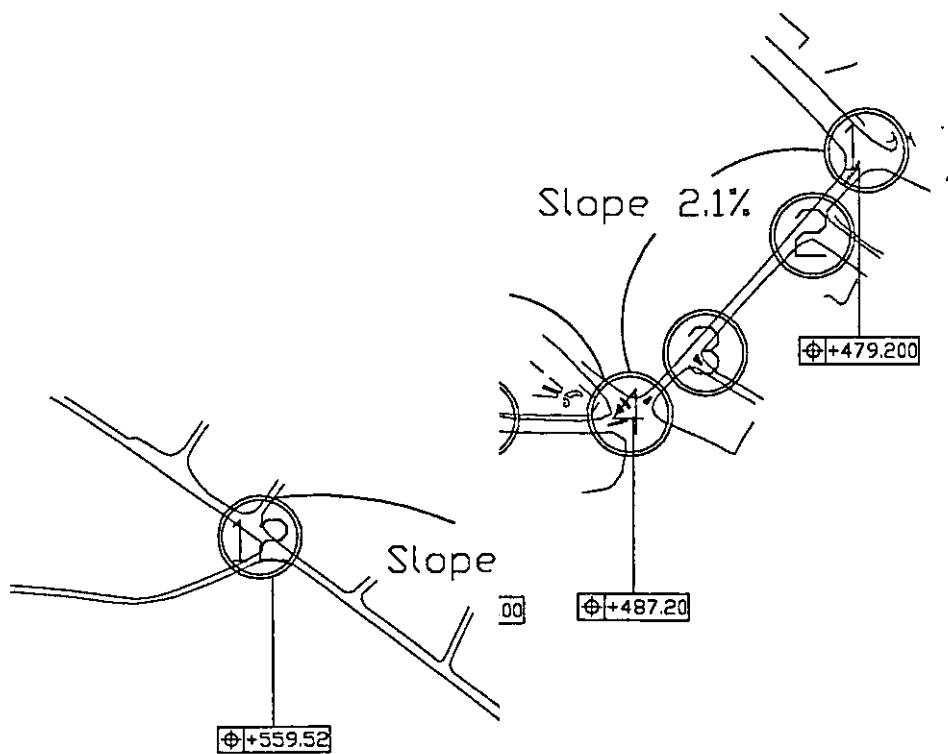
4:4 TRAFFIC CHARACTERISTICS

According to (Dornier System Consultant and Universal Group, (1999), for the City of Nablus, traffic counts conducted in 1998 for several streets and intersections, among these, was Rafidia Street with few of its intersections. The results of these counting shows variations of the traffic flow between daytime and nighttime peak hours. Many other aspects featuring the condition of this street have to be set and studied. Among these are:

4:4:1 TRAFFIC FLOW CHARACTERISTICS

The TSM Study for the City of Nablus identified variance in the traffic flow pattern in Rafidia Street during the morning peak periods and the evening peak periods. These counting periods were at 7:00-9:00 AM for the morning peak period, 2:00-4:00 PM for the afternoon peak period, and 7:30-9:30 PM for the night peak period along Rafidia Street. The morning peak period was to capture the home-based commuter traffic, mainly people commuting to work, school, shopping, etc. The afternoon peak period was to include the end of the working day in the city. The night peak period was to capture the traffic generated by the night activities along Rafidia Street. There are different interfering elements affecting the traffic flow like the sharing taxi, vans, buses and pedestrians.

The results of the turning volumes counting at the selected intersections of the case study in vehicle/hour for all the counting periods of these intersections showed the peak hour and the peak hour volume. According to the mentioned study, intersections vary significantly in all attributes. The amount of traffic flow on the critical approach ranged from 307 to 2194 vehicles per hour during the morning peak periods, and from 227 to 2058 vehicles per hour during the afternoon peak periods. Through observation and according to the mentioned study, other preliminary observations can be made regarding the traffic flow in the city of Nablus in general and for Rafidia Street in particular.



Parameters of People's
Satisfaction Towards Streets

Lege

Figure 4-4
Raflidia Street Intersections,
length and slope

Scale

0 50 100 200 300 400 500m



In addition the mixture of all street's users because of lack of inadequacy of pedestrian facilities and the presence of side activities, pedestrians are found to share the vehicles in their passages. No consideration is given to disabled people almost in all street functions. Another problem is parking along the feeder streets of the network. Furthermore, the different use for most of the streets within the city, and Rafidia Street in particular, adds to the elements that form the character of any of its streets. Also, this combination requires special consideration for the street dimensioning and arrangement of facilities and accessories.

The characteristics of any street are defined according to its contents either physically depending on its layout, or functionally depending on its activities and services. Indeed, Rafidia Street has the contexts that offer different type of services according to variation in the daytime, as the periods mentioned before.

The focus on this study is on the role of Rafidia Street during the different times of the day, and the interrelationship between the street's context and peoples' images and satisfaction. In other words, it is about the attraction between the physical built environment of the street, and people within the street. For example, the location of different schools along Rafidia Street increase the traffic flow during the morning hours, while the presence of An-Najah National University increases the buses flow. On the other hand, the existence of restaurants affects the traffic flow during the night hours.

4:4:2 TRAFFIC CAPACITY

According to observations and based on the counting periods of TSM study as well, heavy congestion on streets leading to and out of the City can be observed during morning and afternoon rush hours. On Saturdays, because of the heavy influx of traffic from Palestinians coming from behind the green line to Nablus for shopping traffic congestion and unorganized parking is predominant throughout most of the day. The same is noticed in the weekends and Fridays, because of the recreational services like restaurants and other shops of fast food and coffee shops along Rafidia Street. The presence of the two Municipal Parks at the northeastern part of Rafidia Street attracts people to being within the area. Based on the traffic counts through TSM Study for the City of Nablus, distinct peak hours were determined for the morning and afternoon periods. The night life of the City can be best seen on Al-Kfair/Rafidia Street, which is the research case study area,

where a mixture of night-oriented businesses, such as restaurants, coffee shops and parks operate along the section from Municipal Park to the intersection with Omar Ibn Al-Khattab Street. This segment of the street is also part of the case study. Based on the field observation, the following factors are believed to reduce the efficiency of Rafidia Street both for pedestrians and vehicles:

- Insufficient street width
- Intersection of moving vehicles, parked vehicles and pedestrians
- Inadequate road surface conditions
- Poor intersection layout
- Poor driver behavior
- Lack of regulations and space for delivery services
- Unsafe operation of taxis
- Variation of the availability of sidewalks, or the presence of the shop's goods or other street vendors sharing the sidewalks with pedestrians
- No consideration of disabled needs
- Lack of pedestrian facilities and street furniture
- Lack of trees and green areas

Some of these factors cannot be addressed within the scope of this study, as they require thorough studies and/or longer time. But the factors relating the people and affecting their satisfaction of the built environment of the street is the aim of this research.

4:4:3 PEDESTRIANS

With the relatively low car ownership rate (according to the Palestinian Central Bureau of Statistics, 1997), the majority of short-to intermediate-distance trips are carried out on foot. Therefore, motorized traffic improvements should not be implemented at the expense of pedestrian traffic. In addition, to being an important urban transportation mode, walking is considered as part of the life style, especially in the commercial center and the Old City during daytime, and on busy streets, as it is the case of this research Rafidia Street, during nighttime. Pedestrians' flow in these areas is very dense and demands for facilities related to pedestrian safety and activities are very high.

People are also accustomed to walking along main street and parallel to the vehicle passages, as well as to crossing the street at any time or point of the street without following the

marked crossing lines or even the traffic signals. This mixed uses between vehicles and pedestrians raise the issue of conflict and emerge the need for solutions (Fig. 4.5).



Fig. 4.5: Mixed use of pedestrians and vehicles.

Based on the fieldwork and observation, most of our streets lack to the safety factors for the use of pedestrians, and Rafidia Street in particular as most of the people like to walk and be in the nighttime as well as the weekends and Fridays. Among the impressions about safety factors, based on the fieldwork, are:

- There is not enough space of sidewalks
- Pedestrians and street vendors share the sidewalks
- Sidewalks are too narrow and sometimes without curbs and pavement.
- Sidewalks are occupied from the parked cars and/or goods
- There is no barriers that protect pedestrians from the traffic danger
- The interruption of the sidewalks either by gradient or other street furniture
- No variation in the pavement used for the sidewalks to help in orienting circulation
- Cutting the sidewalk for providing extra width for the street or parking

Therefore, the pleasure of walking activity is disconnected, either by the previous obstacles, or by the need for different other activities to make this walk more pleasant.

4:5 TRAFFIC CIRCULATION

The circulation schemes are currently under modification and rehabilitation in order to match and follow the increasing needs for the extra numbers of vehicles as well as for pedestrians. Many traffic signals have been installed on certain intersections in order to reduce traffic conflict and for better control of the intersections. New streets are under construction, and others are either under developing or maintaining. Changing traffic

direction for many streets has been made in order to improve the street's efficiency for their different users, and decreases the traffic congestion on different peak periods.

4:5:1 STREET NETWORK HIERARCHY

Streets serve two main functions: mobility and accessibility. The two functions are equally important, but cannot be carried out by the same street at the same time. Provision of mobility is necessary to transport goods and people from one part of the city to the other, whereas accessibility is necessary for providing access to abutting properties (shops, houses, public transport terminals, parking lots, etc.). For example, in a typical urban shopping trip, the traveler needs to arrive at the shopping area as fast as possible, without interruptions or conflicts. Once in the shopping area, the traveler needs to find a convenient parking space, if travelling by his/her own car, or a safe walking area, if travelling by public transport. The existing street classification in Nablus is made up of main, feeder and local streets as mentioned before, and shown in (Fig. 4.2).

In general, main streets carry higher traffic volumes than feeder/collector and local streets. However, it is not unusual that feeder/collector streets as a whole carry higher traffic volumes than main streets. Indeed, almost all traffic on main streets is through traffic, and travels faster than traffic on feeder/collector and local streets (Dornier System Consultant and Universal Group, (1999)

The geometric design standards are higher for main streets than feeder/collector and local streets, mainly because many geometric design features are speed-dependent. For operational and safety reasons, the high speed environment on main streets requires the total separation between moving vehicles on one hand, and parking vehicles, pedestrians, and preferably public transport vehicles, on the other hand. For the same reasons, average-running speeds on feeder/collector and local streets must be kept reasonably low through geometric design elements, as well as traffic calming techniques when needed. (Appendix 4:1).

The present traffic conditions in Nablus City can be briefly characterized based on the fieldwork as follows:

- Adequate quality of main arterials
- Acceptable quality of feeder/collector streets

- Absence of visible street marking and channelization
- Severe interaction between vehicular traffic, pedestrians and streetside activities
- Severe disturbances of vehicular traffic flow due to parking vehicles
- Rapid increase of the vehicle population in the city
- Lack of traffic regulation measures and inadequate enforcement
- Traffic congestion on specific parts of the main street network

More about Rafidia Street will be discussed later in Chapter Five; the aim is to clarify the technical parameters as well as the quality parameters of the case study.

4:6 Summary

The built environment of Rafidia Street has changed in its characteristics; accordingly peoples behavior has taken different orientations. The change was not in the physical characteristics of the built environment, but in the social aspects of people's lives as well. The development and changing laws and legislation of buildings has its role in this change. Moreover, with the political and economic improvement, people expectations regarding how to spend their times and socialize is taking different points of view as well. In addition, what makes Rafidia Street significant in its characteristics is the multi-different uses of it in the different time of the day. It is a commercial and main arterial street in the daytime and a recreational and almost pedestrianized in the evening. This conflict and contradiction use attracted the attention and motivated the study of phenomenon on one hand, and to set parameters for planning and designing process of streets in general in away that increases people's satisfaction towards their streets, on the other.

The different characteristics of the street network of Nablus City is based on the different classifications of the street network categories. Therefore, the dimensioning and measurements of the street network is very related to these classifications and consequently this affects the street network functioning as well. Thus, the design process can be figured out and justified accordingly.

CHAPTER FIVE

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CHAPTER FIVE

RAFIDIA STREET –THE CASE STUDY

5:1 Prologue

The physical characteristics of the street environment will be highlighted through this study. Accordingly, to gain insight into the changes and characteristics of the built environment of the streets, the investigation is focused on one street, namely Rafidia Street in the western part of City of Nablus. In order to enrich and increase the variation and diversity of elements in the built environment of the street and for the purpose of this study, the case study includes besides the street of Rafidia, Al-Kfair Street which is the eastern part of Rafidia street; and intersects with the main arterial via Prince Muhammad Street, which connects Rafidia street with the main arterial of Faisal Street at the west. It is from Al-Salam Mosque at the northern east, till Al-Rozana Hall at the west. Once Rafidia Street is mentioned in this study it means all these streets. The choice of this particular street was based on its size, location and variety as a typical street. Besides, the natural expansion of the city is towards the west because of topographical constraints and the existence of the refugee camps in the east.

There are multi functional spaces; therefore, different reasons may be the cause for being in any street and the same is for Rafidia Street. This study will highlight the case and explain these reasons. First by the discussion of the built environment to know its strengths. Second, identifying peoples expectations and ambitions behind this.

This street will be studied through its different aspects. For the purpose of the study, it has been divided into two major aspects related to its context. These two aspects are considered the parameters of Rafidia Street built environment. These two parameters are the technical parameters and the quality parameters.

5:2 HISTORICAL DEVELOPMENT

Based on the information of Mr. I. El-Fanni the inspector of the antiquities department in the Municipality of Nablus, the meaning of the word “Rafidia” was taken from the word

“Rafid” which means water resource. Rafidia village started as a small agricultural village and a crossing way to Qalqilia and other neighbor villages. It is an ancient village with long history. It was one of the most important crusader sites, (1099-1187 AD). In the Roman period, Rafidia was used as agricultural site and for military camping, between (326-638 AD); but only for agriculture in the Greek period, (190-107 BC). (Nablus Handbook, 2000).

The first type of housing in Rafidia was in the Mamluk period, (1250-1517 AD), and the Ottoman period, (1517-1917 AD), (Nablus Handbook, 2000). Streets, through these periods, were for connecting sites together and not for transportation. The importance of Rafidia was because of its fertilization in agricultural products.

The real positive development of Rafidia site was during British Mandate period when they established a consulate there. This helped in increasing the importance of Rafidia village. Almost all the people who lived in Rafidia were Christians, because of the Roman existence, the crusader then the British Mandate. Although the Municipality of Nablus was established in 1869, Rafidia entered the Municipality boundaries in the 1963, together with Balata and Askar sites for expanding the area of Nablus City. The plans for connecting Rafidia with the Municipality started with the opening of the first part of Rafidia Street till the park boundary now, this was when Mr. Na'em Abdulhadi was taking the responsibilities of the Municipality at that time.

Furthermore, the closeness of this street to the old village of Rafidia raises its cultural quality and value. This affects the importance of any of the proposed projects along this particular street, and at the same time, gives clues for the planners in their design and planning processes. Thus, the quality of this particular street may be signified accordingly.

The building's legislation for Rafidia until May 1999 treated as “B” zone with setbacks of four meter at the front, three meter at both sides, and five meter at the rear. On 20th of May 1999, according to the modified rule number three, the use of the building changed into local commercial, with four meter setback from the front, with a two meter cantilever, two meter at both sides, and four meter at the rear. The Local Planning Committee of Nablus Municipality is responsible of studying and modifying the building legislation of the city (Municipality files).

5:3 LOCATION OF RAFIDIA

Rafidia is located in the western part of Nablus City. It is considered the western entrance of the city for those who are coming from Tulkarm, Qalqilia or the other villages in the neighborhood. The Rafidia Street was named after the village Rafidia because of its closeness to it. It is considered Main Arterial Street according to the Municipality classification system of streets. The Street had a twenty-meter right of way (R/W) width with a two-directional traffic flow operation. It has several intersections. (Fig. 5.1) show the location of Rafidia according to Nablus City (Municipality files).

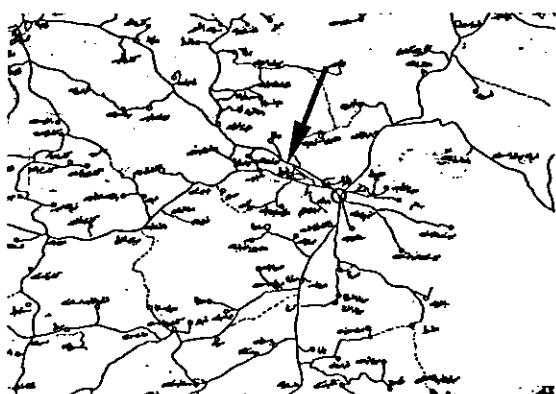


Fig 5.1: Location of Rafidia according to Nablus City.
Source: Municipality files.

The climate of Rafidia is considered cool and moderate especially in summer evenings according to the location of Rafidia in the western part of the city. This is easily justified based on the geographical location and closeness of the coast of the Mediterranean Sea in the west of Palestine.

5:4 THE BUILT ENVIRONMENT OF RAFIDIA STREET

Back to the memories, because I live in Rafidia, most of the time I used to walk to school with my sisters and cousins twice a day, in the early morning and in the afternoon. It was like the morning physical training to all of us. This was my favorite daily journey that gave me the opportunity to compare the variation of the built environment between the past and the present.

Nowadays, it is really very amazing the accelerating change in the built environment of Rafidia Street. The Street is becoming more and more crowded, with lots of new buildings. Previously, Little shops and few number of buildings were forming the boundary of the street, today even the type of buildings constructed is different according to the increasing

number of inhabitants from one side, and the changing in building legislation from the other side. Accordingly, the function of the street takes a new orientation; the height of building increases and the building use is now varied. Besides, many recreational activities are taking place through this particular street, and this increases people existence in this street.

In order to understand the existing condition of the built environment of Rafidia Street, the coming sections will show, using maps and photographs, the elements of the built environment. Also, to highlight the reasons behind people's orientating towards this particular street.

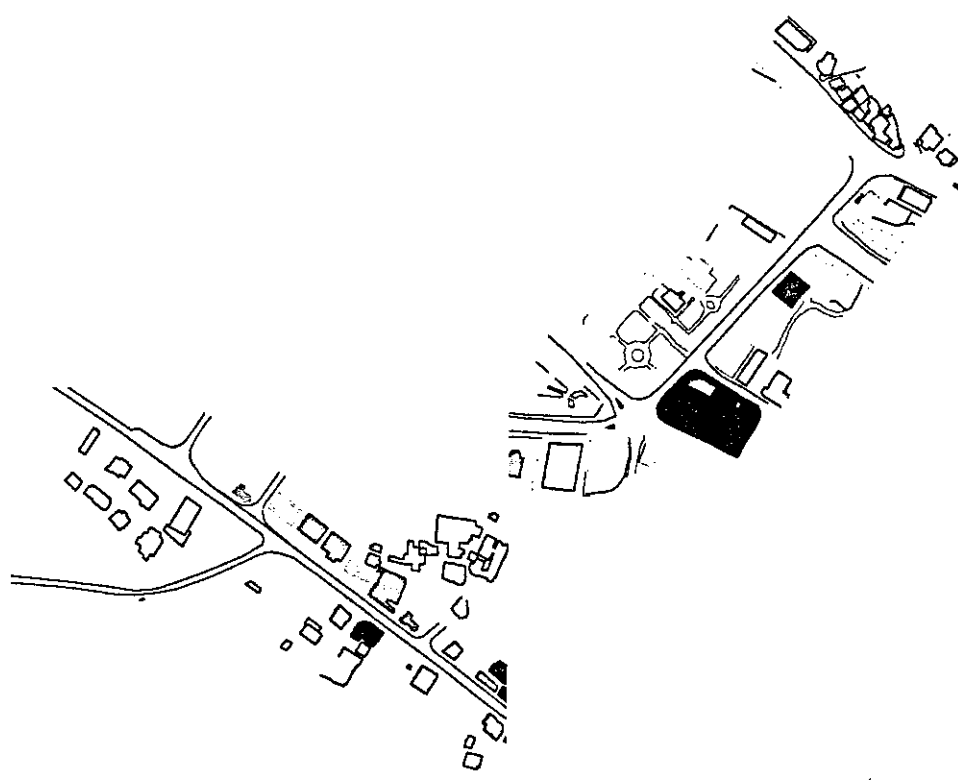
5:4:1 BUILDING'S CHARACTERISTICS: USES AND HEIGHTS

According to the changes in legislation of building through the last twenty years, many changes have happened since then. Most of the buildings were built individually along Rafidia Street with maximum height of three to four floors. The density of the built up area around this street was negligible.

Today, almost every empty land is constructed or under construction. Actually, for investment reasons, most of the landowners as well as house-owners, have demolished their old individual house to make the most benefit of a new building, the same thing has happened with the front gardens of the houses. This affects the boundary shape of Rafidia Street, and increases the density of the built up area (Fig. 5.2) shows buildings' height, (Fig. 5.3) and buildings use.

The diversity of building's use along Rafidia Street is shown in (Fig. 5.2). Most of the ground floor is used as stores, shops and/or restaurants. The upper floors are used for housing and offices. Also, there are schools, parks, hospitals and mosques. It should be mentioned that the existence of An-Najah National University that serves the whole neighborhood affect the increasing number in both people and traffic flow.

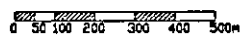
Because the change in building legislation has happened just recently, most of buildings are either still under construction, or nearly finishes. This affects the continuity of the street façade, as in (Fig. 5.3) that shows buildings heights. Consequently, the integration of solid and void distribution is also affected and not very well organized. So a building with seven



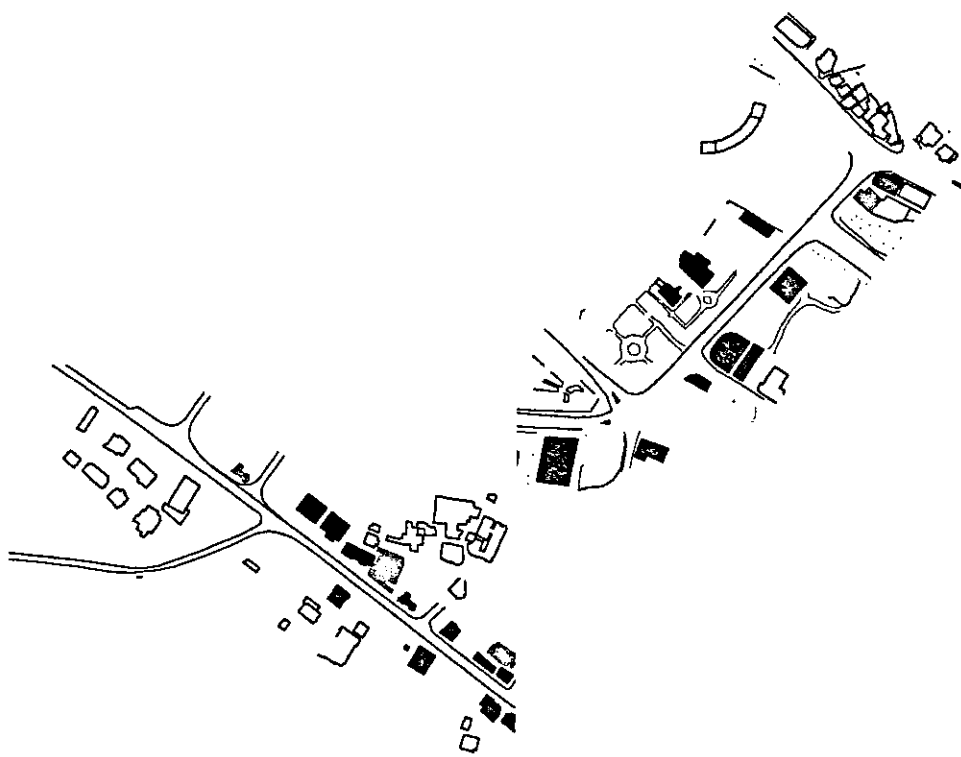
Parameters of People's
Satisfaction Towards Streets

Figure 5-2
Buildings' Heights of Rafidia Street

Scale



Legend



Parameters of People's
Satisfaction Towards Streets

Figure 5-3
Buildings' Uses of Rafidia Street

Scale

0 50 100 200 300 400 500m



Legend

floors besides a building with single floor, or even an empty land is a common scene. Moreover, the level of some lands is lower than the Street level, so there is no possibility to see their façade causing other interruptions (Fig. 5.4).

In addition, the changing in building legislation affects the homogenous appearance of the existing buildings and the proposed or new ones either in the continuity of the facade or the width of the street.



Fig. 5.4: The continuity of the street facade

The architectural characteristic of these buildings is not so much in common. In fact, this matter is not considered in the design process, except the unity in building materials; there are no other elements that unified these buildings. The materials used are not different of what used in all Palestinian areas, which are, stone, concrete and glass.

5:4:2 LANDSCAPING AND GREEN AREAS

Trees are important elements in any streetscape environment. Their quality of over-changing light, sound, movement and pattern can serve as attractions to users while their structure can be used to define spaces. As structural elements, trees should be sited selectively to divide long straight street into smaller spaces, to enclose a space, to provide shade, or to soften the harsh lines of buildings and help create pedestrian scale along a sidewalk. Also, trees may form a strip that separate pedestrian from vehicular traffic. Streetscape should provide variety and a measure of randomness as well.

The distribution of green areas along Rafidia Street is almost randomly scattered. The very distinguished green area, which is uniformly distributed, is located at the northeastern segment of our case study, and named Prince Muhammad Street, near the two Municipal

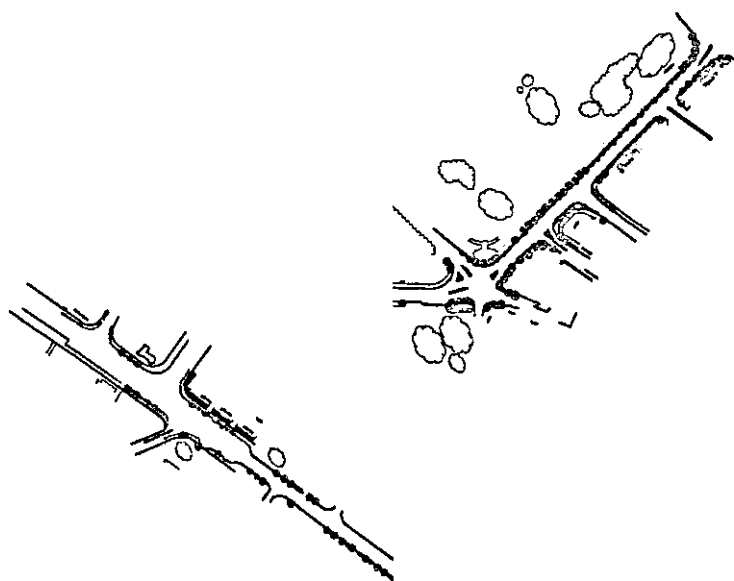
Parks of the city. The overlapping branches of the trees on both sides of the street form a splendid avenue on one hand, and work as a natural barrier that protect pedestrians from traffic danger from the other hand. Even though this segment of the street has a considerably very high flow, people walking there find it easy and safe to sit on the sidewalls of the street for watching and spending time. Still these trees may block views of unique store fronts and limit views of specific shops. Also, these trees limit the possibility of wide and clear seeing for the intersection that should be kept free of vegetation (Fig. 5.5).

The rest of the street has trees on both sides but different in size. The spaces between these trees are not equal. They can be close in one place and far at another. This makes it difficult to obtain a continual visual approach or scene for the street. Also, the purpose of plantings is to shade people walking on the sidewalk, or waiting someone or something, but the different scale of these trees makes it difficult to work even for shading purposes. Mainly the density and uniformity if existed, make the difference between the northeastern side of the case study and the western side of it, according to the distribution of trees and green areas. This affects the users existing and density accordingly. Through observing Rafidia Street, there is no green area in particular. On the contrary, it is what is left of the sidewalk planted with flowers for the scene of the street and not for people to sit on. So, there is no significant streetscaping along Rafidia Street, except for small islands planted with small shrubs (Fig.5.5).

In addition, the existences of the two Municipal Parks help in creating a good environment for spending enjoyable time. On the other side, having these two parks located lower than the street level prevent people from being close and watch the street's scenes. Also, this make the space along the street limited with the sidewalls of these two Parks, accordingly, people use these sidewalls for sitting on to be close of the street's events as in (Fig. 5.6).

5:4:3 STREET FURNITURE

Street furniture includes benches, planters, fountains, sculptures, detailed paving, lighting, waiting areas, telephone boxes and any other facilities or accessories for the street to work properly and comfortably. All these enhance the visual experience and reduce the apparent walk length. The changing in travel speed between being in a car or on foot requires a change in the way based on which the landscape of the street should be designed. In other



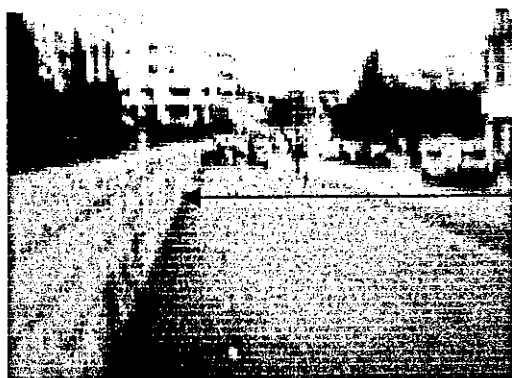
Parameters of People's
Satisfaction Towards Streets
Figure 5-5
Green Areas & Trees of Rafidia Street

Lege

Scale

0 50 100 200 300 400 500m





Sidewall of the Municipality Park

Fig. 5.6: The sidewalks of the Municipality Park.

words, people are aware of every detail, and become bored if the walk is not continually changing and interesting. Not to forget that pedestrian scale needs more detailing regarding pedestrian-scape. Pedestrians walking at two to three km per hour are aware of every passing detail and require continuously varying details to relieve boring and get attracted their attentions.

In order to make the walk more pleasant; thus street furniture should work to increase this pleasure. People convenience of walking depends on the directness, continuity, and availability. Street furniture should not be located in a way that may be considered as obstacles. Certainly, walkers can change direction and go around obstacles, but not without a sense of disruption. On the contrary, people with disability will not manage. The location of this furniture has to be chosen based on geometric and plan form considerations.

The street furniture along Rafidia Street, and through fieldwork observations, were found that they are: poles of light and telephones, trash receptacles, benches, telephone boxes, shelters, traffic lights, crossing lines and guidance signs. For any street to work properly, its furniture has to serve the different users within its context. Usually each street furnishing has to work separately without any contradiction with other furnishing along the same street, otherwise it turn to be obstacles. Sidewalks are always the place for locating all street furniture, therefore, the arrangement of street furnishing should provide room for each element so that its purpose is achieved. Unfortunately, most of the street furniture is randomly distributed or almost missing. For example, the aim of having benches is for people to sit on and watch the scenes of the street, to talk or eat...etc, these benches are supposed to be different of those for waiting a bus or a taxi. Usually, benches are out of the view area, or used by only one or two people when perhaps three or four may want to talk

together will make no difference if they are not located in the first place. Actually, people sit on the sidewalls of the street in the places they like to be in and there are no benches. What is founded in Rafidia Street is some benches for waiting either the bus or the taxi, and covered with a screen, but not any of the other type of benches. Also, once these benches are located at any place along the sidewalks of the street, no special treatment is added either in space or arrangement of the sidewalk. In other words, this furniture is considered additional elements that require additional space in order not to cause any interruption or decreases the sidewalks effective area. On the contrary, instead of facilitating people moving, this furniture constrains their movement along the sidewalks and decreases their space, (Fig.5.7).

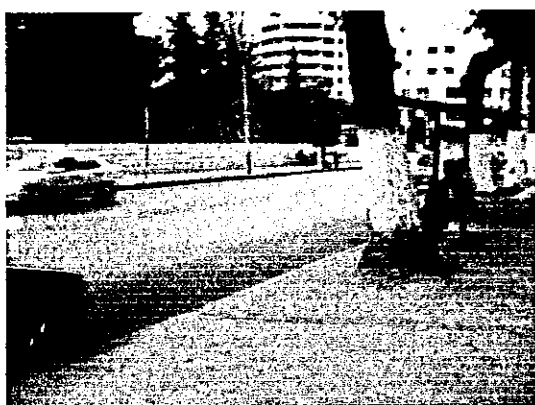
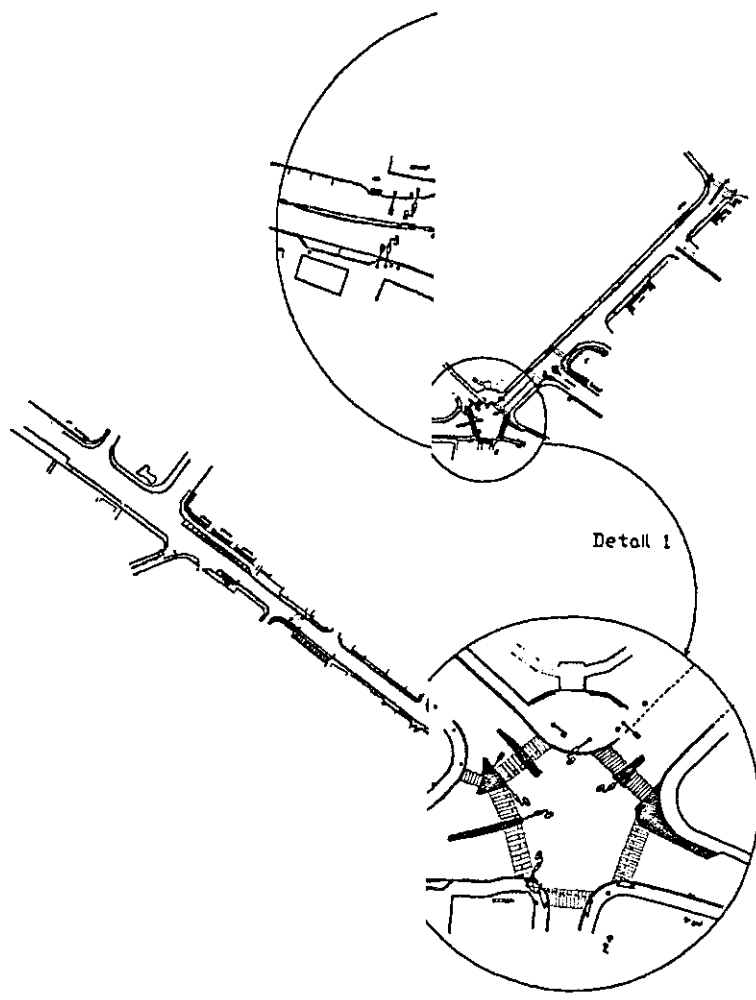

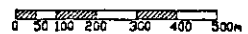



Fig. 5.7: Type of benches and shelters of Rafidia Street

Moreover, the scattered columns of lighting and telephone lines, guidance signs are occupying the pedestrian space. There is no variation or any detailed paving for pedestrians that may keep the directness of the walk. Also, there are no barriers of any type to protect people and keep them safe from vehicles, the other user of the street.

The shelters used for people to wait for a taxi or a bus are distributed without any arrangement or design; they may be located wherever extra space is available. Except for the location of the crossing-lines, the reason for putting these shelters may be understood, but the other places are not defined. Even though not every crossing-line is related to the existence of these shading screens. For example, these places where the shelters are located are not corresponding in any way with regular stopping points either for taxis or buses working along Rafidia Street. People may use them for sitting on, but this does not oblige any of the buses or taxies to stop without pointing for them to do so (Fig. 5.7).



Parameters of People's Satisfaction Towards Streets	Legend
Figure 5-8 Street Furniture - Rafidia Street	crossing Lines 
Scale  	

In addition, along Rafidia Street only two telephone-boxes are found, and this is relatively less than what is expected compared with the pedestrian density. Also, illuminating Rafidia Street depends on lighting poles along both sides of the street, or on the lights of the shops themselves. There is variation in lighting intensity affected by the number of poles on the sidewalk, or the boundary of the street (Fig.5.8). According to the fieldwork, an island divides the street either in direction or lanes. It is supposed to serve as transitional space or pedestrian refuges for crossing the street. Nevertheless, their work corresponds with both crossing-lines and traffic signals, but these islands are so narrow for standing, the width is (1.00-1.20) m, in addition to the guidance signs and columns of the traffic signals are located on these island, this reduces the available area even more. These are located at the four locations of traffic signals.

Through observations, the rest of the street crossings along Rafidia Street are not controlled even with the traffic signals and the painted lines with the guidance signals. This may confuse and disturb drivers and pedestrians and alike reduce the safety criteria of the case study. Most of the street painting that mark crossing-line is vanished and need to be repainted regularly. Most street crossing occurs at the intersections, which are also the location of the most traffic and the greatest of conflict. The places where the street is marked for crossing are at the intersections, and on other four locations along Rafidia Street. (Fig. 5.8); but within a street like Rafidia that has a considerably high pedestrian density, people may cross the street at any point they like or once they reach their destination. So, controlling the action of street crossing is not so easy and had to be solved in order to increase the safety factor of all users.

The diversity of street furniture and the tidiness of its distribution enrich the built environment of the street and attracted all type of users for longer walk and for spending longer time. Consequently, this requires providing Rafidia Street with the necessary accessories and facilities after justifying functions and needs.

5:4:4 SIDEWALKS

The sidewalk, the realm of the pedestrian tends to be more pleasant if it is safe, uncluttered, and continuous and regularly maintained. A wide sidewalk serves a pleasant walking and gathering without any threatening from the street. It provides an attractive protected space for pedestrian. The more the sidewalk is organized and wide, the more

people are involved in different activities. Also, it defines the area where people can walk on their special zone without any conflict with other street users.

In Rafidia Street, crowding is the most distinguished factor that affect how much, how fast and how safe the person walks. While observing the sidewalks at different times of the day, the crowded time is in the morning and noon times at the school start and finish times, and in the evening when people like to be there for recreational purposes. It is noticed that the sidewalk is found almost along the whole street, but it is varying in its width, pavement condition, gradient and arrangement. Most of the times it is interrupted by other street furniture, poles, intersections, width variations, stairs, goods of merchants occupying the space, and/or holes caused by poor maintenance. In many parts of Rafidia Street, sidewalks are reduced to provide parking areas for cars. Parking lots are located on both sides off the street. Recently, the Municipality has prepared the non-used lands to be used as parking lots. Even though the curbstone of the sidewalk is painted with red and white colors at specific locations, this marking does not prevent drivers from parking their cars either beside the sidewalk or even on it. This affects both the continuity of the walk and causes interruption along the sidewalk and the effective area of the street width itself (Fig. 5.9).



Fig. 5.9: Constrains of sidewalks of Rafidia Street

The width of the sidewalk is, frequently, occupied by the parking vehicles, or reduced to provide the street with additional space for car use. This makes pedestrians use the street with difficulties; and causes additional problems due to the conflict with traffic as mentioned. Again, there are no barriers or separation strips to protect pedestrian from this conflict, there is not enough space on the sidewalk from one hand, and no constrains for

not using the street from the other hand. Except for the segment of Rafidia Street with the avenue, mentioned before, there are no other barriers of any kind that provide a safe sidewalk for people. The mixed use of the sidewalk with different functions, for example, walking, sitting, selling and gathering, decreases the effective width for pedestrians to have a walk without any interruptions. In addition, many of the shop-owners put their chairs together with their goods and sit on the sidewalk reducing the effective width for use. Some restaurants put their tables outdoors on the sidewalk with no space left to walk; accordingly, people use street for their walking. These increase the opportunity of extra accidents.

There is a plan, which is under execution now, in the Municipality to reduce the width of sidewalks of Rafidia Street for parking purposes. Almost, the entire sidewalk along Rafidia Street is transferring into parking lanes and lots. In order not to cut off the trees along this street, these parking lots are located between these trees along Rafidia Street, leaving no room on the sidewalk for people to walk or even to locate other street furniture.

It was noticed that wherever the sidewalk is wide enough, people do not have to walk on the street along with vehicles. Thus, no conflict occurs accordingly. On the other side, in the places of narrower sidewalks, circulation of both vehicles and people is mixed causing confusion for each of them. The same happened when sidewalks merchandising placed in a way that interrupts movement along sidewalks. Thus, instead of adding pleasure by its visual stimulus, it turned to be additional obstacle and constrain the flow of people's movements along the sidewalks (Fig. 5.10). Also while observing Rafidia Street's sidewalks, is the lack of accessibility for disabled, all these mentioned factors are considered obstacles for "normal" people, and for handicapped walking it more than torturing. The random distribution of the street furniture on the sidewalk, confuses pedestrian and prevent the handicapped from having easy and safe walks.

It is noticed that the effective area of either the street or the sidewalks along Rafidia Street is always taking into consideration the vehicles needs and requirements. The orientation of developing this particular street towards a livable street with special character determines its dimensioning and capacity for all users. On the contrary, what is happening now is neglecting part of the users of the street. For example, for walking that serve people involved in recreation and pleasure, it is more functional to increase the sidewalk width.

This will increase the opportunity of achieving comfort level and the capacity of walking system, thus reduces the conflict of mixed use, and encourages people not to walk on the street with other vehicles.



Fig. 5.10: Narrow sidewalks for parking purposes.

5:4:5 STREET DIMENSIONING

Rafidia Street is considered as a Main Arterial Street according to the classification system of Nablus Municipality. The requirements of the main street are mentioned in (Appendix 4:1). In Rafidia Street, the problem is the high density of pedestrian compared with other main streets. People find it interesting to end their long working day in this particular street, because of its diverse activities. The absence of other places that provide this type of pleasure, people have no other alternatives, so they may accept to be together in the same place of the vehicles in spite of all the negatives of this combination. They may be looking for one positive thing no matter of any other detail.

Unfortunately, arterial design standards deal principally with moving cars and ignoring measures that make pedestrians or nearby residents comfortable. There are speed limits, street surface and width, parking restrictions and stop signs, but no mention of noise, street crossing safety or amenity or any other quality for other users of the street, especially pedestrians.

According to the fieldwork, Rafidia Main Street has different lane distribution based on its continuity and boundary layout. Part of the street has four traffic lanes with lane width (3.25-3.5 m), while other parts between intersection number (5), (6), (Fig. 4.4) have two

lanes. The four lane segments are in fact operating as two lanes for traffic due to the parking vehicles on both sides. Comparing the dimensioning of Rafidia Street 20m, with the German Standards, for the same category of streets, it is supposed to be 25m width, (Fig. 3.2). Traffic flow is two directional, and parking is allowed almost at both sides of the street. The slope of the street is relatively not very steep, taking into consideration the topography of the city and compared with other streets. The Rafidia Street length is about 2.7 km of length, with many intersections (Fig. 4.4).

The comparatively short length, moderate grade of the Rafidia Street encourages pedestrian to walk more regularly. The same applies for those who like to drive their cars. But the difference in both characteristics causes many crises of different kinds like street crossing, continuous and safety walks and comfort factors; and decreases the opportunity of people socializing and interacting.

Moreover, what is happening now is that the Municipality is narrowing the sidewalks for increasing the area of parking, and neglecting pedestrians' needs of extra space of sidewalks, see Appendix 5.1. So, the priority in the planning process is for vehicles needs and requirements. It is obvious that the present situation is a real dilemma for pedestrians. On one hand, they are crowded with cars and other vehicles, with little room left for them. Motorists tend to be interested in driving through quickly. The noise level is likely to be high. On the other hand, main pedestrian and cultural spots, where pedestrians would like to go, are located on the arterials. Moreover, main streets usually are lined with residential apartments, which means there is much potential for pedestrian to be there.

Rafidia Street is changing towards being a main shopping street, so this increases the ability for more pedestrians to be within its limits. These shops need wide sidewalks for window shopping or moving around. The separation between car and pedestrian is very difficult, almost impossible and this increases the dilemma. There is a contradiction between the conversion and developing Rafidia Street into local commercial, which means more shops and stores and consequently more sidewalks, and the plan of reducing the space width of sidewalks for providing parking areas. There is a lack of balance distribution of area for the different users of street, making it difficult to keep each in its place. Nevertheless, this will increase the conflict between users and accordingly decrease the quality of the street environment.

Although, shopping may be done on foot, most of the people prefer to park their cars in a close place of their destination. This adds more to the conflict within Rafidia Street. As mentioned before, trees and green areas are part of the street landscaping and dimensioning, these trees are located at the side that is close to the street, leaving the rest of the sidewalk for pedestrian to walk freely. But the disorganized arrangement of the streetscape creates more conflicts. This dilemma of combination of use is not so simple either in studying or solving, and most propably there is no simple solutions. This combination of use means a combination of approaches for solution.

5:4:6 TRANSPORTATION ANALYSIS

Rafidia Street is considered a street with a high traffic flow. Because of its function and location at the western part of the city, all the traffic coming from the other areas at the west has to come through this National Main Street (Highway No. 55) Nablus-Qalqilia. The same thing that all the vehicle coming from the downtown most propably will pass through it. Recently, the Municipality had constructed another Main Street named Izz Eddin Al-Kassam that works to reduce this high traffic from passing through Rafidia Street (Fig. 4.2).

Rafidia Street is two directional of traffic flow, each direction with two lanes, except between the intersections mentioned in section 4:6:3:5, where there is only one lane per direction. Many intersections exist along this street; (Fig. 4.4), some are with traffic light signals and others are with signs for right of way assignment. It is paved with asphalt, and needs regular maintenance because of heavy traffic, weather conditions and the need for more services forces the different agencies to make many excavations. These needs are drainage, telephone and traffic lights conducting ... etc. Nevertheless, these types of services may always be at this particular street or any other street of the city causing extra factors for bothering users of the street. The places for pedestrian crossing are marked with painting and guidance signs, but there is nothing to oblige either the driver or walker to follow any of it. The effective area of the street is increased for the vehicle use by deducting the effective area of the sidewalks causes problems of lack of space and crowding.

According to the fieldwork, vehicles are parked along the two sides of Rafidia Street. This decreases the effective area of the street width and sometimes reduces the lane number of

the street adding other obstacles for those using it. Moreover, some drivers may park their cars wherever they want making sudden stops, to take or buy something or even if they want to talk to some one. This may happens whenever it occurs to them no matter how is the street condition or the traffic flow density. Recently, the Municipality has prepared non-used parcels for parking purposes along Rafidia Street in order to solve this problem temporarily, but still people like to park their vehicles as close as possible to their destinations without any consideration for the consequences on traffic flow. In addition, it is noticeable that on Fridays at the time of Friday praying, prayers double-park their vehicles along the street near the three mosques of Rafidia Street, as there are no enough parking spaces. This result in narrowing the street and causing additional obstacles and prevents the continuity of the traffic flow along this street during such times (Fig. 5.11).

It is clear that the different characteristics of the street's users, vehicles and people, cause different approaches of handling the situation. They both have different speed, density and flow. Rafidia Street has different congestion periods, at the morning at school and work time, in the afternoon for the same reasons and in the evening for different reasons related to recreation and enjoying time after a long working day. It is obvious that these different times have almost the same situations of conflict and congestion since the users are the same all the time even though their destinations are different.



Fig. 5.11: Sudden stops and traffic conflict

Talking about traffic flow does not exclude the existence of bus-lines and taxis along Rafidia Street. Parallel with the private cars, there are approximately 85 shared taxi working on Rafidia Street, according to the police statistics, and the bus-line of An-Najah

National University. This requires additional criteria to consider through the whole study. Controlling the several stops of these modes of transport is not an easy job, either in time or place. They just stop unexpectedly whenever and/or wherever any of the passengers reach his/her destination. The same action is done for catching a passenger.

5:5 PHYSICAL FEATURES AND CHARACTERISTICS

In the past, our street's physical appearance was designed with lots of architectural detailing, taking into consideration the different scale of users, man and animals as being the transportation methods in those days. They were all pedestrians; this was why their streets were so proportional and fit with the human scale. Their street offer safety, comfortable and pleasure as well, they were the place where the real variable activities occur. Pedestrians still had the right-of-way until the time people began to lose it to vehicles. Since then, few pedestrian facilities have been constructed, while, as we all know, roadway construction has lots of progress nowadays. This does not mean that people are the only users that should be considered; on the contrary, it is an example of making the street fit for its different users. But it is noticeable that the vehicle is the only criteria considered in the design process of any street.

Recently, and in spite of the busy life, some people begin to realize that dependence on automobile has compromised many valued qualities of their lives. These people believe that there should be interesting things to do in their spare time, and other places to be and see. They are thinking of how they want to live, and how their community may foster their lifestyle. They start to think of their towns in general and streets in particular, in a social rather than a purely physical way. Our daily living pattern is stressful and inconvenience, so people are looking for other activities to do and places to be in that should relief their anxious feeling after a long working day.

Many people walk for recreation: to make social contact, shop, pass time, exercise, and relax. Their experiences is enhanced if the place is pleasant, relatively quiet, landscaped, well maintained, and well lit, and provided with some street furniture and utilities for aesthetic forming. The physical context of Rafidia Street is considered rich compared with other streets of the city. It contains sidewalks, landscaping, street furniture and its width are considered sufficient for organized traffic flow. Thus, the physical characteristics of Rafidia Street encourage people for spending their time there. It is a wide street, with

sidewalks almost along its two sides. It is planted with trees in rows, part of it arranged uniformly and forms an avenue in the segments as mentioned before and the rest of it scattered without forming a specific shape.

Through observation, the purpose was not only to justify how people act within the built environment of Rafidia Street. Also, to figure out the strengths and weakness of the physical feature and characteristics of this particular Street. This street is considered the network of habitual or potential line of movement through the urban context. Therefore, what attracted people's attention to this street is its linearity that leads to the continuity people like to have through either their walks or drives, and as consequence this leads to other desirable criteria, which is visual hierarchy and diversity of spaces. This street is considered of limited gradient taking into consideration the hilly nature of the city.

It is obvious that this street has different characteristics that make it suitable for its function. The main purpose of this explanation is to clarify the corresponding between the existing physical elements mentioned, like sidewalks, streetscaping, parking lots, street furniture and street dimensioning as well, and their functioning as well as people behaviors and acceptance to such elements. It is obvious that many contradictions occur because of locating these elements without real distinguishing of their needs and functions. Therefore, the intend here is not only to have these items, but to make as much benefit as possible out of their existence, without having any conflict with other elements.

In addition, while observing Rafidia Street no variation in its pavements are used. This also affects the experience of orientation and makes no different between places. The sidewalks at Prince Muhammad Street segment of the case study are paved with tiles, while the rest of the sidewalks are paved with concrete, except in front of some shops for decorative purposes. The only difference that was noticed in the treatment of the sidewalks was at the locations of trash receptacles and at the location of the crossing lines, but this also happen only at the segment mentioned before for the crossing lines as the sidewalks are considered of various levels (Fig. 5.12). Why this segment is treated differently? May be because of its closeness to the two Municipality parks and the intention is to attract people to them.

Besides, no barriers of any kind, except at the previous mentioned segment, are used to protect people walking along the sidewalks or even to prevent traffic conflict. People may

walk on streets side by side with vehicles, and vehicles may park on the sidewalks causing disturbance for each other's as users. This may happen at any place along Rafidia Street and with no regulations taken.



Fig. 5.12: Various levels for sidewalks close to the two Municipality Parks

The same is noticed when street dimensioning is discussed; sufficient street width provides room for easy traffic flow with less congestion. Recently, the Municipality started several projects to increase street width and organize traffic flow. These projects are traffic lights that interrupt the continuity of the sidewalks. This may solve the problems of congestion and parking, on the other side it may causes conflict in the movement of users of the sidewalks of the street.

Another element which people choose that affects the built environment of Rafidia Street, which is its boundary. They considered its building and architectural elements are making of Rafidia Street an attractive environment, see in (Fig. 5.3). This was unexpected, since the built environment of Rafidia Street has no unified typology of its context architecturally. This may be related to the influence of different elements or buildings on different observers. Other factors may be related to the meaning of each of these elements towards different users as well. This was obvious as a difference between residents and visitors, seeing the built environment of Rafidia Street for the first time different in its image than seeing it regularly. The results of the distributed questionnaire on the people of Rafidia Street, 11.7% of the respondents chose the boundary and architectural elements of this street as distinguished, taking in consideration that 17% of the respondents were of the visitors.

The city is not built for one person, but for people of widely varying backgrounds, occupations and classes. Accordingly, each one perceives and organizes his/her surroundings and defines the elements they depend on in formulating the qualities of their city in general, and streets in particular, but all share the same spatial product as a whole. Nevertheless, still the topography is an important element in reinforcing the strength of the urban elements of the built environment. Based on the results of the questionnaire, when people were asked about elements that constitute the built environment Rafidia Street, they identified the following elements:

- 1 . Sidewalks
- 2 . Landscaping and green areas
- 3 . Installation of traffic light
- 4 . Parking lots
- 5 . Lack of pedestrian safety
- 6 . Street furniture
- 7 . Street dimensioning
- 8 . Traffic flow and direction
- 9 . Street boundary

5:5:1 ACTIVITIES

Again due to the hilly nature of the city and its location between two mountains it is longitudinally expanded. This expansion makes one of its main streets, which is considered in this study, as the backbone of the city. This street is considered of fair gradient compared with other streets of the city, and this makes walking relatively more comfortable. Rafidia Street has several activities that constitute its character. Through observations, it is noticeable that people like to be in Rafidia Street rather than any other street of the city. This street has a unique role during the daytime. It works as a connection channel connecting Qalqilia, other villages between Qalqilia and Nablus, and the western part of the city, and with the different destinations of the city. In addition, Rafidia Street offers a service of pleasure with its various restaurants, coffee shops and other places related to recreational aspects. So, it is true that Rafidia Street is working as a backbone for the city as a whole.

Describing the services that Rafidia Street offers to respond with the changeable demands of people. It is amazing the various activities this street has. Consequently, its role in the

morning serves mobility and transferring from one place to another, with limited trading and few offices and institutions. While in the evening and because of restaurants, shops for sweets and fast food, groceries, cloths, antiquities, bookshops, and other services that need free time to be done. These functions are considered attractive elements that enrich the context of Rafidia Street.

Many people find it very interesting to spend their time driving; others find it wasting both time and energy, while others prefer walking. Most of them consider Rafidia Street the best alternative they have to practice their different activities and express themselves in either way (Fig. 5.13) and (Fig. 5.14). The approach is to clarify the quality of these different activities depending on people perceptions and experience in order to figure out whether they choose what they do or conditioned to be within this particular street because of limited choices. But whatever the reason is for being in Rafidia Street, or any other street, it must meet the different needs of its different users.



Fig. 5.13: Walking as well as driving side by side along Rafidia Street.



Fig. 5.14: Driving as one of the distinctive activities of Rafidia Street

People behaviors vary within the context of Rafidia Street during the different daytime. According to its different peak hours and different functions, as mentioned before, eating is not the only service, in fact people may be walking, driving, shopping or just sitting there and socializing. Each of these activities is related to the physical characteristics of this street at its location. Therefore, the distribution of these activities within the context of the street is confusing. It turns to be an everyday approach to end the working day walking along Rafidia Street.

Through observation it was easy to figure out how people behave and spread along Rafidia Street, but the main question behind all this was; why do people gather in Rafidia Street? And do they know what they want while being there? In another way, what attracts them to this particular street? It was not easy to justify people's expectations and attitudes. The answer to these questions has to be investigated deeply and with the feedback of people themselves. Therefore, the activities proposed of Rafidia Street are dependent on the type of shops along this street. Nevertheless, still why this street and not any other street of the city? Indeed, no other street has as many recreational activities as Rafidia Street. This was one of the results of fieldwork of this study as 32.2% justified the reason for being in Rafidia Street because of its uniqueness and location.

While studying Rafidia Street, it is noticeable that the different activities that this street has are related to people spare time. The type of services Rafidia Street offers encourages people to be and to spend time within this street. In other words, no one will ever think of sitting on the sidewalls of the street in working time or school time or, the same for having a meal in a restaurant or so, unless it is a working lunch. So, beside the little shopping and business done within Rafidia Street in the morning, it is considered of moderate density of both people and flow. In fact, the rising in density started by the evening hours, according to the counting hours mentioned before, and make the services that Rafidia Street offer work as attraction elements as people themselves mentioned. Throughout Rafidia Street, the activities that most people practice vary between walking, eating, shopping and/or window shopping, meeting and communication, driving and sitting on the sidewalls of the street as well (Fig. 5.15). People may handle of these activities either separately or commonly.

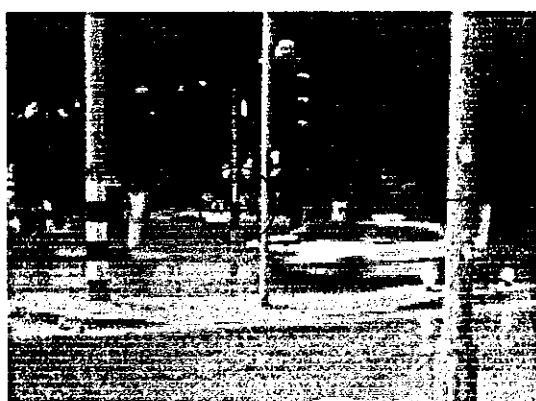


Fig. 5.15: Sitting on the sidewalls of the street.

A variety of restaurants where people may sit to eat or just take their meal and eat while walking are found along this Street. This of course differs according to different groups of age. Based on the fieldwork results, most of teenagers (20%) prefer to eat while walking, or sitting on the sidewalls of the street, while older people prefer to sit in restaurants while eating. Thus, having different types of restaurants help to meet different taste of different ages. Some people may walk while eating ice cream, corn or sandwiches of any kind from the nearby restaurants. It is also noticeable for the restaurants that have parking lots beside their entrances or outdoor sitting areas attract people to come to them more frequently. But this affects people flow along the sidewalks because of shortage of enough width of the sidewalks. The same for shopping, people may do it while they are walking around, or intend to come for that purpose in advance. Mostly, people prefer to do shopping, which is planned in advance, in the shops that have parking lots nearby, as (25.2%) come to Rafidia Street for shopping purposes; while others may enjoy window shopping through their walks. The type of shops Rafidia Street have vary, there are cloths, shoes, sweets, house equipment, groceries, bookshops.... etc. Accordingly, people are in Rafidia Street because of its different functions and services.

The other activity noticed within Rafidia Street, which is people meeting and interaction. There is no specific place along Rafidia Street that serves that purpose in particular, except for the restaurants or other coffee shops; the recreational centers that may serve this purpose are not enough to cope with people's needs and numbers. People, and mostly teenagers may sit on the sidewalls of the Street talking, sometimes they may park their car on the side of the street, open the doors and listen to the recorder of their cars with high volume. Benches that are located for waiting buses, work partially to serve as a place for sitting to talk or socialize, taking into consideration that the existence of these benches do not oblige either the bus or taxi to stop at any station.

Walking along Rafidia Street is the most distinguishes activity. The study of the results of the questionnaire show that, (24.3%) of people preferred walking in Rafidia Street. Most of the time, people are walking parallel to vehicles along the street causing conflict for traffic flow. This conflict seems to be part of the active life of Rafidia Street. Some people find it interesting to be side by side with vehicles (24.1%), while others find congestion is annoying (10.7%). The activities that people prefer to do within the context of Rafidia Street according to the fieldwork and the questionnaire results were:

- 1 . Walking
- 2 . Driving
- 3 . Shopping and/or window shopping
- 4 . People meeting and social communication
- 5 . Setting on sidewalks of the street
- 6 . Eating
- 7 . Watching people

These activities as well as the attractive elements will be discussed as potentials of the context of Rafidia Street later in the research in section 5.6 of this study.

5:5:2 NODES AND LANDMARKS

Each intersection forms a vital point of decision, either of direction and/or function. Location at an intersection involving path decisions strengthens the quality of the street being a landmark. These junctions, or places of breaks in transportation, that has a compelling importance for both walkers and drivers. Since a decision must be made at junctions, people usually concentrate their attention at these places and perceive nearby elements with more than normal clarity. Mostly, people gathering at these focal points of intersections, either because of dominant activities or wideness of the street. At each of the street's intersection, a group of people are motive to walking, buying, eating or talking or listening to a recorder while driving... etc. Usually people presence at any place adds to it a vital characteristic. Actually, people distribution is becoming part of the feature of these intersections as a consequence.

While studying Rafidia Street, it is observed that many elements constitute the physical features and quality of the street that differs along the same street and form a homogenous spatial environment as well. In fact, any street is perceived as a thing that goes toward certain destination. The street should support this perceptually by its strong boundaries, termini, and by a gradient or directional differentiation, so that it gives the sense of progression, and the opposite direction, of course, are unlike.

Rafidia Street has 12 intersections; each with a prominence spatial character related to its geometric and activities around it, (Fig. 4.4). Each of these intersections connects Rafidia Street with different part of the city. Most of them lead to local streets and other neighborhoods of the region. Accordingly, traffic density is mostly affected by the flow

coming and/or going through these streets. The geometric criterions of these intersections differ according to the number of streets meet at the legs. So, while some of these intersections constitute of three legs, others may constitute of five legs. Thus, the number of streets meet at these nodes is between three as in intersection number six in (Fig. 4.4), and five as intersection number five close to the Municipality Park in (Fig. 4.4). This criterion affects the livable image of the intersection accordingly.

Recently, the Municipality has installed traffic signals to some of these intersections with heavy traffic flow within Rafidia Street as in (Fig. 5.14, 5.15). While other intersections are having signs that determine the right of way as illustrated in (Fig. 5.16). The wideness of the street at each of these intersections makes it more distinguished. Therefore, the more the street is wide at the intersection of the node, the more people like to gather and interact.



Fig. 5.16: Intersection with right of way signs.

It is noticeable that the intersections without traffic signals are most likely free in movements. Accordingly, people and vehicles as well are moving randomly at these intersections. The difference is more clarify by comparing two of these intersections with and without traffic signals. When people choose between places along Rafidia Street, most of them choose restaurants and/or shops near intersections of no traffic signals, as (7.8%) of the respondents considered the traffic signals as attractive elements within Rafidia Street.

The characteristics of the factors that formulate each intersection are interrelated. Moreover, the activities around each intersection is highly affected by these factors:

geometric layout, number of street meeting at the node, its wideness as well as whether traffic signals are installed or not. All these influence the visual experience while passing within any of the intersections, and affect the decision taken whenever one reaches any intersection.

Describing each of the intersections along Rafidia Street, what mostly distinguishes each of them, is very related to the factors mentioned before. The intersection of the Municipality Park is wide with traffic signals installation, and with other five streets meeting at this intersection and forming its geometry as in (Fig. 5.17). The boundaries around it are of building that are under construction, but the ground floor of it is mostly used, and the two Municipality Parks. This adds to it more wideness and makes the area around it more distinguished. The trees planted along this segment add to the physical characteristics of this intersection and enrich the built environment of this particular area. Usually people like to sit there at the sidewalls of the two Parks and watch the street scenes. Moreover, the small restaurants selling sandwiches and other sidewalk merchandising close to this area strengthen people existence and gathering so that more than one activity may be experienced there.



Fig. 5.17: Al-Muntaza intersection

Along Rafidia Street, the shops that are located at the intersection that has traffic signals installed face a little difficulty with people coming to do their shopping, since parking is not allowed beside these shops because of traffic regulations. People do not prefer to walk longer distance to reach these shops, accordingly the shopowners find this disturbing.

Addressing parts of the street with some of the elements around it, like the street of trees for Prince Muhammad Street serves like a landmark for the street. The same with using the traffic lights to assign a certain intersection, or a certain shop or restaurants for defining the

location. The activity associated with an element or a place may also make it a landmark. For example, at Al-Muntaza intersection of Rafidia Street (Fig. 4.4), many people set on the sidewalls of the nearby building or the street, eating sandwiches, talking, or listening to the recorder of their parking cars and watching the street scenes. This added a lively atmosphere to particular intersection, making this intersection seem as a landmark. The smell of food and sweets from the nearby shops reinforce the sense of this place to be a landmark. This is almost the same with the other intersections along the street. Once someone reaches any of these intersections, then he/she knows the real location of the way or to any destination. Thus he/she can say at a certain place, "I am almost there" or "I am about to reach my destination". Of course this is also related to the time of the day, whether it is in the morning or at night.

One can specify his/her direction or location according to surrounding elements of the physical environment of the street, and the intersections are considered a prominent feature of the street. Defining each intersection with its elements like traffic lights, vegetation, wideness and/or activity makes it possible to say where one is located depending on either of these elements.

What makes any intersection distinguished are the elements located around it. The sense of arrival is noticed easier and faster once it is related or attached to people's experience and behavior. So, it is different according to the different characteristics of different people. But the common feature between all of them is the place of being. Another factor to mention is the specialty of the place, what is distinguished in Rafidia Street may not be the same if it is located elsewhere. The location property is an important factor that can not be ignored, as we will see while discussing the fieldwork results.

There is no unified typology for Rafidia Street context either architecturally or functionally. Nevertheless, people from different parts of the city find it interesting to visit this street and spend some time walking around. The different setbacks of the building along the street make interruption in its façade that affect the continuity of the street; still this adds another taste for its spaces. The randomness and irregular form of its limited space and intersections serve the purpose of walking and help to strengthen the diversity of the same place. People are gathered mostly close to buildings with more setbacks because the street seems to be wider at this location.

According to the observation of each of these intersections, it is noticed that the more streets of different directions of the one intersection, the more livable this particular intersection will be. Some of these intersections are without traffic signals and with heavy traffic which is a real problem, still people like to be there no matter of the traffic congestion. Regarding the intersection number seven in (Fig. 4.4) near (Al-Zaytona Building), more than one street meet at the intersection but with moderate gradient and wide street at this node. The shops around this intersection are not different of the shop network of Rafidia Street, restaurants and juice making. People are mostly gathering at this intersection, and sometimes a policeman is there for organizing the traffic flow as no traffic light is installed.

Moreover, other intersections with less number of legs but different setbacks for the nearby building and with similar type of activity, restaurants and cassette shop has the same livable character as seen in intersection number eight near (Harwash Building) in (Fig. 4.4). At this intersection, the surrounding area is made of multi story buildings with additional setbacks at the mentioned building and other non-used lands. This make the street looks wider although it had the same width. The other side of the street is planted with rows of trees adding green boundary to the street façade.

For the intersection that leads to An-Najah National University, number ten in (Fig. 4.4); it is always congested with heavy traffic due to bus circulation and other taxies. Furthermore, this specific intersection is considered of more importance since it is the point where traffic coming from the west meets with the local traffic of buses and other vehicles. The other shops around this intersection are varying between restaurants, bookshops, groceries and other related activities. The coffee shops near the traffic signals occupy the sidewalks with their outdoor sitting area leaving no room for walking and narrowing the area around this intersection and increasing congestion. This intersection is considered vital even in the evening hours as in (Fig. 5.18).

In addition, the presence of An-Najah National University is very related to the increasing number of students at any time of the day, at the same time increases the crowding and raises the need for more services.



Fig. 5.18: Omar Ibn Al-Khattab intersection that leads to An-Najah National University.

Intersection number 12 in (Fig. 4.4) is considered located at the new expansion of Rafidia Street. The width of the street increases at this point adding more space and free movements around. The newly constructed buildings with more setbacks accordingly, help in providing parking areas for cars along the street and without occupying the sidewalks area as in (Fig. 5.19) and (Fig. 5.20). The providing of these parking encourages the shop-owners of gaining more outdoor space for their shops and restaurants.

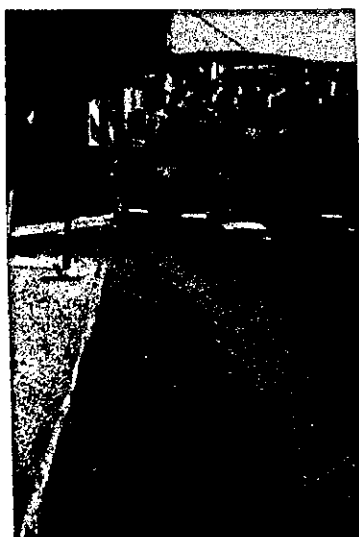


Fig. 5.19: Street widening at the western part of Rafidia Street.



Fig. 5.20: On street parking at the western part of Rafidia Street.

The above descriptions focus on the features and characteristics that shape and distinguish each intersection along Rafidia Street. Among these feature and according to fieldwork process: intersection geometric and number of legs meeting at the intersection, the street width and buildings setback at the street boundary and building facades, different activities and diversity of shops functions and green area distribution.

5:6 POTENTIALS OF THE CASE STUDY

Analysis of the built environment and physical characteristics of Rafidia Street and its elements is an acceptable matter since this depends on observing and analyzing the interrelations between all these elements forming the context of this built environment of this street. However, people's reaction and acceptance to this built environment is something one cannot guess, and needs a different method to investigate. This interrelationship between people and their environment, streets in particular, is the question of this research. The approach to deal with this subject is by observing the built environment of Rafidia Street, and by asking people to express themselves through their different attitudes toward proceeding their surroundings.

Table (5.1) shows the respondents different characteristics according to their gender, age, accommodation and level of education. (*See research method in Chapter Three*).

Table (5.1): The distribution of the respondents' sample according to their different characteristics.

		Age						Total
		1-15	16-25	26-35	36-45	Grand Total	Missing	
Gender	Male	8	32	14	10	64	13	103
	Female	1	12	9	4	26		
Marital status	Married		14	20	13	47	14	103
	single	9	29	2	1	41		
	other		1			1		
Residential place	Residence in Nablus	7	41	15	13	76	13	103
	Visitor	2	3	8	1	14		
Occupation (job)	House keeper		9	8	4	21	13	103
	Student	5	10			15		
	Merchant	2	11	9	8	30		
	Worker	1	8	1		10		
	Sales man	1	6	5	2	14		
Education level	Less than high school	4	5	3	4	16	14	103
	High school	3	20	6	4	33		
	Diploma		2	5		7		
	BA	2	16	7	6	31		
	Master		1	1		2		

The sample covers different groups in terms of age, gender, and accommodation, level of education and occupation. This was in order to get different perceptions and views of different groups. The average age of the respondents was 31 years. The youngest respondent was 17 years old while the oldest was 65 years old. It was noticeable that most

of the respondents were either shopowners 45% or housewives 22%, which indicates the use of Rafidia Street as residential and commercial. The intention was to collect data regarding the existing condition of Rafidia Street, and to figure out what is missing and people want in its built environment. Therefore, the established questions were put for the purpose of defining the distinguished elements and activities, the missing and disturbing elements, as well as the peoples needs and expectation. Each of these will be discussed in a separate section hereafter.

People want variety and choice, they want things to do; things to look at; places to go; things to buy; value of places and friendly streets. While catering for this wide range of needs, each town or city must strive to retain its individual unique character. "The use of key behavior analysis can also be fruitfully applied to space external to the built environment." (Stanford, 1986)

Rafidia Arterial Street is also working as a collector and distributor street. It functions as intermediate link because of its pedestrian flow and vehicles flow. Within its context, the activity settings gathered both the functions of a link as well as a place to be. The fieldwork conducting concludes the performance level this street offer for its users, at the same time, how do people interacts within this street. Moreover, the perception level of people towards their physical built environment.

Potentials of Rafidia Street built environment are realized in its both distinguished **elements** and **activities** as well. Measuring these criteria was through identifying the elements that constitute the built environment of Rafidia Street. The distributed questionnaire discussed several aspects regarding potential of Rafidia Street, but the focusing will be on these two mentioned categories, see Appendix 5.2.

In order to make people express how they perceive their surrounding, multi choice elements were put through the questionnaire processing so that they may choose one or more or even define additional elements. They defined the preferable and distinguished elements within Rafidia Street as: 21% of the respondents like its restaurants existence, while 19% considered its location distinguished, 16% considered its shops, but 14% considered the existence of the previous elements as well its wideness. The rest of the respondents referred to its wideness (6%), boundaries (5%), and few consider its

narrowness (4%). However, very few referred to its traffic lights (1%) and others referred to its noisiness (1%), others talk about combination of these elements, while (7%) found nothing to consider as a distinguish element in Rafidia Street. On the other hand, a group of (7%) considered everything is distinguished in Rafidia Street.

These results were distributed according to the respondents' characteristics as: those who referred to its restaurants were of males who finished their university education 16%, while 13% of males who finished their high school and university education talked about streets' shops. However, those who chose the streets' location 15% were from educated males of high school and university. Regarding the female choice the distribution was mostly for the combination of its restaurants, shops, wideness as well as location 7%. The following Table (5.2) shows the distribution of the respondents regarding the distinguished elements of Rafidia Street.

Table (5.2): The distribution of the respondents regarding the distinguished elements of Rafidia Street.

Element	Freq. %	Gender		Age					Accomm.		Education					Education				
		M	F	1-15	16-25	26-35	36-45	>46	In	Out	M					F				
											LHS	HS	D	BA	M	LHS	HS	D	BA	M
1. Boundaries	4.9	5			3				3	2	1	2		1	1					
2. Wideness	5.8	6		1	3				4	2	1	3		1	1					
3. Restaurants	20.4	16	5	3	7	4	3		17	3	1	5	1	7		1	1		3	
4. Shops	15.5	13	3	1	5	1	2		9	2	2	7	1	3		1	1		1	
5. Location	18.4	15	4	2	7	3	1		13	1	5	4	2	4			1	1	2	
6. Narrow street	3.9	2	2		3				3	1		1		1					2	
7. Noisiness	1	1				1			1					1						
8. Traffic Signals	1	1					1		1		1									
9. 2-3-4-5	13.6	7	7		8	2	1		11	1	2	2	2	1		2	4	1		
10. Nothing	1.9	1	1			1	1		2					1					1	
11. 1-3-5	6.8	5	2			1	4		5	2				2			1	1		
12. All	6.8	4	3		5	2			7					1					2	
Total		76	27	7	41	15	13	0	76	14	13	24	6	23	2	4	8	3	11	0

In addition, those who perceived Rafidia Street in its distinctive activities talked about several activities they mostly mentioned walking 25% and eating 14%. Another 14% considered driving besides walking and eating, while 11% chose people meeting and social communication as well. Shopping had only 6% of people choice and driving took 10%.

People choose the activities of sitting on the sidewalks, driving and social interaction 14%. These variations in people attitudes that are very much related to those of the sample itself. Accordingly, those who preferred walking were mostly of the merchants, which mean they already are in Rafidia Street because of their jobs. Also driving was considered of the attractive activities among females 20% in Rafidia Street compared with the city center, this street is considered to be less congested. Table (5.3) shows the distribution of the respondents regarding the distinguished activities of Rafidia Street

Table (5.3): The distribution of the respondents regarding the distinguished activities of Rafidia Street.

Activity	Freq %	Gender		Age					Accomm.		Education					Education				
		M	F	1-15	16-25	26-35	36-45	>46	In	Out	M					F				
											L.HS	HS	D	BA	M	L.HS	HS	D	BA	M
1. Walking	24.30	20	5	4	9	2	1		16	4	3	9	2	6		1			4	
2. Shopping	5.80	4	2	1	3		1		5	1		1		3			1	1		
3. Eating	13.60	14		1	4		2		7	6	1	7		5	1					
4. People meeting (Socializing)	4.90	5			4				4	1	2	1		2						
5. Setting on sidewalks	1.00	1			1				1			1								
6. Driving	9.70	7	3	1	3		1		5	2	3	4					2		1	
7. Setting & driving	2.90	3			2	1			3		1			1	1					
8. All	8.70	4	5		3	4	2		9			2	1	1			2	1	2	
9. 1-2-4-6	10.70	5	5		3	3	4		10		2	1		2		3	2			
10. 1-3-6	13.60	9	5		8	3	2		13		2	3	2	2			1	1	3	
11. 4-5-6	4.90	4	1		1	2			3		1	1	1	1						1
Total		76	26	7	41	15	13	0	76	14	15	30	6	23	2	4	8	3	10	1

Different places mean different things to different people. The way of perceives the urban environment is probably different among people. Accordingly, what seems interesting for some people is not of the same importance for others. Nevertheless, most of the people in Rafidia Street chose walking to be an attractive activity, and restaurants as a distinguished element. It is noticeable that walking and eating are very much related between the age of 16-25 years. Moreover, this fact does fit with their lifestyle.

5:7 PROBLEMS OF THE CASE STUDY

In fact, the uniqueness of the research problem makes it difficult for the researcher to gather the needed information. Indeed, the specialty of the study and the absence of specialized department in any of the institutions to study peoples needs and expectations make it even more difficult. Nevertheless, it was not an impossible task to start thinking of issues related to humanity while everything is done to serve the mechanical and vehicle use. It is the people who develop their cities and not the machines. In other words, the question is what makes a street? Which comes first the street or fabric? How can we define each of them?

In addition to observations, a structured questionnaire (*see Research Methods in Chapter Three*) was distributed to highlight the real condition of its built environment and how do people interact accordingly. By giving people the opportunity to express their acceptance to their surroundings and what mostly they like in Rafidia Street, several elements as well as activities were mentioned. These elements were of the physical components of Rafidia Street that characterize its features, while the other mentioned activities share in featuring the street quality characteristics.

On the other hand, other elements and activities that may facilitate people presence and circulation within Rafidia Street were missing. These elements can be classified into **missing elements** as well as **disturbing ones**. The first group includes green areas, enough space, street furniture, sidewalks, accessibility for disabled, parking and arrangement of the street, while the other group includes, congestion of vehicles, lack of pedestrian safety, people's behavior, inadequate space of street as well as sidewalks and parking on the street's sides. Moreover, factors related to traffic volume and circulation were discussed to see their influence. The distributed questionnaire discussed several aspects regarding people satisfaction, but the focusing will be on these two mentioned categories, see Appendix 5.3.

These factors influence people as well as performance level of street each in a certain way. Accordingly, each of these variables affects people differently depending on variations between respondents themselves. Nevertheless, the missing elements of Rafidia Street were as follows: 27% of people referred to the shortage of green areas and 18% referred to lack of street furniture, 17% mentioned parking on the street's sides as one of the

negatives, while 34% complained the lack of all the above mentioned elements and 8% referred to accessibility of disabled. Furthermore, those who missed green area existence were of males most of them are educated at least of high school 22%, this percentage is almost the same as those who are always presence in Rafidia either walking or eating. On the other hand, 10% of males and university educated missed almost every facility mentioned above.

The following Table (5.4) shows the distribution of the respondents regarding the missing elements of Rafidia Street.

Table (5.4): The distribution of the respondents regarding the missing elements of Rafidia Street.

Element	Freq. %	Gender		Age					Accomm.		Education					Education				
		M	F	1-15	16-25	26-35	36-45	>46	In	Out	M					F				
											L.HS	HS	D	BA	M	L.HS	HS	D	BA	M
1. Green area	26.20	22	5	4	11	4	2		25	2	7	7	3	5				1	4	
2. Enough space	1.9	1	1		1				2			1					1			
3. Street furniture	17.5	17	1	2	10	2	2		14	4	3	6	2	5	1	1				
4. Accessibility	7.8	4	4		5	2			7	1	1	2		1		1	2		1	
5. Parking	3.9	3	1	2	1	1			1	3	1			2					1	
6. Arranged Street	1	1				1			1		1									
7. 1-3-4	16.5	10	6		6	5	5		15	2		6	1	3			2	1	3	
8. All	16.5	10	7		7	5	4		14	3	1	2		6	1	1	3	1	2	
9. 1-3-2	6.8	6	1		3	2	1		5	2	1	4		1		1				
10 others	1.9	2		1		1			2			2								
Total		76	26	9	44	23	14	0	86	17	15	30	6	23	2	4	8	3	11	0

Moreover, the disturbance influence in Rafidia Street was of: 11% congestion of vehicles, 15% people’s behavior, 9% for not enough space, while 29% mentioned a combination of factors that may cause disturbance consist of all what mentioned in the questionnaire. Most of these people were of males’ merchants in Rafidia Street 24%. 15% of males of high school and diploma spoke about the disturbance caused by traffic direction and shortage of space of streets as well as sidewalks. The following table (4.5) shows the distribution of the respondents regarding the disturbing elements of Rafidia Street.

Table (5.5): The distribution of the respondents regarding the disturbing elements of Rafidia Street.

Element	Freq. %	Gender		Age					Accomm.		Education					Education				
		M	F	1-15	16-25	26-35	36-45	>46	In	Out	M					F				
											L.HS	HS	D	BA	M	L.HS	HS	D	BA	M
1. Congestion	10.70	9	2	1	4	1	1		7	4	1	4		4		1		1		
2. Safety	4.90	3	2	1	3				4		1	1		1			1		1	
3. People behavior	14.90	13	2	1	7	1	1		10		3	5	2	2	1		1		1	
4. Not enough space	1.00	1			1				1					1						
5. Location	8.70	7	2	1	6				7	2	1	4	1	1				1	1	
6. Insufficient sidewalks	2.90	3			1				1		1	2								
7. Parking on streetwalks	3.90	4			2		1		3		1	1		2						
8. Traffic direction	1.00		1				1		1										1	
9. Traffic signals	5.80	3	3	1	4	1			6		1	2					1		2	
10. Others	1.90	2					1		1	1	1	1								
11. 2-3-4-8-9	15.50	12	3		7	5	2		14	1	1	4		7			2	1		
12. 1-3-7-9	12.60	10	3	1	2	3	2		8	3	2	3	3	2		1	2			
13. 2-3-8	5.80	5	1		1	2	2		5		1	1		3		1				
14. 6-9-10	4.90	1	4		2	1	2		5	1		1				1	1		2	
15. All	1.90	1	1			1			1										1	
Total		74	24	6	40	15	13	0	74	12	14	29	6	23	1	4	8	3	9	0

In addition, the effect of traffic volume on the performance of the street and people was discussed. 68% of the respondents noted that Rafidia Street had a heavy volume of traffic. However, 28% considered it of moderate volume, while the rest 4% considered it of low volume. Another 96% mentioned that Rafidia Street, as it is, is improper for vehicles as well as pedestrian, while 32% contradicted this opinion, see Appendix 5.4.

There is a close relationship between environment conditions and people’s reactions and acceptance. In order to design a good street environment, a certain aware must be given to the range of people’s needs. Thus, street spaces should based upon the social, economic, or other cultural characteristics of people, taking into consideration the existing urban environment. The planning and development philosophy for street environments should be

a sensitive balance between people needs and environmental dictates. Accordingly, without knowing what do people need and expect, no design can solve any of their problems.

In order to highlight the various aspects of the built environment of Rafidia Street and parallel to the questionnaire methodology, interviews were conducted with key figures who are in positions that affect the characteristics of the built environment of any street, and Rafidia Street in particular. These persons were the Mayor of Nablus City, Engineers and Architects in the Municipality of Nablus City, planners, lecturers at the An-Najah National University, doctors and others from the Union of Disabled as well as the Engineering Association. This variation was to gain as much as possible of information to enrich the research and serve its objectives.

During the interviews, defining the built environment of the street depend on the background of the interviewee. Thus, interviewees define the existing condition of the built environment of Rafidia Street in order to highlight its weakness and strength. Most of them mentioned its physical layout and diverse activities within its context. They assured the distinguished location and fair slope of this particular street compared with other streets in Nablus City. The intention for most of the decision-makers is to facilitate people's life. The Mayor considered that people are the most effective item in featuring the characteristics of any place is the citizens themselves, and at the same time they are one of its major problems. Sometimes, these bad behaviors of the citizens affect the solutions of the traffic and/or the pedestrian problems. In the recent project handled by the Municipality, the orientation for reducing the sidewalks for the parking purposes was affected by most of peoples behavior instead of limiting their being on the sidewalks, there are reduced for parking purposes.

During these interviews a comparison between two main streets of Nablus City arose. The other street besides Rafidia Street was Faisal Street. The comparison was for the differences in function as well as the built environment and people behavior. This was recognized through; **First** the street life for Faisal Street end by the end of the working hours of the day, while street life start at this particular time for Rafidia Street. **Second**, the function of Faisal Street with its shops and crafts is totally different in the type of Rafidia Street. **Third**, the location of the other street is in the east of the Nablus City.

Among interviews, the psychiatrist Dr. M. Schwail from Ramallah mentioned the importance of having a good comfortable built environment of the street with enough width. This to, a great extent, affect the psychiatric images for all users of the street. Thus, the problems of Rafidia Street may be summarized in the context of the built environment of the street, and the absence of the strategies of making the street a pleasant place to stay and spend time. The contradiction between people's needs and the planning process of the executing authorities are accelerating the situation towards a real crisis. From the interviews and fieldwork processing, the problems of Rafidia Street are:

- The lack of coordination between the responsible institutions regarding the discipline and performance
- The lack of thorough studies and investigations to the real need and problems
- The lack of architectural typology of the street facades
- The lack of pavement variations according to different uses
- Heavy traffic flow and no limitations for speed and with no consideration to safety factors for users
- The lack of green areas
- Lack of the sidewalks
- Lack of needed street furniture and pedestrians zoning
- No streetscaping is considered in planning process
- The changeable building legislation
- The combination of different functions without special treatment for each separately
- The shortage of benefits regarding the existence of the two Municipality Parks within the study area
- The cutting of the sidewalks leaving no room for pedestrians

5:8 PEOPLE'S NEEDS AND EXPECTATIONS

After analyzing the existing situation of the physical characteristics of the built environment of Rafidia Street, the evaluation of the street, according to its different variation, is in two aspects: the physical built environment on one hand, and the unique and value qualities from the other hand. It is difficult to design for every individual, but reaching a certain level of quality and valuable characteristics will provide a comfortable atmosphere for as many as possible of the different users.

The design process should both capture the spirit and character of a place or building in a relevant manner and also to articulate these ideas and images in a well thought out approach to physical form, materials, color and design references which are easily recognized and understood. Good urban areas are legible; they can be understood or read clearly. All this really means that it should be easy for people, pedestrians or drivers, to understand where they are, how the city is arranged and which way to go for different places, amenities and facilities that they require are well provided. The quality of legibility helps in providing a sequence of places, together with particular landmarks. Individual buildings can contribute especially if they are memorable. It should be obvious from outside a building what its function is and how to enter it. This reads the façade properly and people know where to go.

The aim of this study is to identify the expectation most of people have while perceiving street's built environment. The established questionnaire served this purpose and give people the opportunity to define and discuss the characteristics of desired street context.

People's needs and expectations were classified in two categories based on the questions presented in the questionnaire and shown pictures. **Adding physical elements** for making the Rafidia Street more comfortable, and **Actions to be done for increasing accessibility** of Rafidia Street. The first group of people suggested adding physical elements to Rafidia Street in order to gain more comfortable and safe performance level, at the same time, to raise the quality of its built environment. 34.0% of the respondents mentioned adding green areas, and 33.0% preferred adding street furniture. In addition, other 19.4% of the respondents mentioned adding the previous two elements to the physical built environment of Rafidia Street. The following Table (5.6) shows the distribution of the respondents regarding the first group. Other needs were studied through fieldwork processing, but for the research purpose, the focus was on these two categories, see Appendix 5.4.

Moreover, The second group includes arrangements of the street layout, green areas, and street furniture as well as organizing traffic together with building legislation. The other group includes adding green areas, tourist places, street furniture and medians for separating traffic lanes. 17.5% of the respondents mentioned the well arranged and clean with enough width of the street. Another 10.7% referred to arranged traffic while 14.6%

preferred do nothing solution for this particular street. The other Table (5.7) shows the distribution of the respondents regarding the second group.

Table (5.6): The distribution of the respondents regarding the physical elements that should be added for making Rafidia Street more comfortable.

Element	Freq. %	Gender		Age					Accomm.		Education					Education				
		M	F	1-15	16-25	26-35	36-45	>46	In	Out	M					F				
											L.HS	HS	D	BA	M	L.HS	HS	D	BA	M
1. Green area	34.0	22	13	4	11	8	7		28	2	7	5	2	7	1	2	3		7	
2. Street Furniture	33.0	26	8	2	18	7	4		27	4	3	13	3	7		2	3	2	1	
3. Tourist Places	1.9	1	1	1	1				1	1	1								1	
4. Islands & medians	1.0	1				1			1				1							
5. Shops & green area	3.9	4	4		2	1	1		3	1					1					
6. 1-2	19.4	16		2	9	5	1		12	5										
7. all	1.9	2				1	1		1	1										
8. No opinion	1.0	1																		
Total		73	26	9	41	23	14	0	73	14	11	18	6	14	2	4	6	2	9	0

Table (5.7): The distribution of the respondents regarding the actions that should be done for increasing accessibility of Rafidia Street.

Element	Freq. %	Gender		Age					Accomm.		Education					Education				
		M	F	1-15	16-25	26-35	36-45	>46	In	Out	M					F				
											L.HS	HS	D	BA	M	L.HS	HS	D	BA	M
1. Arrangement, Cleaning, Wideness	17.5	15	3		7	5			10	2	3	6	1	4	1	1		1	1	
2. Green area	6.8	6	1	1	5	1			7			4	2					1		
3. Accessibility & St. Furniture	4.9	3	2	1	3				3		2			1					1	
4. Street space	2.9	2	1	1	2				3			2					1			
5. One direction	1.0	1				1				1				1						
6. All	1.9	2			1	1			1	1					1					
7. Crossing lines	6.8	6	1	1		1	2		3	1	4			2			1			
8. Arrange Traffic	10.7	6	5	1	4	2	2		8	1	1	1	1	3		2	1		2	
9. Wide spaces & St. furniture	5.8	6		1	5				4	2		5		1						
10. Parking areas	3.9	3	1	1	2	1			4		1	1	1				1			
11. Modifying building legislation	1.9	2			2				2			2								
12. 1-2-4-7-8	9.7	6	4	1	2	2	3		8	1	2	2		2			2		2	
13. 1-10	1.9	2				1	1		1	1	1			1						
14. Nothing	14.6	7	8	1	6	4	4		14	2	1	2	1	3		1	3		3	
Total		67	26	9	39	19	12	0	68	12	15	25	6	18	2	4	9	2	9	0

In addition, the pictures shown through questionnaire strengthen the images of the respondents. These pictures presented in (Fig. 5.21) have common points that express their characteristics:

In addition, the pictures shown through questionnaire strengthen the images of the respondents. These pictures presented in (Fig. 5.21) have common points that express their characteristics:

Street One

- Strip of tree that form a fence to protect pedestrians
- Adequate width of street and parking lots
- Equal height of street facade
- Dividing sidewalks into lanes
- Homogenous street façade

Street Two

- Strip of tree that form a fence to protect pedestrians
- Adequate width of sidewalk and window shopping
- Parking for vehicles as well as bicycles
- Providing street furniture with no conflict with pedestrian movement

Street Three

- Trees and green area
- Sitting areas
- Playing areas
- Adequate sidewalks
- Parking areas
- Street furniture
- Pedestrian areas
- Architectural typology

Street Four

- Trees and green areas
- Dividing sidewalks into lanes
- Pedestrian areas
- Parking areas
- Street furniture

Street Five

- Home plantings
- No parking areas
- Pedestrian areas
- Architectural typology
- Narrow sidewalks
- Low traffic flow



1



2



3



4



5



6



7



8

Fig. 5.21: The eight streets selected for the investigation

Street six

- Trees and planted islands
- Wide street
- Dividing sidewalks into lanes
- Architectural typology
- Equal height of street façade
- Shaded sidewalks
- Parking areas

Street seven

- Trees and planted islands
- Narrow sidewalks
- No Architectural typology
- Congestion and traffic jam
- No Parking areas

Street eight

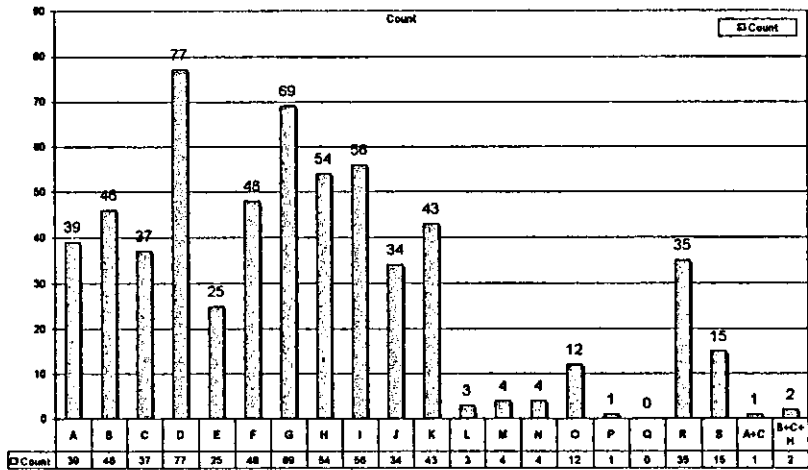
- Trees and planted islands
- Wide street
- Dividing sidewalks into lanes
- Architectural typology
- Equal height of street façade
- Parking areas

Regarding the results of showing the respondents the selected photos of the different street, most of them chose the streets with:

- The distinguished architectural typology
- Having zones for parking as well as walking
- Vegetation and green areas
- Street furniture like benches, sculptures, fountains,...,etc. that do not constrain with people movements
- Adequate width for sidewalks that provide a comfortable window shopping besides walking
- Zoning for sidewalks that separate different movements for different users
- Pedestrians areas
- Rows of trees that work as barriers for protecting pedestrians and reduce traffic conflict
- Equal height for street façade
- Congestion as a sign of street life
- Playing areas for children
- Shaded sidewalks

The distributions of the different characteristics of the selected pictures among respondents vary according to the variation of the respondents themselves. These pictures were classified based on each of the distinguished characteristics. Each criterion was given a symbol; therefore, the choice of any of the pictures meant the choice of all its criteria. This means, what distinguishes each of the chosen picture was recorded, then the numbers of times each picture was chosen mean the number of times the distinguish feature was chosen too. Consequently, multiplying these two numbers together using the “Count if” of “Excel Programme” gave the result of the repetition for any of the chosen distinguish element of any picture. For example, picture 1 had been chosen 25 times, as seen in Table (5.8), and this picture has the characteristics of A, B, C,..., the selected points were arranged in a table for all pictures and the needed calculations were done accordingly. These are shown in the coming Table (5.8).

Table (5.8): a: The counting of the distinguished characteristics of the selected pictures b, c) the meaning of each symbol.



a)

Symbol	Meaning
A	Rows of trees that form natural barrier that protect pedestrian
B	Divided sidewalks into lanes
C	Equal heights for street façade
D	Homogeneous architectural typology
E	Adequate street width that provide sufficient on street parking
F	Adequate width of sidewalk and window shopping
G	Parking for vehicles and bicycles
H	Street furniture including benches that do not contradict with pedestrian maneuvering
I	Trees and vegetation
J	Playing areas for children
K	Pedestrian areas
L	Home plantings
M	No parking areas
N	Narrow sidewalks
O	Shaded sidewalks
P	No Architectural typology
Q	Sitting areas
R	Congestion and traffic jam
S	Sufficient street width

b)

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Photo	1	2	3	4	5	6	7	8		
1	A	B	C	D	E				5	25
2	A	F	G	H					4	14
3	I	R	J	F	G	H	K	D	8	34
4	I	B	K	G	H				5	6
5	L	M	D	N					4	3
6	I	S	B	D	C	G	O		7	12
7	I	N	P	R	M				5	1
8	I	B	K	G	S	D			6	3
										602

c)

It was surprising that most of the people did not know the real elements that may let them walk and use their streets comfortably before seeing these pictures. For example, when they were asked about the missing elements of Rafidia Street, the answer was nothing is missing, but when the question was about green areas of Rafidia Street, most of the respondents complained the shortage of green areas. Thus, the expected results of showing the pictures to the respondents were therefore gained. As these pictures share in raising the respondents' image to the different elements and activities within the context of the street built environment.

Comparing these demands with the situation of Rafidia Street, and the project under construction at the moment, people needs are far from the Municipality projects. In addition, the distribution of different elements and activities is done with no consideration to its real function and use. The conflict between people and traffic is considerably high, and it will be of higher level as a consequence to both building legislation and handled projects.

5:9 SUMMARY

The main results drawn from this chapter could be divided into two groups: one regarding the **technical parameters** of the street, the other concerning the **quality parameters** of the street.

For the technical parameters, the findings could be categorized according to the dimensioning of the street itself, the performance level of the existence street width, and the traffic flow criteria. Accordingly, taking into consideration the requirement for comfortable and safe performance. For the quality parameters, the findings could be categorized according to the distribution of the elements that state the built environment of the street image, and the different activities that personalized the characteristics of Rafidia Street as well. In addition, the distinguished elements and activities that may attracted people's attention and therefore, raise their satisfaction towards their streets.

For the built environment of Rafidia Street the findings could be regrouped into three groups. First, the potentials of this particular street in terms of **distinguished elements** and **distinguished activities**. Second, the problems of Rafidia Street in terms of **missing elements** and **disturbing elements**. Third, the expectations and needs of people of Rafidia

Street in terms of adding physical elements and actions to be done for increasing accessibility.

Therefore, it was found that people of Rafidia Street justified their presence in this particular street to many reasons. These different reasons are very related to the different time of the day. Accordingly, the different reasons for people presence in Rafidia Street orient their maneuvering. Therefore, those who are in Rafidia Street in the morning may had different purposes than those who are there in the evening hours. Thus, the different functions and services of this particular street support its different roles in these different times of the day. Furthermore, the diversity of functioning raises the possibility of responding to the different needs of different people.

It was noticeable that the ideal street that people desired is very represented in the selection of the pictures, for example picture number 3, 1 and 5 as the first three selection. The importance of these pictures was in closing the different images of different streets for those who did not experience similar streets.

The spatial structure quality of Rafidia Street and the types of elements used to formulate the street image are very related to the characteristics of the physical environment of the street. Most of respondents chose being in this particular street because of its individuality and uniqueness, at the same time, they considered its conflicts and obstacles part of the context and vitality of this street. In other words, the continuous competition between people's needs and vehicles needs is eventually endless fact. Nodes of Rafidia Street proved to be the most focal points for people gathering and distribution because of the openness and wideness of the street from one hand, and the dense of activity location from the other. Even though these nodes were the most of traffic flow and congestion. Elements and attributes of Rafidia Street became remarkable in terms of their settings in the whole.

The image that Rafidia Street had is a two-way process between observer and observed. The different characteristics for the different observers affect the way of perceiving the surroundings of their built environment. Therefore, it is possible to strengthen the image by either retraining of the perceiver, or reshaping of one's surroundings. It should be mentioned that in studying the individual interviews and questionnaire, it was obvious that

none of the respondents had anything like a comprehensive view of the street in which they had as a daily path to their different destinations, or even spent time within it.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

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CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 PROLOGUE

This study was promoted by two main concerns. Firstly, to define the technical parameters of the built environment of the street, taking in consideration one street of Nablus City named Rafidia Street as the case study. Secondly, to define the quality parameters of the built environment that personalizes people attachment and perception to their surroundings.

The aim was to develop an understanding of the built environment of the streets of Nablus City in particular, and to try to justify the different approaches that people had in perceiving the built environment of Rafidia Street. Through this study, some categories may be classified that give the street its physical properties, any or all of which can be obtained to give the street its special connotation relative to its context, and these are like: **special size and dimensioning, special configuration and spatial structure, and special position.**

Streets are considered continuous channel of space, and the intention was to give a full awareness to the design process of the streets as channels. The continuity of the street space emphasizes its enclosure as an outdoor room of the city that had a distinctive role besides diversity of activities. On the contrary, streets are mostly thought of as roads rather than as places. Both street and activities in and along it promoted its role as a social condenser and as a locus of common interests. Therefore, the elements that constitute the built environment of the street are not separable from the street context itself.

Nonetheless, the aim is not only to define the two categories of parameters of the street's requirements, the technical parameters and the quality parameters, but also to provide principles and guidelines to be followed in the design process of the outdoor environment of the city, which is presented in its streets. In other words, it is to reach a satisfying approach of having more accessible street and with increasing capacity to accommodate

the needs of its various users. Moreover, to define an approach towards people satisfaction for their streets in general, and for Rafidia Street considered as the case study in particular.

6.2 REVIEW OF THE STUDY

Through the investigation of this study, the concept of street as urban space and outdoor environment were central and considered as a basis for clarification and analysis. With this understanding, the interpretation of the characteristics of the street built environment was constructed according to the differentiation between various characteristics, which made the recognition of the physical elements that feature and shape the context of the street as urban space.

The theoretical perspective of this study has been discussed in Chapter Three, which proposes that different views mean different images for different observers. Therefore, each individual perceives his/her surrounding according to the different backgrounds he/she has. In order to understand a particular situation, it was necessary to apply this understanding within specific area to be examined and justified.

The street network of Nablus City was clarified in Chapter Four. The fieldwork was carried out to investigate the strengths and weaknesses within the context of the built environment of this street network. The main purpose is to clarify then justify how do people interact with the different physical elements of this street. In addition, it was necessary to discuss the contents of the physical characteristics of the street network of Nablus City as well as the elements of the built environment of the street and the quality value of these different elements. Moreover, the categories of the street network along with the traffic characteristics related to their classifications have been discussed.

The Case Study of Rafidia Street was presented through Chapter Five. This Case Study, which was chosen, is a street in Nablus City named Rafidia Street that represents the outdoors-different patterns of life for different people. It examined the built environment of this particular street. These elements that personalize the built environment of Rafidia Street were divided into **physical** and **non physical**. Thus, the physical elements define the **technical parameters** of Rafidia Street built environment, while the non-physical elements define the **quality parameters**. For the physical characteristics, the study was for the street (R/W) dimensioning, traffic flow, lanes and directions, intersections, sidewalks,

parking, street furniture and green areas as well as building characterizing the street facade. For the non-physical characteristics, the study was for the attractiveness and distinguishes of the street built environment, and the locations of people distribution and gathering, in addition, the influence of the physical characteristics on people's perception as well as the quality of the built environment of the street. It was noticeable that both parameters are inseparable and interrelated. In addition, a group of pictures were shown to people of Rafidia Street to close the image and raise the value of the desired street.

This final Chapter concludes the study. It points out the research findings in the case study, recommendations for raising the quality of the built environment of Rafidia Street and to facilitate the street space to satisfy its objectives. In addition, to define an approach for the design process and urban outdoor environment of streets and confirm the needs of its spatial structure.

In sum, this thesis has established a clear understanding about the built environment of one of the streets of the city of Nablus. It has demonstrated how the people express their surroundings and interact within the context of their streets. It also discussed the different elements and activities they like to have for more accessible and comfortable use of their streets in order to gain a certain level of satisfaction.

6:3 THE RESEARCH FINDINGS

The previous chapters show that people are using their streets as a place of the outdoors space that reflects different pattern of life. The people in Rafidia Street, the case study street, feel the interrelationship with their street. This kind of relationship is fully characterized with the different attitudes and approaches while spending time or passing through this street.

In addition, the components of Rafidia Street were divided into two parameters that constitute its characteristics. These two are the **technical parameters** or physical attributes, and the **quality parameters** or non-physical attributes. The first is related to physical elements that constitute the built environment of the street. The second is related to people's evaluation of the physical components of the street, and their interaction with their surrounding of the built environment of their streets. Consequently, these two parameters are overlapping and pierce one another.

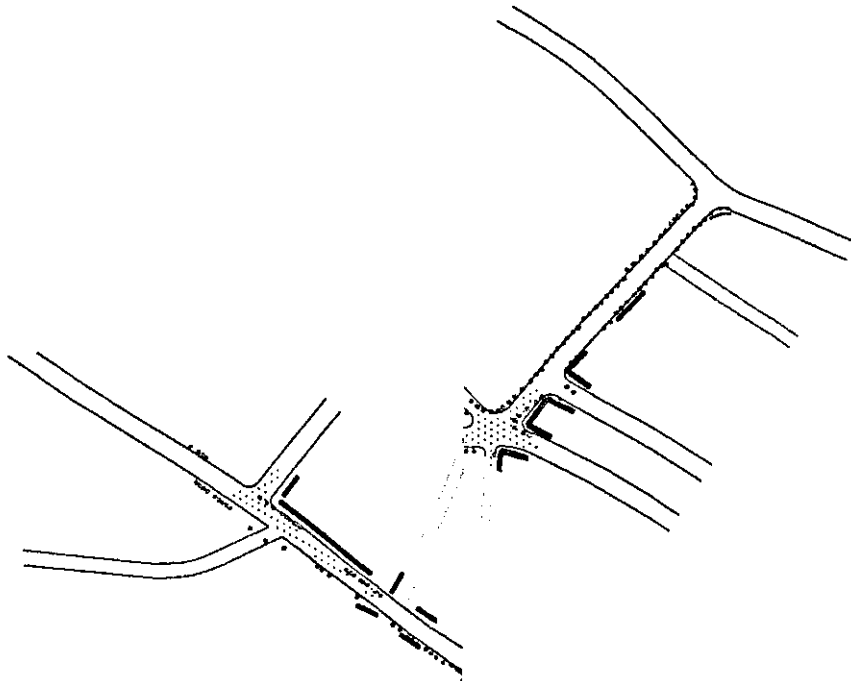
Moreover, the different types of services and activities that any street offers raise the perception level of different users of this street. It was noted that people interaction and existence within Rafidia Street is very related to the time of the day and type of services. For example, the presence of many restaurants and coffee shops attracted people to have outdoor meals with their families and friends especially at evenings, on the other hand the fair slope together with the existence of trees encourage walking along Rafidia Street. As seen in (Fig. 6.1), that clarifies where people are gathering along Rafidia Street. Indeed, people now seek for further functions that strengthen their beings within their street for longer and more comfortable time. This could be, according to fieldwork, by adding further elements and activities like sidewalks, parking areas, green areas and landscaping in addition to street furniture and different sitting areas... etc. In other words, it is to modify the physical characteristics of the built environment of the street once the non-physical ones are justified.

The sequence of the investigation and analysis in this study started by identifying the technical parameters of the components of the street built environment, then moved to define the quality parameters that established accordingly. Consequently, the discussion of the findings is also based on the same structure for these two parameters. Therefore, it was found that for successfully functioning streets, a standard dimensioning has to be constructed. The technical parameters are very related to the level of performance the street offers, and affect the level of acceptance people have as well.

6:3:1 THE TECHNICAL PARAMETERS

The built environment of the street is constituted of several elements and functions. These elements are responsible of the performance level of the street for its various users. The multi function of the street for accessibility and mobility serves in connecting parts of the street in particular and the city in general. This mixed use of the street obliges having different accessories that facilitate the diverse function of the street.

The fabric of Rafidia Street technically is made up of its physical attributes. Its character is fully recognized based on its dimension and contents. As mentioned before, Rafidia Street is a Main Arterial Street, and this requires certain specifications. Based on this fact, many functions could be justified within this particular street. Street is considered of common



Parameters of People's
Satisfaction Towards Streets

Leger

Figure 6-1
Rafidia Street analysis for
Distribution of people and physical elements

Scale

0 50 100 200 300 400 500m



property and not personal. Therefore, the combination influences of private and public appear clearly within its atmosphere.

These physical elements of Rafidia Street formulate its character. The function of the street is very related to this make up elements. In Rafidia Street, it has the attributes for the mixed use for people as well as for vehicles. The differentiation in the built environment of the street made it possible to serve its different users. The conflict of this mixed use is part of the daily life of this street. It was noticed that the peak hours of this combination occurred at the morning hours and evening hours. These different times of the day define the different functions of this street. In addition, this mixed-use may be justified according to the classification of Nablus Municipality rules of this street being of local commercial classification.

Basically, Rafidia Street is made up of two zones not equally distributed. One is for traffic flow as the effective lanes of the street, and the other is the rest of the street right of way (R/W) characterized in the sidewalks for people. The minimum for the street is to have these two zones as basic requirements. But the comfortable and proper use needs further elements in order to obtain an attractive outdoor built environment of the street. These further elements are the different accessories to serve all users of the street as discussed deeply in Chapter Four on the case study processing.

According to the findings of this study and based on interviews and people questioning, there were suggestions in order to raise the performance level of Rafidia Street that respond its technical requirements. These requirements are: enough sidewalks for comfortable and safe walking, trees and green areas, adequate parking areas in order to reduce traffic conflict. In addition, providing the street environment with suitable street furniture serves people in their meeting and socializing and adding a lively image to the street environment as well.

6.3.2 THE QUALITY PARAMETERS

Through this study, it was confirmed that the spatial structure of any street is very related to the arrangement of its physical elements. Eventually, the non-physical elements that determine the atmospheric character of the street built environment being lively. Thus, the street is defined as a space through the degree of its inclusive. The elements of the street

are considered the basic inputs of its image. Therefore, they must be arranged in a certain pattern together in order to provide a satisfying form.

The elements of any street are not separable from their relation to the context of the built environment of the case study street. The visual quality of any street can be recognized if it has identifiable and grouped elements arrangement. The quality that any street had is very related to the pattern of both its physical elements and type of services. Thus, the virtue of the specialty of any element or activity of any street may not be of the same quality in other street. For example, Rafidia Street is a special street in terms of shopping and of its reputation and location. Consequently, people like to be in this particular street because of its different restaurants, shops, wideness, and location...

Moreover, any street element may be of high value in raising the quality atmosphere of the physical built environment of the street such as trees and landscaping. This is very depending on the way each individual perceives his/her surrounding. For example, a small shop selling juice at the corner of the street may act as a landmark that orient people, and this was obvious while discussing the nodes attractiveness' of Rafidia Street.

When people along Rafidia Street were asked about elements that attract their attention to Rafidia Street there were variations in their responds. This variation is related to the different way each individual is reading then acting within the context of the built environment of their streets accordingly. Therefore, the way people express themselves is very dependent on the experience they have in advance. The figural reading of the street is one of the most important factors in the use of this particular street. The capability of the users to perceive his/her street promotes the sense of enclosure and orientation, therefore, defines and delimits the area of public use, property and realm.

The aim is to gain an integrated street with the architecture and landscape of the area so as to achieve visual unity and individual identity. A considerable thought has to be given to the planning and design process of streets, in order to have streets with no congestion or confusion, balanced distribution of activities and rich visual appearance. Based on the fact of the interrelationship between the physical elements and people's perception, then modifying or adding some physical elements will raise the quality of the street spatial structure.

Through examining the qualities that Rafidia Street has, it was noticeable that people evaluate the quality of meeting and socializing, which requires having adequate space for this purpose. Also, this requires having trees and landscaping, sitting area for meeting as well as proper street furniture. The street scene was of the favorable actions along Rafidia Street, so instead of having this virtue as a disturbing fact, special care should be for having sitting area close to the street scenes and do not contradict with its performance. The same awareness in considering the sequence and distribution of the street different activities, in order to gain certain pattern for the street life.

6:4 PRINCIPLES FOR IMPROVING THE BUILT ENVIRONMENT OF THE STREET

A comprehensive perspective to the approach through this study suggests that the uniqueness of a street has arisen from responses to the practical problems of everyday life. In the past, the relationship between people and their surrounding was expressed in the different services and facilities they included to enrich their paths like fountains, benches, lamps and so on. At present, people with their sense of their streets continue to add decorative elements to the built environment of their streets. This in order to strengthen the quality of their outdoor urban space represented in the street, on the other hand to modify their streets to the extent that responds to the different needs for different users. In other words, they expect to find variety, safety and joyfulness in their streets.

In the process of improving the street built environment, many facts have to be considered. Most of these are related to the various requirements of the differentiation between users. In the previous chapters, the various factors affecting the context of the built environment of the street, the components of its physical character and people's perception were studied and highlighted. This was to establish a framework of a strategy to deal with built environment of the street, taking into account the concept of people satisfaction towards their streets.

Based on investigations and examinations of the various factors that contribute in formulating the spatial structure of the street environment that being investigated through this study, and therefore, affecting people's perception and evaluating of the qualities of their surroundings. The following are several principles which are important to achieve the

desired built environment of the street. These principles are derived from the findings of this research.

Principle One: Providing accessible streets

It is the ultimate of the whole design process and the aim of all the working institutions that offered services. Streets should be accessible and comfortable for all users. It should be free of obstacles and barriers of any kind that may shorten its efficiency or safety. Accessibility required the study for the different needs of different users. Therefore, providing the necessary aids that serve its operating. For example, special detail treatment for sidewalks to serve people with disability, and mothers with rolling carriages. This also is not separated of other sidewalk activities as in (Fig. 6.2).

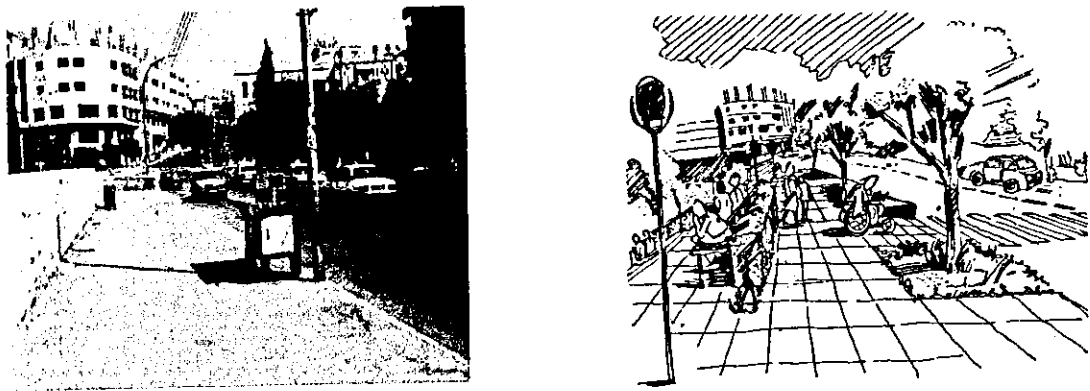


Fig. 6.2: Adding street furniture and landscaping and the proper treatment of sidewalks.

Through this study and while conducting the fieldwork, there was no special treatment for any of the different levels of the sidewalks along Rafidia Street, except at few locations. In addition, the height of the sidewalks is comparatively high for comfortable use. Modifying the street in zoning for its different users will help in gaining more efficient streets with less confusion and less accidents, and consequently more pleasant in use as in the above (Fig. 6.2).

For example, the sidewalks of Rafidia Street are not divided in any way, and the street façade has no specific architectural treatment to serve this purpose. In other area of Nablus City, in Amman Street for example, the arcade construction is a rule of licensing processing of any building. The use of this style of building there will not serve the

purpose of its construction, on the contrary it work to shade the action of vehicle's maintenance. If, as one of the approaches, in modifying the rules of building, this type of architectural design or other similar treatments are to be considered in the right place. Consequently, the result will be not only providing a shaded area for people, but also separate area of other street functions that may not cause any conflict.

It should be mentioned here that land development patterns are dramatically influenced by the accessibility provided streets. As long as the street is well accessible and has a well arranged and furnished context, the value of its land use will be reconsidered.

Principle Two: Upgrading physical qualities of street

The interrelationship between the two parameters of street context discussed in this research is responsible on featuring the street and defining its quality. Therefore, in order to raise the physical quality of the street this interrelationship has to be considered.

Moreover, in studying accessibility responses, physical qualities have to be also considered. Hence, vegetation, scale, materials, transportation modes, street furniture, composition of street as well as architecture and landscaping should all be taken into consideration as in (Fig. 6.2). In addition, the fact that people are part of the street life has to be taken into account. Thus, public spaces that give shape and diversity to the street context and provide people with places to meet, gather and socialize has to be reflected in the street space and zoning. Providing special sitting areas as suggested at intersection number nine in (Fig. 4.4) to be as in (Fig. 6.3).

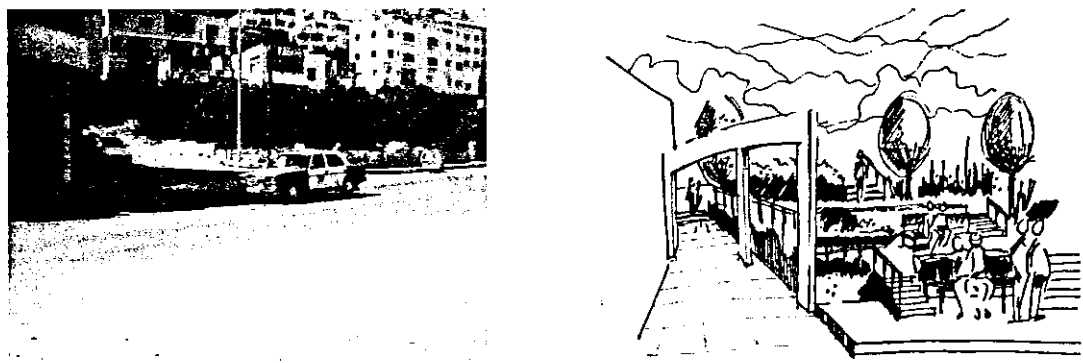


Fig. 6.3: Providing areas for people to gather and socialize close to street life.

Indeed, people are the judge of the quality of any street besides its efficiency. Therefore, providing the street with the necessary elements will reduce conflict and save organize distribution of activities. However, by realizing the importance role the street may has as outdoor public space, the challenge will be of less influence once the problem is defined. Meeting this challenge will be the charge of an array of interest groups, organized advisors to the city and elected decision makers, working side by side with responsible agencies.

Principle Three: Traffic control devices

In order to gain a well and efficient street processing, traffic control devices have to be operated. Such devices should be active and comprehensive taking into consideration various needs and requirements. It should has a uniform signs and pavement marking throughout the whole network of the city. These uniform standards have to be developed in accordance to a comprehensive planning process.

In this understanding, the effort of urban design professionals to achieve coordination in signing includes the consideration of traffic signs as well as other graphics. This will lead to more organized and readable streets regarding orientation and maneuvering for different users. Therefore, unifying the signing and signal processing will enhance the efficiency of reading the code that the street has. Consequently, less confusion will occur. In Rafidia Street, providing the proper traffic control devices will unify the code for all users. Accordingly, they will receive and express the same approach in the signs they use or have as guiding instruments either in place or character. (Fig. 6.4) shows both the street marking and traffic directions and social life at street side.

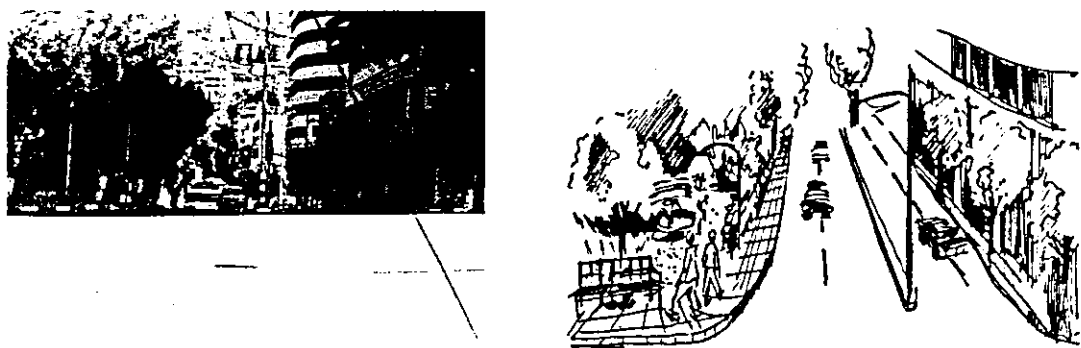


Fig. 6. 4: Street marking reduces conflict with other street activities especially at intersections

Principle Four: Increasing visual acceptance

The visual impacts of the built environment of the street are the basis for judging a good or bad street. However, streets offer the opportunity to enhance the urban environment as well as to furnish a necessary transportation modes. This, therefore, justifies the interrelationship between the two parameters mentioned regarding the context of the built environment. Thus, any elements that serves the performance of the street, for example trees and green areas, will work to improve the physical appearance of the street environment, and consequently add a lively image to its quality.

Whether consciously or unconsciously, people spend much of their time searching for “order in the environment”. The eyes constantly seek out visual information about the spaces people are moving through. When a rational order in the elements cannot be perceived then the view becomes frightened and confused. Planners and developers should provide unity and harmonious relationships in the parts of their developments as in (Fig. 6.5). Relating major spaces to one another through design process will define the different spaces and continuity of the same street.

In (Fig. 6.5) adding the arcade element to the street façade divide the sidewalk into separate zones for either shaded walking, sitting or shopping. Therefore, separating people from vehicles will not only protect them but also increase space for more people to be at the same place. Moreover, it adds more quality to the street space.



Fig. 6.5: Adding architectural elements for the street facade for a continuous street façade.

Increasing visual acceptance is very dependent on the context of the built environment of the street and the elements that shape its physical characteristics. In addition, other criteria should be taking into consideration:

- 1) Control over the height of building in order to keep the street façade continuous and to protect the skyline of the façade.
- 2) In order to keep the unity of street built environment, regulations of having special treatment of the street façade regarding the architectural typology should be applied. For example, the use of arcade as shaded pedestrian area of the sidewalk.
- 3) Providing diversity of activity and in balance distribution so as to obtain a homogenous diversity for both, space and people gathering. For example, having a continuous façade of shopping as in (Fig. 6.5).
- 4) To use the best of the different set backs of the buildings, resulted of the changeable building regulations, for adding variation in the street space.

Principle Five: Traffic flow and direction considerations

It was noticed through investigation that Rafidia Street is considered of having a high traffic volume, therefore, this should not be reflected negatively on other street's functioning. However, the installation of traffic signals reduces the congestion on some of the intersections. Other intersections require different type of solutions in order to improve its performance and increase its efficiency level. These actions may be in changing the traffic directions or modifying the geometry layout of the intersection. In addition, according to the fieldwork, most of people gathering were close to the different intersections were most of the attractive activities are distributed, thus, the need of safe and comfortable space is an essential requirement.

Principle Six: Providing enough parking areas

Most of conflict of the street space is due to the requirements of its different users. Therefore, the existence of vehicle needs special awareness in street dimensioning and parking space in order not to expand the effect. Providing special areas beside the street boundary, like special zone for each segment for example, will give more room along the sidewalks for people to walk and add more space to the street width. In addition, the rule of having enough parking into any proposed building will provide enough parking spaces

inside the buildings and reduce occupying the street space. On the contrary, by reducing the width of the sidewalks, like what happened in the time of writing this research, will oblige people to parallel to the vehicles along the street causing more disturbing and less safety. In (Fig. 6.6) on street parking is divided from the sidewalk by a continuous row of trees.



Fig. 6.6: Dividing on street parking from sidewalks other activities for safety purposes.

Principle Seven: The application of people's participation Concept in the design process

The quality of the built environment of the street can be realized when people participate in the development of the planning process. Thus, in the absence of the influence of people participation, the design process will depend on studied made by the responsible agencies with no attention to the people real needs and requirements. Actually, people always judge and evaluate the level of efficiency and attractiveness of any characteristics of the built environment of the streets themselves. During the fieldwork processing of this research, people were asked to express the strengths and weaknesses of the built environment of Rafidia Street. Accordingly, many of the physical elements featuring the built environment and many of the widespread activities along this particular street were justified. Without this understanding, any project that supposed to serve people will not gain its most benefits if the responsible agency of executing similar project neglect its target group.

Principle Eight: Coordination between all working agencies

Usually, the Municipality is responsible on handling projects concerning services and recreational purposes and so alike. Besides, there is more than one department of the same specialization to carry on projects of similar objectives. Part of these projects needs further studies and thorough investigation to accommodate its target groups, but sometimes, and for different reasons, these projects are executed without enough fieldwork for the needed data. Therefore, the objectives of these works are of less value and unfortunately, this will lead to losses in both financing and energy labor work.

Principle Nine: The possibility of future adjustment

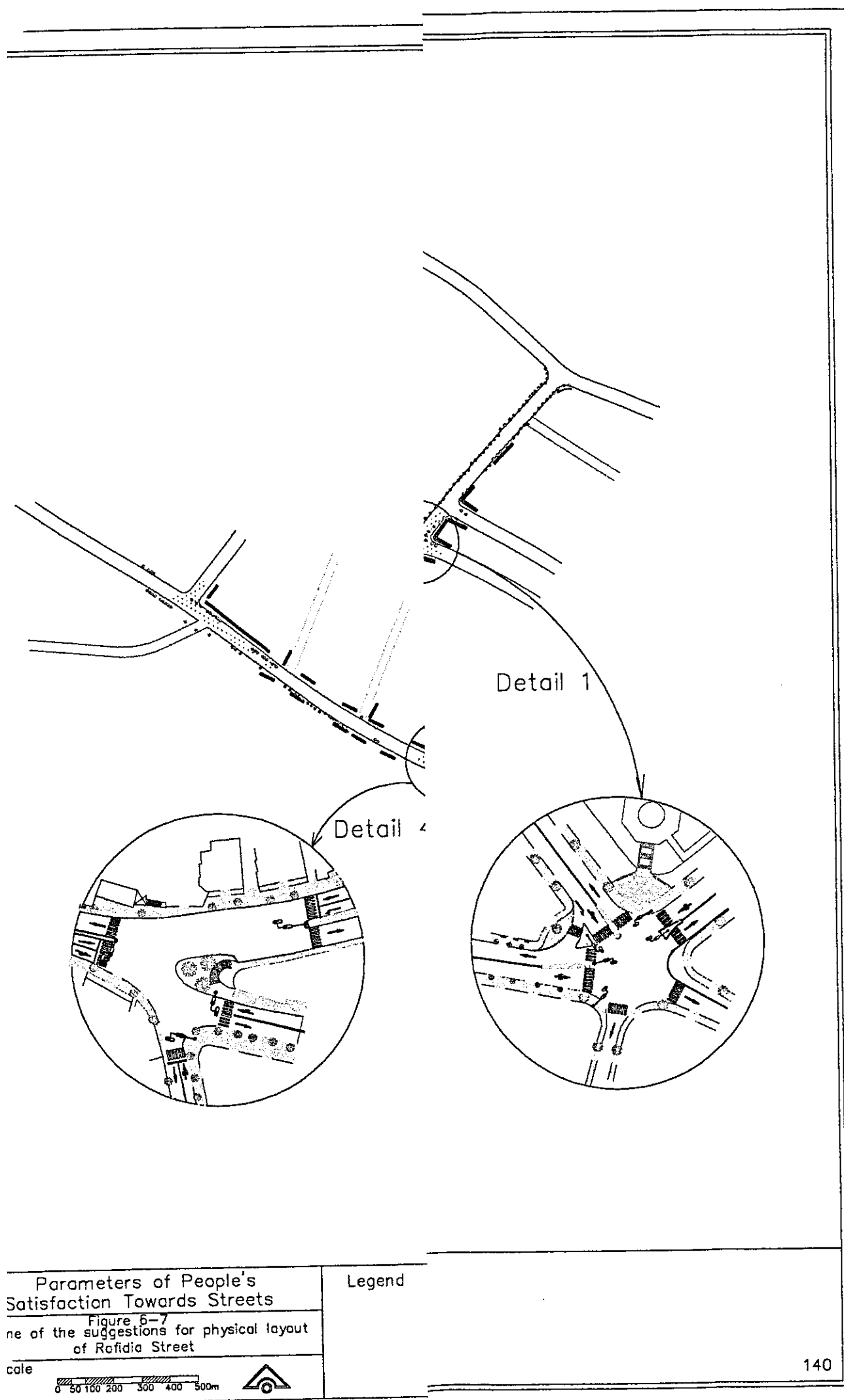
Planning and architectural design should keep space to accommodate the street according to the changes in users needs and requirements; for example, the current project in the time of writing, regarding reducing in the sidewalks space for parking purposes, will prevent the continuity of traffic flow and people maneuvering.

These are some of the principles that could help in defining the quality of the built environment of the street. In sum, the marking of streets with distinctive quality involves principles which consider the built environment of the streetscape process and people interaction. It has to do with understanding the parameters that constitute the physical characteristics of the built environment of the street, taking into consideration the technical parameters and the quality parameters. It also involves a variety and choice that evolve the interaction between people and their surroundings, in order to raise their perception and satisfaction level towards their streets.

This above discussion for the different principles and processes for improving the built environment of the street could lead to various solutions either for Rafidia Street or any other street. As one of these proposals Rafidia Street could be presented as in (Fig. 6.7) that clarifies the above-discussed principles, and the existing conditions and limitations of Rafidia Street itself.

6:5 TOWARDS AN APPROACH FOR PEOPLE SATISFACTION

At present, the contemporary approach to design and planning is insensitive to the concept of the quality of the physical built environment of the street. This lack of sensitivity comes



mainly from professional practitioners, whose approach to the built environment of the streets is generally guided by various backgrounds of education and regulations. Therefore, it is noticeable that professionals design facilities without any consideration to specifications of the context of the built environment of the street.

The point can be seen clearly in the fragmentation of the work processing throughout any street so that no comprehensive thought of the sequence of work is followed; for example, in maintenance works. The same is found in solving the problem of traffic congestion without any concerns of people's needs and expectations. It is impractical to study every individual's needs for projects used by general public, but a list of physical environmental needs applicable to people may be illustrated. In other words, in order to approach the desired quality of the street built environment, a thorough study for people needs and expectations has to be prepared in advance.

This study also implies that the role of the designers and planners is not to create a work that reflects modernization. Rather, the design ought to reflect the essential aspects of all its users. This will lead to an important conclusion that both people and designers should play a complementary role in achieving a good built environment of the street. In order to do it effectively, it is essential that people should have the knowledge to be able to form conception of the desired built environment of their streets.

The first task, therefore, requires an understanding of the potentials and problems of the existing street built environment. Then, it needs to be related to people's needs and expectations. In addition, it is also essential to gain insight into the way people are likely to adapt different spaces of streets in order to express their satisfaction and acceptance as another input of the design process.

In this sense, to justify the built environment of the street, the design and planning processes should consider the followings:

- The type of the street and its characteristics, and the development of its built environment, arrangement, functioning, landmarks, etc.
- The physical elements characteristics that constitute the built environment of the street.
- The significant elements and/or activities contributing to strengthen the physical built environment of the street.

- People needs and expectations according to their different social and cultural characteristics.
- The characteristics of the distinguished elements of the built environment of the street and their meaning to people.
- The distribution of various elements and/or activities along the street.
- The architectural characteristics and typology for building configuration of the street façade and boundaries.
- Providing essential facilities and accessories for different users of street taking into consideration differences in scale, type, behavior, requirements and dimensioning.

The interpretation of all these points will provide a basis for the information and insights related to the image of the street and its built environment, which will be a basis for planning and design process.

In order to improve the quality of the street environment, the design should respond to people themselves and derive from the street characteristics itself. Accordingly, it was suggested that the design for a new street or developing an existing one should be related to the context of the boundaries of it and not dealt independently. In other words, it is important that the street is not seen in isolation of its fabric or surroundings context, in order to gain strong image of the built environment of the street.

6:6 A RECOMMENDED DESIGN PROCESS

The design process arising from this study suggests that both technical and quality parameters are components of street environment and people satisfaction. Each component can be considered a fragment of the total built environment of the street, which help the planner to justify the positive and negative aspects and improve them to reach the optimum solution. The aim of this study is to have a reliable street that can accommodate the different needs for its different users.

Moreover, in order to produce a street reflecting people's satisfaction, the designer can consider three strategies. First, understanding different needs and requirements of the different users of the street. Second, identifying the street components and the two parameters of the street environment, the technical parameter and the quality one. Third, making people participate in the design process.

After identifying the parameters that represent the people's satisfaction towards their streets, the task of the planner, then is to decide how they will be utilized in the design process. It was indicated in this study that some parameters fit in harmony together, while others do not. Moreover, there are parameters which determine the design process (function, technology, economy, vehicle requirements, etc.). Therefore, to reach an optimum solution, one has to go through a long and a complex process, in which there are different variables that had to be satisfied. From this study it was concluded that it could be more practical to concentrate on some of these elements and/or activities at the expense of others depending on their importance and hierarchy. For example, the importance of the activity of walking requires providing adequate sidewalks free of obstacles, and the same for increasing trees and green areas and its influence on the quality of the street environment.

From the above discussion, it is noticeable that there is a need to improve the professional's practice in planning and design process in order to have a good satisfying street environment. In this sense, the function and distribution of elements and/or activities along the street ought to be inspired by awareness and consciousness of their image and quality.

Even though this is a subjective phenomenon, where no rules can be produced, some recommendations can be developed to obtain people's satisfaction towards their streets:

- 1) Recognize the distinguished elements and/or activities and their distribution along the street. This should include the existing and proposed designs.
- 2) Identify the type of services that represent the quality of the street and retain them in similar designs.
- 3) Highlight the elements and/or activities that distinguish the street environment and attracted attention in order to strengthen street quality.
- 4) Establish an organizational framework or local committees. This involves building regulations, organizations, and administrations in addition to decision-makers and academic people.

- 5) Strengthen the relationship between the existing street and the new or proposed ones; the new one should fit in harmony with the whole street network of the city and to keep up with the configuration, unity and context.
- 6) Respond to people's different background in the spatial organization of the new street network.
- 7) Provide balance distribution of the various elements and/or activities of the spatial context of the street composition. Moreover, to define the street space as configuration by itself.
- 8) Respond to the required dimensioning for various functions and users of street.

In sum, it is clear that this approach requires a role for the professionals different from their conventional role in the planning and design process. The starting point of this approach requires that participants should have an awareness of people's needs and satisfaction. If it is approached with this awareness, it will be possible to achieve the desired quality for the street built environment image and characteristics and to emphasize its potentials.

6:7 FURTHER RESEARCH

Recommendations from this research suggest the importance of having a value of the street built environment in planning and design process. The issues related to this subject are wide and varied and this research is only one step, which has specific objectives and limitations. Therefore, some issues lie beyond its scope and need further investigation regarding the two different parameters of street environment.

Here, the concentration was on one main arterial street of Nablus City. Further research could focus on other categories of streets, and discuss its different functioning and different users. In addition, other researches could examine the different images and approach ways for measuring people's satisfaction in other streets in different places with different circumstances. Even though people are not part of the developing process of any planning schemes, still professionals have to be aware of people's needs and requirements in order to increase their level of satisfaction towards their street environment.

Many steps towards modernization have been achieved, but the main concern through all this is to keep the human scale while approaching these wide steps. In other words, the respond to the various demands for the different users of the street environment has to be carried out at parallel and together with the same concern. On the contrary, the accelerating is towards vehicle use and providing the street with facilities that serve this purpose, and neglecting other people's needs. For example, the reducing off the sidewalks width along Rafidia Street for parking purposes leaving no room for either walking or placing other street furniture.

Another important aspect that needs further research is to develop techniques and methods, which enable professionals to determine the parameters and requirements of the street environment in order to reach people's satisfaction and raise the quality of the street environment. Moreover, an application of these methods should be tested in the design process. In other words, the aim is to establish a **code** for the requirements of street environment that can serve the multi functioning of the street spaces for its different users.

For the case study (Rafidia Street), it was noted through this study, the lack of information regarding the street built environment. During this study, several ideas were developed for future researches where investigation on the concept of the street built environment could be extended. A partial list of these could include:

- **Codes** and **document** information about the characteristics of the street built environment.
- Investigate the different **parameters** of the context of the street built environment.
- Examine the influence and interaction of people on the **urban environment** of their streets and define the **interrelationship** with their surroundings.
- Investigate people's **perception** towards the features that express and represent their **level of satisfaction**.
- Conduct similar **fieldwork** in other streets' environment, which allow testing the results of this study.

6:8 CONCLUDING REMARKS

Throughout this study, the underlying theme has been the quality of the built environment of the street context. It has been noted that people usually act within their street

environment according to the distribution of different elements and/or activities along their paths. In addition, people use the street space as public outdoor open space, where they can gather and socialize. Indeed, the characteristics of a particular street with its criteria featuring its personality support the role the street may have in people's interaction and communication with their surrounding. In this sense, streets, which are different in its physical shape and performance should have different built environment.

The proceeding discussions suggest that the concept of the quality of the built environment of the street is not determined by utilitarian factors. Rather it is a product of an approach which respects and involves the characteristics of both the environment and users. In this sense, the comprehensive thought of the street built environment is not a problem solving, but it is a comprehensive approach to provide the street built environment with a unique features and characteristics.

To study the relationship between people and their street means to highlight the parameters that constitute and affect both and the role different elements play to reach people's satisfaction. In this context, an interdisciplinary approach to this subject seems better suited to understand the various roles played by different elements and/or activities of the relationship between people and their street built environment.

Moreover, this study shows that the way people perceive their street built environment is very related to their life pattern and as a respond to their recreational needs. Indeed, people sometimes are accustomed of spending their times in a certain way at a certain place and at a certain time. This justifies most of people's behavior within the context of Rafidia Street in particular and other streets in general. It was found in this study that people are attracted to the different restaurants and coffee shops along Rafidia Street beside the walking activity. However, this was mostly among teenagers. This reflects the pattern of life most of the teenagers have elsewhere.

The outcome of this study is of interesting importance to professionals and people of the case study and any other place. It consists of five main points. First, it provides information about the street built environment of Rafidia Street in particular and Nablus City in general. Second, it clarifies the role of each element/activity within the context of Rafidia Street towards people satisfaction. Third, it defines the different parameters that represent

the street built environment. Fourth, it develops a theoretical understanding to the concept of the street built environment. Finally, it explains a way to consider the concept of parameters of the people's satisfaction towards their streets in planning and design process.

In conclusion, the concept of the quality of street built environment demands more critical investigation and attentions, and this study could be treated as a step forward.

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APPENDICES

APPENDIX 2.1: The checklist used in the key figures interviews.

Interview Key Figures

An-Najah National University

Interview No.

Faculty of Graduate Studies

Month:

Department of Urban and Regional Planning

Time:

Introduction

My name is Sahera R. Bleibleh. I am doing my MS in Urban and Regional Planning at An-Najah National University. In my research, I am studying the parameters of people's satisfaction towards streets.

I would like to ask you few questions about the elements of the physical environment of the street of Rafidia, in particular, as it is taken as a case study for the purpose of the research.

The objectives from this interview will be to determine both, the dimensioning parameter influence, and people's perceptions.

These information will be used in my MS research. The objective is to clarify the strong and weak elements, which may or may not attract people to use streets as open space, therefore, to encourage and emphasize the factors that influence people's satisfaction, then to increase the accessibility of streets for pedestrian as well as vehicles.

I do greatly appreciate your time and cooperation, and thank you very much.

Biography

1. Name
2. Age
3. Sex Male() Female()
4. Occupation
 - 1) () Politician
 - 2) () Planner or architect
 - 3) () Lecturer at the university
 - 4) () Mayor

- 5) () Decision Maker
- 6) () Others

5. In your view, how can we identify the built environment of a street?

6. What distinguished elements give the street its character?

7. According to the previous questions, what distinguished elements are in Rafidia Street?

8. What makes Rafidia Street suitable for pedestrians?

9. What are the problems in Rafidia Street?

10. In your view, what actions should be done to increase people's satisfaction to their streets?

11. In your view, what should be done to reduce the influence of traffic flow on pedestrians?

12. In your view, what should be done for Rafidia Street in particular and other streets in general?

13. Would you like to add something else?

APPENDIX 2.2: Elements to be studied in Rafidia Street: *Check-list used in the observations:*

1- Technical Part:

A- Street Dimensioning

- a) Length
- b) Width
- c) Proportion
- d) Slope

B- Green Areas and landscaping

- a) Trees
- b) Green islands
- c) Green areas

C- Buildings

- a) Use and functions
- b) facades
- c) height
- d) material

D- Transportation Analysis

- a) Traffic direction and flow
- b) Traffic congestion
- c) Traffic lanes number
- d) Peak hours
- e) Intersections
- f) Sidewalks and Pedestrians
- g) Crossing lines
- h) Pavement condition
- i) Parking lanes
- j) Traffic signals
- k) Street furniture

2 - Quality Part:

- 1- Landmarks: (buildings, elements and activities)
- 2- Nodes: (intersections)
- 3- Edge: (boundaries)

APPENDIX 2.3: The questionnaire that has been distributed in Rafidia Street.

Questionnaire

An-Najah National University
Questionnaire No.
Faculty of Graduate Studies
Department of Urban and Regional Planning

Month:

Time:

Introduction

My name is Sahera R. Bleibleh. I am doing my MS in Urban and Regional Planning at An-Najah National University. In my research, I am studying the parameters of people's satisfaction towards streets.

I would like to ask you few questions about the elements of the physical environment of the street of Rafidia, in particular, as it is taken as a case study for the purpose of the research.

The objectives from this interview will be to determine both, the dimensioning parameter influence, and people's perceptions.

These information will be used in my MS research. The objective is to clarify the strong and weak elements, which may or may not attract people to use streets as open space, therefore, to encourage and emphasize the factors that influence people's satisfaction, then to increase the accessibility of streets for pedestrian as well as vehicles.

I do greatly appreciate your time and cooperation, and thank you very much.

Biography

1. Name (optional)
2. Age
3. Sex Male()
 Female()
4. Accommodation Resident ()
 Visitor ()
5. Marital status Single()
 Married ()
6. Occupation
 - 1) () Housewife
 - 2) () Student
 - 3) () Worker
 - 4) () Shop owner
 - 5) () Professional
 - 6) () Others, specify -----
7. Level of education
 - 1) () Below Secondary Stage
 - 2) () General Secondary Certificate
 - 3) () Community College
 - 4) () University
 - 5) () MA.
 - 6) () Ph.D.

Part One:

8. In your view, what are the distinguished elements in Rafidia Street?

- 1) () Boundaries (buildings, green areas, voids,..., specify)
- 2) () Wideness
- 3) () Restaurants
- 4) () Shops
- 5) () Location
- 6) () Certain activity, specify -----
- 7) () Others, specify -----

9. Which ways do you usually take for your different destinations? To Job, To home, To school, others?

10. What mode of transportation do you usually use for your different journeys?

- 1) () Automobile
- 2) () Taxi
- 3) () Shared taxi
- 4) () Bus
- 5) () Walking
- 6) () Others, specify -----

11. What specific element attracts your attention through your different journeys?

- 1) () Buildings or architectural elements.
- 2) () Traffic lights
- 3) () Green areas.(trees)
- 4) () Others, specify -----

12. How these elements affect the street function?

For example: From the previous question, specify which element affects:

- 1) () Image of the street. Affected by:
(1), (2), (3), (4)
- 2) () Making attractive environment. Affected by:
(1), (2), (3), (4)
- 3) () Accessibility of streets. Affected by:
(1), (2), (3), (4)
- 4) () Way finding. Affected by:
(1), (2), (3), (4)
- 5) () Impact on people Affected by:
(1), (2), (3), (4)
- 6) () Balanced distribution of elements. Affected by:
(1), (2), (3), (4)
- 7) () Others, specify -----

13. In your view, what elements are most distinctive in Rafidia Street?

- 1) () Its shops
- 2) () Its restaurants
- 3) () Its accessibility
- 4) () Its plantings
- 5) () Its wideness
- 6) () Certain activity, specify -----
- 7) () Others, specify -----

14. In your view, what activities are most distinctive in Rafidia Street?

- 1) () Walking
- 2) () Shopping or/and window shopping
- 3) () Eating
- 4) () People meeting and social communication
- 5) () Setting on the side of the street
- 6) () Driving
- 7) () Others, specify -----

15. In your view, what is missing in Rafidia Street?
- 1) ☐ Green areas like rows of trees, green islands, parks
 - 2) ☐ Enough space
 - 3) ☐ Street furniture like sidewalks, benches, fountains, telephone boxes
 - 4) ☐ Accessibility for disabled
 - 5) ☐ Certain activity, specify _____
 - 6) ☐ Others, specify _____
16. Do you think it is proper to use Rafidia Street -as it is- for vehicles as well as for pedestrians?
- Yes (☐) No (☐). Why?
17. In your view, how can we increase the accessibility of Rafidia Street for pedestrians?
- 1) ☐ Increasing space
 - 2) ☐ Adding sidewalks
 - 3) ☐ Changing traffic direction
 - 4) ☐ Making pedestrian areas
 - 5) ☐ Adding street furniture
 - 6) ☐ Modifying building's legislation
 - 7) ☐ Providing parking lots(areas)
 - 8) ☐ Considering the disabled needs
 - 9) ☐ Others, specify _____
18. Do you think as pedestrian/driver that the traffic volume is:
- 1) ☐ High
 - 2) ☐ Moderate
 - 3) ☐ Low
19. Do you find it disturbing to walk in Rafidia Street?
- Yes (☐) No (☐)
- a) If yes, because of:
- 1) ☐ Congestion of Cars
 - 2) ☐ Lack of pedestrian safety
 - 3) ☐ Behavior of People
 - 4) ☐ Not enough space
 - 5) ☐ Shops and their goods on the sidewalks
 - 6) ☐ Location
 - 7) ☐ Gradient
 - 8) ☐ Sidewalks and shortage of space because of goods and/or cars
 - 9) ☐ Parking lanes
 - 10) ☐ Lighting
 - 11) ☐ Shortage of green areas
 - 12) ☐ Traffic direction
 - 13) ☐ Traffic lights
 - 14) ☐ Certain activity, specify _____
 - 15) ☐ Others, specify _____
- b) If no, because of:
- 1) ☐ Congestion of Cars
 - 2) ☐ Lack of pedestrian safety
 - 3) ☐ Behavior of People
 - 4) ☐ Not enough space
 - 5) ☐ Shops and their goods on the sidewalks
 - 6) ☐ Location
 - 7) ☐ Gradient
 - 8) ☐ Sidewalks and shortage of space because of goods and/or cars
 - 9) ☐ Parking lanes
 - 10) ☐ Lighting
 - 11) ☐ Shortage of green areas
 - 12) ☐ Traffic direction
 - 13) ☐ Traffic lights
 - 14) ☐ Certain activity, specify _____
 - 15) ☐ Others, specify _____

20. Would you like to add something else?
- _____
- _____

Part Tow:

Show the interviewee pictures of different streets, then ask him/her

In general:

1. Based on the pictures that you have seen, could you please tell me:

- a) In what kind of street do you like to walk?

- b) What physical elements do you really want in the street?

For Rafidia Street in Particular:

2. What should be done to increase street's accessibility?
3. Do you think it is a wise decision to use part of Rafidia Street for cars?
4. Do you think Rafidia Street is easy for either way finding or spending time?
5. Describe how do you feel towards your ideal street?

APPENDIX 3.1: Roads/street–Legal definitions

After reviewing laws and regulations applicable in some countries, it appeared that there is no universally adopted definition for “Roads” or “Streets”. Definition starts from the traditional concept for the word “Road” which restricts the function for the pedestrian use and vehicles, to other definitions that expand the concept to include all the road items. Following definitions appeared at some legal documents.

Law regarding the organization of cities, villages and buildings (Temporal) number 79 for the year 1966.

It is the Jordanian law that was applicable in The West Bank since 1967 until the redeployment and the establishment of The Palestinian National Authority in 1996, when a nearly similar law was introduced.

Article two that gives definitions to words, phrases and terms used in the law, and in specific item 21 from the article defined the “Road” as:

“The word “Road” means any road or street or alley, or passage, or pathway, or path, or granplank, or chariot road, or aisle, or yard, or square, or bridge, no matter if private or public used or unused, existing or proposed to be established according to any project or construction plan, and includes all trenches, canals, grooves, water drainage, locutions, side docks, safety islands, circles, squares, yards, trees, yeast on sides of the road, baring walls, fences, barricades, handrails, and traffic signs.”

In item 37 from the same article a definition was made for the term “ Road construction” as follows:

“The term (Road Construction)”, includes all soil work, land settlement, paving, asphalt paving, or concrete paving, or bridges, or locution, or baring walls, or footpaths, or road’s expansion or improvement, which includes reconstruction of footpaths, cultivation of trees, lightening of streets, fixing side road seats, cleaning buildings facades and roofs, and any other issues for the improvement and city cosmeting.”

APPENDIX 4.1: Network of the Main Streets

The street network of the main streets within Nablus City consists of the following street:

1. Trespassing National Main Street (No. 60) Jerusalem-Jenin, which consists of the following streets: Al-Quds Street, Jamal Abdel-Nasser Street, Faisal Street, Al-Ghazali Street, Al-Hijaz Street, Haifa Street and recently Al-Hurreyia Street.
2. Trespassing National Main Street (No. 57) Jordan border (Damiya Bridge) –Tulkarm, which consists of the following roads: Amman Street, Faisal Street, Al-Ghazali Street, Al-Hijaz Street and Haifa Street.
3. National Main Road (No. 55) Nablus-Qalqilia, which consists of the following roads: Prince Muhammad Street, Al-showetreh Street, Al-Kfair Street and Rafidia Street. (Part of these Streets, which are Prince Muhammad Street, Al-Kfair Street and Rafidia Street, are all considered as Rafidia and are taken as the case study).
4. Regional Bypass Road (No. 548) Jerusalem-Jordan border, which is called Suleiman Al-Nabils Street.
5. Al-Hisba Municipal Road (leading to industrial area and wholesale market).
6. Az-Zuiut- the extension of Jamal Abdel-Nasser Municipal Road (leading to Balata Refugee Camp and the Slaughterhouse).
7. Asker Municipal Road.
8. Sufian-Omar Ibn Khattab Municipal Road.
9. Palestine-Ahmad As-Shaka Municipal Road
10. Izz Eddin Al-Kassam Municipal Road.

A Typical Main Street is

- a 4-lanes divided urban arterial,
- with restricted parking (at least during AM and PM peak periods),
- limited access,
- few pedestrian-generating land use activities,
- with grade-separated or traffic signal-controlled pedestrian crossings,
- no-parking generating land use activities, and
- relatively high speed environment (speed limits 50-80 km/h)

A Typical Feeder/Collector Street is

- a 2-lanes or 4-lanes undivided urban arterial,
- with parking lanes on one or both sides of the street,
- with parking regulations encouraging short-term parking,
- with partial access control,
- moderate pedestrian presence,
- crossing at marked and signed crosswalks, and
- moderate speed environment (speed limits 50-60 km/h)

A Typical Local Street is

- a 2-lanes or 4-lanes undivided urban arterial,
- with no pavement (lane) markings,
- with no parking restrictions,
- no access control,
- with high pedestrian volumes, and
- low speed environment (speed limits 30-50 km/h)

APPENDIX 5.1: Unofficial translation of the submitted paper to Nablus Municipality regarding reducing the sidewalks' width of Rafidia Street.

Mayor of Nablus Municipality

Honorables at the Planing Department

Greetings,

With reference to the sidewalks projects for Rafidia Street (currently under construction), and dependent on the fieldresearch for Rafidia Street in particular, and due to the fact that Rafidia Street is considered a street of high density (both pedestrians and vehicles) for its distinguished functions and spaces. In addition, as there is an orientation to modify building legislations to change the "use purpose" of the street from "**residential type B**" to "**Local commercial**" which will lead the street to be more dense. Thus the following points should be taken into consideration: -

- 1) The Parking locations are opposite to each other on the same segment of the street. This decreases the width of the sidewalks on that segment (i.e. on both sides of the street).
- 2) Some parkings are located in places that need wide sidewalks such as schools, mosques and residential premises as being noted in the attached map.
- 3) Some parkings are located at intersections. This reduces the intersection efficiency, and contradicts the design principles as well as the suitable performance. This also leads to the reductions of pedestrians' safety, and reduces the intersections' capacity, as being demonstrated in the map.
- 4) Most of the sidewalks that were deducted are located in front of commercial shops. This creates contradiction between the pedestrian movement and shopping activities, as well as the need to reserve the architectural facade of the street and its continuity.

The objectives of above mentioned are to serve the citizens as a top priority, and this compiles with the municipality attitude headed by its Mayor as well as the Planning and Engineering Department staff seeking the improvement of the city image based on scientific and planning principles that are designed for streets network.

The research being made on Rafidia street pointed out that the street's user prefer to enjoy the existence of those elements that facilitate their presence at Rafidia Street in particular, and in any street in general.

Thanking you for your endless cooperation and openness. Looking forward for further cooperation towards serving our beloved city.

APPENDIX 5.2: Frequencies of the observed potentials of Rafidia Street as investigated in the fieldwork and their analysis according to: gender, age, occupation, education and accommodation.

Statistics

	what are the distinguished elements in rafeida street	what activities are most distinctive in rafeida street	do you think Rafeidia street is easy for either way finding or spending time	what specific element attract your attention through your different journeys
N	Valid 103 Missing 0	Valid 103 Missing 0	Valid 100 Missing 3	Valid 103 Missing 0

what are the distinguished elements in rafeida street

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid				
Boundries(Building.green area ,)	5	4.9	4.9	4.9
Widness	6	5.8	5.8	10.7
Restaurants	21	20.4	20.4	31.1
Shops	16	15.5	15.5	46.6
Location	19	18.4	18.4	65.0
Narrow street	4	3.9	3.9	68.9
Noisy	1	1.0	1.0	69.9
Traffic Lights	1	1.0	1.0	70.9
2-3-4-5	14	13.6	13.6	84.5
Nothing	2	1.9	1.9	86.4
1-3-5	7	6.8	6.8	93.2
All	7	6.8	6.8	100.0
Total	103	100.0	100.0	

Frequency Table

		Residence place									
		Residence in Nablus					Visitor				
		AGE1				Total	AGE1				Total
		1	2	3	4		1	2	3	4	
what specific element	Buildings or architectural element	4	15	2	3	24	1	1	4	1	7
attract your attention	traffic lights	2	5	3	2	12	1				1
through your different journeys	Green areas		6	1		7		1	1		2
	other	1	13	5	4	23		1	3		4
	1-2		1	2	4	7					
	All		1	1		2					
	2-3			1		1					
Total		7	41	15	13	76	2	3	8	1	14

what activities are most distinctive in rafedia stret

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid walking	25	24.3	24.3	24.3
Shopping	6	5.8	5.8	30.1
Eating	14	13.6	13.6	43.7
People meeting & Social communicating	5	4.9	4.9	48.5
setting on the sides of street	1	1.0	1.0	49.5
Driving	10	9.7	9.7	59.2
Setting on street sides and driving	3	2.9	2.9	62.1
All	9	8.7	8.7	70.9
1-2--4-6	11	10.7	10.7	81.6
1-3-6	14	13.6	13.6	95.1
4-5-6	5	4.9	4.9	100.0
Total	103	100.0	100.0	

do you think Rafedla street is easy for either way finding or spending time

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid				
Yes	1	1.0	1.0	1.0
NO	4	3.9	4.0	5.0
Only For finding way	32	31.1	32.0	37.0
Only Spending Times	21	20.4	21.0	58.0
3-4	41	39.8	41.0	99.0
7	1	1.0	1.0	100.0
Total	100	97.1	100.0	
Missing System	3	2.9		
Total	103	100.0		

what specific element attract your attention through your different journeys

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid				
Buildings or architectural element	39	37.9	37.9	37.9
traffic lights	14	13.6	13.6	51.5
Green areas	10	9.7	9.7	61.2
other	29	28.2	28.2	89.3
1-2	7	6.8	6.8	96.1
All	2	1.9	1.9	98.1
2-3	1	1.0	1.0	99.0
2-4-5	1	1.0	1.0	100.0
Total	103	100.0	100.0	

	gender										
	Male						FEMALE				
	occupation (job)						occupation (job)				
	house keeper	student	Merchant	worker	Sales man	Total	house keeper	student	Merchant	Sales man	Total
what are the distinguished elements in rafeida street		2	3			5					
Boundries(Building, green area ,)		2	1	3		6					5
Widness		3	6	1	6	16		2			3
Restaurants		1	5	3	4	13					4
Shops		3	3	3	6	15			1		2
Location			1		1	2					
Narrow street			1			1					
Noisy			1			1					
Traffic Lights	1		1	3	2	7	7			1	7
2-3-4-5			1			1					1
Nothing		1	4			5	2				2
1-3-5			4			4	3				3
All	1	12	31	13	19	76	21	3	1	2	27
Total											

	gender										
	Male						FEMALE				
	education level						education level				
	less than high school	High school	Diploma	BA	Master	Total	less than high school	High school	Diploma	BA	Total
what are the Boundries(Building, grade distinguishe area ,) elements in Widness rafeida street Restaurants Shops Location Narrow street Noisy Traffic Lights 2-3-4-5 Nothing 1-3-5 All Total	1	2		1	1	5					
	1	3		1	1	6					
	3	5	1	7		16	1	1		3	5
	2	7	1	3		13	1	1		1	3
	5	4	2	4		15		1	1	2	4
		1		1		2				2	2
				1		1					
	1					1					
	2	2	2	1		7	2	4	1		7
				1		1				1	1
		3		2		5		1	1	2	
		3		1		4				2	
	15	30	6	23	2	76	4	8	3	11	26

	Residence place									
	Residence in Nablus					Visitor				
	AGE1					AGE1				
	1	2	3	4	Total	1	2	3	4	Total
what are the distinguished elements in rafeida street										
Boundries(Building, green area ,)		3			3	1		1		2
Widness	1	3			4		1			2
Restaurants	3	7	4	3	17			3		3
Shops	1	5	1	2	9			2		2
Location	2	7	3	1	13	1				1
Narrow street		3			3		1			1
Noisy			1		1					
Traffic Lights				1	1					
2-3-4-5		8	2	1	11				1	1
Nothing			1	1	2					
1-3-5			1	4	5		1	1		2
All		5	2		7					
Total	7	41	15	13	76	2	3	8	1	14

	Residence place									
	Residence in Nablus					Visitor				
	AGE1					AGE1				
	1	2	3	4	Total	1	2	3	4	Total
what specific element	4	15	2	3	24	1	1	4	1	7
Buildings or architectural element										
attract your attention	2	5	3	2	12	1				1
through your different journeys	1	6	1		7		1	1		2
other		13	5	4	23		1	3		4
1-2		1	2	4	7					
All		1	1		2					
2-3			1		1					
Total	7	41	15	13	76	2	3	8	1	14

	gender										
	Male						FEMALE				
	occupation (job)						occupation (job)				
	house keeper	student	Merchant	worker	Sales man	Total	house keeper	student	Merchant	Sales man	Total
what specific element	1	7	10	4	9	30	6	2		1	9
Buildings or architectural element											
attract your attention		1	3	4	2	11	2			1	3
Green areas		2	1	4	1	8	2				2
through your different journeys		2	14	1	6	23	4	1	1		6
1-2			2			2	5				5
All			1			1	1				1
2-3							1				1
2-4-5											
Total	1	12	31	13	19	76	21	3	1	2	27

	gender										
	Male						FEMALE				
	education level						education level				
	less than high school	High school	Diploma	BA	Master	Total	less than high school	High school	Diploma	BA	Total
what specific element	3	15	4	8		30	1	3		5	9
Buildings or architectural element											
attract your attention	5	4		2		11		1		2	3
through your different	3	2	1	2		8		1		1	2
journeys	4	6	1	10	2	23	1	1	2	2	6
1-2		1		1		2	2	2		1	5
All		1				1			1		1
2-4-5		1				1					
Total	15	30	6	23	2	76	4	8	3	11	26

	gender										
	Male						FEMALE				
	education level						education level				
	less than high school	High school	Diploma	BA	Master	Total	less than high school	High school	Diploma	BA	Total
what walking	3	9	2	6		20	1				5
activities Shopping		1		3		4		1	1		2
are most Eating	1	7		5	1	14					
distinctive People meeting & Social	2	1	2			5					
in rafedia communicating		1				1					
street setting on the sides of		1				1					
street street	3	4				7		2		1	3
Driving					1	3					
Setting on street sides and	1			1		4		2	1	2	5
driving driving		2	1	1		4					
All	2	1		2		5	3	2	1	3	5
1-2-4-6	2	3	2	2		9		1			
1-3-6	1	1	1	1		4				1	1
4-5-6	15	30	6	23	2	76	4	8	3	11	26
Total											

	gender										
	Male						FEMALE				
	occupation (job)						occupation (job)				
	house keeper	student	Merchant	worker	Sales man	Total	house keeper	student	Merchant	Sales man	Total
what walking		4	6	5		20	1	2			5
activities Shopping			3	1	1	4	1			2	2
are most Eating		4	5	1	4	14			1		
distinctive People meeting & Social		1		2	2	5					
in rafedia communicating		1				1					
street setting on the sides of		1				1					
street street		1	3	1	2	7	2	1			3
Driving			2	1		3					
Setting on street sides and			2		2	4	5				5
driving driving			4	1		5	6				6
All		1	4	2	1	9	5				5
1-2-4-6	1		2		2	4	1				1
1-3-6		12	31	13	19	76	21	3	1	2	27
4-5-6	1										
Total											

	Residence place														
	Residence in Nablus							Visitor							
	AGE1							AGE1							
	1	2	3	4	Total	1	2	3	4	Total					
what activities are most distinctive in rafedia street	4	9	2	1	16	1		3		4					
	1	3		1	5			1		1					
	1	4		2	7	1	1	3	1	6					
		4			4		1			1					
		1			1										
Total	7	*	15	*	76	2	3	8	1	14					

	Residence place														
	Residence in Nablus										Visitor				
	AGE1					Total	AGE1					Total			
	1	2	3	4	1		2	3	4						
do you think	Yes	1				1									
Rafedia street is	NO	1	2	1		4									
easy for either way		2	14	4	5	25		1	2						3
finding or spending		1	8	3	1	13		1	3	1					5
time		4	15	6	6	31		2	1	1					4
3-4															1
7															1
Total		7	39	15	13	74	2	3	7	1					13

	gender																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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do you think Rafedia street is easy for either way finding or spending time 3-4 7 Total	Yes NO Only For finding way Only Spending Times 3-4 7		4	1	12	7	1		3	7	11	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

	gender															
	Male						FEMALE									
	education level						education level									
	less than high school	High school	Diploma	BA	Master	Total	less than high school	High school	Diploma	BA	Total					
do you think Rafedia street is easy for either way finding or spending time	Yes NO Only For finding way Only Spending Times 3-4 7		1 13 6 9 1								1 24 20 28 1		1 1 1 2 3		1 2 1 1 6 10	1 2 8 1 13 25
Total		15	30	6	21	2	74	4	8	3	10	25				

	gender										
	Male						FEMALE				
	education level						education level				
	less than high school	High school	Diploma	BA	Master	Total	less than high school	High school	Diploma	BA	Total
what specific element	3	15	4	8		30	1	3		5	9
attract your attention	5	4		2		11		1		2	3
through your different journeys	3	2	1	2		8		1		1	2
	4	6	1	10	2	23	1	1	2	2	6
1-2		1		1		2	2	2		1	5
All		1				1			1		1
2-4-5		1				1					
Total	15	30	6	23	2	76	4	8	3	11	26

	gender										
	Male						FEMALE				
	occupation (job)						occupation (job)				
	house keeper	student	Merchant	worker	Sales man	Total	house keeper	student	Merchant	Sales man	Total
what specific element		7	10	4	9	30	6	2		1	9
attract your attention	1	1	3	4	2	11	2			1	3
through your different		2	1	4	1	8	2				2
journays		2	14	1	6	23	4	1	1		6
			2			2	5				5
			1			1	1				1
							1				1
Total	1	12	31	13	19	76	21	3	1	2	27

	Residence place														
	Residence in Nablus										Visitor				
	AGE1					AGE1					AGE1				
	1	2	3	4	Total	1	2	3	4	Total	1	2	3	4	Total
what specific element attract your attention through your different journeys	4	15	2	3	24	1	1	4	1	7					
Buildings or architectural element															
traffic lights	2	5	3	2	12	1				1					1
Green areas		6	1		7		1	1		2					2
other	1	13	5	4	23		1	3		4					4
1-2		1	2	4	7										
All		1	1		2										
2-3			1		1										
Total	7	41	15	13	76	2	3	8	1	14					

APPENDIX 5.3: Frequencies of part of the problems of Rafidia Street as investigated in the fieldwork and their analysis according to: gender, age, occupation, education and accommodation.

Statistics					
		what is missing in rafedia street	do yu think it is proper to use rafedia street -as it is - for vehicles as well as pedestrians	do you think as pedestrian / driver that traffic volume is	What cause Disturbing In rafedia street in your opinion
N	Valid	103	103	103	99
	Missing	0	0	0	4

Frequency Table

what is missing in rafedia street					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Green areas	27	26.2	26.2	26.2
	Enough space	2	1.9	1.9	28.2
	Street Accessibility (benches,sidewalks,tele phone boxws)	18	17.5	17.5	45.6
	Accessibility for disabled	8	7.8	7.8	53.4
	Parking areas	4	3.9	3.9	57.3
	1-3-4	17	16.5	16.5	73.8
	All	17	16.5	16.5	90.3
	1-3-2	7	6.8	6.8	97.1
	Arrangement in street	1	1.0	1.0	98.1
	other	2	1.9	1.9	100.0
	Total	103	100.0	100.0	

do yu think It is proper to use rafedia street -as It is - for vehicles as well as pedestrians

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	32	31.1	31.1	31.1
	No	69	67.0	67.0	98.1
	3	2	1.9	1.9	100.0
	Total	103	100.0	100.0	

do you think as pedestrian / driver that traffic volume is

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low	4	3.9	3.9	3.9
	Moderate	28	27.2	27.2	31.1
	high	70	68.0	68.0	99.0
	4	1	1.0	1.0	100.0
	Total	103	100.0	100.0	

What is missing in Rafidia Street

	gender										
	Male					FEMALE					
	occupation (job)					occupation (job)					Total
	house keeper	student	Merchant	worker	Sales man	Total	house keeper	student	Merchant	Sales man	
Green areas		2	9	1	10	22	2	2	1		5
Enough space			1			1	1				1
Street Accessibility (benches, sidewalks, telephone boxws)		5	5	4	3	17	1				1
Accessibility for disabled		1		2	1	4	4				4
Parking areas		1	1	1		3		1			1
1-3-4	1	2	3	2	2	10	6			1	7
All			6	2	2	10	6			1	7
1-3-2		1	3	1	1	6	1				1
Arrangement in street other			1			1					
Total	1	12	31	13	19	76	21	3	1	2	27

What cause Disturbing in rafedia street in your opinion

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	congestion of cars	11	10.7	11.1	11.1
	lack of pedestrian safty	5	4.9	5.1	16.2
	Behavior of peobles	15	14.6	15.2	31.3
	Not enough space	1	1.0	1.0	32.3
	location	9	8.7	9.1	41.4
	Shortage of spaces for sidewalks	3	2.9	3.0	44.4
	Parking on the street sides	4	3.9	4.0	48.5
	Traffic direction	1	1.0	1.0	49.5
	traffic lights	6	5.8	6.1	55.6
	other	2	1.9	2.0	57.6
	1-2-3-4-5-8-9	16	15.5	16.2	73.7
	1-3-7-9	13	12.6	13.1	86.9
	2-3-8	6	5.8	6.1	92.9
	1-6-9-10-11	5	4.9	5.1	98.0
	All	2	1.9	2.0	100.0
	Total	99	96.1	100.0	
Missing	System	4	3.9		
Total		103	100.0		

What is missing in Rafidia Street

		gender									
		Male					FEMALE				
		AGE1				Total	AGE1				Total
		1	2	3	4		1	2	3	4	
what is missing in rafedia street	Green areas	3	8	3	2	16	1	3	1		5
	Enough space						1				1
	Street Accessibility (benches,sidewalks,telephone boxws)	2	10	2	1	15				1	1
	Accessibility for disabled		3			3	2	2			4
	Parking areas	2		1		3	1				1
	1-3-4		5	1	3	9	1	4	2		7
	All		4	3	3	10	3	2	1		6
	1-3-2		2	2	1	5	1				1
	Arrangement in street			1		1					
	other	1		1		2					
Total		8	32	14		64	1		9	4	26

		Residence place		Total
		Residence in Nablus	Visitor	
what is missing in rafedia street	Green areas	25	2	27
	Enough space	2		2
	Street Accessibility (benches, sidewalks, telephone boxws)	14	4	18
	Accessibility for disabled	7	1	8
	Parking areas	1	3	4
	1-3-4	15	2	17
	All	14	3	17
	1-3-2	5	2	7
	Arrangement in street other	1		1
Total		86	17	103

		Residence place		Total
		Residence in Nablus	Visitor	
do yu think it is proper to use rafedia street -as it is - for vehicles as well as pedestrians	Yes	26	6	32
	No	59	10	69
	3	1	1	2
Total		86	17	103

				do you think it is proper to use rafedia street -as it is - for vehicles as well as pedestrians			Total
				Yes	No	3	
gender	Male	AGE1	1	4	4		8
			2	12	19	1	32
			3	3	11		14
			4		10		10
		Total		19	44	1	64
	FEMALE	AGE1	1	1			1
			2	7	5		12
			3		9		9
			4		4		4
		Total		8	18		26

				do you think it is proper to use rafedia street -as it is - for vehicles as well as pedestrians			Total
				Yes	No	3	
gender	Male	education level	less than high school	9	6		15
			High school	8	21	1	30
			Diploma	2	4		6
			BA	4	18	1	23
			Master		2		2
		Total		23	51	2	76
	FEMALE	education level	less than high school		4		4
			High school	4	4		8
			Diploma	1	2		3
			BA	4	7		11
		Total		9	17		26

				do you think it is proper to use rafedia street -as it is - for vehicles as well as pedestrians			Total
				Yes	No	3	
gender	Male	occupation (job)	house keeper		1		1
			student	5	6	1	12
			Merchant	7	24		31
			worker	6	7		13
			Sales man	5	13	1	19
			Total	23	51	2	76
	FEMALE	occupation (job)	house keeper	6	15		21
			student	2	1		3
			Merchant	1			1
			Sales man		2		2
			Total	9	18		27

				do you think as pedestrian / driver that traffic volume is				Total
				Low	Moderate	high	4	
gender	Male	occupation (job)	house keeper			1		1
			student		5	6	1	12
			Merchant	1	9	21		31
			worker	1	4	8		13
			Sales man	1	5	13		19
			Total	3	23	49	1	76
	FEMALE	occupation (job)	house keeper		3	18		21
			student			3		3
			Merchant		1			1
			Sales man	1	1			2
			Total	1	5	21		27

				do you think as pedestrian / driver that traffic volume is				Total
				Low	Moderate	high	4	
gender	Male	education level	less than high school	1	6	8		15
			High school	1	10	19		30
			Diploma		3	3		6
			BA	1	3	18	1	23
			Master		1	1		2
			Total	3	23	49	1	76
	FEMALE	education level	less than high school		1	3		4
			High school		1	7		8
			Diploma		1	2		3
			BA	1	2	8		11
			Total	1	5	20		26

				do you think as pedestrian / driver that traffic volume is				Total
				Low	Moderate	high	4	
Residence place	Residence in Nablus	AGE1	1	1	3	3		7
			2	1	7	32	1	41
			3		6	9		15
			4	1	2	10		13
		Total		3	18	54	1	76
Visitor		AGE1	1			2		2
			2		1	2		3
			3		3	5		8
			4			1		1
		Total			4	10		14

		Residence place									
		Residence in Nablus					Visitor				
		AGE1				Total	AGE1				Total
		1	2	3	4		1	2	3	4	
What cause Disturbing in rafedia street in your opinion	congestion of cars	1	4	1	1	7	2		2		4
	lack of pedestrian safty	1	3			4					
	Behavior of peobles	1	7	1	1	10					
	Not enough space location		1			1					
	Shortage of spaces for sidewalks	1	6			7			2		2
	Parking on the street sides		1			1					
	Traffic direction		2		1	3					
	traffic lights				1	1					
	other	1	4	1		6					
	1-2-3-4-5-8-9		7	5	2	14		1			1
	1-3-7-9	1	2	3	2	8			2	1	3
	2-3-8		1	2	2	5					
	1-6-9-10-11		2	1	2	5					
	All			1		1			1		1
Total		6	40	15	13	74	2	1	8	1	12

	gender										
	Male					FEMALE					
	education level					education level					
	less than high school	High school	Diploma	BA	Master	Total	less than high school	High school	Diploma	BA	Total
What cause congestion of cars lack of pedestrian safety	1	4		4		9	1		1		2
Disturbing in rafedia Behavior of peoples	1	1		1		3		1		1	2
Not enough space street in your location	3	5	2	2	1	13		1		1	2
Shortage of spaces for sidewalks opinion	1	4	1	1		7			1	1	2
Parking on the street sides	1	2				3					
Traffic direction	1	1		2		4					
traffic lights	1	2				3				1	1
other	1	1				2		1		2	3
1-2-3-4-5-8-9	1	4		7		12		2	1		3
1-3-7-9	2	3	3	2		10	1	2			3
2-3-8	1	1		3		5	1				1
1-6-9-10-11		1				1	1	1		2	4
All					1	1				1	1
Total	14	29	6	23	2	74	4	8	3	9	24

What cause Disturbing in Rafidia Street in your opinion

	gender										
	Male					FEMALE					
	occupation (job)					occupation (job)					Total
	house keeper	student	Merchant	worker	Sales man	Total	house keeper	student	Merchant	Sales man	
congestion of cars		2	3	1	3	9	2				2
lack of pedestrian safty		1			2	3	1			1	2
Behavior of peobles		2	5	4	2	13	1			1	2
Not enough space		1				1					
location		2	2	2	1	7	1		1		2
Shortage of spaces for sidewalks		1		1	1	3					
Parking on the street sides		1	2		1	4					
Traffic direction							1				1
traffic lights			2	1		3	2	1			3
other		1	1			2					
1-2-3-4-5-8-9			7		4	12	4				4
1-3-7-9			6	1	3	10	3				3
2-3-8			2	1	2	5	1				1
1-6-9-10-11			1			1	4				4
All				1		1	1				1
Total	1	11	31	12	19	74	21	1	1	2	25

APPENDIX 5.4: Frequencies of the proposed solutions and people expectations of Rafidia Street as investigated in the fieldwork and their analysis according to: gender, age, occupation, education and accommodation.

Statistics

		how can we increase the accessibility of rafedia street for pedestrians	what physical elements do you really want in the street	what should be done to increase street accessibility	do you think it is wise decision to use part of Rafedia street for cars
N	Valid	103	99	93	100
	Missing	0	4	10	3

Frequency Table

how can we increase the accessibility of rafedia street for pedestrians

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	increase spaces	5	4.9	4.9	4.9
	adding sidewalks	18	17.5	17.5	22.3
	change traffic direction	9	8.7	8.7	31.1
	making pedetrian areas	12	11.7	11.7	42.7
	adding street accessibility (furniture)	11	10.7	10.7	53.4
	modifying Building Legislation	2	1.9	1.9	55.3
	Providing Parking areas	7	6.8	6.8	62.1
	considering the disabled needs	1	1.0	1.0	63.1
	2-3-5-7-6	15	14.6	14.6	77.7
	All	12	11.7	11.7	89.3
	1-2-11	2	1.9	1.9	91.3
	4-7-8	7	6.8	6.8	98.1
	other	2	1.9	1.9	100.0
	Total	103	100.0	100.0	

what physical elements do you really want in the street

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Green areas	35	34.0	35.4	35.4
	Street accessibility	34	33.0	34.3	69.7
	Tourist Places	2	1.9	2.0	71.7
	Island	1	1.0	1.0	72.7
	arranged shops and green areas	4	3.9	4.0	76.8
	1-2	20	19.4	20.2	97.0
	All	2	1.9	2.0	99.0
	No opinion	1	1.0	1.0	100.0
	Total	99	96.1	100.0	
Missing	System	4	3.9		
Total		103	100.0		

what should be done to increase street accessibility

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Arranged , cleaning and wide Street sides	18	17.5	19.4	19.4
	Green Areas	7	6.8	7.5	26.9
	Street Accessibility	5	4.9	5.4	32.3
	Increase street spaces	3	2.9	3.2	35.5
	Make Rafedia street one side	1	1.0	1.1	36.6
	All	2	1.9	2.2	38.7
	Walking Lines on street	7	6.8	7.5	46.2
	Arrange traffic	11	10.7	11.8	58.1
	1-7-8-4-2	10	9.7	10.8	68.8
	1-10	2	1.9	2.2	71.0
	wide spaces and street accessibility	6	5.8	6.5	77.4
	Parking areas	4	3.9	4.3	81.7
	Increase Building	2	1.9	2.2	83.9
	Nothing	15	14.6	16.1	100.0
	Total	93	90.3	100.0	
Missing	System	10	9.7		
Total		103	100.0		

do you think it is wise decision to use part of Rafedia street for cars

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes If we have good Arranged street	6	5.8	6.0	6.0
	Yes	38	36.9	38.0	44.0
	NO	56	54.4	56.0	100.0
	Total	100	97.1	100.0	
Missing	System	3	2.9		
Total		103	100.0		

		Residence place									
		Residence in Nablus					Visitor				
		AGE1				Total	AGE1				Total
		1	2	3	4		1	2	3	4	
how can we	increase spaces	1	4			5					
increase the	adding sidewalks	3	8		1	12		1			2
accessibility of	change traffic direction	1	4	1	1	7			2		2
rafedia street for	making pedetrian areas	1	5	1	1	8	1		2		3
pedestrians	adding street accessibility (furniture)		3	1		4		2	1	1	4
	modifying Building Legislation	1				1	1				1
	Providing Parking areas		4		1	5					
	considering the disabled needs				1	1					
	2-3-5-7-6		5	7	3	15					
	All		5	1	4	10			2		2
	1-2-11		1		1	2					
	4-7-8		1	3		4					
	other		1	1		2					
Total		7	41	15	13	76	2	3	8	1	14

		gender						
		Male	FEMALE					Total
			education level					
			less than high school	High school	Diploma	BA		
		Total						
how can we increase the accessibility of rafedia street for pedestrians	increase spaces	5						
	increase the accessibility of rafedia street for pedestrians	15	1				2	3
	adding sidewalks	7		1			1	2
	change traffic direction	10	1				1	2
	making pedetrian areas	9				1	1	2
	adding street accessibility (furniture)	1					1	1
	modifying Building Legislation	5		2				2
	Providing Parking areas						1	1
	considering the disabled needs	9	1	1	1	2		5
	2-3-5-7-6	8	1				2	4
	All	2						
	1-2-11	3		3	1			4
4-7-8	2							
other	76	4	8	3	11		26	
Total								

		gender				
		Male				
		occupation (job)				
		house keeper	student	Merchant	worker	Sales man
how can we	increase spaces		2	2	1	
increase the	adding sidewalks		4	2	4	5
accessibility of	change traffic direction			4	2	1
rafedia street	making pedetrian areas		3	4		3
for pedestrians	adding street accessibility (furniture)		1	2	3	3
	modifying Building Legislation		1			
	Providing Parking areas			2	1	2
	considering the disabled needs					
	2-3-5-7-6		1	5		3
	All	1		6	1	
	1-2-11			1	1	
	4-7-8			2		1
	other			1		1
Total		1	12	31	13	19

		gender						
		Male	FEMALE					Total
			occupation (job)					
			house keeper	student	Merchant	Sales man		
		Total						Total
how can we increase the accessibility of rafedia street for pedestrians	increase spaces	5						
	adding sidewalks	15	3					3
	change traffic direction	7	1				1	2
	making pedetrian areas	10	1	1				2
	adding street accessibility (furniture)	9		1	1			2
	modifying Building Legislation	1		1				1
	Providing Parking areas	5	2					2
	considering the disabled needs		1					1
	2-3-5-7-6	9	6					6
	All	8	3				1	4
	1-2-11	2						
4-7-8	3	4					4	
	other	2						
Total		76	21	3	1	2	27	

		gender				
		Male				
		occupation (job)				
		house keeper	student	Merchant	worker	Sales man
what physical	Green areas		2	11	3	6
elements do	Street accessibility	1	6	8	5	6
you really	Tourist Places			1		
want in the	Island			1		
street	arranged shops and green areas			2	1	1
	1-2		4	4	4	4
	All			2		
	No opinion			1		
Total		1	12	30	13	17

		gender					
		Male	FEMALE				
		Total	occupation (job)				Total
			house keeper	student	Merchant	Sales man	
what physical elements do you really want in the street	Green areas	22	11	2			13
	Street accessibility	26	6		1	1	8
	Tourist Places	1		1			1
	Island	1					
	arranged shops and green areas	4					
	1-2	16	4				4
	All	2					
	No opinion	1					
Total		73	21	3	1	1	26

				what physical elements do you really want in the		
				Green areas	Street accessibility	Tourist Places
gender	Male	education level	less than high school	7	3	1
			High school	5	13	
			Diploma	2	3	
			BA	7	7	
			Master	1		
			Total	22	26	1
	FEMALE	education level	less than high school	2	2	
			High school	3	3	
			Diploma		2	
			BA	7	1	1
			Total	12	8	1

				what physical elements do you really want in the street			
				Island	arranged shops and green areas	1-2	All
gender	Male	education level	less than high school			4	
			High school		2	8	
			Diploma	1			
			BA		2	3	2
			Master			1	
			Total	1	4	16	2
	FEMALE	education level	less than high school				
			High school			2	
			Diploma			1	
			BA			1	
			Total			4	

				what	Total
				No opinion	
gender	Male	education level	less than high school		15
			High school	1	29
			Diploma		6
			BA		21
			Master		2
		Total		1	73
	FEMALE	education level	less than high school		4
			High school		8
			Diploma		3
			BA		10
Total				25	

		Residence place				
		Residence in Nablus				
		AGE1				Total
		1	2	3	4	
what physical elements do you really want in the street	Green areas	2	11	8	7	28
	Street accessibility	2	18	4	3	27
	Tourist Places	1				1
	Island			1		1
	arranged shops and green areas		2		1	3
	1-2	2	7	2	1	12
	All				1	1
Total		7	38	15	13	73

		Residence place				
		Visitor				
		AGE1				Total
		1	2	3	4	
what physical elements do you really want in the street	Green areas	2				2
	Street accessibility			3	1	4
	Tourist Places		1			1
	Island					
	arranged shops and green areas			1		1
	1-2		2	3		5
	All			1		1
Total		2	3	8	1	14

		Residence place									
		Residence in Nablus					Visitor				
		AGE1				Total	AGE1				Total
		1	2	3	4		1	2	3	4	
what should be done to increase street accessibility	Arranged , cleaning and wide Street sides		7	3		10			2		2
	Green Areas	1	5	1		7					1
	Street Accessibility	1	2			3		1			
	Increase street spaces	1	2			3					
	Make Rafedia street one side								1		1
	All		1			1			1		1
	Walking Lines on street			1	2	3	1				1
	Arrange traffic		4	2	2	8	1				1
	1-7-8-4-2	1	2	2	3	8			1		1
	1-10				1	1			1		1
	wide spaces and street accessibility	1	3			4		2			2
	Parking areas	1	2	1		4					
	Increase Building		2			2					
	Nothing	1	6	4	3	14				1	1
Total		7	36	14	11	68	2	3	6	1	12

		gender				
		Male				
		occupation (job)				
		house keeper	student	Merchant	worker	Sales man
what should be done to increase street accessibility	Arranged , cleaning and wide Street sides			8	1	6
	Green Areas	1	1	2	1	1
	Street Accessibility			1	1	1
	Increase street spaces		1	1		
	Make Rafedia street one side			1		
	All				2	
	Walking Lines on street		1	1		4
	Arrange traffic		3		2	1
	1-7-8-4-2		1	3	2	
	1-10			2		
	wide spaces and street accessibility		3		2	1
	Parking areas		1		1	1
	Increase Building		1	1		
	Nothing			5	1	1
Total		1	12	25	13	16

		gender						
		Male	FEMALE					
			Total	occupation (job)				Total
				house keeper	student	Merchant	Sales man	
what should be done to increase street accessibility	Arranged , cleaning and wide Street sides	15	2	1			3	
	Green Areas	6			1		1	
	Street Accessibility	3		2			2	
	Increase street spaces	2	1				1	
	Make Rafedia street one side	1						
	All	2						
	Walking Lines on street	6	1				1	
	Arrange traffic	6	4			1	5	
	1-7-8-4-2	6	4				4	
	1-10	2						
	wide spaces and street accessibility	6						
	Parking areas	3	1				1	
	Increase Building	2						
	Nothing	7	8				8	
	Total	67	21	3	1	1	26	

		gender				
		Male				
		education level				
		less than high school	High school	Diploma	BA	Master
what should be done to increase street accessibility	Arranged , cleaning and wide Street sides	3	6	1	4	1
	Green Areas		4	2		
	Street Accessibility	2			1	
	Increase street spaces		2			
	Make Rafedia street one side				1	
	All				1	1
	Walking Lines on street	4			2	
	Arrange traffic	1	1	1	3	
	1-7-8-4-2	2	2		2	
	1-10	1			1	
	wide spaces and street accessibility		5		1	
	Parking areas	1	1	1		
	Increase Building		2			
	Nothing	1	2	1	3	
Total		15	25	6	19	2

		gender						
		Male	FEMALE					
			education level				Total	
			less than high school	High school	Diploma	BA		
		Total						Total
what should be done to increase street accessibility	Arranged , cleaning and wide Street sides	15	1		1	1	3	
	Green Areas	6			1		1	
	Street Accessibility	3				2	2	
	Increase street spaces	2		1			1	
	Make Rafedia street one side	1						
	All	2						
	Walking Lines on street	6		1			1	
	Arrange traffic	6	2		1	2	5	
	1-7-8-4-2	6		2		2	4	
	1-10	2						
	wide spaces and street accessibility	6						
	Parking areas	3		1			1	
	Increase Building	2						
	Nothing	7	1	3		3	7	
	Total	67	4	8	3	10	25	

		gender			
		Male			
		education level			
		less than high school	High school	Diploma	BA
do you think it is wise decision to use part of Rafedia street for cars	Yes If we have good Arranged street	4			2
	Yes	2	10	4	7
	NO	9	20	2	12
	Total	15	30	6	21

		gender	
		Male	
		educati	
		Master	Total
do you think it is wise decision to use part of Rafedia street for cars	Yes If we have good Arranged street		6
	Yes	2	25
	NO		43
	Total	2	74

		gender	
		FEMALE	
		education level	
		less than high school	High school
do you think it is wise decision to use part of Rafedia street for cars	Yes If we have good Arranged street Yes NO	2 2 4	6 2 8
Total			

		gender		
		FEMALE		
		education level		Total
		Diploma	BA	
do you think it is wise decision to use part of Rafedia street for cars	Yes If we have good Arranged street Yes NO		5 5 10	13 12 25
Total		3		

				do you think it is wise decision to use part of Rafedia street for cars			Total
				Yes If we have good Arranged street	Yes	NO	
gender	Male	occupation (job)	house keeper student Merchant worker Sales man			1	1
				1	2	9	12
				4	14	12	30
					5	8	13
				1	4	13	18
		Total		6	25	43	74
	FEMALE	occupation (job)	house keeper student Merchant Sales man		12	9	21
						3	3
						1	1
					1		1
		Total			13	13	26

		Residence place				
		Residence in Nablus				
		AGE1				Total
		1	2	3	4	
do you think it is wise decision to use part of Rafedia street for cars	Yes If we have good Arranged street Yes NO	1 2 4 7	1 16 22 39	2 6 7 15	2 4 6 12	6 28 39 73
Total						

		Residence place				
		Visitor				
		AGE1				Total
		1	2	3	4	
do you think it is wise	Yes If we have good					
decision to use part of	Arranged street					
Rafedia street for	Yes	1		6		7
cars	NO	1	3	2	1	7
Total		2	3	8	1	14