HOUSING DESIGN IN OLD DAMASCUS

UNDERGRADUATE THESIS
BY ZAID M. AZEM
BALL STATE UNIVERSITY
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I. PREFACE

Housing is a major issue in the third world countries. How would it be possible to house all the people needing housing in the big cities? What kind of material would be appropriate? What sort to neighborhood should be stereotyped?

These problems which mainly confront the third world countries have been caused by many issues which are brought about by new technology and inventions from other parts of the world. Changing the customs of a country is not easy. It sometimes takes years to achieve a little change, yet the new technology which has been brought from different cultures has been forced to be admitted, regardless of whether it fits or not. These problems can be clearly seen in Syria. According to the New York Times, members on the International Commission mention briefly these problems which are facing the capital of Syria saying, "The problems of Syria are those of growth-rapid urbanization, land speculation, and changing social patterns, as well as, natural deterioration."
The intent of this study is to provide a model which can be used as a starting point for other housing projects. This project will try to produce a design solution which will provide a good social environment through the introduction of appropriate facilities and services for a project of such scale. George Tremblett, in his book "Housing Layout" says, "It is now recognized that architects must examine not only the way the individual homes are designed, but how these homes can become an integral part of the social community."

For this purpose a site from the old part of the city of Damascus has been chosen as a base to apply the new ideas in a real project. This site illustrates all major problems facing the old city and the residential areas: over Crowdedness, physical unsoundness, and lack of services.
II. DESCRIPTIVE INFORMATION

General Description of the Country and Its Population

The population of Syria numbers 9,156,000 according to the census of 1981. The projected estimation for 1985 is 10,423,000. The average annual growth is shown in Table 1.

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Average Annual Growth</th>
<th>From...To</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>4,565,121</td>
<td>2.8</td>
<td>1955-1960</td>
</tr>
<tr>
<td>1970</td>
<td>6,304,685</td>
<td>3.2</td>
<td>1965-1970</td>
</tr>
<tr>
<td>1981</td>
<td>9,156,000</td>
<td>3.4</td>
<td>1975-1980</td>
</tr>
</tbody>
</table>

The increase in the growth rate of the population is mainly because of new methods of public sanitation and inoculation against certain diseases which provide better living and more care. Table 2 shows the constant increase in the number of the staff in health care in the public sector.

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td># of workers</td>
<td>4509</td>
<td>9611</td>
<td>10289</td>
<td>12164</td>
<td>12238</td>
<td>13888</td>
</tr>
</tbody>
</table>
The density of population sometimes exceeds 53 per acre. It is higher in the western part of the country. The density is progressing at a rapid rate in the urban areas and much lower in the rest of the country. The density is progressing at rapid rate in the urban areas and cities due to the immigration from rural areas because of the availabilities of some facilities which are not satisfactorily available in the rural areas as shown in Table 3.

**Table 3: Labor Distribution.**

<table>
<thead>
<tr>
<th></th>
<th>Agriculture</th>
<th>Manufacturing</th>
<th>Construction</th>
<th>Government</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1963</td>
<td>30.0</td>
<td>15.9</td>
<td>3.1</td>
<td>9.0</td>
<td>42.0</td>
</tr>
<tr>
<td>1976</td>
<td>22.1</td>
<td>22.4</td>
<td>7.0</td>
<td>12.1</td>
<td>36.4</td>
</tr>
</tbody>
</table>

We can see in the table the percentage of increase in the industry and other services as compared to the decline of agriculture.

Due to increased construction, factories, and government work, cities' residents in 1970 were 43 percent of the total population, while in 1976, 47 percent lived in the urban areas. Table 4 shows the percentage of urbanized people, the density, and the total population in the three largest counties and the capital city.
Table 4: Density and the Urban Population Ratio.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>County</td>
<td>1970</td>
<td>1970</td>
<td></td>
</tr>
<tr>
<td>Damascus City</td>
<td>12.3</td>
<td>100.0</td>
<td>10593</td>
</tr>
<tr>
<td>Damascus</td>
<td>10.1</td>
<td>36.2</td>
<td>51</td>
</tr>
<tr>
<td>Aleppo</td>
<td>20.3</td>
<td>59.7</td>
<td>102</td>
</tr>
<tr>
<td>Homs</td>
<td>9.0</td>
<td>50.1</td>
<td>19</td>
</tr>
</tbody>
</table>

Damascus in History

Damascus is one of the oldest existing cities in the world; the first time it became the capital of the country was in 940 B.C. The city went through a sequence of changes in its plan because of the different occupants and their origin. Major periods of the city's history were the Armenian, Greek, Roman, Byzantine, and finally, the Islamic phase which started during the middle ages.

During the Islamic era, the mosque was the most dominant architectural element (Fig.1). Around it, commercial and residential areas were developed. Because of the social and religious importance of the mosque, which generated heavy traffic, more commercial areas were closer to it. Because of many reasons, and safety as a major one, the city was divided into major quarters or neighborhoods. Each neighborhood became an isolated and a relatively self-sufficient unit. It even contained its own mosque.
GENERAL VIEW OF OLD DAMASCUS

FIGURE 1
The City Plan

Old Damascus consisted of four quarters, three of them were used as residential areas. Each quarter was occupied by people who shared the same religion, tradition, and customs. The fourth quarter housed the market and governmental activities, such as the city castle and mosque (which functioned as an educational center and a place for social interaction). The three residential quarters were divided into subquarters. These subquarters were developed mainly because of the population growth and the development of different social classes, parts of the governmental and commercial quarter were also used for residential purposes. The subquarters are mainly separated from each other by public streets. Smaller streets were branching from these public streets. The smaller streets can be considered semi-public spaces because they were mostly used by the residents of each street only. The semipublic streets opened from both ends and they served approximately 100 homes. Branching from the semi-public streets, there were smaller alleys called hara. Each of these hara served an average of five houses and was usually a dead end. (Fig. 2) shows the transformation from a semi-public to a semi-private space.

Street characteristics

1. The streets were usually 3-4 meters wide.
2. Some parts of the streets were covered by arches forming gateways or by a portion of the house extending from one side of the street to the other. Beside the total coverage, there were many parts of the streets which were partly covered by a protrusion from the second floor.

3. Streets were defined by one or two story houses attached to one another.

4. Streets were not straight. The city was built in an organic manner, each person would build his house next to his neighbor. This new house could be projected outward or inward. With the continuous process of building, a street would be formed. Hence, the size of the house and the way the owner wished to build it would determine the shape of the street at that point of this new house, there would be possible a widening or narrowing in the street. The number of rooms in the new house and the relationship with other neighbors would determine whether the street would be completely or partly covered.

5. Streets were mostly shaded to protect the pedestrians from the summer sun.
TRANSACTIONS BETWEEN PUBLIC, SEMIPUBLIC

SEMIPRIVATE TO SEMIPUBLIC

PUBLIC SPACE

FIGURE 2
Damascus as the Main Urban Center

According to the 1981 census, 12.3 percent of the population in Syria lived in the urban centers. The population of the urban areas has been growing faster than the rest of the country due to the internal immigration from rural areas.

Damascus dominates the urban scene in Syria. Its population was 1,054,000 in 1981 representing 12.3 percent of the population in Syria. Damascus plays the dominant role in the economy of the country (the rate of purchasing power which concentrates in Damascus and the percentage of industrialized establishments which are located in and around the city belt.)

Damascus represents the biggest urban housing problem. This is why the proposed site chosen as a case study relates to the historical, social and economic aspects of the city and specifically its ancient quarter where the downtown area is located.

Migration to the City

The annual population increase in Syria and Damascus in 1981 was 3.4 percent. The average annual rate of population growth in Damascus is much higher than the rest of Syria.

Internal migration to the city is responsible for the rate of population
growth in the city. This is very clear if one realizes that half of the people who now live in Damascus were not born there.

The most obvious reasons for migration to the city are:

1. job opportunities,
2. better educational facilities, and services.
3. concentration of all extensive government service.

Naturally, most of the migrants are people of low economic status who are seeking a higher income or standard of living.

**Housing Problems in Damascus**

The city has been influenced and defaced by the following:

1. Service expansion: The population boom in Damascus which increase the need for services. The commercial activities were to engulf the residential areas converting them to shopping or storage facilities.

2. Craft work: Many private homes were converted to workshops or small factories. These new factories changed the character of the old residential neighborhoods, and reduced the quality of life in the city. While in the past neighborhoods were quiet and enjoying semi-private spaces, the new industries brought traffic, workers,
noise, and pollution. These changes pushed people who could afford moving out of the old city to leave their homes. The new residents were poor and unable to maintain a good condition for their houses.

3. House density: The causes for that were:

a. deterioration of the houses caused by the constantly needed maintenance pushed the inhabitants to sale their homes to low income classes. The new residents, hence, could not afford any maintenance for these houses. Another problem was that single family residences were sold to two or low income families because one family could not afford to buy the house by itself. These families had converted the houses to match their lifestyles by adding some rooms to the patio or the roof.

b. Changes in lifestyles caused a direct change in the accepted ratio of residents to every single house. While in the past five or more persons were able to live in one room, because of the new lifestyle no more than two people can now live in one room.

4. Transportation: The streets in the old city were designed to be used by pedestrians and animals only. The city could not provide
the appropriate spaces for automobile vehicle movement. Therefore, cars and pedestrians used the same street. This dual use made both parties' movement difficult and unsafe.

The Problem

From the previous section it was clear that Damascus is facing a great increase in its population. The need for more housing, therefore, is urgent. Also the old part of Damascus is under danger of being destroyed because of the industries which are moved in, and because of the lack of appropriate maintenance needed to protect the old structures of the city.

The new imported style of housing which consists of high rise buildings seems to be not the right answer for the housing problems of the city. This is because high rise buildings proved to be not a good place for social interactions. These buildings are also extremely difficult to be maintained especially in a society which is used to a single housing unit.

These two major problems, social effect and maintenance, beside other problems caused by high rise buildings, provides the chance for a return to the old Arabic housing system. The Arabic house can not be used as it is. Rather some modifications should be applied on the unit itself and on the total complex of units to match the new needs of the contemporary life. Accordingly,
the problem is of dual sides: architectural side and deals with the design of the housing unit, and urban side which deals with the whole neighborhood and its facilities.

The unit itself will need to be designed to be built of materials which can be easily maintained. Also the design should be suitable for the new way of life. Two examples of the new design should suit the new lifestyle is first the concern for privacy for each member of the family and second the choice of the appropriate size for each unit to be comfortable and yet economical.

The neighborhood as a whole will need to have green areas, parking spaces. It needs to present the old attractive spaces which the old city used to have. Furthermore, it has to include new features which would make the total picture more pleasant. Color, plant materials, street furniture are some of these new needed features.

This project, therefore, is meant to be a model for such a neighborhood. A series of housing units will be provided. Also an urban design solution will be presented. A site in old Damascus has been chosen for this purpose.
III. THE APPROACH

In order to reach the ultimate design the following steps are followed:

1. A study of the chosen site: this study is needed to understand the problems of the site so that it can be solved in the proposed project. Also the study of the existing condition will provide deeper understanding of the Arabic house and road (hara). This understanding will be a good background for the new design.

2. A program for the project will be developed according to the recommendations of the Ministry of Housing in Syria.

3. A theoretical background will be gained by the review of different urban design studies. This background will be another base to be used while designing the project.

4. The project will be designed according to the information gathered about the site, the Arabic house, the Ministry of Housing recommendations and the theoretical background.

Analysis and Description of the Proposed Site

Architects must examine the design of each individual house, the organization of houses within a neighborhood, as well as the activities
performed by the residents of the particular neighborhood. This examination is
needed so that the designer can produce a design which suits people's
lifestyles and accommodate their activities. Therefore, the following points
would be briefly discussed:

1. The site's location and reasons for choosing it for this project.
2. The site's existing condition.
3. Design concept of the existing houses in the site.
4. Description of the house.

This information may provide us with a good insight of what is best for
the future of the community. This insight can be used as guidelines during the
design process.

1. The Site's Location and Reasons for Choosing it for this Project.

The site is located in the northeast part of old Damascus. (Fig. 3).

This site has been chosen for the following reasons:

a. It is in bad structural condition.

b. It has bad sanitary conditions.

c. It is located inside Old Damascus which gives it
   historical values.

d. It shows high population density according to the
housing monitoring code.

e. It lacks entertainment facilities, green spaces, and public gardens.
f. It lacks parking.

2. The Site's Existing Conditions

a. The area of the site is 1800 sq. m.
b. It consists of 73 houses with the average area of each house occupying 230 sq. m.
c. The condition of these houses if mostly poor.
d. Area of which building covers is 73% of the site area (Fig. 4, 5).
e. Private green spaces (patios) occupy 21% of the total area.
f. Circulation occupies 6% of the total area (Fig. 4, 5).

Design Concept of the Existing Houses in the Site

Houses in the site are of the kind which is called Arabic houses. Two major factors have played an important role in the Arabic design: the weather, and the traditions of the Islamic religion combined with the tradition of the region. The weather is hot in the summer and cold in the winter. Therefore, the materials must be able to stand against this changeable weather. Local materials which are used in construction are mud mixed with tree branches. The
roof consists of wooden beams, leaves of palm trees and mud compressed with sodden hammers or rolled, making the mixture waterproof (Fig. 6). Weather and the materials affect the shape of the house. Traditions affect the arrangement of the rooms in order to provide the privacy which is highly desired in the Islamic society. Therefore, the Arabic house consists of a private green space in the center. Around this open space (patio), rooms are arranged. Light and air are obtained from this patio while the outer walls have very few openings. In general the house is divided into two major areas: day area and night area. These two areas can be separated either by having two patios, or by having two floors.

Description of the House

The majority of houses consist of two stories which are centered around an open space. The first floor usually contains six types of spaces: the entrance, guest room, ka‘a, derka‘a, lewan, and kitchen. Each of these spaces has its own characteristics (Fig. 7, 8, 9, 10).

The entrance has two doors and one doorway. One door leads to the guest room and the other to the street while the doorway opens to the garden but does not face the outside door. This arrangement stops the view from the street to the inside of the house.
RATIO OF THE AREA AMONG BUILDING, PATIO AND CIRCULATION

FIGURE 5
13 cm pressed adobe and ash
14.8 cm adobe
2 cm wood plate
15-18 cm joist
10 x 10 beam

2.5 cm tile
2.5 cm cement admixture
2.5 cm wood panels
15-18 cm joist
main beam 2.5 cm

Detail of old roof

Detail of the old method of construction and applying some new materials
The guest room is located next to the entrance so that guests who are not close friends are not admitted to the center of the house.

The ka'a and the derka'a occupy the same space. The derka'a is part of the room with the entrance, usually containing a fountain, while the ka'a is raised higher than the derka'a by two or three steps. The air comes in from the garden, circulates through the derka'a to the ka'a, then escapes through an opening in the ceiling of the derka'a (Fig. 11).

If the house has a second floor, bedrooms would be located there. Therefore, the number of room in the second floor depends on the size of the family. Another lewan may be found there also.

The uses of the above mentioned rooms are listed in Fig 7. From the table and the description of the rooms, we can cancel the ka'a and derka'a because the lewan, in conjunction with the rest of the house, can be developed to serve the same purpose.
<table>
<thead>
<tr>
<th>Name of Room</th>
<th>Sit</th>
<th>Sleep</th>
<th>Fixfood</th>
<th>Cook</th>
<th>Men</th>
<th>Women</th>
<th>Circu.</th>
<th>Day</th>
<th>Night</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guestroom</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Hallway</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bedroom</td>
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<td></td>
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<td></td>
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<td></td>
<td></td>
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<tr>
<td>Kitchen</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full bath</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/2 bath</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lounge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Porch</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roof</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Matrix of the kind of activities of the rooms in an old house

Figure 7
ELEVATION OF EXISTING HOUSES

FIGURE 9
IV. THE PROGRAM

The program of the project is based on the recommendations of the Ministry of Housing in Syria and on the existing social structure of the area.

Public areas: the guidelines according to the Ministry of Housing code for the middle class income of the Arabic style house are:

1. public gardens: 1 square meter per person.
2. green area: minimum of 2 square meters in the dry areas and 30% of the area where the average rainfall is 400 mm.
3. parking spaces: vary from one area to another. According to a government project in Barza, parking spaces had to be proportioned so that every 340 houses would get 200 parking spaces. The minimum number of parking spaces required by the Ministry of Housing is 12 persons per car.

School area: The ministry of Housing code requires 10 meters squared for every elementary student. The school must be at least 4000 meters squared. The percentage of students are 16% of the total population.

Service areas: Including religious center, cafe, clinic, etc., must be .2 meters squared and .5 meters squared of open spaces per person. The size
of the project dictates that there is no need for a school or major facilities such as a clinic or religious center. The only services which will be open are some shops or kiosks in the open spaces (garden).

Private areas: The code for the middle income and for an Arabic style house requires:

1. real estate: The area should not be less than 91 meters squared.
2. It must be no more than 80% of the area beneath the construction.
3. The facade which is facing the street should be no less than 7 meters squared.
4. The real estate can be no less than 13 m long from the street to the opposite end.

The three Classifications of Arabic Housing Style Based of Income

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>Middle</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real Estate</td>
<td>70</td>
<td>91</td>
<td>112</td>
</tr>
<tr>
<td>Built Percent</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td>Depth</td>
<td>10</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>Facade</td>
<td>7</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Density</td>
<td>750</td>
<td>---</td>
<td>550</td>
</tr>
<tr>
<td>Area per person</td>
<td>11-14</td>
<td>11-14</td>
<td>11-16</td>
</tr>
</tbody>
</table>

* The units are in squared meters.
In the project, the following percentage of housing units will be used.
These percentages are based on the number of members in each family:

30% of houses for 2 persons.
30% of houses for 3-4 persons.
20% of houses for 4-5 persons.
20% of houses for 5-7 persons.

The project will provide one parking space for each six persons. This is double the figure required by the Ministry of Housing. The reason for such a larger number of parking spaces is the continuous increase of people who own a car. It is certain that the Ministry’s figures will be modified in the near future to match ongoing changes in the society.

The project will provide open space for the residential area. This open space or garden will consist of the following elements: children’s playground, passive areas for adults, small areas for shows, and some shops.

Theoretical Background

The number of experiences in urban design is unlimited; projects and books in this area, therefore, can be a good source of guidance and inspiration. This section will present some of the ideas which will be used in the process of forming the concepts and the design ideas of this project.

The first idea to be discussed is the transport system. Many kinds of
layouts are used in the design of cities or neighborhoods. Three major kinds are the following:

- **Uniform grid.**
- **Radial system.**
- **Linear system.**

The **uniform grid** (Fig. 12) consists of two series of parallel lines intersecting usually at a right angle. There are many variations in this type. Each of these variations has its own advantages and disadvantages. Yet, in general, grids are useful where flows are shifting and broadly distributed. Grids also are easy to follow, therefore, they are suitable for complex and large scale areas. On the other hand, the grid is criticized for being unable to distinguish between heavy and light traffic. Also it is criticized because it usually does not respect the topography of the land. Having straight long streets brings monotony and boredom.
Many modifications can be done to omit these disadvantages.

The radial system (Fig. 13) is based on a central point of attraction from which all streets radiate. This system is the best for moving to and from a major center, such as industrial, commercial or administrative center. Its problem is that it does not respond well enough for movement in the city which is not directed towards the center. This system may circles connecting the radial streets. These circles help make movement around the city, away from the center, easier.

The linear system (Fig. 14) is based on one major street around which all activities take place. This system can be seen along railroads, canals and trolley car lines. Also movement along this major line will be overloaded because of the huge amount of traffic coming in and out. As it is the case in the first two systems, several variations of this system may increase its advantages and decrease its disadvantages. The
combination of these three systems can give more new solutions. It is up to the designer to decide what is the best for his design problem. In a project of the scale of the one in hand, the grid system will be useful for the services such as sewage and electricity. Also if the main direction of the roads are straight this will make service vehicles' movement easier and quicker. Yet, the totally straight lines would be boring. Therefore, some of the characteristics of the radial system can be useful. A variation of the radial system has streets branching from other points other than the central point. This pattern is very similar to what can be seen in nature (tree). The lines are not perfectly straight; rather they have several changes in direction. These changes would make views more interesting.

The project would not need to radiate from this point they only need to lead to this focal point. The road system then will have different characteristics for the purpose of making it functional as well as attractive.

The second idea is the idea of superblock (Fig.15). The gathering of four or five city blocks in one direction and two or three blocks on the other one forming one huge block. If automobile movement is eliminated from the inside of these blocks, and intimate zone for pedestrians can be formed. This is huge block is called superblock. Inside this superblock children can play safely,
and adults can enjoy quietness. Cars would be parked in several parking at the edges of the block or in pockets which do not complete the continuity of the block.

Because people would have to walk from the parking lots to their houses, they would have more chances to meet each other. This would encourage stronger social relationships. It should be kept in mind that distance between parking areas and housing units should not be very long. This concern is for safety and maintenance reasons.

The idea of superblock as a zone free of automobile traffic is suitable for the Syrian culture. For roads in Damascus were used to be used for social interaction and as a playing ground for children. It is not easy to provide playgrounds for each neighborhood in the city and especially in the old part of it. Therefore, it is extremely important to retain the leisure function of the street for children. One way to do it is to provide safe streets and roads. Isolating cars from some of the city's streets is one way to reach this goal.

This characteristic of the road as a pedestrian oriented corridor is part of the heritage and culture of the city. To bring it back to life is to give the people the chance to enjoy their traditional life again. At the same time
the superblock idea respects the reality of the car and its importance in the modern life. The superblock put the car far enough to provide pleasant and safe atmosphere, and close enough to maintain adequate services for the community.

When using the idea of superblock, the designer will always consider the possibilities of entering emergency and service vehicles to the block in order to provide the needed services.

The third point to be mentioned is related to the section of the roads. Cities' streets can divided into three major levels: city level, sector level and local level. Typical level would have its width usually twice the height of the surrounding buildings. This level provides the basic access for the city. It is for both automobiles and pedestrians. Sector level are more suitable for local activities. The section of this kind of streets would have the width of the street equal to one and a half of the height of the surrounding buildings. Still in this level cars can be found. Yet, their movement is slower and less important than in the city level. This kind of streets can be used to connect the superblock with other superblocks, or with the main access of movement in the city.
Diagram of the super block in the urban form

Figure 15
The third level is the local. This kind of street has a section where the height of the buildings equals the width of the street. This section is very convenient and pleasant for pedestrians. Cars will not be found in this kind of street. If the height of the buildings becomes more than the width, then the section would not be that convenient. People would not feel the same comfort and amenity. This street can be useful for the pedestrian roads (hara) inside the superblock.

In general, the Arabic hara (road) may have a section where the height is much more than the width. It would be logical to modify the Arabic road’s section to a with a 1:1 ratio since studies show that this ratio will enhance the appearance of the hara and make it more usable for social activities. The characteristics of the hara would help maintain the total character of the Arabic road.

The fourth point is the Arabic road (hara). The typical hara in an Arabic city has several major characteristics. But most of all, it has a very important social aspect. In it all kinds of activities take place. It is where children play and meet other children, and where people sit and socialize. It is not an unfamiliar scene to see people putting chairs at their doors to sit and meet their neighbors. The hara is, with no doubt, the living
room of the small community (houses around the hara). One attitude in particular can show how people feel about their hara in a very straightforward and simple behavior; each house will clean the part of the hara which adjacent to his house. This cleaning is a serious matter, the resident will clean in many cases each stone of the pavement individually to make the whole hara as clean and appealing as possible.

This strong relationship between the hara and its residents is due to many factors: the way people run their lives; the actual fiscal section of the hara and the closeness which it introduces; the simple, slow, and relatively quiet modes of transportation; and of course the long and old traditions and heritage of the people. New changes in the lifestyle effected these previously mentioned factors and, therefore, effected the way people see and use their haras. The hara slowly but steadily lost its social character and changed it into a regular road or street.

The aim of this project is to produce an environment which would encourage social life in the hara and bring back its old character. The way for doing so is by understanding the physical characteristics of the old hara and by trying to recreate these characteristics in the new design. The experience gained from contemporary urban design studies described in this section will be an