

Urban Clarity in Tripoli Center-Libya

¹Ahlam Abdullah Bridan and ²Dr.Özlem Özer

Okan University, Department Of Architecture, Tepeören Mahallesi, Tuzla, Istanbul, Turkey

Okan University, Department Of Architecture, Tepeören Mahallesi, Tuzla, Istanbul, Turkey

Abstract: This paper discusses the urban clarity of the city, presenting the concept of the legibility, by Kevin Lynch (The image of the city) in 1960, which states that linking roads is related to the process of mental mapping of the environment, to study the visual formation of the city by knowing the elements of the city. The Tripoli center was selected as a case study. Tripoli is the capital city of Libya. It located on the south coast of the Mediterranean Sea, is presented by methodological procedures of interviews with people, for sketch mapping. the study sample was selected from the population of the case area. Interviews were conducted for 382 people, including local, visitors and tourists.

Keywords: Tripoli Center, Clarity, Elements, Mental Image.

1. Introduction

The Tripoli City is characterized by a multiplicity of periods in which passed through the city, where the Sea Mediterranean civilizations are mixed with prehistoric civilizations[1]. The concept of clarity is one of the measures of the urban environment, and is a broad and diverse concept that is linked to various knowledge fields (urban planning, urban design, psychology and behavior). The research considers that the concept of clarity is a broad and comprehensive concept and is considered as a measure of the urban environment quality, Interferes with the city's installation to represent the ease of absorbing the environment And to consolidate its parts and components into a unified system and a common format at the global phase.

Urban Clarity is an obvious and comprehensive concept that include many processes and stages including orientation and wayfinding, In both stages, we need tools to help reach our destination. These are the tools for hidden and visual features in the urban environment where that visual features or reference points or significant points, environmental profile represent to confirm the environmental information that know the identify the place, As for hidden features is the space environment with implicit influence and is often used by human without reaction, and also it makes people and vehicles flocking and spreading through the city. Both hidden and visual features affect the clarity of the urban environment. [2].

Urban clarity has several names, as Lynch mentioned in his book (THE IMAGE OF THE CITY), that known "Legibility" (also called image ability and visibility). Legibility means the extend to which the cityscape can be "read". People who move through the city engage in wayfinding. [3].

2. Methodology

This research depends on:

Assessment the Urban Clarity of study area (Tripoli Center) method in the evaluation process those which are:

Analysis of visual formation by mental image of the city.

Mental map: It is the result of the interviews with people, all the individuals draw a map of the place (study area). The work of a personal interview with three groups of people:

- Locals.
- Visitors.
- Tourists.

In this study depends the analysis mainly concerned with the analysis of visual Formation according to Image of The City by Kevin Lynch. Analysis of the city elements (Paths, Edges, Districts, Nodes, Landmarks). knowledge degree Legibility of the city. Urban clarity requires to depend on knowledge of the environment.

2.1. Mental Image of the City

These are perceptions and impressions, and also the sensations of the movement that are derived by the population and users of that city, Where the paths of movement and open urban areas and visual contrasts play an important role in the formation of an integrated image of the city, whether this image is positive or negative. [6].

Another concept of Mental Image of the city: These are the mental perceptions of the city by most of its inhabitants, which play open spaces and visual contrasts, And also sense of motion within its paths an important role in the formation of an integrated picture of the city through it. [7].

Legible City is a city whose districts can be distinguished, their Landmarks, Edges, Paths and Nodes clearly and easily, In which these elements are interconnected and integrated into one clear formation, This city has a high capacity for manifestation and clarity. "Image ability" is the term Lynch used to express his theory. [7].

2.2. Elements of the mental image of the city

Lynch argues that people in urban situations orient themselves by means of mental maps. He compares three American cities (Boston, Jersey City, and Los Angeles) and looks at how people orient themselves in these cities. A central notion in this book is that of legibility (also called image ability and visibility). Legibility means the extend to which the cityscape can be "read". People who move through the city engage in wayfinding. They need to be able to recognize and organize urban elements into a coherent pattern. "In the process of way-finding, the strategic link is the environmental image, the generalized mental picture of the exterior physical world that is held by an individual. This image is the product both of immediate sensation and of the memory of past experience, and it is used to interpret information and to guide action" . Lynch proposes that these mental maps consist of five elements: [3].

Figure 1. Shows of Elements of the mental image of the city

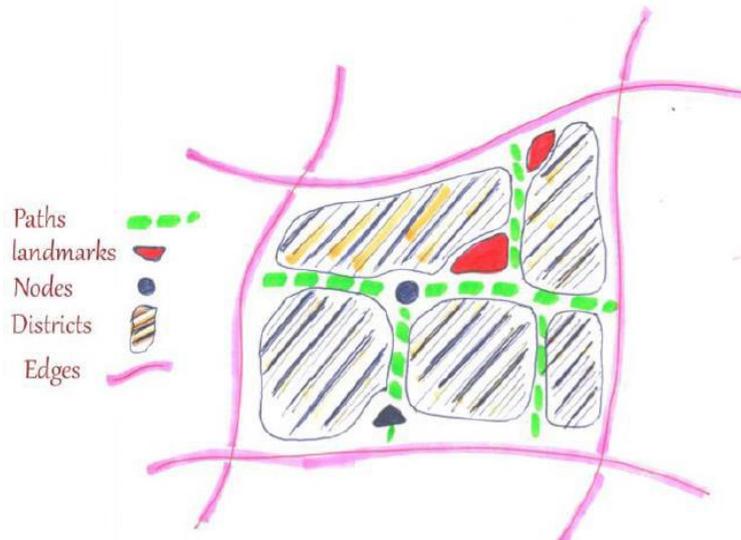


Figure 1: Shows of Elements of the mental image of the city

Paths: Paths are streets, transit ways, pedestrian roads or railways where observers can move through. According to Kiyak (1997) paths are linear city gaps which connect buildings and other structures. People observe and perceive the city while moving through these paths and this interaction plays a role in city image. [8].



Figure 2: Shows of the Paths

Edges: Edges have visual effects between areas. They separate regions in a sharp way and provide relation between them neither damaging visual relation nor being distinctive barriers. Borders can be classified in two kinds as natural and artificial borders. [8].

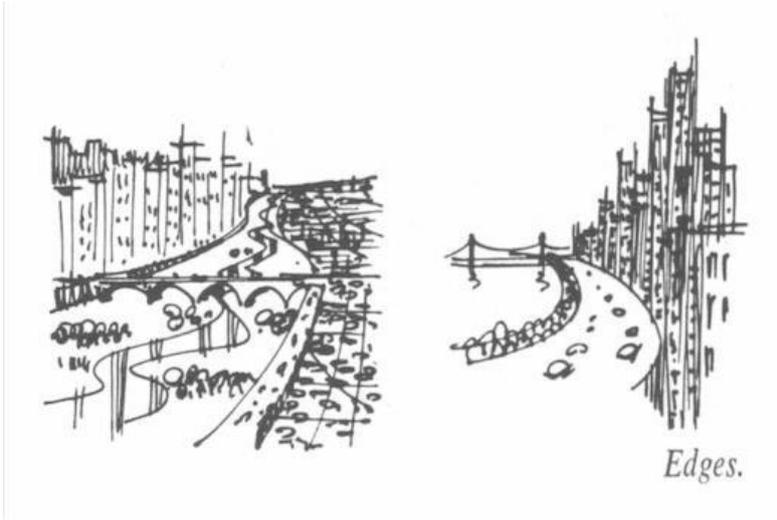


Figure 3: Shows of Edges

Districts: Being the greatest component of the city, regions include all city characteristics and other city structural elements. Regions differ and become clear from the other parts of the city and settlements with their characteristics such as extent, pattern, material, building and elements and with these characteristics they can be recognized and distinguished easily. [8].



Figure 4: Shows of the Districts

Nodes: These are the places where the paths, junctions and some features become dense including observers. Nodes may become a symbol of a region because of being dense activity center and using a specific physical character. [8].

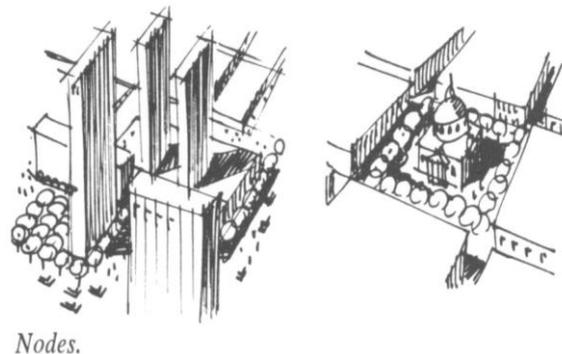


Figure 5: Shows of the Nodes

Landmarks: external points of orientation, usually a easily identify able physical object in the urban landscape. Of these five elements, paths are especially important according Lynch, since these organize urban mobility. [3]. Landmarks are physical elements which attract attention with their characteristics such as scale, pattern, form and material. They become a qualified image and reference element with functional and symbolical properties, size, and contrast form and construction period. They can be seen from several region of the city. The number of landmarks depends on the description ability of the observer. [8].



Figure 6: Shows of the Landmarks

3. Data Gathering and Analysis

3.1. Site Description

Tripoli is the capital city of Libya. Tripoli is located on the south coast of the Mediterranean Sea. Tripoli has a good strategic geographical position and an extensive history. It forms a vital link between the eastern and western cities of the Arab world, and between European cities and African cities. [1]. Tripoli's history reflects the history of the country. [5]. Etopolis or "Al-Medina", is considered one of the oldest cities in the Middle East. Tripoli was held under the auspices of successive peoples and civilisations: the Phoenicians (7th-8th centuries BCE). [4]. It has known ups and downs but its historical architectural monuments are a testimony to the great Libyan civilisation. Tripoli has many old and historical buildings such as the Red Saray Castle.



Figure 7: Location of Tripoli city

3.2. Interviews and mental mapping procedures

The aim of this procedure is to get cognitive maps and explore the degree of legibility through degree of accuracy and completeness of sketch maps. in order to achieve a clear and comfortable city formation. Which gives easy identification of city's parts for assist practical tasks the wayfinding. In general, the mental image of the city consists of the composition, harmony and legibility of the following:

- Paths - Edges - Districts - Nodes - Landmarks.

At the beginning, should be determine the sample size of the study area (Tripoli Center) by using Slovin Formula to know how many sketches required as follows:

It is computed as: $n = N / (1 + Ne^2)$.

whereas:

n = the sample size.

N = total population.

e = error margin / margin of error.

For Tripoli Center, by 0.05 margin of error.

$n = 154060 / (1 + 154060 * 0.0025)$

n = 398 sketches. I have collected 382 sketches.

382 people with interviews in Tripoli Center to draw mantel maps sketch for the city.

Table 1. The repetition city elements

Paths	Edges	Districts	Nodes	Landmarks
29	2	6	11	85

Table 2. The mental maps elements of the study sample

Paths	Edges	Districts	Nodes	Landmarks
2028	210	80	793	2297

4. Results and Discussion

Umar Al-mukhtar street is the most legible city Paths with 305 times in the minds of people. The reason for naming the street is the name of Libyan hero Umar Al-mukhtar. Where he was the leader of the resistance against the Italian occupation. It is considered one of the largest streets in the Tripoli center, branch out of Maidan AL-Shuhada "Martyrs' Square". It includes shops,

government, administrative buildings, hotels, restaurants, cafes and Tripoli International Fair. It includes residential neighborhoods. The buildings this street of Italian-style and consist of four to five floors equal height, distribution of shops for economic activities in the ground floor. It is separated from the street by shaded alleys. Including the upper floors as residential apartments or administrative offices. Most with white paint.

The sea is the only edges in the center of Tripoli with 116 times. It is considered a natural edges that has a direct impact on the minds of the people. It comes from the north west side of the city of pubic park, fountain and children playground. There is also the sea, the Corniche, the cafes and the small shops. On the

north-east side there is a sandy beach suitable for swimming and it is called Sindbad Resort, next to tower buildings and hotels.

Jalaa neighborhood buildings are the most legible districts in the Tripoli center in the minds of people. This is due the buildings are very high in the area to 18 floors. The neighborhood includes a large number of buildings and a population. It is easy to see from nearby neighborhoods. There is also nearby Jalaa Hospital for women and children. This makes it easier to understand.

Maidan AL-Shuhad is the most legible city nodes and landmark with 305 times in the minds of people. It is one of the most famous squares in the Tripoli city. It was founded in the 1920s. Located next to the Saraya Al-hamra " Red Saraya Museum" and Bab Al-horia is one of the entrances to the old city" Al-Medina". Where it was called the Italy Maidan "Piazza Italia", and after the independence of Libya in 1951, the name of Independence Maidan, was changed to the Maidan AL-Shuhada, was the Green Square in the era of Gaddafi. To rename Maidan AL-Shuhada in 2011. It is the shape of the rectangle is at the ends of a historical fountain and branch out it the most important main streets Tripoli center. The Maidan considered one of the most important historical and tourist areas. Where it is used as a social space and do the concerts, religious events and demonstrations in the city recently. "see Figure 8. The largest elements in Tripoli Center. Figure 9 . The image of Tripoli Center" and "see Table 3. The largest elements in Tripoli Center" .

Table 3. The largest elements in Tripoli Center

Elements City	Tripoli Center	
Paths	Umar Al-mukhtar street	263
Edges	The sea	116
Districts	Jalaa neighborhood	24
Nodes	MaidanShuhada	305
Landmarks	MaidanShuhada	305

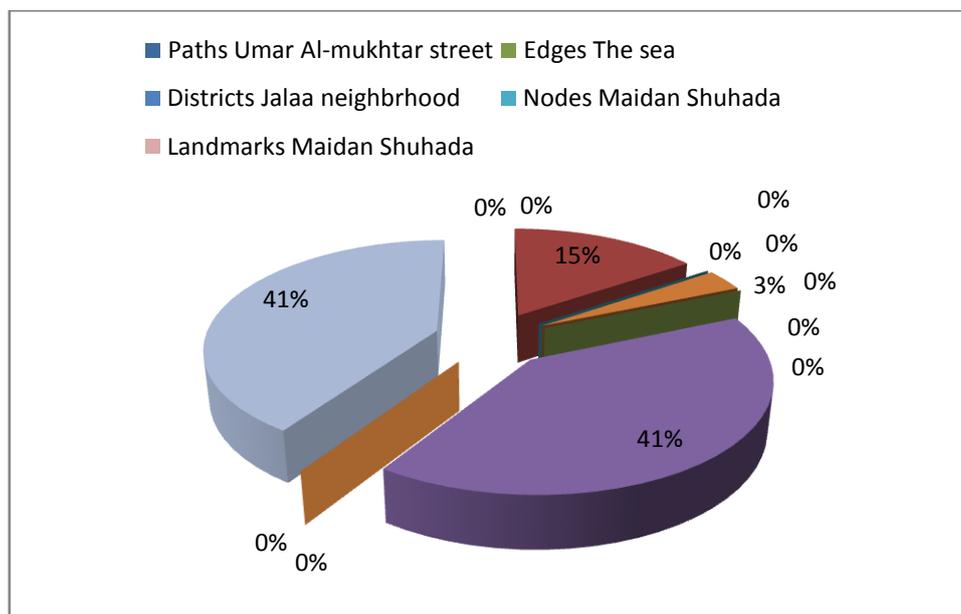


Figure 8: The largest elements in Tripoli Center

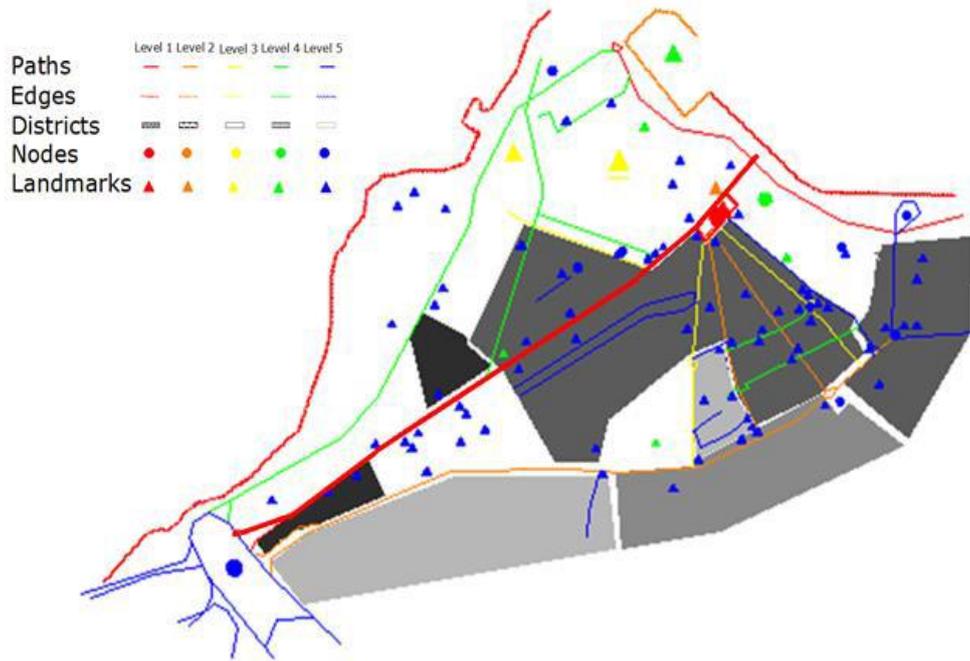
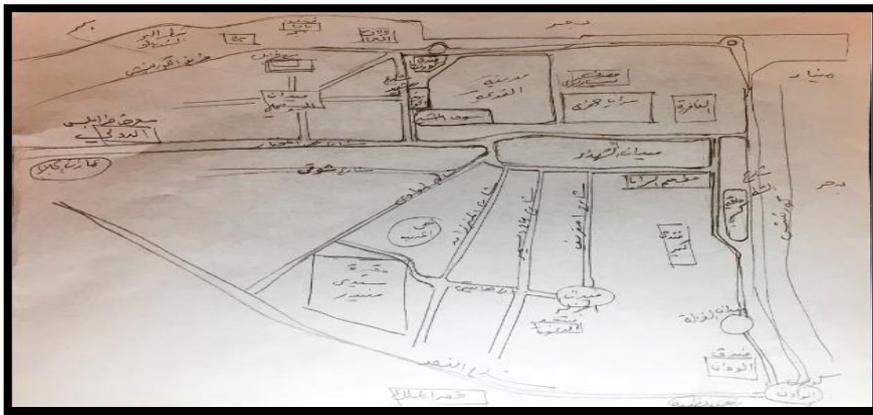


Figure 9: The image of Tripoli Center

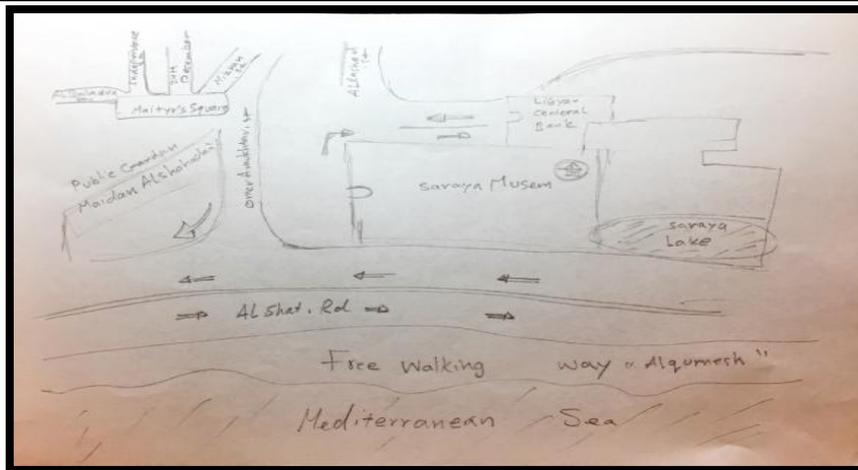
4.1. Some examples for elements in Tripoli Center



By Male : 34 years old – visitor



By Female : 32 years old – inhabitant



By Male :29 years old – inhabitant
Figure 10: Shows of Examples for Elements in Tripoli Center

5. Conclusion

In this paper aims to study urban clarity, So Tripoli Center has low legibility, while Landmarks were the most mentioned elements of people, Maidan AL-Shuhada was the highest ratings from people According to mental maps. that the historical area and the main streets are more legibility in the Tripoli center. Which are located around the Maidan AL-Shuhada, The Maidan AL-Shuhada, it has a great impact on people "inhabitant or visitor". Especially Umar Al-mukhtar Street has the highest classification of people according to mental maps, While Al-fatih Street has a high rating of people but is located in a separate area. The second streets in legible, are Mizran Street, Al-nasr Street and 24 December street . The third streets in legible, are Al-isiqlal street, Rashid street, Amar Bin Al-a'ss street. These streets are also the longest in the study area, This result is encouraged by the environmental structure of a good and strong relationship between inhabitant and visitors. This area is of great importance to the city. Tripoli center have two edges "Sea and harbor". The sea got the higher rating of people than the harbor. The sea is a strong edge in the Tripoli city. This edge has a great impact on people and other cities. The harbor is also considered a strong edge for people, which is considered of great importance to the city, and also a source of livelihood. This will positively change the character of this part of the Tripoli Center and make the area more welcoming to the users. It is easy to navigate the city and connect the edges with the city center. Which becomes more legible and clarity.

The nodes in the center of Tripoli is also impressive. The most common node is a Maidan AL-Shuhada that is located between the streets more legible. And also the highest choice values. The second node in legible is the park. Which is located next to the historical area, the field and overlooking the sea. There is a strong relationship in this area. Where it is linked to Umar Al-mukhtar Street and Al-fatih Street. These streets have the highest visibility in the mental maps. The other nodes are the lowest classification of people.

The most landmarks in the Tripoli Center is Maidan AL-Shuhada, as mentioned above, due to its importance in the city. Second is the historical area, the Saraya Al-hamra is located next to the Maidan AL-Shuhada, in the area more legible. Overlooking the most important streets of the city. Then comes the old city "Al-Medina". This region reflects Libya's civilization and tells stories, civilizations and various periods. Making this area of historical landmarks strong in the city and other cities.

Of all these results is the focus of legibility in the city in the historical area where the Maidan AL-Shuhada, the main streets, and also Al-nasr Street which has high results in the legibility of people. Thus facilitating mobility and accessibility in this area, and the main streets are easily recognizable and the wayfinding in them. However, other area is difficult wayfinding and navigate. So the Tripoli center is less clear and readable. Requiring solutions and ways to help to navigate inside the city and make it more visible.

6. Acknowledgements

The authors would like to thank Okan University for their efforts to support research. Thanks also to the Department of Architecture.

7. References

- [1]. Amiruddin, Ismail., and Adel, Ettaieb, Elmloshi., "Existing Transportation Scenario In Tripoli, Libya", 2011.
- [2]. Jaleel, Ameera., "Legibility Environment Urban of Al-Kifl Historical City", 2013.
- [3]. Lynch, Kevin., B. " The Image of the City", 1960.
- [4]. EL- ALLOUS, M. O., ABDELATIF., "The Historical Transformation of Civic Architecture: City Council Buildings and Urban Change in Tripoli, Libya", 2016.
- [5]. Elbendak, Omar., Emhamed., "Urban Transformation and Social Change in a Libyan City: An Anthropological Study of Tripoli", 2008.
- [6]. Al-Meghary, R. A., Ahmed., "The role of the Paths and Visual Endings in the formation of the Image of the city (Case Study - Gaza City)", *Islamic University – Gaza*. 2015.
- [7]. Mohsen, Salah. Eldin., Youssef., Summary book" Image of the city", 1983.
- [8]. Damla, Zeybekoğlu. Atik., Hatice, Kiran. Çakir., and Esin, Benian., "The Importance Of City Image Elements Through Recognizing and Introducing Of Cities: Edirne. Trakya" *University, Faculty of Engineering and Architecture, Department of Architecture, Edirne / TURKEY*, 2009.