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THE IMAGE OF THE HISTORICAL CITY IN THE COURSE OF ITS DEVELOPMENT- TYRE CASE STUDY

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Abstract

Built heritage constitutes the physical components of the city's identity and image; adding historical, symbolic or cultural values to old buildings justifies the need to protect them, and to find a way to integrate them with the expected development of the city. On the other hand, the modernity of the city reflects the contemporary character of the society by adopting the current architectural trends and the newest technologies in construction. This paper investigates the historical cities image throughout its continuous development, where the built heritage needs to be integrated within the new urban context established by the rational development of the city, through studying the case of Tyre city in South Lebanon. In this city, 1930s-1970s buildings achieved a sense of disjunctive break from the old city fabric (1766-1900s). In spite of the differences between these two fabrics, both represent a clear and strong identity for the two historical stages. This identity is confused in the later urban fabric of the city. As a result, the development of Tyre city should be balanced to improve 'the sense of place'.

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Abstract

Built heritage constitutes the physical components of the city's identity and image; adding historical, symbolic or cultural values to old buildings justifies the need to protect them, and to find a way to integrate them with the expected development of the city. On the other hand, the modernity of the city reflects the contemporary character of the society by adopting the current architectural trends and the newest technologies in construction. This paper investigates the historical cities image throughout its continuous development, where the built heritage needs to be integrated within the new urban context established by the rational development of the city, through studying the case of Tyre city in South Lebanon. In this city, 1930s-1970s buildings achieved a sense of disjunctive break from the old city fabric (1766-1900s). In spite of the differences between these two fabrics, both represent a clear and strong identity for the two historical stages. This identity is confused in the later urban fabric of the city. As a result, the development of Tyre city should be balanced to improve 'the sense of place'.

INTRODUCTION

The architecture of the city is both, the work of engineering and architecture as man-made object that grows over time, and the urban artifacts that characterize the city by their history and forms (Rossi, 1982). The historical study of the city reflects two points of view; the first is an archeological one where the cities become the historical texts, the second concerns the series of values constituting the collective imagination. The study of the actual urban fabric and the continuities in the layers of the urban structure reveals the common fundamental characteristics of the urban dynamic of the city (Rossi, 1982). Other city definition by Lynch (1960) describes it as "the product of many builders who are constantly modifying the structure for reasons of their own. While it may be stable in general outlines for some time, it is ever changing in detail. Only partial control can be exercised over its growth and form" (Lynch, 1960).

In both definitions, the city depends on the construction knowledge and capability of its inhabitants. In fact, Lynch states that the analysis of the city image includes three components: **identity, structure and meaning**. While the quality of the city image depends on the identification of its physical elements, which are **path, landmark, edge, node and district**; in other words, the urban tissue that constitutes the city. Three logical systems correlate to define the urban tissue (Panerai et al., 2004) as follow:

- The logic of roads in their double roles of movement and distribution;
- The logic of plot subdivision, where land holdings are built up and where private and public initiatives take place; and
- The logic of buildings that contain different activities.

In addition to these logical systems, **the logic of geographical context** is an important factor that influences the initiative of city construction.

This paper addresses the problematic of **the historical cities image in the course of its continuous development**, where the built heritage needs to be integrated within the new urban context established by the rational development of the city.

"Historic buildings, open spaces and contemporary architecture contribute significantly to the value of the city by branding the city's character. Contemporary architecture can be a strong competitive tool for cities as it attracts residents,

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tourists, and capital. Historic and contemporary architecture constitute an asset to local communities, which should serve educational purposes, leisure, tourism, and secure market value of properties"(WHC and UNESCO, 2005).

This previous point of view considered by UNESCO, addresses many problematic on the social and economical levels. The built heritage embraces the "sense of place". The set of associated values, such as historical, aesthetic, symbolic or cultural value, enhances the importance of these traditional buildings. Within the context of planning in historical environment, the preservation of traditional forms and buildings reinforces the link to past (nostalgia) and affect the image of the city. On the other hand, the modernity of the city should reflect the contemporary character of the society. This paper inspects the "sense of place" in Tyre city case, where the historical core forms an important part of the city. The study examines the morphology of its master plan, the typology of its urban fabric and the functionality of its road network, in the aim to clarify the image of the city. This image reflects the cultural identity of the local social actors according to their cultural attributes.

TYRE CASE STUDY

Tyre, which was constructed on a purportedly impregnable island, succumbed in 332 to the attack of Alexander of Macedonia who had blockaded the straits by a dike before his final assault. First a Greek city, it was followed in 64 B. C. by a Roman city, constructed on his historically charged site ... In the early period of Christianity, it was the seat of a province, which incorporated fourteen bishoprics. Having fallen under Arabic domination in 636, it was retaken by the Crusaders in 1124 ... From 1124 to 1294 - date of its evacuation, the city became a stronghold of the Christians who built eighteen churches... Following the period of the Crusades, the historic role of the city declined' (ICOMOS, 1984). By these words, the International Council on Monuments and Sites (ICOMOS) justified its recommendation to include Tyre city in the world heritage list, in 1984. At that time, the city was significantly affected by the war, and was threatened by urbanization and by land speculation. In this part of the paper, the current image of Tyre city is studied, within a chronological evolution reading in the history of the city.

The **morphological study of Tyre city**, as illustrated in figure1, demonstrates four main zones as mentioned below:

1. **Two archeological sites**, which are the one of the town (insular city), located on the headland, and the one of the Necropolis of El Bass located on the continent.

"The sector of Tyre El Bass, constituting the principal entrance of the town in antique times, comprises the remains of the necropolis, on either side of a wide monumental causeway dominated by a Roman triumphal arch dating from the 2nd century AD. Among the other vestiges are an aqueduct and the hippodrome of the 2nd century, one of the largest of the Roman world" (WHC, 2010).

2. **The old city of Tyre**, which encompasses an area of 45,000 square meters, includes the northern sector of the former island of Tyre. It contains a densely inhabited zone that includes a fishing port, and a commercial zone that contains a commercial port.
3. **The Palestinian refugee camp of Al Bass**: The French originally built Al Bass refugee camp during the 1930s for Armenian refugees. Then, it was used by the Palestinians from the early 1950s onwards before the initiation of any excavation. Over the years, this camp became poor cramped urban settlement(WHC et al., 2013) , and it forms a border limit for the city from the west.
4. **The district of Al-Raml** is the main quarter of the city. As shown in figure 1, it is surrounded by the sea from its northern and southern sides, the insular city archeological site and the old city from the west, and the natural reserve and the refugee camp of Al Bass from the east. Al-Raml district constitutes the continuous development of Tyre city from 1930 until present. In this study it will be divided into two zones as follows:

A.The fabric adjacent to the Hamra Road (historical Passage of Alexander) representing the 1930-1970 urban fabric and

B.The remaining part that represents the urban fabric built from 1970 until present. Influenced by the first Master plan established by architect Pierre El-Khoury in 1965 (approved by Decree No 4028, 1966), he described the city as "a sick and disabled" body in 1965, and identified three main residential zones(CDR, 2001):

- The congested old city,
- A low-density quarter recently built (Hay Al-Raml), and
- The Palestinian camp of al-Bass that blocks the eastward extension of the city.

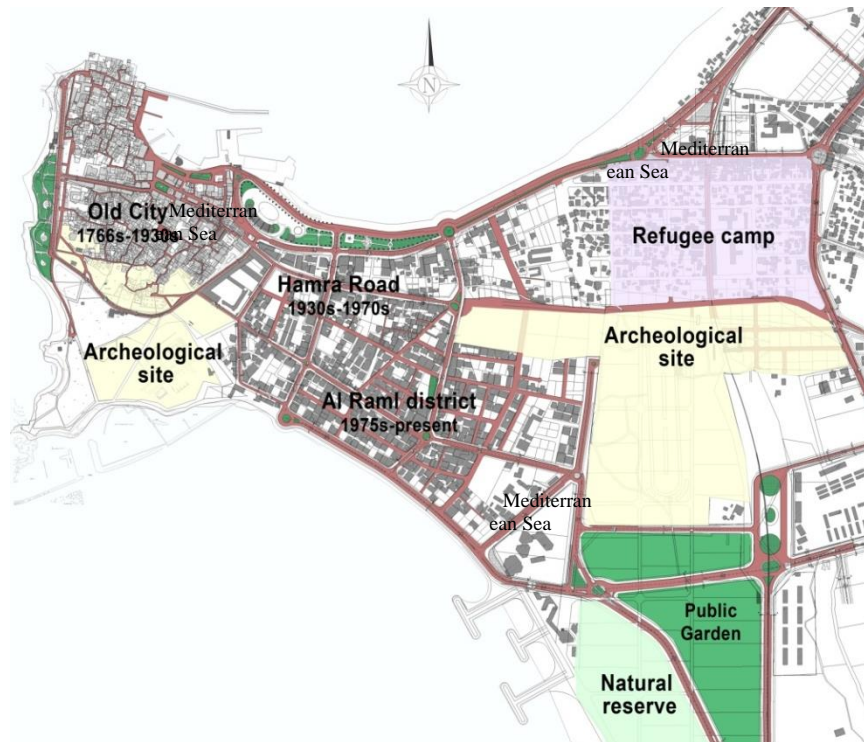


Figure 1: Current plan of Tyre city, showing the morphological study of the urban tissue of Tyre (Researcher, based on the Council of Development and Reconstruction (CDR) cad drawing 2012).

This plan had a fundamental influence on the shaping of the city afterwards, with the excavation of the Roman hippodrome site in 1967-69, another 18 ha of the peninsula were transferred to archeological sites, progressively; other elements in the master plan were abandoned including the sites designated for public buildings and the east-west network of streets, which were never expropriated. The negative impact of this master on the image of the city is revealed, for three main reasons as follows:

- The later archeological sites excavation change major parts of 1966 master plan, which modified it.
- The lot distribution: lot parcel area after division was set to be 400msq, which shaped small properties that increase the built area and reduce the open space and private gardens areas.
- No side limit recess: this permission allowed the creation of continuous facades; this decision was not the ideal one for a peninsula surrounded by the sea from three sides. This decision was a part of the modern concept in Tyre planning adopted by El Khoury that depends initially on the road network system to define the shape of the city urban fabric.

After this brief listing of the main zones in the city- through its morphology- and the indication of its natural and artificial borders, the urban fabric that shapes the image of the city is divided into three groups: in the Old City (1700s-1930), surroundings of Hamra Road (1930-1970) and Al-Raml district (1970-present). These three groups are studied separately to understand the urban tissues through the following:

A. Typology: The architectural character is recognized through certain vocabulary:

- Form: openings, rhythm, solid/void ratio, and decorative patterns;
- External and internal finishing materials, and construction methods; and
- Space organization: inner spaces and their functions.

B. Skyline

C. Road network

D. Urban fabric density

The old city of Tyre:1700-1930

In the thirteenth century, the last destruction of Tyre took place by the Mamluks to prevent the Crusades attacks from this access point in the Mediterranean Sea. From the ruins of the destroyed city, Sheikh Abbas Muhammad Al Nassar rebuilt Tyre in 1766, during the Egyptian rule of Ibrahim Pasha. "One can call Tyre a city of ruins built out of ruins"(Jidejian, 1996). Its traditional fabric, mainly dating from Mameluk and late Ottoman

periods, keeps certain homogeneity. This area of about 13 ha has 3600 inhabitants, divided among Muslim and Christian neighborhoods, consist in their majority of original Sour residents, with low income. "Among them, the fishermen community constitutes around 25% of the old city inhabitants. 62% are tenants, with old rents, while the majority of owners live in Beirut" (Debs et al., 2015).

The Cultural Heritage and Urban Development (CHUD) project, launched in 2001 for Tyre old city and four other cities in Lebanon, enhanced the image of the historical core of the city.

A. Typological study:

As all Islamic cities "characteristically comprises a tripartite system of public, semi-public and private spaces, varying in degree of accessibility and enclosure. The main public areas of the town are those of central bazaars, lined with open booths and workshops, with associated major mosques, caravanserais, café and hammams" (Michell, 1978). These typical characteristics are established in Tyre Old Town as shown in figure 5. The main public area in Old Tyre is the northern port. In addition to the commercial street (Suq), this represents the central area linking different quarters in the old city. Two main churches and two mosques are distributed over the old town, influencing the names of the neighborhoods where they are located as the Maronite quarter, Greek Catholic quarter, Al Jamii quarter where the mosque is located, and so on (El-Khoury et al., 2002). In the addition of the Massarwa quarter, this took its name from the origin of its Egyptian inhabitants.

A- Building Typology

1- Old City 1766-1930

a. RESIDENTIAL

Bitar House parcel# 706	Construction date 1766	Mamlouk Palace parcel# 618	Construction date 1800s	Salha R. House parcel# 381	Construction date 1766 GF -1900 F1 & F2
					
external finishing materials		openings/rhythm			
					
1-Sand Stone 2-Paint					

b. RELIGIOUS




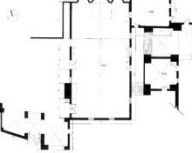


Greek Catholic Church parcel# 202	Construction date 1752	Maronite Church parcel# 407	Construction date 1870	Sunnit Mosque parcel# 748	Construction date 1860 2011 rehabilitated
					

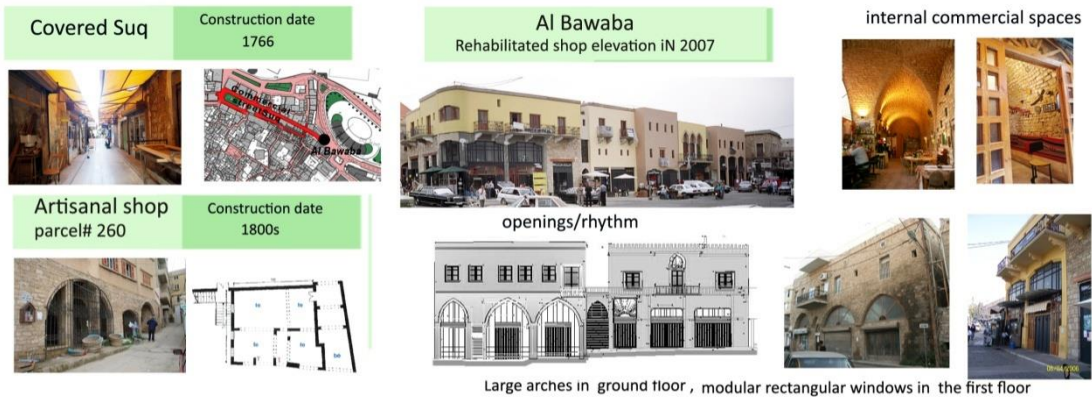
Figure 2 Typology of Old city of Tyre: residential and religious (based on khoury study 2002, all photos taken by the researcher 2011,2015)

The following figure 2 and figure 3 cover a study for the architectural character of the urban fabric in old city (1700-1930). A strong identity is defined in the different types of buildings. According to the survey of the Old City historic buildings in CHUD project, which was done by Pierre El-Khoury Office (2002), most of the oldest buildings and monuments in the current urban fabric of historical core of Tyre were built in the 18th century. The Greek Catholic Church, the Old Mosque and the Serail were the first built elements in the city (1752) (El-Khoury et al., 2002). The development of the neighborhoods grew continuously and reached its final form in 1930. Fig.2 and fig.3 demonstrate the significant adoption of arches in buildings, especially in those constructed in the 18th and 19th centuries using the local stone (sand stone) as structural material. That lead to a classification of arche types as is indicated in the figure 4, from semi arches used in pedestrian passages named 'Al Sibat', to semi circular arches and the pointed with two centers arches implemented in external and internal facades, and the use of vault and cross-vault to cover large spans as main construction techniques.

A- Building Typology

1- Old City 1766-1930

c. COMMERCIAL (Suq)



d. CULTURAL

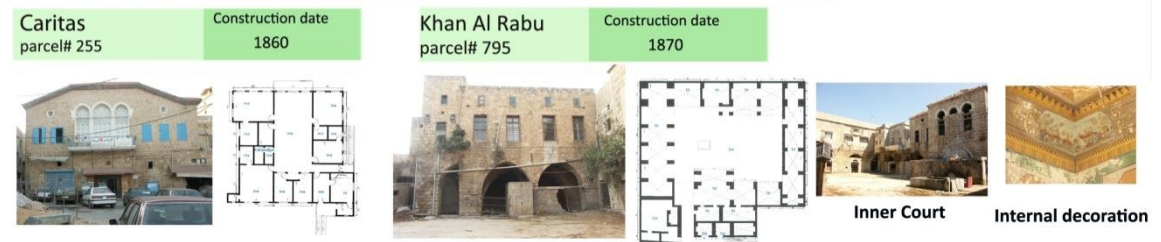


Figure 3: Typology of Old City of Tyre: commercial and cultural buildings (based on khoury study 2002, all photos taken by the researcher 2011,2015)

Arches and Vaults

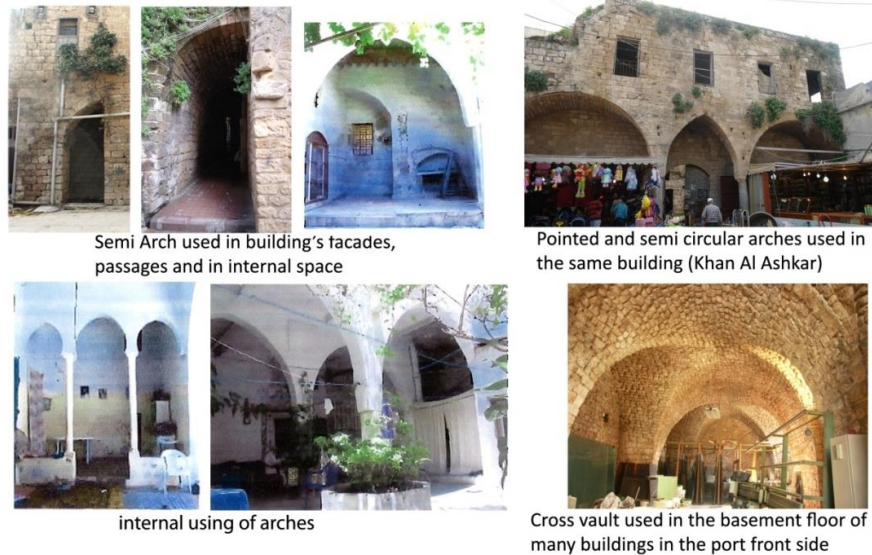


Figure 4: Architectural Elements in Old City of Tyre (researcher)

B. Skyline study

1-Tyre Old City

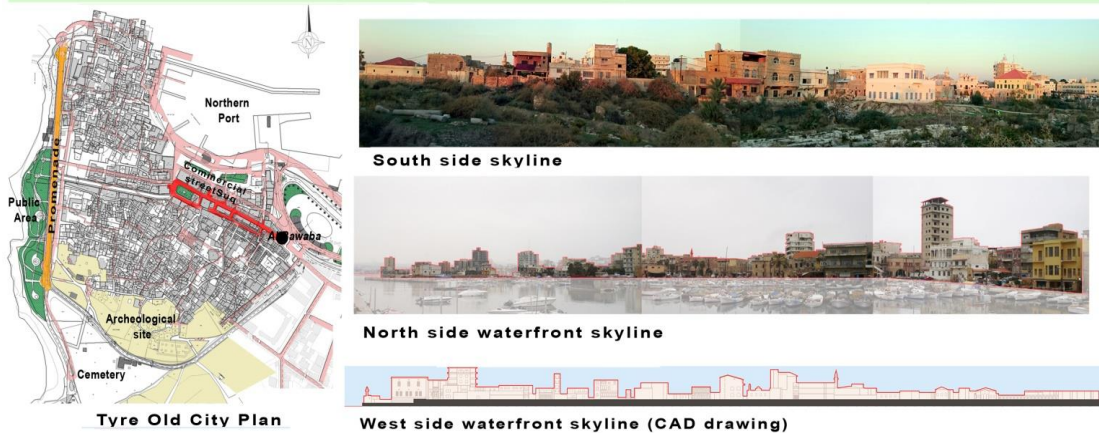


Figure 5 Skyline study of Tyre Old City (researcher, 2015).

B. Skyline study:

The old city as illustrated in figure 5 reflects the limitation of the construction methods and techniques to built more than three floors as maximum height before the 20th century. The anomalies in the skyline are the "illegal" (WHC et al., 2013) buildings constructed during the civil war in the late 1980s.

C. Road network study:

The old city has a pedestrian network related to a number of spaces, which are divided into two categories: **enclosed court** and **open courts** from a side or more. The figure 6 demonstrates four type of passages:

- The narrow pedestrian paths created by the urban blocks with max width of three meter;
- The road of the covered traditional Suq after rehabilitation by the Cultural Heritage and Urban Development CHUD project (phase one: sanitizing, illegal construction demolition, and roof covering) has from seven to eight meter width;
- Narrow car road with six meter width as it shown in blue in figure 6; and
- Large road, which is adjacent to the public garden on the west side of the old city, has two car lanes of twelve meter width and a wide sidewalk.

C. Road Network

1- Tyre Old City

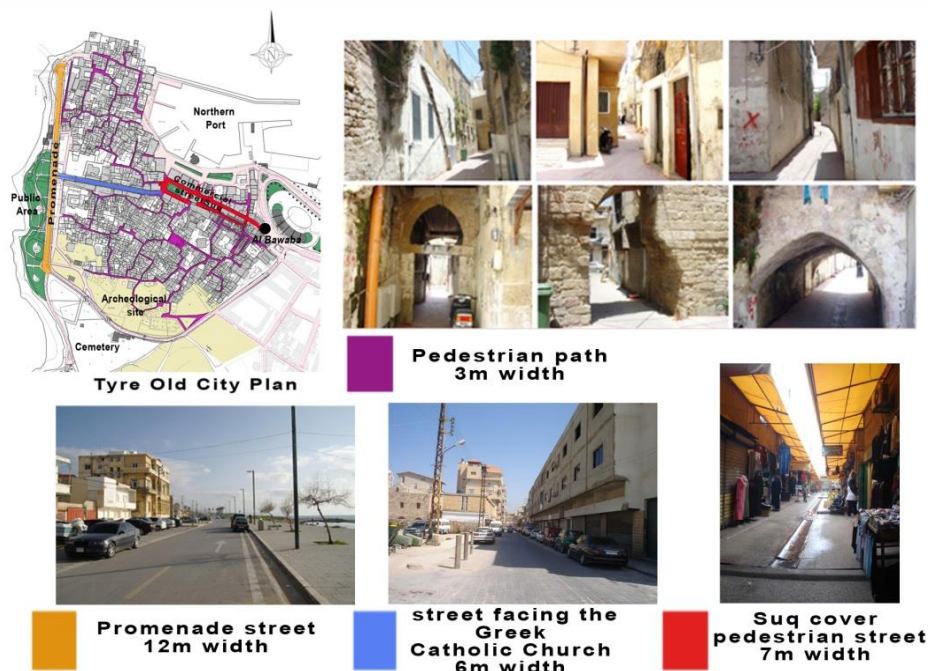


Figure 6- The road types in the old city (photos taken by researcher 2011/2015).

D. Urban fabric density:

According to figure 7, the old city has a compact urban fabric since there were no rules regulating properties distribution.

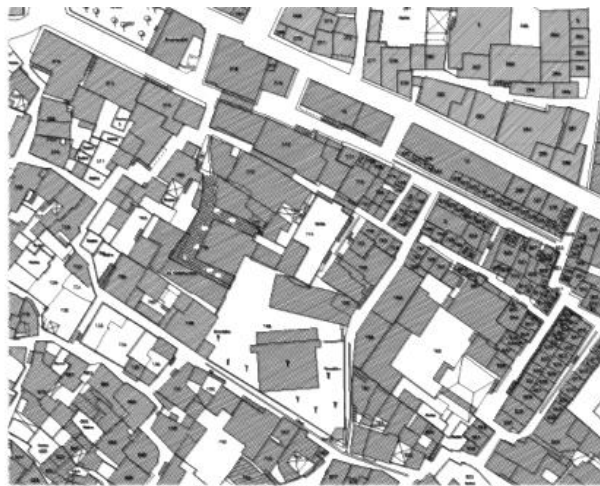


Figure 7- cell constituting the urban fabric in the old city (researcher)

Hamra Road Urban Fabric: 1930-1975

From 1930, when the old city districts were saturated and there was a need for new construction, the residents went outside Al- Bawaba and built along the road towards Saida-Beirut. The development went along the Hamra road, which was the main historical path linking the two archeological sites of the city (the insulated city, and the Bass site).

A. Typological study:

Figure 8 illustrates selected buildings (1930s-1970s) adjacent to the highlighted Hamra Road. The study demonstrates common characteristics in the architectural form of these buildings, especially the round edged corners where the curved walls appear in several residential buildings' facades. The distinctive largest property in this area belongs to Jaafarih School built in 1930 and its final addition in 1975, its design was different and innovative in its time because an engineer, who did not try to imitate the construction traditional trend of this area, designed it. The main structural material was the local stone plastered and finished with paint to protect the stone from deterioration. In the 1940s, concrete was introduced as the new building material.

A- Building Typology₂-Hamra Road Fabric: 1930-1970



Figure 8: Typology of Hamra Road urban fabric (all photos taken by the researcher 2011/2015)

B. Skyline study:

Figure 9 shows an aerial view-A- for Hamra Road (Alexander Roman Passage). It demonstrates visually the difference between the low heights of older urban fabric (1930-1970) highlighted in red, and the higher buildings after 1970 highlighted in green.

C. Road network study:

The historical road of Alexander (Hamra Road) was considered an important historical feature relating to the archeological site in the study of CHUD project (2002), which led to the enhancement of its conditions by widening of its sidewalks and caring for the existing trees along this road as shown in figure 10. All the secondary passages linked to this road typically visualize the pedestrian corridors in the old city, because they were constructed prior to 1966 master plan.

D. Urban fabric density:

Figure 11 shows the urban cells in the Hamra road area. Pertaining to the built up area in this zone, it has a considerable high density per square meter. Nevertheless, the solid void ratio tends to reflect a more dense fabric in the old city as shown early in this study.

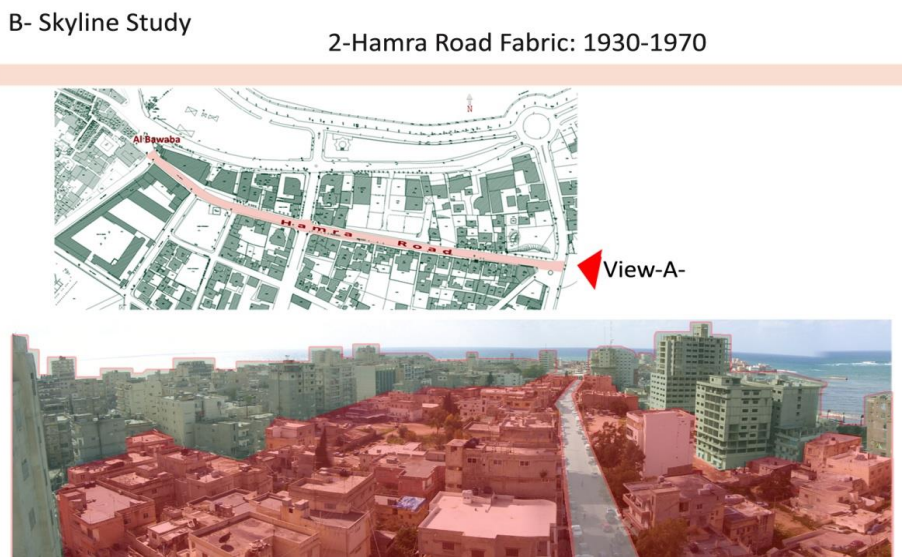


Figure 9 Skyline study of Hamra Road urban fabric (researcher, 2011)

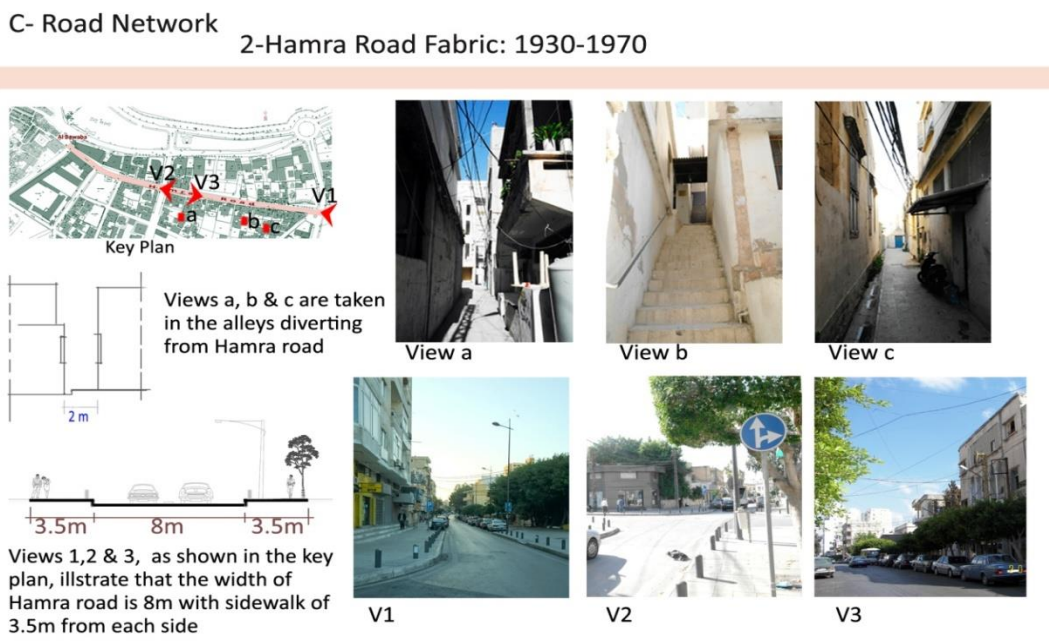


Figure 10- The road types in Hamra Road Area (photos taken by researcher 2015)



Figure 11- cell constituting the urban fabric in the Hamra Road area (researcher)

Al-Raml district: 1975-present

Many developments took place during the long years of conflict (Civil War 1975-1991).

During the period of civil war (1975-1991), the urban development of Tyre progressed uncontrolled by the authorities and consequently numerous tower constructions were built in the immediate vicinity of the property. The integrity of the property is still threatened by urban sprawl and building speculation (WHC, 2010).

A. Typological study:

Illegal practices are quite evident on private properties in the modern town of Tyre. Most violations were exceeding the permitted surface and total build up area rather than breaching public and private properties. Some of these developments act as visual eyesores that disconnect the two archaeological sites from each other and/or from their extension (WHC et al., 2013). As perceived in figure 12 the building character is different from the old city and the Hamra road urban fabric due to the following:

- New construction technologies and materials were introduced;
- The traditional builders were replaced by engineering experts;
- The traditional aesthetic values change after the 1960 exposure to modernism;
- The failure of the 1966 master plan as previously discussed in this paper. For this reason, two other master plans were implemented in Tyre city in 1991 and 1998. The two master plans attempted at legalizing the illegitimate building practices.

A- Building Typology 3-Al-Raml District: 1970-present

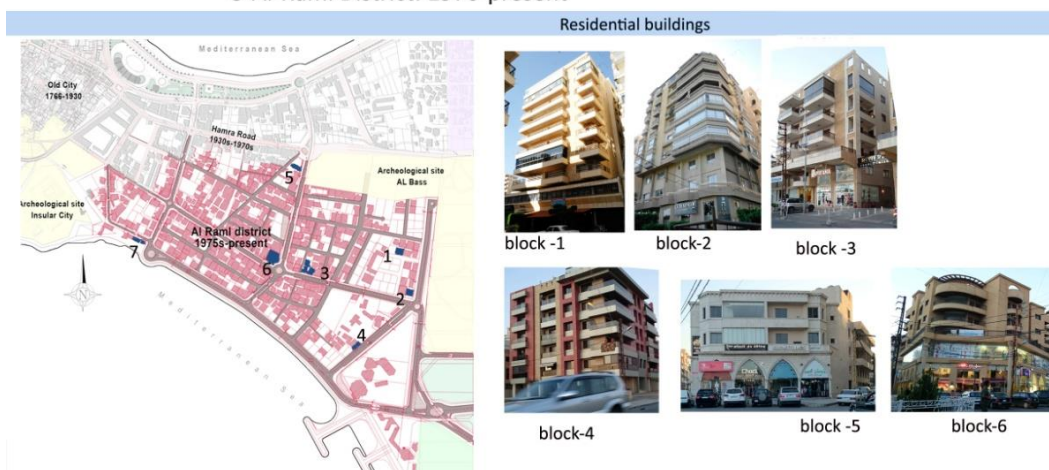


Figure 12: Typology of Al Raml District urban fabric (all photos taken by the researcher 2015)

B. Skyline study:

Figure 13 shows two views, the first is a side elevation of the fabric of Al-Raml district showing the weak image of the city, portraying the high-rise buildings to the south west of Al Bass site, with the remains of the aqueduct in the forefront. The second view is the southwest waterfront skyline of the city.

C. Road network study:

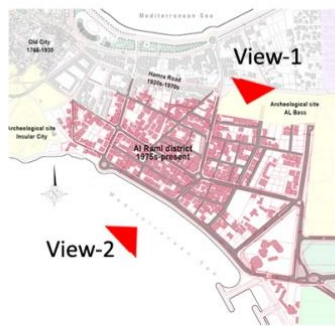
Figure 14 typifies the streets linking the urban fabric of Al Raml district. They vary in the range of 10-20-25 m width according to the traffic flow expected.

D. Urban fabric density:

Figure 15 represents the urban cells in Al Raml District. Compared to the other two studied areas, this zone has the highest density per square meter.

B- Skyline Study

3- Al Raml District: 1970-present



Aerial view-1- for Al Raml District

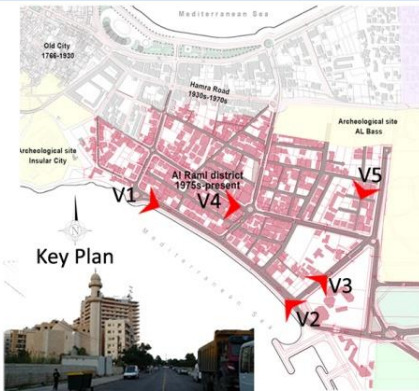


View-2: South-west waterfront of Tyre city, shows the cornice and the buildings of Al Raml District

Figure 13- Skyline study for Al Raml District zone of the city (photo taken and montage by researcher, 2015)

C- Road Network

3-Al-Raml District: 1970-present



V3- Road of 25m width from 2sides' property limits



V1- Southern cornice (promenade) is considered as high flow traffic road of 25m width including the 2 sidewalks



V2- Southern cornice of Tyre city



V4- The main commercial street in Al Raml district zone, with high flow traffic , its width is 20m including 4m for each sidewalk



V5 view of road with low flow trafic, of 10m width

Figure 14- The road types in Al Raml District zone (photos taken by researcher 2015)



Figure 15- cell constituting the urban fabric in Al Raml District area (researcher)

ANALYSIS

Further to the detailed illustration of the characteristics in the three studied areas constituting Tyre city, several perceived findings lead to the change in the city image. These points are listed below:

Change in the builder identity

In the old city, the architectural vocabulary reflects primarily the cultural identity of its inhabitants, and secondarily the culture of its builders. These builders, as defined by Ronald Lewcock (Michell, 1978), are the "men who built the mosques, caravanserais, palaces and baths were for the most part anonymous craftsman using techniques that go back to before the Islamic era". In this sense, we conclude that the change in the culture of the builders induces a change of the architectural identity of the city. In the early expansion of the city outside its walls prior to the first master plan (1930-1966), the same logic that shaped the old city was followed. In the later development (1966-present), the city fabric is governed by the building codes, laws and master plans, and is shaped by the influence of international trends and entry of new materials and technologies.

"Modern materials, methods and techniques are required as complementary, to the traditional ones when these cannot meet the demands of high quality living standards. In cases of new additions though, it is required that new materials and building methods are used, expressing their time of construction"(Casanovas and CAATB, 2005).

Change in Aesthetic values of inhabitants:

Under the title of expressing the cultural identity, many projects in Tyre utilize traditional elements in contemporary architecture; but the question is did they respect the traditional elements as geometrical proportioning or functional meaning? To answer this question, figure 16 demonstrates cases where the traditional architectural elements in old Tyre were used in new buildings constructed after 1990s, without respecting proportions of the original design.

Alternatively, in new constructions and additions in the old city fabric, some projects use old materials from demolished ruins to produce contemporary design proportions, by the mean of the same old construction methods, as figure 17 demonstrates. In this way, falsification is prevented and the new building expresses the modern vision of the historical spirit.

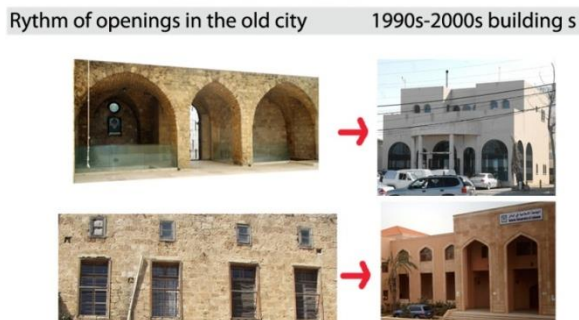


Figure 16- Comparison between traditional elements in old Tyre city buildings and their unauthentic use in buildings in Al Raml District zone (photos taken by researcher, 2015)



Figure 17- new building in the old city using the old material from demolished building to produce a contemporary design proportions (photo taken by researcher, 2014)

CONCLUSIONS

The case of Tyre reflects the changes in the set of architectural aesthetic values adopted by the Tyrians. The old city of Tyre represents the strongest character in the city image, where the following factors are the strength points that embrace the spirit of place in this zone:

- Efficient use of space in a particular **social environment**;
- Adaptation with **natural context** constraints within construction sites;
- Builders (craftsmen) used available building materials in an appropriate manner and acknowledgment due to their **cultural attributes**; and
- Building methods and techniques were adequate to the available building materials, which cooperate in the effectiveness of the **economical process**.

The comparison between the urban fabrics of the old city and the Hamra Road shows continuity in authentic traditional architecture on the contrary to Al Raml district architectural character.

In the aim to ameliorate the architectural image of Tyre, three points should be taken into consideration as below:

- Protect and revitalize the old city by implementing advanced conservation strategies, where "the overall aim of an intervention in a traditional building is not only to restore and preserve its historical, architectural or any other special value, but also to bring it back to life, as part of its environment and of the society in general" (Casanovas and CAATB, 2005).
- Improve the quality of design in the new constructions, and beautify the existing urban tissue by massive rehabilitation projects in the Al Raml district, including sanitizing and arranging the street elements.
- Reconsider the regulatory framework in Tyre, to establish a clear character to the urban fabric of the city.

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