The Impact of Local Vernacular Building Tradition on the Italian Colonial Architecture in Libya

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Submitted to the
Institute of Graduate Studies and Research
in partial fulfillment of the requirements for the degree of

Master of Science
in
Architecture

Eastern Mediterranean University
August 2021
Gazimağusa, North Cyprus

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ABSTRACT

In the four decades of Italian colonization of Libya, Italian architects attempted to find the architectural style for their colony. As they settled down in their new colony, a new theory discussions emerged on how to build in the colony; as a consequence of this new colonial power, new architectural concepts emerged, such as Neo-Moorish, Modernity, Romanity, and Mediterranean. Further, the colonial architectural discourse went through many political periods that shaped their architecture; however, exploring, adapting and imitating local architecture was inevitable, since vernacular buildings provided all the ingredients of a modern building.

The main argument of this research is that, through the analysis and understanding of Libyan vernacular buildings, Italians established a style inspired mainly by re-interpreting Libyan architecture and vernacular forms; this inspiration was the base for Italian colonial style in Libya. Therefore, the research aims to investigate the link between vernacular buildings and Italian colonial architecture in Libya in between 1911-1940.

This research will include a brief introduction to the topic, followed by the second chapter that will discuss the contextual background of Libya and different periods and civilizations that influenced the architecture in the region. In addition, brief research of Libyan vernacular architecture will be discussed, to establish a strong link between vernacular buildings and colonial architecture. The third chapter will discuss the colonial architecture discourse and its architectural influence in terms of architectural theory and practice in detail. Fourth chapter will contain results and discussions of the

research. The conclusion of the research illustrates the direct and indirect relation between the two. As vernacular colonial architecture are analyzed, the link between the two is abundantly apparent, not just in terms of theory and colonial debates, but also in terms of architectural built form as well.

ÖZ

Libya'nın İtalyan kolonizasyonunun kırk yıllık döneminde, İtalyan mimarlar kolonileri için mimari tarzı bulmaya çalıştılar. Yeni kolonilerine yerleştiklerinde, kolonide uygulanacak olan mimari tarza ait yeni bir kuramsal tartışma ortaya çıktı; bu yeni sömürge gücünün bir sonucu olarak, Neo-Mağribi, Modernite, Romanite ve Akdenizlilik gibi yeni mimari kavramlar bu tartışmaların sonucudur. Ayrıca, kolonyal mimari söylem, mimarilerini şekillendiren birçok siyasi dönemden geçti; yerel binalar modern bir binanın tüm bileşenlerini sağlaması nedeniyle, yerel mimariyi keşfetmek ve taklit etmek kaçınılmazdı.

Bu araştırmanın temel argümanı, İtalyanların Libya'nın yerel binalarının analizi ve anlaşılması yoluyla, esas olarak Libya mimarisini ve yerel formları yeniden yorumlanmasından ilham alan bir üslup geliştirdikleri böylelikle bu yaklaşımın Libya'daki İtalyan sömürge tarzının temelini oluşturduğu anlşılmaktadır. Bu nedenle araştırma, 1911-1940 yılları arasında Libya'da yöresel yapılar ile İtalyan sömürge mimarisi arasındaki bağlantıyı araştırmayı amaçlamaktadır.

Bu araştırma, konuya kısa bir giriş ve ardından Libya'nın bağlamsal arka planını ve bölgedeki mimariyi etkileyen farklı dönemleri ve medeniyetleri tartışacak olan ikinci bölümü içerecektir. Buna ek olarak, yerel binalar ve sömürge mimarisi arasında güçlü bir bağlantı kurmak için Libya yerel mimarisinin özellikleri tartışılacaktır. Üçüncü bölüm, sömürge mimarisi söylemini ve mimari etkisini teori ve uygulama açısından ayrıntılı olarak tartışacaktır. Dördüncü bölüm, araştırmanın sonuçlarını ve tartışmalarını içerecektir. Araştırmanın sonucu, ikisi arasındaki doğrudan ve dolaylı

ilişkiyi göstermektedir. Kolonyal ve yerel mimari analiz edildiğinde, ikisi arasındaki bağlantı sadece teori ve kolonyal tartışmalar açısından değil, aynı zamanda mimari form açısından da oldukça belirgindir.

Anahtar Kelimeler: yerel mimari, İtalyan sömürge mimarisi, Libya'da sömürge mimarisi.

DEDICATION

To Reem and Abdelgader,

Who encouraged me to go on every adventure, especially this one.

To the soul of my late grandfather Salem.

ACKNOWLEDGMENT

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Chapter 1

INTRODUCTION

1.1 Introduction

Once Italians invaded Tripoli in 1911, authors and poets have made significant contributions to the public articulation of Italian imperial ambitions. Several of their ideas characterized the discussions, and their phrases stayed in common usage throughout the colonial period in a few instances. Italy's rich imperial history was re-imagined in ways that rendered it accessible once again by many eminent writers like, Gabriele D'Annunzio (Fuller, 2007). D'Annunzio poetry lent a lyrical depth to the imperial ambition and often expressed pseudo-mystical notions of an inherent Italian "spirit" which will also emerge in subsequent colonial architectural works, D'Annunzio used the term "Fourth shore" to refer to Libya, implying that its reacquisition "squared" Italy by expanding its Adriatic, Ionian, and Tyrrhenian seas coasts (D'Annunzio, 1924). The propaganda did not stop there, one of the main famous propaganda illustration (Figure 1.1), it shows a young sailor withdrawing the sword of his ancient ancestors on the shores of Libya; the illustration gives a general idea on how Italians saw the claim to Libya (The Sphere, 1911).

Even though little is known about Italian colonial architecture outside of the Italian architecture community, the colonial Italian architecture is similar to the British and French architecture. However, for Italian colonial architects the dilemma was, between establishing a symbolic architectural separation from the colonized

area through transplantation of European styles, and using indigenous decorative or structural elements and forms, which was central to all contemporary colonial architectural thoughts (Foucault, 1984).

L'ITALIA BRANDISCE LA SPADA DELL'ANTICA ROMA

Figure 1.1: "Italy brandishes the sword of Ancient Rome" (The Sphere, 1911)

Italian architectural style of buildings is wide-ranging and broad, and that's why their architecture always had an influential impact on territories they occupy (Dan, 2013). However, after Italy began its colonization of Libya, it hadn't had big influence on architecture and architectural forms, the early settlement built by Italians were mostly military camps and facilities, it was not until 1914 when Italian began planning their colony`s cities; this planning was mainly in two of Libya's biggest cities, or what's considered to be the capitals of both Cyrenaica (Benghazi) and Tripolitania (Tripoli). (Milod, 2018).

After taking control of most of Libya, Italians ought to figure how to build their own colonies, as a consequence, a theoretical debate that resulted in an overlook to discover

variety of concepts Italians came with such as, "Neo-Moorish", "Fascist", "Modern" and "Mediterranean" (Capresi, 2011). However, given their long colonial rule, which extended to over 30 years, no new towns were founded by the Italians. Further, Italians focused on devolving the existing cities and establishing new agriculture centers in the rural areas of Libya (Attir, 1983).

Throughout the 1920s and 1930s, at the height of Italy's colonization, authorities of the government's national and fascist urged architects to establish a distinct, clear, and unmistakable colonial style in the colony of Libya. However, this unity in style has never been achieved (Henneberg, 1996). The heated discussions of the colonial style started among architects in the period between the years 1929–39, when few architects tried to integrate colonial rhetoric with architectural vocabulary. Additionally, during the same period in Italy, architecture flourished and ranged in style. Many architects gained popularity through publications in famous journals like, Domus, Architettura and La Casa Bella. Furthermore, architects started to establish their indispensability to the government, many of the more ambitious architects were also passionately preaching on the significance of colonial architecture and consequently, their own role in shaping the new Italian colonies. (Fuller, 2007)

In 1931, Rava, one of the most influential architects of the colonial period published an article in *Domus*, starting the theoretical debate on colonial architecture, the article was more toward "modern colonial architecture" (McLaren, 2002). Rava proposed a style that is represented by the characteristics of Libyan architecture, further it was described as having signs of Roman influence in Libya, an "*Influences almost cubistic, mixed with Mediterranean characteristics*" in accordance to the article for Rava, at that time building colonial meant paying full attention to the multiple influences of

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traditional Libyan forms, and understanding how to carefully reinterpret them. (Rava, 1931)

Rava interpreted his arguments in relation to 'Mediterranean' concept, other Rationalists also responded Mainly *Luigi Piccinato*, and *Giorgio Pellegrini*. By 1936, with an admiration of structural and functional value that local vernacular had, Rationalist started to discuss which local elements can be integrated into Italian colonial architecture and how. (Fuller, 2007) Pellegrini and Piacentini developed a notion of minor architecture that influenced contemporary architectural debate and sparked Italian curiosity in Libyan vercnular architecture. Their publication in *Architettura e Arti Decorative* featured Libyan indigenous architecture as an example of this approach. (McLaren, 2002 p: 171)

Before and after 1936, architects managed to accept private commissions and construct in a wide range of styles. To boot, after the 1936 public buildings and architecture were more politicized and rhetoric, however, the claim that all colonial buildings are fascist is not accurate, despite the fact that not all of the structures were constructed by the authorities. Nonetheless, there was never a singular recognizable "Fascist style" therefore, the colonies showed a diverse range of architectural design approaches, each of which was employed in accordance to a number of circumstances. (Fuller, 2007)

In 1936, Pellegrini wrote the Manifesto of Colonial Architecture, like many other manifestos of the era, it sheds light on architects conflicting quest for a unified imperial language. However, a lengthy sequel to Pellegrini's call for the transfer of conventional urban planning models extolled the benefits of Arab vernacular architecture. (Henneberg, 1996) Pellegrini argues that Libyan vernacular architecture

is worth exploring and even imitating. He further elaborates that, in a hot Mediterranean environment, primitive indigenous architectural styles will be better suited in local circumstances. Libyan vernacular's cubist volumes, lack of ornamentation, and pragmatic construction can inspire contemporary architecture. However, the architect's job may be to research and create such features to be used by European settlers, since the Libyan house was the representation of a poor`s man functionalism. Nevertheless, 'Arab' architecture resembled Italian modern design principles, and Libyan vernacular forms may after all, offer the colonial architect some kind of inspiration or even imitation. (Pellegrini, 1936)

Italian approach to Libyan cities was controversial, the Colonial architectural approach in Tripoli is different than it is in Benghazi, and the approach to rural areas were different to their approach to urban cities. In Tripoli Italians built outside of the walls and that's why Tripoli as a city looks Italian. Italians had the opportunity to build from the ground up outside of the old city`s walls, and plan the city as they wished it to be, on the other hand what they did in Benghazi was different in a way that they built within the existing fabric of the existing city. Italians then started devolving rural oasis for Italian settlers, then moving to total segregation in east African colonies. Even though, three mentioned paths are different, all of them aimed to reach Italian superiority. (Elfagih, 2020; Fuller, 2007) As the city was influenced by Italian architects, the Italian architects were also inspired by Libyan cities and its existing urban fabric that has a strong meaning and an honest expression and simple forms (Elfagih, 2021).

Beside architectural expression Italian architects were highly involved in theory of colonial architecture. Many lead colonial architect Like, Rava, Pellegrini, Reggiori, Ottavio Cabiati, Alpago-Novello and Di Fausto, wrote theories on the colonial Style that should be implemented in Libya (Hennberg, 1996). Thereby, the theory of colonial architecture went through several phases, each were influenced by many characteristics and circumstances (Fuller, 2007).

1.2 Background Study

The Libyan lands were always exposed to foreign powers through its time like, Greeks, Phoenician, Garamants, Romans, Arabs, ottomans and Italians, this resulted in a wide variety of architectural style, and building types. As the study seek to investigate the impact of vernacular architecture of the Italian architecture, all the previous architectural style will be discussed briefly. Additionally, Italian colonial theory discourse will be discussed in more details.

Although, modern day researchers had many individual interpretation of colonial architecture, most of them share common grounds when it comes to several issues that affected colonial architecture in Libya. In this study both (McLaren, 2006 and 2007; Fuller, 1988 and 2007) chronological categorization of colonial architecture development and theory discussion will be followed. In addition to the original theory itself written by colonial architects between 1911 and 1940. Additionally many other sources of literature will be examined and cited. The research central focus will be to organize colonial architecture style in relation to local vercnular architecture in Libya.

1.3 Problem Statement

Post their occupation of Libya in the 1911, Italian started settling by buildings camps and military facilities, between the 1911 and early 1920, in addition to their buildings,

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Italian governments came up with the intention to build architecture that is 'native-friendly'; an approach that was over sought by master builders and engineers. By the time the Fascist party took over Italian architects were asked to find out an ideal unified imperial style for their colonies. This resulted in experimental new type of architecture that is influenced by many International, Italian, and local circumstances. The colonial style however, diverge from one architects to another. The research will reveal the influence that Libyan local vernacular architecture made on Italian colonial architecture in the period in between 1911-1940.

1.4 Research Questions

Italian colonial architecture made a visible impact on Libyan cities and rural areas, however, in order to build the foundation of study, and determined the sort of data to be collected and analyzed research questions must be defined; further, since this study seek to find the impact of vernacular Libyan buildings on Italian colonial architectural style in Libya the research will attempt to answer the following questions:

- Was the influence of Libyan vernacular architecture to colonial architecture direct or indirect?

- What was the colonial style in Libya?

- How local buildings influenced Italian colonial style in Libya?

- What local elements Italian used in their colonial architecture?

1.5 Aims and Objectives

Following the above mentioned discussions, the present study aims to investigate the link between Libyan vernacular architecture buildings and Italian colonial architecture in Libya, this link will help contribute to the following objectives: Study the impact Local and vernacular Libyan buildings on Italian colonial architecture in the period 1911-1940. Analysis of the features of Italian colonial architecture in Libya and their

relation to vernacular architecture. Defining the vernacular elements that influenced colonial architecture in Libya directly or indirectly.

1.6 Methodology

This research will use a qualitative research method, it will follow and explore the theoretical debate on the connection between vernacular and Italian colonial style in Libya. Due to the nature of this qualitative research two main data collection methods will be followed:

1. **Literature review**:

   Various sources of data would be gathered such as existing literature the first part will contains a short overview of Libya's general history, a review of the cultural, social, and political impacts on the Libyan vernacular buildings, a description of local Libyan architecture and an analysis and identification of its components, in addition to any existing drawings or documentations of those vernacular buildings; this data is to be found in, history books, rare book collections and existing researches online and offline. The second part of literature was mostly found, in books, scientific articles in both Italian and English, archival data found online and offline such as, Italian newspapers, journals, magazines and online blogs; in addition to records, and audiovisual information related to the research topic to generate a holistic multidimensional understanding of the issue, further archival drawings of colonial buildings will be included in the process of the data collection in order to be analyzed in the discussion part. Additionally few chapters will provide background information supporting the primary topics of the research and it will be counted as a part of literature.

2. **Interviews:** due to the limited local literature sources it's very important to keep focus on learning the meaning historians and professional participants hold about

the research problem, thus interviews will be held as method of data collection, in order to support and fulfil the gap in the theoretical debate and give a deeper understanding on the subject. Moreover, interviews helped in the data collection methods in terms of providing extra data, such as images, videos, literature and related books that are not available online, also, in providing useful archival data. A sample of potential questions to be asked in the interview is attached below along with the application form; however the interviews will not be limited to the given questions but rather invites the participants to share their thoughts and experience.

3. **Data Analysis**: according to the different sources of data the analysis procedure for presenting it will be through organizing it, validating it, interpreting and indicating the potential outcomes of the study. In addition to reviewing all the material, arrange it, make sense of it and match it to all sources of data. Finally, an architectural analysis will be conducted in form of schematic drawings such as plans, sections and elevations.

1.7 Limitations

This research will take place in the geographical limitations of the state of Libya, cases selected for both local vernacular buildings and Italian colonial buildings are within the boundaries of the state of Libya. Both vernacular and Colonial buildings will be analyzed and decoded through literature, images and existing archival and research documentation. Additionally, buildings will be studied are both public and private buildings in both urban and rural areas. The theory of Italian colonial architecture will be in studied in between the period of (1911-1940), with more focus on literature related to the main topic. No limitation on colonial buildings, however, the research will exclude colonial approach in other Italian colonies in Africa and Europe.

Additionally, architectural drawings used and produced are not in the form of measured drawings.

1.8 Contribution to Literature

Throughout the research it may be observed that most of the researches on this issue were done by Italians. As fuller proclaim that topic of study is not often discussed outside of the Italian architectural community (Fuller, 2007). In addition, the topic is also rarely researched about by Libyan researches. Thus, this research makes a contribution to the small collection of Libyan architecture history and theory of architecture literature, with the focus on two important architectural style in Libya, the research will give a clear awareness of both vernacular and colonial style to the readers, additionally it will link the gap, not only between vernacular architecture and colonial architecture, but also to establish the core for contemporary Libyan architecture.

Chapter 2

HISTORICAL CONTEXT

2.1 General Overview on Libya

The territory of Libya was formerly referred to by the names of its three main regions: Tripolitania in the west, Cyrenaica in the east, and Fezzan in the south (Figure 2.1) (Collins, 1974). The name of "Libya" is formally used to identify boundaries of today's Libya by Italians in 1911; it was done in their attempt to colonize this part of North Africa. After Italian attack on coastal regions of Libya, the Italian government made a royal decree to mandate officials on Libya, this official decree is a first of its kind to make the three states (Cyrenaica, Tripolitania and Fezzan) under one state in the name Libya[1] (Bulokma, 1995).

Figure 2.1: Three regions of Libya, (adapted by author, 2021 from URL1)

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[1] In ancient times was not with such consistency or clarity in terms of definition, regions of Libya were initially defined by an anthropology by the Race of their inhabitants. (Bazama, 1975)

A seemingly never-ending succession of foreign rulers marked the history of the Libyan region, who one after another, sought to subdue the rebellious network of tribes and natives that had inhabited Libya's hinterland. Libya is located at the center of North Africa and it covers around 176 million km^2 of land. It's also located south of the Mediterranean sea with over 1,900km of Africa`s coastal line. In over all natural classification of landscape, it has a relatively livable rich and fertile north and a scattered and hostile south. Population distribution and the geographic variations in human traits show more diversity, especially to those between the west and the east. This relates to a three-way division of Libya into three regions, Tripolitania in the west, Cyrenaica in the east and Fezzan in the south. This can be interpreted as a result of the unique historical circumstances in these three regions (Braun, and Passon, 2020).

Figure 2.2: Libya's geographical location, (adapted by author, 2021 from URL2)

Along the costal line lies most of its fertile and cultivable lands, and today where most of the country's oil is found. The area that was once covered by dense vegetation and wildlife, gradually became drier in the climate, resulting in the gradual spread of the Sahara desert to the north of the country (Braun and Passon 2020).Today, 95% of Libya's territory is marked as "desert", or "pre-desert steppe". However, this small percentage of land still gives a great value to the region. These conditions have

influenced the way international expansion into Libya, foreign prevailing powers came either to take advantage of the agricultural wealth and the productivity of the coastal regions, or to monopolize and control the profitable trading of the four major trading caravan's routes crossing the Sahara in the 19th century. Three of them have passed through Libya, this is a clue to the historic importance of both Tripoli's and Benghazi's ports, which exported the riches of Africa to Europe. (Braun and Passon, 2020)

However, since foreign leaders were not concerned in Libya's internal growth its economic growth has always been subject to other powers economics elsewhere (Collins, 1974). Urbanization of these regions is not new, from the ancient times, old civilizations of Libya's historical approach as a country includes three main provinces or regions, and it's still maintained until this present day and it can be used not just in natural landscape but also in the structure and culture of Libyan society as well (Braun, and Passon, 2020). In order to understand the phenomenon of development, historical roots must be traced. Since its urban history has developed through various settlement systems. or it could be understood through the study of other civilizations settlements network, for examples Greek, Phoenicians, Romans, Byzantines, Arabs, Ottomans and Italians; all of them developed their own systems, that changed according to their main interests at the time, including economy and politics (Kezeiri, 1995).

2.1.1 Origin of Libya through Time

In order to understand the establishment of Libya as it's known today, historical periods of it must be understood, this part will chronologically discuss the civilizations that settled the Libyan region through time.

2.1.1.1 Historic and Pre-Historic Era

Archeological findings shows that Libya was inhabited by many groups and settlements since the ancient history, many cave drawings were found in different sites

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around Libya. Those drawings were found in caves and other sites around coastal, desert and mountain regions (Al-Bargouthi, 1971). Hundreds and hundreds of walls were carved with drawings of humans, wild animals, in the greatest prehistoric museum ever (Al-Bargouthi, 1971; Lhote, 1951). Omora (1998) divided the development of human civilization in Libya to pre-historic period which covers hundred thousands of years ago, and historic period which covers around 5,000 years ago.

According to those drawings, four phases were categorized by scholars in order to understand the pre-historic events in the area; first, drawings of animals that only live in water-rich places, like elephants, hippopotamus and crocodiles, this can be also indicates that the Libya Sahara was not always a desert, specifically the golf of Sirte area, were water extended more to the south, this period is estimated to be 20,000 to 12,000B.C. The second group of drawings, belongs to animals that do not necessarily require a large bodies of water, like giraffes and cows; the period belong to approximately 12,000 to 5,500 B.C. Third group, of people riding either horses, or carriages, this can be traced to Garamants, this period might be around 5,500 to 2,500 B.C . Fourth group, presents camel shepherds, which is 2,500 B.C until our present day (Al-Bargouthi, A. 1971). In addition to cave frescos and carvings, many tools were found around the same site. These evidences provide visual and tangible evidence on the form of civilization the Libyan region had (Omora, 1998).

Before the existence of cities and towns, Libya was inhabited by many tribes, there aren`t enough writings and discerptions on the ancient tribes and inhabitants of the region, not until the writings of Greek writer and geographical Herodotus, where he mention that Libyan tribes were on constant movement, however, no stable towns or

settlements excited before the Greek, Phoenician and Garamants civilization, moreover, during the rule of these civilizations, Libyan native tribes were in control of areas outside of these cities and town (Omora, 1998).

2.1.1.2 Cyrenaica

Starting from the year 631 BC the Greeks settled in eastern Libya through a group of cities that they built and resided in. The city of Cyrene (*Shahat*) was established as the region's capital. The Greeks expanded their territory by establishing other cities and settlements that included the five cities, and Hesperides (Benghazi today) (Omora, 1998). Cyrenaica's southern boundaries were never established, however, the calashes of sand and the wastelands of Jebel Zelten essentially blocks any path into the south. The only portion of Cyrenaica suitable for settlement in this region is the coastal strip (Sahel), which rises in two consecutive escarpments at the north end, between Benghazi and Darnah, and the neighboring fertile plateau of the Jebel of Akhtar (Green Mountain) with a height around 800m (Jones; Little J. H. 1971).

The Greek's five cities, were established according to the Greek system in the form of independent cities (Omora, 1998). Cyrene is considered to be the first built city in Libyan territory, its strategic location played a huge role in its growth and development, with many natural water resources and a relatively big and fertile land. According to its strategic position and its closeness to from Apollonia (Susa) Harbor, Cyrene became a political, religious, agricultural and trade center, this resulted in a huge number of migrants which lead to the creation of other cities Such as Barce or Euspeerides (Later on Benghazi), Teucheria along with the harbors of Apollonia and Potlemais (Kezeiri, 1995).

Figure 2.3: Greek settlements in the Mediterranean, (adapted by author, 2021 from URL3)

2.1.1.3 Tripolitania

The Phoenicians dominated maritime trade and monopolized it in the Mediterranean. Groups from the cities of Tire and Sidon left in continues successive migrations to the coasts and islands of the Mediterranean. They constructed settlements and shipping stations for their trades. One of the most important settlements that they established was Carthage (Located in Tunisia today West of Libya) in the year 814 BC. It was the capital of the Phoenician settlements in the region, and directly responsible for their settlements outside of the motherland (Omora, 1998). However, those trading center turned into cities in the region of Tripolitania; Phoenicians founded the three cities *Oea*, later on Tripoli, *Sabratha* and *Leptus magna* as part of their Mediterranean trade network (Kezeiri, 1995). The excavations carried out on the city of Sabratha (West of Tripoli) show that the Phoenicians established a commercial stations during the 6th century BC. Other stations can be traced back to the same period in the sites of Leptus Magna, Tripoli and Sirte. These stations were markets for the exchange of goods and centers for loading ships with their requirements of water and food, and protection from storms. (Omora, 1998). Kezeiri (1995) describes it as "*few residents and a great number of shops and storages.*" Furthermore, in the year 500 BC Carthaginians took over the three cities and continued to rule it until they were defeated by romans in the

late 140BC, which resulted to the rise of the Numidian state that took control of Phoenician settlement with the help and support of Rome. At the time, there wasn't any expansions or the creation of new cities, however native's residents of Libya (*Berber*) were more comfortable to take control over more agricultural control (Omora, 1998).
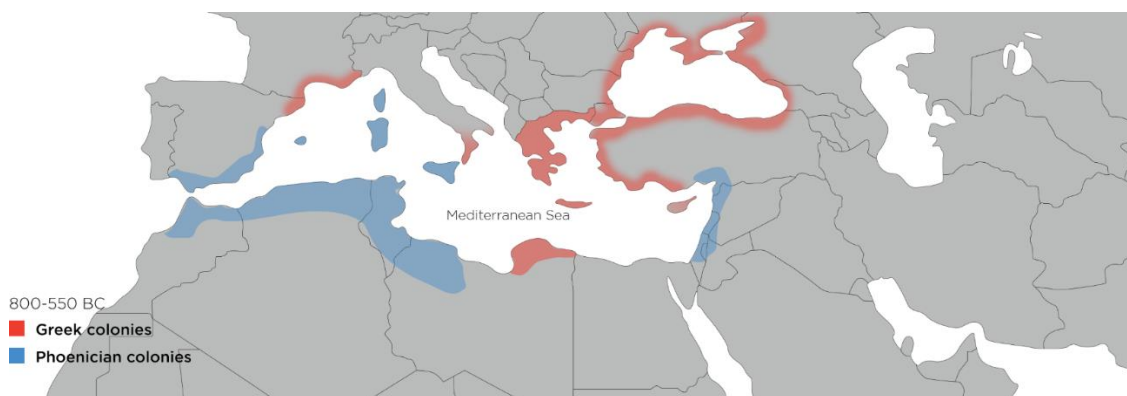
Figure 2.4: Greek and Phoenicians settlements, (adapted by author, 2021 from URL 3 and URL4)

2.1.1.4 Fezzan

Garamantes took places from oases and valleys in Fezzan, they settled, and controlled all the desert roads that connect the coast with the south of the Sahara to the east and the west. The Kingdom of Garma played a huge role in shaping the region of Fezzan as we see it today (Al Fakhri, 2015). The origin of the Garma is not known precisely, however, some scholars presented several possibilities about which came the Garamantes and the approximate time that appeared in southern Libya; however, the archeological proofs are very limited or found in a bad condition and no useful documents found to support any claims (Ayoub, 1969). There are multiple stories on the origins of the Garamantes, some scholars claim that they're originally from constant migrations in the Mediterranean like Crete, Sicilia and Sardinia, specifically from who migrated after an earthquake in the 11th century BC; others claim that they're

Mediterranean immigrants mixed with Libyan Berber tribes and were forced south by the Phoenicians and Greeks to the south (Ayoub, 1969). In contrary Al Fakhri (2015) argues that the findings of archaeological excavations and researches in Fezzan differ radically from the records of classic writers on civilization and require a review of most of what was previously written.

The capital settlement of the Garamantes is the city of Garma (Figure 2.5) and the location of this ancient city is now in the valley of the Agal in Libya; at the time Garamantes have founded other cities as well. Even though the cities have been identified in ancient literature, no tangible proof can be seen today except for Garma. These settlements are proof that the Germanic people did not actually live a nomadic life, despite being given this quality from time to time by other scholars (Daniels, 1970). The Garamants civilization continued until the year 395 AD, where sources mention that the city was burned in a great fire. However, Garma was revitalized and continued to thrive as many sources mention from the Islamic period (Omora, 1998).
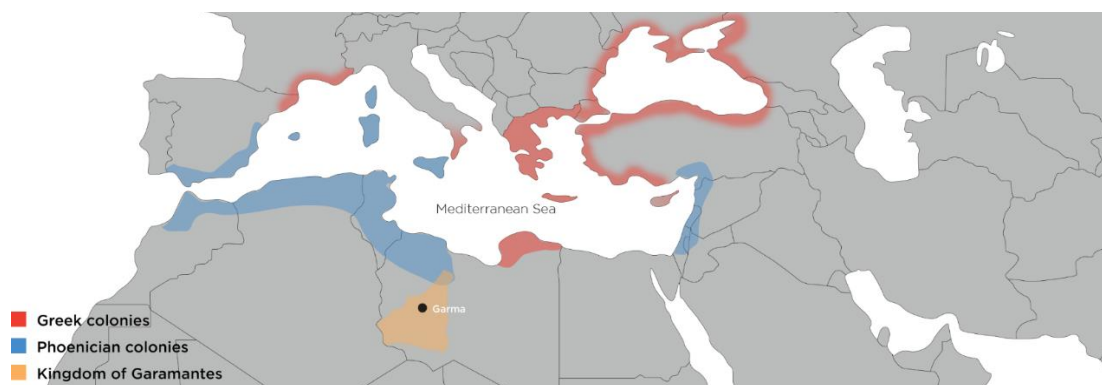
Figure 2.5: Garamantes settlements (adapted by author, 2021 from URL, 3, 4, 5)

2.1.1.5 Libya under the Roman and Byzantine Rule

The second era of the Libyan development history is when the whole region, was under the rule of the Romans for the first time in its history; this control extended somehow

to the south in the region of Fezzan. It started after Romans took control of the three

Cities of Tripolitania in the year 148 BC, and the Pentapolis in 96 BC (Kezeiri, 1995).

After 390BC, the Roman Empire was divided into two, one in the east under the rule

of Constantinople, the second in the west under the rule of Rome. This rule extended

until the Islamic conquest 644 A.D. (Omora, 1998) During their rule, Romans

continued developing the three cities of Tripolitania, adding more facilities and new

structures such as, temples, Roman baths, public buildings, and gardens, along with

the organization of road networks, eventually Oea (Tripoli) became the capital of

African Rome. In the east Cyrene continued to be the capital of the pentapolis until

297AD where Potlemais then Apollonia took its place at different periods of time

(Kezeiri, 1995).
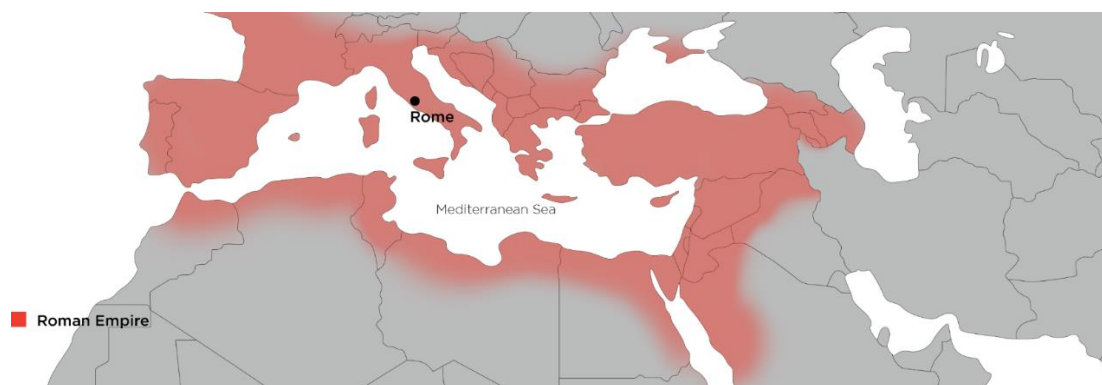
Figure 2.6: Roman Empire territory, (adapted by author, 2021. From URL6)

2.1.1.6 Libya under the Islamic Rule

The Islamic era in Libya as the region continued from 644 AD to 1911. Within this

period the Islamic rule could be categorized under two major rules, the Arab and the

Ottoman, each of these two periods had minor political rulers.

2.1.1.6.1 Libya under the Arab Rule

The Arab era started from 642 AD, as Arab troops first moved from the east 'Egypt'

into Libyan Cyrenaica's northeastern part of Libya. The Arab Muslims quickly

conquered Tripoli with the assistance of camels to cross the Sirtica, which is a 300 miles of open desert separating the coastal regions of Cyrenaica and Tripolitania. Although they faced with a heavy opposition from the Berber indigenous people. It was not until 1,050-1,100 AD, under the influence of major migration waves of two Bedouin Arab tribes, Bani Sulaim and Bani Hilal, from Egypt and the Hejaz, Libya became profoundly Arabized in language, belief and culture[2]. Berber tribes were assimilated by the new Arab people, although with much resistance together both of them form the stock from which most Libyans today originate (Collins, 1974).

Figure 2.7: Arab Islamic Territory, (adapted by author, 2021 from URL7)

Following the Arab invasion, three types of settlements are noticed:

1. Cities that founded by Greeks or Romans, which Arabs then developed it as trading centers.

2. Trading spots that became major cities.

3. Secondary trading spots.

Overall, Arabs in Cyrenaica ditched the coastline and settled more to the interior to avoid contact with Byzantine fleets. This resulted in the disappearance of some

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[2] Belief and culture here relates to the Islamic religion Arabs brought with them.

important cities or becoming less important; consequentially, other cities rose and became of more importance (Kezeiri, 1995). This effect, directly caused the network of ancient cities to face economical failures, especially by the neglect of agricultural until the arrival of Ottomans by 1511. The negative side that affected the urban and economic area, following the invasion of the Arabs was not intentional or on purpose, it was because Arabs brought their lifestyle that is mostly based grazing and a nomadic lifestyle which directly contradicts to what Roman were trying to building in the area (Collins, 1974) and (Kezeiri, 1995).

2.1.1.6.2 Libya under the Ottoman Rule

In the 1,551 the Ottoman Fleets with the help of some Arab tribes took control of Tripoli, consequently, it became an Ottoman state, their rule continued until the year 1911, after Italian attack on Libya. The Ottoman ruling periods in Libya can be divided into three, periods: the first Ottoman rule 1511-1711, the Karamanli dynasty the ended 1835, and the second Ottoman period that ended 1911 (Al-Baloshi, 2007). Most of North Africa was divided into three provinces by Ottoman rulers, after the failure of a few half-hearted Crusader attempts to retain the coastal regions in the 16th century. Those provinces were, Algeria, Tunisia and Tripoli along with Cyrenaica and Fezzan each one under the role of a separate Pashas. The interior population has been left un-administered. Ottoman rule was actually nominal throughout the 18th century, with real power in the hands of local leaders, originally from Anatolia, for example the Karamanli dynasty that ruled Libya around 1711-1836 AD (Collins, C. 1974).

Figure 2.8: Ottoman Empire territory, (adapted by author, 2021 from URL8)

After Ottomans took control of Tripoli, they encouraged the construction of new buildings such as, residential buildings, markets, cafes, Hammams (Public Baths), along with mosques and schools, which caused more communities like Jewish, Christians and Turks to move to the cities from the villages. This made Tripoli an important urban center in the north of Africa. By the time, Ottoman conquered Cyrenaica only the City of Benghazi and Darnah were influenced by the Ottoman rule and became an important administrative centers. Libyan cities thrived in the first Ottoman rule, and Karamanli Dynasty which by then Libya was independent from the administration in Anatolia. Further, the Ottoman ruled over Libya until 1911, when Italy start its campaign to colonize Libya under the name (*Quarta Sponda*) which translates into the Fourth Shore (Kezeiri, 1995).

2.1.1.7 Libya under the Italian Rule:

Italians became the first European powers to take Libya's colonial conquest into consideration. As few Italian priests and politicians were fascinated by chances to use Libya during a caravan to central Africa. Libya was seen as an outlet for better-endowed areas in the far south of Italy; Italy couldn't compete with the great powers back then, such as Britain, France and Germany so they had to be satisfied with the

"leftovers" from the great "scramble" of Africa in the Congress of Berlin (1884-85), so it ended up with Somalia and Eritrea and Libya (Collins, 1974).

The military conquest of Libya began in Italy in 1911, initially the Italians conquered several port cities, including Tripoli and Benghazi, and the two regions of Tripolitania and Cyrenaica had been declared admitted to Italy in the end of 1911. When Italians left the coastal cities, they eventually found resistance far more intense. However, the Ottoman sultan, who had endured political problems in the Balkans back home reached a Treaty of peace with Italy in October 1912, which gave Cyrenaica and Tripolitania to Italian "sovereignty" (Collins, 1974).

The Italians came with the plans to settle in Libya and hence initiated the programme to expand and improve the cities for the Italian immigrants. The number of Italians living in Tripoli has risen at a high rate, as by 1931 and it matched those of the Jewish people, by 1940 specifically in Tripoli there were more Italians than the Arab Libyans (Attir, 1983).

2.1.2 Political States (Rulers of Libya)

Angelo Pesce portrays Libya in his novel 'Colors of Libya': "*a nation with a rich artistic and cultural heritage: The silent voices of its glorious historical past are embodied in the Garamantic, Greek, Roman, Byzantine, Berber and Arab cities and monuments, widely known for their uniqueness and conditions of preservation*" (Pesce, 1970). In the past and present, several scholars have written about Libya. Their key takeaway is that it is a nation with a wide spectrum of backgrounds in all regions. This background is mainly its architectural heritage, starting with the Phoenician, Greek and Roman empires, outspreading to the Ottomans and Italian colonization; Libya`s Independence was gained in 1951 but before that Tripolitania, and Cyrenaica had been

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ruled by a British administration, and France administered Fezzan, right after the end of World war II (Elbabour, 2011).

According to Elbabour (2011) the historical period that contributed in the emergence of Libya after the prehistoric eras into three main categories, the first is the rise of separate centers of civilizations in separate locations of Libya, in a parallel periods:

- The Pentapolis in the east (Greek), and the three cities in the west (Phoenicians), and Garma in the South (Garamants).

- Second period is when the area was ruled by the same regime but cities continued as separate regions, like the Roman, Islamic, and Ottomans.

- Third is the birth of the name *Libya* under the Italian rule, then the under the French and British administration following WWII to the independence in 1954 with the rise of the monarchy and the Kingdom of Libya, Following Aljamahyria 1969 and the today the state of Libya after the Libyan revolution 2011-present.

2.1.3 Geography

Throughout time, Libya have been governed by many nations, and this somehow help create the boundaries of the state as it is today, through many international agreements, most of them made by the Italian government along with Ottomans and the Kingdom of Libya's government (Bulokma, 1995). Nowadays, Libya is located in the northern part of Africa, occupying an area of 1,759,540 square kilometers. On the northern border has the longest coastline in Africa, reaching more than 1,770 kilometers[3].

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[3] Most sources state that the costal line of Libya is up to 1975km.
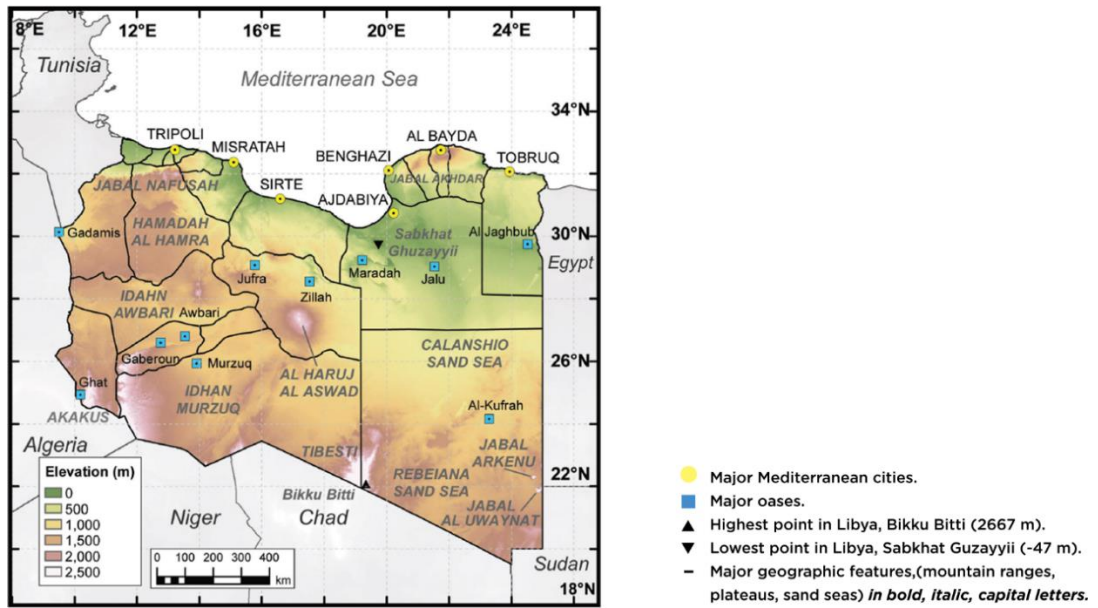
Figure 2.9: Map of Libya showing the major features of the country, (URL 9)

The western border of the country is shared with Tunisia and Algeria, while the eastern

border shared with Egypt and Sudan, and the southern border is shared with Niger and

Chad (Figure 2.10) (Braun K. and Passon J. 2020; Surveying department of Libya

1985). This somewhat played a huge role in two main aspects, the political history of

the country and the ethnography of its inhabitants (Bulokma, 1995). The existence of

the Mediterranean Sea and the Sahara desert are a key factor in Libya's geographic

situations. There are a variety of topographic areas in the region, each with

distinguished soil characteristics. Libya is mostly known for its vast deserts and semi-

deserts, covering around 85-90% of the land, aside from some relatively small areas

on the Mediterranean Sea costal line, these vast deserts regions is also called the

(Sahara) that translate to "the Great Desert" in Arabic (Braun, and Passon, 2020).

Figure 2.10: Libya's geographical location, (adapted by author, 2021 from URL2)

2.1.4 Climate

Libya's climate is affected by two main climatic zones; Mediterranean Saharan and semi-Saharan climates. Sahara desert climate is characterized by its dryness and wide temperature differences at diurnal, as well as summer and winter (Amer, 2007). The coastline areas and mountain inland regions, are affected by a Mediterranean climate, having hot, dry summers and warm, rainy winters (Braun, and Passon, 2020).

Libya is positioned between (20° to 34° N), about 90.8% of the region is hyper-arid, 7.4% is arid, 1.5% is semi-arid, and 0.3% is categorized as sub-humid (Ageena, 2013; Ben-Mahmoud, 1993). The region also includes a sub-humid area is situated between the cities of Shahat and Al-Beyda in northeast Libya. The climate in Libya is distinguished to be hot, dry and high temperature summers. The average annual temperature in Libya's coastal area are between 14° and 21°; Libya is one of the world's driest countries with annual mean rainfall ranging from 140 to 550 mm on the coast of Libya. The rainy season begins from September to October and finishes in March to April. The rainy season is mostly in the winter (Ageena, 2013).
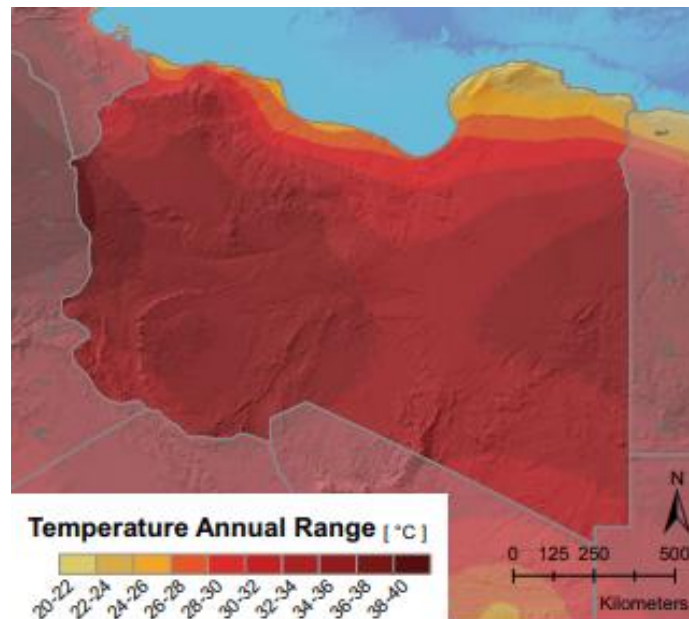
Figure 2.11: Temperature annul range (Braun, and Passon, 2020).

According to (Figure 2.11) the climatic conditions of the south are characterized by excessive temperatures and a significant degree of aridity. Yearly mean temperatures range between 10 and 26 degrees Celsius in low-lying sand seas, while it may seem to be comfortable, the daily temperature change throughout the summer is tremendous, ranging from 50 to 60 °C during the day to 20–30 °C at night. In the winter, night time temperatures may drop to as cold as 10–15 °C below zero. The prevailing breeze flows from the northeast almost all year round. Local hot winds usually pick up desert sand and dust bits and carry them to south-west direction in the form of dust storms. When similar winds blows from the south to coastal areas, it's called Gibli, it carries air masses from the desert, and causes extremely uncomfortable dry-hot and dusty conditions (Braun, and Passon, 2020).

2.1.5 Socio-Economics

The political situation in the area have affected the ethnographical demography of Libyans through time. Libya was influenced by the three major civilizations in the area, beginning with Greeks who came and funded the five cities Pentapolis at the east

each leaving there own obvious traits to area along with their stable lifestyle. While the Phoenicians took over the shores of Tripoli and Tunisia creating there three cities, Oea, Sabratha, and Leptus magna. Greeks basically flee the Greek islands due to the unstable situations there, they were more to settle and interested in agriculture, while Phoenicians were more interested in creating their trade networks along the coastline to keep their monopoly in the area (Bulokma, 1995). Quite the reverse, Romans controlled Libya, they unified it and ruled it as one region and went deeper into the interior of the land, removed the supposed disparity between East and West, which existed during Greek and Phoenician times. then came the 'Islamic city' model of settlement expanded over the entire area at the beginning of the middle of the 7th century, overlapping old urban sites or built next to them; a similar consolidated territory then ruled by the Ottomans; when the Italians invaded Libya in 1911 and they formalized its geopolitical name and colonized it also as one region (Elbabour, 2011).

Only a small portion of Libyans lived in the cities, since early urbanization to the late 50s. About 70% of Libyans lived rural or nomadic lives, according to estimates of the 1954 census data. It was not until the 1960s, as a direct consequence of the new economic growth, that the rural migration to cities started. Most Libyans lived mostly in two major cities Tripoli and Benghazi and in several medium-sized towns and villages. When it comes to historical demographic statistics, the data is sparse for the region, but the main cities and towns are traditionally richly defined. It is therefore possible to create such knowledge for one of the major towns that can represent the urban growth in Libya (Attir, 1983).

2.1.6 Demographics and Population

From the seventh century onward; Libyan population has been composed of Arabs, Berber, and other minor ethnic communities (Werfalli, 2008). Libyan society is traditionally organized on families, clan and tribes. Those families, tribes and clan are directly affecting the soci-cultural and political interactions (Ramadan, and Mogherabi, 1998). Following, in the same level of importance is religion, which has a great impact on the shape and values of Libyan society on both public and private realm (Abuarrosh, 1996).
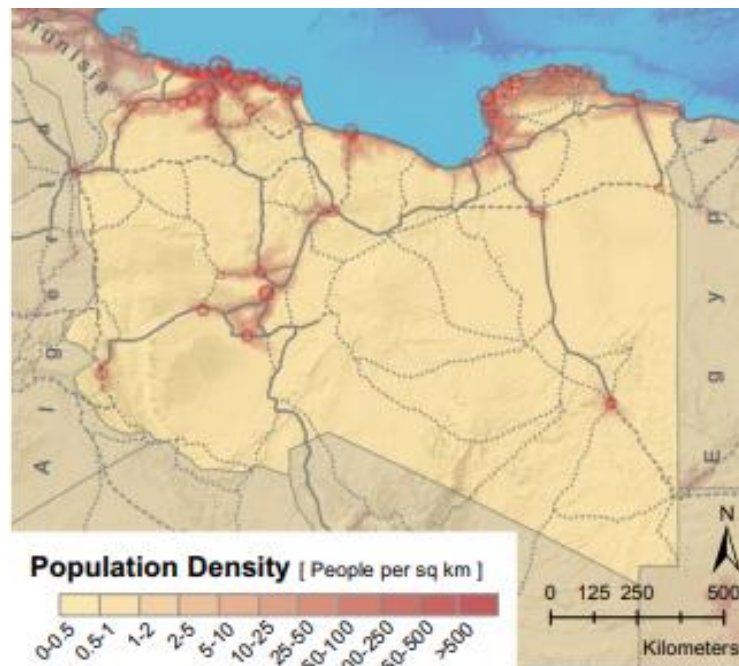
Figure 2.12: Population Density in Libya, (Braun, and Passon, 2020).

Around 75% of Libya's population of over 6.5 million live along its coastline, particularly Tripoli and Benghazi, as well as the mountainous hinterlands of Jabaal Nafusa and al Jabaal al Akhtar. The remaining 25% are scattered amongst several oasis in the region's interior and along the major routes that link populated areas (Figure 2.12) (Braun K. and J. Passon J. 2020). In his article "Libya: a nation of cities" Elbabour (2011) mentions that in Africa and the Arab world, Libya is the most

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homogeneous, politically and religiously; when it comes to the tribal structure it's just a thing of the past, and part of the cultural traditions to lore the people and their history, the tribal system is simply a social construct and has no inherent significance. However, in Libya, the important sense of national unity is not absent, the sense of unity has been officially launched by the independence and establishment of a constitutional Senussi monarchy back in 1954.

2.2 Features of Architecture in Libya

This part of the research will discuss the periods that influenced Libya's architecture through time. However, even though many civilizations have left their traces in Libya, the starting point of this chapter is a brief overview of pre-roman settlements, moving onward to ancient Roman architecture features and settlement, since Roman architecture is more related to this study.

2.2.1 Features of Pre-Roman Architecture

Due to the scope of research this part will briefly discuss the Pre-Roman settlements and architecture. Followed by a study of Roman architecture, considering it's the most and only relative part in the discourse of colonial period.

2.2.1.1 Pre Historic and Historic Settlements

Parallel to the existence of cities and towns by the Greeks and Phoenicians, few settlements and typologies appeared. Those settlements and typologies will be discussed in the vernacular architecture section. (Omora, 1998; Al Fakhri, 2015).

2.2.1.2 Greek Settlements (Cyrenaica)

The condition is not well known for the majority of important sites in Cyrenaica (G. D. B. Jones, J. H. Little. 1971). A key feature of the ancient Greek cities is their location and proximity to both ports and agricultural fields. However due to constant change in rulers and civilizations the Greek cities are merely visible; in archeological

excavation, only Cyrene, Apollonia and Ptolemais are discovered; nonetheless the excavations are not completed yet (Omora, 1998).

Figure 2.13: Greek temple at Cyrene, (URL 10)

However, Greek Sites like city of Cyrene 631 BC, are almost entirely found, Cyrene, which for a period of time was the capital of the Pentapolis, was located at a high fertile land, with fresh water sources and valleys (Omora, 1998). The city of Cyrene was established according to the Greek independent cities system. In terms of the establishment of the sacred area the acropolis temple and the Agora in a separate area higher than the everyday. Today, the Archeological sites and ruins do not only belong to the Greek period but its accumulative structures of Roman traces are still visible (Omora, 1998). On the other hand, Apollonia, one of the important parts of the Pentapolis, at some point was the capital of the Pentapolis. Nowadays, the only thing relates to the Greek period is its location and urban distribution of the port in front and agriculture at the back of the city. Potlemais, also was founded by the Greeks, then turned into a roman city. Akin, the Greek city of Ptolemais is barely visible as ruins, however we the roman urban grid of streets can be distinguished, in addition to settlement drawings of the early excavations findings (Goodchild, 1952).
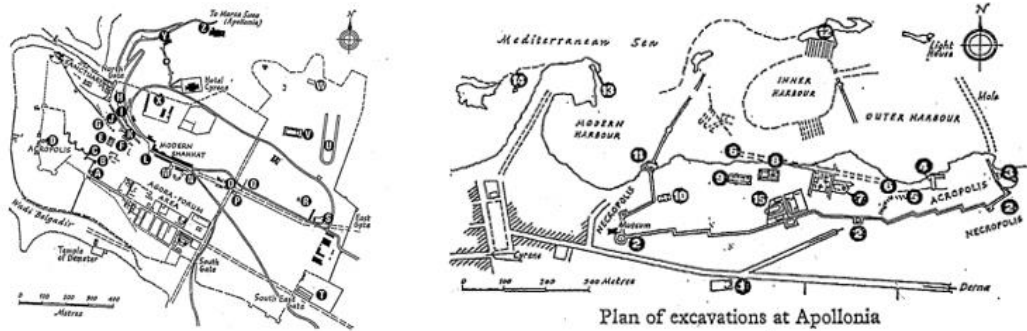
Figure 2.14: Excavations in the ancient city of Cyrene (left), Apollonia (right)
(Kareleng, 1962)

2.2.1.3 Phoenicians (Tripolitania)

The Phoenician cities as mentioned Earlier was part of wide network along the
Mediterranean (Figure 2. 15), the main settlements or cities in this period are now in
the province of Tripolitania, known as Oea, Leptis Magna and Sabratha, however little
to no remains of the Phoenician period is available or found since the area was
developed by the Romans, where they settled and reorganized the city according to
their rule and approach, more of that will be discussed under the Roman Features.
(Carter, 1965).
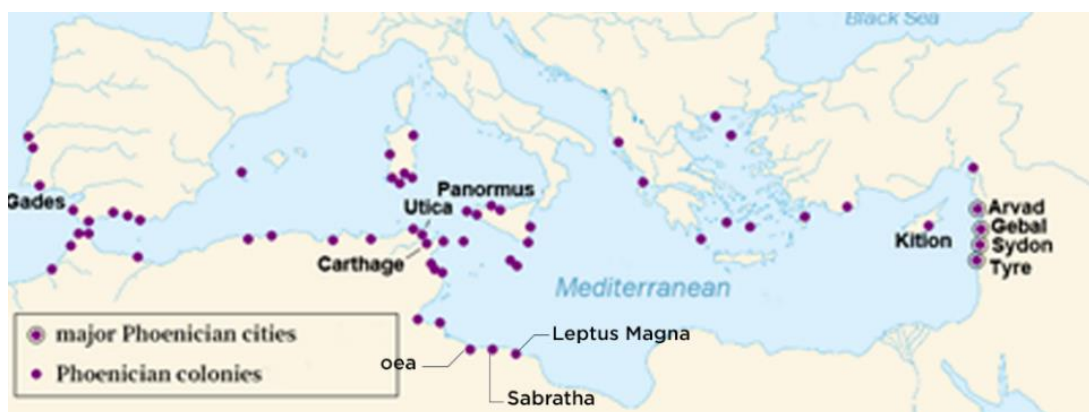
Figure 2.15: Phoenicians colonies, 11th-6th century BCE (URL 11)

2.2.1.4 Garamants (Fezzan)

The Garamants built pastoral settlements over mountain peaks and up the hilltops in the second half of the second millennium BC[4]. Garamants also established a series of forts over the hilltops, and the remains of the walls are still present today. In the period from 500 BC to 1st AD, their first settlement known as Zinkkara was abandoned; at the same time, a new residential dwellings area appeared in the middle of the valley of Ages, in addition, the groups that inhabited Zinkkara moved to a high and fortified areas of the valley, and they settled in the city of Germa (Al Fakhri, 2015).

Observation of the ancient ruins of Garamants can give a glimpse of how the settlements used to look like. Garma once their capitol is in the center of the valley wasn't their first settlement; as mentioned before the mountain of Zinkkara held their first settlement. Many excavations proved the existing of houses that belong to the 1st millennium BC. While some houses were made alongside the mountain, a settlement of dry mudbricks and palm fronds is made on another layer around the hump (Figure 2.16) those houses are sounded by walls, because garments had their livestock within their boundaries, on the top the settlement is sounded with a large fort, another fort was added at another period of time, and it's the one visible now, since the old one disappeared (Daniels, 1970).

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[4] Recent archaeological studies have proven the existence of many sites in Zinkkara, at an irregular distances along the valley from *Tinda* through and *Al Qusayr* to *Khalif,* and these sites may have been formed at the highest peaks. As in Zinkkara, or colonies within a closed area. (Al Fakhri, 2015).
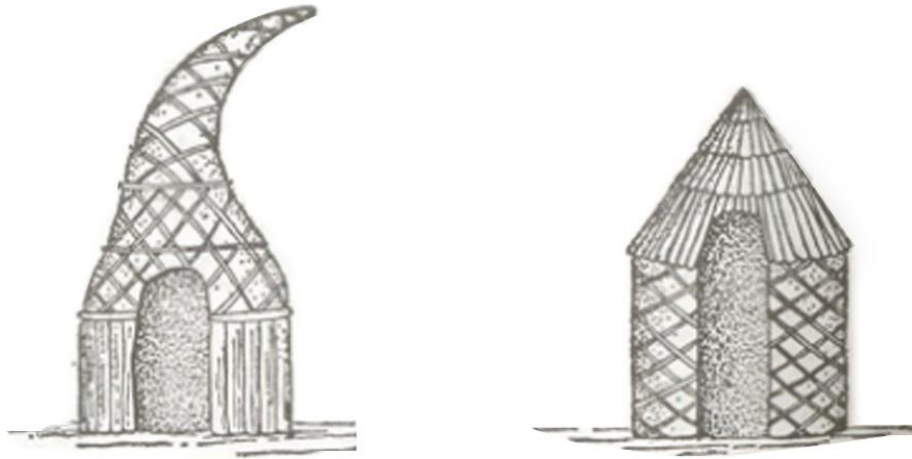
Figure 2.16: Type of Garamants huts (Omora, 1981)

In the north part of the area the living spaces turn more into houses than a simple shelter. Those houses are built out of stone or dry mudbrick, archeological evidence shows that wood was part of construction at some point. Those houses have a base of well-cut stones, and mudbrick walls, houses have one to two spaces and sometime a small yard. Located a little bit below this settlement another settlement, larger than the previous one with at least made out of six houses, regular and rectangular, with a row of rooms, that reach up to 30 meters, these houses are also made of mudbrick, or cut stones (Daniels, 1970).

2.2.2 Features of Ancient Roman Architecture
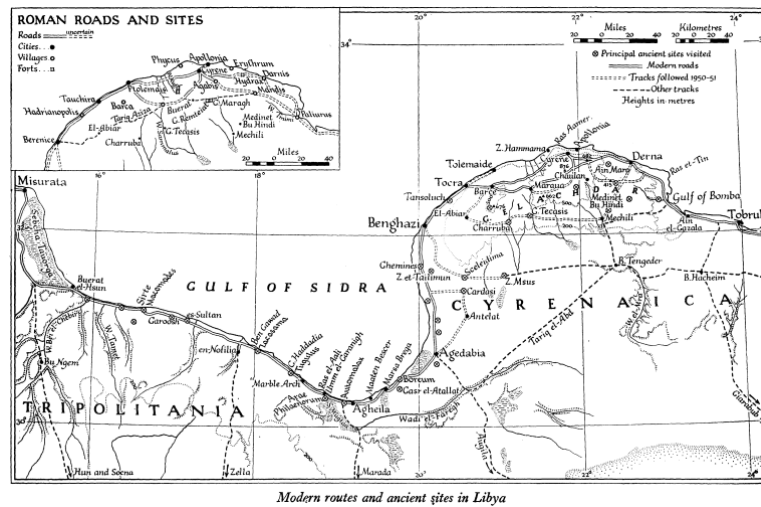
Figure 2.17: Roman Settlement in Cyrenaica (Kareleng, 1962)

The term *Roman Libya* is used to identify the parts of the Roman Empire that are now originally part constituted empire of Libya. In the roman period, the term 'Libya' was used by them either in a general context or as an official name for the areas between Alexandria and Cyrenaica, other times to identify the whole of North Africa (Goodchild, 1952).
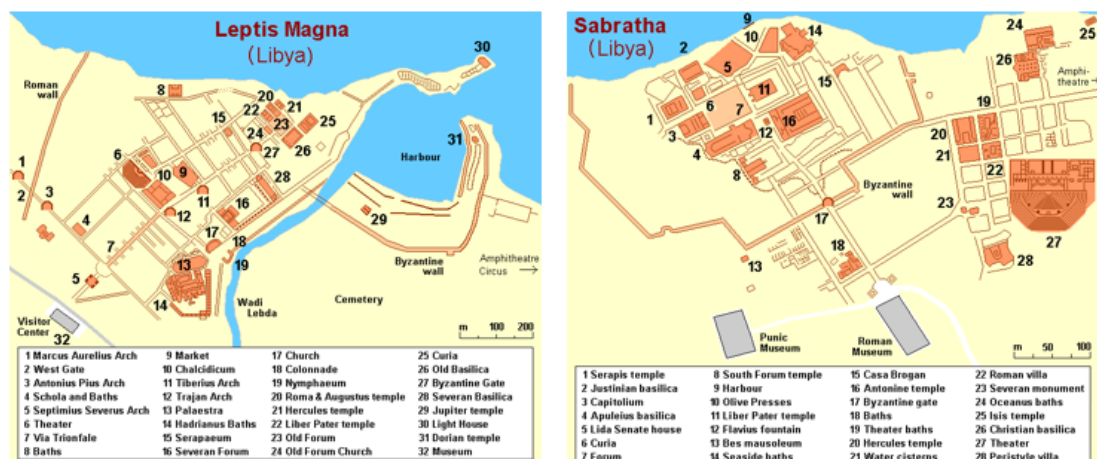
Figure 2.18: Roman cities in Libya, (URL 12)

The Roman Cities networks developed and enhanced the Greek cities in the east, and rebuilt the Phoenician cities in the west, however the roman style and influence is greatly visible in the two cities of Sabratha and Leptus magna, and both cities are designed with diagonal girdle Streets, with forms, markets, baths, amphitheaters and Coliseums (Omora, 198l). According to Leonardo Benevolo (1980), in term of size Leptus Magna is the largest roman city after Rome, and the largest roman city outside of Italy.

Figure 2.19: Conceptual reconstruction of Leptus magna, (URL 13)

The record of Cyrenaica's Roman urban planning and buildings are still incomplete. However, there is now sufficient knowledge about Cyrene, Euspeerides, Teucheria and Ptolemais to make a reasonable assessment of the data at least (Kraeling, 1960).
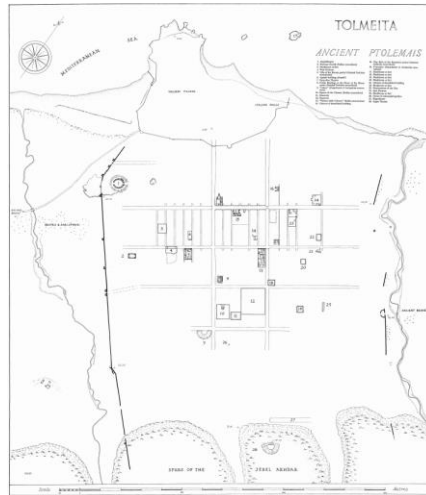
Figure 2.20: Ptolemais, ancient city plan after the colonial period (Kareleng, 1962)

In an assessment brought by Kraeling (1960) he states that Ptolemais can be the key to understand the previous mentioned cities; the Ptolemais street grid is an outstanding example of an ancient city planner's imagination and technological skills (Figure 2.20). It is well suited into the site, and is consistent of homogenous elements by adding a variety such that the symmetrical elements, regularity is saved by pure repetition. Finally, the normal characteristics and the differences seem to stress a concentration which offers a unifying aspect for the whole. He adds, only one public building from the excavation time is known on monuments street on the site of Byzantine governor Paul's administrative headquarters; furthermore, only a partial plan for the land could be reconstructed from the Roman building and its purpose did not become clear, as extensive construction enterprises from the time are shown in the region west of the city by the scale of the quarried fields.

2.2.3 Features of Islamic Architecture

The Islamic period in Libya, is mainly divided into two distinguished period; the first Islamic period under the Arab rule, the second Islamic period under the Ottoman rule. Although both periods share similar architectural features, the Ottoman period

witnessed development of more public facilities and the beginning of municipal based areas.

Almost all structures of Islamic cities are oriented to interior courtyards, with simple, smooth and plane surfaces to the exterior, with ornamentations around openings or other areas. Akin, Islamic cities were designed based on privacy and social structure. (Omora, 1981) When it comes to the main element of Islamic city urban fabric in Libya, public facilities like Al-Hosh[5], the Mosque and the Souk[6] as one integrated and balanced unit, as the streets, roads and alleys proportional with the movement of pedestrians and means of transport and provides shades to protect from the sun's rays; The proximity of housing units is to strengthens kinship ties (Elfagih, 1995). Bengs, (1997) defines as many others the dwellings in the traditional cities into three types, first the typical; Traditional Arab house (Hosh), the straw hut (Zariba), and tents.

2.2.3.1 Features of Islamic Arab Architecture

The Islamic Arab city is divided into two types, first one, cities that existed before Islam, which Arab came maintained built on top of them and kept developing, the best example for this type is Tripoli. The second, are small towns that became important during the Arab period like Barca. Arabs settlements were located adjacent or other settlements were founded during the Islamic period away from the ancient cities, for instance, Barca; the latter settlements are usually made out of Mud-Brick (Kezeiri, 1995). Goodchild (1952) describes the traces of roman and Islamic archeological findings, "*Mud-brick was used in the construction of some Roman forts in Egypt and*

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[5] The *Hosh* also translates to House, also it's the name of the traditional Libyan house.
[6] *Souk* is the traditional Market.

in southern Algeria, but in Cyrenaica and the Syrtica the use of mud-brick seems to be characteristic of the early Islamic period".

In the Arab town's streets had an organizational hierarchy, the main streets for the public, usually contained the public facilities, like mosques, schools or markets etc.., the secondary streets, are mostly private, was distributed on tribal, ethnic or religious bases. That's resulted in organic growth of cul-de-sac streets, and neighborhoods distinguished by religion, or tribes such as, Jewish sector, Christian sector, Muslim sector etc... (Othman, 1978). An example of the hierarchical street layout is seen in the urban fabric of Benghazi, which is characterized by several advantages, its streets appear in the form of long, parallel, narrow lines heading from north to south interrupted by some transverse axes from west to east (Elfagih, 1995). As a result of the undefined boundaries of properties, the street tend to bend sometimes its narrow or wide. This fabric is characterized by the abundance of mosques, shrines of Sufi movement Sheikhs who had contributions in building mosques and religious temples. The urban fabric of Benghazi followed a typical approach of most traditional north African cities, meaning the streets of the city has a hierarchy but still controlled by locals, for example only the (Souk) streets were public, transits streets between main streets and col-de-sac are of semipublic nature, and the col-de-sac`s were considered private and each controlled by a local family (Bengs, 1997).

During the Arab rule, the situation of the area relatively changed. New centers were founded and became the new focal point of the area. For instance, Barca[7] (al-Marej) in the ancient times named Barca, became the new center of the region because it

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[7] Al-marej in the ancient times named Barca, later became the official name of the Cyrenaica as a whole region (Barga) and became the new administrative center in the region.

supported the Arab lifestyle, in addition to its farness from the sea, it granted its Muslim inhabitants to be far from the Byzantine raids (Kezeiri, 1983). A similar approach accrued to the main cities in the south of Libya. As in Fezzan region the main cities of the region remain as primary or secondary towns in the desert. However, new Islamic towns appeared, these old and new cities created a trade network from east to west and from south to north, scholars describe the cities as palaces and fortifications; inside of these walls or fortification houses that are made of mudbrick. The sultan or the leader house lays in a palace, mosques are an important layer of these towns, beside markets that supported their location as a trade centers (Omora, 198l).

2.2.3.2 Features of Ottoman Architecture

One of the main features of the Ottoman architecture on Libya, is strictly organizational, Ottomans brought an organizational methods to their provinces in Libya that never existed before. They started by creating municipalities (Baladya), each for locations with high densities, those municipal bodies were responsible to develop as urban quarters, these developments included the making of public water fountains, planting trees and naming streets. Further, cities were divided into neighborhoods, both in Tripoli and Benghazi, this approach created the base for future urban planning made by the Italians (Bengs, 1997).

During the Ottoman era in Libya, Islamic architecture thrived strongly. The Ottomans worked on constructing palaces, mosques, schools, hammams, markets and houses. At the level of mosque architecture, current evidence indicates that their simplicity of style, shape and content represents the characteristic of Islamic architectural features. In addition to the simplicity of dome and minaret. Decorations built with stone marble and timber play an important role in representing the architectural and urban characteristics of this period (Al Baloshi, 2007).

The city of Tripoli was meant to be a façade of the Ottoman state in Libya; therefore, it was rich in its elements and architecture. The architecture of mosques, markets and baths was received a great deal of significance. Along with many significantly designed houses, particularly the Ahmed Pasha Mosque, Turgut Pasha Mosque, Osman Pasha Mosque (Al Baloshi, 2007). Ottoman Tripoli is a compact structure of a pre-industrial city created around collective facilities of Typical Maghreb Arab-Islamic urban culture, like a Jami, Masjid (Mosque), Madrasa (School), Zawya (Religious space,), Souk (Market), Funduq (a hotel, or Khan), and Hamman all identified by the walls, bastions and the palace (Al saraya), The directions of the network of the major urban paths were created on the waterfront and port where fortifications are less extensive (Micara, 2011).

2.2.3.3 Common Features of Islamic Architecture

- **Mosques:** The mosque is the most common structure of Islamic architecture. However, the architecture and arts traditions before and after the Ottomans are not clear, the main contrast in the architecture of the mosque is seen in the roof construction, while the Arab mosques were flat constructed out of wood, or vaulted roofs. The roofs in the Ottoman mosques of Libya were made out of domes. The latter became the most common feature of Islamic mosque architecture in Libya. Similar to the mosques, many architectural features are shared within the same period, Ottomans however, add new facilities to the urban fabric of towns and cities, and especially that Tripoli was the façade of their state in Libya (Baloshi, 2007).

- **House:** since the Arab conquest, clusters of courtyard houses formed the urban fabric of most North African cities, Arab house is mostly influenced by North African and Roman courtyard houses (Edwards, 2006). The Arab Islamic

house in Libya is similar to the other Islamic houses around the world, as Hammed (2008) describes the Libyan house in the old city of Tripoli as the following: from the entry door. Passing through an entrance a hallway blocked with a wall at its end that takes you either left or right; this is mainly for privacy, which is the main concern of Islamic architecture, the second is to protect the house from dirt and wind. The hallway contains a men reception room that is separated from the house (Othman, 1978). Arab house also called Housh, is known to have a courtyard in the center, with all spaces facing this central courtyard. In most cases the Arab house is oriented to the inside and does not have any opening to the outside. The courtyard is used to bring natural light, ventilation, it's also a social gathering area for the family and especially for women (Elwerfalli, 2016).
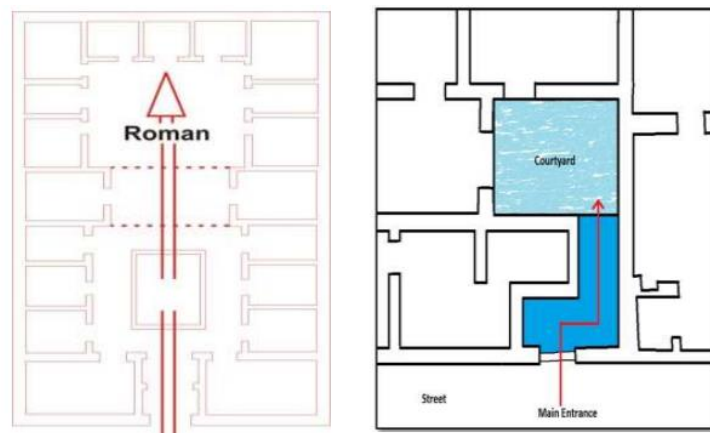
Figure 2.21: Comparison between Roman courtyard House (Right), and Islamic Arab courtyard house (right), (Elwerfalli, 2016)

The Ottoman house however is similar in layout, but richer in ornaments and materials, usually contains a fountain in its courtyard (Othman, 1978). It's mostly influenced under the Middle Eastern courtyard house. The house is divided into two sections, living quarters on the ground floor and sleeping

quarters on the first floor; the living area is referred to as *selamlik*, which translate to men section in Turkish, and private quarters as *haremlik* which translates to Women section. The haramlek section is always distant from the main entrance and the main street (Bianca, 2000).

- **Funduq:** Trade was an important matter for Arabs (Kezeiri, 1995). And since many trading routes passed by Libya, a new typology emerged to accommodate those travelers. Funduq which is also known as Khan in the Ottoman period, is a two or one floor building, with a central courtyard, the complex has a large door the allows "a loaded camel to pass" and a small door that is called (Bab Bu-Khoka) that translates to Peach door, this door can be seen in many houses in Libyan houses. (Othman, 1978).

- **Souk:** Markets are seen in many sites in Libya, especially in cities like Benghazi and Tripoli, since most of the cities in the Islamic period relied on trade, markets played a large rule in the cities, those markets are mostly closed markets, at the beginning markets were located on the main street some markets were then closed off from the top with palm leaves (Jerid) then it was closed with wooden roofs in Ottoman and Italian periods (El-Fagih, 1995).

- **Hammam:** Many scholars argued that the Islamic Hammam as a facility is an enhanced or inspired roman bath, other claim that it's an enhancement of Greek therma. However, the main difference can be notices in the water circulation system, since Islam requires that water must be clean; the public bath emerged greatly due to its need, it was used by both men and women, however each has their own days. Ottoman bath was known to be of three main space, the first is the changing room, then the cold room, and then the heat room that contains hot water pools, this room is covered with domes, the domes contain glass

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opening to allow natural light at the same time to keep thermal envelope (Othman, 1978).

- **Medrese:** Schools emerged during late Arab periods, the Medrese in sometimes an extension within the mosque complex or as a separate unit, the best example for than is Othman pasha Sagezli, in Tripoli 1641-1675 school was one of the well-known schools during the Ottoman period, the school rooms are organized around two courtyards, each room has a different functions (Othman, 1978).
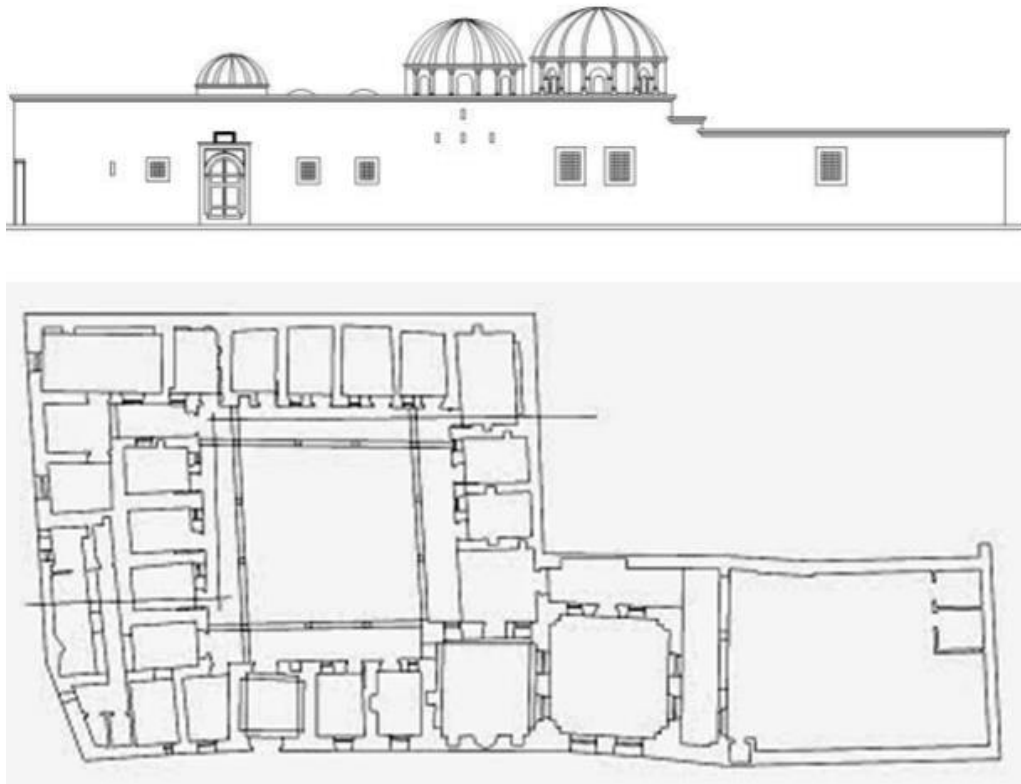
Figure 2.22: Othman Pasha Sagezli School, (URL 14)

2.3 Local Vernacular Architecture in Libya

Several essential factors should be taken into consideration in order to identify Libya's early buildings. However, there has never been an official effort at regularly surveying

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and recording these buildings or identified them, with the exception of the attempted renewal of the old districts of Tripoli and Benghazi, and its full governmental municipal work (Bengs, 1997). However, few individual efforts are made every now and then, mainly documentations attempts, and few other fragmented academic studies that document building in their process of a certain hypothesis, not in the sake of documentation.

This section of the research will be discussing Libyan vernacular architecture. Due to the vast land of Libya and its geographic and climatic differences, and the slight variation in its historical settlements, two main classification are to be followed, the first dividing vernacular architecture into Urban and Rural settlements; then each type will be divided into Costal region, Mountain region, and Sahara region.

Libyan vernacular houses' morphology can be attributed to three main factors: demographics, environmental and construction machinery availability. Furthermore, other factors have a particular effect on the vernacular buildings. For instance, influence of environment and socio-cultural conditions has made a crucial role in the development of vernacular house types, not just because of the climatic constrains, and abundance of materials and developing technologies but also because of the lack of economical means (Milod, 2008). According to El-Fagih (1995) vernacular architecture in Libya is recognized to have a strong content and functionality, it consist of interconnection of architectural block, the architectural masses or blocks are following a horizontal orientation. Simple facades without decorations and inscriptions, minimal openings to the outside for protection and environment control.

2.3.1 Vernacular Architecture in Coastal Region

Vernacular architecture in the Coastal region is divided into two distinguished parts, the urban vernacular architecture including two major cities of Benghazi and Tripoli, and rural vernacular architecture, which is similar in approach with few alterations according to the contextual feature of rural areas (Amer, 2007; Elwerfalli, 2016).

2.3.1.1 Urban Areas

Privacy and security were one of the most important factors that shaped Libyan cities and settlements (Milod, 2008). People tended towards seclusion from the outside due to the absence of security, which is a common element in most of urban centers, and seclusion became part of the people's culture, customs and traditions, and interconnected building blocks appeared with a social motive to seek protection. Courtyard houses in cities are constructed in a network close adjacent to each other, back to back or side by side to construct a fluid system supported by a network of narrow alleyways (Edward, 2006). (Figure 2. 23)
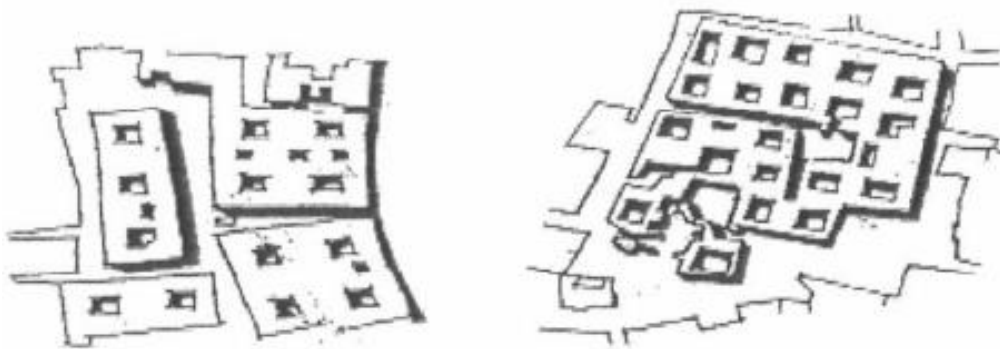
Figure 2.23: Town Courtyard House, (Amer, 2007; Daza 1982)

In the downtown area of Tripoli and Benghazi the arrangement of the residences within its urban landscape are laid to a single side facing the narrow alleyway (Figure 2. 23); minimizes its exposure to direct heat. Houses tend to have a quadrangular plan that is made out of a one- or two floors building with a

central courtyard. The construction of these dwellings as well as the materials used guarantee the functionality and performance of this type for its climate and terrain (Elwerfalli M. 2016).
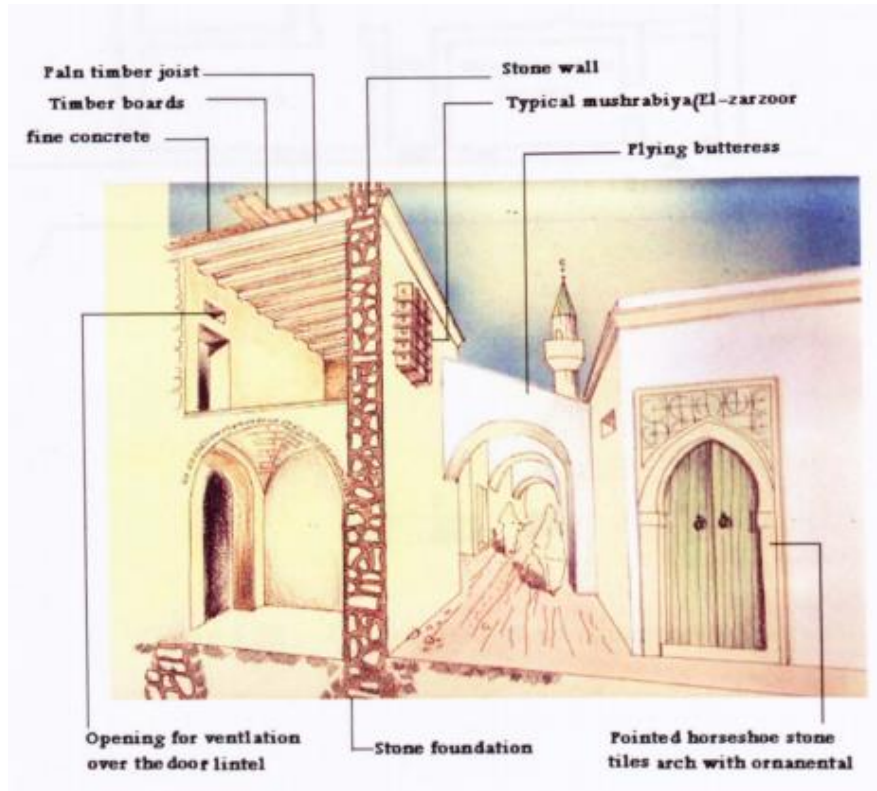
Figure 2.24: Construction details of a house in the old town of Tripoli (Amer A. 2007)

With the increase in population in cities the building blocks became adjacent, Most of them have two floors, and the streets and roads are narrow and are characterized by the abundance of arches within them for support. The fabric of the old city of Tripoli is mainly characterized with a narrow, organic and partially concealed alleys. The system of these alleys is typically hierarchical according to its function, almost all the streets are narrow, and contain sudden twists or turns, The large percentage of the plots are uneven type and appear to intersect among themselves. And it's hard to differentiate between each of the houses (Amer A. 2007).

Figure 2.25: Arial View of Tripoli city (Zarrugh, 1976)

2.3.1.2 Costal Courtyard House

This type of dwelling is located is found within the coastal areas of Libya. The coastal courtyard house, as a dwelling is also divided into two distinguished characters, coastal courtyard house in urban areas, and coastal courtyard house in rural areas. However, there are two type of courtyard house in urban areas, one storey house, and double storey house. Moreover, in the rural areas there're only one storey house, due to the availability of land. (Elwerfalli, 2016 and Amer, 2007) the Libyan courtyard house (Figure 2. 26) is usually divided into two parts, public and private, the public part has the entrance areas and men's reception, while the private part contains all the units of the house (Amer, 2007).
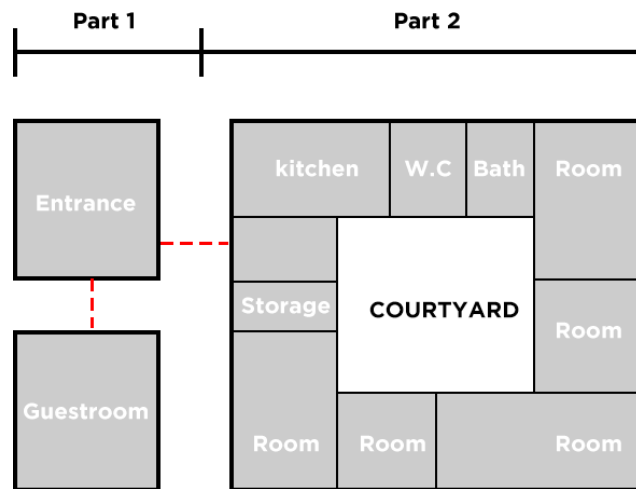
Figure 2.26: Functional diagram of courtyard house (Adapted by author, 2021. From Amer, 2007)

2.3.1.2.1 One Story House

Al-Hosh has an uncovered square courtyard. Rooms of the house are distributed around the courtyard. The number of the rooms varied from one house to another according to the number of the family members and social statues of the owner. Most of the houses has hall way with a dead end, a men's reception room is located next to the entrance door. The plot of the house as measured in few cases are not less than 10m x 15m, another additional floor started to be added in the 19th century periods, due to the lack of land (Figure 2. 27). The houses were built with ancient stones brought from the ancient city, cemented with mud. Roofs had layers of seaweed scattered over wooden beams and were coated in dried mud or lime. This caused repeated problems with drainage caused by winter rain. Most house has its own water well, the wealthier households have cisterns, where the rainwater is harvested in winter and used during the year, and water was drawn from the few municipal wells if such resources are not available (Bengs, 1997).
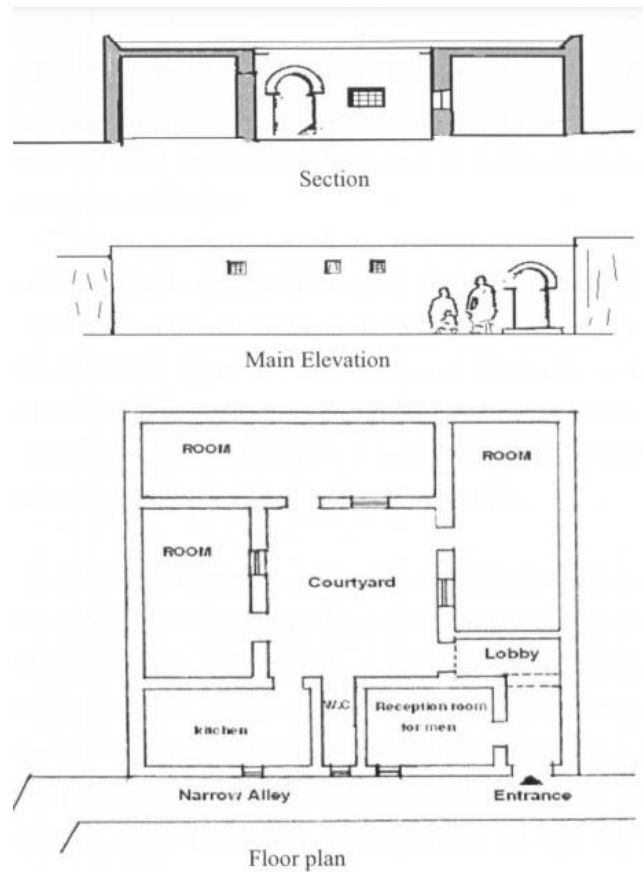
Figure 2.27: One story courtyard house (Ameer A. 2007)

2.3.1.2.2 Two Story House

The courtyard houses are mostly built side to side, in a rows facing the street, the average square meters of the house is $300m^2$ with around $70m^2$ to $100m^2$ only for the courtyard; in today's distribution the courtyard houses is divided into 2 types, one story building and two story building, the two story building emerged with time due to the lack of empty land in the city (Zarrugh, 1976). Open arcades create a transition space between the courtyard and the rooms, in some houses the courtyard has fountain to cool down the house in hot summers and fruitful trees to give shade to the inhabitants, in the two story house bedrooms are typically found at the first floor or on the first floor away from the path. Space measurements are about 2.5 x6 long and narrow (Ameer, 2007). (Figure 2. 28)
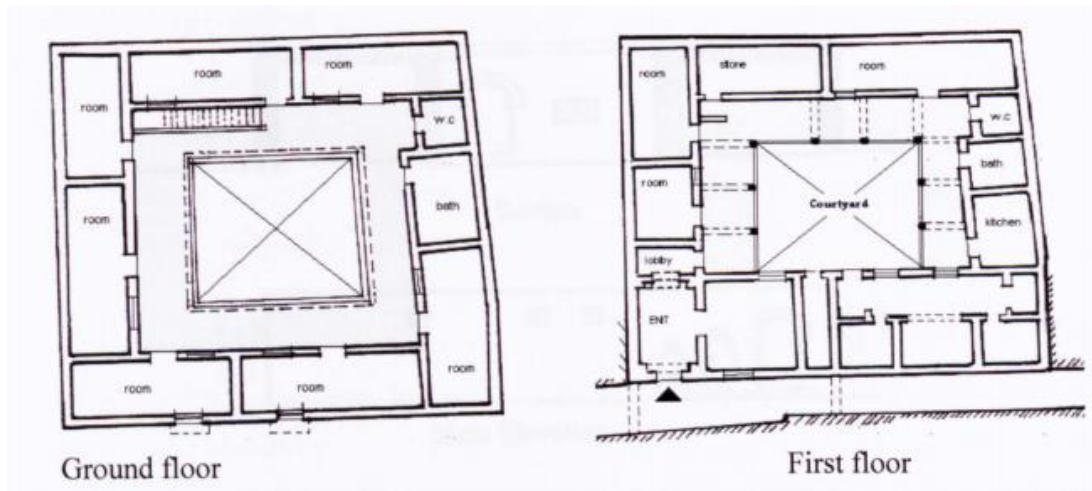
Figure 2.28: Two story courtyard house (Werfalli, 2016)

2.3.1.2.3 Zariba

Al-Zariba, (Figure 2.29) was a straw hut made of palm leaves (Jerid).This form consists of a signal space for the entire family and enclosed with a straw fence to conceal the interior and to shield women`s of the family, this type of dwelling was characteristic for the poor suburbs of the cities like Benghazi and Tripoli (Bengs, 1997).

Figure 2.29: Al-Arish or Zariba (Ahmida, 2005)

2.3.1.3 Rural Areas

The courtyard dwelling in rural areas is comparable to the courtyard dwelling in urban centers, the major deference here is that the guest room, men's reception room opens to the outside and it's not connected to the main entry hall of the house, and due to the vast space the houses are always one floor with flat roof (Amer, 2007).

2.3.1.3.1 Courtyard House in Rural Areas
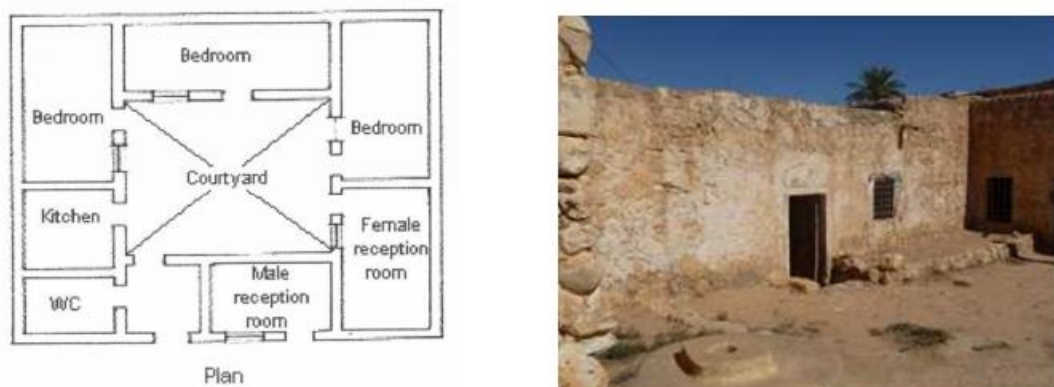
Figure 2.30: Courtyard house Rural Area (Daze, 1982)

The rural courtyard house is mainly built by its owners, so the external appearance of such house is always neat and organized, however, it always seems rustic and rugged, and this is of course because of the construction method; the courtyard houses construction methods in rural areas is made of similar traditional methods according to the available resources, it can be built through the rammed earth method (Darb El Bab) (Figure 2. 31) or through stones or sun dried brick blocks, the roof is usually made out of palm trunks with a layer of clay or mud on top of it; these types of houses can be find alone in the landscape or in a cluster of two to three houses (Elwerfalli, 2016).
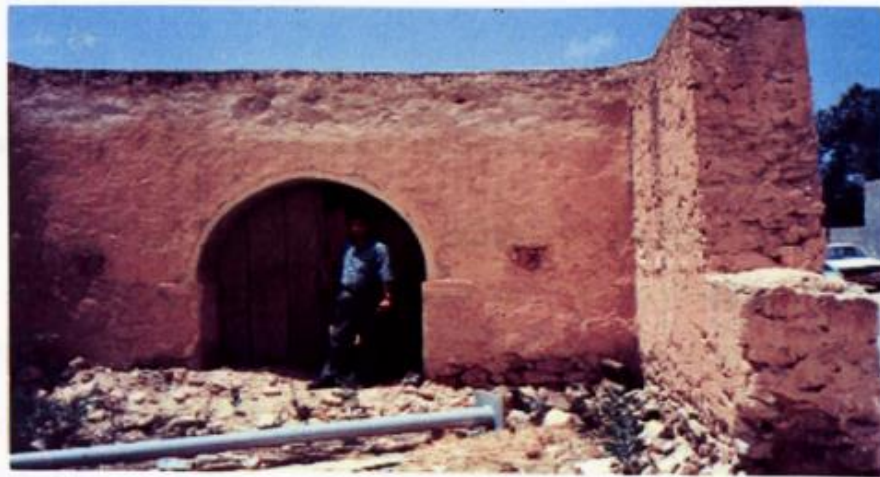
Figure 2.31: Rural Courtyard house, Rammed earth method, (Grafa, M. 1996)

2.3.2 Vernacular Architecture in Sahara Region

A significant portion of the Sahara desert is the Sahara region in Libya. It spreads through the Mediterranean Sea and northern mountains, Jabil Nafusa in the west and Jabil Al-Akhtar to the east in the southern part of Libya. There are two main zones, the southwestern Fezzan and the south east Kufrah district. Those areas contains two regions, the land is largely flat, paved with sand and the land dry and rocky, few scattered oases like Sabha, Ghadames, Murzuk, Ghat, and Kufrah. Settlements in the desert area can only be found around oases (Amer, 2007).

Amer (2007) divided houses typology in the region into two, the first is the courtyard dwellings in Fezzan and Murzuk; the second, the covered houses or the non-courtyard house. However, according to Elwerfalli (2016) in the area there are three major housing forms, courtyard homes, mobile shelters and non-courtyard buildings.

2.3.2.1 Courtyard Houses in Sahara Region

The urban houses in the region of Ghat are arranged into irregular courtyard blocks (Amer, 2007). The building process usually starts with an irregular courtyard surrounded a space or two. Different annexes are added according to the family's

needs (Elwerfalli, 2016). Those houses were made using rammed earth method also known as "Darb al-Bab" in local tongue. The result is close to adobe construction, the different is the walls are made together layer by layer, by compacting a mixture of mud, straw, stones and little salt clay bits, this mixture is poured into a form work until they exceed the appropriate height (Amer, 2007).
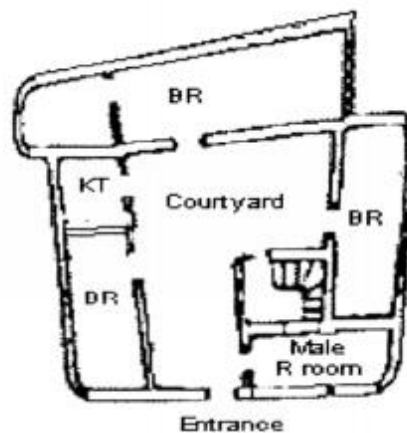
Figure 2.32: Garamantian irregular court yard house, (Daza, 1982)

This construction method might also rely on the different materials and resources within hand. The building materials can also include sandstone, sun dried bricks and small stones combined with clay and organic materials, these material are then compacted to create walls in several other places (Elwerfalli, 2016). Most dwellings blocks are similar in height, very few houses have more than one story, some blocks contains terraced roofs which provide space for the women in the family. The tight, winding alleys connected the buildings in circles with no external links. The external walls of the houses establish the perimeter of the settlement (Amer, 2007).
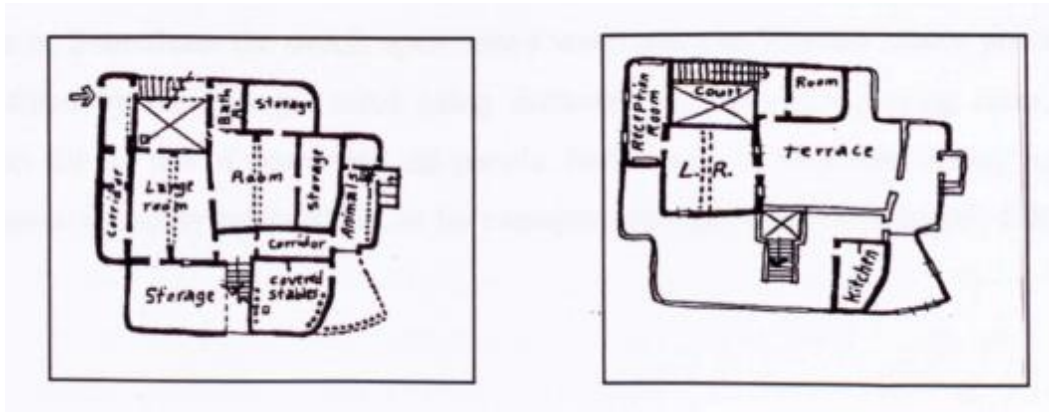
Figure 2.33: Two Floor, traditional house, Sabha. (Bukamar, 1985)

Figure 2.34: Examples of buildings in Ghat, A mosque (left), and gate (right) (URL 15)

2.3.2.2 Non-Courtyard Houses in Sahara Region

Figure 2.35: Aerial view of the city of Ghadames, (URL 16)

The ancient town of Ghadames is situated in the Sahara desert, it has grown over time considering the remote location and the arid atmosphere. Due to the outstanding qualities of the urban planning and vernacular architecture, Ghadames has been the most important cultural and commercial hub for many decades. Its urban morphology has a certain type, shape and order; this order is unique and easily recognized and understood (Figure 2.35). (Abufayed and Raghei and Abufayed, 2005)

Ghadames is positioned in one of the country's severe climates, from harsh cold in winter to almost non-rainfall and dry heat at the summer in addition to frequent sand storms. Hence, houses must be able adapt in these conditions, with the available resources and material which includes clay, mud, lime stone, palm trunks

and fronds. Due to the limited space next to the oases, the buildings are organized vertically rather than being spread horizontally (Ahmed, 1985).

Two or three sides of houses are attached to other buildings. Houses have a variety of spaces on three floors sometimes even four, men use the streets at the ground floor, while and women use the roofs as terrace for cooking, also the roofs of the city work as a circulation network that is used only by women of the city to have complete privacy, and when necessary, they could even use the roads on the ground level (Curwell, 2008).

Figure 2.36: Typical Ghadmesian house plans, with description (Amer, 2007)

Ghadames houses are court-yard planned houses, cubical in its mass, almost identical with floor areas about 40 to 80 m2 (Figure 2.36). The house consists of two main levels, an entrance and an additional storage on the first floor where the main rooms of the house are put, a lavatory, and the main living room which is also the

house courtyard. The living room reaches to the ceiling; the ceiling is enclosed with the exception of a narrow central window on the roof for light and ventilation. The courtyard has steps that leads to the mezzanine floor; the plot of mezzanines contains more rooms for sleeping and storage area. The kitchen of the house is placed directly in the ambience on the roof terrace to avoid smokes from cooking; in addition terraces and rooftops were used as public walkways for women during the day, in the summer the same rooftops are used as a living or sleeping area for the family at night (Abufayed and Raghei and Abufayed, 2005).
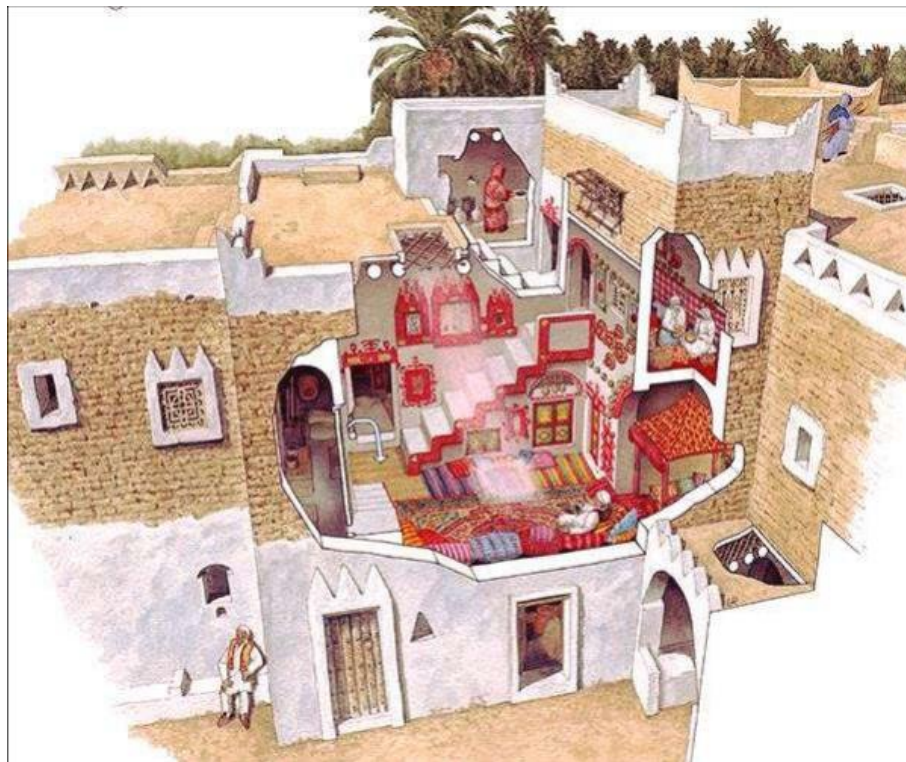
Figure 2.37: Perspective section of typical house (Abufayed, and Raghei, and Abufayed, 2005)

2.3.2.3 Nomadic Houses in Sahara Region

The Nomads adopted mobile shelters because inadequate resources had to be used in areas which did not allow permanent farmland. They had to travel seasonally to reach grassland while they remained with their flocks; this constant travel required

removable shelters, normally in the form of tents or huts. The tent composed of local skin and fur, and is considered as one of oldest traditional homes. Bedouins and Nomadic folks use such shelters, because it's very easy to build and dismantle. Tents may be split into three sections one to men and the possible guests, the second for women, the third for cooking, sometimes the tent is split into two sections, men and women, while guests or cooking activities can be held in another tent. Traditionally women make the interiors and decorated the tents, while men tended to the animals (Elwerfalli, 2016).

Around the coastal strip and some oases huts made of palm leaves or branches known as (Al-Arish) in which these materials are available were found. Those type of huts are usually made if nomads decided to stay for a longer period. Moreover, other permanent wooden huts are located in clusters around the towns of Tripoli and Benghazi, which are coated with galvanized boards, also called (Zariba) or (Kokh) (Elwerfalli, 2016).
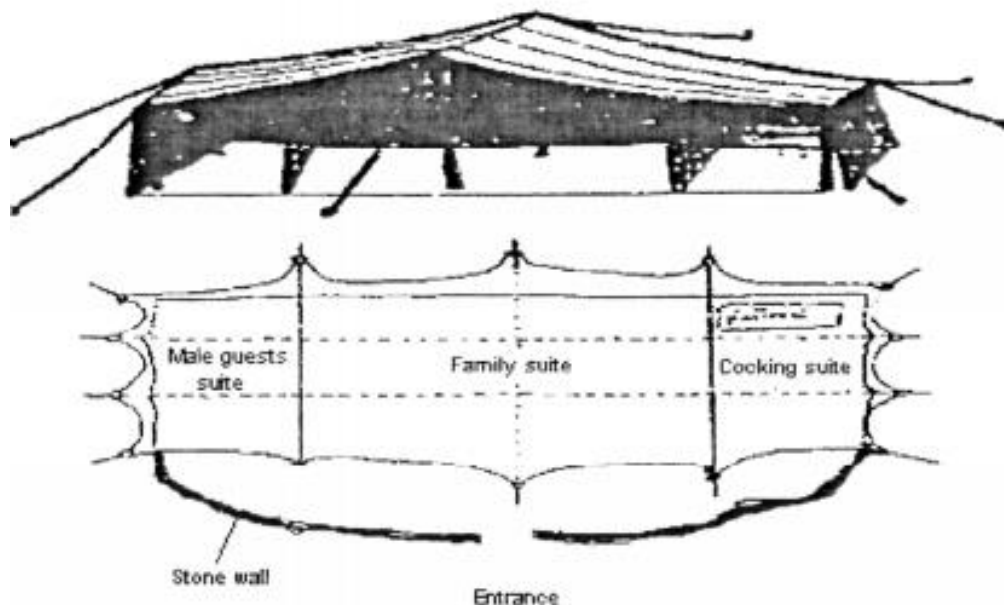
Figure 2.38: Plan and perspective of a mobile Tent, (Zaher, 1984, p: 19)

2.3.3 Vernacular Architecture in Mountains Region

According to Amer (2007) and Elwerfalli (2016) Bakoosh (2019), vernacular architecture in mountain region is divided into above ground and underground, vernacular buildings at this region are not very different from other types of buildings, buildings in this region are also using a similar concept of the courtyard house except for the details like the structural elements and material used in the buildings.

2.3.3.1 Underground Settlements

Underground houses or as it's called Damous is a house that is completely under the ground, the rooms of the buildings are distributed around a courtyard where it provides protection, ventilation and natural sunlight. The chambers were dug in the adjacent neighborhoods, and distributed around it equally, two on each side, and in the middle is a small kitchen that is shared by the families, in total of no more than 6 members. Covered with vaulted ceiling in the form of a basement to handle the pressure of soil.
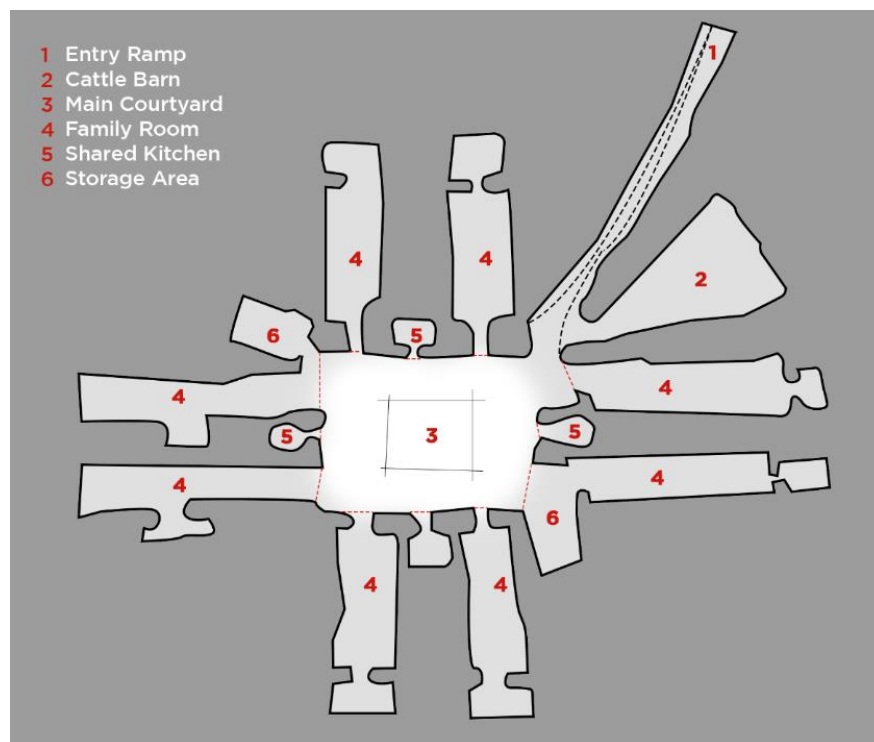
Figure 2.39: Plan of an underground house in Ghryan (Adapted by author, 2021 from Elwerfalli, 2016)

The floors of the rooms rise from the courtyard, and the entrances have olive-wood doors. Climatic studies have indicated that the temperature and humidity are suitable for the inhabitants of the pits, noting that the daytime temperature in the summer is around 35 degrees, and in the winter season it may reach below zero degrees. During the winter the rooms are warm and cold in summer. Each space in an underground house has historically been occupied by a family, which opened on an indoor courtyard about 10 x 10 m, and by a depth between 7 and 10 m allowing air flow and sunlight radiation to reach rooms during the day, The key purpose for this style of building was to safeguard from harsh climates and predators (Bakoosh, 2019).
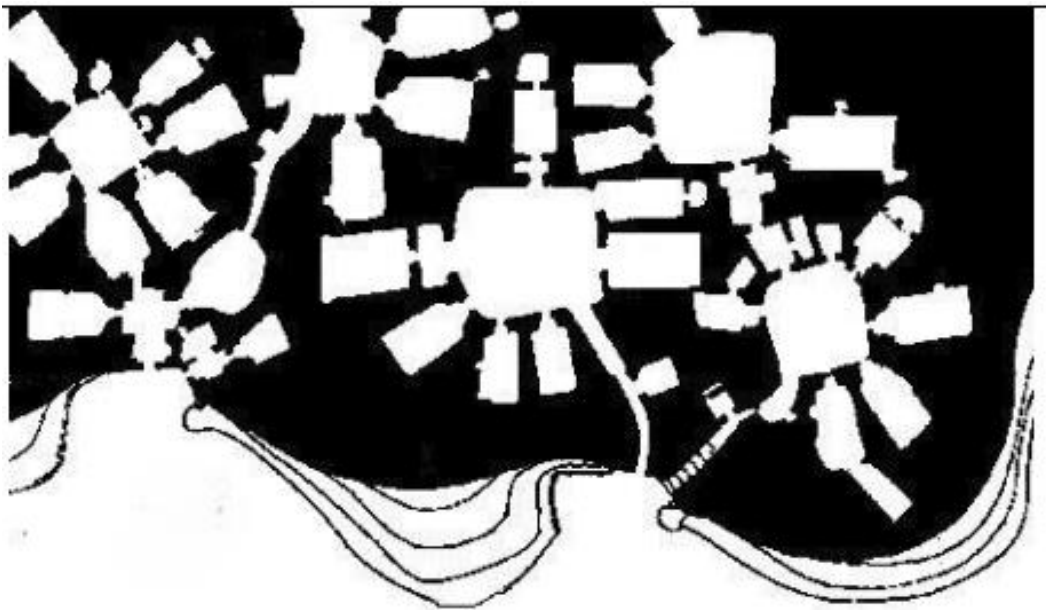
Figure 2.40: Public Network, (Madi, 2015)

Figure 2.41: Underground house in Ghryan (URL 17)

2.3.3.2 Above Ground Settlements

According to Amer (2007) there are two types of above ground houses in the mountain regions in addition to the storehouse (Gaser) which is used to store the goods of the town; the first, is courtyard house with a flat roof, the second, with a vaulted roof.

2.3.3.2.1 Flat Courtyard House

Flat roof houses is similar to the courtyard houses at coastal regions and rural courtyard house in terms of design, the major distinction between them lies in the form of the courtyard; in the mountain house the courtyard is circular or of an irregular shape, while the rural or costal the courtyard is more of a square or rectangular shape. In this type of house the rooms are distributed around a circular courtyard for lighting and ventilation. In the corner, the main door opens into a blind passage to provide privacy (Figure 2.42) (Elwerfalli, 2016).
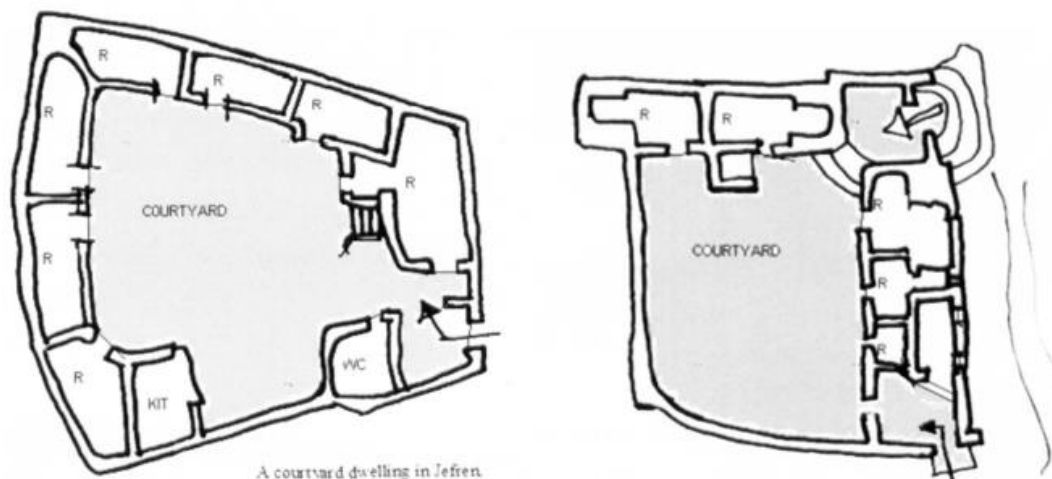
Figure 2.42: Mountain Region, flat roof courtyard house. (Daza 1982)

2.3.3.2.2 Vaulted Roof Courtyard House

This form of dwelling emerged as protected granaries in the Roman period. This type of dwelling is similar to the flatted roof courtyard the main distinguish is this type of house has a barrel vaulted roof instead of the flat one, in addition to the regular shape

of the courtyard; the vault is made out of rough stones leaning on each other to form a

vault, then a layer of paste clay and plaster are laid on top of each other to form a flat

roof (Petherbrigde, 1995). Daze (1982) states that this method did not survive because

of the limited construction and design techniques, and the need for regular repair.
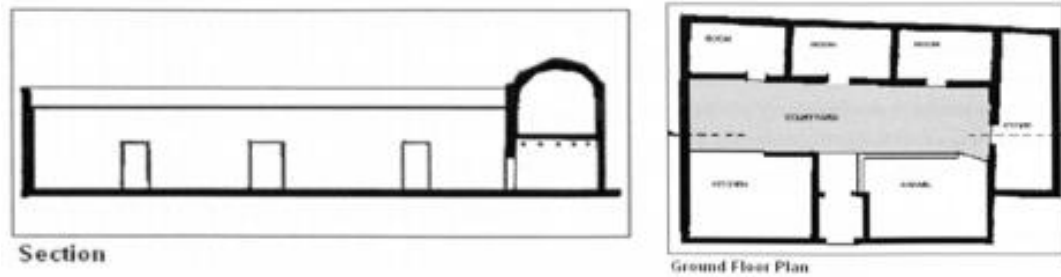
Figure 2.43: Mountain region, vaulted Roof courtyard house. (Daza, 1982)

2.3.3.3 (Gaser) Granaries

The warehouse is used as a storage center for agriculture products and therefore played

a major role in the agricultural economy. It is popular throughout the area of Nafusa

Mountains; in many areas such as Gaser al-Haj, El-As Sabah and Nalut, fortification

granaries are built in the form of a circle around an open central courtyard.

Figure 2.44: Gaser El haj, Granary (URL 17)

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Every storage room is around, 1,9m long, 1,6m wide, and 1.75m. Room are stacked on top of each other, in a regular or irregular manner; the doors of the storage rooms are made out of palm tree trunks and about 50 to 70 cm wide, each of the rooms has a barrel vaulted roof, the rooms themselves are divided into smaller storage units from the inside for the different types of good, In most cases, there were up to 500 storage rooms in the granary; each family of the town has its own. (Amer A. 2007).

Chapter 3

ITALIAN COLONIAL ARCHITECTURE IN LIBYA

As mentioned in the previous chapter the Libyan region has a variety of vernacular and local architectural typologies; also as mentioned in the introduction part of this research, Italian architect had to know to what extent their project could borrow or integrate local architecture in their colonial buildings. Thus, this chapter discusses the theory and practice behind the influence and the motifs Italian architects were inspired by to come with colonial style in Libya.

3.1 The Colonization of Libya

The first attempt to invade Libya was done in non-violent manner by the bank of Rome; which opened its first branch in Tripoli in 1907. The numerous initiatives were intended to fortify ties with Libyans by establishing recognition and prestige, as well as to capitalize on the existing untouched territories. The Ottoman administration, on the other hand, did not approve of the Bank's operations and actively discouraged Arabs and Ottomans from utilizing its facilities, boycotting and disrupting their mentioned initiatives. (Capresi, V. 2009)

Further, Italy's leaders have been preparing local and international opinion to colonize Libya since the 1870s. The government was sponsored by a powerful capitalist lobby that encouraged the advancement of Italy into Somalia, Eritrea and by the 1911 Libya. The Italian version of the manifested destiny to provide the nation with manufactured products and perpetual surplus workforce with trading opportunities. On 5th

November, 1911 the Italian Government confirmed the occupation of the two regions

Tripolitania and Cyrenaica, and incorporated them officially on 25 February 1912;

after it's a first attack on the September 1911 where Italy took control over most of the

important coastal cities. By 1932, Italy ended the Libyan rebel movements in the east.

The Italian reign in Libya ended after their defeat in World War II. (Vandewalle D.

2006)
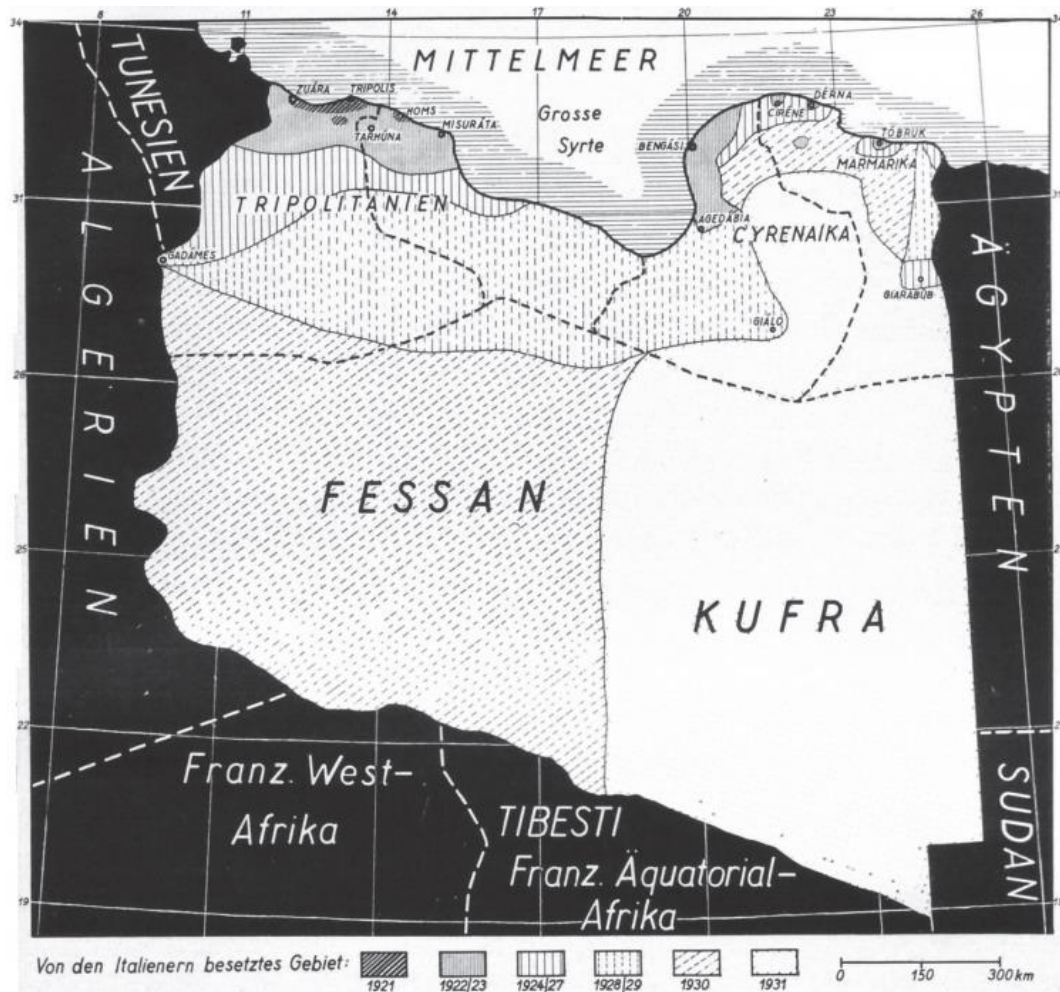
Figure 3.1: Chronology of colonization of Libya (Capresi, 2007)

3.2 Early Italian Plans to her Colony

It was not until recent days that Western researchers and scholars recognized that the rural inhabitants of Libya, had been forcefully deported and imprisoned by the Fascist government of Italy, in concentration camps between 1929 and 1934. Thirteen million liras were invested by the colonial state on constructing of these camps. These camps were surrounded with double wire mesh barriers, food was rationed and pasturelands were reduced and patrolled. Sixteen camps were established, the degree of brutality in these camps were varied. Al-Agaila punishment camp in Cyrenaica was the worst, since it was built for the Libyan fighter's families, most of the camps are in the countryside of Cyrenaica outside the rural centers and cities. Beside the camps many Libyans who opposed to the colonization of Libya were removed from their towns to other towns, some were even exiled from their towns to prisons in Italian islands. (Ahmida, 2005)
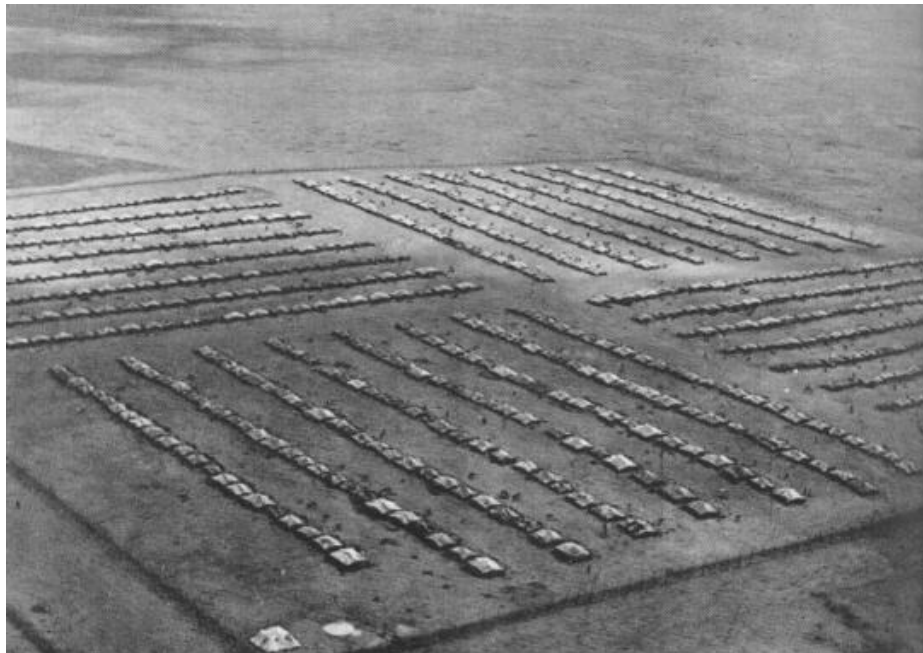
Figure 3.2: Al-Agaila concentration camp (URL 18)

3.2.1 Approaches to the Urban Settlements

Italians employed three distinct urban design and planning modes in their colonies: the colonial dual city which preserved existing city while obliterating it like the case of Tripoli. The colonial city wherein indigenous people were removed from the city's center and accordingly the pre-existing city was redefined; Similar to the case of Benghazi. Finally, The scattered Borghi Italian settlements away from cities and indigenous population, similar to countless examples in the rural parts of Libya. (Fuller, 2007)

By the end of their era, Ottoman administration in Libya left it with primal planning. Nonetheless four Italian master plans have been prepared and implemented. In addition to other layouts plans for villages that were of a great importance in their colonial settlement plans. Villages were devoted a great deal of importance in the colonial program of settlement. Classic European urban principles, including (*Citta giardina*) also known as the Garden City, have been implemented in Libya for the very first time. (Kezeiri, 1983) Furthermore, towns started to undergo a new period of contemporary Italian urban planning that made a deep influence on its morphology. Multiple old town have been destroyed to make room for wider streets or new structures New residential areas have been developed, a new residential units style has emerged, Further, villas alongside apartment buildings were also being designed in the major cities for the Italian officials and their families (Kezeiri, 1983; Khuga, 1969).

Kezeiri (1983) proclaims that all of these new developments were to the Italian people favor, not to the Libyans. The presence of old towns *Medina* and new extensions contribute to striking confrontations between urban models and the emergence of two distinct communities in 'dual cities'. In the late 1930s Italian administration

implemented civic centers in the rural areas for both Italian and local population called Borghis.

One of the key issues of colonial urban development is how far could indigenous and European populations be separated? Italian approaches to urban organization and planning evolved through three separate yet related trends; starting with the construction of "modern" quarters alongside ancient city walls; later establishing villages and civic center enters in rural Libya to serve for Italians peasants and Italian settlers; Finally, moving to an apartheid model in their approach to east Africa's colonies namely Ethiopia (Fuller, 2007).

3.2.1.1 Tripoli

Tripoli exemplified the colonial dual city settlement in its division of new and existing areas and conservation of aesthetic value. Plans of Tripoli were created with the aim of preserving as much of its historic center as possible. Though new quarters were eventually constructed, Europeans frequently lived in the historic center with Libyans; and new quarters of the city weren't entirely closed to Arab population (Fuller, M. 2007). There were three notable urban development phases in Tripoli. 1911-1921, 1922-1932 and 1933-1939. The early phase of the project was primarily marked mostly by removal of parts of the old downtown walls especially the eastern and northern parts of the city (Khuga, 1969).

The second phase begun in 1922 as the Fascist Party took over power in Italy, Mussolini was not into bringing peace by negotiation, but violence and aggression; this managed to stop much of the Libyan resistance in Tripolitania by 1929. In the aftermath the Italian government then launched major urban growth plans because the government needed to prove it was willing to manage the new colonies in

Africa, also to help the technicians, workers and, in particular, the poor Italian peasants in the south of Italy to immigrate to Libya; to overcome the over-population crisis in Italy. Finally to establish a whole life of urban life for the new Italian settlers. The third stage began with the appointment of Marshal Balbo as the general governor of Tripolitania and Cyrenaica provinces, alongside the military zone in the south, known as Fezzan. (Khuga M. 1969).
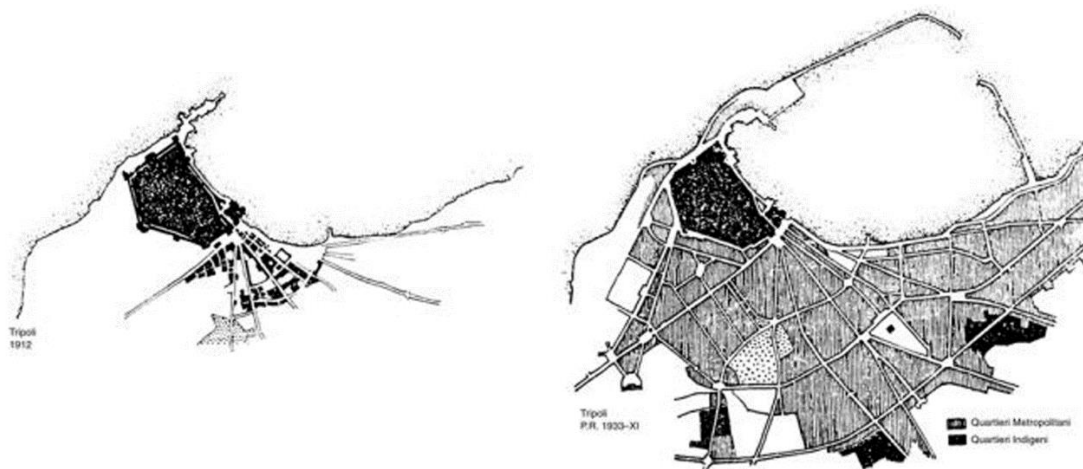
Figure 3.3: Tripoli plan in 1912 (right), and master plan with Europeans and natives quarters (left), (Fuller, 2007)

During the rule of governor Volpi 1921, few to no plans were expended on carrying out Tripoli's masterplan. Additionally, his administration worked to achieve monumental components of Tripoli's programme. By 1924, Tripoli`s harbor had been constructed; the city had gained wider streets and new planted trees; and the City Hall and Hall of Justice had been recently built. The urban planning of the waterfront was particularly ambitious and it aims to create a striking impact of people coming from the sea. A similar approach of this grand visual view is made in the design of Benghazi`s waterfront. (Talamona, 1992)
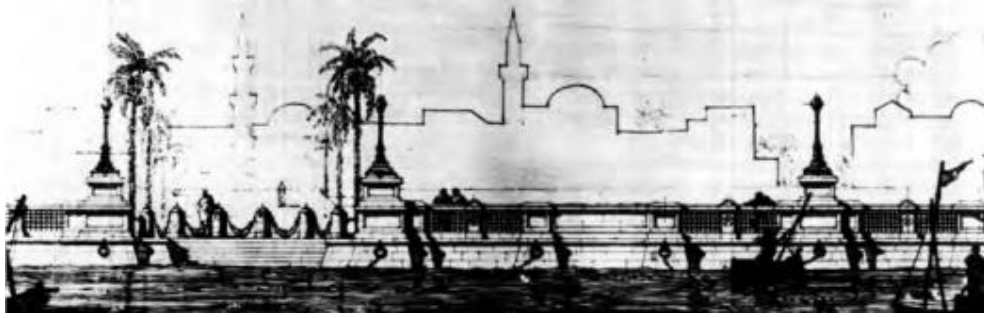
Figure 3.4: Tripoli water Front proposal, (Stigliano, 2009).

In 1928, a recent wave of architects started to emerge into Tripoli, this period have seen a bunch of competitions, these engineers and architects were the same kind of theory-driven designers, who are still gaining popularity in Italy at the time. Consequently, these reasons were why certain historians have referred to Tripoli as a research laboratory for architecture during this era. In the early 1930s a new city plan to Tripoli was to keep the old city as it is, and create new metropolitan areas close or in-between them the plan argues that population of the old town mainly Arabs should remain where they are, as the new European settlers live in the newly design quarters outside of the walled city (Talamona, 1992).

3.2.1.2 Benghazi

In Cyrenaica, Italian colonial policies were very strict in comparison to Tripolitania. Through the colonial period movement of native population was strictly controlled. This continued even after the peace treaty of 1932. In that sense, Italians excluded native populations from their plans; this comes in contrast to what they did in Tripoli. Benghazi`s plans introduced in 1932 by Alpago Novello, Cabiati, and Ferrazza, called for a distinct division between new Italian new city and the existing indigenous city. However, complete separation was obviously impossible in Benghazi, the proposal established strict delineations that are meant to be as visible as possible (Biasutti, 2004).

Benghazi's urban plan was distinct from Tripoli's in terms of native space distribution, since Tripoli`s Metropolitan quarters erected from away from the old city, In contrast, in Benghazi they fully surrounded the initial native settlement enclosing and isolating it from outlying indigenous territories. The proposal planned to expand the roads that circle the primary native region in order to better delineate it. The main goal was to keep the European center European, and somehow the goal was achieved successfully (Biasutti, 2004) and (Fuller, 2007).

3.3 Approaches to the Rural Centers (Borghis)

In 1926, Libya was presented as a natural extension to Italian territory. Despite Libyan resistance in rural areas of Libya. In the rural areas Italian colonial works remains recognizable, as rural centers were established starting 1933, to represent national, religious, and administrative civic centers. Those rural municipal civic centers which are called Borghis, were an alternative to the existing built environment in city. This alternative is a distinguished colonial-urbanistic mode and a planning model that has been created and applied to several locations. New Borghis, were constructed as they were in Italy; aiming to bring large number of peasant settlers. The plans for third group of center were canceled in 1940 because to World War II; however, a special emphasis are put on Borghis between 1938 and 1939, where a mass exodus of Italian peasants to Libyan beaches occurred to settle in the new rural centers. (Quilici, 2009)

These new centers were part of Italian demographical colonization of Libya. There are two major periods of Italian demographic colonization in Libya. First, the period in which the Italians occupied Tripoli, the second is in which two migratory waves 1938 & 1939 with a program of dense demographic colonization, a stage that stimulated the creation of those civic rural centers.
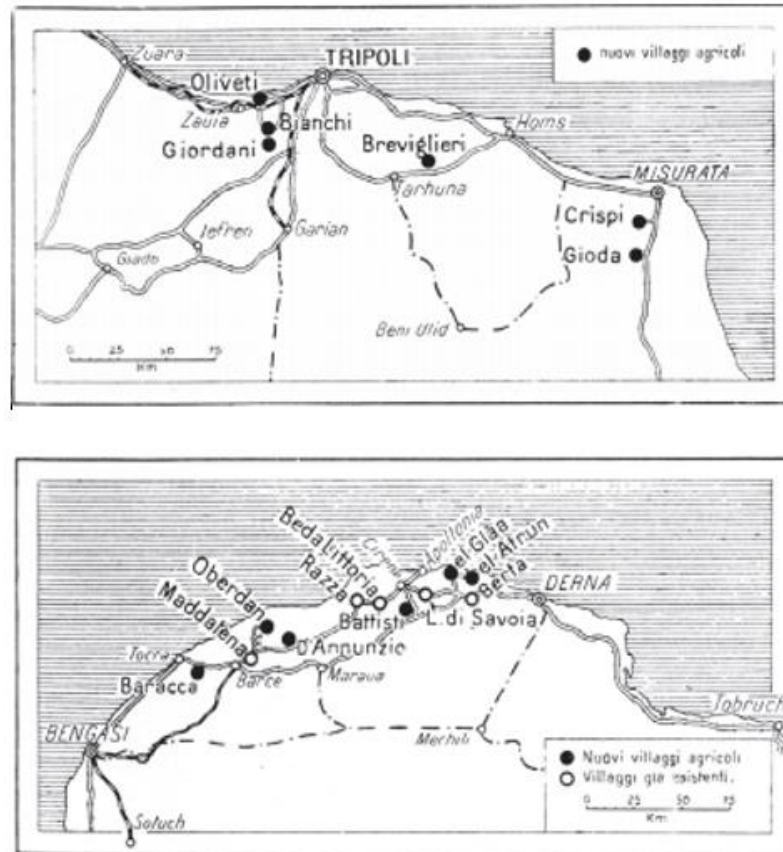
Figure 3.5: The new centers in Tripolitania (top), Cyrenaica (bottom). (Capresi, 2009)

The first migration wave started by Italo Balbo in 1938; the goal is to raise an army of obedient peasants who are trained for commitment to work and fascism. Around ten thousand Italians and twenty three thousand Libyans were prepared to build rural centers for further settlers to come, after arriving to Tripoli settlers were distributed around their ready and built new homes. In Tripolitania, three major colonization regions were selected: Tripolitania, Gefara (central west area), Tarhunah Plateau, and south of Misurata. In Cyrenaica, rural settlements were implemented in the four villages which already existed on the Gebal Akhtar plateau. This part of the region has a sufficiently high rainfall to support agricultural production. The second mass migration to Libya in 1939, and another was planned to set in 1940, but because of the World War II it was cancelled. (Capresi, 2009)

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Rural centers were a series of government-built structures that acted as a model for immigrant peasant farmers. They were principally administrative centers, as they served as the focal point of public life, regardless they were not occupied by peasants. The peasants lived in farmhouses scattered throughout the districts. The Borghis practical system was strictly established by colonial rule. These defined the necessary frameworks and program, but did not include instructions for the layout and overall plan of the villages (Ghirardo, 1989). Thereby, architects conformed to statutory requirements, each center was required to accommodate and was provided with a church, a Fascist party headquarters, store, town-hall, school, among other facilities and buildings. Beside the requirements, architect had complete freedom to design and plan those centers as they wish. (Capresi, 2009)

Even though, those Borghis were not meant to be similar, however they were. Most Borghis have a similar distinguished features, for instance, a church, Municipal hall, Fascist headquarter, and offices. Those components are mostly gathered around a central square. Architects of the Borghi were not required to consider pre-existing cities. Rather than that, climatic conditions, local safety issues, and labor conditions shaped their designs there. Simultaneously, under the architect's oversight, the settlements began to imitate Italian cities regardless of their size. They weren't completely modular in their construction. Preserving the identifiable "map" of the Italian classes' in both spatial and social lifestyles. Libyan villages throughout the 1930s mirrored other metropolitan areas in many ways except perhaps the inclusion of Arabs (Ghirardo, 1989). Given this freedom, all of the proposal shared a range of common, if not similar characteristics. These characteristics, which included the village's urban architecture and the interaction between the village and its neighboring context (Capresi, 2009).

3.3.1 Characteristics of Borghis

Capresi, (2009) described those in six fundamental patterns; The Square, The arcades, the access road (communication with the outside world), Morphology of the land (Acclimatization), Church, and Fascist party quarters. Despite these shared characteristics or design concepts, several alternative proposals were introduced, hence the implementation cannot be described chronologically. Similarly, no specific construction style or plan was used. Due to the need to design, and construct these centers in a short period of time, moreover, those common feature introduced by Capresi, 2009 as follows:

3.3.1.1 The Square

The village square was the central, essential feature that really symbolized the village's creation. The square is a well-defined space, whether it's enclosed or open from one side or another. Boundaries of the Square are often defined by building forms (Stigliano, 2009). However, Capresi (2009) argues that building forms do not make the space; the need for public space generated the buildings layout. For theoretical reasons, it is significant to mention, that there were no linear settlements and that all layouts were concentrated around a central square. The square, which was intended to be a safe, recognizable space, served as the spatial generator for the centers. Specific structures encircling the square were granted a single image instead of being a set of different components, including the arcades that run the length of the perimeter.
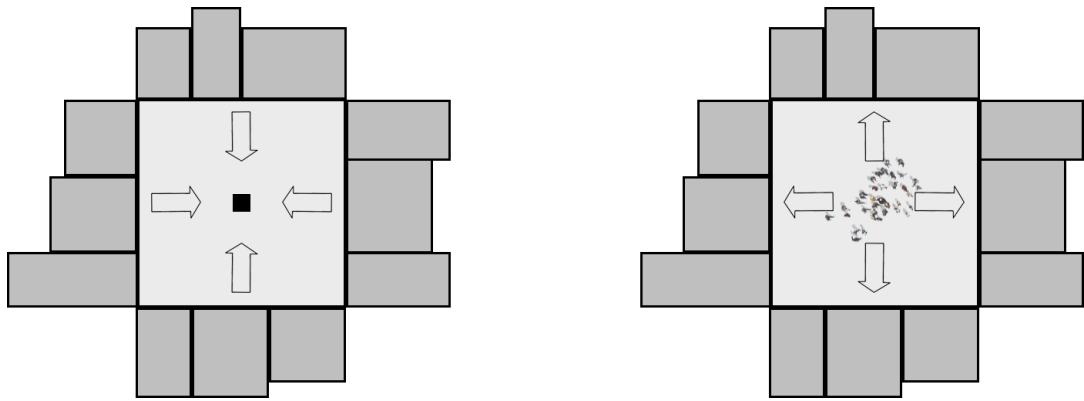
Figure 3.6: Schematic diagram of Borghi square, (Adopted by author, 2021. by Capresi, 2009)
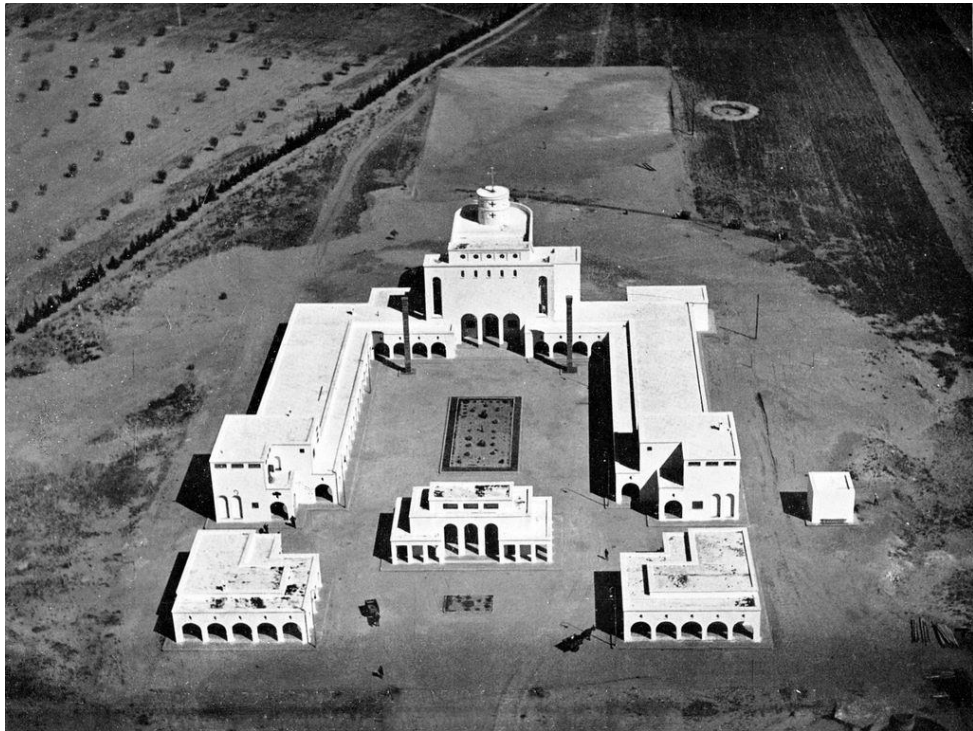
Figure 3.7: Oliveti Borghi, by Di Fausto, 1935-1938 (URL 19)

3.3.1.2 The Arcade

Arcades as buildings, are mainly made to define the edge of the square. As building`s defined Square edge, arcades connected the square and individual buildings. The primary purpose of those translucent walls are to identify the boundaries of open and close spaces. In addition, arcades provided a strong architectural identity to the rural centers; in both where they're actual covered passages, and as they were just two-

dimensional dividing partitions with transparent arches. The porch passage allows enclosure of the space and at the same time to open new spaces perspectives towards a bigger picture frame of the surrounding countryside (Stigliano, 2009).
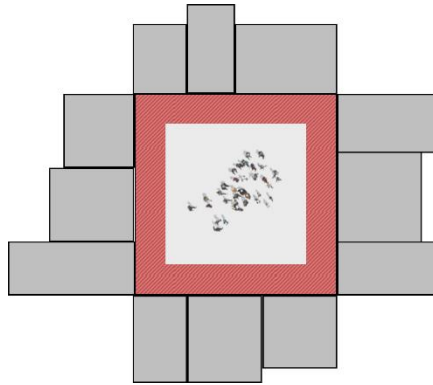
Figure 3.8: Schematic Diagram for Arcade, (Adapted by author, 2021)
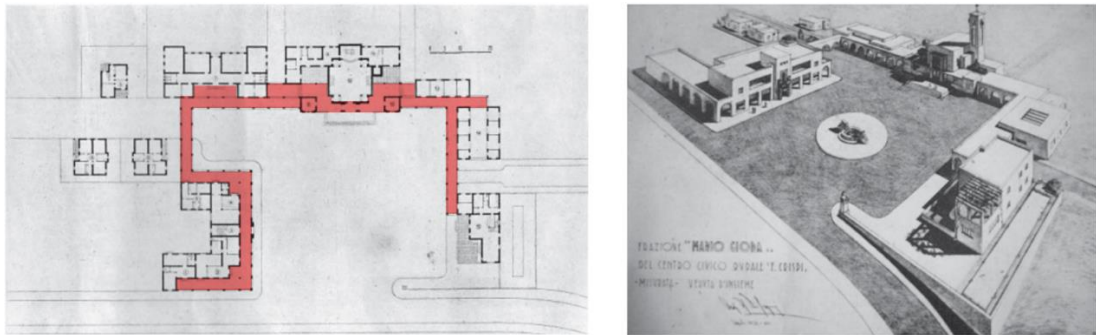
Figure 3.9: Plan and perspective of the Gioda (Kririmea) Borghi. The buildings all face the center of the inner square. (Adapted by author, 2021. From Capresi 2009)

3.3.1.3 The Access Road

Considering that the main road connection to centers was very important in the layout of the rural centers. Therefore, numerous centers were located along the coastal route, or penetrated by the main road; these Borghis served as the sole mode of travel and communication in Libya's coastal region. In an environment that had just recently been adapted for settlement, it was an opportunity to connect the highways, establishing the required conditions for developing the region's first urban centers (Ghirardo, 1989).
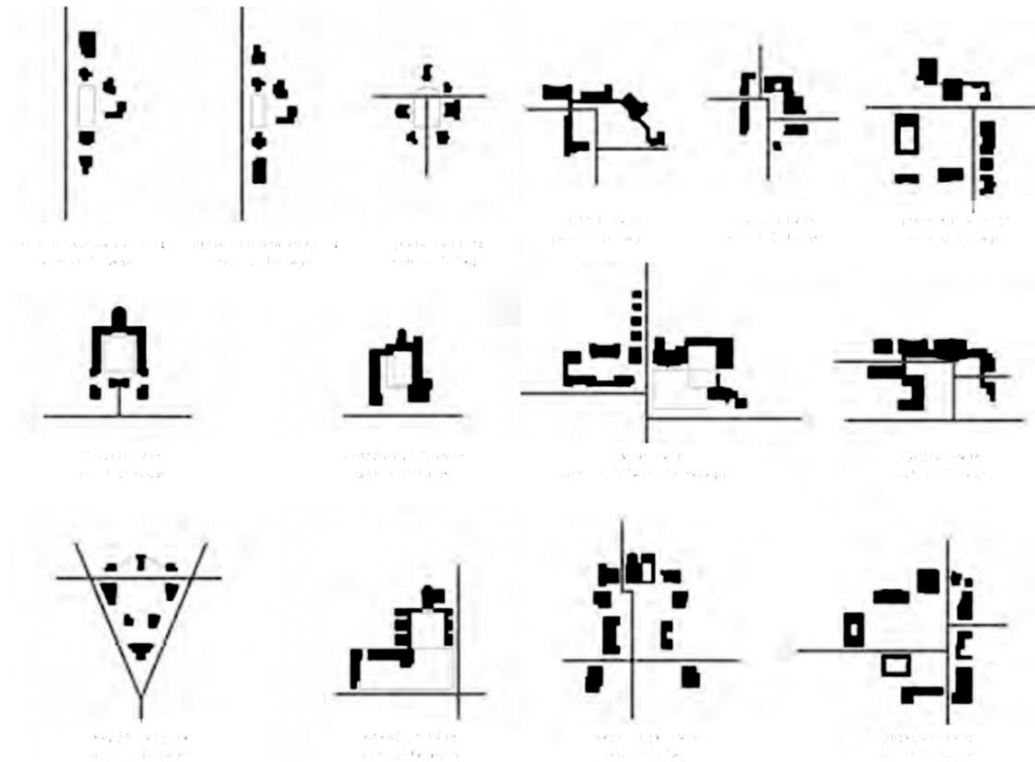
Figure 3.10: Borghis Planning in relation to access road schemes (Stigliano, 2009).

The composition's connection with the land was a central theme. The road axes entering the village from the flat Libyan countryside would intersect with the church, splitting a symmetrical arrangement in half, or they could be divided in a V shape, giving the plan a triangular form. Occasionally, it transitioned from a central plan with node characteristics to a longitudinal plan with the territorial axis perpendicular to the town. A procedure that enabled future development by addition to take on a more serial nature. (Stigliano, 2009)
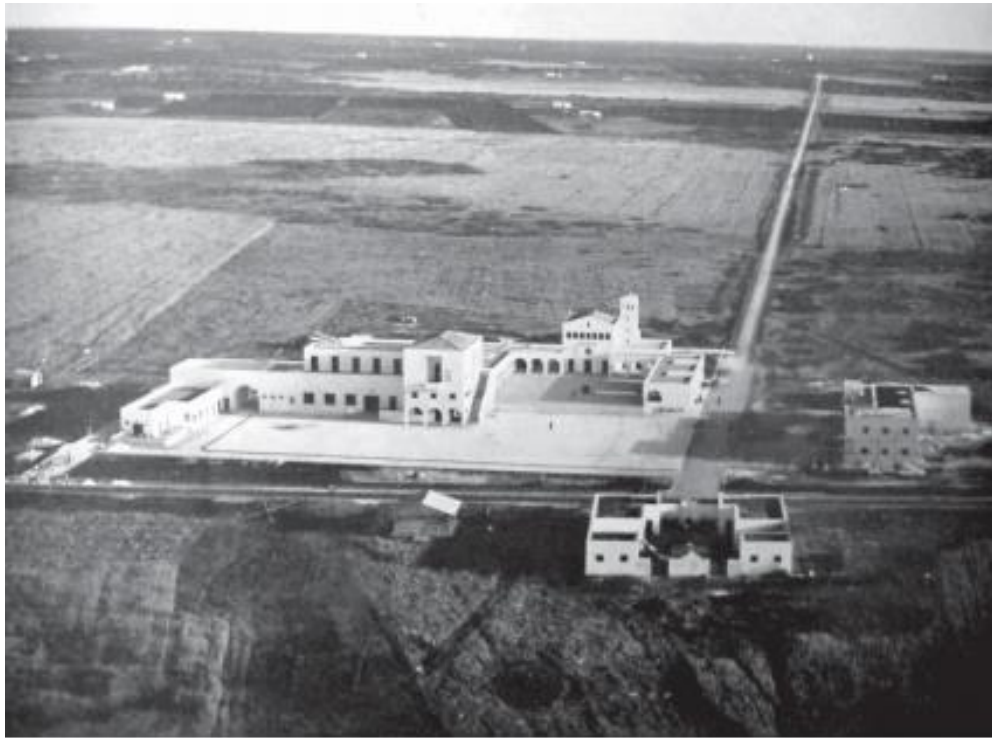
Figure 3.11: Oberdan (Batta) Rural center, Farzoga (URL 20)

3.3.1.4 Morphology of the Land

A further criteria must be addressed in the town planning study of the centers, in which was a crucial component of the design, is the relationship that is seen between designs and the land's morphology. Al-Gebal, with its mountainous terraces and rugged regions, was integrated into the design phase as a core feature (Capresi, 2009). Certain centers in Cyrenaica and others in Tripolitania's owe their architecture to the effort to engage with the morphology of the surrounding territories. This resulted in a greater degree of articulation of the levels inside the centers, which were often used to establish hierarchies between spaces or houses. (Stigliano, 2009)

3.3.1.5 Churches

The church and the offices of the Fascist Party were the two primary functions that intersected collided in the main square, interns of both scale and importance in the hierarchy of the town plan. These structures served as the focal point of the cores. Also

often, the temple Church or chapel, depending on the size and the population of the center was located in the middle of one side of the square's perimeter, on an alignment of the town plan, and directly accessible from the access lane. The steps and distinction in height from other structures highlighted its significance. (Mangione, 2003) The church and the bell tower overlooked the main square, since it had an important role in the composition, acting as pole of the main axis of the organism (Stigliano, 2009).
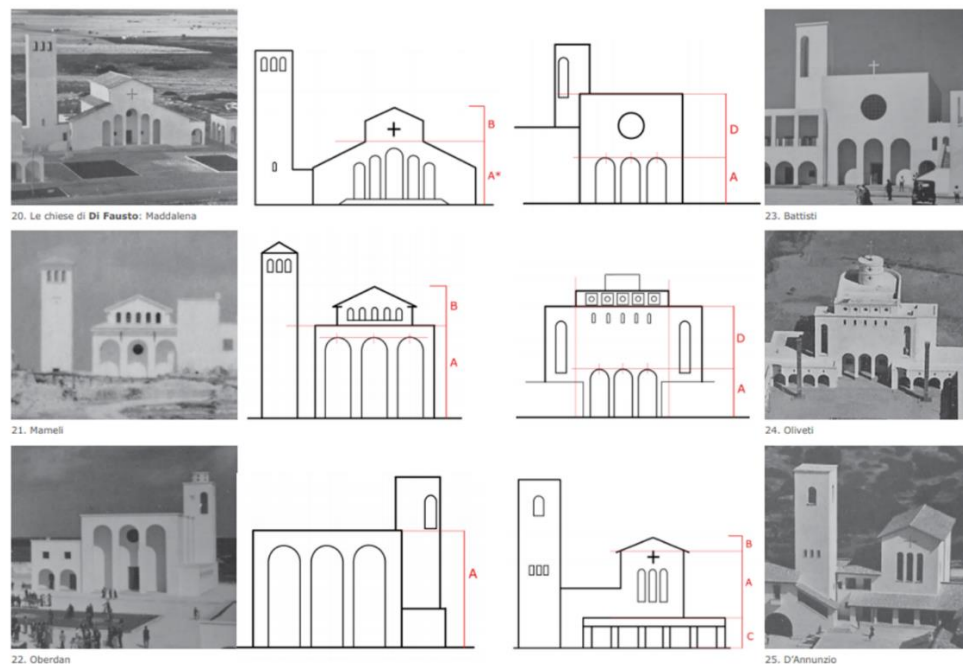
Figure 3.12: Schematic Diagrams of churches in rural centers, (Capresi, 2009)

3.3.1.6 Fascist Headquarter and Town Halls

Despite this prevailing theme, the only instantly identifiable structures are the political and religious powers' headquarters, owing to their strategic locations. Additionally, they may be characterized by their unique vertical characteristics or the distinctive arrangement of the forms that distinctly differentiated the Fascist Party headquarters, town hall, and church (Mangione, 2003).
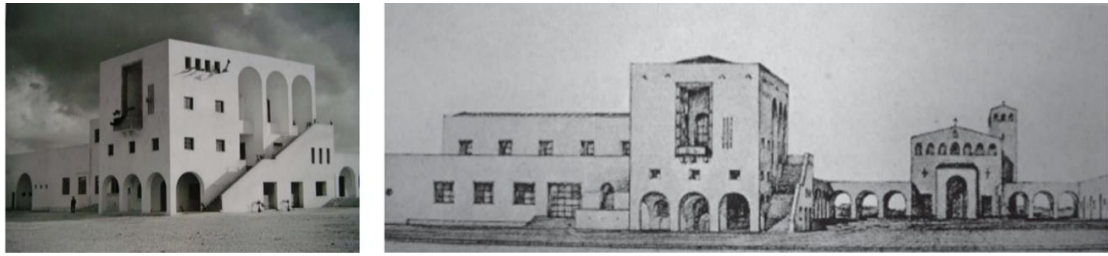
Figure 3.13: Fascist headquarter in Al-Farzoga Borghi, Pellegrini 1930s. (URL 21)

3.3.1.7 Borghis for Libyans

After emptying the concentration camps and release of all Libyans, in the late 1930s Italian government carried out plans to create settlements for native Libyans, at the same time maintaining the strategic and fertile plateaus of Al Jabaal Akhtar to Italians. Thus, new centers for Libyan native population were built to make a certain level of autonomy. Centers were deliberately designed to have control, since the regime desired to keep these immigrants away from favorable areas. Each center was equipped with a mosque, a school, a small coffeehouse, director`s office, a store, and a few households (Mangione, 2003).
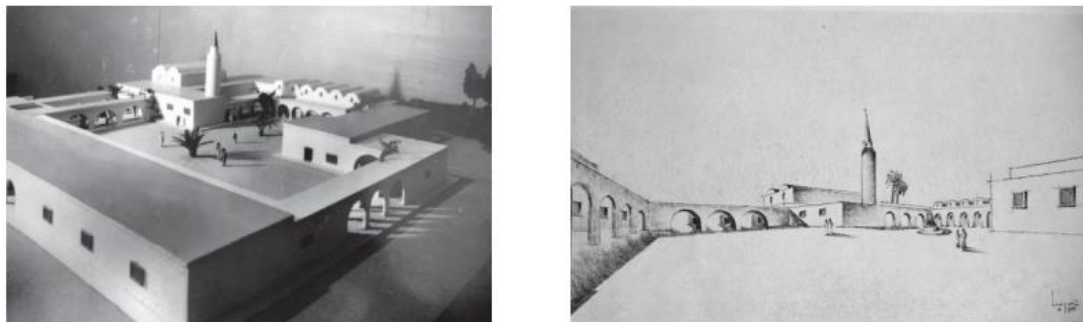
Figure 3.14: Borghi for Libyans, Pellegrini 1930s (Capresi, 2009)

In comparison to Italian civic centers and native civic centers, architectural simplification may be better to compare with better understanding of horizontal and vertical separation Italian architects integrated in their designs regardless of how small. Italian civic centers had several levels of different heights, reflecting the municipal or

authority presence, while the centers for Libyans were more horizontal with a slightly different elevation that is subordinating by an imposing minaret. (Ongaro, 1939)

Figure 3.15: Borghi for Libyans (Capresi, and Pallini, 2020)

3.3.2 Houses in Rural Areas

The second part of the rural areas architecture are the new settlers housing, later on added with the local farmer houses. Those houses were designed and built in the most convenient manner. Houses differed in appearance from a pure box exteriors to those embellished with quirky harmonies, few of them resembles vernacular types, because they were built by native population, or because indigenous color appealed to Italians architects, or perhaps both (Ghirardo, 1989).

Italian builders used a method that they called it Tunisian roofing method where dried algae are laid on top of wooden flat roof[8]. Most intriguing, has been that architect and engineer Enrico Bartolozzi[9] still referred Italian rural building "*that are commonly seen in rural buildings*" as the Arab "Funduq" style. He was not identifying houses with decorative similarities to the Arab background. But describing single story white houses with one or two plain arches and a façades he describes to as "*borrowed from the Arab form in its basic elements.*" (Figure 3. 14) (Bartolozzi, 1939) However, architect that were designing the peasants houses in rural centers were not concerned that much of theory and rhetoric explanations of design. Rather, they focused more on practical manners such as simplicity, materials, and cost in addition to both physical and moral hygiene. Moreover, the new rural houses were designed based on gender separation of the family members, the parents, the sons and daughters. Some dwelling hosted more than one married couple. Appearance wise, architects created a range of uniform, to some extent repetitive, undecorated house styles that is similar to both Italian and Libyan vernacular architecture Figure 3.14 (Bartolozzi, 1934).

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[8] as discussed in chapter one this method was widely used in costal courtyard houses in Libya

[9] An Italian architect and engineer, expert in engineering issues relating to Libyan settlements.
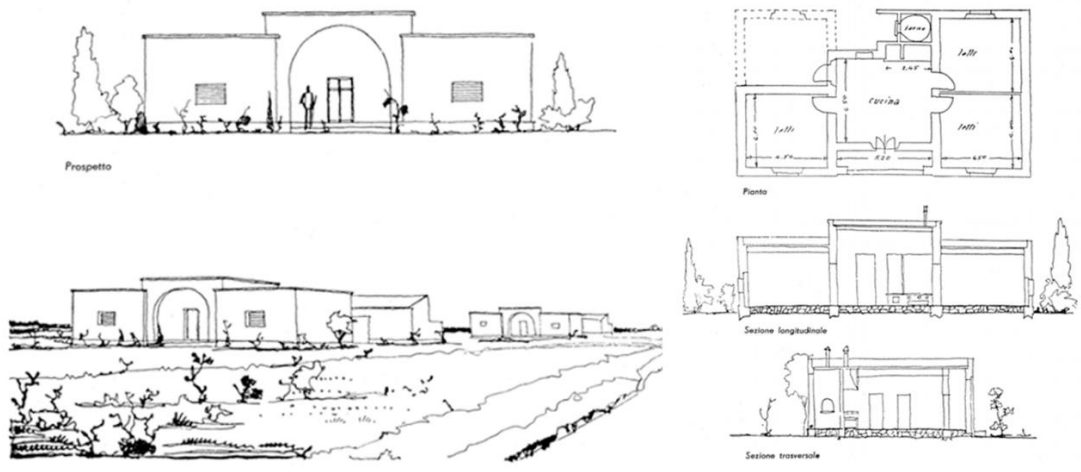
Figure 3.16: Italian Settlers Houses in rural centers (Adapted by author, 2021. From Fuller, 2007).
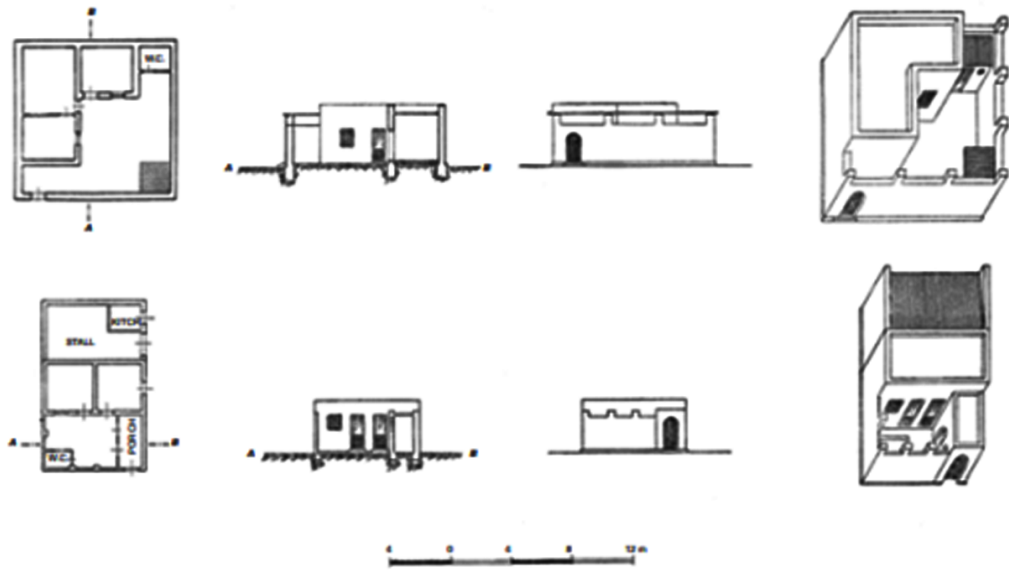
Figure 3.17: Houses for Libyans in rural centers (Adapted by author, 2021. From Fuller, 2007).

Houses for Libyans, were designed in a modern sense, here a great ambiguity presents itself, Italian and Libyans constructions were distinct, but had built-in common influences. Italian-designed houses for Libyans took inspiration from Italian interpretations of modernity, while Italian built houses took inspiration from preliminary North African vernacular architecture (Fuller, 2007). Dwellings constructed for Italian settlers had an explicit yet non-local links to Italian

vernacular; this, somehow was another distinguishing characteristic of the many significant variations between Italy's and Libya's general architecture trends. In particular, Italian homes had two stories, for people to reside above and animal live below. Houses constructed in Libya were mostly single-story; frequently included a covered space on the ground level, perhaps a narrow porch; windows were few and tiny with an enclosed courtyard; and both of these characteristics reflected the regional vernacular instead of the purely Italian (Ortensi, 1941).

Local features were integrated into the Italian settlers houses; architects' justifications for their projects often symbolized by the use of "Roman arch". Local features were introduced, especially those that offered additional control over the heat and sun. The houses were white, with thick walls but very few and tiny) windows. "*In other terms, they embodied the characteristics defined by Italian colonial architecture as the "essence" of Arab-Libyan architecture"* (Bartolozzi, 1934). Native's homes mirrored those of Italian settlers, yet smaller with no exterior windows, they made a strong reference to traditional North African houses with a blinded exterior as well as an enclosed courtyard; Simultaneously, they implemented non-Libyan characteristics, such as cattle sheds as well as other sanitation steps. The North African influences on houses built for Italians may potentially be viewed as a manifestation of architects' ideological exploitation of the indigenous vernacular. As Fuller best describes it as "*Houses for Italians represented the appropriation of Libyan soil and Libyan architecture*". (Fuller, 2007)

3.4 Development of Italian Colonial Architecture

In comparison to other Italian colonies, their approaches to Architecture in Libya were on micro level, and highly relied on symbolic, emotional, and uncertain imperial motifs. Italian architects had a clear goal, both to distinguish Libya from Italy, at the same time to find some common historical features in between them (Fuller, 1988). Therefore, a deeper research of colonial architecture motifs, influence, inspirations, debates and theories of will be discussed in this section.

3.4.1 The Notion of Colonial Architecture

Most Italian architects argued that the entitlement of Italians to colonize Libya came from its Roman identity and the ownership of it. However, for those architects in Libya, modern building structures trend appeared, with a goal to look modern in the eyes of Europe (Fuller, 1988).

For a significant period of time Italian architects practiced some sort of architectural syncretism until the issues of using local vernacular elements was finally discussed. Eventually, theories of Italian colonial architecture could never avoid the matter of incorporation local vernacular architectural elements into colonial architecture. Further, several architects saw artistic value in association with indigenous ornamental components. Many of them desired to replicate indigenous functional and structural solutions responsive to local environmental conditions (Fuller, 2007). The term colonial architecture pointed out appearance of individual buildings, especially the effect of European countries of both the old and the new style, or as it's pronounced "Romanita" "Modernita"; hence Local elements were an inspiring sources and also as comparative measures. Therefore a distinction between Mediterranean and Classical,

Roman and African was a key point in order to write and implement "Colonial architecture" (Fuller, 1988).

In defining the new architectural style in the colony, Modernita[10] was the goal. Buildings could be a combination of local (primitive) and Italian classical. Two Rationalists point of views emerged, the first that called for a uniformed Italian style, a modern style "Modernita". The second, tends to the imply history, arguing that Libyan architecture is Roman therefore, Italian. According to this analogy, Libyan architecture only excited to preserve Modern Italian heritage, which in return be the starting point for Italian architecture onto the future (Fuller, 1988).

Generally, there is a lack of awareness of the architectural issue in Italian colonies, their historical patterns and current characteristics. Here, few practical issues were at stake, in both construction and design, that's why local architecture solutions are of interest. Additionally, the admiration of local Libyan forms by some Italian architects resulted in the study and adaptation of their best qualities in their own designs, like, the geometrical simplicity of these Local forms are in harmony of contemporary modern architecture. Nevertheless, the interest in Libyan local architecture had to be justified to a certain extent. (Fuller, 2007)

This justification involves the assertion that Libyan buildings are colonial, since Ottomans colonized Libya. In return all colonial architecture are rational, without reservation suitable in their context (Fuller, 2007). In addition to the argument about local architecture plays an essential role in the creation of colonial architecture. As

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[10] Modernita translates to modernity in Italian.

Rava (1931) mentioned "*The original Libyan architecture provides us with all the desirable elements to create our own colonial architecture of today*". These components are rational (in reference to modern Rationalism), in particular the simplicity of forms, acclimation to the African climate, and ultimate balance in Libyan environment. (McLaren, 2008)

Rava identifies the value of Roman architecture in the Italian colony into two parts; the first, the formerly dead part, here he means the classical monumental ruins of sites like Leptus magna and Sabratha; since their value is only archeological and touristic. Second, referring to the argument, that the Arab house is purely Roman in its origin, this assumption connects Italian past to its future (McLaren, 2002). Furthermore, Rava emphasizes an important point, by identifying the Arab house as a roman house will allow Italian architects to recreate the indigenous architecture without copying from the "Colonized". In this case Libya is removed from its history, culture and most important its own identity (McLaren, 2008).

3.4.2 Theoretical Debate on the Colony Style 1911-1940

The theoretical debate on the colonial Italian style was interrupted by many architects and scholars, since the debate was constant in change, and was influenced by many international and local factors. However, both the theoretical and practical debate on colonial architecture can be classified in a chronological order. Fuller (1988) managed to tackle the Italian Colonial architectural discussion in her architectural publications in three phases:

(1) 1923-1928 As archeology, geography & architectural history were the main subjects.

(2) 1929-1936, when the topic colonial architecture arose as an overarching concern, to when the discussion on urban planning started in the early 1936s.

(3) 1937-1940 Once colonial urbanism's question were entirely acknowledged. This approach was done mostly in rural Borghis, and colonies in eastern Africa.

In the years between 1920s and 1930s Italian architects found an opportunity to conduct large scale experiments on colonial architecture and urban planning in Libya. While occupied with establishing these colonial labs, they stumbled with few topics concerning colonial ideology and identity in approbation to both Europe and their local community. Italian architects encountered several issues ranging from the differences among both "Italian" and "primitive" architecture, especially in a formal manner (Fuller, 1988).

3.4.3 Early Italian Architecture in Libya 1911-1920s

By the 1910s, as Italian capitalists and the stakeholders increased their financial interests in the colonies, many architectural style appeared in Libyan cities. European architectural styles like, Art Nouveau, Art Deco start to appear, following the colonial approach on neighboring French and British colonies. However in Libyan context "Neo-Moorish" style became visible in many buildings such as parliament building in Benghazi (Figure 3.18) and "Neo-Arab" such as Hotel Roma in Benghazi (Barillari, 1999). Further, Rava and many other architects criticized the overuse the Neo-Moorish style, claiming that it was unjustifiable to use such style since it was created by Europeans, with no origins in Libya, which had not been under Moorish rule (Fuller, 2007; Rava, 1931).

Figure 3.18: Cyrenaica parliament building, by Carlo Rossini-1923, Benghazi (URL 22)

Other examples of this style is Architect Brasini, who's called upon by the governor of Tripoli at the time. Brasini with a background and professional career of decoration, transformed Tripoli's into a historicist's style painting, taking inspiration from Baroque, Neoclassical, and numerous regional Italian types (Barillari, 1999). Many other architects were also involved, such as the Milanese architect *Saulle Meraviglia-Mantegazza*, who modeled the new Governor's residences (Figure 3. 19) (Now central bank of Libya) in a Sicilian-Moorish blended style. In addition to architect Lungomare who designed the bank of Italy 1921-1928, Figure 3.18 (Fuller, 2007).

Figure 3.19: Governor Palace, (URL 23)

Figure 3.20: Bank of Italia, By Architect Biagio Accolti Gil 1928. (Fuller, 2007).

Giuseppe Volpi, who was assigned as the governor of Tripolitania by the Italian authorities In the 1921, adopted several indigenous policies in order to modernize the

colony`s infrastructure and boost its economy. This included the efforts to make viable networks of roads, and public facilities, to serve both the public and the military. Beyond, he proposed the protection of Tripolitania's Roman and Islamic historic heritage, in order to please the local community. The policies included the restoration and preservation of many Roman and Islamic historical sites, in addition to the restoration of Tripoli's old city wall that ended by 1923, under the oversight of the archeologist *Pietro Romanelli,* where he kept searching for the Roman roots, and origins of the buildings in the program. To support his argument that the origin of the city is Roman, therefore Italian. (McLaren, 2002)

Under Volpi administration, many developments accrued not only in preserving the local architecture of the Tripoli, but also to its arts and crafts and artistic traditions as well. The administration brought many craftsmen from the adjacent French colonies, like morocco and Algeria, to enhance and develop those native crafts traditions in Tripolitania. The outcome was a scholarly debate on this colony's authentic architecture and history. This was a discussion which was particularly important to architects such as Rava who've been concerned in the "modernity" of local traditional buildings (McLaren, 2002).

From its beginnings, the debate of Italy`s colonial architecture in Libya is focused on recognizing Italy's historical marks on the Libyan buildings and structures. In 1923, a study by Romanelli's, portrayed buildings and design patterns in Libya as Roman as possible, and these constant reinterpretation of archeological materials to establish that the architectural and cultural influence of Tripoli has always been by Romans. He claims, that since the marks of that influences are still visible, this means that Libya`s only culture had always been Roman, and therefore Italian (Romanelli, 1923). The

following year studies of the same nature were published by scholar Salvatore Auriemma; where he used an analysis of Tripoli's artistic practices in the history and research to link the profundity of its Roman heritage and the potential of its colonial present (McLaren, 2008).

Later on, under Volpi administration, the architectural discourse, in 1920s, has showed no interest in indigenous architecture. Throughout this phase, the modern Tripolitania architecture is characterized by a varying alternatives among Classical and Islamic characters. In addition, in 1929 the situation changed substantially with the introduction of new figures such as, Alessandro Limongelli as an art consultant to the city of Tripoli one year prior. Although Limongelli`s background was strictly Classical, he introduced the term "Romanita" in the context of Tripoli. In his proposal for the competition "Piazza de Italia in Tripoli, 1931" Synthetic features to incorporate classical/modern urban image with the existing landscape of North Africa are apparent (Figure 3. 21) (Fuller, 1982).
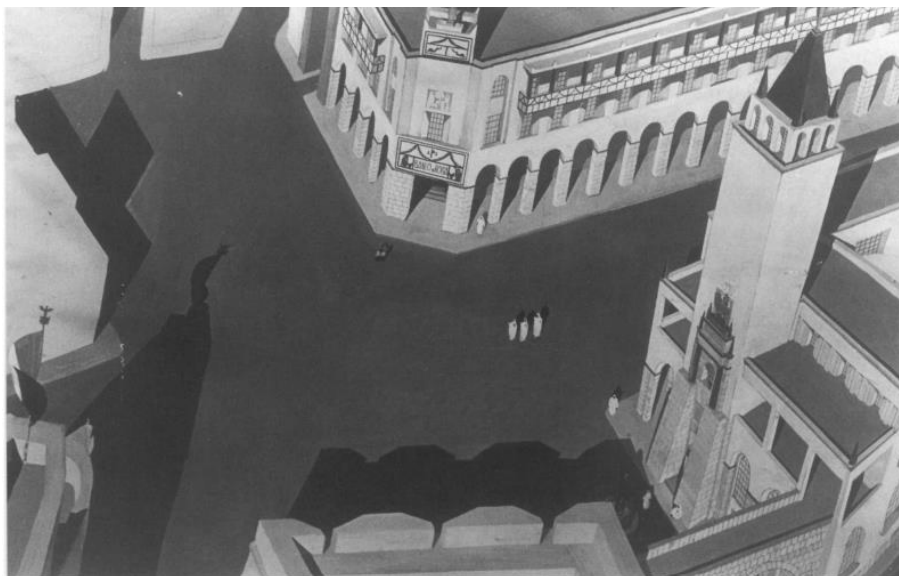
Figure 3.21: Limongelli proposal for piazza Italia 1931 (McLaren, 2002)

In the quest for classical and Mediterranean architecture, Limongelli developed his Vocabulary. Common features are visible in most of his mature works, such as horizontal lines, simple and plain volume, exclusion of decoration, and clearness of lines and whiteness of the surfaces (Fuller, 1988). Rava`s triumphal arch in Tripoli was described in balance amongst Romanity, Adaptation and Modernity yet was influenced by local architecture in terms of its primitive and unrefined Forms. At the same time Pavilion of the Governatorato di Roma at the Fiera di Tripoli is projected as Roman and Monumental (Perna, 2007).

Figure 3.22: Pavilion of the Governatorato di Roma at the Fiera di Tripoli 1928-1929
(URL 24)

Figure 3.23: Triumphal arch in Tripoli by Carlo Enrico Rava (Fuller, 1988)

3.4.4 Modernity and Rationalism 1920-1936

At the peak of Italy's colonization throughout the 1920s and 1930s, officials of the country's official fascist architectural syndicate urged members of the field to take a unified, systematic approach to the Italian empire architecture style. They argued that previous liberal governments fostered rushed, uncontrolled building in Italy's foreign territories. Engineers conspired with investors and officials to push a range of styles, including neo-classicism to scenic interpretations of indigenous themes. Nonetheless, during a period of fascist growth, such variety was widely seen as a sign of indecisiveness and weakness. Consequently, Architects and bureaucrats contended that the fascist party required a unique, clear and unambiguous aesthetic. However, this unified style and aesthetic was never achieved (Henneberg, 1996 p: 373) this resulted in the birth of Rationalism movement, which was and extension of the

architectural modernism, that launched a machine based aesthetics that favored functionality of decoration (Doordan, 1988).

As the architectural practice in Libya was gradually running parallel to contemporary architecture movement in Italy; the most important of this movement was Grupo Sette, 1926. The Movement was established by a number of young Milanese architects, the group published a series of publications; Grouppo Sette (Group 7) is generally regarded by scholars as a pioneer of modernism in Italy. Consequently, Limongelli's organization brought this trend in the colonial context through a sequence of design competitions for public buildings, such as Piazza del Italia 1931 (McLaren, 2002).

Two architectural competitions were held to design the same project *Piazza della Cattedrale* (Cathedral`s Square) in Tripoli both in 1929 and 1930 (Architettura ed Arti Decorative 1930) reported the four awarded projects. The theme proposal for the plaza design was to make an appearance that fits for a look appropriate for a big "modern city". Two faults had been detected in all entries; one is being excessive in its obedience to the Mediterranean modern housing styles, for instance project by Libera (Figure 3.24).
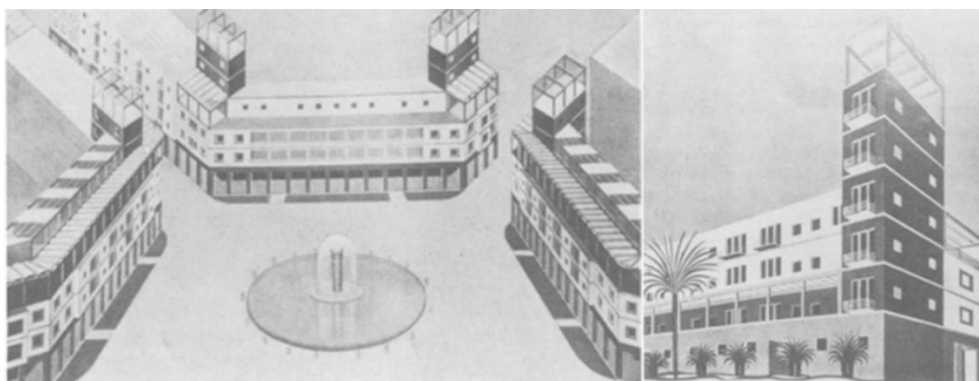
Figure 3.24: project by Libera, Tripoli, 1930. (Fuller, 1988)

And the second is being of too much focus on monumental classic styles where participants expressed a collective desire to create Roman tradition monumentality with shapes that are in harmony with local tones. Other entry's fell under the category too classical as in (Figure 3.25). The wining proposal (Figure, 3.26) however, was Selected because it was pure in its italian origin and modernity. (Fuller, 1988)
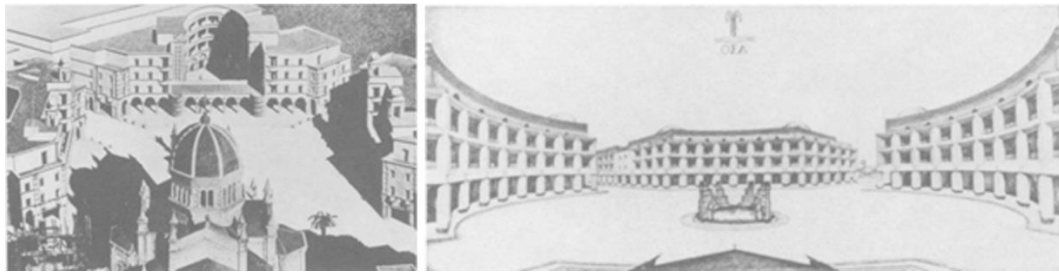
Figure 3.25: Tripoli, 1930. (Architettura ed Arti Decorative, 1930; Fuller, 1988)
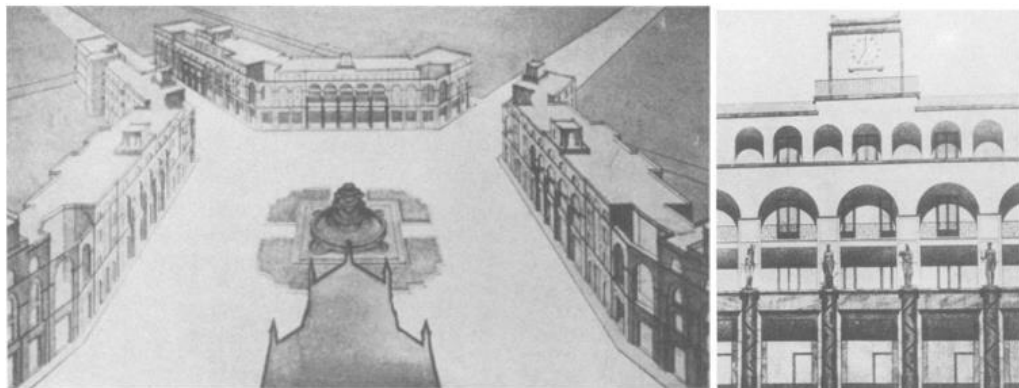
Figure 3.26: Winning project by Morandi et al., Tripoli, 1930. (Architettura ed Arti Decorative 1931; Fuller, 1988)

In 1929, One of the most influential reports of the theoretical discourse of colonial architecture was submitted to the mayor of Tripoli, even published in many Italian journals; By Maurizio Rava, a political figure, and the father of Architect Carlo Enrico Rava; this report discusses the development of Tripoli`s present and future, and it's an important reference in the creation of modern architecture in the Libyan colonies. (Fuller, 1988 and 2007) (McLaren, 2002 and 2008).

In 1929, a more comprehensive collection of viewpoints emerged, when Carlo Enrico Rava wrote his first essay on colonial architecture concerning restoration and preservation of Tripoli`s city, which had been occupied by Italy since 1911. In the essay he praised local vernacular architecture and preferred it over the Italians' injected European styles. Rava called for an Italian architectural sensibility that was modernist in nature, with forms that were suited to the local environment and topography. Thus, he put himself against two major types of master builders in Tripoli; the first group was imitating British and French colonial style, and also their invented Neo-Moorish style, in addition to randomly borrowing modern buildings from Italy. The second group, was the most conservative, though clearly imperialist manner, the builders who focused their works on faithful reproductions of classical Roman Empire styles (Perna, 2007).

The mentioned article underlines the conservation and enhancement of Tripoli's local character, by arguing that it could be a touristic attraction, since it combines features of Africa and the east. In addition, Rava argues the need to create modern colonial architecture; his argument is that the architecture of local house gives a clue on how to build in the colony. Further, he adds that the qualities of this architecture are apparent in its volumes, and the clear smoothness of its walls. The argument extends to the typology of the Libyan house, claiming that the courtyard is the most logical and ideal solution to environmental and climatic issues. In conclusion he mention that the simplicity and cubic volumes of local architecture combined with advance construction and comfort methods of Europe creates the ideal colonial house (Rava, 1929). Although being ambitious, Rava was not the most profound thinker of his colleagues. His several texts might have spread common sophisticated words, but it is

impossible to align all of their differences. He had many new ideas but didn't implement them in the field. (Fuller, 2007)

Later on, in 1931, Rava also published a two pieces article, out of a total of eight parts articles introducing a new concept "La Mediterraneita". His argument that the issues concerning the modern colonial architecture is connected to a broader questions of architectural modernity. Rava indicates that Italian architect's active in the Libyan colony to stay away from *direct* imitation of Roman models; where he direct his concerns to the Italian pavilion at the international colonial exhibition in Paris, for mimicking Roman basilica in Leptis Magna. Further, he criticized the use of Neo-Moorish style, stating that those motifs exist only in buildings built after the Italian conquest in 1911. In addition, he assures that Italian architects must accommodate elements of local architecture, those elements have all the qualities for making a desirable modern colonial architecture. Rava find those desirable qualities of local architecture such as forms and materials modern; this modernity is also found in their sustainability to the environment, and the absence of unnecessary elements, akin, they will fit naturally in the colonial context. (McLaren, 2008)

Rava`s second article was theoretically in line with his previously published article, in 1929 and its claim that vernacular Arab house is the best inspiration for colonial architecture in Libya; However, he reconstructed his argument in to match the *Mediterraneita* point of view, and that the local Arab architecture have always been Roman. He explained his use of genuine Libyan architecture by declaring that, due to Roman impact, local architecture`s intense primitivism instinct is completely in sync with Italian contemporary urban preferences, in addition that its overall of a Mediterranean character (Rava, 1931).

In addition to the mention points, came the argument that the Arab-Ottoman house is Roman in its core. "The Arab house … is nothing but an ancient Roman house" consequently to mimicking Libyan Local forms, in no ways means copying Libyan local forms, but tracing "The true Roman tradition" (Rava, 1931). To him, the Arab house was an approximation of Roman Domus, according to his point the Arab house borrowed the Roman central courtyard and classical plan (Perna, 2007).
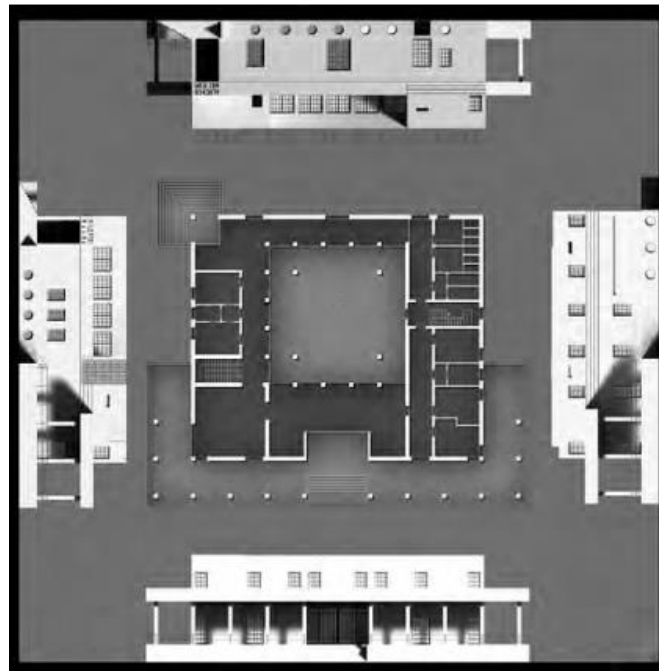
Figure 3.27: Hotel Khums by Rava, shows borrowed element from the Arab house in built in a modern way. (Stigliano, 2009).

In the 1929-1936, journals took as a collection the most remarkable characteristic of short reports. They were mostly reporting public buildings and monuments. Housing for instance, appeared only in 1933-1935 journals, not because housing was not of great importance but as an evidence to the Italian and Europeans to observe the ongoing aspect of monumental facts, to declare the new position of Italy as a powerful colonial power and "civilization" (Fuller, 1988).

In the 1936 also, the ministry founded the central council of architecture and town planning. A committee established primarily to approve proposals for the new fascist cities in east Africa; at the time the emphasis of the Italian architects and engineers was on colonial urban and city planning (McLaren, 2006). From outside the media spotlight, Italian architects proceeded to accept private commissions, as they built in a range of styles. However, architecture after 1936 became somehow gradually, governmental, political and rhetoric (Fuller, 2007).

In the same year, the *Rassegna di Architettura* published few of Geovanni Pellegini's projects alongside his manifesto of colonial architecture. In his manifesto, included brief statements, which were supported by several detailed images, accompanied by many pages of extensive remarks. Further, as it turns out, Pellegini's "manifesto of colonial architecture" is really a compilation of recommendations and prescriptions for a variety of concrete issues. He organized his reflections into several points, in addition to an appendix on the strategy for the new cityscape. Pellegrini was able to keep thematic issues to a minimum, as seen by the photos of diverse subjects trying to prevent cultural imbalance between the colonizers and the colonized (Pallini & Capresi, 2020).

After his graduation in Italy, Pellegrini moved to the colony; consequently, his career began as a consultant on the Benghazi Cathedral project along with other houses from the private sector. His appearance became more relevant in the thirties linked to the discourse of increased emphasis on colonial architecture, the importance of which appeared evident mostly with competition for the *Cathedral Square in Tripoli*, which challenged participants to combine Italian values with a "sense of modernity" in their proposals. (Fuller, 1988)

Pellegrini's work is not considered a programmatic manifesto. It's more of guidelines which provides detailed recommendations to help build in the colony, those suggestions were extracted from the observation of Libyan vernacular architecture. Similar to Rava, Pellegrini provided specific method to observe local architecture, especially for its successful responses to environmental and climatic conditions. Moreover, each approach presented by the use of traditional building methods has proven to be successful and can be combined with modern European technology to generate the modern house in the colony (Pallini & Capresi, 2020).

Figure 3.28: Villa in Tripoli by Geovanni Pellegrini 1935 (URL 25)

Pellegrini asserted conclusively that, "The Italians can live very comfortably in houses of this kind." Here he`s talking about the Libyan house. The Libyan house with its provided the optimal answer for Tripoli's physical conditions, centralized plan and private patios, therefore houses must adapt to the indigenous style with inner courtyard. Furthermore, his only exception to the notion that European buildings were better to local building only in the technological level. Thus, he proposed resolutely integrating local models with all that new technologies and modern comfort designs

of Europe. In summary, Pellegrini drew his inspiration of the Libyan vernacular houses as, a highly functional elements, for example the usage of inner courtyard; and an artistic inspiration, such as its cubic forms, and smooth surfaces (Pallini & Capresi, 2020).

To convey Pellegrini's principles of colonial architecture, he created a comprehensive photographic scheme, and used the expression "cubism" in several comments. The term "cubism" was used as a stylistic formal theme connected to the external appearances of the buildings. Further, to illustrate the organization of Libyan vernacular architecture Pellegrini divide the term Cubism into:

1. "Elementary cubism", describing Local houses in Tripoli.

2. "Classic Cubism", describing the minaret suggests the shift from a rectangular section to a cylinder.

3. "Intransigent cubism", to describe an almost disordered appearance to Volumes of the old city of Tripoli. (Capresi, 2012).
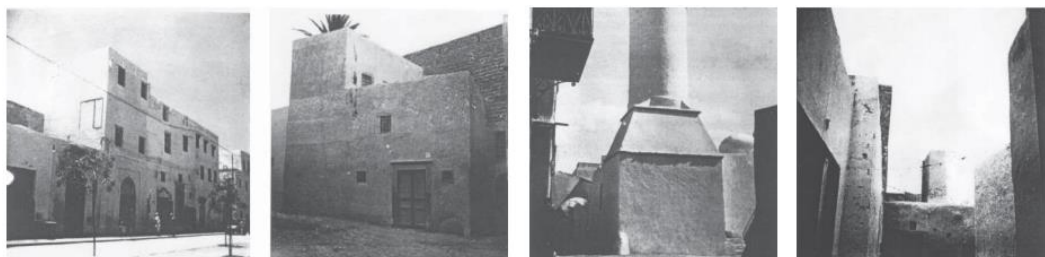
Figure 3.29: photograph collection from Pellegrini's manifesto of Architecture, (Pellegrini, 1936)

Within the same year, Architect Piccinato who's less radical than his peers also, wrote three essays on the colonial house and colonial architecture. Many of his comments referred back to previous debates, including those on "Arab style" (Fuller, 2007). However, those articles were not associated with traditional architecture in general,

but tackled the issue of European colonial houses in northern and eastern Africa. Moreover, rather than justifications for integrating indigenous structures to Italian architecture, these studies focused exclusively on realistic and practical considerations such as, the environment, way of life, and building materials. Piccinato studied the local design in terms of basic elements in order to meet certain functional criteria. Therefore, he argues that the house must be "ordered around" natural conditions; analyzed on the basis of its "efficiency" in matching these variables with accessible materials; and perceived as an "organism" determined by local requirements that varied from those in Italy (Vittorio, 2008).
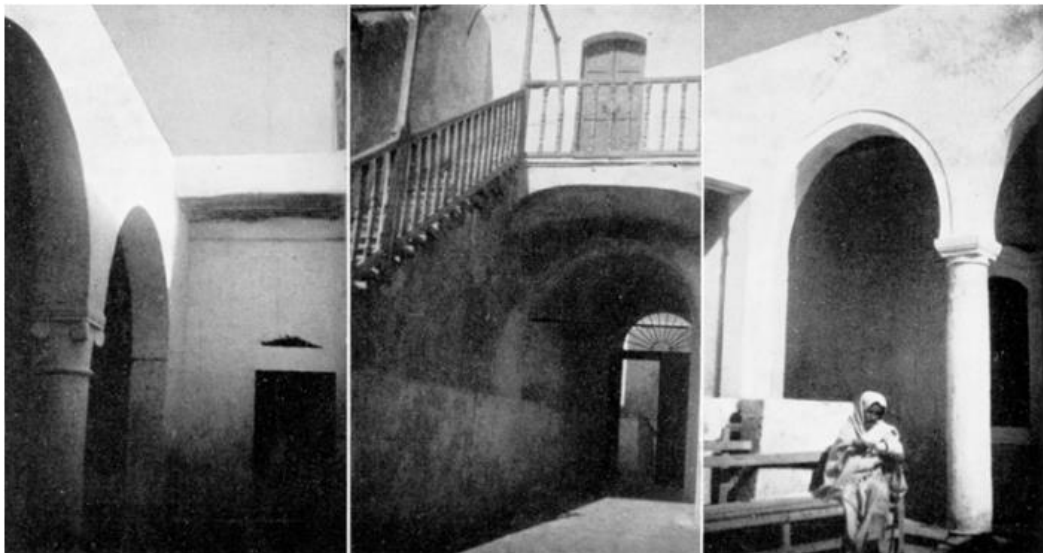
Figure 3.30: Views of an "Arab courtyard" analyzed in search of an appropriate Italian colonial architecture by Luigi Piccinato in 1936 (URL 26)

In his writing, Piccinato identified two usable North African dwelling types: small Arab courtyard house, which he called it "Latin courtyard house" justifying the name as "the purest traditions of the Mediterranean house". And, the multi-story house with external loggias and verandas, which mainly provides protection from the sun and dust, and provides ventilation and safety. He adds, in such environmental settings these two

type of dwellings demonstrates a rational, economically feasible and Mediterranean approach (Piccinato, 1936).

Piccinato then concludes, with an in-depth research of the Libyan house components, arguing for a "structural-technical" perspective. His primary concern was how often Italian architects could depend on indigenous materials rather than incorporating advanced European innovations into colonial architecture. Under economic limitations, he states that, architects to familiarize themselves with indigenous methods and materials and to combine them with European ones, or to embrace them entirely while "*maybe improving"* them (Vittorio, 2008).

Around the year 1937, a more contemporary scientific publications aimed to theoretically understand Libyan architecture existed. These approaches were presented in articles like Fabrizio Apollonj`s "*L`architetettura araba della Libya*". When analyzing Libyan Vernacular architecture, Apollonj notices that the versatility of this indigenous architectural form present an extraordinary benefit, as he describes it: "Specifically arising from the soil and emerging from the people". Furthermore, according to him, it would be irrational to say that only a practical use of local elements will help solve the issue of modern architecture in Libya via a simple and straightforward use of local motifs. In contrast, he identify the local population as a "poverty-stricken" nation living in a still state. And local architecture to "having no artistic taste and following primitive lifestyles." The relation between these viewpoints and the colonial administration at the time highly evident in this example. (Apollonj, 1937)

3.4.5 Mediterranean Vision 1936-WWII

Italians were able to transcend the gap among 'Italian' and 'African' by using the word 'Mediterranean.' From the perspective of colonists, the two terms formed an essential distinction. Moreover, since Italian architects preferred to be "solely" Italian in relation to the local models and forms, it was crucial to establish common ground in colonial architecture. Once again, Libyan architecture can only be seen as Italian, and here it was denied from its own style due to the general "Mediterranean Characters" (Fuller, 1988). Architects like Gustavo Giovannoni, Giovanni Pellegrini, Alessandro Limongelli, Luigi Piccinato, and Carlo Enrico Rava, who worked by under the Ministry of the Colonies (Ministero delle Colonie), argued that Italian colonial architecture grew out of a common concept of "mediterraneità"; all of these articles were published in architectural magazines, much-discussed the most debated topics of "tradition" and "modernity" as a starting point for the manifestation of an Italian identity in the colonies (Anderson, 2010).
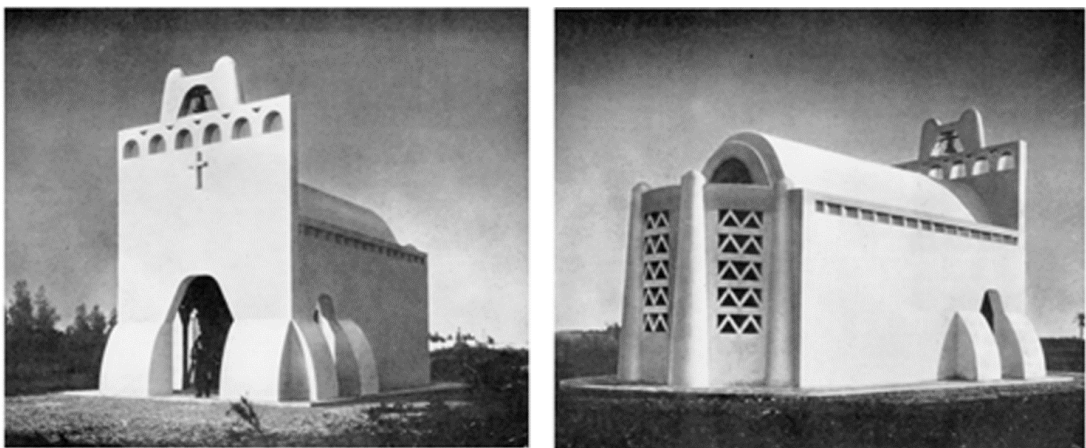
Figure 3.31: Church at Suani, by Rava and Larco -1930, (Fuller, 1988 and 2007)

Church at Suani be Aden designed by Architects Rava and Larco (Figure 3.31), was recognized with blending diverse components using a "Mediterranean African" concept, resulting in "colonial" and "new" outcomes. The convergence of historically

Roman Christian components with Native African elements, influenced by the historical development of Mediterranean Africa, hence the architectural development too, indicates the aspects from which to construct a spiritual and imperial, yet new architecture (Vittorio, 2008 ; Alpago, and Cabiati, 1937). "Vernacular", and "Mediterranean" styles have been defined by Italian architects in terms of their timeless quality. However, instead of admitting that vernacular architecture was inevitably influenced by history, they characterized them as temporal structures that belongs to poorly defined geographic locations. Most importantly as Fuller, proclaim that, by renaming the local vernacular Architecture "Mediterranean" Italian architects can copy the local forms and styles without seeming to be politically subservient. (Fuller, 2007)

In 1937, one of the most important theory approaches of colonial architecture was introduced; vision Mediterranean "Visione Mediterranea" by architect Florestano Di Fausto which was published in Libia Magazine. In the article, Di Fausto argues that North Africa colonies of Italy have always been Mediterranean and Italians should maintain them, thorough careful analysis of the local architecture. However, in contrast to Carlo Enrico Rava, and other Rational architects in Libya before 1936, "Visione Mediterranea" calls for a more direct appropriation of local building forms. Thus, parallel to rationalists, who took influence from the design of the local forms, and suggested an abstract form of assimilation, Di Fausto, argues that implementation of the typological method to the environment created a reasonable answer to the Fascist issue in the colonial style. However, what sets those two visions apart, the change in the modern colonial architecture debate described in the writings of Di Fausto's has been influenced largely by political circumstances. (McLaren, 2006)

Figure 3.32: Residence, embracing the "Roman arches", by Di Fausto 1937. (Fuller, 2007)

Di Fausto's Mediterranean vision was strongly historical, for instance, his article in Libia magazine in 1937, included statements like: "*Architecture was born in the Mediterranean and triumphed in Rome in the eternal monuments created from the genius of our birth: it must, therefore, remain Mediterranean and Italian*" And "*I have not betrayed my land, nor my sky! And my colonial architecture . . . could not betray it as a result*" (Di Fausto, 1937*).* His article firmly established the Mediterranean framework for his whole body of work. However, his Mediterranean was not that of the Rationalists, instead of serving as a decoration of vernacular works from North Africa, it was explicitly European centered as he declares his motifs. Further, Di Fausto explains his designs in terms of their basic shapes, his work was conciliated with lines of Roman triumphal arches. As was customary, the Roman arch symbolized all ancient, strong, and traditionally appropriate. In his words, Di Fausto states: "*The arch cannot be excluded from any architecture; the arch is an element that is entirely our own, It is by the arch that buildings become dimensions of the spirit, more than by their material dimension*". (Di Fausto, 1937)

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Figure 3.33: National Fascist Welfare institute, By Di Fausto, 1938. (McLaren, 2002)

The governorship of Italo Balbo witnessed many political intervention especially in the field of architecture, urban and city planning. This resulted in Libyan architecture being shaped by the governorship ideology. Moreover, it was the birth of a building council, which had the duty of regulating everything about the colony buildings. While the approach preferred by this council supported a contemporary and Fascist aesthetic was combined carefully with Libya`s Mediterranean hence 'Italian context' in which Di Fausto`s vision Mediterranean demanded a shared relationship between his buildings and their sites (context), here his most important manifestation of this modern political ideology is presented (Stigliano, 2009) and (McLaren, 2006).

"Libyan Arab style" was obviously in sync with both the climate and the features of the region. Thus provides many hints into the development of a "colonial yet European architecture" (Rava, 1929). Rava elaborated more on the matter arguing that, there's no need of using arches in the patio`s porticoes or have pointed arched windows just because they were used in an 'local' Arab house; moreover, it's easy to see how such

big, smooth, bare planes of exterior walls are appropriate, given that the building would have few windows due to its orientation toward the sun. Finally, pointless concrete and stucco decorations should be discarded; however, if there's a wish to decorate exterior walls, one should return to painting the broad flat surface only with colors that "*Arab houses master*", and which lend charm and beauty to the indigenous residences underneath the charm of African sunlight   (Henneberg, 1996). In theorization Rationalist approach, Rava evoked 'la mediterraneità' to reconcile the basic classifications of Italian and Libyan "Arab" architecture; "Mediterranean" acted as a unifying factor, infusing vernacular buildings within a certain order. Also, the Mediterranean characteristics of the region, makes Italian local architecture in the Libyan colony coastlines comparable to that of the rest of the Mediterranean (Anderson, 2010).

Figure 3.34: National Fascist Welfare institute, By Di Fausto, 1938. (URL 29, URL 27)

In the national insurance institute building in Tripoli, designed by Di Fausto 1938, the uniformity and repetitive nature of the façade combined with different scales of local architecture archives monumentally; in reference to native North African forms, the central portico was implemented, it also emphasize the monumentality of the building. The building combines both neo-classic urbanism and North African imperialism,

evoking a Mediterranean consistency drawn from regional vernacular architecture (McLaren, 2002).
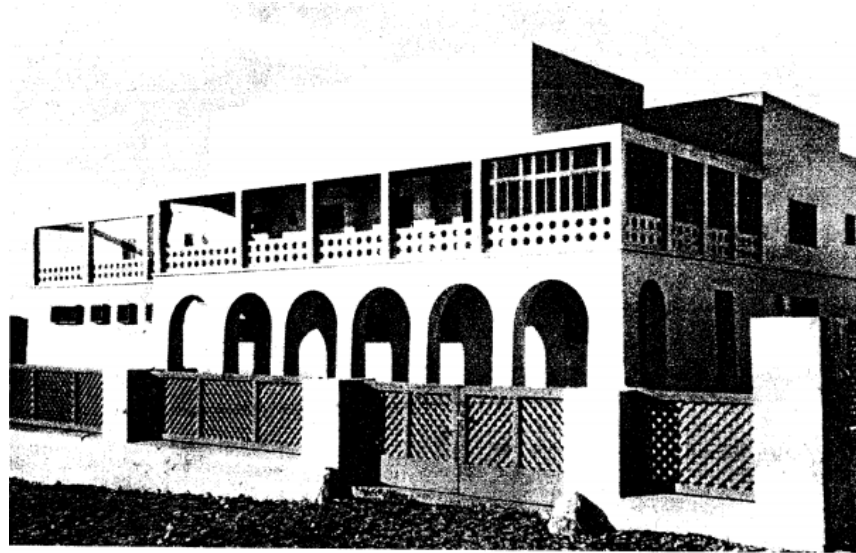
Figure 3.35: Hotel Tobruk, 1937, by Di Fausto (McLaren, 2002)

Many hotels under the ETAL, were constructed that represented both exteriority of Libyan forms and European comfortable interiors. For instance, hotel Tobruk, 1937 shows a much more straightforward reflection of the surrounding context. A quality of local tectonics of the exterior walls are obvious. As well as arches on both the first and second floor that shows a sense of Mediterranean character that is borrowed from local architecture (McLaren, 2006). Uddan hotel designed by Di Fausto might considered to be the best example of his contextual approach exemplified by his Mediterranean vision; a strategy that involves both an in-depth examination of the context as well as a blend of its original characteristics. The forms composition gives a strong reference to the old town of Tripoli, furthermore, the program and functions of the hotel is distributed volumetrically. This approach gave two distinguished characters to the building, first with the unified stucco walls and stones on the façade the building represents a Mediterranean image, the second giving an image of the old town of

Tripoli. The connection seen between method and local architecture is particularly clear when it comes to monumental structures, like mosques or other religious buildings. Further, Uddan seems to be a clear descendant of these Islamic precedents' external profiles, as these are usually a mixture of minarets, domes, and plain cubic volumes (Henneberg, 1996).

Figure 3.36: Hotel Uaddan, By Di Fausto, 1935, (Capresi, 2005)

In contrast to the De Fausto`s Mediterranean approach in Uddan (Figure 3.35), a more faithful representation and exploration of local architecture of Tripoli is made in hotel Mehari, 1935, (Figure 3.36). The building was a synthesis of local examples of traditional minor architecture (McLaren, 2006). Giving the triangular plot of the site, Di Fausto`s designed the building as an L shape two story block vitalized by five courtyard space, an octagonal vertical shape places at the midpoint the horizontal shape, that formed the entrance of the hotel. The building itself is similar to Tripoli's minor courtyard houses, in its mute volume and rooms overlooking the inner courtyard (Stigliano, 2009). However, this hotel was a recreation of the local Funduq, as a

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systematic and considered application of courtyard typology, Mehari was a clear and intentional imitation of the area's local architecture.as the architect reconstructed both the form and the function of the Funduq's courtyard space in a modern way (McLaren, 2006).
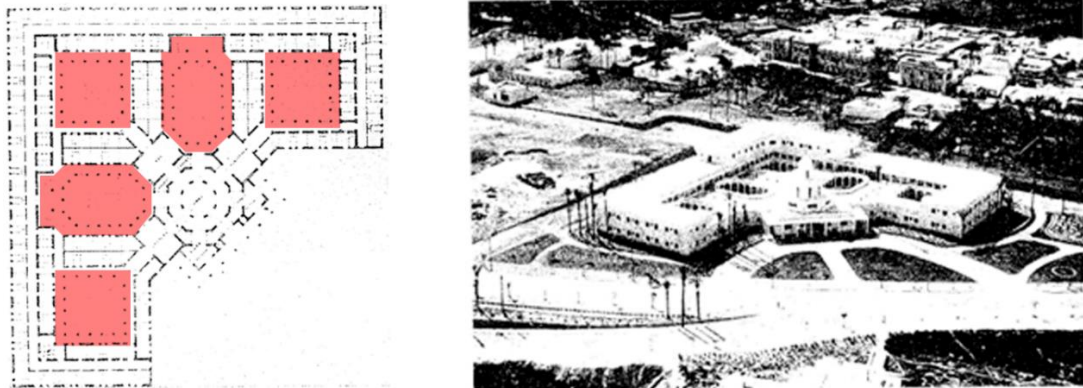
Figure 3.37: Hotel Mehari Plans and aerial view and courtyard plan, (Adapted by author, From McLaren, 2002)

Other project that were designed by di Fausto in a different regions in Libya, namely, the mountain region, and Pre-Sahara regions in Libya. Contrasting with the Mediterranean language explored in the previous building, the upcoming examples responds to the cultural differences. At the same time creates ongoing touristic experience (McLaren, 2006).
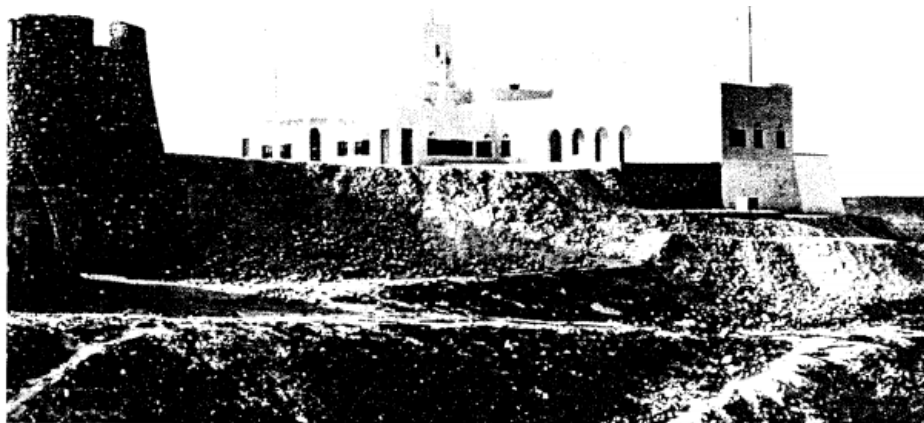
Figure 3.38: Hotel Rumia in yefren 1934 (McLaren, 2002)

Moreover, Pre-Saharan hotels became well-known over their incorporation of local references, in this case the vernacular basis not the monumental ones. Hotel Rumia in Yefren 1934, was placed on the ruins of an old Ottoman fortress, the hotel can be described as a horizontal block in harmony with its context and may be interpreted as a reference to similar characteristics found on the location in the surrounding environment. However, the overall building shares little less with the surrounding buildings, the form, somehow was created the shape was derived from an in-depth examination of the local natural environment. The response to context was evident in the tectonics of it exterior large walls designed to fit the harsh climate of the region. Well regarded in terms of climatic conditions, multiple windows used a mixture of blinds and screening mechanisms designed after those used in indigenous building structures (McLaren, 2006). The other building designed by Di Fausto, is hotel Nalut 1935, since it's a similar site and environment the building is somehow identical to hotel Rumia in Yefren (Figure 3.37), their relation was not only in form wise but in respect to the context; thus, their usage of indigenous types was wide rather than precise. The center tower was inspired by religious architecture found within that area, but still it showed no reference to the area it belongs to (Henneberg, 1996).
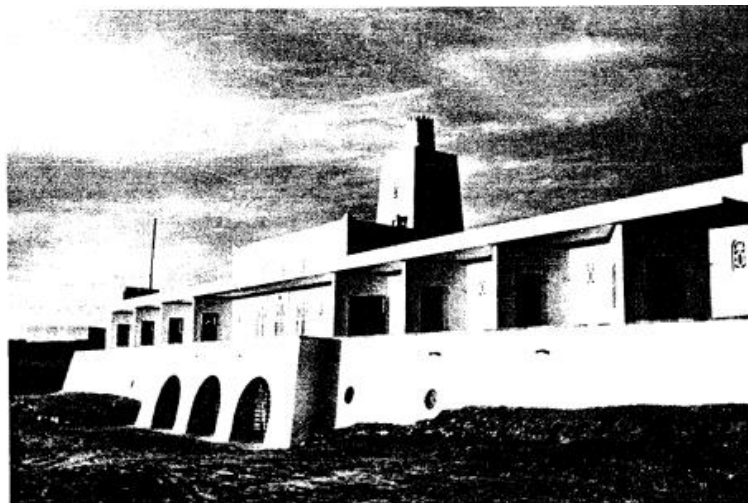
Figure 3.39: Hotel Nalut, Di Fausto, 1935 (McLaren 2002)

Chapter 4

DISCUSSION, RESULTS AND FINDINGS.

4.1 Introduction

This part of the research will contain theoretical contribution, and analysis of previously mentioned data, to establish the link in between vernacular buildings and Italian colonial architecture in Libya. Comparative data of colonial and vernacular will be discussed thoroughly.

Figure 4.1: Volpi Waterfront, Tripoli, 1920s (URL 28)

As discussed earlier in the research, the first decade of architectural colonial period in Libya was full of doubt and uncertainties, the authorities at the time, gave most of the commissions of building the colony to engineers, builders and decorators but not architects; a hybrid orientalist architectural styles appeared in cities like Benghazi and

Tripoli. However, during the same period, early city masterplans of Tripoli were done in 1924; the plans aimed to create a striking first impression of the city, since Europeans will mostly come from the sea. Many metropolitan facilities and buildings were built in Tripoli close to the waterfront; Libyan population however were controlled inside of the ancient city walls, and the new city is located outside of it.

Figure 4.2: The Grand hotel Tripoli early 1930s, (URL 29)

After the first decade, in the early 1920s, the Fascist party tool control of power in Italy, architects were asked to come up with a unified imperial style to the colony, however, not until the 1930s, where architects had their own approach to colonial architecture which resulted in a theoretical debate among architects on the inspiration or selected style of their colony. Therefore, it can be argued the Italian architectural discourse is influenced heavily by politics as discussed in chapter3, for that reason many architectural styles appeared every now and then; the colonial architectural discourse however, can be discussed in a chronological timeline to some extent. As many approaches were overlapping, each architectural style followed a single sometimes few theoretical argument, this enabled different interpretations to be done

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by Italian architects in the colony. Arguably, the topic of discussion could change from the "impact of vernacular buildings on Italian colonial architecture" to "the impact of vercnular buildings on Italian architects" in Libya.

One of the most important aspects presented in the literature of Italian colonial architecture in between 1911-1940, is terminology used to describe, claim or justify colonial architecture and their claim to Libya. Furthermore, one of the first argument presented in Italian colonial dictionary, the false claim that Libya was originally Roman therefore Italian in both architecture and tradition. Thus, the term Roman, for example, is used by archeologist Romanelli in the 1920s, as a part of the claim that Libyan origin and architecture are somehow Italian. The same term is also used by Alessandro Limongelli to describe Classic style in the colonial setting, or to describe monumental architecture in the colonial setting. Moreover, the term Roman appeared frequently in Rava's writings, both 1929 and 1931, where he proclaim that the "Libyan Arab house" and "Libyan Ottoman House" are originally roman, this statement is also important colonial manifesto since it was brought to justify the usage of local references in Italian colonial architecture. The term was also used by Di Fausto in his Mediterranean vision to support his claim that the Mediterranean has always been and should remain Italian.

Mediterranean, on the other hand is the most frequently used terminology in the architectural discourse, however, the term has been used in multiple dimensions and discussions throughout the period of colonial present in Libya, however the most distinct usage of the term came from Italian Architect Florestano Di Fausto in his "Mediterranean Vision" where he argues that all the North African colonies are Mediterranean, and maintain this feature is the best answer to Fascist colonial style in

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the colonies; here and according to his claim, architecture was born in the Mediterranean, therefore its Italian and it "Should remain Italian". In the writings of Rava, which are bias to Rationalism, Mediterranean is used as a common grounds and an infusion tool between Italian and Libyan architecture. That being said Fuller argues the Mediterranean was a justification used by Italians to mimic local forms without being "politically subservient."

Cubism, is another term used almost inclusively by Pellegrini, the term was also used to justify or to draw inspiration from local forms to modern architecture; and also to describe the volumetric masses of the old city of Tripoli. Overall, Pellegrini didn't really discuss vernacular architecture in a colonial manner, but rather a rational and practical ways, similarly to the Italian architects Piccinato, where he frequently used the term "Latin" and "Mediterranean" house in more practical and technical perspective.

In addition, Italian journals, magazines and architects frequently used the term Arabs instead of Libyans; which is in return a colonial tool to proclaim Libya and deny its native population, the constant argument that the region of Libya is "Roman therefore Italian," will be proven easily if the native population are foreigners to the land and not Libyan. An example of that is present in the discussion on the Libyan courtyard house, were in all of the colonial Italian literature its always presented as Arab; Although it shared many features of Arab courtyard house, it's not the same with many of the other courtyard houses. Many Libyan areas of the region used the courtyard house as well, especially in the mountain region where the majority of the population are originally Libyan Berber (Amazigh). Another example is clear where the Borghis for Libyans are called "Borghis of Arabs;" instead of "Borghis of Libyans".

The discussion on the terminology used in colonial architecture could extend further, however the mentioned terminology may give a glimpse on the motifs that inspired colonial architecture in Libya, Starting, from the claim that Libyan architecture is in its essence Italian. Then, finding the common grounds between the colonized and colonizer. Finally, coming to the last phase where the colonial style debate transformed into a discussion of more practical issues, and adapting local traditions in colonial buildings.

4.2 Theoretical Discussion on Impact of Vernacular Architecture on Colonial Architecture in Libya

This section contains a discussion on Libyan vernacular architecture according to chapter 2, and colonial architecture according to chapter 3; in addition to a discussion on the theoretical debate of Italian colonial approaches in Libya.

4.2.1 Vernacular Architecture

Libya was mainly influenced by many civilizations, which ruled the Mediterranean area or parts of it, namely, Greeks, Phoenicians, Garamants, Roman, Arab, Ottomans and Italians. The starting points of Libyan cities and settlements were set by the Greeks, Phoenicians and Garamants; other civilizations that ruled the region either built over the existing settlements, changed the administrations cities to other ones, or rarely founded their own, to match their lifestyle and way of living. Therefore it's very hard to claim, which architectural style influenced Libya the most, since most of the cities we see today are an accumulation of all.
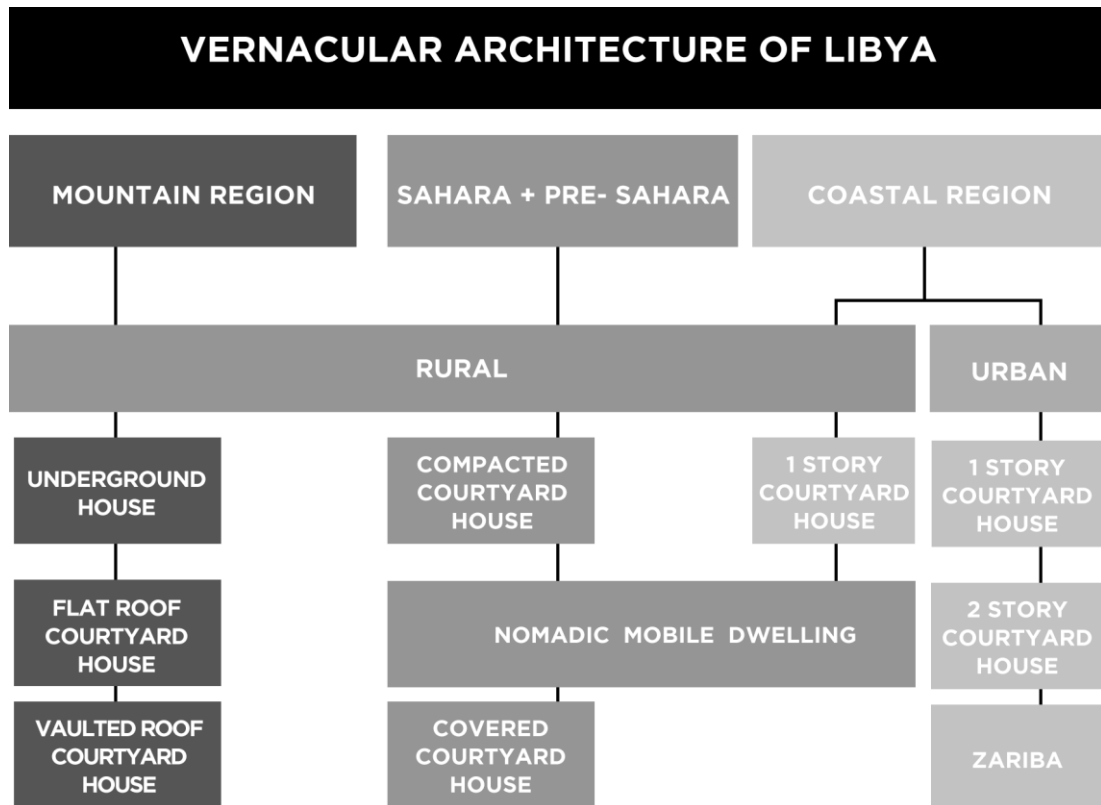
Figure 4.3: Table of Vernacular architecture of Libya, (Author, 2021)

According to the discussion of vernacular architecture on chapter 3, it's established that vernacular buildings in Libya are distrusted among three distinguished regions, coastal area, mountain region and Sahara and pre-Sahara regions. Although the three regions developed a distinguished type of architecture, the central courtyard is the most distinguished and shared feature in all the regions. The typology of courtyard offers an ultimate solution, to privacy, security and environmental control, since the Islamic rule of Libya extended from 642-1911, the Islamic architectural care for privacy influenced the whole region. In addition, even in the coastal region of Libya, the courtyard offers a solution for the winds coming from the south (Gibli), since it's loaded with many sand and dust particles it's highly unfavorable.
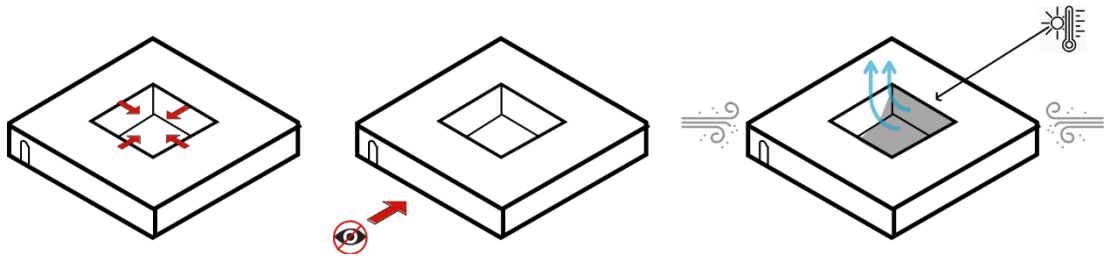
Figure 4.4: Most important characteristics of courtyard houses in Libya (Author, 2021)

Additionally, since a large portion of the Libyan population, towns and cities are located on the coastal area, Libya had a strong roots to the Mediterranean culture, and since the early civilizations traces were also left on the Libya territory, it can be argued that vernacular architecture of the Libyan coastal region are Mediterranean, with an Arab functional alterations. Nevertheless, the commonly shared element of Libyan vernacular architecture in the three regions is the central courtyard. Thus, it can be argued that the courtyard is considered to be the most distinguished element of vernacular in Libya.
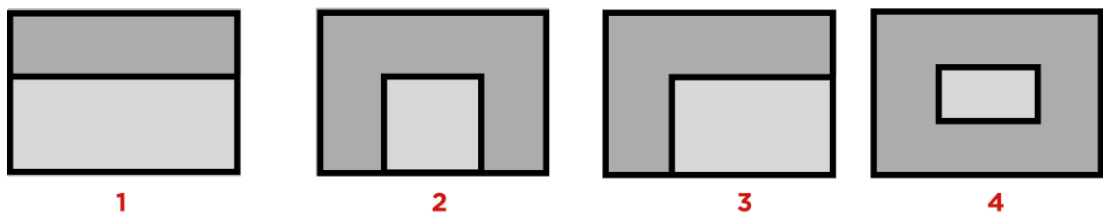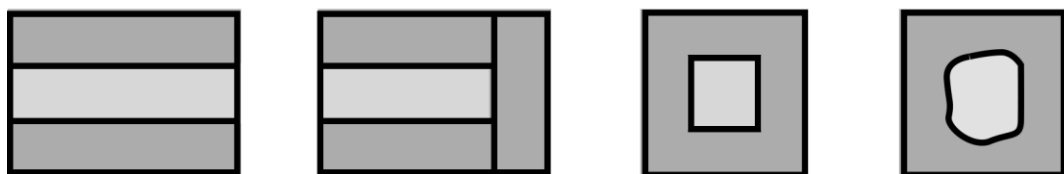
Figure 4.5: The concept of a courtyard house (Author, 2021)

As, shown in (Figure 4.5) The courtyard dwellings are somehow different from region to another when it comes to small detail, however, the basic design principle, as well

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as the construction materials and modest height, remain consistent. In many places in Libya, courtyard house may begin with just one side of the walled courtyard, but as soon as the family size grow and more space is required, the house expand by adding rooms to different sides of the courtyard (Figure 4.6).
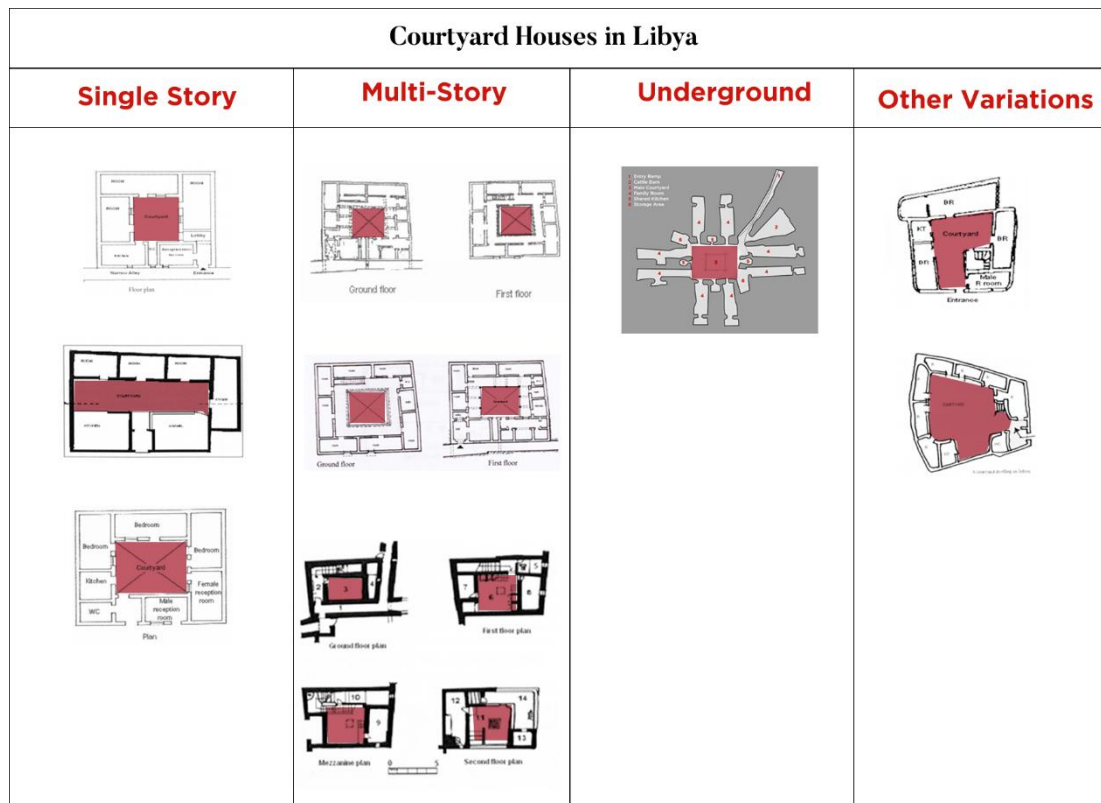
Figure 4.6: Diagram of different courtyard houses in Libya, (Author, 2021)

In analyzing different local courtyard houses, a series of combinations are observed, starting with a single story courtyard houses, to double story courtyard houses; a multi storey covered courtyard houses is also noticed in Sahara region, like Ghadames houses; in addition there are more of an organic courtyard houses, especially areas where mud and mudbricks are used as the primary construction material.

Conceivably, the clear distinguished features of local vernacular architectural such as the courtyard, small opening, whiteness and smoothness of exterior walls can be easily

connected to Italian colonial architecture; however, Italians were not influenced by all of the local vernacular architecture examples. For example, no underground houses or granaries inspired colonial buildings can be seen anywhere in Libya, yet a contextual inspired buildings like Yefren hotel and Nalut hotel were a good example and in perfect sync with vercnular mountain settlements.

Figure 4.7: Hotel Yefren by Di fausto1937 (Left), Vernacular mosque at the mountain region (Right)

In the Sahara region one example can be presented and it's the intervention of Ghdamsi hotel, here it's only an intervention on an existing local structures in favor of tourism, the goal was to create an exotic experience of the Libyan Sahara, Further, an attempt to use local elements is seen in the drawings of Italy`s bank in Benghazi, 1930s, where the architect attempted to use Ghadmesian elements on the top part of buildings corners, however those elements were eliminated upon completion.
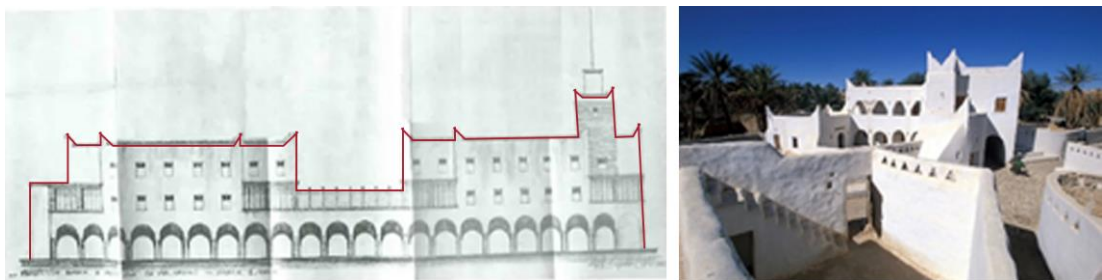
Figure 4.8: Bank of Rome Benghazi (left), Ghadmesian building (Right)

Moreover, the Libyan traditional houses in itself was in the center of the colonial architectural discussion, in terms of its schematic design, massing or functionality. However, the Libyan vernacular courtyard house in the coastal areas was more of an influence than other courtyard houses in the mountain or Sahara region, the reason might be because of the historical colonization progression of Italians in Libya, or due to the first encounter with Libya was in the coastal areas.
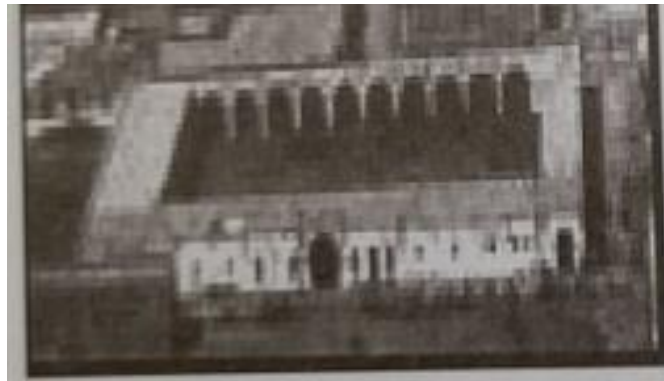
Figure 4.9: The Old Funduq, Benghazi. (Elfagih, 2021)

The Libyan house was a sum of synthesis to the solution to the Libyan weather, almost all architects in all different periods drew some inspiration from it. The courtyard was interpreted in many ways, and in many different building typologies. Funduq is also an important typology that have been used in many colonial buildings namely Mehari hotel by Di Fausto. The Funduq is well known for its large courtyard and arcades similar to the courtyard house layout, however different in function.
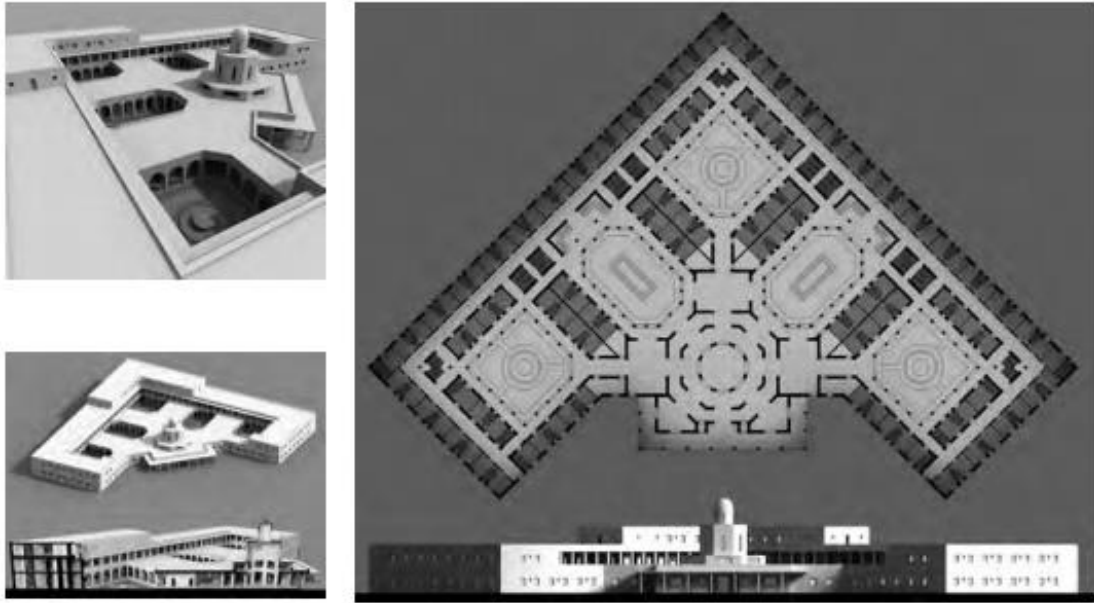
Figure 4.10: Mehari Hotel by Di Fausto (Stiringlos, 2009)

4.2.2 Discourse of Italian Colonial Theories

Colonial architectural theory discourse is an important factor in determining what kind of style Italians followed in their colonies. This resulted in a heated debate on what style Italians should follow in their colonies. Since the early decade of Italian colonization the filed was under the control of buildings and engineers, colonial theory and buildings were more of improvisation and uncertain painting of different style on the Libyan canvas.
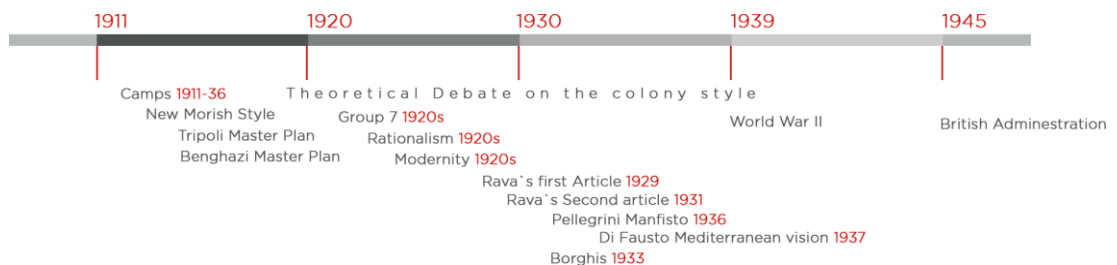
Figure 4.11: Timeline of Italian theory discourse (Author, 2021)

However, a stronger rhetorical discussion appeared after Rava`s first article in 1929, on Tripoli`s local architecture and the importance of rationalism as a colonial style,

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followed by several architectural competitions in Tripoli that allowed the new generation of modern architects to express a new architectural style inspired by functionality and simple forms; the intersection between colonial architecture and vernacular buildings is arguably, drawn by modernism and rationalism, since rationalism seek for a functional solutions and simple forms.

Moreover, since the Italian Fascist authorities had to show power and control in their colonies, direct imitating of local references had to be justified, since Italy had discussions to claim that Libyan local architecture is in fact Italian or Roman, therefore the usage of Italian or Roman motifs will not degrade their colonial architecture since local inspirations are already Italian. Many architects, were inspired by Libyan vernacular architecture, the level of influence is different from one architect to another, depending on intellectual and political constrains.

In discussing the discourse in the colony of Libya, Italian colonial architecture took several routes, it started with scattered military administrations units, military camps in addition to military concentration camps for the native populations. In the 1920s, prior to the fascist control over power in Italy, Italian administration in Libya tried to get closer to the native population, Italian builders and engineers used motifs from Islamic architecture in Libya; this resulted in the birth of the Neo-Moorish style in that can be seen in many cities in Libya, however, this style cannot be traced in any of the local or vernacular architecture references in Libya. This phenomena was even criticized by many Italian architects at the time, as it was invented and cannot relate to the current context.

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In the early 1920s as the theoretical debate started, Italian architects tend to study local references more, as discussed in chapter four, this study and usage of vernacular local reference had to be justified to political reasons. This however, did not stop rational architects from analyzing and adapting vernacular architecture to their works. This justification included the claims that Libyan vernacular architecture is originally Roman therefore it's Italian, or that the local architecture is Mediterranean so it's Italian. Late 1920 and early 1930s Italian colonial architects moved pass justifying the usage of local references, into more practical discussions on how to infuse local typologies with European comfort technologies, this is very apparent in hotels and houses designed by Italian architects in Libya.

Borghis, which are designed and implemented in the early 1930s, where more or less influenced by vernacular architecture infused with classical references, and Italian urban layouts. In the Borghis, simplicity of forms and whiteness of surfaces are mixed with roman arches and arcades facing a central piazza, the simplicity of the facades and the layout is directly seen in many squares in Tripoli, Benghazi and Darnah. Rural housings were also directly influenced by vernacular architecture at the area, here it can be argued that this is the most logical the usage of these typologies in a specific context, even though the Colonial houses made for Libyans had the characteristics of a courtyard house, it was the Italian interpretation of Libyan courtyard house.

4.3 Impact of Vernacular Buildings on Italian Colonial Architecture

"The original Libyan architecture provides us with all the desirable elements to create our own colonial architecture of today" (Rava, 1931).

It's now very convincing to say that vernacular architecture has an impact on Italian colonial architecture in Libya, the traces are not only theoretical but on the built environment as well. The impact of vernacular architecture on Italian colonial architecture is visible from the period of late 1920s to the end of Italian reign in Libya. Before the notion of using vernacular architecture was clearly discussed Italian architects used some sort of architectural eclecticism of vernacular element. However, in terms of incorporation local architecture the new colonial buildings had to be modern as well. Thus, Italian architects had to study existing vernacular architecture to use it in their buildings, this phenomena appeared best in the manifesto of Geovanni Pellegrini 1936, and Luigi Pectinate's search for the appropriate colonial style in Libya in, 1936.

In the quest to find the best form of colonial architecture in Libya, Italian architects were not only interpreting and referring to the architectural elements of vernacular local architecture, but studied technical and functional qualities as well. This interpretation resulted to what can be called the origin of the 'Libyan style', even though, post Italian colonization Libyan architecture went through socialist style of architecture, especially in the 70's period, Italian colonial architecture in Libya seemed like the most logical result and interpretation of local Libyan architecture. Colonial architecture in Libya starting late 1920s was highly influenced by the modern

movement around the world, vernacular architecture inspired modern and rational architects to find simplicity of form, and best environmental solutions in their designs.

The interpretation of the arcade and courtyard is evident in most of the colonial buildings, it was used and repeated to achieve functional and aesthetic results. The colonial state of Libya gave more freedom to Italian architects to discover and experiment new ideas and typologies. However, the 'Italian touch' can still be seen represented in the classicism of the façade and sometime the excessive use of the arch.

4.3.1 Urban Areas

On the urban level, Tripoli was the strong reference to Italian architects building in the colony, the purity of its masses and simplicity of its form can be seen in many colonial examples across Libya; the overall composition of mosques domes and houses forms of Tripoli`s medina are highly visible in the works of Di Fausto.
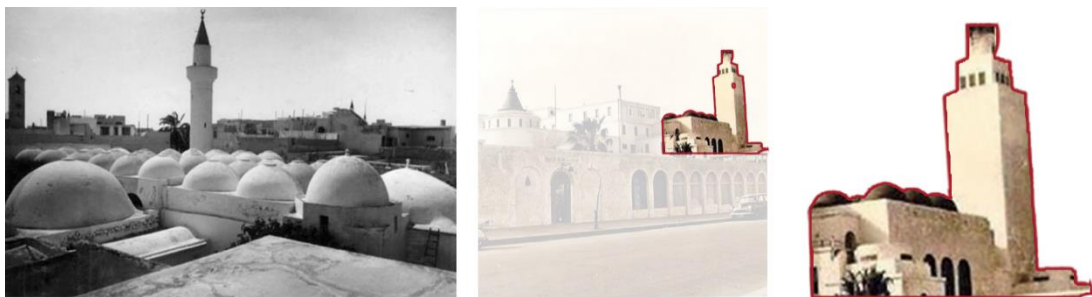
Figure 4.12: Volume analysis of hotel Uddan, in comparison to a mosques in Tripoli`s old City, (Adapted by author, 2021. From URL 30 and 31)

The best example for that is the Uddan hotel finished in 1935. Even though Di Fausto proclaims "Modernita" and the roman spirit in his works, his architecture reflect otherwise, in other terms his architecture is a mixture of local forms and masses infused with classical and Italian elements, those elements are represented in arches, arcades, and repetition of openings on the façade.

When it comes to urban areas, it's difficult to draw the connection of colonial master plans and existing local towns in Libya. At the time Italians colonized Libya, two major cities where present; Tripoli, as the capital of Tripolitania region, and Benghazi, as the capital of Cyrenaica region. Time, and city politics are a key element in understanding the colonial approach in Italian masterplans to Tripoli and Benghazi. Mainly, Italians had three distinct urban approaches to cities that are discussed further in chapter 3. Moreover, the approach between Benghazi and Tripoli were different, an aerial view of both cities can reveal that Italians continued the urban growth of the city of Benghazi in a similar approach to the existing one, but with wider streets and more open spaces and gardens, while Tripoli`s urban plan was similar to Italian cities, since Italians actually built their new city outside of the city walls from scratch. Still a glimpse of organic grids could be found in both cities.

Figure 4.13: Tripoli Martyr square aerial (Left) view and an Italian city (Right) (URL 33 and 34)

In Benghazi, colonial masterplans were different for many reasons. The city masterplan was introduced in the year 1932, which was under the fascist administration, therefore, the masterplan main aim is to create a clear distinction between the native population and the Italian settlers; however, since the city had no clear definition like Tripoli, the new masterplan emerged with the city to appear as

one. The same striking first contact with the city was created, this time in a stronger statement, by building one of the largest cathedrals in the colony.

Figure 4.14: Waterfront of Benghazi, downtown (URL 32)

Figure 4.15: Benghazi aerial view Italian quarters (Left) Benghazi in the 1910s (Right) (Al Faitouri, 2021)

4.3.2 Rural Areas

Figure 4.16: Borghi in Libya, (Capresi, 2009)

At the rural centers, Borghis, Italian architects were more mature and experienced in their approach to colonial architecture. The urban layout of the centers were however, inspired by Italian urban layouts, the compositions of those centers contained strong visual and functional facility, in most cases a church, to assert superiority. Although religious symbols were not present in either the debate or built space, religion played a role in distinguishing Libyan's Borghis and settler's Borghis. As mentioned in chapter three, Borghis for Libyans, were different by having a mosque instead of a church, additionally, in contrast to the church in the Borghi layout, mosques were not placed on the main access of the layout. Borghis for Libyan had a horizontal layout and massing found in silhouette of Libyan cities like Benghazi; while settler`s Borghis had a variety of massing composition depending on the functionality of its units.

Figure 4.17: Borghi in Libya. (Fuller, 2007)

General layout of the Borghi depended on the location and the access of the road, since the connection to the outside was primary, buildings of more important function were bigger and closer to the main square or piazza, arcades in most of Borghis were used to connect spaces throughout the civic center. Houses in rural areas, were scattered and not grouped, which is the how houses in rural areas in Libya were distributed, however, according to Fuller, this is also similar Italy's south rural areas and rural houses.
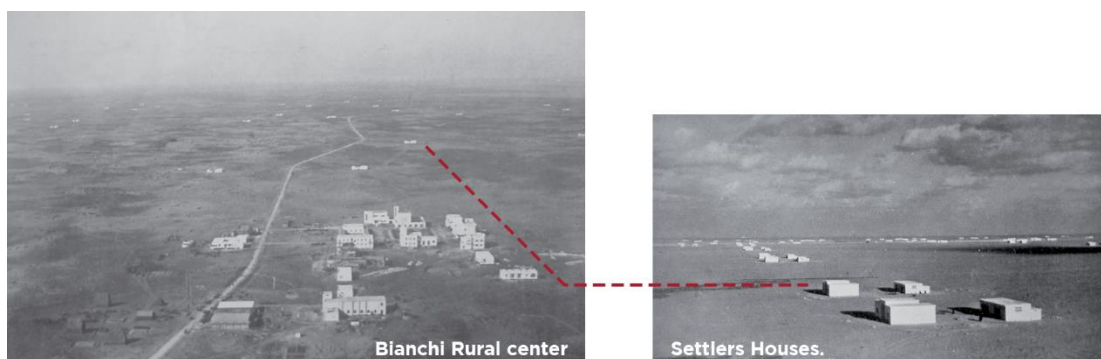
Figure 4.18: Aerial view of a Borghi and settlers houses (Adapted by Author, 2021. From Capresi, 2009)

4.4 Features of Architecture

In dissimilar situation to other colonies, beside the master plan of Tripoli and Benghazi, Italian colonial architecture in Libya was on the micro level, and relied on symbolic features and uncertain motifs, therefore the usage of local vercnular architecture is seen on singular buildings. Since the colony had several working architects until the 1936, where the new designed buildings were overseen by a colonial administration. This part of the research will draw the connection between vernacular references and elements, Italian architects used in their buildings and designs.

4.4.1 Massing and Volumes

The relation between international movement and colonial architecture is very obvious in terms of massing and composition. Furthermore, since 'Rationalism' was the equivalent of modernism in Italy, Rationalist architects looked for simplicity and functionality, thus, vercnular architecture was the best form of inspiration there is. Architects like, Rava, Piccinato, Pellegrini and others, called for the interpretation of local vernacular architecture, asking other architects in the colony to draw inspiration from those local elements, since the vernacular architecture have already provided solution Italian architects are seeking to solve. Additionally, in his colonial architecture manifesto, Pellegrini used the term 'Cubism' to describe volumes of vernacular houses in addition to individual elements like minarets and columns; architects like Piccinato and Apollonj complimented the form of vernacular building, in more practical ways, and came with the conclusion that those form must be adapted in their colonial buildings.

Figure 4.19: Hotel Uddan, (URL 35)

The latest call for direct appropriation of local form is done and by architect Di Fausto

under the umbrella of his 'Mediterranean vision' where he argues that the usage of

local forms is the solution to build in the colony, however a political justification had

to be given, to maintain the Italian Empire image; moreover, most of the buildings

design by di Fausto in Libya contained elements from local architecture, hotel Uddan

designed in 1935, (Figure 4.19) was a collage of different units of the old city of

Tripoli, as the functional program of the hotel was done volumetrically, even though

it was a hotel building and a casino, Di Fausto couldn't resist to add a tower, mimicking

minarets of Tripoli's Medina, the building combination of elements such as, domes,

tower, and volumetric plain cubes resulted in a profile that refers to a religious local

building. Hotel yefren (Figure 4.20) also designed by di Fausto contains similar

volumetric units of vernacular mosque at the mountain region, one main horizontal

volume as the main body of the building and a horizontal volume which is the minaret in the mosque.

Figure 4.20: Colonial hotel in Yefren, a mosque also in Yefren. (URL 36)

Perhaps the most clear usage impact of local architecture is done by Pellegrini, as mentioned in the previous chapters, Pellegrini lead a journey to analyze and understand elements of local vernacular architecture in Libya; further, as he developed his architectural language, this inspiration became more apparent. (Figure 4.18) shows a villa designed by Pellegrini (Right), and a picture of a vernacular house taken by Pellegrini himself in his study and analysis of Libyan vernacular buildings, here the building are very similar, in masses, volumes, colour and small openings. However, a similar housing units in Tripoli, around 1937, also look similar to coastal courtyard houses in their small openings, simple form and mass and whiteness of their exterior walls and the usage of pure and simple forms.

Figure 4.21: Pellegrini, his own analysis of isolated house in Benghazi (right), Villa in Tripoli (Left)

Figure 4.22: Italian Villas in Tripoli, 1937 (Amer, 2007)

4.4.2 Composition
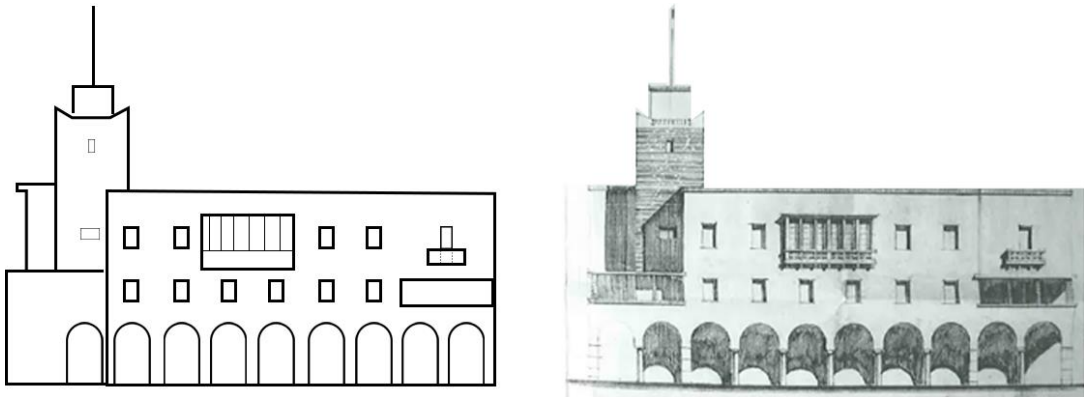
Figure 4.23: Bank of Italy, Benghazi, and 1930s (Left) Drawn by author, 2021. Right. From URL, 37)

As established in the previous part, Italian architects used different cubic volumes in their designs, this resulted in a unique composition that is almost seen in all colonial buildings in both rural and urban areas. Composition of volumes usually consist of the

main building body, and a tower, buildings either contained inner courtyard, Cubic or in the form of an L shape.
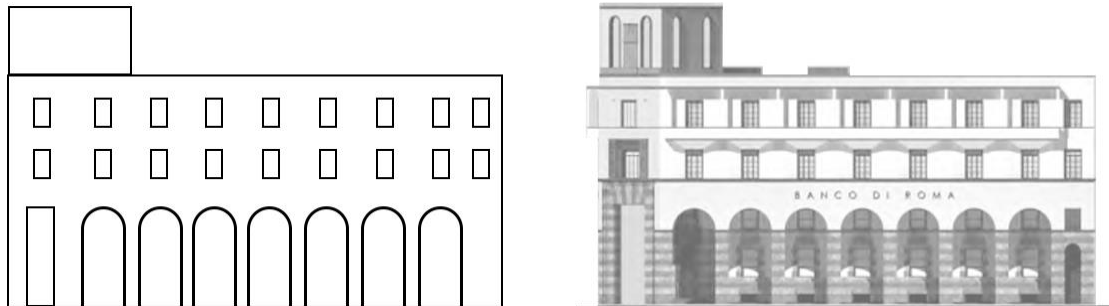
Figure 4.24: Bank of Rome, Tripoli, 1931(Adapted by author, 2021. From Stigliano, M. 2009)

On the other hand, buildings in Borghis had more verities in the composition of its elements (Figure 4.23) and (Figure 4.24), this is because Borghis had less architectural and contextual constrains, however, similar composition of volumes is seen in combination of a tower and the arcades.
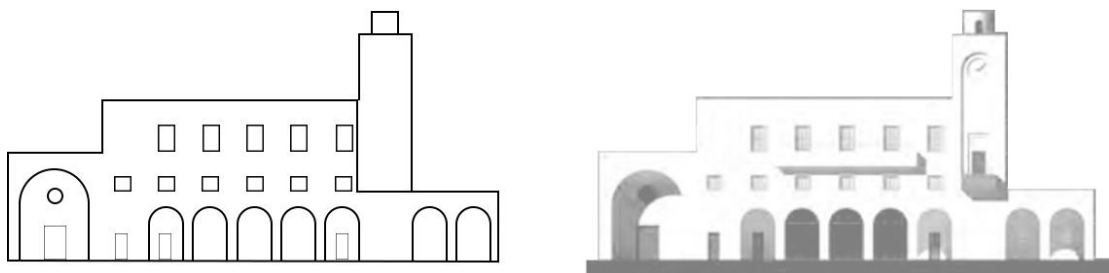
Figure 4.25: Fascist headquarter schematic composition diagram (adapted by author, 2021. From Stigliano, 2009)

Figure 4.26: Fascist headquarter schematic composition diagram (adapted by author, 2021. From Fuller, 2007)

4.4.3 Facades and Openings

Façades and openings of colonial buildings contain a manifesto on how to build colonial, the language used by Italian architects is systematic, and it's perhaps characterized by four main characteristics: the general mass, which is cubist in its volume, with slight variation and play of masses on higher floors. Heights of different levels floors, the ground floor is always higher than others. Arcades, which will be discussed in detail in the next section of this discussion; Openings, which are relatively rectangular small in proportion. Tower, as an architectural element is seen in many colonial building examples, religious and non-religious, many scholars claim that it's an element that was directly inspired by mosques of local architecture in Libya, this claim is arguably correct, since the tower was used in combination of domes in many colonial non-religious buildings.
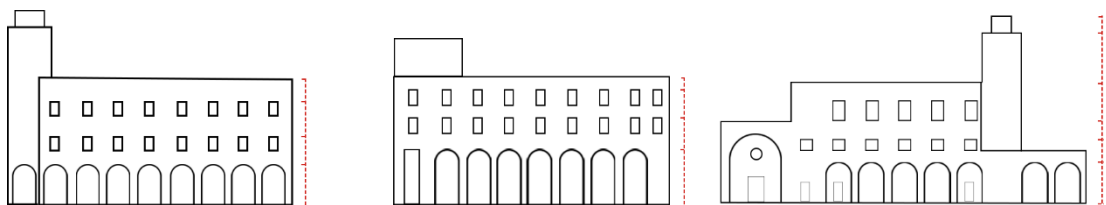
Figure 4.27: Schematic Facade Analysis, (Author, 2021)

(Figure 4.27) shows a typical colonial façade in Libyan cities, moreover, beside the arcade at the ground floor, small openings, and the minaret shaped tower, an opening inspired by Mashrabiya is also visible in the façade, Mashrabiya here is a strong feature of Islamic vernacular architecture, even though it rarely seen in local architecture of Libya, it was still used in both façade, in the first case (Figure 4.23) Bank of Rome in Benghazi, the Mashrabiya was used in a similar way to the original Mashrabiya design, in addition the architect Guido Ferrazza also used Ghadmesian elements to decorate the building top. In contrast, the concept of Mashrabiya was further developed in Bank of Rome building in Tripoli, in this building, Mashrabiya was presented in a modern way, the material used were different, and the element was repeated on the façade; Additionally as a typical organizational system, as the openings in facades the Mashrabiya was aligned to the arches on the ground floor.
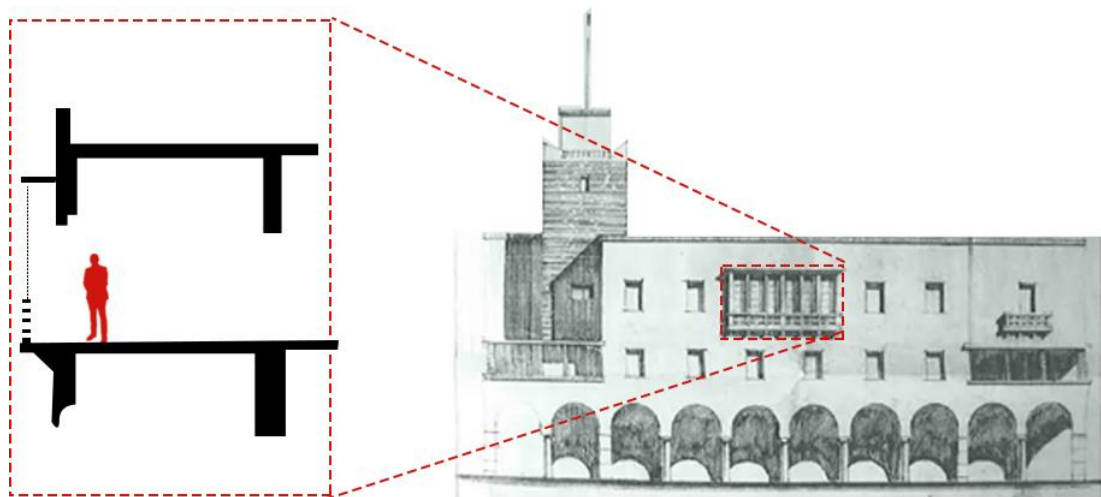
Figure 4.28: Diagram of window element in Bank of Rome Benghazi, (Adapted by author, 2021, From URL 37
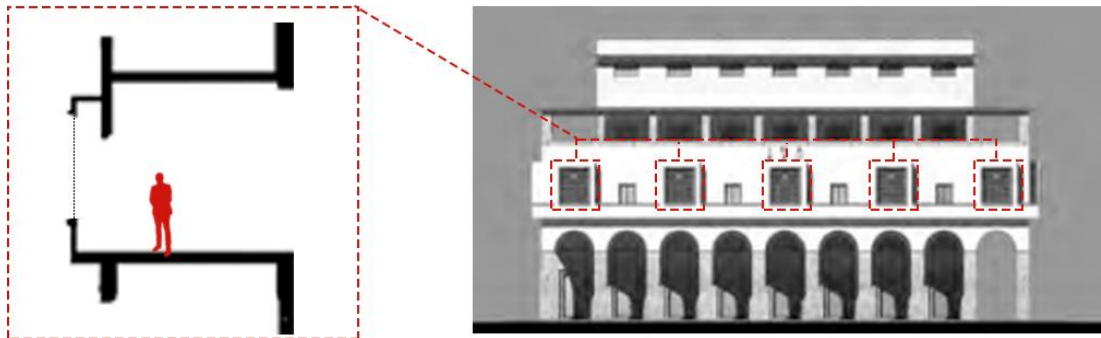
Figure 4.29: Diagram of window element in Bank of Rome Tripoli, (Adapted by author, 2021, From Stigliano, 2009)

In the previous examples, it can be understood that Italian architects used a strong elements influenced by vernacular architecture in the design of their façades. a connection can be made between Pellegrini`s analysis of vernacular architecture and his colonial buildings, minimal windows layout, pure cubism in the form, and arches to insure Italianty.

Moreover, openings, mainly windows are another element that is inspired by both vernacular architecture and climatic conditions. Libyan vercnular architecture in both urban and rural areas, is well known by its narrow and small windows, due to the need for privacy, protection and environment control. Further, it can be argued that windows of Italian colonial building might be natural response to environmental issues rather than architectural style, however the connection between local vernacular and colonial architecture cannot be denied.

typical house for settlers, designed by italians

typical house for Arabs, designed by italians

Villaggio Giovanni Berta, Cyrenaica, by Umberto di Segni 1933-34

Villaggio Breviglieri in Tripolitania, By Umberto di Segni 1938
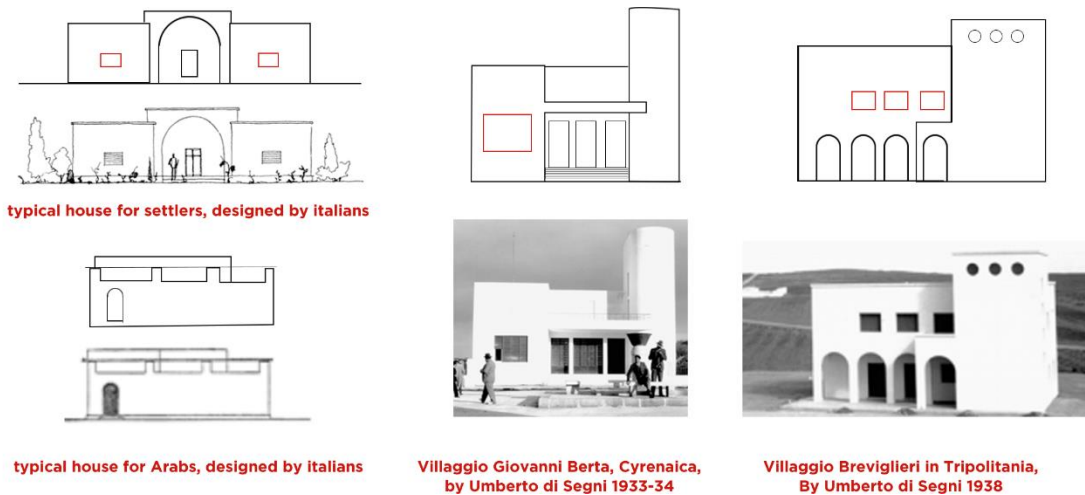
Figure 4.30: Opening Schematic Analysis (Author, 2021)

This relation of opening is set clear in most of the rural centers across Libya, in most examples, building have small windows. However, similar approach can be seen in colonial buildings in urban areas as well, (Figure 4. 30) and (Figure 4.31) shows the proportions of the windows, even though the windows are repeated, most probably for functional needs, since the given examples are of administrational nature, however the proportion of the opening is still relatively small compared the general mass.

■ Window.
■ Mashrabiya
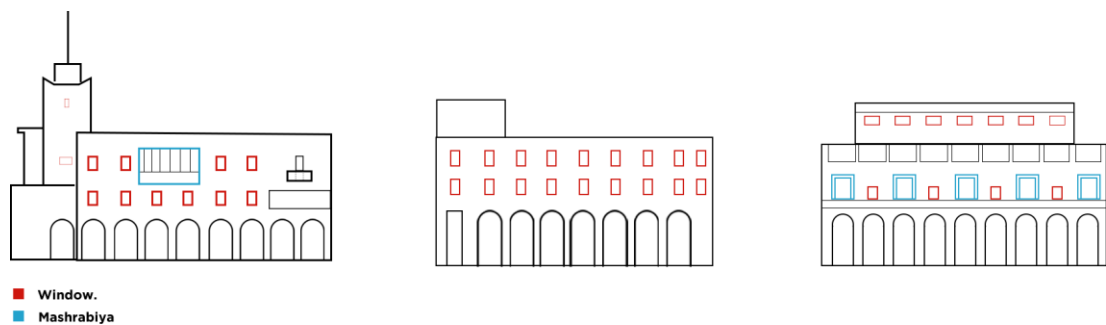
Figure 4.31: Opening Diagram in colonial building, (Author, 2021)

4.4.4 Arches

Arches were the strongest representation of Italian colonial architecture, even though it's a common element in both Libyan and Italian architecture, the addition of arches in many variation is what made colonial architecture in Libya Italian, its arguably rare

to find arches on the exteriors of local architecture, beside perhaps few mosques, however the arch presence in local vernacular architecture is not hidden. Nevertheless, not all colonial buildings used the arches, especially in Rationalist architects like Rava, were he regularly adopt elements of the local context such as, the courtyard layout, openings and volumes, however the usage of arches in his buildings is rare which in result makes it hard to identify the building and if its colonial or not (Figure 4.13).
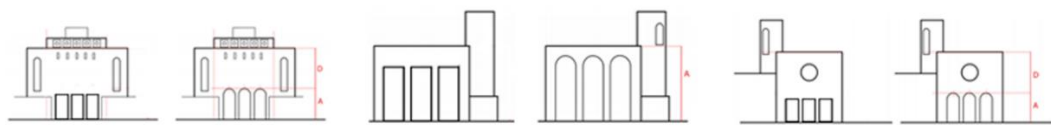
Figure 4.32: Analysis of Arches in churches compositions in rural center, (Adapted by author, 2021. From, Capresi, 2011)

Moreover, in most Borghis centers the arches created a strong unity, and Italian character to the overall composition, further, arches were extended to emphasize an entrance, or to highlight an important elements, in (Figure 4.32) Pellegrini, extension of the arches is what gave the building the Italian colonial character, since the openings are small and the general volume is over simplified. In the overall composition of colonial buildings the arch were presented in the form of arcades in both rural and urban areas.
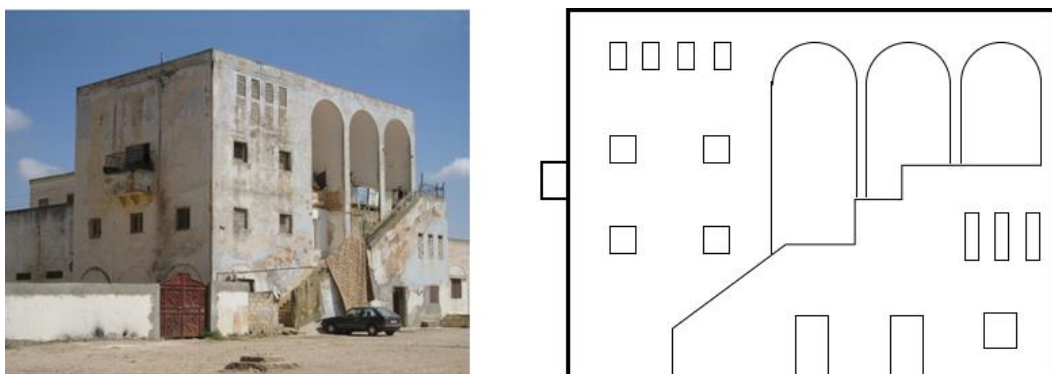
Figure 4.33: Schematic Analysis of Fascist headquarter in rural area, (adapted by author, 2021. From URL 38)

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4.4.5 Arcades

Arcades were an important elements in both vernacular and colonial architecture in Libya, the usage of arcade is highly evident in main local examples such as houses, Funduq's, markets and mosques all over Libya. Italian architects reinterpretation of the arcade was not only in housing but most of public buildings, this is very evident in many buildings in urban areas and Borghis were arcades were used to connect different parts of the composition.

Figure 4.34: Local Suk (left) (Pellegrini, 1936); Local Libyan house (Amer, 2007)

Figure 4.35: Schematic analysis of arcades, in colonial buildings (Author, 2021)

In urban areas, the usage of arcades on the ground floor, is a common feature, however it was only limited to individual buildings (Figure 4.35), arcades were used to reach double floors, the usage of arcades created not only the transition between open and closed space but it came as solution to the local environment of Libya, a similar

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situation is seen in the old city of Tripoli. Furthermore, in rural areas arcades were used to connect different functional units together, arches from the arcade could extend higher or wider to emphasize hierarchy of spaces, Arcades were also used to emphasize entrances to the main piazza.
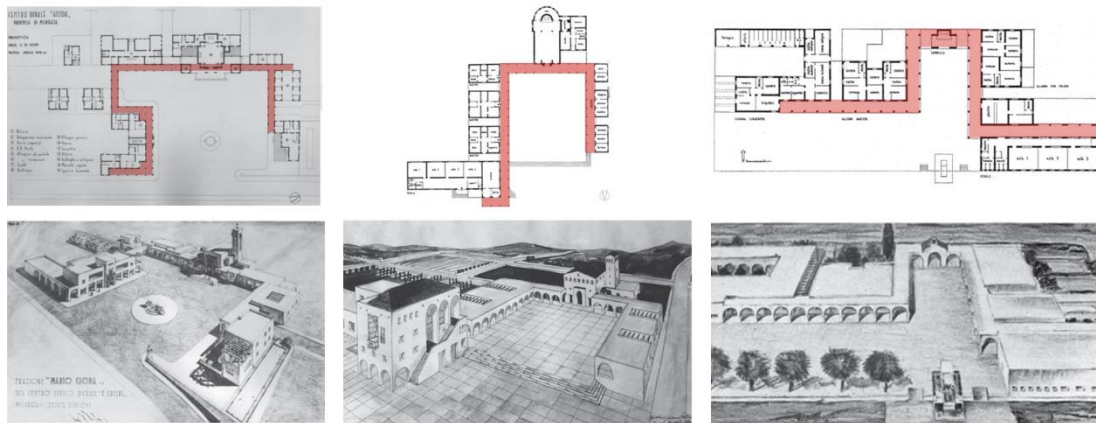
Figure 4.36: Analysis of Arcades in Rural Centers, (Adapted by author, 2021. From Capresi, 2009)

Nonetheless, Arcades was used in interior spaces as well, since the best adaptation of arcade is present in hotel Mehari by Di Fausto, as described in the literature that it was reinventing the Funduq typology and local two story courtyard house typology, in addition to the some Suk (market) spaces as well. Arcades were copied as they are in both functional and visual manner, further, this example is an accumulation of many vernacular elements specifically the interior arcades and courtyards.
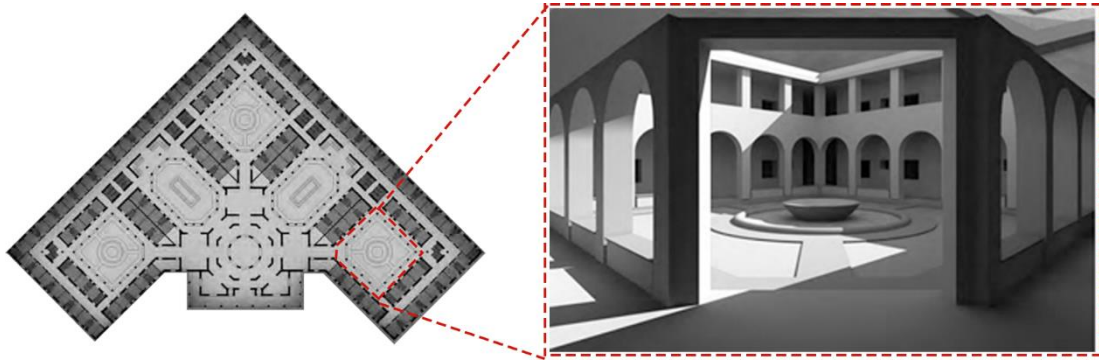
Figure 4.37: Mehari hotel courtyard an arcade, (Adapted by author, 2021. From Stigliano, 2009).

4.4.6 Courtyards

The Courtyard is a strong feature of Libyan architecture since it origin, it was used starting the Greek period and it's still used to today. It can be argued that the courtyard is the best environmental and functional solution in the Libyan local vernacular architecture. Akin, most of vercnular buildings are oriented to the inside, arcade is the second most logical solution especially in two story buildings or public buildings in general, it also provides environmental protection and hierarchy of space, that's why arcades always complement the courtyard spaces especially in two storey buildings.

The usage of courtyard space natural due to the local layout of cities, in addition to the environmental conditions in the Libyan region, moreover, the usage of courtyard as a space was not only limited to dwellings but to buildings in general. Italian architects however extended this hierarchy of space on the urban level as well, their usage of the arcade was to define streets and public squares; therefore the usage of arcade was reversed from the inside to the outside, this allowed a better definition of space.

In comparison between the Libyan vernacular house and Benghazi's bank of Rome, it appeared the courtyard is enlarged to a bigger proportion to fit the function of the building, however, the absence of arcade in the bank building might be justified.
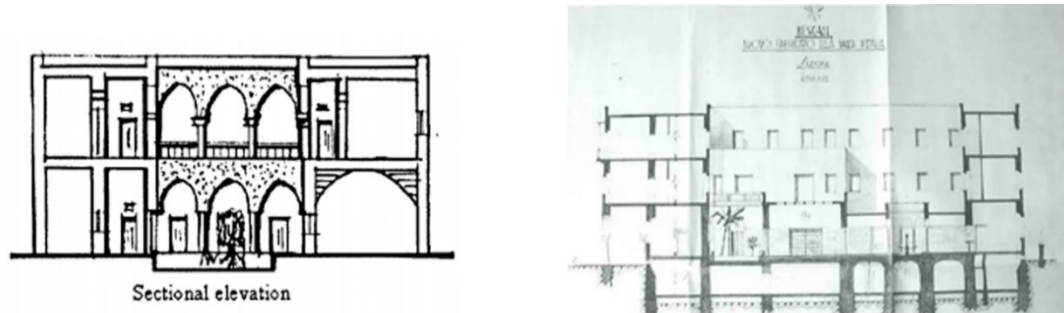
Figure 4.38: Libyan Courtyard house (Left) (Amer, 2007). Bank of Rome, Benghazi 1930s (Right) (URL 37)

Hotel Khums by Rava, is also one of the best interpretations of local courtyard in an Italian building, from the outside the building looks simple with no distinguished colonial or local features, however the spatial organization of its spaces and the hierarchy of the semi open, open and closed spaces achieved by the courtyard is commonly seen in courtyard houses in urban areas; the interiors however must follow the program hence, the differences in between the distribution of spaces between the local house and the hotel building.
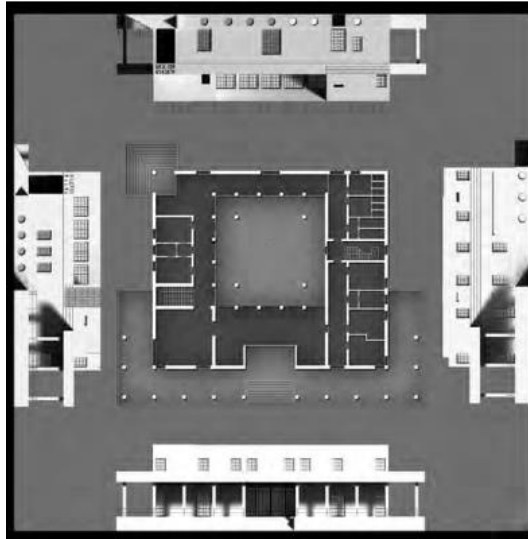
Figure 4.39: Hotel at the excavations of Leptis Magna, C. E. Rava and S. Larco,
Khums, 1928 (Stigliano, 2009)

In dwellings the usage of courtyard existed in many examples, in urban areas houses for Arabs designed by Italians (Figure 4.36) used the exact layout and dimensions, however a clearer interpretation of the courtyard is much clearer in houses for both settlers and Libyans in the rural side of Libya, Italian architects developed the concept of courtyard to a hall, in terms of a distribution and circulation, or used it as it is in houses for Libyans.

Figure 4.40: Courtyard house built in Colonial Period, Tripoli (Amer, 2007)

4.4.7 Decoration and Ornamentation

Since the Rationalist movement was parallel to the modern movement, Italian architects were not in favor of ornamentation, therefore, vernacular architecture was always favored for not having an ornamentation or extra decoration units, thus, Italian building usually were not ornamented except for few details around doors and windows.
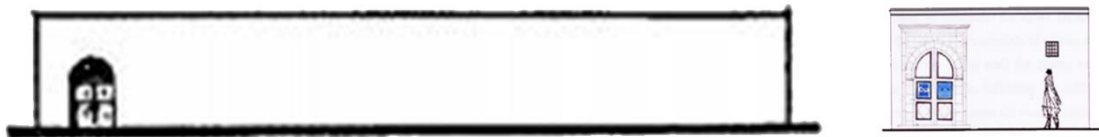
Figure 4.41: Local Houses Facade, (Elwerfalli, 2016)

When it comes to vernacular architecture, many colonial architects who analyzed Libyan vernacular architecture complemented the whiteness of the white walls, and the absence of ornamentation; that's however when it comes to the exteriors of buildings volumes, in analyzing the local houses, especially the exterior part of the buildings (Figure 4.40), ornament usually apparent on the entry door and rarely around exterior windows. Nevertheless, in some private houses Italians added exterior ornaments around doors and windows, in contrast public buildings and houses designed by rational architects, were very modern, clean in addition to no presence of extra ornamentation.

4.4.8 Symbols

Usage of symbols is clearly evident in monumental architecture, in the discussion in chapter 3, few examples of monuments were clearly inspired or tried to accumulate classical 'Italian' features and indegiouns simplicity 'local'. To better analyze inspired symbols in Italian architecture, three monuments will be discussed, Limongelli, Triumphal Arch for the entrance of the Royals of Italy, Tripoli 1928. Rava, Triumphal

Arch for the visit of the Princes of Piedmont, Tripoli, 1931. And Di Fausto, Arco dei

Fileni, Sirte, 1937.

Figure 4.42: Rava Triumphal arch, Limongelli, Triumphal arch, Di Fausto Triumphal
arch (Stigliano, 2009)

In Limongelli's Arch, the Roman origins were obvious in the usage of the vaulted

archway and the enormous dimensions of the pillars, nevertheless, the Arabic

influences were equally apparent in the frames and plastic ornamental elements on the

arch itself, Further, the closest monuments to represent local vernaculars is Rava's

Arch, as earlier discussed in chapter3, the form itself is inspired by vernacular

Ghadmesian elements and proportions in addition to few elements from the Gebal

region's mosques.

Figure 4.43: Different local elements that inspired colonial architects, from Sahara and pre Sahara regions, (URL 36, 39, 40)

As for Di Fausto's Arch, arguably it's a combination of both, however, it's clearly evident that it's closer to Limongelli's approach than to Rava's, the monumentality of the arch is Roman, in addition to few ornamentation that represent the local context.

4.4.9 Roofs

Roofs are perhaps one of the most distinguished features of colonial architecture in Libya. Since almost all colonial buildings in Libya are flat roofed, no signs of gable or tilted roof along the colony, except for few Borghis in the rural area, in addition to religious buildings in both urban and rural areas, and this can be justified by the need of wide spans to achieve the main function of the religious building. Further, in analyzing the local examples, most of the building in both rural and urban areas has flat roofs, in the Gebal region however, few vaulted roofs exit, in addition to domes, in mostly mosques, however, no clear example of usage of vaulted roofs in colonial buildings. Here, questionably the shift to modernism at the time played a huge role in the absence of tilted or any kind of gable roofs, yet again, most Rationalist architects used vernacular architecture as an inspiration for their modern approach, thus, the local environment and building traditions affected the roof types of colonial building significantly.
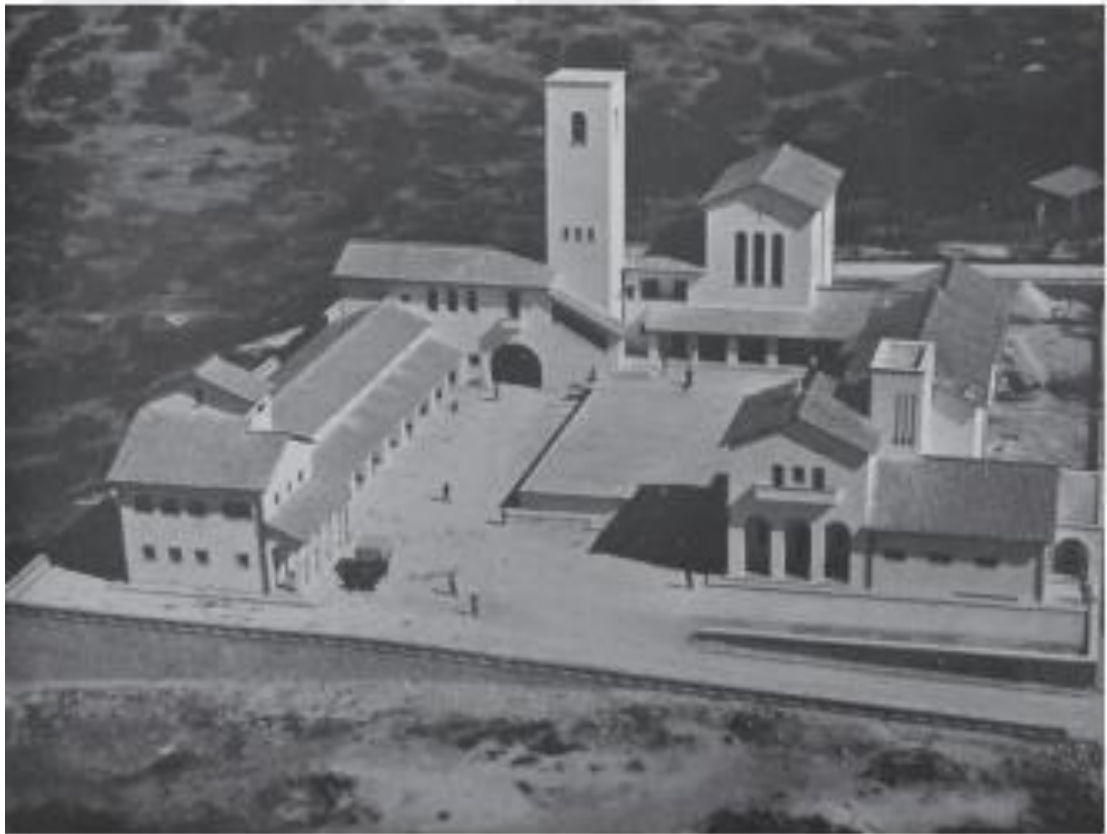
Figure 4.44: Rural Center, with gabled roof system (Capresi, 2009)

Chapter 5

CONCLUSION

As mentioned in chapter one, the main aim of this study is to investigate the link between vernacular buildings and colonial architecture in Libya, Considering this aim, the literature review of vernacular architecture provided a brief of the general concepts and approach of vernacular architecture. In the discussion of chapter three Italian theoretical discussion gave a general layout of how Italian colonial architects used vernacular references and motifs in their buildings. Moreover, in chapter four, the study have drawn not only the link between the two but also the motifs and features of colonial architecture that were inspired by local vernacular building.

Furthermore, based on what is gained from analyzing colonial buildings and vernacular architecture the connection between the two is very clear, not only in term of theory and colonial discussions but also on the built form, architectural elements, and design language used in colonial buildings. Thus, it's perhaps very evident that colonial architects took inspiration, and reinterpreted features of Libyan vernacular architecture in Libya.

Although by now, the link between Libyan vernacular and colonial architecture is less blurry, few general findings must be mentioned and clarified. The first attempt to mimic local architecture done by Italians was in the first decade of colonization, however this attempt resulted in a deformed Islamic style that doesn't really represent

local architecture of Libya; the motif lead to the appearance of the Neo-Moorish style which never existed on the Libyan region before. However, this style disappeared as soon as architects lead the field of architecture and design.

Although starting the early 20s Fascist party was in charge, there are no signs of a clear 'Fascist style'. The party, asked architect in the colony to come up with a unified fascist style, however, this call did not have a clear result on the colony of Libya. Moreover, the appearance of modernism as an international movement and Rationalism as a representation of modernism in Italy, motivated Rationalist colonial architects in Libya to inspired by local building traditions, since many features of vernacular architecture was in sync with the modern movement such as, functional solutions, spatial organizations, lack of ornamentation in addition to its simple and well defines volumes, therefore due to mentioned circumstances no clear or distinguished Fascist style appeared in Libya.

In rural centers Borghis, the situation was different, even though architects had complete autonomy in designing urban layouts and building of the Borghis, colonial architects intentionally or unintentionally had many common features in their designs. The urban layouts are by default different since the topographical, location and environmental conditions differ from one place to another, nevertheless, Borghis in the rural areas of Libya are distinguished in language, form and composition.

Vocabulary was also an important tool used by Italian architect to justify the usage of local elements, even though many examples revealed direct imitation of Libyan vernacular elements. Nonetheless, starting the mid-30s, Italian architect understood that local buildings contained ultimate solution for environment and the context,

therefore the discussion turned into recognizing local vernacular features, and tried to develop its concept according to the newest technologies and comfort measure. This explain that beside the inner courtyard interiors of colonial building didn't take much from local buildings, and most of the discussions and imitation was one the formal or urban level.

During the process of this research, one important missing element in the data is the present of local references on colonial architecture in Libya, even though there were few humble attempts (including this one) to study and analyze colonial architecture, much of the original data and literature is very hard to get a hand on, since most of the research and sources were in Italians. Many succeful attempt were dedicated to study the phenomena of colonial architecture by modern scholars, Like McLaren, Fuller and Capresi; however those studies and books were in the overall influence of colonial architecture on the colonies; nevertheless, since the colonial architecture were inspired by Libyan vernacular architecture, discussions rarely included local references or documentation of Libyan buildings in their researches.

In the process of this research many unanswered questions appeared, those questions present the opportunity of further research and discussions on both vernacular and colonial architecture in Libya. The notion of vernacular architecture in Libya is absent, and no proper documentation and measured drawings of building exist. Additionally, many issues needed to be discussed further such as, the colonial influence in the city of Benghazi, or the motifs and the language used in rural Borghis, or even a study dedicated to understand the influence of colonial architecture over the local cities and towns in Libya.

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APPENDICES

Appendix A: Ethical Approval

Doğu Akdeniz Üniversitesi
"Erdem, Bilgi, Gelişim"

Eastern Mediterranean University
"Virtue, Knowledge, Advancement"

9062B, Gazimağusa, KUZEY KIBRIS /
Famagusta, North Cyprus,
via Mersin-10 TURKEY
Tel: (+90) 392 630 1995
Faks/Fax: (+90) 392 630 2919
E-mail: bayek@emu.edu.tr

Etik Kurulu / Ethics Committee

Reference No: ETK00-2021-0055   15.03.2021

Subject: Your application for ethical approval.

Re: Salem A. Bader (19500246)

Faculty of Architecture

EMU's Scientific Research and Publication Ethics Board (BAYEK) has approved the decision of the Ethics Board of Architecture (date: 12.03.2021, issue: 07) granting Salem A. Bader from the Faculty of Architecture to pursue with his MA thesis titled **"The impact of local vernacular building tradition on the Italian Colonial Architecture in Libya"** supervised by Prof. Dr. Özgür Dinçyürek.

Best Regards

Prof. Dr. Yücel Vural

Chair, Board of Scientific Research and Publication Ethics - EMU

YV/şk.

Appendix B: Interview Questioner, and Consent Form

1. Consent Form

Eastern Mediterranean University
Department of Architecture

Research title here: **The impact of local vernacular buildings on the Italian Colonial Architecture in Libya**

Dear participant…

Please take a few minutes to read the following information on this research carefully before you agree to participate. If at any time you have a question regarding the study, please feel free to ask the researcher who will provide more information.

This study is being conducted by *Salem A. Bader* under the supervision of *Prof Dr. Özgür Dinçyürek;* the research aims to investigate the link between Libyan vernacular architecture buildings and Italian colonial architecture in Libya, this link will help contribute to the following: Study the impact Local and vernacular Libyan buildings on Italian colonial architecture in the period 1911-1940; Analysis of the features of Italian colonial architecture in Libya and their relation to vernacular architecture; Defining the vernacular elements that influenced colonial architecture in Libya.

You are not obliged to participate in this research and are free to refuse to participate; you may also withdraw from the study at any point without giving any reason. In this case, all of your responses will be destroyed and omitted from the research. If you agree to participate in and complete the study, your name and identifying information will not be disclosed except for the purposes of data analysis and scientific research. Once the data is analyzed, a report of the findings may be submitted for publication.

To signify your voluntary participation, please complete the consent form below.

CONSENT FORM

Research Title: **The impact of local vernacular buildings on the Italian Colonial Architecture in Libya**

Name of Researcher: **Salem A. Bader**

Salem.a.Bader@gmail.com

+905338526627

- I voluntarily agree to participate in this research study.
- I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
- I have had the purpose and nature of the study explained to me in writing and I have had the opportunity to ask questions about the study.
- I agree to my interview being audio-recorded.
- I understand that in any report on the results of this research, my identity will not be declared.
- I understand that extracts from my interview may be quoted in the thesis and published papers.
- I understand that I am entitled to access the information I have provided at any time.
- I understand that I am free to contact any of the people involved in the research to seek further clarification and information.

Signature of Participant: Date:

I believe the participant is giving informed consent to participate in this study.

Signature of Researcher: Date:

2. Questioner

Eastern Mediterranean University
Department of Architecture

Research title here: **The impact of local vernacular building tradition on the Italian Colonial Architecture in Libya**

Sample of standardized open-ended (*semi structured*) **Interview`s Questions:**

1. Please State Your name, title, affiliation, and area of research.
2. How long have you been in a researcher in this field?
3. What are that special features of Libyan Vernacular architecture have?
4. In your opinion what are the architectural periods influenced Libyan architecture the most?
5. What are the main features of Italian colonial architecture in Libya?
6. From your perspective why the colonial architecture in Libya was not Italian?
7. How much of an influence Italian colonial architecture had on Libyan cities?
8. How much influence you think Libyan vernacular architecture influenced Italian colonial architecture?
9. Can we say that colonial architecture fall under the category of Mediterranean architecture? And why?
10. Where can we see the link Between Libyan vernacular architecture and colonial Italian architecture in Libya?