

Migration And Architectural Transformation In Alexandria, Egypt

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ABSTRACT

Alexandria's history as a cultural crossroads, from its founding by Alexander the Great through Ptolemaic, Roman, Byzantine, and Arab rule, has shaped its unique urban and architectural character. However, recent local migration from rural areas has strained the city's infrastructure, leading to deterioration in its urban planning and a loss of its distinct architectural identity in both the old city and new extensions. This research investigates the impact of urban development on Alexandria's architectural identity by comparing the city's architectural evolution during the reign of Muhammad Ali Pasha (19th century and first half of the 20th century) with its current state. It aims to identify key changes and propose recommendations for preserving Alexandria's unique architectural character. Field visits and data collection were employed to analyze the architectural styles of Fouad Street buildings. This street was chosen for its rich history and the architectural transformation of its buildings has undergone. The research emphasizes the importance of developing regulations to integrate new construction with existing buildings while preserving historically significant structures. It also promotes regular maintenance by specialists to ensure a harmonious architectural character that respects Alexandria's diverse historical eras.

Keywords: Local Migration, International migration, Alexandria, Architectural Identity.

1. INTRODUCTION

Alexandria, named after its founder Alexander the Great, lies on the Northeast coast of Africa. It is the second-largest city in Egypt,¹ and the largest city on the Mediterranean coast. The city remained the capital of Egypt for about 900 years.

Alexandria's longitude is 27° 35' 30" and latitude is 31° 13' (Aref, 2023).

The city is bordered by the Mediterranean Sea to the north, Lake Mariout to the south, and stretches from Abuqir in the east to beyond Borg El Arab (approximately 50 miles southwest). Its strategic location, as shown in Figure (1), had long made it a target for colonization. The same strategic location has also attracted migration throughout history.

1.1 The emergence of the city

Alexander the Great (356-323 BC), king of the Macedonians, conquered the vast Persian Empire, stretching from the Mediterranean to India, and transformed the ancient world in just over a decade (Potts, 2023). He aimed to spread Greek culture throughout his domain, including western Asia and Egypt. When he conquered Egypt, the Egyptians welcomed

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him as a liberator from Persian rule and even crowned him pharaoh.



Figure 1. Alexandria's location on the Mediterranean Basin (Snazzy Maps, 2024)

On the western edge of the Nile Delta in 332 BC, Alexander found a small fishing village called "Rhakotis". Recognizing its strategic location, he envisioned a grand, Greek-styled city on this land. He entrusted its design to his architect Dinocrates and named it Alexandria after himself. While Memphis remained the Egyptian capital for a time, Alexandria would eventually become a major center of Hellenistic culture and a lasting symbol of Alexander's legacy. The Ptolemies, successors of Alexander the Great, aimed to strengthen Egypt. They relocated the capital to Alexandria, a strategic location for trade. Alexandria became a center of learning with a renowned library attracting scholars. The city boasted a well-planned grid layout with colonnades for shade. These initiatives made Alexandria a powerful and influential city in the ancient world.

Likely before 45 BC, a war erupted between Ptolemy XIII and Julius Caesar for control of Alexandria. Caesar, unprepared for Ptolemy's large army, resorted to a risky tactic. He set fire to Ptolemy's ships in the harbor to create a distraction. Unfortunately, on a windy day, the fire spread rapidly, accidentally engulfing the famed Ancient Library and Museum, destroying countless scrolls. Roman reinforcements soon arrived from a nearby province, securing Caesar's dominance over Alexandria. Cleopatra was then installed as ruler under Roman authority (Forster, 2014).

Later, Mark Antony attempted to restore the lost knowledge by bringing scrolls from Pergamon and establishing a smaller "daughter library" within the Serapeum Temple. However, this daughter library, along with other significant structures like Cleopatra's Temple, faced destruction during later conflicts between Christians and Romans.

Over time, Alexandria endured further decline. By the time the Crusaders arrived, the city lay mostly in ruins, with only Pompey's Pillar remaining largely intact. This once-grand city's instability ultimately led to its capture by the Persians and then the Arabs. (Polyzoides, 2014).

When the Islamic entered Egypt in the seventh century, Alexandria's political influence waned with the transfer to the new Arab capital, Al-Fustat (present-day old Cairo). Despite this, Alexandria's commercial importance persisted. It remained a vibrant trading center for textiles and luxury goods, with trade routes extending across North Africa and into Europe.

However, its overall size contracted in line with its diminished political stature. Left largely unattended after this period, Alexandria witnessed several significant environmental changes. Over time, the Canopic branch of the Nile River near Alexandria silted up, as did Lake Mariout. Consequently, both bodies of water dried out, isolating Alexandria from the Nile's Delta. Alongside these aspects, the city underwent significant architectural changes. The original Greek city walls, the Pharos lighthouse, and Ptolemaic castles were dismantled. New walls were erected, and the Mamluk sultan Qaitbay constructed the Qaitbay Citadel on the former site of the lighthouse, naming it after himself. During Ottoman rule, Alexandria's population dwindled, while immigration rose. The expansive new city walls encompassed a much larger area than necessary. Consequently, the actual inhabited area, known today as "The Turkish City," consisted primarily of houses and mosques built in the Islamic character (Encyclopædia Britannica, 2024).

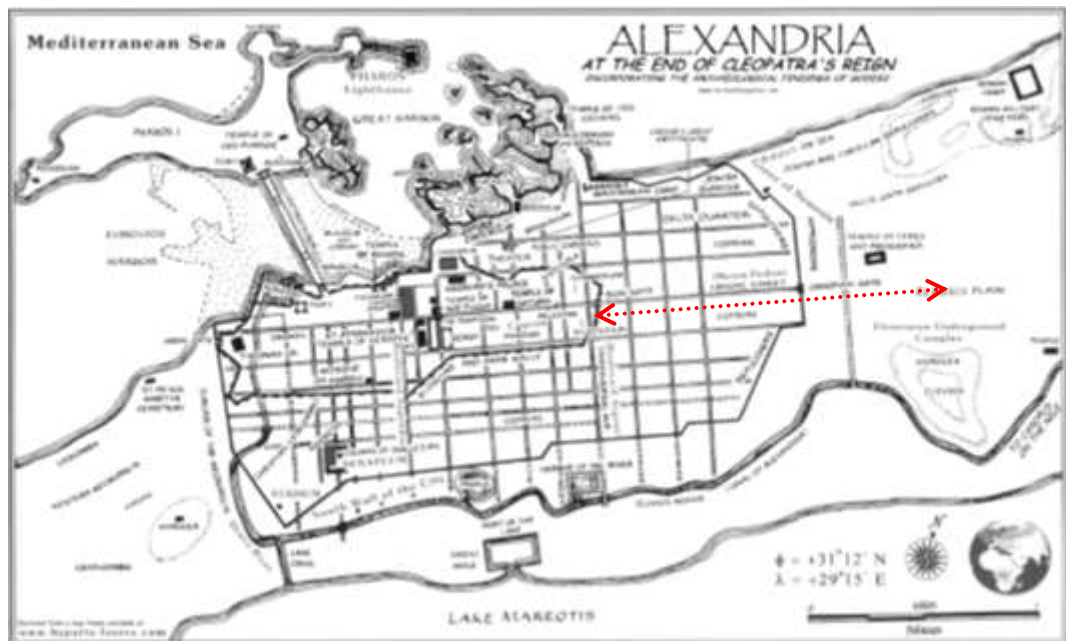


Figure 2. Map of Ancient Alexandria (at the end of Cleopatra's reign) illustrates Canopic Street (Merit Santos, 2016).

1.2 Alexandria from 1805 to 1952: International migration

In 1805, Muhammad Ali Pasha, an Albanian soldier in the Ottoman army, rose to power in Egypt. He established a dynasty that ruled the country for nearly 150 years, until 1952. With the monarchy's abolishment, Egypt became the Arab Republic of Egypt. Muhammad Ali's significant modernization efforts during his reign earned him the title "founder of modern Egypt."

Prior to Muhammad Ali Pasha's rule in the early 1800s, the foreign population in Egypt remained very small, numbering no more than 100 people. However, under his leadership, Egypt witnessed a significant rise in foreign residents, particularly in Alexandria, as shown in Table (1). This influx resulted in the establishment of 13 foreign embassies.

Table 1. Number of foreign immigrants

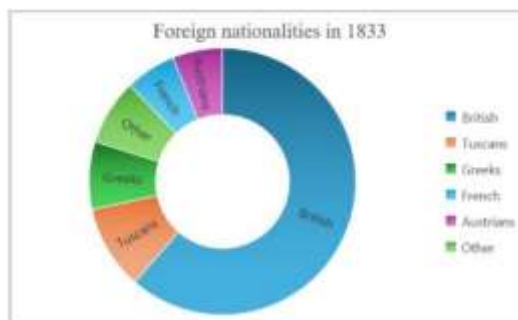
Year	Number of foreign immigrants
1800	100
1833	4886
1897	46118

Source: (Ramadan, 1993), modified by the authors.

Muhammad Ali Pasha's modernization initiatives attracted a diverse range of foreign nationalities to Alexandria. These foreigners began investing in various sectors, including banks, international trading companies, businesses, and even harbor navigation. The Greeks were the first movers, arriving in Alexandria in 1811. They were followed by the French in 1815. Italian Influence: Italians formed a particularly prominent community, making the Italian language commonly used by Alexandrians. British, Germans, Austrians, and Spanish also joined the growing foreign population in Alexandria, as illustrated in Table (2).

Table 2. Foreign population in Alexandria in 1833.

Nationality	Immigrants
Britain	3000
Tuscans	500
Greek	400
French	300
Austrians	296
Other	390
Total	4886



Source: (Ramadan, 1993), modified by the authors.

Alexandria during this period was a multi-faith city with Islam, Judaism, and Christianity represented. Muhammad Ali Pasha implemented significant reforms to foster religious tolerance. He abolished discriminatory practices against Christians and Jews, allowing them to freely build churches and synagogues alongside mosques. He also encouraged economic participation by allowing Christians and Jews to establish businesses, freeing them from the social isolation they previously faced.

Despite his accomplishments in modernization, Muhammad Ali Pasha's domestic policies were not without criticism. The economic reforms relied heavily on Egyptian farmers. He implemented a system where crops were purchased at low prices, leaving farmers with minimal profits. He also awarded vast tracts of land to his supporters, further concentrating wealth and resources (El-Ashmouni & Bartsch, 2014).

While Alexandria's urban development during Muhammad Ali Pasha's reign didn't replicate the grandeur of the Alexander the Great era, it did witness expansion. Buildings rose, and roads extended through previously abandoned areas within the existing Arab walls. However, Pasha and his foreign advisors lacked a comprehensive urban plan. Their most notable contributions were the construction of Muhammad Ali Square and some surrounding buildings.

The city became divided into neighborhoods based on nationality and ethnicity. The British community resided north of Muhammad Ali Square, where they built their church. The French and Greek communities settled south of the square. Other foreign communities, like

the Armenians, also had designated areas. Unfortunately, these developments often lacked coordination with existing projects and access to key city features like the sea, Mariout lake, Pompey's Pillar, castles, and the Arabian walls.

The main roads were built away from the coast, and the historic Arab walls were dismantled. People used the remaining sections on the eastern side as public gardens. As Alexandria sprawled outward, suburban expansion began. Antioniadis Villa, built on the Al-Mahmoudia Canal (constructed by Muhammed Ali Pasha to connect Alexandria to the Nile after Lake Mariout dried up), and other attractive buildings were part of this initial expansion.

Improved transportation options led wealthy residents to seek more spacious living areas outside the city center. They had two primary choices: Al-Max and Al-Raml. Al-Max offered beautiful natural surroundings, but unfortunately, slums separated it from the main city. Consequently, Al-Raml, with its railway and tram connections, became the preferred area for expansion, extending the city eastward. (Source: Forster, 1982).

Alexandria's architecture reflects the city's rich cultural pluralism and cosmopolitan character. Some notable examples from this period include the Italian Filippo Piñi's house (built in 1882, now the Spanish Consulate) and the Plazzina (designed by Antonie Lasciac around 1885, now the Ahrām building). Additionally, mansions constructed by Italians like the Luzzatto, Averino, and Sinigaglia families stand as testaments to this era's architectural richness.

The architects who shaped Alexandria's architectural identity during this period were a diverse group: Europeans (Greeks like Benaki and Salvago, Italians like Luzzatto, Averino, Sinigaglia, Lasciac, and Gora, and French) (Kenawi & Marchiori, 2018), Levantines (Sursok, Zogheb, Abou Shanab, and Bassili), and local Egyptians all contributed their talents. The architectural styles that emerged were Neo-Classical, Eclectic, Art Deco, Art Nouveau, Neo-Renaissance, Neo-Romanesque, and Neo-Islamic.

1.3 Alexandria After 1952: Rural-urban migration



Figure 3. Modern Alexandria.

Rural-urban migration refers to the movement of people from rural to urban areas due to better job opportunities and urban amenities. The influx of migrants affects the socio-economic, demographic, environmental, and socio-cultural aspects of both the urban destination and the rural origin, in addition, it influences the built environment of the city (Shafiei & Leardini, 2018). This migration leads to urban sprawl, placing increased pressure on existing urban infrastructure, housing availability, and the capacity of urban centers to function effectively. (Fan, 2022). In addition, it plays a major role in the formation of slums and informal settlements (Niva et al., 2019). Furthermore, it causes significant deterioration in the architectural identity of the city (Emmanuel Arenibafo, 2020) (Savchenko & Borodina, 2017).

Alexandria's architectural beauty began to deteriorate after 1952 due to several converging factors. The city's reputation as a center for opportunity attracted people from other parts of Egypt, leading to rapid population growth. This, in turn, fueled unplanned urban expansion which strained resources and resulted in the rise of slums and informal settlements. Overlooking regulations on building materials, heights, and overall construction practices further contributed to the decline. Inadequate preservation efforts jeopardized historic and important structures, while new buildings constructed within historic contexts often lacked aesthetic consideration, creating a disjointed cityscape. These factors have culminated in the loss of Alexandria's unique architectural identity, the deterioration of many buildings' facades, and an increase in unsafe structures due to disregard for building codes.

2. RESEARCH METHOD

The selected area for a case study is a part in Fouad Street. Fouad Street in Alexandria is a significant area within the historic district undergoing revitalization efforts to conserve its Euro-Mediterranean heritage. The street symbolizes cultural and societal changes, reflecting the assimilation of Western values into traditional societies.

The methodology for this study involved a three-step process. First, a survey was conducted to document and assess heritage buildings in Fouad street. Second, the architectural styles represented in these buildings were compared. Third, to understand the impact of time and external factors, the transformations experienced by these buildings were then analyzed.



Figure 4. Fuad street (OpenStreetMap, 2024).

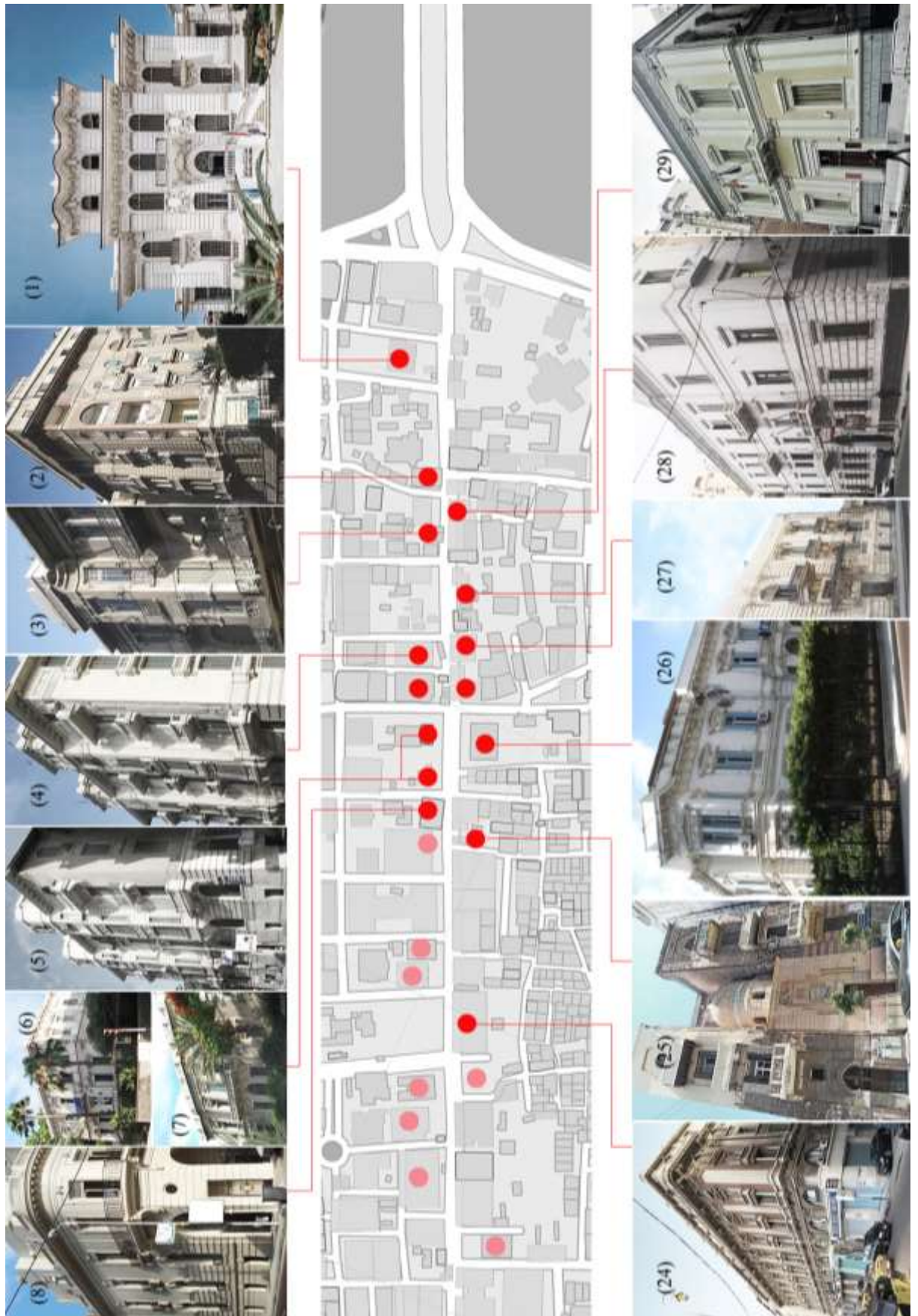


Figure 5 a. Heritage buildings survey (part 1)

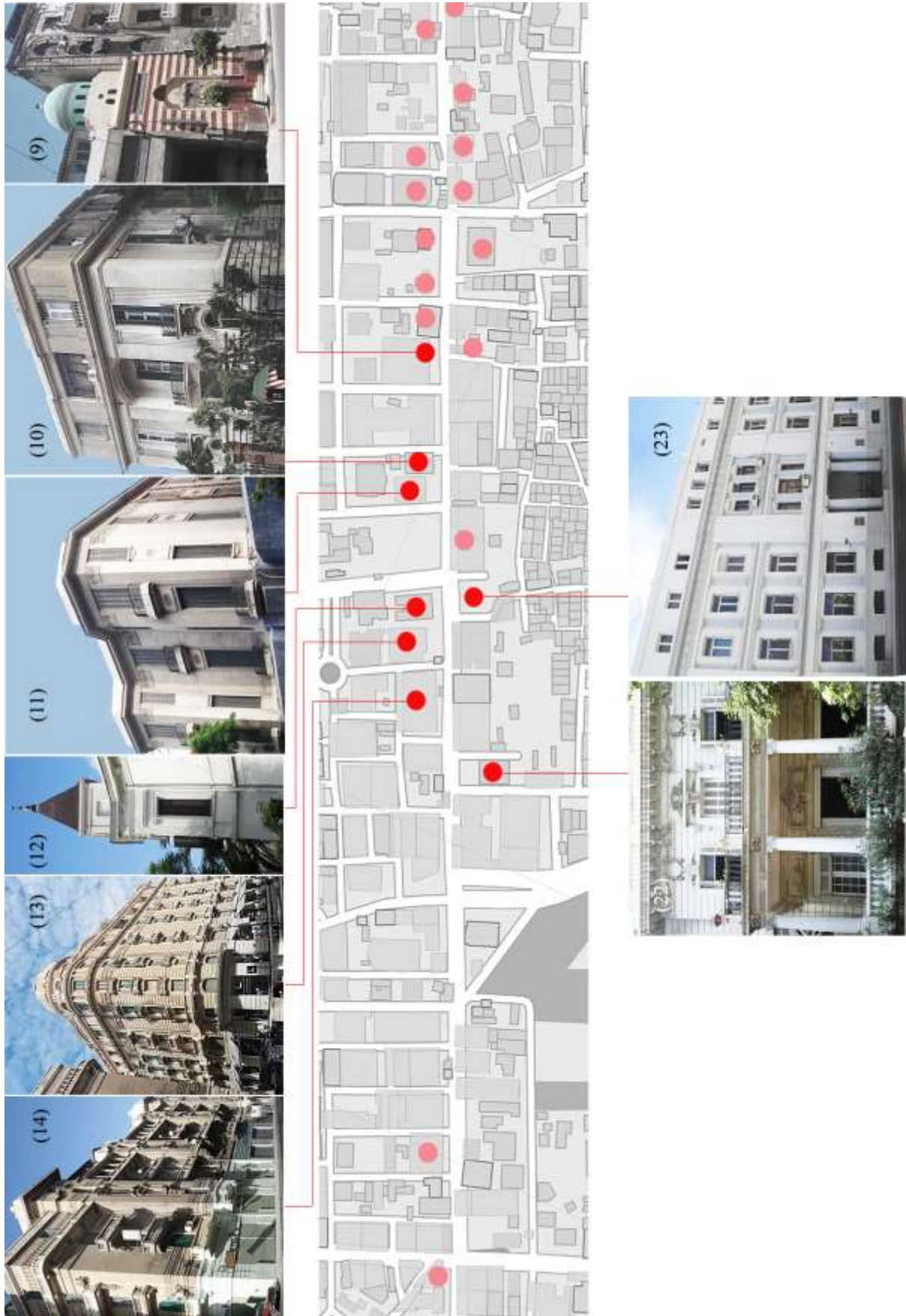


Figure 5 b. Heritage buildings survey (part 2)

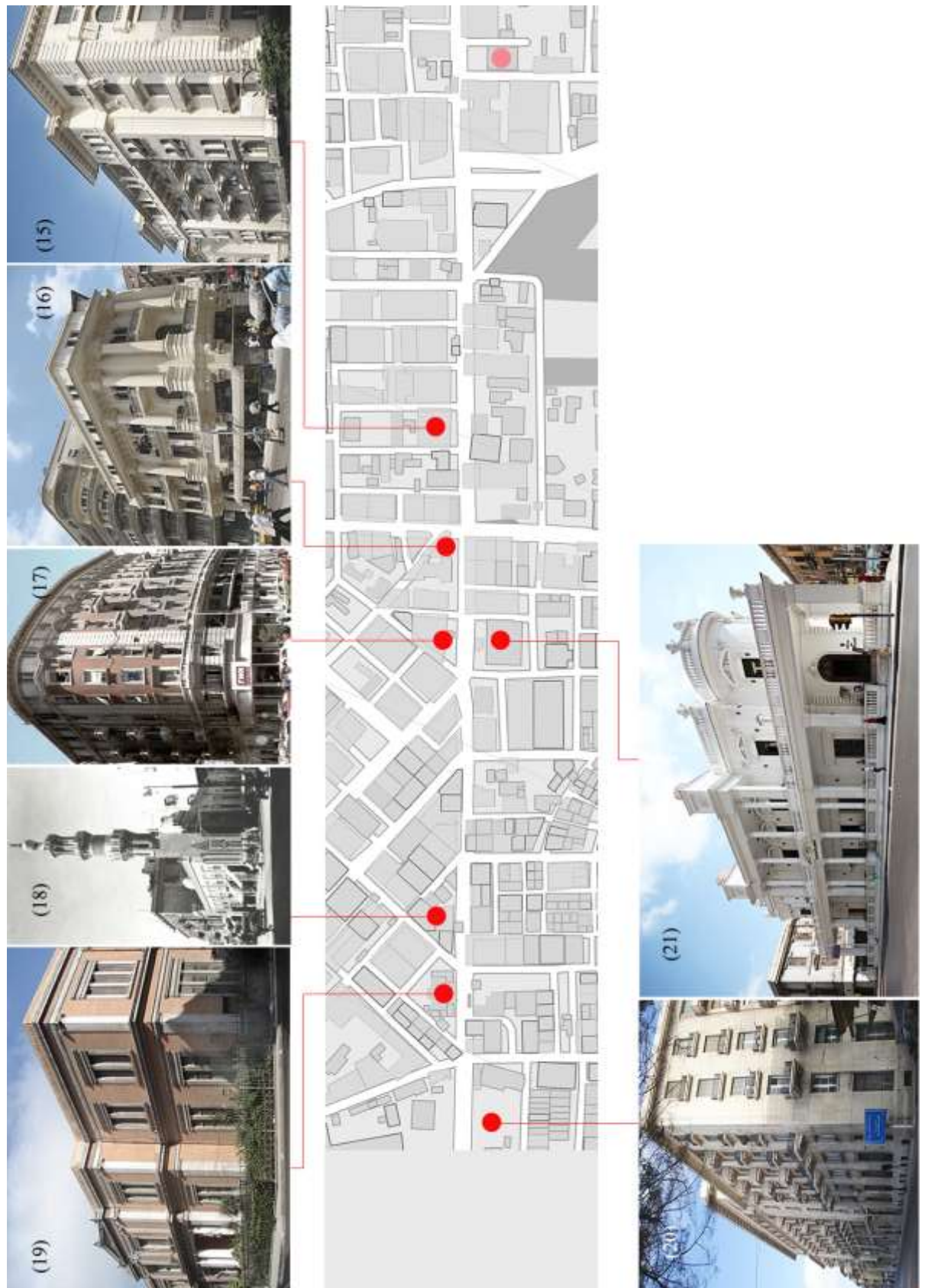


Figure 5 c. Heritage buildings survey (part 3)

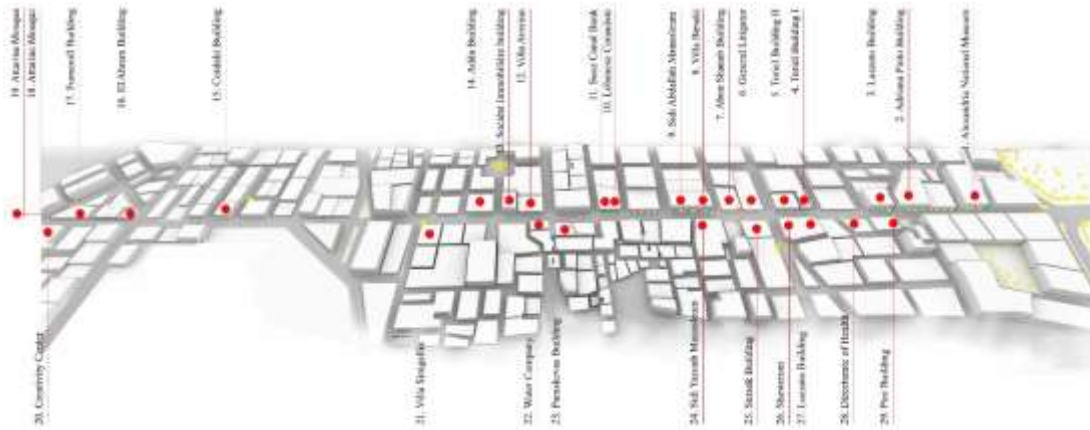


Figure 6. 3D map illustrates heritage buildings in Fouad Street.

2.2 Comparison between different styles of Fouad Street buildings

The following tables illustrate a comparison between different styles of Fouad Street buildings:

Table 3.a. Sorting of heritage buildings according to architectural style

Style	Neo-Classic	Neo-Renaissance	Neo-Romanesque
Origin	Classic Greece and Rome	Italy and France	European
Historical Inspiration	Classical Greece & Rome	Italian Renaissance	Romanesque Period (10th-12th Centuries)
Features	Columns, pediments, symmetrical facades, restrained ornamentation	Symmetrical facades, grand proportions, elaborate ornamentation	Round arches, massive stonework, rustic appearance
Example (1)	Water Company (22)	Société Immobilière building (13)	Adriana Pinto Building (2)
Year	1920s	1928	1923
Architect	Y. Yatrou and P. Gripari	N. Paraskevas and P. Gripari	G. A.Loria
Architect Nationality	Greek	Greek	Italian
Original Function	Administrative	Properties Company	Residential
Example (2)	Al-Horreya Creativity Centre (20) (Muhammad Ali Club)	Alexandria National Museum (1)	Sidi Abdallah Mausoleum (9)
Year	1890s	1931	1920
Architect	N/A	V. Erlanger	Ministry of Waqfs
Architect Nationality	N/A	French	Egyptians and Italians
Original Function	Recreational	Residential	Mausoleum and Residential

Table 3.b. Sorting of heritage buildings according to architectural style

Style	Neo-Islamic	Art-Nouveau	Art-Deco
Origin	Oriental cities	European	European
Historical Inspiration	Islamic Architecture	Late 19th & Early 20th Century Natural Forms	1920s and 30s Modernism
Features	Arches (horseshoe, pointed), domes, minarets, geometric patterns, arabesque decoration	Organic forms, flowing lines, floral and nature motifs, stained glass	Geometric forms, bold colors, streamlined design, modern materials
Example (1)	Sidi Yacoub Mausoleum (24)	Luzzato Building (27)	Lebanese Consulate (10)
Year	1920	1918	1925
Architect	N/A	Sinigallia	M. Avena
Architect Nationality	Egyptians and Italians	Italian	Italian
Original Function	Mausoleum	Residential	Residential
Example (2)		Khedival Estate	Cordahi Building
Year		1860s	1929
Architect		Dimitri Fabriciuos Pacha	George Pareq
Architect Nationality		Greek	French
Original Function		Residential	Residential

3. DISCUSSION AND RESULTS

Throughout the history of the city, the architecture of Alexandria, Egypt, has been in contact with world cultures, especially those of the Mediterranean sphere. Alexandria is rich with cultural features dating back seven thousand years (El Menshawy et al., 2023).

Fouad Street boasts a legacy that stretches back centuries. With origins dating to 331 BC, it was designed by Greek architect Dinocrates as part of the initial layout of Ptolemaic Alexandria. This makes it arguably the world's oldest continuously inhabited planned street. Originally named "Canopic Road," it served as a major artery for trade and movement within the city.

The street's name has evolved over time. During the Roman era, it was known as "Port Rashid Street." Later, it was called "Fouad Street," named after King Fuad I of Egypt before receiving its current designation "Al- Horreya Street" which means "Freedom Road". Despite the official name change, residents often use the older moniker, a testament to the street's historical significance.

A walk down Fouad Street is a journey through various architectural styles. From Neo-Classical buildings to Art Deco structures and even modern influences, the street showcases Alexandria's rich architectural heritage. The presence of European architects and residents during the 19th and early 20th centuries left its mark, with Italianate influences particularly noticeable alongside French and Greek elements. Many of the buildings lining Fouad Street possess historical significance, including grand mansions, former consulates, and historic theaters, all contributing to the street's unique character and providing a glimpse into Alexandria's past.

While some preservation efforts are underway, Fouad Street faces challenges. Deterioration of older buildings, unplanned development, and the need for modernization threaten the street's architectural integrity. One of the most glaring problems is the construction of new buildings with facades that clash dramatically with the existing historical structures. These modern additions often lack the intricate details, classical proportions, and rich ornamentation that define the heritage buildings.

Furthermore, the historic buildings on Fouad Street were constructed within a certain height range, creating a sense of visual unity and allowing sunlight to reach the entire street. Unfortunately, new developments often disregard these height limitations, resulting in towering structures that cast long shadows and create a suffocating feeling. This not only disrupts the architectural rhythm of the street but also negatively impacts the quality of life for residents and businesses in the older buildings.

Furthermore, poorly planned renovations and the use of inappropriate materials pose a significant threat. Heritage buildings often require specialized restoration techniques and materials that are compatible with the original construction. However, to save costs or simply due to a lack of knowledge, some renovations use modern materials like concrete or plastic cladding that not only look out of place but can also accelerate the deterioration of the original structure.

The neglect of proper maintenance further exacerbates the problem. Historic buildings require ongoing care to address issues like water damage, cracked facades, and structural weaknesses. Without regular maintenance, these problems worsen over time, jeopardizing the structural integrity of the buildings and diminishing their aesthetic value.

The combined effects of these issues paint a concerning picture of the future of Fouad Street. The architectural language that tells the story of Alexandria's past is gradually being erased, replaced by a disjointed and impersonal streetscape. Unless there is a concerted effort to enforce stricter building codes that prioritize heritage preservation, utilize appropriate materials for restoration, and establish robust maintenance programs, Fouad Street risks losing its unique character.



Figure 7. Facades of modern buildings that are inconsistent with heritage buildings.



Figure 8. The facades of modern buildings differ from the prevailing height of heritage buildings.



Figure 9. Deterioration of heritage buildings (Mausoleum of Sidi Yacoub)



Figure 10. Visual distortion resulting from modern buildings.

4. CONCLUSION

Alexandria's architectural landscape reflects a rich history of cultural exchange. The presence of Greek, Italian, and Armenian communities, alongside local Europeans, significantly influenced the city's built environment. This cosmopolitan melting pot fostered a unique architectural pluralism, evident in the emergence of various styles throughout history: Neoclassical, Art Deco, Art Nouveau, Neo-Renaissance, Neo-Romanesque, and Neo-Islamic. Despite the diversity in styles and nationalities of architects, a remarkable degree of integration and visual unity was achieved. This harmony within the city streets contributed to a strong sense of belonging for its residents. However, this study of Fouad Street reveals a concerning trend of architectural and urban deterioration as a result of local migration. Alexandria's once-vibrant architectural identity seems to be fading. This decline manifests in several ways: deteriorating building facades, insensitive new developments within historical contexts, and a disconnect between the urban design of recent extensions and the city's historical fabric. Comparative analysis of Alexandria's golden age under Muhammad Ali Pacha's rule (1805-1953) further underscores this loss of architectural character. Understanding the factors contributing to this deterioration and implementing effective preservation strategies are crucial to ensuring the future of Alexandria's architectural heritage. Future research should investigate these challenges and propose solutions for sustainable urban development that respects the city's rich cultural legacy.

5. RECOMMENDATIONS

Based on the literature review and the preceding analytical study, the following recommendations are proposed:

Preserving Architectural Heritage: The preservation of buildings with diverse architectural styles is crucial. These styles contribute to the city's distinct character and foster a sense of belonging among residents.

Integrated Development: New laws and regulations, along with clear design criteria, are needed to guide the construction of new buildings. These guidelines should ensure integration with existing structures and the creation of a cohesive architectural environment.

Specialist-Led Preservation: The preservation of historical buildings requires the expertise of specialists. They should employ modern technologies, regular maintenance practices, and appropriate conservation materials and theories.

Respecting Architectural Identity: New developments should respect the established architectural principles and character of the area. This will promote harmony between buildings from different eras.

Strategic Urban Planning: Develop comprehensive urban development plans that anticipate population growth due to migration. These plans should include strategies for creating new, affordable housing units while preserving existing historical areas.

Infrastructure Investment: Invest in infrastructure upgrades, including water supply, sanitation, transportation networks, and waste management systems, to accommodate the growing population. This will help prevent the strain on resources that can contribute to urban sprawl and the rise of slums.

Promoting Economic Opportunities: Implement programs and incentives to create new job opportunities in rural areas. This will discourage residents from migrating to other cities for better economic prospects.

Public Awareness Campaigns: Launch educational campaigns to raise awareness about the importance of preserving the city's architectural heritage and promoting responsible urban development practices among residents.

Community Participation: Encourage community participation in urban planning decisions. Residents can provide valuable insights into the needs and challenges of their neighborhoods, fostering a sense of ownership and promoting sustainable development solutions.

Funding Mechanisms: Establish sustainable funding mechanisms to support heritage preservation efforts, infrastructure development, and community revitalization programs.

This could involve public-private partnerships, grants, and revenue generated from tourism initiatives.

Incentives for Property Owners: Offer tax breaks or financial incentives to property owners who undertake restoration projects on historical buildings according to approved guidelines. This will encourage investment in heritage preservation.

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