



City as a palimpsest: A Preface to the Hidden Geometry of Cairo

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Abstract

In the center of Cairo, there remains a street named "Baab El-Bahr"- or "A gateway to the sea". This street once led to the shore of a wide sub-canal from the Nile River. Today, it only leads to the famous "Ramses square", which still holds the name of the ancient statue of "Ramses the 2nd" that has been relocated to Cairo-Alexandria desert road in August 2006. The city witnessed major changes in its urban morphology across the 19th and 20th centuries as it lost its role as a platform for social interchange and instead turned out to be an everyday scene for controversy and dispute. Through an investigation of the key principals which generated the city's morphology and its massive transformation, this study aims to support future urban regeneration methodologies, urban development policies and city expansion visions.

1. Introduction

This preface attempts to establish an understanding of the city as a palimpsest. In order to read into the complexity of its layers, first, we have to trace the key influences leading to the growth of the city. However, this study assumes that the key influences - which directed the genesis of Cairo and led to the city's growth for over 2,000 years - were deliberately eliminated from the city's fabric during the 19th and 20th centuries. The study is concerned with identifying the key influences that enforced the metamorphosis of the city of Cairo during the 19th and 20th centuries.

2. Identity Through Urban Geography

2.1 Natural Geography - the Desert, the Nile and the Birth of Vernacular Urbanism

The natural morphology of the city of Cairo is a micro model that resembles the natural morphology of the land of Egypt as a whole. In older times, the "Sahara Desert" extended over all across Egypt and North Africa, until the Nile first appeared in the Miocene age where its inflow at that time was in the city of Cairo.

2.2 The Nile Birth of Vernacular Urbanism

The city was first founded in the south of historic Cairo, *Babylon Fortress 2nd century A.D.*, and after the Arab invasion during the 7th century A.D, it started to grow to the northeast until it merged, in the 20th century, with the old Egyptian city of *Heliopolis 2500 B.C.*

It is well observed on the map of Cairo of the year 1798 A.D that the most dominant element influencing the morphology of Cairo was the water canal, which held many names including *El-Khalig El-Massry*, *Khalig Amir El-Momineen*, *Trajan canal*, etc. Prior to any of those names, however, it originally held the name of the ancient Egyptian king, *Senusret III* of 1850 B.C, justifying the reason the canal was also

known as the “Canal of the Pharaohs”. It was known to have been the first implementation for creating a connection from the Nile to the Red Sea in the east.

On all the city maps produced by the French commission of science and arts in Egypt during 1798 A.D, the canal was still running in the center of the city, from its very beginning in the south and heading northeast, where it passed by the shores of the ancient city of *Heliopolis* and continued its way to *Suez* old port.

When looking into pre-existent maps, the city of old Cairo seems as if had been divided into two parts. In reality, the city had been growing for 2,000 years to form this specific morphology. Moreover, Cairo witnessed several stages of city growth under several consecutive dynasties. During all eras, the city always maintained the dynamic and integrated relation between its lakes and canals. Being the source of water supply and a transportation network that connected the city internally, the city remained intelligently connected to the surrounding world through the Red and the Mediterranean Sea.



Figure 1: Canal passing through the center of Cairo heading northeast to Suez.
1829, Description de l'Égypte Atlas Géographique, France.



Figure 2: Chamouin et Dandeleux Vol.I. PL.15, 1829, Description de l'Égypte État Moderne, France.

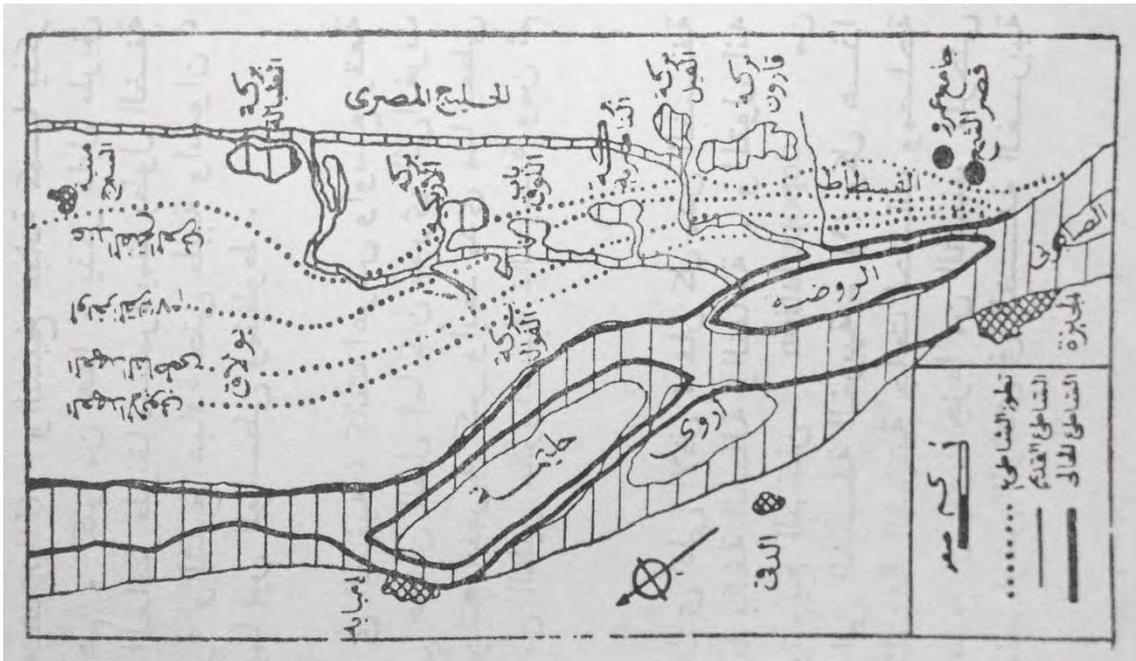


Figure 3: Main course of Nile river deviating towards west.
Hemdan G.,1980, Shakhsiat Masr, Cairo

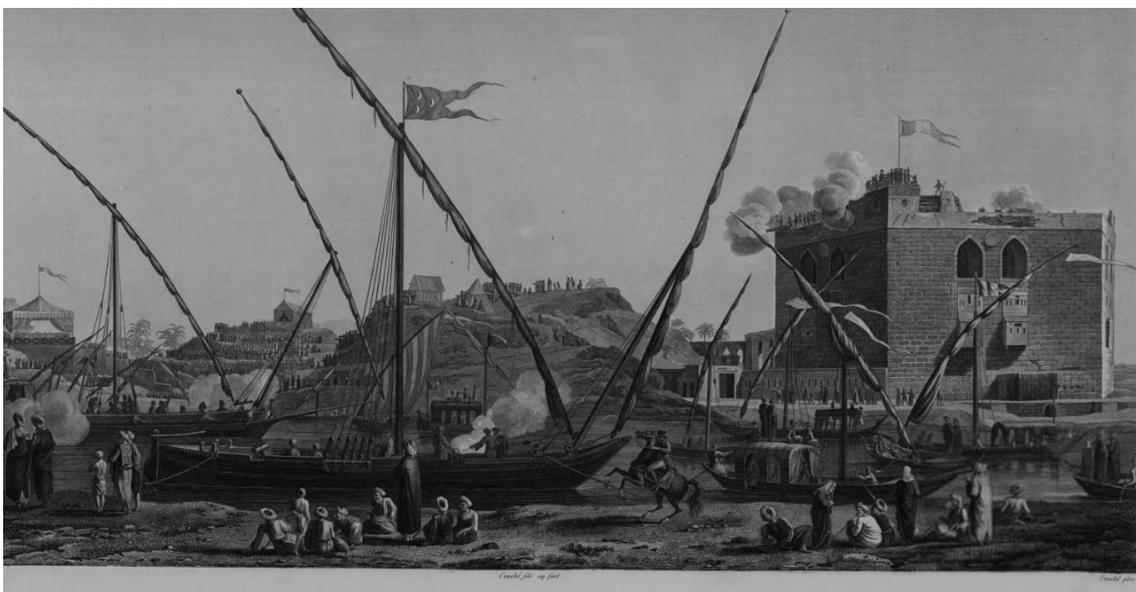


Figure 4: Cairo's central canal (El-Khalig El-Massry) at its origin (Fom El-Khaleeg)
Couche Pere, E.M. Vol.I. PL.19., 1829, Description de l'Égypte État Moderne, France.

3. CITY METAMORPHOSIS

3.1 Transnational Urbanism - Ultra Vision for the City

The morphology of the city in the 19th century under the rule of *Mohamed Ali's* family led to a new phase. One significant form of development of the city made by *Mohamed Ali* during the beginning of the 19th century was connecting the "*Bulak port*" to the central canal via a new canal project. This development plan is described as a very important national project.

However, and during the rule of *Ismail*, an early model of transnational urbanism had been implemented. The city center was designed by French Architects. New designs replaced the small streets with new and broad avenues, the lakes all over Cairo were transformed into big squares and gardens such as the

Abdeen palace, the official residence for *Ismail* during his rule constructed over *Berket El-Faraeen* (the Pharaohs lake) and the great famous *Azbakeyya lake* was altered into a large garden and opera house. The new French planning for the city was influenced by military a movement that imposed political rule into the streets of the city. On the other hand, a fear of an epidemic rather threatened the decision of filling lakes distributed all over the city.

In the 1850s, the city introduced the railway network which connected Cairo, Alexandria and some Suez important ports. Thereon after, the railway network substituted the Nile and canal networks' role of transportation. Moreover, the *Khedive Ismail*, in 1865, commissioned *Jean-Antoine Cordier* to establish the first water company in Cairo. Although considered a magnificent step towards a modern city, it had a major impact on the conventional nature of the canals in supplying water. In 1899, the central canal was filled and used as an infrastructure for tramway.

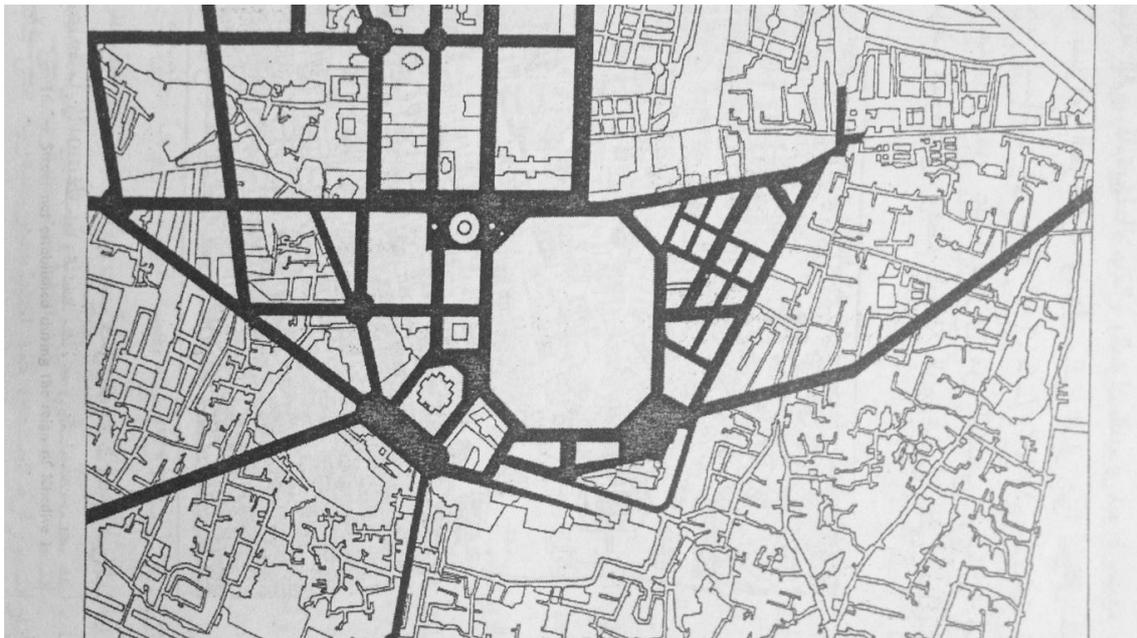


Figure 5: French design of new Ismailia development in the center of Cairo.
Ismail, M.H., 2014, Wagh Madinat Al-Qahira, Cairo.

3.2 Formal vs. Informal Urbanism

3.2.1 Informal Urbanism - Urban Improvisation from Below

The second half of the 20th century witnessed a new stage of urban metamorphosis. It could also be known as improvised urban morphology as the cultivated lands inside and on the edges of the city transformed into extremely dense informal communities. Informal communities in Cairo reused the irrigation network of canals and turned them into a network of streets. Main and secondary irrigation canals were transformed into main and secondary streets while blocks were built over narrow streets - old irrigation sub canals- in over than ten floors.

3.2.2 Formal State Strategies for the City Growth through the Desert

During the beginning of the 20th century, the city of Cairo expanded towards the eastern desert and beyond the natural barrier of the *El-Mokattam plateau*. As a result, a new extension for Cairo later called *New Heliopolis* was formed. It was the first time in history that the city expands towards the desert without any connection to the Nile River or its canals. However, the newly established city remained connected to the center of Cairo through tramways. The model of expansion towards the desert was then continued creating the establishment of *New Heliopoli*, *Nasr City*, *10th of Ramadan*, *15th of May*, *New Cairo*, *Badr*, *Elshorouk*, *Madinaty* and a *New administrative capital* (current state vision expansion).

Cairo expanded, similarly, to the west facilitating the establishment of areas such as the *6th of October*, *Sheikh Zayed*, and *Elsadat City*. None of the new city's expansion models was connected through railroads or tramways with an exception of *Heliopolis* and *Nasr city*. However, recent governments have decided to rid of all the old tramways in 2015.

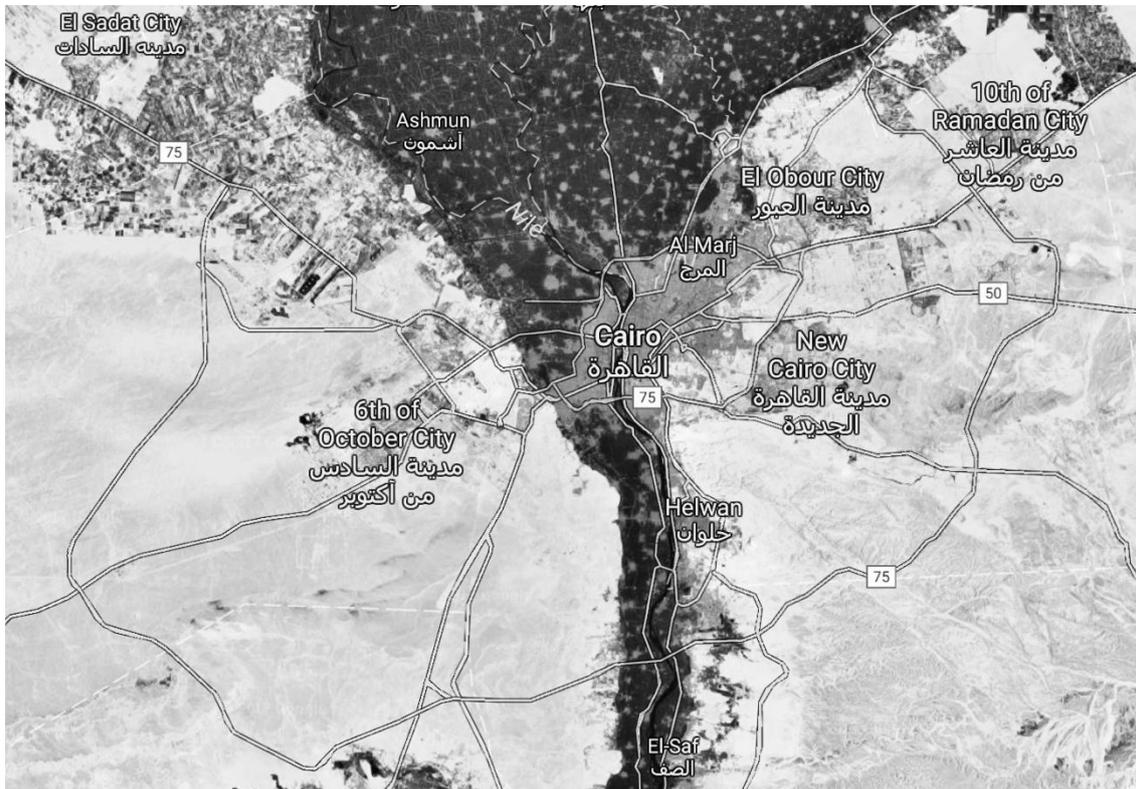


Figure 6: Cairo's expansion across the desert.
Satellite image 2017, Cairo.

4. CONCLUSION

The current urban morphology of Cairo is no longer integrated with lakes or river canals. Previously existing water features were filled and reused as infrastructure for railways and street networks and disappeared from the city scene. Modern, formal and informal urban approaches failed to maintain the integrated historic relation between the city and its context (lakes and canals). Modern approaches, however, created an absurd urban morphology for such a historic city. The city of Cairo is in a critical need of special regeneration projects and urgent urban preservation policies. Such projects and policies should especially focus on the historic relation between the city and the Nile River.

Ongoing development projects in Cairo include the *Maspero Triangle Development Project*. The project's location is one the state believes should undertake a real estate development. However, the historic *Bulak* area must be reconsidered as an "urban archeology site" and should be preserved for further site studies. The recent discovery of an ancient Egyptian statue near old *Heliopolis* during March of 2017 was found within an informal settlement built over the traces of Cairo's old central canal. This discovery feeds the argument that the city needs more policies to support the preservation of old canals and that these sites should act as grounds for investigation for landscape and urban archeology.

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