The Contributions of Mehmet 'Ali the Wali of Egypt, the reforming and architectural works that remain in the city of Heraklion on the Island of Crete (1830-1840 AD/ 1246-1256 AH)

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Abstract

The Greek island of Crete played an important historical role in the future of the Ottoman Empire (1669-1898 AD/1080-1316 AH), which included a ten-year period (1830-1840 AD/1246-1256 AH, during which the island was under Egyptian administration.

From the beginning, Mehmet Ali Pasha realized the importance of the island's strategic location; he found an opportunity to achieve his military and political aims to complete the independence of Egypt. So Mehmet Ali Pasha developed a comprehensive and organized modernization program for the Cretan society, through specific axes: such as taking care of public health, civil and military infrastructure, renovating forts, castles and ports in the four island cities in general. Water projects were one of the most important axes of the Egyptian reform program in the cities of the island, so the Egyptian administration adopted a major water architectural project, relying on canals and water bridges that were constructed in previous periods, after renovating them and adding some architectural works to deliver water to the city, so he rehabilitated the Fundana Canal and built the Egyptian bridge at Agia Irini, which is considered the most important surviving architectural work of Mehmet Ali on the island.

This paper aims to study Mehmet Ali Pasha's reformist additions to the community and the remaining water architectural works in the city of Heraklion and to determine the architectural characteristics of the bridge built by Mustafa Nayel Pasha in (1839 AD/ 1255 AH), as a continuation of the Fundana Canal rehabilitation project. The water architectural elements follow historically and architecturally in the ages prior to the period of Egyptian rule of the island (1830-1840 AD/1246-1256 AH). And the inventory of the different influences on these facilities, comparing them with similar aqueducts and water bridges, and identifying the types used by the Ottomans on the rest of the Greek lands, based on the field study of these remaining works that are used until now.

Introduction

Mehmet 'Ali Pasha's relationship with the island began for the first time in (1822 AD / 1238 AH), when 7000 soldiers landed on the island to suppress the rebellion of the Greeks on the order of the Ottoman Sultan Mahmoud II (1808-1839 AD / 1223 / 1255 AH), who asked Mehmet 'Ali to put down the Greek revolution, so he participated in the Moreh War, in which Mehmet 'Ali lost his naval fleet in the Battle of Nuarino (1826 AD / 1242 AH).

The island of Crete became completely under Egyptian rule in the period (1830-1840AD / 1246-1256 AH)), and during this period the Egyptian administration on the island carried out various architectural and urban reforms, in addition to economic and social reforms, in an attempt by Mehmet 'Ali Pasha to transfer the reform experience in Egypt Which he started since taking power (1805 AD / 1220 AH).

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Since taking control of matters, Mehmet 'Ali Pasha began implementing a major reform program on the island of Crete, and was keen to publish the results of this reform program in an official newspaper, which he called the Cretan Gazette Vekayii Giridiye, similar to the Egyptian Gazette, and this newspaper contributed as a different source from Contemporary sources for the study of the history of the island of Crete in the period (1830-1840 AD / 1246 - 1256 AH), a topic that has not been adequately addressed by historical studies related to the attempts of the Egyptian administration to reform and organize the island.

Some previous studies by Detorakis, T, Panagiotis K and Seçil Yilmaz mention that Mehmet 'Ali's project to develop the island relied on two main pillars: the first is charity, and the second is discipline, announcing this explicitly in the Official Gazette, the Cretan Chronicle.

These Egyptian reform policies on the island required the establishment of an infrastructure, and the allocation of a budget to ensure the effectiveness of these measures in the areas of public health and service projects on the island as follows:

First: Attention to public health on the island

According to the Cretan Chronicle, this was accomplished by building health units and providing them with qualified doctors, as seven units were operated and quarantined in Chania, Heraklion, Rethymno, Castile, and Sudha. With a guarantee of full subsistence for the pioneers of these units and quarantine. It can be said that the largest of these health units is the Lazaretto Quarantine Hospital), which was established in the port of Heraclio (1832 AD / 1248 AH) according to the quarantine established by Muhammad Ali Pasha south of the eastern port in Alexandria, whose construction costs amounted to 10,717 piasters, according to the report of the Head of Customs. On the island of Crete, Hajj Muhammad Agha, who was commissioned to build the hospital from the beginning, to be similar to the military hospitals founded by Clot Bey in Cairo and Alexandria in (1827 AD / 1243 AH), as well as following the same medical practices followed in Egypt. The Heraklio Hospital had a capacity of about 900 beds. While the capacity of the military hospital in Cairo was 1200-1600 beds. The salaries of doctors and pharmacists at Heraklio Hospital amounted to 19,000 piasters, most of whom were Europeans. The military hospital in Khania was also renovated when a regiment of the Egyptian army arrived, and this cost the state treasury about 6000 piasters.

During the period of Ottoman rule for ten years, the Egyptian authority was the direct ruler of the island in the period from 1830-1840 CE / 1246-1256 AH. During this period, Muhammad Ali Pasha made several attempts to repeat the Egyptian experience on the island of Crete, so he renewed and increased the depth of the ports in the cities of Chania, Heraklion and Rethymno. However, in later periods, the island's ports were completely renovated; In a way that it is difficult to determine the additions that were made in the era of Muhammad Ali Pasha.

The Egyptian administration has added a new source of water in Heraclio, and this source is represented in the constructions that were incorporated for the Fundana aqueduct. Of which we have significant parts of the archaeological remains of the water networks, the aqueduct and the water bridge in the region of Agía Iríni, which was built with direct instructions from Muhammad Ali Pasha to Mustafa Nael Pasha in 1837 A.D. From the beginning, the Egyptian administration was interested in renovating the Fundana Canal, which had been built with its facilities in its first phase by Francisco Morosini 1628AD/1038AH - as mentioned above-, so Mustafa Pasha expanded it, and cleared the Skalani tunnel), whose dimensions are about 1 x 2

m, and its length is about 1150 m. Currently, this water network consists of three water bridges, namely Spilia Bridge, Karydaki Bridge and Fortetsa Bridge.

Thus, the water course changes to the city of Heraclio to start from Fundana to Skalani, passing through the aqueduct built by the Venetian rulers in Vlychia through the Roman tunnel and the bridge built by Mustafa Pasha. The unit of fluid measurement in the Ottoman era - The sources that studied the Ottoman archives stated that this amount of water was sufficient for the city's residents to a large extent, as the water pumping in the year 1887AD / 1304 AH was about 8 liters per second, according to the Ottoman archives in Heraklion in 1892 AD / 1309 AH, the Fundana Canal was the main and perhaps the only source in the 19th century AD / 13 AH, and for this great importance, it was donated as a charitable work in the name of Sultan Abdul Majid. By demolishing a large part of it to cut off water from the city, which weakened the Ottoman position during the war between them.

Despite the numerous repair works carried out by the Egyptian administration in the period from 1828-1840 CE / 1244-1256 AH, the water bridge built by Muhammad Ali at the hands of his governor, Mustafa Nael Pasha, in the Agía Iríni region, is the only architectural work that its architectural condition hasn't changed (plate. 1). This bridge is a major architectural contribution that helped in solving the water shortage problem in Heraklion. The construction of the bridge was a continuation of the water architectural works that started from an early age on the island.

Analytical study

Tracing the water transport route to the city of Heraklion indicates that Mustafa Nael Pasha followed the prevailing tradition in Ottoman architecture, which is to re-use, complete and renovate the old facilities, and sometimes add some units to perform their previous or new job. We find; it has integrated parts of the previous water channels, and the use of old springs and added new ones to provide greater quantities of water. These added parts reflected the high technical expertise, engineering and architectural precision, resulting from the exploitation of Roman, Byzantine and Ottoman technical know-how in the construction of aqueducts and water bridges throughout the Ottoman Empire.

These waterways were chosen according to the terrain in the region, which governed the course of the canals, taking care to avoid the construction of high water bridges and water tunnels, except when only necessary. As is the case in the water transport route of the city of Heraklion (Map.1, 2), where the Fundana tunnel) dating back to the Roman period was dug, and the bridge was built by Mustafa Pasha. Here it is different from those huge water projects in Constantinople, Kavala, Ceres and Pylos.

The Ottoman period and the Egyptian transitional period left many types of channels prepared as water transport paths, and previous studies traced the types of these channels that date back to the period of Ottoman rule in Greece, and their types can be summarized as follows:

- Subterranean canals: They are canals formed according to the terrain in terms of inclination and path, and they are very few. An example of this is the subterranean canal under the Neocastro Castle in Pylos, which was built by the Ottomans in 1573AD / 981AH.
- Channels cut into the rock: their vertical sides are secured with brick walls, the most important examples of which are part of the Chalcis Aqueduct, and the Fundana Canal in Crete.

- Ground channels: They are simple waterways on the surface of the earth, and they are few due to the ease of demolishing them and using their stones in other buildings. Including the semi-cylindrical aqueducts made of pottery, as in Chios, Pylos and Kos, and Meh is cylindrical, as the rest of the models in Kavala and Kos
- Arches over castle moats: They extend over vaults to cross the trench dug in front of the walls of cities and castles, such as the Rio Castle in Polygonises (plate. 11).

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