

The Mamlukisation of Some Religious Buildings in Cairo throughout the Muhammad Ali Dynasty

An Analytic Study^(*)

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Abstract:

This paper introduces an analytic study on the occurrence of the mamluk style on religious monuments of the Muhammad Ali dynasty while covering the reasons for this phenomenon. The research also analyzes the most focal and obvious mamluk artistic as well as architectural features that were employed on religious establishments of the Muhammad Ali dynasty. The study found out that the location of these monuments played a vital role in the appearance of mamluk features as the architect tried to maintain harmony in the area without changing its style. Another reason was the founder's tendency to apply the traditional style of the mamluks rather than borrow foreign features, in spite of the great European renaissance at the time of Muhammad Ali and his successors. The study also revealed that the founder also played a great role in the mamlukisation of the religious buildings in the time of Muhammad Ali's dynasty.

Keywords: Mamlukisation – Muhammad Ali – buildings

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التأثيرات المملوكية على بعض العماير الدينية في القاهرة في عصر اسرة
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المستخلص : يهدف هذا البحث الي دراسة وتحليل ظهور العناصر المملوكية المصرية علي العماير الدينية في عصر اسرة محمد علي كذلك الأسباب التي أدت الي ظهور تلك العناصر المعمارية والفنية علي هذه العماير. كما تشمل الدراسة ايضاً تحليل تلك العناصر الفنية وانواعها المختلفة على عمائر اسرة محمد علي. ومن خلال الدراسة والتحليل ثبت ان هناك عاملان اساسيان لهم دوراً كبيراً في ظهور تلك العناصر، العامل الأول هو الموقع الذي تقع عليه المنشأة حيث نجد ان بعض عمائر اسرة محمد علي أنشئت داخل العمران المملوكي فكان لزاماً على المعمار المصري ان يتأثر بالفن والعمارة المملوكية ويسير علي نفس النمط. العامل الثاني هو منشئ الأثر والمهندس المصري الذي كان مغزماً بالفن والعمارة المملوكية فكان من الطبيعي ان يتأثر بالعمارة المملوكية المصرية على الرغم من النهضة الأوروبية التي شهدتها مصر في عصر اسرة محمد علي وخلفاؤه.

الكلمات الدالة: التأثير المصري المملوكي - اسرة محمد علي - العماير الدينية

Introduction

In 1517, Egypt became an Ottoman province for about three consecutive centuries after the defeat of Tuman Bey in the battle of El Raydaniah by Sultan Selim¹, until the advent of the French expedition 1798-1801¹ Egypt remained under the rule of the family of Muhammed Ali as an Ottoman province. In addition, Egypt was granted as an

independent vassal state or as a khedivate 1867, Khedive Ismail and Tawfiq ruled Egypt as a Semi-independent State under Ottoman sovereignty until the British occupation 1882². It is worthy saying that Muhammed Ali's reign can be divided into two periods. For the first few years, he spent his time consolidating his rule by military, economic and architecture expansions, the second phase by eliminating his oppositions³

This research aims to clarify the reason of the appearance of the Egyptian mamluk style on the religious architecture of the Muhammad Ali dynasty. Since 1805, when Muhammad Ali accessed the authority of Egypt, the European style was employed on most monuments of his time because of a European cultural renaissance that spread widely at the time of Muhammad Ali. His successors, however, followed the traditional mamluk style in their newly-built monuments. This research covers the reasons and factors behind the mamluk phenomenon on the monuments of this era.

The analytic study

The modern era is full of its historical and archaeological features that resulted from the course of political, social and cultural events. The effects of this era are a natural extension of the effects of the Islamic era, but rather it is the link that links the Islamic era with the eras that immediately follow it⁴. This era has resulted in a lot of immovable and movable monuments in various parts of Egypt. These monuments are full of architectural and artistic elements that distinguish them from the rest of the monuments of

previous eras⁵. Therefore, this era is a great turning point in the development and prosperity of the architecture of civil, military and religious facilities, with the use of technical elements that highlight its features and clarify its beauty that distinguishes it from the rest of the artistic elements of the effects of other ages⁶.

Undoubtedly, this era has been blessed by the Alawia family to ascend the rule of Egypt, some of them added and built to satisfy their expansionist dreams. Some of them were built to extinguish their fascination with Europe and its beauty, in addition to the external influences that imposed their weight in Egypt to produce facilities that have a new and distinct character⁷. Historians differed at the beginning of the modern era, and despite the tendencies of some historians to be the beginning of modern era since Muhammed Ali, but the real beginning since the French expedition 1798AD.⁸ Every era has a history that narrates events and glories, and every history has traces that bear witness to that. Like the ancient history and the Islamic history, so the modern history has combined all beauty to show it in its best form in architecture and the arts⁹.

Muhammad Ali's monuments followed the European cultural heritage by blending European and Egyptian heritage together. The architectural scene during the reign of Muhammad Ali Pasha witnessed great changes, whether in the style of buildings or in the decorations executed on them, or in the raw materials used in construction.

There were three trends in the architectural scene:

The first trend: continued the Egyptian style that existed

before the era of Muhammad Ali and some Turkish influences. This model persisted especially in religious establishments, but was not used frequently in civilian establishments.

The second trend: represented the styles found in Turkey, the most important of which was the Roman style that appeared in the palaces of Muhammad Ali and Abbas I during the first half of the nineteenth century.

The third trend: represented the European architectural styles that came to Egypt since the era of Muhammad Ali, and soon dominated the architectural scene, especially civil buildings, since the second half of the nineteenth century.

Each of these models had its terminology and vocabulary. Eventually, there was a mixture of vocabulary and terminology related to architecture at that time. Some of these terms were considered an extension of the old terminology that continued, thanks to the architectural styles that have preserved largely their inherited traditions and styles for several centuries. Moreover, some date back to their origins; the Turkish and Persian languages, while others have their origins in European languages, especially Italian, French, and Greek¹⁰.

The architecture of Muhammad Ali dynasty continues to occupy the minds of researchers and experts in search for its distinguishing features through the study of an archaeological and architectural heritage that occupies a unique artistic position in the history of modern architecture. Archaeologists have shed light on the stages of architectural development during the rule of the Alawite

dynasty, and the attempts at preserving the national Mamluk identity through Egyptianization of the European architecture and inserting the Mamluk style and decoration in order to give them an Islamic character found in the Mamluk monuments and mosques that are still remaining¹¹.

The stages of the development of architecture during that period and the difference in its features starting with the reign of Muhammad Ali, which the archaeologists call the stage of "adaptation", until the periods his ancestors. This period witnessed the stage of Egyptianization during the reign of Khedive Ismail in order to preserve the Islamic identity in the arts and architecture¹². In the nineteenth century, Cairo witnessed the introduction of architectural and artistic styles that were widespread in Europe at that time, as well as the revival of the Islamic style in Cairo¹³.

Foreigners at that time admired the contemporary Islamic style, which was later called the Neo- Mamluk style (Neo-mamluk style)¹⁴, in which architects adopted the reproduction of Islamic designs and artistic styles in modern architecture, and Mamluk architecture had the largest share of this trend¹⁵.

Many experts in the field have been interested in the development of Egyptian architecture between 1805-1952. Among the most prominent of these is Dr. Jamāl Abd al-Raḥīm, who reported to *al-sharq al-Awsaṭ* newspaper that the beginning of Muhammad Ali's era marked the stage of borrowing from European architecture. During the rule of his sons, the concept of European architecture developed to focus on the Egyptianization of art and architecture with the

aim of preserving the Islamic identity. European architecture had prevailed in Egypt since the seventeenth century following two main types: Baroque and Rococo¹⁶.

In general, religious buildings continued the traditional architectural styles, whether Mamluk or Ottoman, and adorned with decorative elements from the Rococo style. That was generally due to the government's desire not to prejudice everything related to religion in order to avoid stirring up community sentiments. It was not always acceptable to use non-Muslim architectural styles in building mosques or shrines. Therefore, the European influence in religious buildings was limited to the use of Baroque and Rococo motifs that had been derived from the Ottoman architecture after being intertwined and refined by Turkish architects in a manner consistent with the Islamic religion within the Ottoman style¹⁷.

The funerary tombs of the royal family at Imām al-Ṣafiʿī district was a stage in the development of funerary buildings in general in Cairo. Such a development applies to both architecture and all its features including decorative inscriptions. In addition to an increase in the decorative architectural enrichment at that time that was the natural result of the Turkish, Mamluk and European influences that affected artistic life in Egypt¹⁸.

Dr. Jamāl ʿAbd al-Raḥīm confirms that the Italian architect, Mario Rosseti, started the Egyptianization phase of European architecture in Egypt, whose love for Islamic civilization and art was the main factor behind his conversion to Islam. He died while performing the

pilgrimage *Hajj* and was buried in *Al-Baqī'*, along with Antonio Lasciac¹⁹.

Therefore, the change in ideology that prevailed during the reign of Muhammad Ali and his successors played a major role in shaping the architectural and urban thought of many cities. It was the driving force that formed this architectural and urban interface and accordingly city planning changed from an Islamic system to a modern one²⁰.

The Mamluk architectural features

Numerous architectural elements had been employed in the Bahri mamluk period, which reflects the economic prosperity at that time. These include domes, minarets made of stones, and elegant facades. In the Circassian period, however, other distinctive features were added to the already existing ones, such as the size of constructions and the Iwans. The minarets also took different shapes and designs especially in their decoration and their multiple heads²¹. Elaborate stalactite portals became one of the distinctive mamluk features, which claimed a Syrian influence²². Facade windows were oval in shape with the sun like *Šamsiyāt* for lighting the inner edifice, and *Qamariyāt* or *Šand* that were embedded with stain glass and sometimes with brass grills. Other forms included tripartite windows, and double arched openings that were greatly used²³. Crenellations *Šurrāfāt*²⁴ on facades of buildings were among the characteristic features of mamluk architecture, and were either simple or composite²⁵. Mamluk religious buildings witnessed a remarkable evolution in their plan;

such as colonnaded walls in the riwāqs of mosques²⁶ and the cruciform plan of madrasah²⁷.

All above-mentioned elements had been employed in the architecture of Muhammad Ali dynasty and became elaborate devices in the buildings of the 19th century AD. Therefore, there was a great need to analyze the different types of mamluk elements employed in modern architecture, which help emphasize the idea of the mamlukisation in the modern buildings of Egypt.

The minarets

The first elaborate element that was greatly inspired by modern Egyptian artisans is the **minaret**, which became a vital part in the architectural buildings of the mamluks²⁸ until Muhammad Ali's reign. The first example here is in the mosque of al-Rifā'ī²⁹ facing the madrasah of Sultan Ḥasan. The minaret is typically mamluk in style³⁰ (Fig.1) (Pl.I). The two minarets of al-Rifā'ī are located in the southern side of the mosque above the southern entrance and façade. The minarets were built of four storeys; the first is octagonal enhanced by a series of keel arched recesses, followed by a cylindrical shaft with interlaced carved patterns. The third and last story is the pavilion supported by eight colonettes and crowned by a bulbous top³¹. These two minarets resemble the northeastern minaret of sultan's Hasan Madrasah³² (Fig.2) (Pl.II), having two octagonal storeys instead of one, and a pavilion similar to al-Rifā'ī's. The minaret of the mosque of Bashtāk built in 737AH/1337AD³³ is another prototype of this mosque's two minarets. The resemblance between the minarets of al-

Rifā'ī and sultan Ḥasan reflect the idea of the parallel factor of the monument to maintain the symmetrical composition of the two buildings thus creating harmony, which emphasizes the vital importance of the topographical factor on the appearance of these impacts.

The Khedive of Egypt, Muhammad Tawfīq Baša, started building another mosque near the mausoleum of Imam al-Šāfi'ī (1882-1896AD), which was finished by Khedive 'Abbās Ḥilmī II in 1905AD³⁴This mosque had a mamluk facade, and a typically a mamluk minaret as well³⁵ (Pl.III) very similar to al-Rifā'ī³⁶. Such examples indicate that the style of mamluk minarets became one of the features of the 19th century's religious buildings.

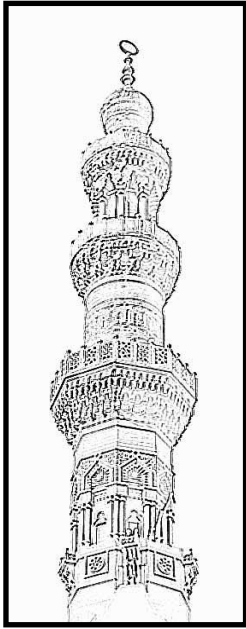


Fig.1 minaret of al-Rifā'ī mosque
Ḥasan madrasah

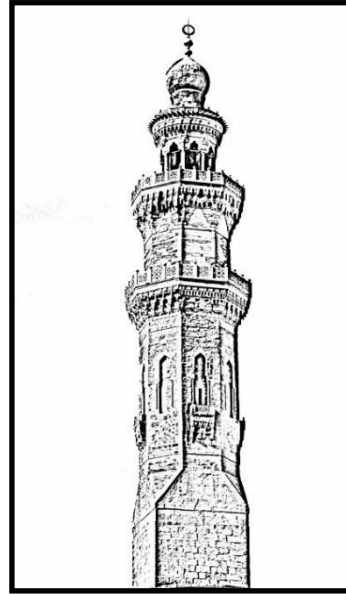


Fig.2 minaret of sultan
Ḥasan madrasah

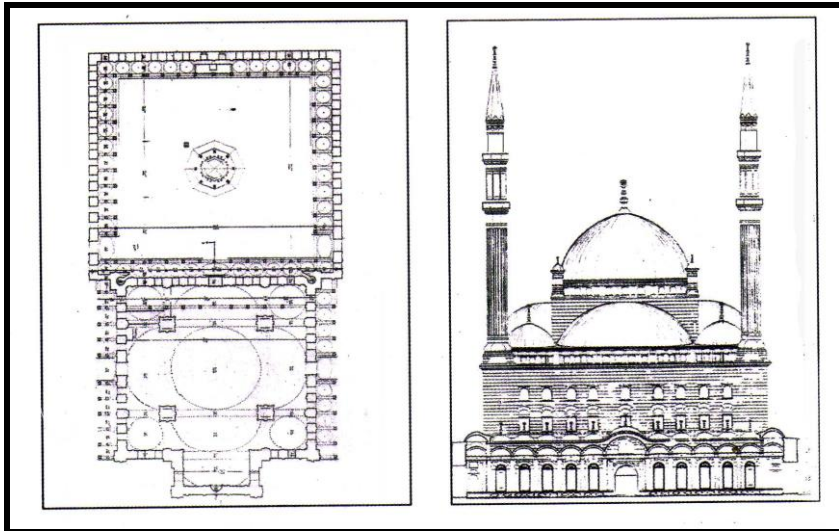


Fig.3 The plan and the minaret of the mosque of Muḥammad 'Alī
After Ḥālīd 'Azab, *al-Taḥawlāt al-siyāsiya*

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e by the researcher

There is an obvious difference between the minaret of the Rifā'ī and sultan Ḥasan Minarets and those of Muḥammad 'Ali. The mosque of Muḥammad 'Ali was built in the Ottoman style that is called "the pencil shaped minaret" (Fig.3). A formal style occurred in the mosques of the Ottoman period as seen in the mosque of Sulaymān al-Khādīm and the mosque of queen Ṣafiyah. Therefore, the mosque of Muḥammad 'Alī represents the faith of the Ottoman revival of arts³⁷. In the mosque of Muḥammad 'Ali, it was a great show of the contemporary European styles of the Rococo and Baroque style of arts involved in the a phase that is called "The Ottoman Baroque"³⁸

In the mosque of al-Rifā'ī, a phenomenon occurred which is "The Twin Minarets". A character seems to have been involved in the mamluk architecture, considering this phenomenon a revival of the mamluk architectural style. The madrasa of sultan Ḥasan originally now had a mamluk minaret and lost its twin³⁹, however, a prototype was built by Ibrāhīm Bashā instead⁴⁰. The same phenomenon could also be observed in the Khānqāh of Faraj ibn Barqūq⁴¹

Another example by the same founder is the mosque of al-Sayyida Zaynab built in 1302AH/1884AD⁴². Later in 1940, the Ministry of Awqaf completed the works and enlarged the mosque.⁴³ The mosque is located within a vicinity full of mamluk monuments. It was built in the mamluk style with a main western façade overlooking the main quarter⁴⁴ having three entrances slightly protruding from the main façade. The minaret of the mosque (Pl.IV)

was built in the mamluk style⁴⁵ with two octagonal storyes and a pavilion with colonettes. This minaret resembles that of al-Rifāʿī in the mamluk style⁴⁶.

Other mamluk monuments within the same vicinity is the mosque of Timrāz al-Aḥmadi built in 876 AH/1471 AD, and located at the beginning of Port Said Street, which displays a typically mamluk minaret, facade, and main portal. Its most attractive part is the minaret that was built in three storyes in the mamluk style⁴⁷. The mosque was called by the commons the mosque of Sidi Bahlūl. In 1907 the ministry of Awkaf reconstructed and restored the mosque⁴⁸. Its last works ended in 1992AD⁴⁹ Urbanization in the quarter of al-Sayyida Zaynab did not affect the harmony of the area surrounded by mamluk monuments. Right behind the mosque lies *al-Ṣalībah* Street, which occupies plenty of mamluk monument with various architectural designs. That is why the architect of the mosque of al-Sayyida Zaynab decided to preserve the harmony of the quarter and built the mosque in the mamluk style.

In the quarter of al-Ḥalīfah the mosque of al-Sayyidah Nafisah was erected in the Ottoman period by ʿAbd al-Raḥman Kathūda. It was rebuilt in the time of the Khedive of Egypt 'Abbas Ḥilmī II⁵⁰ because a fire had caused serious damage and it was renovated in the mamluk style. The minaret (Pl.V) was also built in the mamluk style with three storyes and a pavilion as in most of mamluk minarets⁵¹ recalling the minaret of Qāyrbāy in the mamluk cemetery⁵². Qāyrbāy had ordered restoration of the tomb of al-Sayyida Nafisa in 889-90AH/1484-85AD, but the works only comprised the dome and the minaret⁵³, which is why

the Khedive of Egypt rebuilt the mosque in the mamluk style. Another reason for building the mosque in the mamluk style is, as stated by Alī Mubārak in his *ḥitat*, that sultan al-Nāṣir Muhammad ibn Qalāwūn had established the mosque for the grave of al-Sayyida Nafīṣah in 714AH/1314AD⁵⁴. That is why under the Khedive of Egypt, ‘Abbas Ḥilmī II, the architect wanted to revive the mamluk features of the old mosque, which became a tradition in the time of the Muhammad Alī Family.

Trilobed monumental entrances

One of the mamluk features is the trilobed portals, which was used extensively in the majority of mamluk buildings⁵⁵. Mamluk monumental entrances were borrowed in the modern edifices of the nineteenth century. The western and the southern facades of the Rifā‘ī mosque have a magnificent trilobed arched portals (Fig.4, and Pl.VI) with a huge porch of stalactites⁵⁶ resembling that of sultan Ḥasan in the western façade that, in turn, carried some Anatolian Seljuk impacts (Fig.5)⁵⁷ (Pl.VII). The huge stalactite porch adorning the upper part of the southern façade of al-Rifā‘ī⁵⁸ has obviously been inspired by that of the western façade of the madrasah of sultan Ḥasan⁵⁹.

The famous Khedive of Egypt, Muḥammad Tawfiq, who died in 1296AH/1879AD, asked to be buried in a tomb he had built for himself in al-‘Afīfī Street inside the Mamluk Cemetery known as the dome of *Afindīna*⁶⁰. The main trilobed portal of *Afindīna's* dome (Pl.VIII) is typically mamluk in style similar to that of the madrasah of Qāyṭbāy nearby⁶¹ (Pl.IX). His famous mosque of Imām al-Shafī‘ī has

its entrance built like a trilobed-arched portal with three porches of stalactites⁶². The stalactites are arranged in the mamluk design having four porches as in most mamluk portals whether those belonging to the Bahrite⁶³ or the



Fig.4 Portal in the southern façade of the Rifā'ī mosque
(Trilobed porch of stalactites – Modeling *jufūt* and *mīmāt*)

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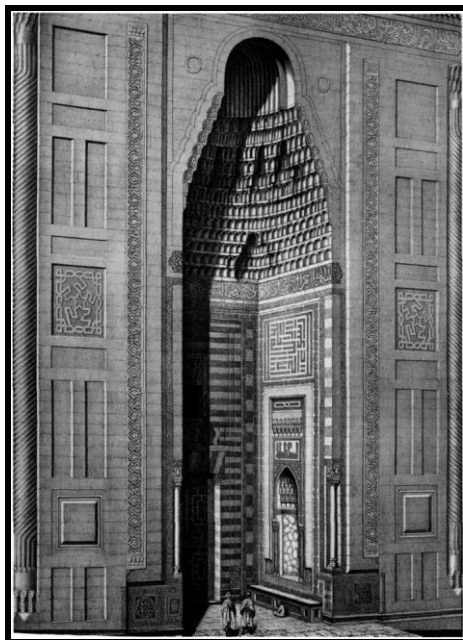


Fig.5

The northwestern trilobed stalactites portal in the madrasah of sultan Ḥasan (Porches of stalactites- main entrance – Seljuk impacts)

After, Prisse D'Avennes, Islamic Art.

Circassian period⁶⁴. This same design of trilobed portals was used in the mosque of al-Sayyida Zaynab (Pl.X), and the mosque of al-Sayyida Nafīṣah⁶⁵ (Pl.XI). The same style of façades and portals was used in the mosque of Imām al-Šāfi'ī⁶⁶. The present-day mosque is located within a cemetery with monuments dating back to different eras mostly mamluk, especially at al-Ašrāf street located behind the mosque.

Khedive Ismāʿīl's daughter, the famous Princess Fāṭimah, who was known as "The Princess of Charity"⁶⁷, died in 1339AH/1920AD. She was buried in the southern part of the cemetery of Sidi Zayn al-ʿĀbidīn. The princess died before completing the construction of her own domed mausoleum, and the ministry of Awqaf completed the construction by order of King Fu'ad. The first mamluk feature is the main portal (Pl.XII) that has a trilobed arch adorned with a large porch of stalactites and framed with a molding frieze *ḡifūt and mīmāt*⁶⁸. This style of entrances was applied to most mamluk free-standing domes such as the zawiyah of Zayn al-Din Yusuf, the entrance of the mosque of Qawsūn, and the main western portal in the madrasah of Sultan Ḥasan⁶⁹.

The joggled and cushion voussoirs⁷⁰

Joggled and cushion voussoirs are essential parts of mamluk monuments. This mamluk feature adorns door lintels and entrances taking many shapes and types of white and black striped masonry⁷¹. To maintain the same artistic tradition artisans of the 19th century were keen on the continuation of such features in their buildings by adopting the same artistic designs. Inside the Rifāʿī are joggled voussoirs in the southern portal of the mosque in different forms⁷² (Fig.6, and Pl. XIII), which had been employed in the entrance of the madrasah of sultan Ḥasan on the northern façade above the windows (Fig.7) and above the portals of each college⁷³. Joggled voussoirs are found in the main entrance of the dome of *Affendīna* (Pl.XIV). They are arranged simply on a curved tympanum with blue tiles in the Ottoman style.

In 1368/1974 Princess ŠīyūKār, wife of king Fu'ād, built herself a tomb in the mamluk cemetery. The tomb houses her grave and was built from the outside in the mamluk style. She was buried with her sons; Prince Ismā'īl, Waḥīd Yusrī Pasha, and his wife Princess Samīḥa and Prince Waḥīd al-Dīn,⁷⁴ as well as her housemaid Shayesta who died in 1952. The grave is located in the outskirts of Manšayat Nāšir in front of the Ḥānqāh of Sultan Ināl 860AH/1456AD and the Khanqāh of Qurqumās al-Sayifī 913AH/1507AD. The entire building was built in the mamluk style showing a semi-circular dome carved with a zigzag pattern that rests on

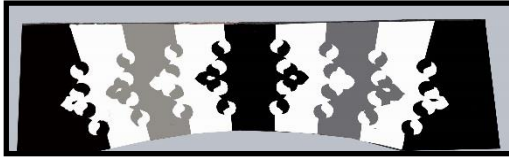


Fig.6

Joggled voussoirs-al-Rifā'ī mosque
Hasan. N.Facade

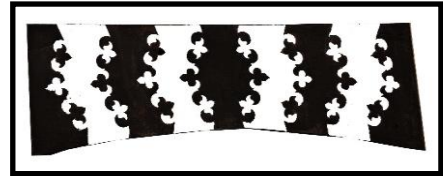


Fig.7

joggled voussoirs-Sultan
Hasan. N.Facade

Done by the researcher

transitional zones over a rectangular base emphasizing the body of the dome⁷⁵. The portal from the outside has a portal made of cushion voussoirs⁷⁶. (Pl.XV)

This same feature is found on the windows and recesses of the southern façade in the mosque of al-Sayyida Nafīṣah. The main western portal leads to a vast hall *barāḥ* and leads to another trilobed portal with an opening crowned by joggled voussoirs and a slab carrying the name of the Khedive of Egypt 'Abbas Ḥilmī II. The portal is framed by a

series of moldings *ḡifūt and mīmāt*, which is a mamluk feature. The exterior walls are carved with vertical recesses topped by small porches of stalactites as seen in most of the mamluk buildings⁷⁷ (Pl.XVI). Each entrance has its main door opening topped by a relieving arch and joggled voussoirs.

The formal mamluk designs of the domes and their decoration

Large groups of freestanding mamluk domes have been found scattered all over Cairo. The deserts and necropolises of Cairo housed a large number of domes. The mamluk cemetery comprised numerous types of freestanding domes belonging to the sultans and emirs from the mamluk period⁷⁸. At its eastern end away from the main road, al-'Afifi Road recently opened onto a small square of tombs that used to block access to the royal shrine dedicated to the son of Muhammad 'Ali. A remarkable tomb stands a few meters from the complex of Sultan Qāyṭbāy designed in 1894 by the architect Fabricius Bey in the mamluk style, which was dedicated to the Khedive Tawfīq and his successors⁷⁹ (Pl.XVII). The edifice was built in the mamluk style, especially its exterior, the upper drum of the dome, and the transitional zones. When looking at the surrounding constructions, the nearest mamluk dome is that of Azrumuk 909AH/1504AD, and the dome of Ṭashtumur *Humuṣ akḥḍar* 735AH/1334AD.⁸⁰ (Pl.XVII-a)

The carved masonry dome of *Affendina* bears the same style of external carved moldings (Pl.XVIII) on the outer

surface of that of Tashtumur (Fig.11), which is located to the opposite side in Sultan Ahmad Street near the complex of Qaytbāy. Some other external moldings and enhancements adopted from mamluk designs decorate the dome of *Affendina*; such as the crenellations (Pl.XIX) that are formed of composite leaves in the mamluk style. Such a feature prevailed in the late Circassian mamluk monuments, most notably the madrasah of emir Uzbek al-Yūsufī 900AH/1495AD⁸¹ and the dome of the Khanqāh of Qansuwah al-Ghawrī 909-910AH/1503-1504AD⁸², as well as his madrasah⁸³. The same style of window grills (Pl.XX) adorned those of the dome of *Affendīna*, and from the late mamluk period the madrasah of Qijmās al-Ishāqī 885-886AH/1480-1481AD⁸⁴. The nearby dome of Tashtumur also carried the same features, which became popular in the late mamluk domes of the northern cemetery.⁸⁵

The interior is square in plan (Fig.9) enclosing a dome that rests on four gigantic columns carrying horseshoe arches. The central dome rests on a transitional zone of six rows of stalactites flanked by eight stained glass windows⁸⁶. The exterior is carved in straight molding like rib (Pl.XVIII)⁸⁷ patterns similar to those adorning most mamluk domes in the cemeteries of Egypt, most notably the dome of emir Tankazbughā 761AH/1359AD⁸⁸, and the dome of Tashtumur⁸⁹. Mamluk patterns such as moonlike *qamariyāt* or *shand*⁹⁰ (Pl.XXI) adorn the exterior seen also in most mamluk domes of the northern cemetery, such as the dome of Barsbay al-Bajāsī, the dome of Jānibak al-Ashrafī,⁹¹ and the dome of Qāytbāy in the same vicinity⁹². The main entrance is decorated with the so-called moldings *gifūt and*

mīmāt, which are typically mamluk used to decorate the mamluk portals⁹³. *Qamariyāt* and oculus were common in the freestanding domes of the northern cemetery, which enhances the walls of the dome of the Khedive Tawfīk inspired by the surrounding domes, such as the free-standing dome of Ṭashtumur⁹⁴.

The main trilobed portal of *Afindīna's* dome is typically mamluk reminiscent of Qāyṭbāy's madrasah nearby (Pl.IX)⁹⁵. The inner hall of the dome is made of four lateral horseshoe arched iwāns (Pl.XXII)⁹⁶ resembling the interior of the madrasah of Qāyṭbay (Fig.8) (Pl.XXIII)⁹⁷. For such reasons the iwān plan of the dome of Khedive Tawfīk is typically mamluk.

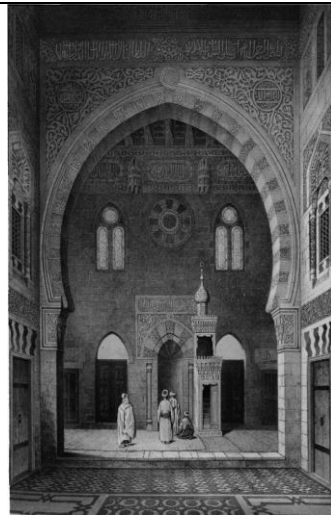
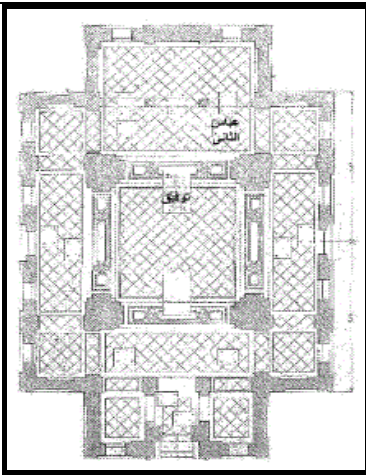
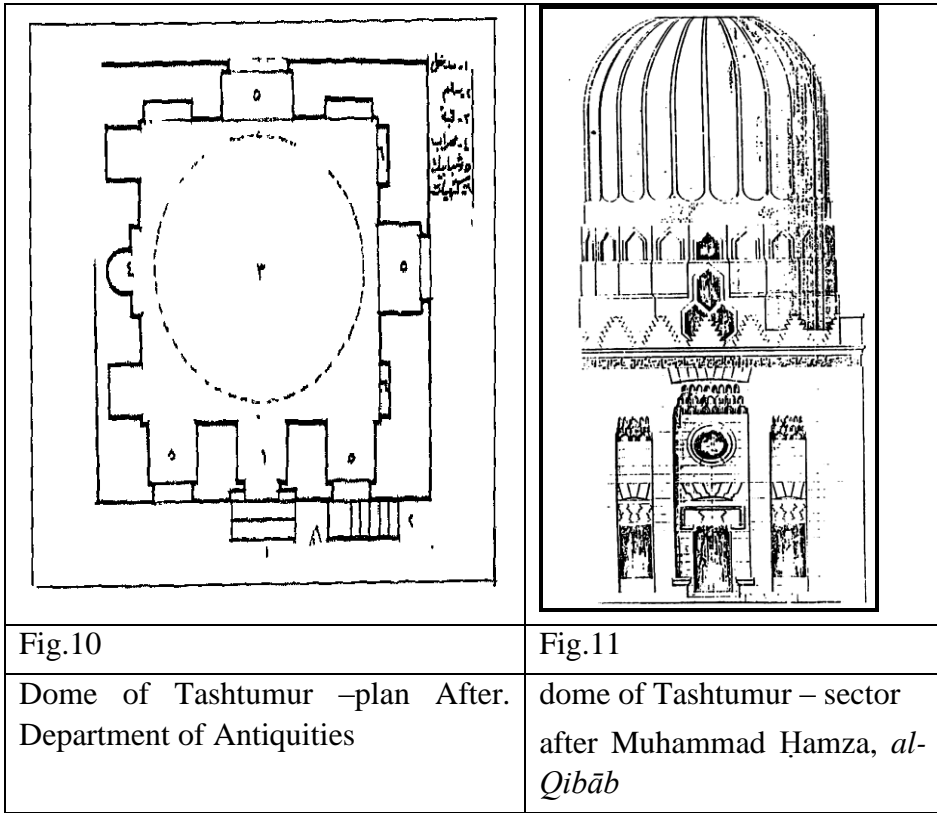


Fig.8 interior design of Iwan system
The dome of Khedive Tawfīq
Affendina-plan
After. Prisse D'Avennes, Islamic Art

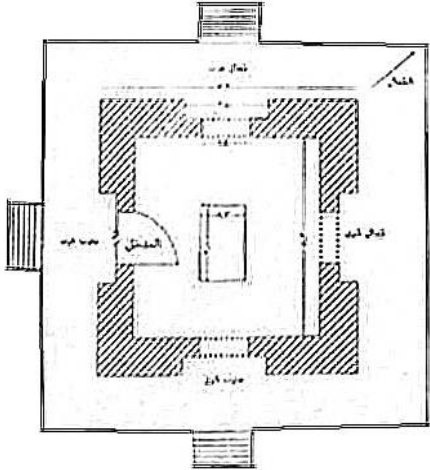
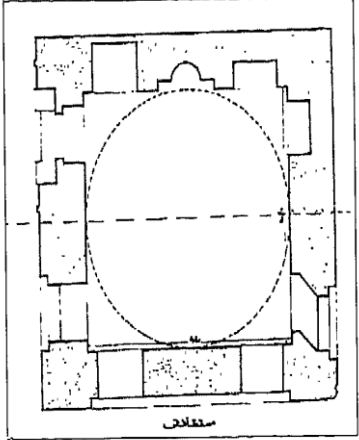
Fig.9 Qaytbay Madrasah
After. M.S.Abdallah,
Madāfin ḥukkām Miṣr



The inner plan of the *Affendina* resembles the square plans of mamluk mausoleum domes, such as the plan of the dome of Tashtumur 735AH/1334AD in the same area (Fig.10). Externally the dome is also square based on several windows surrounding the drum of the dome (Pl.XXVIII). It looks like those found in the domes of the same area, such as the dome of Tashtumur⁹⁸, and the dome of Azrumuk⁹⁹. The dome of Khedive Tawfiq was also enhanced by vertical rectangular recesses topped by a porch of stalactites in the mamluk style (Pl.XXIV), also found in the dome of Kuzal known as Sidī Karkar¹⁰⁰, the dome of Azrumuk¹⁰¹, and finally in the external walls of the dome of Tashtumur¹⁰².

Another freestanding dome built in the time of Khedive Ismāʿīl is the dome of his daughter Princess Fāṭima, which has a square plan and its eastern wall is void of any mihrab (Fig.12). The very same plan was used earlier in the dome of al-Qāṣid 735AH/1362AD, dome of Tankazbughā, and the dome of Shaykhu 750AH/1349AD¹⁰³. The entire construction is a square edifice (Pl.XXV) topped by a circular dome carved with calyx ornaments¹⁰⁴. This carved calyx leaf appeared on most late mamluk domes, such as the madrasah of Jawhar al-Qunqubāʿī 844AH/1440AD, the dome of al-Gulshanī¹⁰⁵, the dome of Azrumuk¹⁰⁶, and the dome of ʿAbdallah al-Munufī in the northern cemetery¹⁰⁷. They were built in the style of freestanding domes enhanced by architectural decorations like the trilobed portal with its molding friezes as mentioned before. The facades are richly decorated with crenellations that took the form of composite leaves¹⁰⁸ have been extensively employed in the late mamluk period, such as the dome of the Khānqāh of al-Ghawī¹⁰⁹.

The square plan of mamluk domes was used in the dome of Princess Fāṭima daughter of Khedive Ismāʿīl¹¹⁰ (Fig.12). Mamluk square-planned include the dome of Tankazbughā (Fig.13)¹¹¹, the dome of Ṭashtumur (Fig.10)¹¹². The square-planned domes appeared before the mamluk period in Fatimid domes, like the dome of Sayyida ʿAtikah and al-Jaʿfarī¹¹³, the mausoleum of Shaykh Yunus from the works of Badr al-Jamalī at Bab al-Naṣr¹¹⁴, and the mausoleum of Imām al-Shāfiʿī from the Ayyubid period¹¹⁵.

	
<p>Fig.12 Mausoleum of princess Fāṭimah-plan</p>	<p>Fig.13 Dome of Tankazbughā – plan</p>
<p>After-R.‘Abd al-Rāziq, Munsh'at al-Amirah Fāṭimah</p>	<p>After. Dalīl al-Athār al-Islāmiya</p>

The dome of Fāṭimah has the main entrance on the southwestern side ¹¹⁶ like that of Shajar al-Durr 648AH/1250AD¹¹⁷ and Tankazbughā¹¹⁸. This was how most mamluk domes were constructed and applied in the dome of Fāṭimah. The upper structure of the circular dome is carved with a row of calyx leaves¹¹⁹. These types of ornaments were common during the mamluk era; as in the dome of Shaykh ‘Abdallah al-Munūfī 879AH/1474AD¹²⁰, and the dome of Azrumuk¹²¹. Such a style became a prototype of most of the late mamluk domes of Egypt, where one could see several freestanding domes in the mamluk cemetery; wither from the northern or southern suburbs of Cairo¹²². The domes upper exterior wall is decorated with a trilobed shaped crenellation in the mamluk style on the northeastern, southeastern and northwestern façades ¹²³ (Pl.XXVI). Mamluk freestanding domes are the prototype, especially those located in the

northern cemetery, such as the dome of Kuzal al-Nāṣirī¹²⁴, and the dome of Nasralah¹²⁵. The outer part of the dome is bordered with a small frieze exhibiting three rows of stalactites¹²⁶. These same motifs could also be found in the freestanding mamluk domes; such as the dome of Tankazbughā¹²⁷, and the dome of al-Saba' Banāt (mid 9thAH /15th AD century)¹²⁸.

Among the freestanding domes from the reign of Muḥammad Ali is the dome of Princess Shiyūkār. It is located within the vicinity of the mamluk cemetery and reflects the formal mamluk designs of the dome. It is located close to mamluk domes and religious constructions; such as the Khānqāh of sultan Ināl and the dome of emir Qurqumās¹²⁹. Consequently, the dome has borrowed many features from surrounding mamluk constructions and the suburban nearby. The plan of the dome is mainly square (Fig.14) surrounded by a garden that is enclosed by a triangular wall. The dome has four facades; the main is the eastern with the main entrance¹³⁰. This freestanding dome follows the formal plan of the late mamluk domes found in the surrounding area and nearby suburbs. The plan is square as most nearby domes; like that of the dome of sultan Qansuh Abu Sa'īd (Fig.15) 904AH/1499AD¹³¹, and the dome of Yunus al-Dawadār (*Anaṣ*)¹³² (Fig.16). The architect succeeded in maintaining the harmony of the place and its surrounding and constructed the dome in the square form. The only unusual feature is placing the main entrance towards the east. Furthermore, the dome of Shiyūkār has no sign of a mihrab.

The outer surface of the dome consists of **zigzag chevron patterns** (Fig.19) (Pl.XXVII) as in most mamluk freestanding domes in Cairo¹³³. This pattern is found on the mamluk domes of the northern cemetery; such as the dome of the complex of sultan al-Ashraf Ināl (Fig.17), and that of Qurqumas (Fig.18)¹³⁴ on the opposite side of the tomb¹³⁵. The portal is adorned from the center by a double window and an oculus *qandīliyah* (Pl.XXVIII) like that of nearby mamluk domes; such as the dome of Faraj ibn Barqūq. *Qandīliyah*, which is one of the mamluk architectural features, adorned domes of the mamluk desert located close to the tomb of ShīyūKār. The style of the zigzag chevron pattern is widely occurred in most of the dome of the mamluk period as seen in the mosque of Qānibāy al-Muḥammadī 806AH/1403AD, the dome of the madrasah of Emir Jānibak al-Ashrafī 830AH/1426-7AD¹³⁶, and the mausoleum dome of Emir Ṭarābāy al-Sharīfī 909AH/1504AD in the vicinity of bāb al-wazīr¹³⁷

ShīyūKār's main portal is topped by a rectangular marble slab of floral elements surrounded by a row of moldings ***Jifūt and mīmāt*** and window grills on its walls.¹³⁸ This feature prevailed in the complex of al-Ašraf Ināl in its northern entrance and the secondary entrance to the Khanqāh, and in the main eastern entrance as well¹³⁹.

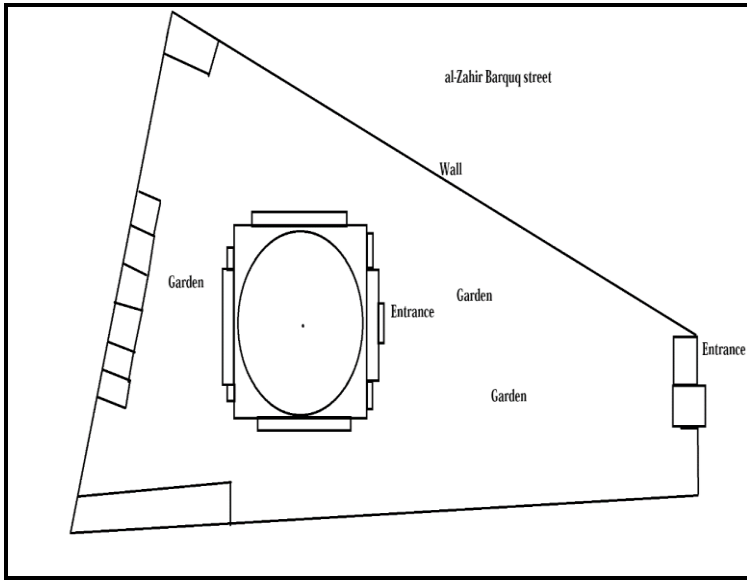


Fig. 14

The dome of Princess Shiyūkār

Done by the Researcher- Published for the first time

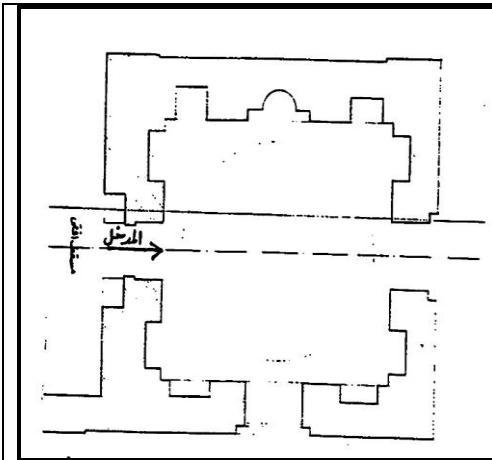


Fig.15

The dome of Qansūh Abu Sa'īd

After.A. 'Abd al-Rāziq, *al- 'Imārah*

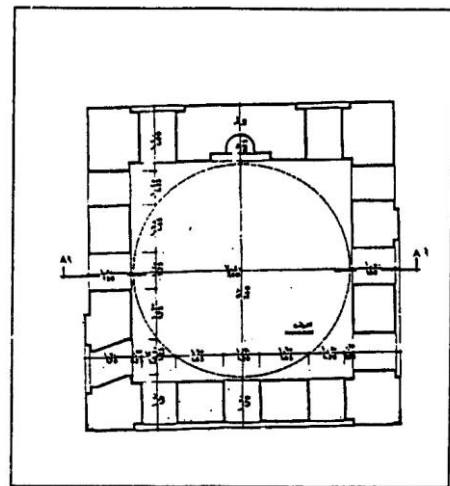


Fig.16

The dome of Yūnus al-Dawadār
(Anaṣ)

After. M.Hamza, *al-Qibab*

Exterior sections - The Zigzag chevron patterns

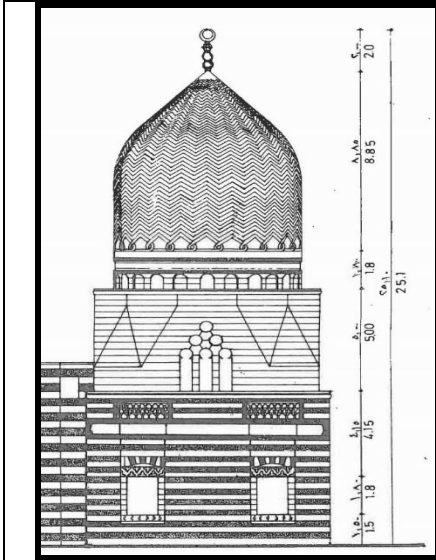


Fig.17 The dome of Ināl
Munazamat al-'Awašim

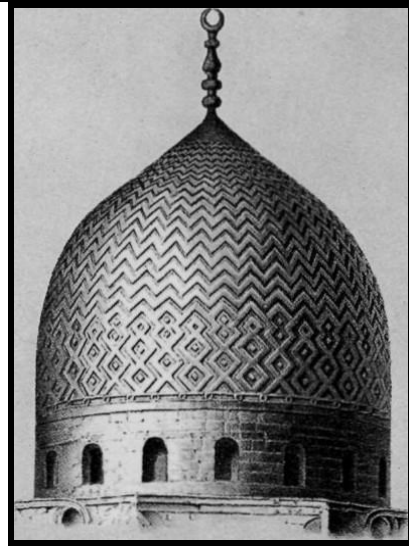


Fig.18 The dome of Qurqumas
After. Prisse D'Avennes, *Islamic Art*

wa-l-mudun al-Islāmiyah

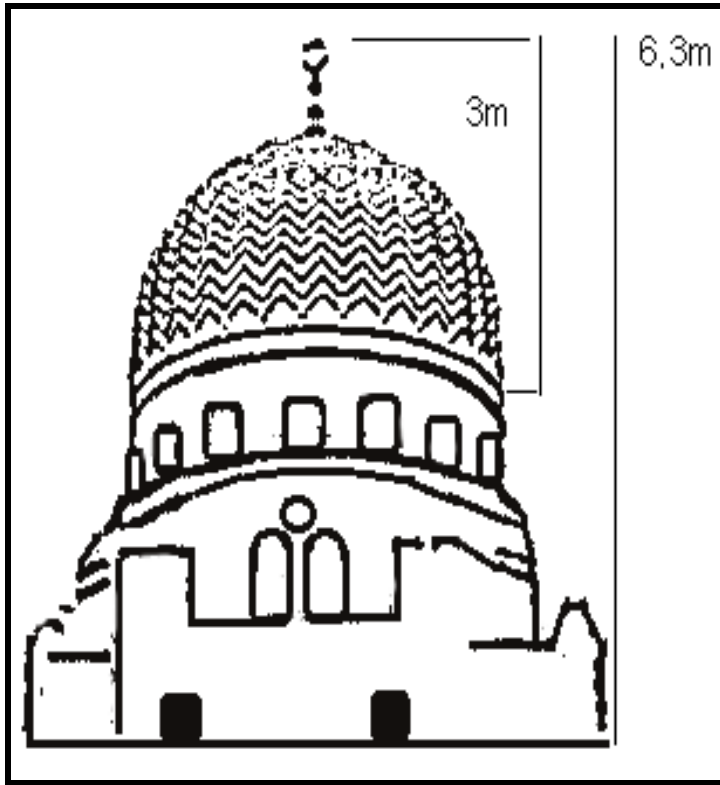


Fig. 19

An exterior section of the dome of princess Shiyūkār. Done and firstly published by the researcher

The innermost design of the dome based on the *Iwānat* system, which is mostly a mamluk feature. The plan consists of a central hall, *durqā'a*, surrounded by four lateral *iwāns*¹⁴⁰; the eastern and the western are small *Iwāns* in a form of *sadlah*. The interior of the dome is covered with marble dado of a mamuk style. The inner *dirkah* is square, and the base of the dome has four porches of stalactites acting as transitional zones¹⁴¹. The mamluk monuments following the iwan plan are the *Khānqāh* of Inal¹⁴² and the

Khanqāh of emir Kabir Qurqumās in the opposite side¹⁴³. Similar porches of stalactites are found in the two domes of the Khānqāh of Faraj ibn Barqūq¹⁴⁴ that is located nearby the tomb of ShīyūKār, and the dome of the Khānqāh of sultan Ināl¹⁴⁵ to the opposite side. When looking up to the ceiling, the dome's cavity from the inside is bordered by four units of stalactites each of which consists of eight porches of pointed squinches¹⁴⁶(Pl.XXIX) The two domes of the Khānqāh of Faraj ibn Barqūq also had also eight porches of stalactites acting as transitional zones. Similar units were found in the dome of sultan Qanṣuh Abu Sa'īd, and the dome of Barsbāy in the northern cemetery¹⁴⁷

The location factor on the mamlukisation process

Apparently, the location played a vital role in the mamlukisation of religious monuments of the Muhammad Ali dynasty. Looking at Cairo's historical map one sees a number of contemporary religious constructions located within a mamluk suburb full of mamluk monuments. Our first example is the mosque of al-Rifā'ī set right across the mamluk madrasah of sultan Ḥasan (Fig.20). The main portals of these two monuments are set facing one another. Their minarets are close to one another, even the windows, moldings, stalactites, window grills, and the decoration of their portals emphasize this theory. Only a small street¹⁴⁸ separates between these two great masterworks as if the two monuments live together in harmony. The similarity of their decoration is clearly shown on their walls, windows, portals, stalactites, minarets, and the inner decorative elements.

The location factor also played a vital role in the

mamlukisation of the mosque of al-Sayyida Zaynab. The mosque is located within the vicinity of the mamluks, as stated earlier, near the Salibah district full of mamluk monuments; such the mosque of Timraz al-Aḥmadī known as *Jāmi' al-bahlūl*. (Fig.21)

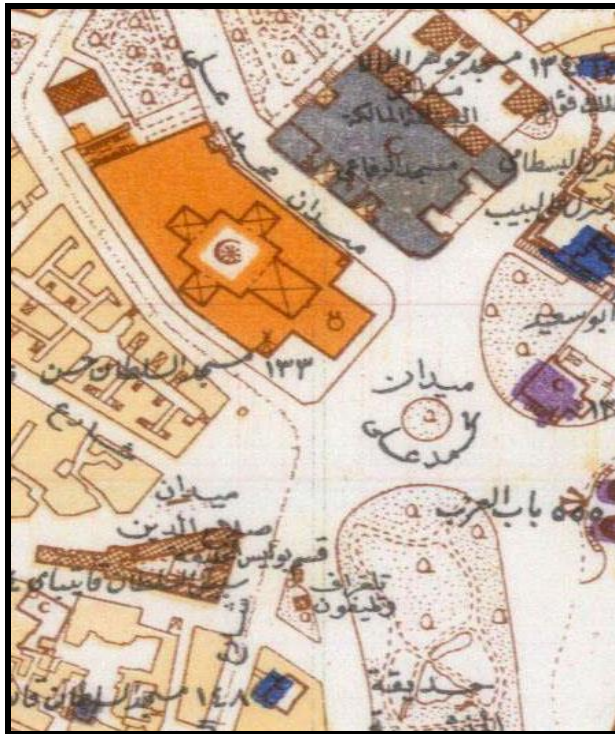


Fig.20

Plan shows the location of the madrasa of sultan Ḥasan and the Rifā'ī mosque.



After. The Egyptian Survey Authority – ESA Plan 2.

Fig.21

The location of the mosque of al-Sayyida Zaynab

After. After. The Egyptian Survey Authority – ESA Plan 2.

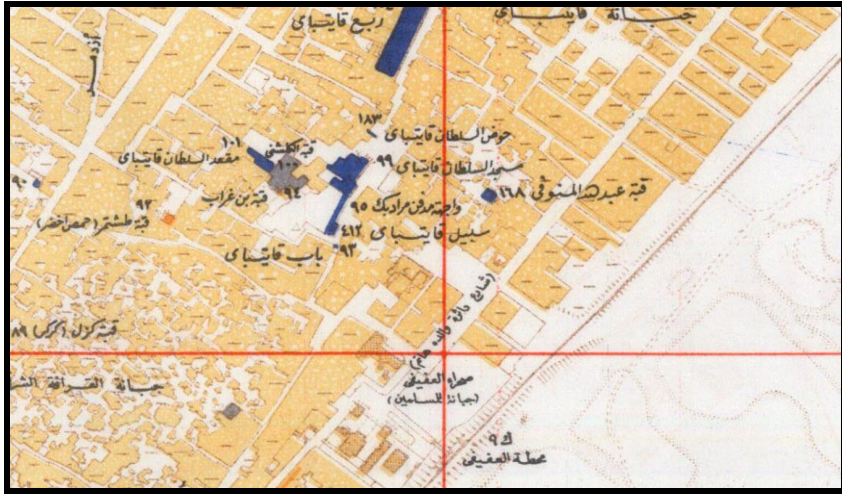


Fig.22

The surroundings mamluk suburbs around the dome of Khedive Tawfiq

After. The Egyptian Survey Authority – ESA Plan 1

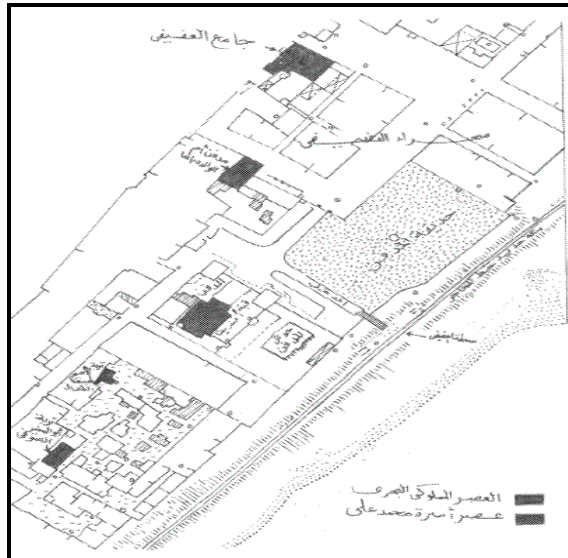


Fig.23

The dome of Khedive Tawfiq

After.M.A. 'Abdallah, *Madāfin ḥukkām Miṣr*

overlooking the Khanqāh of Amir Kabīr Qurqumās and the madrasah of al-Ashraf Ināl on the opposite side. (Fig.24) On the map this funerary dome is located within the mamluk suburbs of the necropolis. Barquq's funerary complex, Khanqāh of Barsbay and the dome of Barsbay al-Bajāsī are at the southern suburb; Qurqumas and Ināl complexes at the western part; while the domes of al-ʿĀdil Ṭumānbāy and that of Qanṣuh Abu Saʿīd are at the northern suburbs. Being surrounded by a purely mamluk panoramic view initiated the architect to build the grave in a mamluk tradition and style to keep the harmony of the other mamluk monuments.

Some causes of the mamlukisation related to the rulers and tradition

As mentioned before, the mamluk Sultan Qaytbay ordered the restorations of the tomb of al-Sayyida Nafisa in 889-90AH/1484-85AD, but the works comprised the dome and the minaret¹⁵⁰; which might be why the Khedive of Egypt rebuilt the mosque in the mamluk style. Another reason for building it in the mamluk style is, as stated by Alī Mubārak in his *Khitat*, that the sultan al-Nāṣir Muhammad ibn Qalāwūn had established a mosque for the grave of al-Sayyida Nafisah in 714AH/1314AD¹⁵¹. The architect of the Khedive ʿAbbas Ḥilmī II wanted to revive the mamluk features of the old mosque; which became a tradition during the reign of Muhammad Alī's Family.

The rulers also played a vital role in the mamlukisation of the modern architecture. The princess Khushiyār Hanim the mother of Khedive Ismāʿīl once visited the madrasah of

sultan Ḥasan and admired the enormous building. She was upset when she observed the tomb built back to the mihrab: a reason forbids praying in, thus she ordered her son Ismā‘īl to construct a huge mosque like sultan Ḥasan for the Muslims to pray and to encompass the relics of the royal family, and to gain blessings and invocations from the people.¹⁵² By doing so, the surrounding mamluk features greatly influenced the newly built constructions such as Al Rifā‘ī Mosque.

Another reason for the mamlukisation of modern religious constructions is that the main tradition of the Islamic Monuments in Cairo is mamluk; as stated in the reports of the Supreme Council of Antiquities, and the Official Guide to Islamic Monuments, *dalīl al-āthār al-islāmiya bi madīnat al-Qāhirah*, Egypt has 232 mamluk monuments in Cairo, excluding those that have perished. On the other hand, Egypt has 194 Ottoman construction^s¹⁵³ most of which had been built in the traditional mamluk style. According to documents and waqf deeds, the Ottomans made use of the mamluk monuments, specially the commercial and secular ones¹⁵⁴.

A large number of the Ottoman mosques exhibit mamluk designs on their decorative walls and modeling. However, a few Ottoman religious constructions; such as the mosque of Sulayman Basha al-Khādīm¹⁵⁵ at the northern part of the Citadel, the mosque of Sannan Basha at Bulāq¹⁵⁶, the mosque of Queen Şaffiya¹⁵⁷, the mosque of Muḥammad bik Abu-l-Dahab facing al-Azhar mosque¹⁵⁸, the mosque of Muḥammad Ali Basha¹⁵⁹, and the mosque of al-Faḥ al-Malakī, all follow the Ottoman Egyptian style¹⁶⁰.

Accordingly, more than two-thirds of the modern –Egyptian buildings in the time of Muhammad Ali's family were constructed in the Egyptian mamluk style, known as the Neo-mamluk style, which became a tradition followed in most of the modern and contemporary religious constructions in Cairo.

Conclusion

To sum up, a great number of Egyptian modern constructions in the time of Muḥammad Ali dynasty have been inspired by mamluk features and arts. This can be due to several reasons.

- 1- The first reason is the location. A good example is the mosque of al-Rifā'ī, in which the artisan managed to preserve the harmony of the place by borrowing the same decorative form from the opposite madrasah of Sultan Ḥasan; especially the minarets, portal, façade, and inner court. The same phenomena could be seen during the reign of the Egyptian Khedive, Muhammad Tawfīk Baṣā, in his tomb known as the tomb of Afandīna. The tomb is located in the vicinity of mamluk graveyards near the dome of Azrumuk and the madrasah of sultan Qāyṭbāy. It preserves the same mamluk style, ornaments, and architectural decoration. It shows how the artisan was greatly inspired by the area and the nearby tombs to keep the harmony of the place with the building. In the same era, the same phenomenon is observed in the mosque of al-Sayyida Zaynab that was reconstructed by the same sovereign. The minaret and the entire plan are similar to


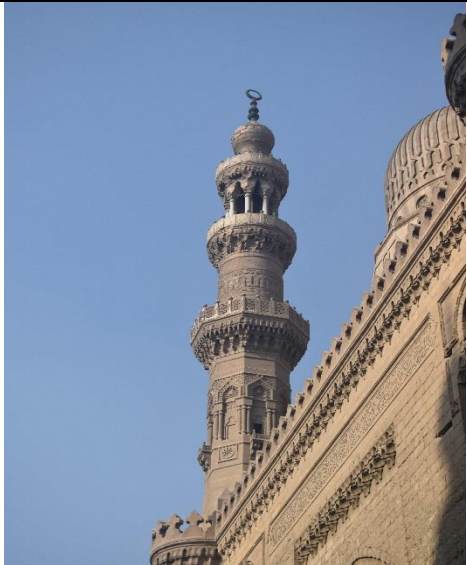
those of the mosque of Timraz al-Aḥmadī or *Sidī Bahlūl*, especially the minaret. The mosque of al-Sayyida Zaynab was founded amongst a group of mamluk monuments, especially those found in the Ṣalībah Street. Accordingly, the architect also managed to create harmony by maintaining the mamluk style in a modern mosque. The location played a vital role as well in the construction of the tomb of Princess Šīyū Kār; a tomb that was built within a mamluk area, where the architect managed to build her tomb in the mamluk style to create harmony with the mamluk monuments in this area.

- 2-The second reason is the **ruler**, who played a role in this change. As previously mentioned, parts of the mosque of al-Sayyida Nafīṣah were reconstructed by Qāyṭbāy, such as the minaret, so that when the Khedive of Egypt ‘Abbās Ḥilmī II renovated the mosque, he tried to maintain its mamluk features. In other cases, Princess Khushiyār Hānim the mother of Khedive Ismā‘īl transmitted the burial place of the royal family to the mosque of al-Rifā‘ī and admired the construction of the mosque of Sultan Hasan that is why the mamluk features were extensively employed in the modern architecture.
- 3-The Tradition factor. Since a great number of Egyptian mamluk monuments were built in Egypt, several Ottoman religious constructions carried on the mamluk style, designs, as well as ornamental details. Therefore, it became a tradition for Egyptian architects to design modern buildings with the formal mamluk style of Egypt.
- 4- The study has also revealed the original form of the dome of Princess Shiyūkār, while the researcher made a

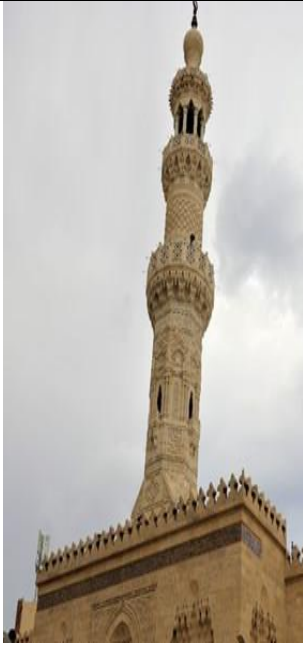
horizontal section (Fig.6) for its square plan ¹⁶¹ , surrounded by a great wall, and surmounted by circular rounded moldings *bābāt*; which is typically mamluk in style.

Overall, one can conclude that one of the main reasons of selecting the previous monuments as examples for analysis, that they are located within a dense of mamluk constructions that are occupying the majority of the Islamic monuments, therefore the location factor became one of the main factors beside the founder and the traditions.

The Plates

 A photograph of a tall, slender minaret with a tiered, bulbous top, set against a clear blue sky. The minaret is part of a larger stone building with a dome visible in the background.	 A photograph of a minaret with a more ornate, multi-tiered top, featuring a crescent moon and star at the very peak. The minaret is part of a large, highly decorated stone building with intricate carvings and a dome.
<p>Pl.I Minaret – al-Rifā'ī mosque</p>	<p>Pl.II. Minaret – Sultan Hasan</p>

Photographed by the Researcher



Pl.III. Minaret – Imām al-Shafī'ī mosque

After.

<https://egymonuments.gov.eg/>



Pl.IV. Minaret al-Sayyida Zaynab mosque

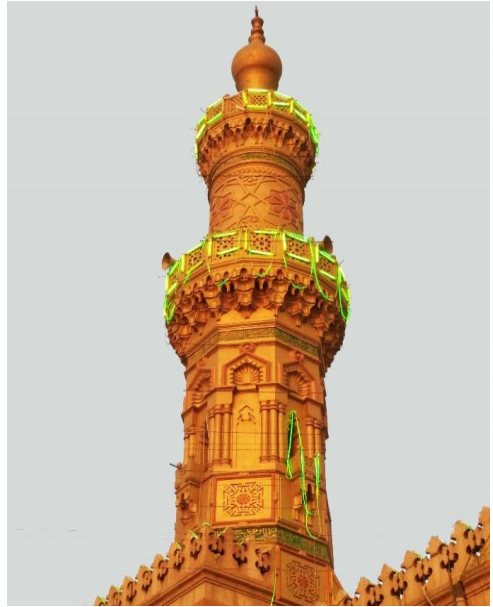
After.

<http://www.mazaratmisr.org/>



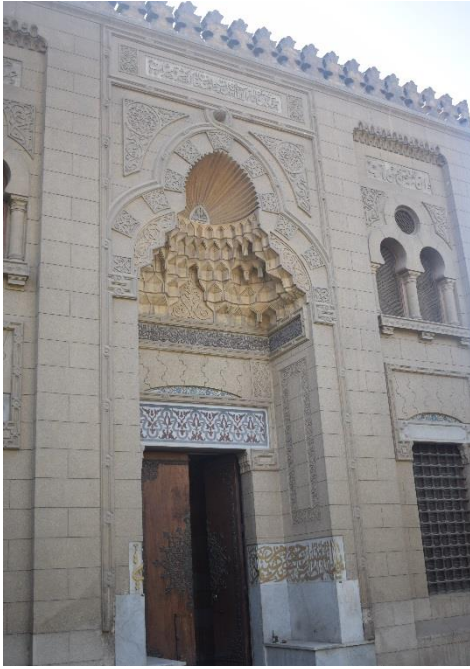
Pl.V. Minaret- mosque of al-Sayyida Nafisah

Photographed by the Researcher



Pl. VI. Monumental entrance-al-Rifa'i mosque

after. <https://egymonuments.gov.eg/>



Pl.VII. N.W portal – Sultan Hasan madrasah

Photographed by the Researcher



Pl.VIII. Portal-dome of *Affindina*



Pl.IX . Portal-Madrasah of
Qāyrbāy
After.Yeomans, Islamic Cairo



Pl.X. Portal-mosque of
Sayyida Zaynab
after.
<https://ar.wikipedia.org/>



Pl.XII
al-Sayyida Nafisah –portal
after the courtyard
Photographed by the
Researcher



Pl.XI
Portal-princess
Fāṭimah
mausoleum



Pl.XIII. *jifūt* and *mīmāt*- *voussoirs*

Al-Rifā'ī mosque

Photographed by the Researcher



Pl.XIV. *jifūt* and *mīmāt*.
Voussoirs

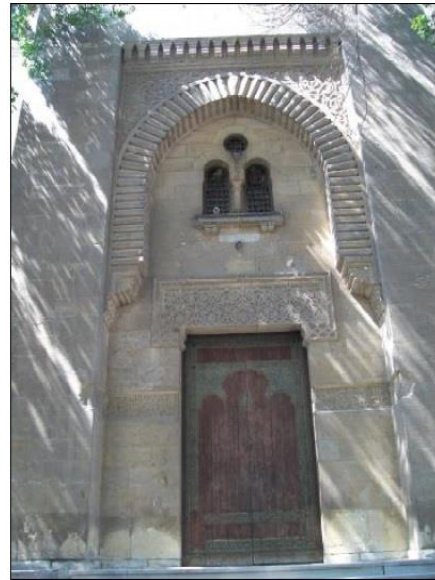
Affendina dome



Pl.XV. portal-cushion voussoirs

Dome of Shiyūkār

After M. A. 'Abd al-Raḥman,
'Amā'ir al-amīrah ShīyūKār



Pl.XVI. Joggled Voussoirs –al-Sayyida Nafisah

Photographed by the Researcher



Pl.XVII. Affendina dome-
Exterior view

Photographed by the Researcher



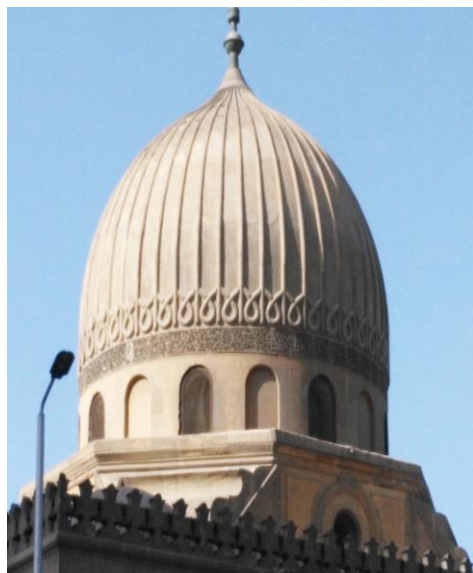
Pl.XVII-a dome of Tashtumur



Pl.XVIII

Affendina dome-external ribs

Photographed by the Researcher



Pl.XIX

dome of Affendina –
Crenellations



Pl.XX. Metal window-grill

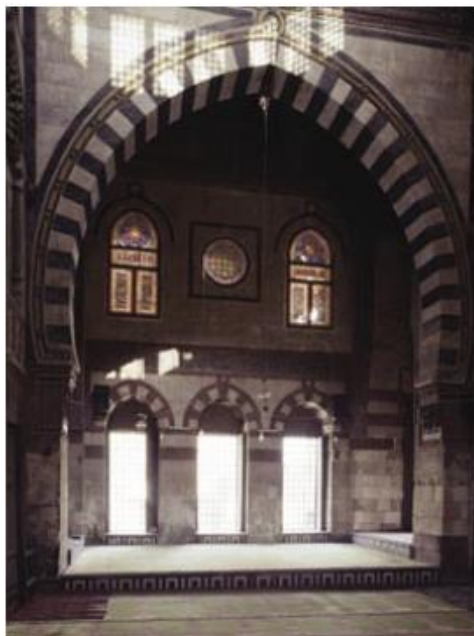
Dome of Affendina



Pl.XXI. Qamariya – *Shand*

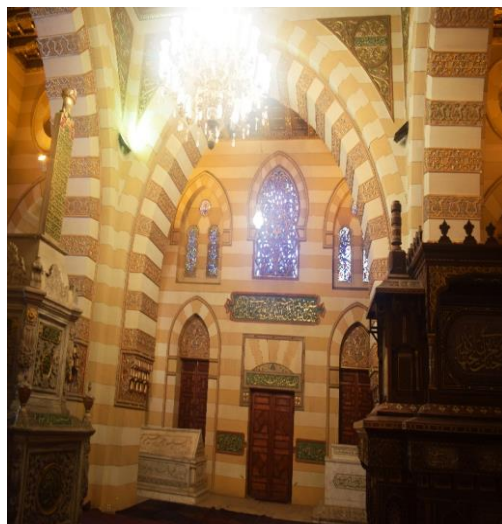
Dome of Affendina

Photographed by the Researcher



Pl.XXII

Interior design *iwānāt* Affendina
dome
Photographed by the
Researcher



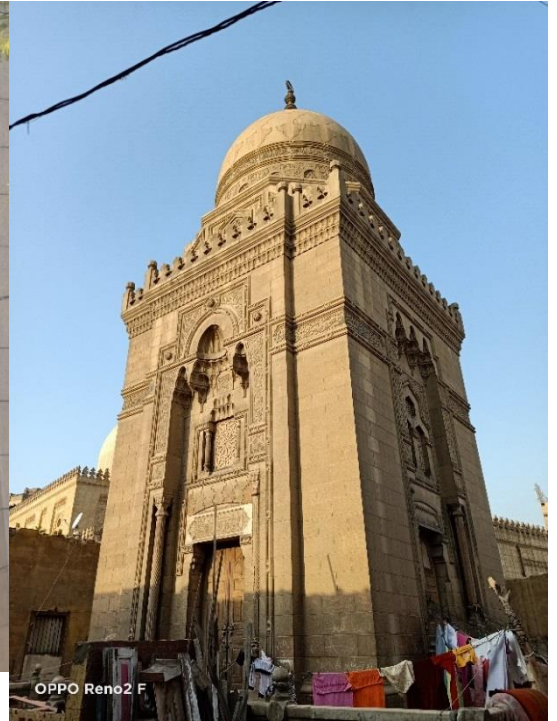
Pl.XXIII

Qaytbāy's complex –interior
After .D.Abu Seif, Cairo of the
Mamluks



Pl.XXIV

Vertical recess- stalactite porch



Pl.XXV

mausoleum of princess Fāṭima -
overview
Affendina dome

Photographed by the Researcher



Pl.XXVI

Crenellations – dome of princess
Fāṭima

Photographed by the Researcher



Pl.XXVII

Dome of Shiyūkār – overview

after. M. A. ‘Abd al-Raḥman, *‘Amā’ir
al-amīrah ShīyūKār*



Pl.XXVIII

Qandīliya – *shand*

Mausoleum of Shiyūkār – main portal

After. M. A. ‘Abd al-Raḥman, *‘Amā’ir al-amīrah ShīyūKār*



Pl.XXIX

Interior base of the dome of princess Shiyūkār –stalactites –transitional zones
After. M. A. 'Abd al-Raḥman, *'Amā'ir al-amīrah ShīyūKār*

Notes:

- ¹ 'Abd al-Azīz Muḥammad al-Šinnāwī, *'Umar Makram baṭal al-muqāwamah al-ša'biyah, al-Mu'asassah al-Miṣriya li-l-ta'līf wa-l-naṣr, Dār al-Kitāb al-'Arabī*, Cairo, 1967, p.10
- ² <https://m.marefa.org> > Mīṣr al-'Uthmāniyah
- ³ Amīn Sa'īd, *Tārīkh Miṣr al-siyāsī min al-ḥamlah al-firinsiya ila inhiyār al-malakiyah 1952*, Cairo, 1959, p.46
- ⁴ Shawqī al-Jamal, *Ma'ālim tārīkh al-ḥadīth wa-l-mu'āṣir*, Cairo, 1996, p.3
- ⁵ Saniyah Qurā'ah, *Masājid wa duwal*, Cairo, 1958, p.16
- ⁶ Muḥammad 'Abdallah 'Anān, *Miṣr al-Islāmiyah* General Egyptian Book Organization, Cairo, 1998, p.41
- ⁷ Farīd Šafī'ī, *al-'Imārah al-'Arabiya fī Miṣr al-Islāmiyah*, General Egyptian Book Organization, 2002, p.20
- ⁸ Ḥilmī Aḥmad Shalabī, *Fusūl fī tārīkh taḥdīth al-mudub fī Miṣr, 1820-1914*, General Egyptian Book Organization, Cairo, 1988, p.21
- ⁹ Maḥmūd 'Abbās Aḥmad 'Abd al-Raḥman, *Ma'ālim Miṣr al-Ḥadīthah wa-l-mu'asirah, tārīkh wa ḥaḍārah*, Cairo, 2008, p.16
- ¹⁰ Muḥammad 'Abd al-Ḥafīz, *al-Muṣṭalahāt al-Mi'māriyah fī wathā'iq 'asr Muḥammad 'Alī wā khulāfā'ih, 1805-1879*, al-Hay'ah al-'Āma li-l-binā' wa-l-ta'mīr Cairo, 1st edition, 2005, pp.5,6.
- ¹¹ Tharwat 'Ukāshah, *'Aṣr al-Naḥḍah*, al-Shurūq, Cairo, 1999, p.50
- ¹² Marei Laila Kamal, *Revival of Mamluk Architecture in the 19th & 20th centuries*, M.A. Thesis, AUC, Cairo, 2012, p.20.
- ¹³ It was one of the results of the National revolution in architecture. The building appeared in the spirit of the traditional Islamic style in Cairo, especially in public buildings. This was working to revive the inherited Islamic style. See: E.Gzio G., *Architettie ingegneri Itlaiani in Egitto da diciannovesimo secolo a un'emigrazione potica dilunga duratoa, pontedera per conto di artout maschiet* Firenze, 2008, pp.34.
- ¹⁴ Marei, L., *Revival of Mamluk architecture*, p.20. Among the most important foreign architects who applied the new Islamic style in their work was aspiring architect Carl von Ditsch (who designed the French Mausoleum of Solomon Pasha), the flux Austrian architects Julius Frans Pasha (who designed the island palace) and Max Hertz Pasha and the French architects Ambrose Boudry (who designed the Baron's house) Diors de Glion in Shawarby, the Villa of Count San Maurice, and the architect Ernesto Verdeitch (who designed the Institute of the Arab Music). Look: Sakr, T.M., *Early Twentieth Islamic Architecture in Cairo*, The American University in Cairo press, 1992, p.15.
- ¹⁵ Marei, L., *Revival of Mamluk architecture*, p.20.

- ¹⁶ Muḥammad 'Abd al-Sattār 'Uthmān, *Nazarīyat al-waḥḥīfīyah bi-l- 'imārah al-dīniya al-mamlūkia al-bāqiya bi madīnat al-Qāhīrah*, Dār al-wafā' li duniya al-ṭibā'a wa-l-nashr, Cairo, 2000,p.107
- ¹⁷ Maḥmūd Muḥmmad Fathī, *Al- 'Imārah al-Islāmīyah fī Miṣr khilāl al-qārn altāsi' 'aṣhr, Usrat Muḥmmad 'Alī bi-l- Qāhīrah 1805-1899*, PhD, Faculty of Archaeology , Cairo University,1985, p.298; Sāmīr Māḥmūd,Tāmīr, *Darāsa Tāḥlīliya mūqārna l-l-shakl al'umrānī wā almī'mārī lī madīnāt al-Qāhīrā bayn 'aṣr Muḥmmad 'Alī wā 'aṣr Ismā'il*, Master thesis, Faculty of Arts, Ain Shams University,2000,120.
- ¹⁸ 'Atīya Muṣṭafa 'Atīya Fādīaa, *'Amā'ir al-Qāhīrā al-jnā'izīya, Dirāsa athrīya mi'māryā, al-qarn 13AD-19AH*. Master Thesis, Faculty of Archaeology, Cairo University,2003,p.2; Sa'īd 'Uthmān, Badr,Aḥmad, , *Al-Taṭawur al-mī'mārī wa al'umrānī bī-l-Qāhīraa*,M.A, Faculty of Archaeology, Cairo University,1999 ,p.5.
- ¹⁹ Marei, L., *Revival of Mamluk architecture*,pp.20,21.
- ²⁰ S.'Uthmān, Badr, , *Al-Taṭawur al-mī'mārī wa al'umrānī* ,p.7; Muḥammad Lutfī 'Abd al Raḥmān, Shawūkat, *al-'Imārah al-Islāmīyah fī Miṣr (al-Nazaraiya wa-l-taṭbīq*, PhD, Asyut University, 1998 ,p.50.
- ²¹ Aḥmad 'Abd al-Rāziq, *al- 'Imārah al-Islāmiha fī Miṣr, Munḍu al-faṭḥ al- 'arabi ilā nahāyat al- 'aṣr al-mamlūkī*, Cairo, 2009, pp,223,317
- ²² Creswell.K.A.C, *Muslim Architecture of Egypt, Volume II, Ayyubids and Early Bahrite Mamluks*, New York, 1978 , p.146
- ²³ Layla 'Alī Ibrāhīm, Muḥammad Amīn, *al-Muṣṭalḥāt al-m 'māriyah fi-l-waṭā'iq al-mamlūkiya*, AUC, Cairo, 1990, pp.84,85.
- ²⁴ An architectural element stay alongside each other on the top of the buildings made of stone and took differnet forms and shapes wither its simple like trilobes or composite leaves. The early types occurred on the Fatimid walls and gates of Cairo in Bāb al-Naṣr. See Creswell, K.A.C, *The Muslim Architecture of Egypt, Ikhshides and Fatimids*, Oxford, 1951, pp.167,176; L.A Ibrāhīm, M. Amīn, *al-Muṣṭalḥāt al-m 'māriyah*, p.70
- ²⁵ Delly. Welfered Joseph, *al- 'Imārah al- 'arabīyah, fī ṣarḥ al-mumayazāt al-binā'iyh al-ra'isiyah li-l-tirāz al- 'arabī*, Translated by Maḥmūd Aḥmad, Cairo, 1923, p.8.
- ²⁶ For more details on this point see Edward Thomas Rogers, Mary Eliza Rogers and George L. Seymour, *The Mosques of Cairo : The Art Journal (1875-1887)*, New Series, Vol. 6 (1880), pp.37-40.
- ²⁷ For more details see, Creswell, K.A.C, Creswell, K.A.C, *The Origin of the Cruciform plan of Cairene Madrasas*, *BIFAO*, Tome XXI, Le Caire, 1922, pp.1-54.
- ²⁸ Bloom, J. M, Bloom, Jonathan M, Creswell and the Origins of the Minaret, *Muqarnas*, Brill, 1991, Vol, 8,pp.55-58

- ²⁹ A modern designed mosque erected by princess dawlat Khushyār Hanım mother of Khedıvıe İsmā'ıl in 1286AH/1869AD. She purchased the surrounding property. The late Khalīl Aghā supervised the mosque, until the building process so far stopped in 1880AD. The mosque was restored by the Khedıve Abbas Hılmı II and supervised by Max Hirz Basha in July 1906AD. For more details see Hasan 'Abd al-Wahhāb, *Tārıkh al-masājıd al-atharıya*, Cairo, 1946, Vol.I, pp.363,364.
- ³⁰ Muḥammad Al-Asad, The Mosque of al-Rifa'ı in Cairo, *Muqarnas*, Vol. 10, Essays in Honor of Oleg Grabar Brill,1993, 10, pp.111-114.
- ³¹ H. 'Abd al-Wahhāb, *Tārıkh al-masājıd*, Vol.I, p.366
- ³² E. T Rogers, M. E. Rogers and G. L. Seymour, The Mosques of Cairo, II, The Art Journal ,p.104; Max Herz, Mosquée du Sultan Hassan au Caire, Le Caire, 1899, p.18, Fig.8; Huwayda. N. Al-Harıthy, The Complex of Sultan Hasan in Cairo: Reading between the Lines, *Muqarnas*, Vol. 13, Brill, 1996 , Muqarnas,13, p.76.
- ³³ H. 'Abd al-Wahhāb, *Tārıkh al-masājıd*, Vol.II, Pl.86.
- ³⁴ Aḥmad Zakarıya. 'Abd al-Raḥman, *al-Taghayur fı 'ımārit al-masāğıd fı-l-Qarn al-Tāsı' 'aşr wa bıdāyat al-qarn al-ısrın bı madınat al-Qāhırah*, M.A, Faculty of Engineering, Ain Shams University, Cairo, 2006, p.110.
- ³⁵ A. 'Abd al-Raḥmān *al-tagayur*,p.110
- ³⁶ M.al-Assad, The Mosque of al-Rifa'ı, *Muqarnas*, p.110, fig.4
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- ³⁸ M.al-As'ad, Mosque of Muhammad Ali, *Muqarnas*, 9, p.46.
- ³⁹ Majdı 'Abd al-Jawwād 'Ilwān, al-Ma'āđın al-taw'amiya fı-l-'amā'ır al-İslāmiya fı Mısr, *Annal of the Arab Archaeologists, Studies on the Arab World's Monuments*, Vol.23, 2020, p.555.
- ⁴⁰ Aḥmad 'Abd al-Rāziq, *al-İmārah al-İslāmiya fı Mısr munđu al-fatḥ al-'arabı ḥata nahāyat al-'aşr al-mamlūkı*, Cairo, 2009, p.303.
- ⁴¹ M. 'Ilwān, al-Ma'āđın al-taw'amiya,
- ⁴² Caroline Williams, *Islamic Monuments in Cairo*, a Practical Guide, AUC, Cairo, 2002.136.
- ⁴³ Māhir .Su'ād, *Masājıd Mısr wa awliyā'ihā al-sāliḥūn*, Cairo, 1971, Volume.I, p.97.
- ⁴⁴ S.Māhir, *Masāğıd Mısr*, I, p.97.
- ⁴⁵ A. 'Abd al-Raḥmān *al-tagayur*, p.109.
- ⁴⁶ M. Al-Asad, *The Mosque of al-Rifa'ı*, *Muqarnas*, 10, pp.111-114.
- ⁴⁷ Comité de conservation des monuments de l'art arabe, bulletin, 1911, *Appendice au vingt-huitième fascicule*. – Sommaire, pp.119-121.
- ⁴⁸ Comité, 1907, *Trois cent soixante-douzième rapport*. – Sommaire, p.62

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- ⁵⁰ . Alī Bāshā Mubārak *al- Khīṭaṭ at-tawfīqiya al-jadīda li-Miṣr al-Qāhira wa-mudunihā wa-bilādihā al-qadīma wa-l-shahīra*, Vol.II. Būlāq, 1886 Vol, II, pp.133-134; Yusuf Rāgib, Al-Sayyida Nafīsa, sa légende, son culte et son cimetière (Suite et fin), Studia Islamica , Brill, 1977, No. 45 (1977), pp.46-48.
- ⁵¹ A. 'Abd al-Raḥmān *al-tagayur*, p.112
- ⁵² Doris Behrens Abu Seif, *Cairo of the Mamluks*, AUC, 2007, p.276, Fig.261
- ⁵³ .Aliaa Ezzeldin Ismail El Sandouby, *The Ahl al-bayt in Cairo and Damascus: The Dynamics of Making Shrines for the Family of the Prophet*, PHD, UNIVERSITY OF CALIFORNIA, 2008, p.235
- ⁵⁴ A.Mubarak *al-Khīṭaṭ al-tawfīqiyah*, II, p.62
- ⁵⁵ For more details on the mamluk monumental entrances and their types see . Muḥammad Sayf al-Naṣr Abu-l-Futūḥ, *Madakhil al- 'amā'ir al-mamlūkiya bi-l-Qāhira, al-dīniya wa-l-madaniya*, M.A. thesis, Faculty of Archaeology, Cairo University, 1975, pp.31-44.
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- ⁵⁷ J. M. Rogers, Seljuk Influence on the monuments of Cairo, Kunst des Orients, Vol. 7, H. 1, Franz Steiner Verlag, 1970/71,p.44; M. Sayf al-Naṣr, *Madakhil al- 'amā'ir al-mamlūkiyah*, pp.28,29; H.Al-Harithy,The Complex of Sultan Hasan, Muqarnas,13, p.76; D.Abu Seif, *Cairo of the Mamluks*, pp.207,208 ; : Pauli Gallin, *Mamluk Art Objects In Their Architectural Context*, M.A, Thesis, Boston College, Morrissey College of Arts and Sciences, 2017, p.40
- ⁵⁸ M.al-Assad, The Mosque of al-Rifa'i, *Muqarnas*, p.110, Fig.7.
- ⁵⁹ H.Al-Harithy,The Complex of Sultan Hasan, *Muqarnas*,13,p.76; Doris. Abu Seif, *Islamic Architecture An introduction*, AUC, Cairo, 1989, p.124.
- ⁶⁰ Maḥmūd Sayid 'Abdallah, *Madāfin ḥukkām Miṣr al-islāmiyah* M.A, Thesis, Alexandria University, 2002, p.290.
- ⁶¹ D.Abu Seif, *Cairo of the Mamluks*, p.277.
- ⁶² Abd al-Wahab 'Abd al-Fattah Ḥaḡḡāg , *al-Ṭirāz al-mi'mārī wa-l-fanni li masājid al-Qāhiraḥ fi-l-qarn al-al-thālith 'aṣr al-hijrī-al-tāsi' 'aṣr al-milādī*, M.A, Faculty of Archaeology, Cairo, University, 2006, p.463; A. 'Abd al-Raḥmān *al-tagayur*, p.110, Pl.6-6.
- ⁶³ For more details see M. Sayf al-Naṣr, *Madakhil al- 'amā'ir al-mamlūkiyah*, pp.102-114.
- ⁶⁴ For more details, see Daad Abd al-Rāziq, The Circassian Mamluk Monumental Entrances of Cairo, M.A. Thesis, The American University in Cairo, 1990.
- ⁶⁵ A. 'Abd al-Raḥmān *al-taghayur*,p.112

- ⁶⁶ A. 'Abd al-Raḥmān *al-taghayur*, Pl.6-6.
- ⁶⁷ Princess Fāṭimah, the daughter of Khedive Ismā'īl, she was known by her good deeds and endowments, in addition to the lands she owned and endowed to the people. In her Waqfiyah, she organized salaries and expenses to the slaves and the employees. She endowed some of her property on education, military industry, maritime arts, and military weapons. The revenue of her endowments have been specialized for the education, and knowledge. She also endowed her own palace to be the centralization of the Cairo University. For more details on her endowment deeds see Hind Muṣṭafa' Alī, al-Amīrah Fāṭimah bint Ismā'īl, al-Waqf ka maṣrū' iṣlāhī, Awqāf magazine , 7th year, No.13, Cairo, 2007, pp.97-103.
- ⁶⁸ Ra'fat 'abd al-Rāziq, Madfan al-Amīrah Fāṭimah bin Ismā'īl bi madīnat al-Qāhirah, Dirāsah āthāriya mi'māriyah, *al-Ūṣūr magazine*, London 2012, Vol.IV, p.6
- ⁶⁹ M.S.Abu-l-Futuḥ, *Madākhil al-'amā'ir al-mamlūkiyah*, p.33
- ⁷⁰ This device is mentioned in the mamluk documents as *asaḥīn mukatafa* as seen in the endowment deed of sultan al-Ghawrī. It also took the name *ḥajar al-faṣṣ al-naḥīl* in the waqfiya of Qāyṭbāy. See 'Abd al-Latīf Ibrāhīm , *Dirāsāt tarikhiyah wa 'āthariyah fī watha'iq min 'aṣr al-Ghawrī*, PhD, Faculty of Archaeology, Cairo University, 1956, Vol.II, p.4.
- ⁷¹ For more details see Delly, *al-'Imārah al-'arabiya*.pp.7-8; L. 'Ali Ibrāhīm, M. Amīn, *al-Muṣṭalahat al-mi'māriya*, p.13.
- ⁷² Max Herz, *La mosquée El-Rifai au Caire*, Le Caire, 1906, Pl.13.
- ⁷³ H.Al-Harithy, The Complex of Sultan Hasan, Muqarnas,13, Fig.7 ;A. 'Abd al-Rāziq, *al-'Imārah*, p.307; D.Abu Seif, *Cairo of the Mamluks*, p.165.
- ⁷⁴ Her marble grave is considering a marvelous piece of art in a form of a bed designed by an Italian artisan. See Caroline Kurha, *Palais oubliés d'Egypte*, Paris, 2015, p.335
- ⁷⁵ Muḥammad Aḥmad 'Abd al-Raḥman, *'Amā'ir al-amīrah ShīyūKār al-bāqiyah bi madīnat al-Qāhirah*, M.A, Faculty of Archaeology, Cairo University, 2011, p.164.
- ⁷⁶ A Fatimid device occurred in al-Futuḥ gate from the works of Badr al-Gamālī, and occurred in some of mamluk constructions such as the mosque of Baybars al-Bunduqdarī and the Ḥanqāh of Baybars al-Ġāšinkīr in al-Gamāliyah. See Creswell, *M.A.E*, II, p.156; D.Abu Seif, *Cairo of the Mamluks*, pp.124, 163
- ⁷⁷ A visit to the site done by the researcher in 25/1/2019.
- ⁷⁸ For more details see Muḥammad Ḥamza, *al-Qibāb fī al-'imārah al-miṣriya al-iṣlāmiya, al-quba al-madfan nash'atuha wa taṭawurha ḥata nahayat al-'aṣr al-mamlūkī*, Cairo, 1993, pp.55-148; Hānī Ḥamza, *The Northern Cemetery of Cairo*, AUC Press, 2001, pp.19-56;

- ⁷⁹ Jalīla al-Qādin, Alain Bonnamy, *The Architecture of the Dead, Cairo's Medieval Necropolis*, AUC Press, Cairo, 2007, p.199.
- ⁸⁰ M. Ḥamzah, *al-Qibab*, p.130, Pl.131; H.Hamza, *The northern Cemetery*, fig.25.
- ⁸¹ Jamāl 'Abd al-Raḥīm, *al-Ḥilyāt al-mi'māriya al-zukhrufiya 'ala 'amā'r al-Qāhira fī al-'aṣr al-mamlūkī al-jarkassī*, PhD, Cairo University, 1991, Vol.II, Pl.213.
- ⁸² J. 'Abd al-Raḥīm, *al-Ḥilyāt al-mi'māriya*, II, Pl.271.
- ⁸³ A. 'Abd al-Rāziq, *al-'Imārah*, p.405.
- ⁸⁴ Gazbeya El-Hamamsy, *The Mosque of Qijmās al-Ishāqī*, M.A, The American University in Cairo, 2020, Vol.I, pp.15,16.
- ⁸⁵ M. Ḥamzah, *al-Qibab*, p.138, Pl.131; H.Hamza, *The northern Cemetery*, fig.25.
- ⁸⁶ M. S. Abdallah, *Madāfin ḥukkām Miṣr*, p.294.
- ⁸⁷ Carving the masonry domes with this type of ribbed ornaments known extensively from the early Fatimid period in Egypt from either outside or inside the masonry. The surface was decorated by fluting devices either concave or convex. See Martin.S.Briggs, *Muhammadan Architecture in Egypt and Palestine*, Oxford, 1924, p.130.
- ⁸⁸ M. Ḥamzah, *al-Qibab*, p. 75; Barbara Cipriani, Development of Construction Techniques in the Mamluk Domes of Cairo, M.A, Massachusetts Institute of Technology, 2005, p.37, Fig.1.5
- ⁸⁹ M. Ḥamzah, *al-Qibab*, p.162; H. Hamzah, *The Northern Cemetery*, Pl.8
- ⁹⁰ A circular opening could be extensively seen in most of the mamluk architectural buildings composing of two oblong windows centralized by circular oculus to be called *shand*. Another type of Qamariyāt, which exhibits three oblongs enclosing three roundel that is called *dust*. The term is mentioned in most of the mamluk documents. See L 'Ali Ibrāhīm, M. Amīn, *al-Muṣṭalaḥat al-mi'māriya*, pp.90,91.
- ⁹¹ H. Hamzah, *The Northern Cemetery*, Pls, 3,16
- ⁹² Briggs. M.S, *Muhammadan Architecture*, p.123, Fig.115; D.Abu Seif, *Cairo of the Mamluks*, p.276
- ⁹³ The moldings were mentioned in the mamluk documents, a term recalled two projecting parallel lines interlocking forming roundels *mīmāt* to be called as *jift lā'ib*. They are extensively found around window openings, iwāns, and portals. See L 'Ali Ibrāhīm, M. Amīn, *al-Muṣṭalaḥat al-mi'māriya*, p.29
- ⁹⁴ M.Ḥamza, *al-Qibāb*, Fig.66.
- ⁹⁵ Richard Yeomans, *The Art and Architecture of Islamic Cairo*, British Library, UK, 2006, p.219; D.Abu Seif, *Cairo of the Mamluks*, p.277.
- ⁹⁶ M.S.Abdallah, *Madāfin ḥukkām Miṣr*, p.292.
- ⁹⁷ Briggs, *Muhammadan Architecture*, p.123, fig.116; Yeomans, *The Art and Architecture*, p.222; D.Abu Seif, *Cairo of the Mamluks*, p.276.
- ⁹⁸ M.Ḥamza, *al-Qibāb*, Fig.66.

- ⁹⁹M.Ḥamza, *al-Qibāb*, p.138.
- ¹⁰⁰H. Hamzah, *The Northern Cemetery*, Pl. 335; G.al-Qādī, A.Bonnamy, *Architecture of the dead*, p.198
- ¹⁰¹M.Ḥamza, *al-Qibāb*, Fig.89
- ¹⁰²M.Ḥamza, *al-Qibāb*, Fig.66.
- ¹⁰³R. ‘Abd al-Rāziq, Madfan al-Amīrah Fāṭimah, al-Ūṣūr magazine, IV, p.19.
- ¹⁰⁴R. ‘Abd al-Rāziq, Madfan al-Amīrah Fāṭimah, al-Ūṣūr magazine, IV, p.21
- ¹⁰⁵H. Hamzah, *The Northern Cemetery*, Pl.5; Bernard O’Kane, "The design of Cairo’s masonry domes." *Proceedings of the Masons at Work Conference*. University of Pennsylvania, 2012, pp.5,13, Figs.4,18.
- ¹⁰⁶R. ‘Abd al-Rāziq, Madfan al-Amīrah Fāṭimah, al-Ūṣūr magazine, IV, p. ۲۲
- ¹⁰⁷H. Hamzah, *The Northern Cemetery*, Pl.4.
- ¹⁰⁸R. ‘Abd al-Rāziq, Madfan al-Amīrah Fāṭimah, al-Ūṣūr magazine, IV, p.8.
- ¹⁰⁹D.Abu Seif, *Cairo of the Mamluks*, Fig.304.
- ¹¹⁰R. ‘Abd al-Rāziq, Madfan al-Amīrah Fāṭimah, al-Ūṣūr magazine, IV, p.19.
- ¹¹¹M. Ḥamzah, *al-Qibab*, p. 75, Cipriani, *Mamluk domes*, p.37, Fig.15.
- ¹¹²M.Ḥamza, *al-Qibāb*, Fig.66.
- ¹¹³‘Abdallah Kāmil Musah, *The Fatimid Architecture in Cairo*, General Egyptian Book Organization, 1995, Fig.13.
- ¹¹⁴Creswell. K.A.C, *The Muslim Architecture of Egypt, Ikshides and the Fatimides*, Oxford, 1951, pp.232,233, Fig.132.
- ¹¹⁵Creswell, M.A.E, II, p.65, Fig.30.
- ¹¹⁶R. ‘Abd al-Rāziq, Madfan al-Amīrah Fāṭimah, al-Ūṣūr magazine, IV, p.6.
- ¹¹⁷Creswell, M.A.E, II, p.136; Fig.71.
- ¹¹⁸M. Ḥamzah, *al-Qibab*, p. 75.
- ¹¹⁹R. ‘Abd al-Rāziq, Madfan al-Amīrah Fāṭimah, al-Ūṣūr magazine, IV, p.10.
- ¹²⁰M. Ḥamzah, *al-Qibab*, p.173, Fig.127.
- ¹²¹M. Ḥamzah, *al-Qibab*, p.173, Fig.131; J. al-Qādī, A. Bonnamy, *The Architecture of the Dead*, p.186; Cipriani, *Mamluk domes*, Fig.126
- ¹²²For more details see M. Ḥamzah, *al-Qibab*, pp. 55-148 and J. al-Qādī, A. Bonnamy, *The Architecture of the Dead*, pp.105,106,171-250.
- ¹²³R. ‘Abd al-Rāziq, Madfan al-Amīrah Fāṭimah, al-Ūṣūr magazine, IV, p.8
- ¹²⁴J. al-Qādī, A. Bonnamy, *The Architecture of the Dead*, p.198.
- ¹²⁵M. Ḥamzah, *al-Qibab*, Fig.79.
- ¹²⁶R. ‘Abd al-Rāziq, Madfan al-Amīrah Fāṭimah, al-Ūṣūr magazine, IV, p.8
- ¹²⁷B. O’Kane, *Domes*, Fig.10.
- ¹²⁸M. Ḥamzah, *al-Qibab*, Fig.81.
- ¹²⁹M. A. ‘Abd al-Raḥman, ‘*Amā’ir al-amīrah ShīyūKār*, p.163, note.2.
- ¹³⁰M. A. ‘Abd al-Raḥman, ‘*Amā’ir al-amīrah ShīyūKār*, p.164.
- ¹³¹Aḥmad ‘Abd al-Raziq, *al-‘Imārah al-Islāmiyah fī Miṣr, min al-Fath al-‘arabi hata nahayat al-‘Asr al-Mamlukī*, (Dār al-Fikr al-‘Arabī, Cairo, 2012), p.398.

- ¹³²M. Ḥamzah, *al-Qibab*, Fig.29.
- ¹³³M. A. 'Abd al-Raḥman, 'Amā'ir al-amīrah ShīyūKār, p.166.
- ¹³⁴M.Ḥamzah, *al-Qibāb*, p.118; 'Āṣim Muḥammad Rizq, *Khānqāwāt al-Ṣūfiyah ft Miṣr*, Vol.II, Cairo, 1998, p.786.
- ¹³⁵H. Hamza, *The Northern Cemetery*, Pl.19
- ¹³⁶Cipriani, *Mamluk domes*, p.37, Fig.1.14.
- ¹³⁷Prisse D'Avennes, *Islamic Art in Cairo from the 7th to the 18th centuries*, The American University in Cairo, 1999, p.27
- ¹³⁸M. 'Abd al-Raḥman, 'Amā'ir al-amīrah ShīyūKār, p.163.
- ¹³⁹A. Rizq, *Khānqāwāt al-ṣūfiyah*, II, pp.664,668.
- ¹⁴⁰M. 'Abd al-Raḥman, 'Amā'ir al-amīrah ShīyūKār, p.166.
- ¹⁴¹M. 'Abd al-Raḥman, 'Amā'ir al-amīrah ShīyūKār, pp.166,167
- ¹⁴²A. Rizq, *Khānqāwāt al-ṣūfiyah*, II, pp.671-673; D.Abu Seif, *Cairo of the Mamluks*, p.270.
- ¹⁴³D.Abu Seif, *Cairo of the Mamluks*, p.311.
- ¹⁴⁴A. Rizq, *Khānqāwāt al-ṣūfiyah*, II, pp.566,569; D.Abu Seif, *Cairo of the Mamluks*, fig.211; A. 'Abd al-Rāziq, *al- 'Imarah*, pp.334, 337.
- ¹⁴⁵A. Rizq, *Khānqāwāt al-ṣūfiyah*, II, p.674; A. 'Abd al-Rāziq, *al- 'Imārah*, p.375.
- ¹⁴⁶M. 'Abd al-Raḥman, 'Amā'ir al-amīrah ShīyūKār, p.167.
- ¹⁴⁷M.Ḥamzah, *al-Qibāb*, p.118
- ¹⁴⁸This street previously called Muhammad Alī Street (the present day al-Qal'ah). See Herz, *Mosquée du Sultan Hassan*, p. 2; A. 'Abd al-Rāziq, *al- 'Imārah*, p.298.
- ¹⁴⁹Looking to the map of the Egyptian Survey Authority, the dome of Affendina was registered among the Islamic Monuments (Decision No 242, year 2001) and the location was not clear, however, the name of the street *al- 'Aḥḥī* in which it is located is clear in the map. The Researcher Maḥmūd Sayid 'Abdallah mentioned another map according to the Egyptian Survey Authority clarifying the exact location of the dome. See M. S. Abdallah, *Madāfin ḥukkām Miṣr*, p.293, Map 9.
- ¹⁵⁰A. El Sandouby, *The Ahl al-bayt in Cairo and Damascus*, p.235
- ¹⁵¹See Note 40.
- ¹⁵²Maḥmūd 'Abbās Aḥmad 'Abd al-Raḥman, *Ma 'ālim Miṣr al-Ḥadīthah wa-l-mu 'asirah, tāriḥ wa ḥadārah*, Supreme Council of Antiquities, 2006, p.162
- ¹⁵³For more details see *Dalīl al-Āthar al-islāmiya bi madīnat al-Qāhirah*, The Supreme Council of Antiquities, 1st Edition, Cairo, 2000.
- ¹⁵⁴According to the mamluk waqf or endowment deeds, some commercial and secular buildings were used by the Ottomans such as the house of emir Manjak al-Silāhdār, the palace of emir Baysarī, the house of house of Amir Qurqumās, the house of al-Razzāz, the palace of prince Alīn Āq al-Ḥusāmī, the Wukallah of sultan al-Mu'ayyad Shaykh, and the constructions of the sultan Qaytbay at

Suq al-Ghanam. For more details see Muḥammad Ḥusām al-Dīn Ismā‘īl, *al-Uṣūl al-mamlūkiya li-l-‘amā’ir al-‘uthmāniyah*, Cairo, 2003, pp.57-190.

¹⁵⁵ D.Abu Seif, *Islamic Architecture*, p.158; Ḥasan ‘Abd al-Wahhāb, *Tārīkh al-masājīd al-Āthāriya*, Cairo, 1946, Vol.I, p.309

¹⁵⁶ D.Abu Seif, *Islamic Architecture*, p.161; Ḥ. ‘Abd al-Wahhāb, *Tārīkh al-masājīd*, I, p.309

¹⁵⁷ D.Abu Seif, *Islamic Architecture*, p.162; Ḥ. ‘Abd al-Wahhāb, *Tārīkh al-masājīd*, I, p.309

¹⁵⁸ D.Abu Seif, *Islamic Architecture*, pp.165,166.; Ḥ. ‘Abd al-Wahhāb, *Tārīkh al-masājīd*, I, p.309

¹⁵⁹ Ḥ. ‘Abd al-Wahhāb, *Tārīkh al-masājīd*, p.309; D.Abu Seif, *Islamic Architecture*, p.168; Mohammad Al-Asad, *The Mosque of Muhammad Ali in Cairo*, *Muqarnas*, Vol. 9, Brill, (1992),p.41.

¹⁶⁰ Ḥ. ‘Abd al-Wahhāb, *Tārīkh al-masājīd*, p.309.

¹⁶¹ The dissertation given by Muhammad Ahmad ‘Abd al-Raḥman to Faculty of Archaeology Cairo University didn’t provide with any plan or sectors for the mausoleum. The researcher gave a plan by using the computer programs showing the original square plan and its surrounding; therefore, the plan is firstly published by the researcher.

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