



# ANNALES ISLAMOLOGIQUES

en ligne en ligne en ligne en ligne en ligne en ligne en ligne en ligne en ligne en ligne en ligne

AnIsl 50 (2017), p. 147-198

Dina Ishak Bakhoun

Mamluk Minarets in Modern Egypt. Tracing Restoration Decisions and Interventions

## Conditions d'utilisation

L'utilisation du contenu de ce site est limitée à un usage personnel et non commercial. Toute autre utilisation du site et de son contenu est soumise à une autorisation préalable de l'éditeur (contact AT ifao.egnet.net). Le copyright est conservé par l'éditeur (Ifao).

## Conditions of Use

You may use content in this website only for your personal, noncommercial use. Any further use of this website and its content is forbidden, unless you have obtained prior permission from the publisher (contact AT ifao.egnet.net). The copyright is retained by the publisher (Ifao).

## Dernières publications

9782724710540 *Catalogue général du Musée copte*  
9782724711233 *Mélanges de l'Institut dominicain d'études  
orientales 40*  
9782724711424 *Le temple de Dendara XV*  
  
9782724711417 *Le temple de Dendara XIV*  
9782724711073 *Annales islamologiques 59*  
9782724711097 *La croisade*  
9782724710977 *???? ??? ???????*  
9782724711066 *BIFAO 125*

Dominique Bénazeth  
Emmanuel Pisani (éd.)

Sylvie Cauville, Gaël Pollin, Oussama Bassiouni, Youssef  
Hamed  
Sylvie Cauville, Gaël Pollin, Oussama Bassiouni

Abbès Zouache  
Guillemette Andreu-Lanoë, Dominique Valbelle

# Mamluk Minarets in Modern Egypt

## Tracing Restoration Decisions and Interventions

### ♦ ABSTRACT

This essay discusses the work of the *Comité de conservation des monuments de l'art arabe* to restore, and in some cases transform and reinvent Mamluk minarets from the 1880s to 1950s. Three types of interventions are particularly considered: 1. the dismantling and reconstructing of upper pavilions at risk of collapse; 2. the construction of upper pavilions that were missing when the *Comité* started to work on the minarets; and 3. the removal of Ottoman pencil-like caps from Mamluk minarets and the reconstruction of a typical Mamluk pavilion. Relevant examples in each type are examined using historical sources and on site observations. The research leads to conclude that although the *Comité's* decisions might have been influenced by ideology, as often suggested in the literature, technical motives and safety issues also played an important part in orienting interventions. The common notion that the *Comité* "medievalized" Cairo for the sake of tourists only imperfectly captures the diversity and complexity of the principles and methodologies of restoration and conservation followed by the *Comité*.

**Keywords:** *Comité de conservation des monuments de l'art arabe*, earthquake, Mamluk minarets, medievalize/medievalization, Ministry of Public Works, pencil-like minaret/Ottoman minaret, reconstruction, restoration, tanẓīm, Waqf/Awqāf

\* Dina Ishak Bakhoun, Engineer and art historian specialised in cultural heritage conservation and management. Ph.D. candidate at Université Paris 1 Panthéon-Sorbonne, dina.bakhoun@gmail.com

## ♦ RÉSUMÉ

Cette contribution examine l'activité du Comité de conservation des monuments de l'art arabe en matière de restauration, et le cas échéant de transformation et de réinvention de minarets mamlouks au cours des années 1880 à 1950. Trois types d'intervention sont considérés : le démantèlement et la reconstruction des couronnements menaçant ruine, la construction de nouveaux couronnements qui étaient manquants lorsque le Comité commença à intervenir sur les minarets et la destruction des couronnements effilés ajoutés à l'époque ottomane sur des minarets mamlouks pour les remplacer par des couronnements d'époque. Des exemples dans chaque catégorie sont étudiés à partir de la documentation historique et de l'observation sur place. L'étude conduit à conclure que, si les décisions du Comité furent influencées par des considérations idéologiques, ainsi que le suggère la bibliographie récente sur le sujet, des motifs techniques et des préoccupations de sécurité ont contribué autant, sinon plus, à orienter les interventions. L'idée convenue, selon laquelle le Comité contribua à « médiévaliser » Le Caire au profit des touristes, ne rend que très imparfaitement compte de la diversité et de la complexité des principes et des méthodologies de restauration et de conservation mis en œuvre par le Comité.

**Mots-clés :** Comité de conservation des monuments de l'art arabe, tremblement de terre, minarets mamlouks, médiévalisation, ministère des Travaux publics, minarets à couronnement effilé, reconstruction, restauration, *tanzīm*, *waqf/awqāf*

\* \* \*

## Introduction

This essay discusses the restoration of some Mamluk minarets carried out over a century, between the mid-1800s and mid-1900s. Using selected case studies, it will present initiatives by the *Comité de conservation des monuments de l'art arabe*<sup>1</sup> to restore, and in some cases transform and reinvent minarets. Through the use of mostly unpublished primary sources, it provides new insights on the principles and methodologies of restoration and conservation interventions during Egypt's modern history.

The research also aims to revisit previous analysis and common notions about the *Comité's* work and agenda by paying attention to specific situations that can inform both of them. It argues that although the *Comité's* decisions might have been influenced by ideology, as often suggested, a detailed chronological examination of the restoration process, from initial survey to implementation, demonstrates the diversity and complexity of its working policies.

1. Hereafter, *Comité*. In Arabic, *Laġnat ḥifẓ al-āṭār al-ʿarabiyya al-qadīma*.

## The *Waqf* and the *Comité*

The article will first begin with a brief history of the *waqf* system and the *Comité de Conservation des Monuments de l'Art Arabe*.

When a patron founded a mosque, *madrassa*, *sabīl* (water dispensary), or any other utility, as an endowment (*waqf*, pl. *awqāf*) for people to benefit from in perpetuity, he or she also alienated other revenue generating properties by stipulating in the endowment deed (*waqfiyya*) that the income be primarily used on regular maintenance and repair of the endowed structure in order to ensure the continuity of its use, function and benefit.<sup>2</sup> The *waqfiyya* included a list of jobs related to the running and maintenance of the endowment, to be supervised by a *nāẓir*.<sup>3</sup> Each endowment functioned independently until 1835 when Mehmed Ali started to confiscate *awqāf* creating a management body for the endowed structures, which he later abolished in 1837–1838. Khedive 'Abbās re-established the *Waqf Administration* (*Dīwān 'umūm al-awqāf*) and gradually the revenues of the *awqāf* were centralized. In 1878, the *Dīwān* was reorganized under Khedive Ismā'īl and it became a Ministry until 1884, when it reverted again to an administration.<sup>4</sup>

By the mid-19th century concerns were being raised, predominantly by foreigners, but also by some Egyptians, about the state of many *awqāf* buildings such as mosques, *madrassas*, *sabīls*, etc. These buildings were suffering from lack of maintenance and most significantly bad restoration practices, which led to demands to create a specialized body of experts to deal with the protection and conservation of such structures. The concern prompted Khedive Tawfīq to issue a decree on 18 December 1881 establishing the *Comité de Conservation des Monuments de l'Art Arabe* under the Ministry of *Awqāf*.<sup>5</sup> The mission of the *Comité* according to its foundation decree was:<sup>6</sup>

- 1-De procéder à l'inventaire des monuments arabes présentant un intérêt artistique ou historique;
- 2-De veiller à l'entretien et à la conservation de ces monuments en avisant le Ministre des Wakfs des travaux à exécuter et en lui signalant les plus urgents;
- 3-D'étudier et d'approuver les projets et plans de réparations de ces monuments et d'observer leur stricte exécution;
- 4-D'assurer dans les archives du Ministère des Wakfs, la conservation des plans de tous les travaux exécutés, et de signaler à ce Ministère les débris de monuments qu'il y aurait lieu de transférer, dans l'intérêt de leur conservation, au Musée national.

2. Bakhoum, 2004 and 2007, pp. 179–196, El-Habashi, 2001, pp. 11–58.

3. Amin, 1980, pp. 303–320.

4. For more details on this period, see Ġānim, 1998, pp. 383–499.

5. Volait, 2002, pp. 311–325, Volait, 2009, pp. 181–226, Ormos, 2009a, vol. 1, pp. 52–53, 82–85 (among others), El-Habashi, 2001, pp. 60–83, Reid, 2002, pp. 213–237. El-Habashi and Warner, 1998, pp. 81–99.

6. *Comité de conservation des monuments de l'art arabe, Exercice 1882-1883, Fascicule premier, Procès-verbaux des séances, Rapports de la deuxième Commission*, Imprimerie nationale, Cairo, 1892, 2nd ed., 72 pp. and V pl., pp. 8–9. The Bulletins of the *Comité* will be shortened to BC followed by the volume number, the period the Bulletin covers, the title of the section of the respective report and the page numbers. It must be noted that in some cases the year of publication is different from the year/years the Bulletin covers. The year of publication will therefore be left out.

Although the Minister of *Awqāf* was the president of the *Comité*, technical decisions were mainly the responsibility of its chief architect and of its foreign and Egyptian members.<sup>7</sup> Julius Franz, a German who headed the technical office of the Ministry of *Awqāf*, was the first to lead the works of the *Comité* from 1882 to 1887.<sup>8</sup> Upon his retirement, the position of chief architect was established and filled from 1889 to 1914 by the Hungarian architect, Max Herz Pasha,<sup>9</sup> who had been working with Franz since the early 1880s. The *Comité's* third chief architect after Herz was the Sicilian Achille Patricolo, who held the position until 1923. After 1923, the *Comité's* chief architects were Egyptian, including Aḥmad Sayyid Mutawallī [Sayed Metoualli or Metwalli in most European sources], Maḥmūd Aḥmad and Muḥammad 'Abd al-Fattāḥ Ḥilmī, while the members remained foreign and Egyptian.

Donald Malcom Reid has politically contextualized the Egyptian-European discourse of managing Egyptian heritage, especially Arab monuments, demonstrating how, after years of European domination of the *Comité*, national claims to heritage prevailed, especially evident after the 1920s when nationalism was growing in Egypt.<sup>10</sup>

The rising tension between the Egyptian and foreign members of the *Comité* is further addressed by 'Alā' al-Ḥabaṣī (Alaa El-Habashi).<sup>11</sup> Contrasting a compilation of “waqf preservation principles” with the conservation/restoration philosophies of the *Comité*, which were influenced by the conservation movements in Europe, he states that the “*Comité* had created, perhaps unintentionally, segregation between the portion of *waqf* buildings it tackled, and its users and inhabitants”. He argues that “The *Comité* indeed had preserved the physical values of such monuments but in the meantime, diminished their role in the urban context, and dissolved their integration with the local society.”<sup>12</sup>

Recent research has taken this discourse further, concluding that the work of the *Comité* resulted in the “medievalization” of Cairo by European and local elites for the interest of foreign travelers, especially at a time of growing tourism by companies such as Thomas Cook.<sup>13</sup>

For example, Paula Sanders argues that “the *Comité's* architects reconfigured these sites in ways that broke their ties to the present for Egyptians even as they configured these sites in relation to European tourists as representations of a continuous medieval.”<sup>14</sup>

The “medievalization” process is also scrutinized by Irene Bierman, Nasser Rabbat and Nezar Al-Sayyad:<sup>15</sup>

7. Speiser has provided an orderly summary, listing the name, period and some interventions of each of the *Comité's* chief architects, as well as a list of all the names of its members and the duration of their mandate. Speiser, 2001, pp. 67–74; pp. 231–234.

8. For more on Julius Franz, see Pflugrad-Abdelaziz, 2013, pp. 297–310.

9. Ormos, 2001, pp. 161–171, and Ormos, 2009a.

10. Reid, 1992, pp. 57–76. See also Reid, 2002 and 2015.

11. El-Habashi, 2001, pp. 148–184.

12. El-Habashi, 2001, pp. 6–7 and p. 97.

13. AlSayyad et al., 2005, and Sanders, 2008.

14. Sanders, 2008, p. 85.

15. AlSayyad et al., 2005, pp. 2–3.

The process through which Cairo was “medievalized” consisted of two separate but overlapping parts. First, the representation of medieval Cairo through literary narratives, paintings, photography, etc. Second, and not remote from the first, either chronologically or conceptually, came the fabrication of a “medieval” Islamic Cairo on the ground through the reorganization of the physical space of the city, the work of the *Comité de Conservation des Monuments de l’Art Arabe* (the *Comité*) etc. Both parts fit snugly within the larger context of orientalism, and more specifically, they illustrate how the East has been an inextricable part of the West’s self-representation as modernity’s locus and history’s peak.

István Ormos, who researched the *Comité* through the works and life of Max Herz and a thorough study of published as well as non-published archival material, disagrees with many of the above-mentioned claims. He acknowledges that foreign tourists and art connoisseurs had a great interest in Cairo due to the large number of surviving monuments, especially after experiencing the loss of medieval Paris. He argues that the notion of medievalizing Cairo “is not supported by facts, at least for the period of Max Herz Pasha”. He states:<sup>16</sup>

I think the *Comité* never thought of conserving the whole old city in its contemporary shape and even less of transforming later buildings into medieval ones. As a rule, the *Comité* always dealt with single monuments in the period under discussion. Its funds were also very limited and so it was able to execute only a small fraction of the work it regarded as absolutely indispensable. Under such circumstances even to think of “making Cairo medieval” was out of the question.

He does however, recognize exceptions:<sup>17</sup>

It is true that Herz undertook some minor measures which pointed in this direction: on Mamluk minarets he replaced ugly later structures with constituents in the original style of the given monument, thus rendering it so to say more medieval than it had been prior to his intervention.

## Rationale for the Selection of Minarets

Why focus on minarets? While minarets dominated the skyline of Cairo and attracted the attention of many travelers, artists and photographers, they were also an important element in the urban fabric and also of the mosque and were used by the *mu’addin* for the call to prayer until electricity was connected to mosques around the middle of the 20th century.

16. Ormos, 2009a, vol. I, p. 89. In his review of Ormos (2009), O’Kane shares this point of view, O’Kane, 2014, p. 130.

17. Ormos, 2009a, vol. I, p. 89.

From a structural perspective, minarets are not only a challenge to construct, but their restoration must have been a costly and difficult task for the *Comité*, especially as many of them suffered after a number of earthquakes that will be discussed below (fig. 1 & fig. 2).

The shape and decoration of the minaret not only represent an art-historical phase, but also a political shift; Behrens-Abouseif when discussing the construction rather than the restoration of Ottoman style minarets in Cairo notes:<sup>18</sup>

There is no architectural development in the history of Cairo that can be so closely linked to political change as the almost universal replacement of the Mamluk multiple-tiered minaret with the pencil-shaped shaft following the Ottoman conquest.

During the Ottoman period, some damaged upper pavilions of Mamluk minarets were reconstructed in Ottoman style with the pencil-like cap (fig. 3 & fig. 4). These additions were sometimes removed by the *Comité* and restored back to Mamluk style (fig. 5). From a political perspective, Sanders, when discussing this type of restoration work by the *Comité*, argues broadly that: “One of the most urgent tasks of the *Comité* was to identify and restore these dozens of monuments to proper dynastic style”<sup>19</sup> arguing that the “*Comité* was decidedly anti-Ottoman”.<sup>20</sup>

From an art-historical perspective, other general trends about the *Comité*’s restoration of minarets have been highlighted. Behrens-Abouseif’s *Minarets of Cairo* provides a thorough chronological analysis of the history, art and architecture of Cairene minarets.<sup>21</sup> She provides brief mentions of the *Comité*’s interventions on minarets, references Ormos’ description of their restoration during Herz’s time and in some cases refers to them as “modern” restorations.<sup>22</sup> The accompanying drawings by Nicholas Warner indicate all additions in grey, including not only those of the *Comité*, but also later interventions as well as non-executed or no-longer existing hypothetical reconstructions.<sup>23</sup> Behrens-Abouseif argues that:<sup>24</sup>

The restorations undertaken by the *Comité* in the late nineteenth and early twentieth centuries further altered the appearance of the pavilion owing to the use of slender marble columns instead of the original limestone piers with engaged carved columns, which can be seen at the minarets of Asanbugha and Qaytbay at Qal’at al-Kabsh. The *Comité* also seems to have adopted a standard model of pavilion in their reconstructions, exemplified by their restorations of the minarets of al-Mu’ayyad Shaykh at the gate of Bab Zuwayla. This arbitrary and careless attitude to restoration was criticized even at the time.

18. Behrens-Abouseif, 2010, p. 22.

19. Sanders, 2008, pp. 103–104.

20. Sanders, 2004, p. 133, and Sanders, 2008, p. 36.

21. Behrens-Abouseif, 2010.

22. Behrens-Abouseif, 2010, pp. 209, 217, 223.

23. Behrens-Abouseif, 2010, p. xvi.

24. Behrens-Abouseif, 2010, p. 58. The reference used by the author here refers in fact to work carried out during the 1870s, before the *Comité* was created.

Fig. 1. Facchinelli, *Panorama preso dalle Torri di Sultan Barquq (Cairo)*, 1887, Silver print. From *Raccolta Artistica Di Fotografie Sull'Architettura Araba, Ornati Ecc. Dal XII° al XVIII° Secolo Fotografia Italiana Del Cav. B. Facchinelli*, 1887, Library of INHA, Fol Phot 065, f° 40. Courtesy of BINHA.



Fig. 2. G. Lekegian & C°, *Minaret [of the mosque of Qurqumās]*, ca.1880. Silver print, Creswell Photographic Collection, The American University in Cairo, Album 27. Courtesy of the RBSCL.





Fig. 3. K.A.C. Creswell, with manuscript mention at the back of the print: *Mosque of Barsbâi: minaret, from coping of şahn*, before 1944. Creswell Photographic Collection, The American University in Cairo, Album 24. Courtesy of the RBSCL.



Fig. 4. K.A.C. Creswell, [Minaret of Qāḍī ‘Abd al-Bāsiṭ mosque], with manuscript mention at the back of the print: *Mosque of ‘Abd el-Basset: N. façade*, prior to 1936–1940. Creswell Photographic Collection, The American University in Cairo, Album 24. Courtesy of RBSCL.



Fig. 5. [Minaret of Qāḍī 'Abd al-Bāsiṭ mosque], 2015.  
Digital photograph. © Matjaž Kačičnik.

What can accordingly be ascertained is that the restoration of Mamluk minarets by the *Comité* had been central in the critical analysis of its working policies.

The overgeneralization on the one hand, and inaccuracies on the other, regarding the restoration of Mamluk minarets in 19th and 20th century Cairo, invite scholars to reconsider anew the topic, using both historical and material data.

Therefore, in exploring and describing the *Comité's* interventions on a selected number of minarets, the author aims to revisit and/or confirm some of the above-mentioned general notions, with the hope to contribute to the effort of studying, identifying, interpreting and also contextualizing the *Comité's* interventions. It is all the more crucial to do so since its legacy represents a significant layer in these buildings' history during modern times.

Many questions about the *Comité* and its work can be tackled. Was it restoring the minarets for the sake of the tourists or the users? Were the motives political, aesthetic, social, historic, artistic or otherwise? Did it have a comprehensive plan to "medievalize" Cairo's skyline by restoring the minarets or removing their Ottoman additions, reverting them back to the Mamluk style? Who initiated the restoration of minarets and how was it funded?

Other interesting technical and art-historical information on the *Comité's* restoration methodologies can be raised; such as how the minarets were documented, who were the architects, photographers and contractors involved and on what basis were the restorations and additions designed and implemented.

## The Design of Minarets, Classification of Interventions and Sources Used

### *Design of Minarets*

This study predominantly focuses on some Mamluk minarets, which are typically characterized by an upper, third shaft formed by a pavilion comprising either eight marble columns carrying an onion-shape bulb or eight stone piers with engaged columns made of masonry courses and carrying the onion shape bulb or a ribbed helmet.

### *Classification Based on Typology of Intervention*

The case studies considered here are classified according to the typology of the *Comité's* own intervention, which was linked to the condition of the minarets' upper pavilion at the time when the *Comité* started their restoration. These are grouped into three sections:

1. Dismantled and reconstructed, which deals with minarets whose upper pavilions were still intact when the *Comité* started their work, but were structurally unstable or in a relatively ruined state, sometimes with the minaret's upper shaft shored and in some cases with the bulb missing.
2. Newly designed and reconstructed, which deals with minarets whose upper pavilions were missing when the *Comité* started their work.
3. Restored from Ottoman back to a Mamluk design, which deals with Mamluk minarets whose upper pavilions were restored during the Ottoman Period in the typical Ottoman pencil-like cap.

Within each of these classifications, a chronological order of the restoration intervention will be followed, whenever possible. The rationale for this is to trace if the methodology of restoration changed over time; it also allows us to understand to what extent restoration decisions were influenced by the background and philosophy of the *Comité's* chief architect at a given time<sup>25</sup> and possibly also political and social circumstances.

Accordingly, minarets restored during the mandate of the *Comité's* various chief architects will be discussed; however, in order to add to the scholarly discourse, the detailed case studies selected for discussion in this present work are of minarets restored prior to or after Herz's tenure, hence they are not discussed by Ormos.

25. See also El-Habashi, 2001, pp. 127–133, and Speiser, 2001, pp. 67–74.

## Sources

With regard to the sources used, it is worth noting that while the *Comité* has published its minutes of meetings and technical reports in its Bulletins, accompanied by a selection of photographs and drawings,<sup>26</sup> their non-published archive contains a wealth of information that merits more research and analysis. These include the *Comité's* correspondence with other government bodies, contractors, designers, etc. as well as the projects' specifications and bills of quantities, in addition to architectural drawings and photographs.<sup>27</sup> This paper draws on some of the above-mentioned primary and secondary sources, in addition to other photographic collections of the late 19th and early 20th centuries, that document Cairo's monuments and illustrate the minarets prior to and/or after the *Comité's* interventions. The two main photographic collections carefully consulted are those of Facchinelli and Creswell;<sup>28</sup> their collaboration with the *Comité* will be discussed in the article, when relevant.

## Cairo, the City of a Thousand Minarets

The minarets of Cairo, whose graceful presence contributed to the city's unique aesthetics, appear frequently in paintings as well as in photographic and architectural collections and it may be said that during the late 19th to early 20th centuries they dominated its skyline.

In addition to textual sources, the wealth of visual material produced in the 19th and early 20th centuries provides valuable information that may assist scholars in producing a possible timeline for tracking any damage the minarets incurred alongside the different types and phases of interventions prior to and during the *Comité's* time. It is important to note, however, that while dated images are quite reliable sources of information, dealing with artistic drawings and paintings demands a critical eye since, in many cases, the artists did not intend

26. The *Comité* Bulletins are currently available online in image mode on Islamic Art Network. <http://www.islamic-art.org>. Full searchable texts of the entire collection were released on the portal Persée in June 2016, thanks to a partnership with InVisu (INHA/CNRS) and Ifao. URL: [www.persee.fr/collection/ccmaa](http://www.persee.fr/collection/ccmaa)

27. The correspondence files of the *Comité* used to be at the headquarters of the Supreme Council of Antiquities in 'Abbāsiyya, specifically *Idārat al-mahfūzāt al-islāmiyya wa-l-qibṭiyya*; it was moved in 2015 to another office in the complex of Qurqumās at the Northern Cemetery. The drawings and the photographs are at the Citadel in *Markaz tasḡil al-ātār al-islāmiyya wa-l-qibṭiyya* and *Markaz al-dirāsāt al-aṭariyya* respectively. Documents will be referenced as: "IMIQ, folder (monument number)". Drawings will be referenced as: "MT, folder (monument number)"; the numbers corresponding to the number assigned to the monument by the *Comité*. Manuscripts and written documents in Arabic, French and Italian, used in this article, are translations of the author, unless otherwise stated.

28. Facchinelli's collection is dispersed in Paris, Geneva, Florence, London and Cairo. The consulted collection for this research is housed at the Bibliothèque de l'INHA and at the Bibliothèque nationale de France in Paris. With regard to Creswell, his collection is in Oxford, London, Harvard, Cambridge (USA) and Cairo. The consulted collection for this research is at the Rare Books and Special Collections Library at the American University in Cairo. It includes photographs by Creswell as well as others by Gabriel Lekegian, Hippolyte Béchard and Giuntini. Thanks are due here to Mercedes Volait and Ola Seif.

to document the exact condition of their subject and the representations may consequently lack accuracy.

The ability to date the *Comité's* interventions on minarets conversely assists in dating photographs, for which detailed information is not available.

### *Illustrations of Damaged Minarets*

Minarets that appear in images of the late 19th century in quite a ruined state (fig. 1 & fig. 2) were endangered not only as a result of neglect and lack of maintenance, but also due to a number of recorded earthquakes.

Orientalist and antiquarian Émile Prisse d'Avennes offered his impressions of the damage to Islamic monuments noticed during his stay in 1858–1860:<sup>29</sup>

J'ai entrepris à l'aide de mon photographe une suite de monuments arabes. Ces beaux édifices qui avaient fait autrefois mon admiration sont encore peu connus en Europe, mais ils sont aujourd'hui tellement détériorés par la négligence des Pacha et le dernier tremblement de terre qu'il en existe peu de complets. La plupart des minarets ont perdu leur couronnement, des colonnes et des voûtes sont écroulées, des dômes et des pans de murs sont lézardés de façon à interrompre la liaison des arabesques, les élégantes fenêtres ouvrées à claire-voix sont en partie brisées, les découpures en bronze qui ornaient les portes ont disparu ; enfin les fonds affectés à l'entretien de ces monuments ont été dilapidés.

The authors of *Seismicity of Egypt, Arabia and the Red Sea*, record an earthquake that struck Cairo on 18 Šafar 1273/October 12, 1856, originating in the Hellenic Arc.<sup>30</sup> They summarize the consequences of the earthquake noting that it was felt in the cities of Alexandria, Damietta, Tanta, Damanhur, Suez and Cairo resulting in damage to many buildings. Cairo's historic structures, such as the mosque of Sultan Ḥasan (757/1356) and that of Dāwūd Pasha (955/1548) were affected as were many others, particularly in the district of Būlāq, where minarets collapsed including that of Qāḍī Yaḥyā Zayn al-Dīn (852–853/1448–1449), sometimes referred to as al-Maḥkama mosque, and some main structures also suffered. When the top of the minaret of Abū al-'Ilā (890/1485) fell, it damaged the structure and killed four people.

29. Paris, BnF, département des Manuscrits, papiers Prisse d'Avennes, Nouvelles acquisitions françaises 20426, volume Art arabe I, fol. 272. For more on Prisse d'Avennes, see Volait (ed.), 2013a.

30. Ambraseys et al., 1994, pp. 69–70, based on the *Journal de l'Union des Deux Mers*, the Petermanns Geographische Mitteilungen and the *Ceride-yi Havadis*. The authors use other primary sources such as *Taqwīm al-Nīl* by Amīn Sāmī, among many others.

The earthquake that occurred on 25 Ša‘bān 1263/August 7, 1847 is better known as it was noted by Edward William Lane (1801–1876) in *Cairo Fifty Years Ago*.<sup>31</sup> The earthquake affected al-Azbakiyya, where three minarets lost their tops and the falling debris of one killed a woman. Damage to the northern minaret of the mosque of al-Mu‘ayyad (no longer extant and not to be confused with one of its twin-minarets on top of Bāb Zuwayla) is noted in detail as is the damage suffered by the southern minaret of the twin-minarets of the *ḥānqāh* of Farağ ibn Barqūq in the Northern Cemetery.<sup>32</sup>

It seems that another earthquake took place in 1863 and affected the minarets of al-Mu‘ayyad mosque on top of Bāb Zuwayla, as will be described below.<sup>33</sup>

### ***Al-Mu‘ayyad Mosque Minarets: Illustrations and Interventions Before and During the Comité***

Illustrations and photographs that predate the *Comité*’s establishment are particularly helpful to identify previous interventions, especially because literary sources on interventions that took place between the 1850s and 1880s are quite scarce. Mid- to late-19th century illustrations, photographs and other literary sources of the minarets of al-Mu‘ayyad mosque will be used to present some of the interventions carried out before the *Comité* started to work on them.

Pascal Coste’s *Architecture arabe ou monumens du Kaire, mesurés et dessinés, de 1818-1825* (1839) contains many drawings of minarets, shown in their entirety, along with two plates entitled *Parallèle des minarets des principales mosquées*.<sup>34</sup> Although Coste did not set out to record monuments in a state of ruin, many of the minarets depicted were nonetheless suffering from neglect or at risk of collapse, including the twin minarets of the al-Mu‘ayyad mosque.<sup>35</sup> The minaret’s third octagonal storey formed by eight columns and carrying an onion-shaped stone bulb, shows masonry courses placed between the columns (fig. 6). As will be explained below, based on visual observations of this and other similarly-built minarets, it is apparent that the inter-column masonry was not part of the original construction and that it was a later reinforcement of the minaret, installed as a safety measure.

31. Lane, 1896, p. 96 and pp. 121–122. Although published in 1896, Stanley Lane-Poole explains in the preface that this publication is from a manuscript that E.W. Lane did not include when revising *Modern Egyptians* in 1835. He explains that he got the manuscript from Lane’s nephew, Reginald Stuart Poole, who copied his uncle’s 1835 manuscript and revised it in 1847. Lane-Poole concludes in the preface that “it is safe to say that whatever corrections and additions were made, they were inserted after careful observations and were individually examined and approved by Lane himself”, p. viii.

32. Ambraseys et al., 1997, pp. 66–68.

33. Artin-Bey, 1883, p. 153; Ambraseys et al., 1997, p. 71, list this earthquake but not the damage to the minarets of al-Mu‘ayyad mosque.

34. Coste, 1839, pl. XXXVI–XXXVII.

35. Coste, 1839, pl. XXXI, XXXVII, and MS1310, folio 26b (Marseille, Bibliothèque de l’Alcazar).

The minarets furthermore appear in a drawing by David Roberts dated to 1843 (that is prior to the 1847 and 1856 earthquakes) showing the two minarets intact, but with masonry between the marble columns.<sup>36</sup> A photograph by Robertson and Beato dated to *ca.*1860 (post-earthquakes and prior to the *Comité's* work) shows the upper shafts with the inter-column masonry still standing.<sup>37</sup> One photograph by Émile Béchard dated to 1880 and another dated prior to 1892 show the minarets' top third shaft missing and dismantled.<sup>38</sup>

Taking other drawings, photographs and literary sources into consideration, Ormos notes that the upper parts of the minarets were dismantled after the 1863 earthquake, most likely between 1879–1881, prior to the establishment of the *Comité*.<sup>39</sup> He argues that the pulling down of the upper part was undertaken by the *Tanzīm*<sup>40</sup> Department of the Ministry of Public Works, “which regarded unstable minarets as a threat to public safety and had them demolished”.<sup>41</sup> In the *Comité's* first Bulletin covering work between 1882 and 1883, a letter from the police was accompanied by a quotation from the Ministry of Public Works. The letter mentioned stones falling from the minarets of al-Mu'ayyad Šayḥ mosque (821–823/1418–1420) on top of Bāb Zuwayla, concluding that the minarets should be demolished.<sup>42</sup>

The *Comité* managed to keep the two lower shafts of the minarets, reconstructing their third pavilions.<sup>43</sup> In terms of design, Ormos notes that the *Comité* probably used some of the available representations as the basis for the design and reconstruction of the upper parts of the minarets, although the proportions after reconstruction were slightly different.<sup>44</sup>

As will be demonstrated below, when the *Comité* followed a specific drawing or photograph as a basis for their reconstruction work, they sometimes noted it in the Bulletins, albeit not systematically.

36. The illustrations described in this section were published by Ormos as indicated below. See Ormos, 2009a, vol. 1, p. 152, fig. 15 (Victoria & Albert Picture Library, museum #: FA.176[O]).

37. Ormos, 2009a, vol. 1, p. 156, fig. 25, courtesy of Danish National Art Library, Copenhagen.

38. Ormos, 2009a, vol. 1, p. 155, fig. 21, courtesy of the Supreme Council of Antiquities, and fig. 22, courtesy of Fratelli Alinari Museum of the History of Photography, Florence.

39. Ormos, 2009a, vol. 1, pp. 113–144, referencing also Artin-Bey, 1883, p. 153.

40. For more on the *Tanzīm* department, see Fahmy, 2005, pp. 179–185. In the annual report for 1917–1918 of the Ministry of Public works, they translate *Tanzīm* as “The Department concerned primarily with street alignment and maintenance”.

41. Ormos, 2009a, vol. 1, p. 114.

42. BC I, 1882–1883<sup>2</sup>, “1<sup>o</sup> Porte Metoualli”, pp. 39–40.

43. Ormos, 2009a, vol. 1, pp. 115–117.

44. Ormos, 2009a, vol. 1, pp. 114–115.



In other cases, however, it is not possible to understand what the original shape of the upper pavilion may have looked like (in marble columns or stone piers) when relying only upon visual means. The reason for this is not the inaccuracy of the representation or the clarity of the photographs, but the method by which the support masonry was applied, totally wrapping the columns. In such cases, only physical investigation would provide accurate information. For example, Coste's representation of the minaret of the mosque of Qāyitbāy (877–879/1472–1474) in the Northern Cemetery shows the third storey of the minaret as a solid octagonal shaft formed by courses of masonry, while no traces of marble columns or piers are seen (fig. 7).<sup>46</sup> It is possible that the original shape of the minaret's last shaft that he drew is of a solid octagonal shape rather than a pavilion with columns; however, when the *Comité* started their study and intervention of the minaret in 1897, the *colonnettes* carrying the bulb were discovered with masonry added between them in order to strengthen the structure. The *Comité* was unable to date this intervention, but understood that it was carried out to support the minaret's bulb. They noted:<sup>47</sup>

Réparation du minaret et reconstruction de la partie supérieure, au-dessus de la deuxième galerie. L'état menaçant du bulbe et la mauvaise condition des colonnettes que l'on dut, à une époque indéterminée, envelopper d'une maçonnerie les soutenant mais masquant les entrecolonnements, rendirent ces travaux indispensables. Des colonnettes dégagées, un bulbe reconstruit, rendirent au minaret son élégance première.

Other mid-late 19th century photographs show Mamluk minarets with upper shafts, *muqarnas* and onion-shaped bulbs (or the bulb missing) still existing, while the pavilion is completely encircled and wrapped with masonry forming a kind of cylinder. A photograph that clearly shows such a wrapping including the wrapped columns is attributed to G. Lekegian of the minaret belonging to Qurqumās (911/1506)<sup>48</sup> dated to ca.1880;<sup>49</sup> hence, prior to the *Comité's* intervention (fig. 2). It seems here however that the stone masonry was not completed, and tie bars, possibly in steel, were inserted between the columns.

A photograph of the minaret of Qiğmās al-Ishāqī (885/1480) also taken by G. Lekegian & Co. was published by the *Comité* in its 1892 Bulletin.<sup>50</sup> It shows a similar wrapping of the upper pavilion, but doesn't provide us with more information on dating this intervention. A photograph of the minaret of Umm al-Sulṭān Ša'bān taken by Francis Frith and dated to

46. Coste, 1839, pl. XXXII, and MS1310, folio 25 (Marseille, Bibliothèque de l'Alcazar).

47. BC 14, 1897, "Mosquée funéraire du sultan Kaïtbāi aux Tombeaux des Khalifes", Appendice, pp. II–III, and photo "Mosquée funéraire du sultan Kaitbai au désert", pl. I.

48. Creswell Photographic Collection, RBSC, The American University in Cairo.

49. The photograph is also in the collection of the University of Chicago, where they dated it to ca.1880. [Lekegian, ca.1880. Negative inscribed "Minaret 462". Albumen. Mounted. 8 × 10.5 inches. Acquisition number 290-91].

50. BC 9, 1892<sup>1</sup>, "Mosquée Kidjmās el-Ishaki, Caire (façade ouest), photogr. artistique G. Lékegian et C<sup>o</sup>", pl. X (between p. 84 and 85).

ca.1857<sup>51</sup> and an illustration of Girault de Prangey in Prisse d'Avennes' *L'Art Arabe*<sup>52</sup> show a similar treatment to that of Qiğmās' minaret. The minaret was also illustrated by Coste, but without the wrapping.<sup>53</sup> Therefore, if we consider Coste's representation as accurate, then this intervention must have taken place after 1825 and prior to 1857; if not, then it could be concluded that it took place prior to 1857. In all cases, it seems that this treatment was in response to one of the above-mentioned earthquakes (1847 or 1856).

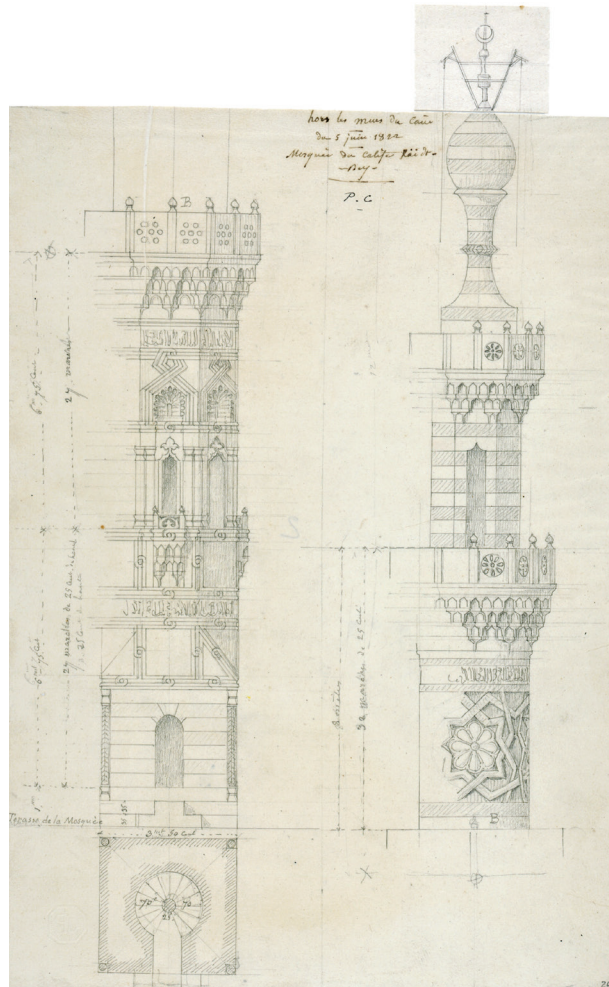


Fig. 7. Pascal Coste, *Hors les murs du Caire, du 5 juin 1822, Mosquée du Calife Kâïdt Bey, 5 June 1822*. Drawing, Bibliothèque de l'Alcazar, Marseille, Album MS 1310. Folio no. 25. Courtesy of BMVR.

51. Photo in the George Eastman Museum and it can be found online through: <http://www.luminous-lint.com/app/image/69158211877176980574/>, accessed on February 26, 2017.

52. Prisse d'Avennes, 1877, vol. 1, pl. XXVII.

53. Coste, 1839, pl. XV.

Other period photographs of Mamluk minarets show the upper shaft with a perfect cylinder and covered by an Ottoman pencil-like cap (fig. 3 & fig. 4). It is not possible to precisely date these interventions, as they could have been carried out either during the Ottoman period or the Khedival era. The cylindrical part could represent masonry wrapping around still existing columns or piers, as we have seen above, or a totally new one. In some other cases, the Ottoman cap was just placed on top of the second shaft most likely after the third shaft was dismantled.

As demonstrated by the case of the minarets of al-Mu'ayyad mosque, photographs that show the last third shaft completely missing do not indicate a sudden collapse, but rather an intentional dismantling process, sometimes prior to the *Comité* and mainly for safety reasons. Some photographs taken after the *Comité* started its interventions on minarets show them in a “neat” state, cleared of rubble and sometimes with a small masonry balustrade replacing the third shaft. As will be discussed below, these photographs represent a stage in the restoration process of the minaret and were mostly taken after the *Comité* intentionally dismantled the upper shafts of minarets owing to risk of collapse with the intention of reconstructing them.

What is clear from the careful investigation of photographic evidence is that a variety of interventions on minarets were carried out prior to the establishment of the *Comité*, but cannot always be accurately dated. The *Comité* acknowledged that some of these interventions were structurally useful, even if the work was not aesthetically and artistically pleasing. In one instance dating to 1894, when the *Comité* couldn't find a contractor to carry out the dismantling and reconstruction work on the minaret of Şargatmiş (757/1356), a masonry wrapping for the upper pavilion was proposed as a consolidation measure and was executed (fig. 8).<sup>54</sup>

It must be noted, however, that criticism of the restoration works carried out shortly prior to the *Comité's* establishment, mainly during the khedival period, did refer to specific works on minarets that took place during the 1860s and 1870s.

Two references are worth noting here. One is an article by Ya'qūb Artīn (Jacoub Artin), an Armenian Egyptian who was a member of the *Comité* from 1881 to 1915, on the mosque of al-Mu'ayyad and Bāb Zuwayla. He specifically criticized the demolition of the minarets' upper parts and the risk that Bāb Zuwayla faced:<sup>55</sup>

Comme les minarets qui la surmontaient et que les poètes qui les ont vu bâtir comparaient à de belles jeunes filles prêtes pour la cérémonie nuptiale, menaçaient ruine à la suite du tremblement de terre de 1863, ils furent décapités et sont depuis restés mutilés.

La porte elle-même menace ruine ; mais nous espérons que S.A. le Khédive voudra conserver ce monument historique et qu'il en ordonnera la restauration par des mains intelligentes, sans jamais permettre qu'on la détruise, même sous prétexte de la reconstruire.

54. BC II, 1894<sup>2</sup>, “8<sup>o</sup> Mosquée Sergatmach”, p. 44, and BC II, 1894<sup>2</sup>, “6<sup>o</sup> Minaret de la mosquée Serghatmach”, p. 51.

55. Artin-Bey, 1883, p. 152.



Fig. 8. Unknown photographer, [Mosque and minaret of the mosque of Şargatmiş], post 1894 and before 1935. Silver print, Creswell Photographic Collection, The American University in Cairo. Album 22. Courtesy of RBSCL.

The other is an article by the French journalist Gabriel Charmes published on the August 2, 1881 in the *Journal des débats*. In the section discussing the restoration work carried out on the minaret of Qāyitbāy mosque at the Northern Cemetery during the reign of Khedive Ismāʿīl, he writes the following about the architect of the Ministry of *Awqāf*:<sup>56</sup>

Likewise in the case of Kait Bey's mosque at the Tomb of the Caliphs he did not hesitate to replace the old balustrades of the minaret with new balustrades of completely different design. Since Kait Bey's mosque has been photographed hundreds of times it is not difficult to see this more than ill-advised change. Numerous fragments have survived from the old balustrades; nothing would have been easier than to copy them. Instead of being reproduced faithfully they were broken up and turned into lime. In the interior of the mosque heresies of the same kind have shocked me profoundly. The gorgeous flagstones have given way to paving-stones of bad taste.

56. Translation of part of Charmes, 1881, appearing in Ormos, 2009a, vol. 1, p. 261 (French text in Volait, 2009, pp. 279–280).

It is believed that the architect in question is Julius Franz; these alterations occurred when he was directing the activities of the Technical Section in the Ministry of *Awqāf*, but not yet the *Comité*, as sometimes misinterpreted.<sup>57</sup>

It is within this context that the *Comité* started to work on minarets. On the one hand, minarets at risk of collapse were of great concern and sometimes demolished, probably by the Ministry of Public Works or the Police; and on the other hand, attempts at restoration by the Ministry of *Awqāf* were strongly criticized.

### *The Protection of Lives and Monuments*

As we have seen, the intention of the *Tanzīm* Department to demolish the minarets of al-Mu'ayyad mosque was among the first issues on the *Comité's* agenda. In June 1882 the minaret of al-Zāhir Baybars *madrasa*, incorrectly reported to be that of al-Ṣālihiyya complex because the *Comité* had initially listed both as one monument,<sup>58</sup> collapsed, causing casualties.<sup>59</sup> This situation must have prompted the *Comité* in its first Bulletin to discuss other dilapidated minarets, such as those of the mosque of al-Ġamrī (850/1446) and the mosque of Abū al-ʿIlā,<sup>60</sup> in addition to the entire structure of Qāḍī Yaḥyā Zayn al-Dīn mosque in Būlāq.<sup>61</sup> The *Comité* was obliged to balance its aim of protecting the monuments with the need to protect the people inside and around them. For the mosque of al-Ġamrī for example it was noted that:<sup>62</sup>

En continuant son chemin, la Commission a remarqué que le minaret de la mosquée El Ghamri, située également au quartier de Bab-el-Charieh, penche aussi sur la voie publique et qu'aucune mesure ne semble avoir été prise pour sa consolidation.

Comme ce minaret est au nombre des monuments dont la conservation s'impose, et comme, en outre, son état constitue un danger permanent pour le public, la Commission croit devoir prier le Comité d'intervenir auprès du nazir de la mosquée, afin d'obtenir qu'il fasse procéder, sous sa surveillance et sa direction, aux travaux absolument indispensables à la consolidation de ce minaret.

57. Works carried out prior to the *Comité* are sometimes mistakenly attributed to it. See for example Behrens-Abouseif, 2010, p. 58, where she writes that the *Comité's* "arbitrary and careless attitude to restoration was criticized even at the time", on the basis of the citation of Charmes given by Ormos, 2009a, vol. 1, p. 261, which refers in fact to work done during the 1870s prior to the establishment of the *Comité*.

58. Hampikian, 2004, pp. 58–59; BC 3, 1885, "Mosquée et tombeau du Sultan Saleh Nedjm-ed-Din Ayoub, au quartier de Nahassin, au Caire", pp. 13–16.

59. BC 1, 1882–1883<sup>2</sup>, "Procès-verbal n° 7", p. 35.

60. BC 1, 1882–1883<sup>2</sup>, "3° Minaret de la mosquée el Ghamri", p. 43; BC 1, 1882–1883<sup>2</sup>, "1° Mosquée Aboul-Ela", pp. 42–43, and BC 1, 1882–1883<sup>2</sup>, "3° Mosquée d'Aboul-Ela", p. 63.

61. BC 1, 1882–1883<sup>2</sup>, "2° Mosquée du Mehkemeh", pp. 62–63.

62. BC 1, 1882–1883<sup>2</sup>, "3° Minaret de la mosquée el Ghamri", p. 43.

The *Comité* often opposed the demolition of minarets and as such, managed to save many, but did not or could not prevent the destruction of others. In 1883, the police demolished the upper part of the minaret of the mosque of al-Šāliḥ Āgā (1220/1805) in Būlāq without the knowledge of the Ministry of *Awqāf*. The remainder of the minaret was slated for destruction, but the *Comité* argued that although it had lost “its crown” the structure was stable. The *Comité*, concluding that the police intervention was unjustified and only spread unwarranted fear regarding the minaret’s integrity, stated that the minaret’s base should be partially consolidated, but that the structure should be left otherwise intact.<sup>63</sup>

During a *Comité*’s meeting in December 1884, Franz informed members that the minaret of the mosque Ġamāl al-Dīn Yūsuf (845/1441–1442) was demolished based on a report from the Ministry of Public Works. The minaret was demolished due to its poor condition, fear of its collapse and the fact that it could not be easily repaired. He also presented to the members other reports prepared by the Ministry of Public Works that were sent to the Ministry of *Awqāf* regarding eight other minarets, whose conditions were equally unsalvageable. The *Comité*’s members indicated that they could not take any decision based on these reports and that they had to be sent to the Second Commission (later called Technical Commission or Technical Section) of the *Comité*. It was recommended that the Second Commission should visit the buildings and give definitive proposals on ways to conserve them if possible. They also advised that for the minaret of the mosque of al-Ġamrī (850/1446), which seemed to be condemned for demolition, detailed photographic and architectural surveys be made, as well as tracing all the moldings, relief, inscriptions and carvings.<sup>64</sup>

By the year 1887–1888 the *Comité* agreed (or was obliged to agree) to the demolition of the minarets of al-Šāliḥ Āgā mosque, Ġamāl al-Dīn Yūsuf (discussed above), al-Ġamrī mosque, the mosque of Murād Pasha (986/1578) at al-Mūsķī, and the minaret and part of the mosque of Ḥāzindār also located at al-Mūsķī.<sup>65</sup>

Other buildings were also at risk of being demolished, but the *Comité* managed to save them. During the *Comité*’s meeting of April, 21 1883, Franz reported that the governorate’s police had informed them that twelve historic monuments, all located in the desert, should be demolished as their dilapidated condition was a threat to public safety.<sup>66</sup> Accepting the demolition of these buildings was understandably against the *Comité*’s mandate and accordingly such a request could not be accepted. As a result some of these buildings still stand today including the *ḥānqāh* of Faraġ ibn Barqūq, which was on the list.

63. BC 1, 1882–1883<sup>2</sup>, “l’<sup>o</sup> Mosquée de Saleh Agha”, pp. 61–62, and Ormos, 2009a, vol. 1, p. 51.

64. BC 2, 1884, “Procès-verbal n° 13”, pp. xxiii–xxv.

65. BC 5, 1887–1888, “Extrait du rapport de Franz pacha”, Annexe au Procès-verbal n° 32, pp. xliv–xlv; this was part of an extract from a report prepared by Julius Franz and annexed to the *Procès-verbal* no. 32. The mosque of Ġamāl al-Dīn Yūsuf is sometimes referred to as the mosque of al-Ġamālī Yūsuf.

66. BC 1, 1882–1883<sup>2</sup>, “Procès-verbal n° 5”, pp. 24–25.

The following part will discuss the methodology followed to restore the twin minarets of the *ḥānqāh* of Faraǧ ibn Barqūq, which are among a number of other minarets that the *Comité* dismantled with the intention to reconstruct them.

## Dismantled and Reconstructed Mamluk Pavilions

### *The Twin Minarets of the Ḥānqāh of Faraǧ ibn Barqūq*

The twin minarets of the *ḥānqāh* of Faraǧ ibn Barqūq are among examples that were well-illustrated and photographed prior to and during the *Comité's* intervention. Textual sources provide us with valuable information about them.

Writing about these minarets, Lane notes that “the upper part of the southern one fell in the shock of an earthquake in 1847”.<sup>67</sup> “Upper part” must refer here to the onion-shape bulb of the southern minaret. A photograph by Leavitt Hunt and Nathan Baker dated to 1851 does indeed show the southern minaret missing its bulb, while the northern minaret's bulb is intact.<sup>68</sup> The northern bulb must have collapsed at some point after that date, but prior to 1857. Photographs by Francis Frith,<sup>69</sup> Hippolyte Arnoux, Maison Bonfils and others of the Northern Cemetery clearly indicate the *ḥānqāh's* twin minarets with the third shaft still intact and the bulbs of both the southern and northern minarets missing. The second bulb could have collapsed after the 1856 earthquake.

During his stay in Cairo from 1858 to 1860, Prisse d'Avennes mentioned an earthquake that caused minarets to collapse. In his illustration of the twin-minarets of the *ḥānqāh* of Faraǧ ibn Barqūq, he seems to have intentionally represented the structural damage, which was possibly earthquake related.<sup>70</sup> He depicts the minarets in a relatively ruined state with the bulbs of both minarets missing and the space between the columns of the northern minaret filled with masonry. Another drawing, on the same plate, shows how the minarets would have looked in their original form. He describes in his notes:<sup>71</sup>

Les deux minarets, situés à l'ouest, sont semblables; la calotte supérieure était autrefois portée sur des colonnettes, mais on les a réunies par un mur qui enlève à cette partie des tourelles toute sa légèreté.

Two photographs in an album by Facchinelli dated 1887<sup>72</sup>, featuring the southern minaret of the *ḥānqāh* of Faraǧ ibn Barqūq (803–804/1400–1411), were taken from the side of the

67. Lane, 1896, pp. 121–122.

68. Iverson, 1994, fig. 9, Collection of the Bennington Museum, Vermont.

69. Mostafa, 1968, p. 80, gives reference to a photograph by Fritz dated to 1857 and publishes it.

70. Prisse d'Avennes, 1877, vol. I, pl. XVII.

71. Prisse d'Avennes, 1877, volume de texte, p. 113.

72. Paris, Bibliothèque de l'INHA, Collections Jacques-Doucet, Fol Phot 065, *Raccolta Artistica Di Fotografie Sull'Architettura Araba, Ornati Ecc. Dal XII° Al XVIII° Secolo Fotografia Italiana Del Cav. B. Facchinelli Cairo, 1887 (Egitto)*.

northern one. The photographs show the ruined minaret with its bulb missing, as observed in other photographs, but here we can observe in more detail the condition of the minaret and what parts of the stone balustrades of the balconies are damaged, and in other parts what is completely missing (fig. 1). The last shaft composed of marble columns is intact and clearly supported with masonry between the columns, as represented earlier by Prisse d'Avennes.

Facchinelli purposefully recorded the southern minaret's condition prior to 1887 and the start of interventions, which was completed in 1900.<sup>73</sup> One of his photographs shows a man standing on the first balcony of the southern minaret. The same photograph appears in the Creswell Archive of the Rare Books and Special Collections Library of the American University in Cairo,<sup>74</sup> and in the *Comité's* photographic archives.<sup>75</sup> Creswell, a long-time *Comité* member (1937–1953)<sup>76</sup> probably borrowed these photographs from the *Comité* archive or had prints made for his collection to illustrate the volumes of *The Muslim Architecture of Egypt*.<sup>77</sup>

To explain the intervention methodology on the *ḥānqāh* of Faraḡ ibn Barqūq with regard to dismantling and reconstructing the minarets, a *Comité* report, prepared under Franz will be summarized. In this report, the findings of the examination are outlined indicating that while the first and second shafts show slight inclination, the third pavilion is in a very bad condition and at risk of collapse, especially because parts of the marble columns carrying the heavy load of the bulb are corroded. Therefore the *Comité* indicated that detailed drawings had to be completed prior to the dismantling process and required that each stone be numbered in order to be re-placed/re-used in the construction. It stated:<sup>78</sup>

Démolir immédiatement le troisième étage du minaret aussitôt après que les dessins détaillés auront été faits; les pierres seront numérotées, descendues avec soin, afin d'être replacées lors de la reconstruction.

The southern minaret was indeed dismantled and reconstructed between 1886–1900. At this point a *Comité* photograph shows it after reconstruction, while the northern one's upper part was still dismantled and awaiting intervention.<sup>79</sup> In the 1930s, the northern minaret was completely dismantled to the ground and reconstructed.<sup>80</sup>

73. For more information on Facchinelli see Seif, 2013, pp. 195–214.

74. Creswell Photographic Collection, RBSCCL, The American University in Cairo (most probably a print from Facchinelli plates, or from an original print).

75. Two of Facchinelli's photographs appear in a monograph on the *ḥānqāh* of Faraḡ ibn Barqūq and the source of the photograph is the Antiquities Organization. Mostafa, 1968, figs. 213–214.

76. Speiser, 2001, Appendix A, p. 231.

77. Another photograph with similar views of the *ḥānqāh* has in the back a note by Creswell: "Bécharde?" This means that he was not able to identify the author of these photos but acknowledges their early date. Some of the non-published photographs were published in O'Kane (2009).

78. BC 4, 1886, "2° Mosquée Barkouk, au désert", pp. 5–6.

79. Mostafa, 1968, p. 88.

80. BC 37, 1933–1935, "Mosquée de Faradj ibn Barqūq, au désert. Façade ouest avant les travaux", pl. XII, and Mostafa, 1968, p. 88.

Research at the *Comité*'s drawing archives did not yield detailed existing condition drawings indicating the numbered stones apart from one drawing (dated to 1886).<sup>81</sup> The drawing illustrates the minaret prior to intervention, with the bulb missing; therefore, it should be considered an accurate survey and documentation of its design and proportions. The shape of the minarets' reconstructed parts is quite comparable to the existing-condition drawings produced by the *Comité* prior to intervention, which they must have used as a base for the design of the reconstruction.

### *The Minaret of Qāyitbāy at the Northern Cemetery and the Minaret of Qiğmās al-Ishāqī*

Other examples, where the upper part of the minaret was dismantled and reconstructed, include the minaret at the mosque of Qiğmās al-Ishāqī (885–886/1480–1481) and that of the mosque of Qāyitbāy. Both were executed during Herz's time as chief architect.<sup>82</sup> The *Comité* published photographs of the monument before and/or after interventions were completed, but not after the dismantling of the upper part,<sup>83</sup> while the *Bulletins* briefly refer to dismantling and rebuilding the upper shafts.<sup>84</sup> Only extensive research comprising design drawings, available photographs and implementation contracts can provide exact information on the intervention process as well as the design of the minarets. *Comité* drawings of both minarets show detailed design drawing of the upper part with its dimensions and proportions.<sup>85</sup> One of the drawings of Qiğmās al-Ishāqī includes on the left side four small drawings illustrating the existing condition of the dismantled section. This shows that the members of the *Comité* were keen on documenting the existing condition prior to the dismantling process and possibly used these drawings as a base for the new design. One question that comes to mind is to what extent did they reuse the dismantled stones within the reconstruction?

When the *Comité* started to work on the minaret of Qāyitbāy, they discovered that the "*colonnettes*" were in a bad condition.<sup>86</sup> There is no reference as to whether these *colonnettes* were in marble or stone piers; however, it can be assumed that they were made of stone piers with engaged columns. This assumption can be made because the upper shafts of Qāyitbāy's

81. MT, folder # 149, and published by Ormos, 2009a, vol. 1, p. 167, fig. 53. Another design drawing of the mosque of Qiğmās al-Ishāqī includes details of the parts that were dismantled. Ormos, 2009a, vol. 1, p. 170, fig. 61.

82. Ormos, 2009a, vol. 1, p. 143, p. 267 respectively.

83. For Qāyitbāy, see pre-intervention photograph in BC 14, 1897, pl. I; for Qiğmās al-Ishāqī, see pre- and post-intervention in BC 9, 1892<sup>1</sup>, "Mosquée Kidjmās el-Ishaki, Caire (façade ouest), fotogr. artistique G. Lékegian et C<sup>o</sup>", pl. X (between p. 84 and 85), and BC 9, 1892<sup>2</sup>, "Mosquée Kidjmās el-Ishaki, Caire", pl. X; note here that none of the photographs are labelled as "before" or "after" and both appear in the same volume but different editions.

84. For Qiğmās, see BC 9, 1892<sup>1</sup>, "Mosquée Kidjmas el Ishaki connue aussi sous le nom de mosquée du cheikh Abou Hariba", p. 85; for Qāyitbāy, see BC 14, 1897, "Mosquée funéraire du sultan Kaïtbaï aux Tombeaux des Khalifes", Appendice au fascicule de l'année 1897, pp. II–III.

85. Ormos, 2009a, vol. 1, p. 170, fig. 61, and p. 299, figs. 183 and 184.

86. BC 14, 1897, "Mosquée funéraire du sultan Kaïtbaï aux Tombeaux des Khalifes", Appendice, pp. II–III.

minarets at Qal‘at al-Kabš (880/1475) and at al-Azhar mosque (1495, date of minaret) are built with masonry piers rather than marble columns. The *Comité* chose to restore this minaret with marble columns because they found some in place as understood from the bill of quantities, specifications and quotation of the reconstruction project of the upper part of the minaret dated March 16, 1897. It is stated that “eight new marble columns” should be installed but that if any of the old ones is in a good condition then it should be reused in the reconstruction.<sup>87</sup> Other bills of quantities and quotations show similar instructions. This methodology is in line with later conservation charters of the mid 20th century, such as the Venice Charter (1964), which notes that for archaeological sites, only “anastylosis, that is to say, the reassembling of existing but dismembered parts can be permitted”.<sup>88</sup> In the case of the minarets in question the intervention is much earlier than the Venice Charter and might have been a purely pragmatic and economic decision to use well-carved existing material rather than producing new ones.<sup>89</sup>

I will use the example of the minaret of Qānībāy al-Šarkasī (845/1441–1442) to demonstrate that the *Comité* generally followed the process of reusing dismantled stone blocks in the reconstruction. Ironically enough, however, the upper pavilion of this minarets was dismantled with the intention of reconstruction, but was never rebuilt.

### *The Minaret of the Mosque of Qānībāy al-Šarkasī*

On May 2, 1900 a man by the name of Borāi Ali complained that the minaret of Qānībāy al-Šarkasī (845/1441–1442) was crumbling and in due course the governor of Cairo invited the General Administration of *Awqāf* to take swift and effective measures to prevent a disaster.<sup>90</sup> Accordingly, in 1900 and 1901, an engineer/architect working with Max Herz and named P. Rodeck, measured the inclination of the minaret’s three shafts and produced a report.

In his report for the *Comité* (1901), Rodeck included a detailed drawing showing the inclination measurements recorded in three readings over a period of nine months.<sup>91</sup> These reports indicated that the minaret was leaning south-east and that the inclination was increasing over time, especially eastwards. Rodeck attributed this not to an earthquake or wind pressure, but to the existence of an ablution area adjacent to the minaret, explaining how water infiltration affected the soil beneath the structure undermining its integrity. He warned that the minaret’s upper shaft could fall at any moment owing to shifts in the sodden ground, and argued for demolition. He proposed to photograph the upper shaft and number its pieces in case reconstruction was possible after the consolidation of the minaret’s lower parts.

87. IMIQ, folder # 99.

88. The Venice Charter, 1964, article 15.

89. It is worth exploring to what extent was this methodology applied in Europe before and/or during the time of the *Comité*.

90. BC 18, 1901, “6° Mosquée Kanbaï el-Charkassi”, p. 39.

91. Three readings: (28 June 1900; 29 September 1900 and 17 March 1901) summarized in BC 18, 1901, “6° Mosquée Kanbaï el-Charkassi”, p. 39. The report is at IMIQ, folder # 154.

Members of the *Comité's* Technical Section shared Rodeck's opinion that the leakage from the ablution area was the principle cause of the minaret's leaning and invited the General Administration of the *Awqāf* to either change the location of the ablution area or take the necessary measures to remedy the infiltrations.<sup>92</sup> Based on the Technical Section's report Herz instructed Rodeck on April 9, 1901 to 1) commission photographs (from Giuntini) of the minaret's shaft that would be demolished and of the whole minaret, inviting him to choose the appropriate views; 2) take some measurements of the storey that will be demolished; 3) find a suitable location to deposit the dismantled material; and 4) prepare a cost estimate for the demolition works. Herz ends by reminding Rodeck of the urgent need for action.<sup>93</sup>

On April 28, Rodeck reported that Giuntini had photographed the minaret, delivered four copies of each two photographs on April 18, 1901 and that he had verified the invoice on April 20, 1901 (fig. 9).<sup>94</sup> Rodeck mainly recorded the dimensions of the accessible sections of the storey to be demolished, noting that the remaining measurements would have to wait until the contractor erected scaffolding for the demolition of the upper pavilion. He identified the mosque's *qubba* (mausoleum) as a possible place to deposit the material and ended with a cost estimate for their dismantling, transferal and orderly arrangement there.

Rodeck prepared a contract (that Herz had Mr. Elias translate into Arabic) with specifications for potential contractors, emphasizing that the utmost care would be required during the demolition in order to preserve the masonry and not mix pieces up.<sup>95</sup> One Youssef Effendi Sirry presented the sole bid, ten percent higher than the cost estimate. The Technical Section accepted the offer and authorized the work's execution from the current budget.<sup>96</sup> The project was completed on June 27, 1901 and received by Rodeck on July 2, 1901.<sup>97</sup>

The dismantled masonry remained in the mausoleum of the mosque of Qānībāy al-Šarkasī until 1908, when the General Administration of *Awqāf* asked the *Comité* to remove it. The *Comité's* chief architect, Max Herz, explained that the materials were intended for the reconstruction of the mosque's minaret, but that this project had been abandoned owing to the inclination of the minaret's lower sections. Herz indicates that this was particularly regrettable, since this minaret was the only complete one of its type in that it had a square base and cylindrical top. Consequently he proposed to reconstruct the dismantled part of Qānībāy al-Šarkasī's minaret in the courtyard of al-Ḥākim mosque. He also suggested that as

92. In 1902 and in response to the *Comité's* report 281, the General Administration of the *Awqāf* informs the Technical Section that the necessary measures were taken for the ablution area; the Technical Section hopes that the infiltrations were eliminated for the sake of the stability of the minaret. The minaret's upper part was already demolished by the end of June 1901.

93. IMIQ, folder # 154.

94. In BC 18, 1901, "8° Paiements", pp. 48–49, Giuntini's payment for his photographs of the minaret of Qānībāy al-Šarkasī is mentioned. The two photographs of the pre-demolition condition were not published by the *Comité* but were found in Creswell's archive at the American University in Cairo, although with no reference to the author of the photograph.

95. IMIQ, folder # 154.

96. BC 18, 1901, "2° Mosquée Kanbaï el-Charkassi", p. 64.

97. IMIQ, folder # 154, the contractor sent a letter to the *Comité* indicating the completion date.



Fig. 9. Probably Giuntini, [Minaret of Qānibāy al-Šarkasī mosque], with manuscript mention at the back of the print: *Kānbāi el-Djarkassi (mosquée de): minaret, vue d'ensemble*, 1901. Silver print. Creswell Photographic Collection, The American University in Cairo, Album 24. Courtesy of RBSCL.

the minaret of Saghri Wardi (Tağrī Birdī on al-Šalība) is of the same period (and typology), a project for its completion be considered.<sup>98</sup>

An inventory at the archives shows that 172 pieces were delivered that same year (1908) to al-Ḥākim mosque including 112 pieces of stone of varying dimensions, eight marble columns with average height of 1.7 m and a diameter of 0.2 m, eight marble capitals, eight wooden posts that were placed on top of the capitals, five iron tie beams (installed for the thrust of the columns), one old brass crescent with some missing parts (and with a wooden bar inside), and 30 iron angles.<sup>99</sup> The cost estimate for the reconstruction in al-Ḥākim mosque courtyard was prepared in 1908 by the *Comité*'s engineer Maḥmūd Aḥmad based on Herz's instructions.<sup>100</sup>

98. BC 25, 1908, "7<sup>e</sup> Mosquée Kānbāi el-Charkassi", pp. 37–38. The conditions of minarets of this typology (square base and then cylindrical top) at the time of the *Comité* and their restorations by the *Comité* are discussed in a following section of this article.

99. IMIQ, folder # 154.

100. IMIQ, folder # 154. In several cases, it is noted that Herz copies the extract of the report in the *Comité* Bulletins and gives his instructions below it. Here, he addresses instructions to Mahmoud Effendi, asking

In 1910, the *Comité* allocated money for the following year for the reconstruction works.<sup>101</sup> In October 1911, the contract with *al-mu'allim* (the master) Ibrāhīm Mabruk was signed and the works were completed in February 1912.<sup>102</sup> As noted by Ormos, the upper part of the minaret of the mosque of Qānibāy al-Šarkasī as well as that of the mosque of Aydamur al-Bahlawān (also called Baydar al-Aydamurī, 747/1346), appear in an early-mid 20th century photograph from the Creswell photographic collection at the American University in Cairo, depicting the courtyard of the mosque of al-Ḥākim, where they were reconstructed.<sup>103</sup>

Neither the archives nor the *Comité's* Bulletins contain further discussion of the minaret of Qānibāy al-Šarkasī, until 1941, when *Comité* members visited the mosque of al-Ḥākim, and noticed the pieces of its upper part in the courtyard. It must be noted here that since 1936, the *Comité* was no longer under the supervision of *Awqāf*, but of the Ministry of Public Instruction.<sup>104</sup> Muḥammad Riyāḍ Pasha, then president of the *Comité* suggested that it be transported and remounted in its original place and that the project be studied and details be submitted to the *Comité* for consideration.<sup>105</sup> The *Comité's* engineer duly prepared a report on the minaret's condition noting the following:<sup>106</sup>

1. The second circular storey had a 25 cm inclination towards the eastern side in respect to the height of 5.4 meters.<sup>107</sup>
2. The first square storey inclined 19 cm eastwards in respect to the 10.85 m height.
3. Excavations carried out to examine the minaret's foundations showed they were built of stone with a height of 1.6 m from the floor level. The footing was  $2.3 \times 2.3$  m, the same as the minaret's first storey. Below that was another footing (also  $2.3 \times 2.3$  m) built with small stones mixed with mud-mortar and gypsum that was disintegrated.
4. The ablution area and drainage tank, both adjacent to the minaret, were not connected to the public sewage system. Excavations from the side of the minaret closest to the ablution area revealed moist soil.
5. Given its current inclination and condition, as well as the impact of the wind pressure, the minaret is dangerously out of plumb.

him to prepare: 1- a cost estimate for the completion of the minaret of Saghrī Wardī (Taḡrī Birdī) and 2- the reconstruction of the minaret of Qānibāy al-Šarkasī in the courtyard of al-Ḥākim mosque. Maḥmūd Aḥmad, who at that time was working as an engineer for the *Comité*, responds by saying that both estimates were prepared, the first with a total of 110 EGP and the second for 15 EGP.

101. BC 27, 1910, "Prévisions des dépenses. II.-Travaux à commencer. 24 Mosquée Kānbaī el-Charkassī", pp. 102–103.

102. IMIQ, folder # 154; the final as-built bill of quantities was to dated February 24, 1912 with a total cost of 14.055 EGP.

103. Ormos, 2009a, vol. 1, p. 202, footnote 381, and Ormos, 2009a, vol. 2, p. 347, fig. 229.

104. El-Habashi and Warner, 1998, p. 82.

105. BC 39, 1941–1945, "4<sup>o</sup> Visites sur les lieux. d) Mosquée de Qānibāy ash-Sharkasī", p. 34.

106. IMIQ, folder # 154; the signature of the name of the engineer is not clear and no drawing of the measurements was found attached to the report.

107. P. Rodeck measured 5 meters; it is possible that when the new measurement was taken, the upper masonry ring that the *Comité* installed to replace the third shaft was also measured.

The *Comité* decided to delay the minaret's reconstruction while requesting that the Ministry of *Awqāf* take measures to connect the ablution area to the public sewer.<sup>108</sup> The upper part of the minaret of Qānībāy al-Šarkasī was eventually moved from the courtyard of al-Ḥākīm mosque to its present location behind the offices containing the *Comité*'s photographic and architectural archives at the Citadel in Cairo (fig. 10). It is labelled with its name and a 15th century date, however its story since its dismantling from the mosque of Qānībāy al-Šarkasī in 1901 remains untold. Today, the mosque still stands with an incomplete minaret (fig. 11).



Fig. 10. [Upper part of the Minaret of Qānībāy al-Šarkasī mosque, now at the Cairo citadel], 2015. Digital photograph. © Dina Bakhroum.



Fig. 11. [Minaret of Qānībāy al-Šarkasī mosque], 2015. Digital photograph. © Matjaž Kačičnik.

108. BC 39, 1941–1945, “2° Mosquée de Qānībāy ash-Šarkasi”, pp. 44–45.

### *The Minaret of the Mosque of Tamīm al-Raṣṣāfi*

At a later stage, it appears that this long process of carefully inventorying the dismantled stones to be used in the reconstruction was not followed. For example, in the early 1950s the *Comité* planned and executed work on the minaret of the mid 15th century Mamluk mosque of Tamīm al-Raṣṣāfi<sup>109</sup> prompted by structural concerns and cracks that appeared in the minaret's top portion. A report listing the demolition and reconstruction activities, accompanied by two photographs pre- and post-intervention,<sup>110</sup> shows that the dismantled material was intentionally not reused in the construction. It is not easily discernible why the *Comité* didn't reuse the material, but what is clear is that they followed the same design as before the dismantling.

The above examples show that when the upper parts of minarets were extant but damaged, the *Comité* dismantled and reconstructed them, following more or less the authentic design and also tried to reuse the surviving material whenever possible.

### **Newly Designed and Reconstructed Pavilions**

In contrast to the previous examples, this section will focus on minarets in which pavilions had not survived or had been dismantled. The following two cases illustrate *Comité* interventions and designs for new upper parts at Qāḍī Yahyā Zayn al-Dīn mosque and Maṅḡak al-Yūsufi mosque.

### *The Minaret of Qāḍī Yahyā Zayn al-Dīn Mosque*

The *Comité*'s design of the minaret of the mosque of Qāḍī Yahyā Zayn al-Dīn (848/1444), located at what was formerly known as al-Ḥalīḡ, now at the intersection of Port Said and al-Azhar streets,<sup>111</sup> raises many questions. The *Comité* performed extensive interventions in the mosque, which was found in a state of ruin.<sup>112</sup> They planned to dismantle the second shaft of the minaret, which they considered a poorly-executed recent construction.<sup>113</sup> The third shaft was missing, so it was decided to keep the first shaft and reconstruct the second and third.

A *Comité* drawing made by an architect named Beck in March 1893<sup>114</sup> shows both the minaret's existing condition and the proposed design with the first shaft intact, the second shaft

109. The *Comité* dates it to before 876/1471, see BC 40, 1946-1953, "Mosquée de Tamīm ar-Raṣṣāfi", p. 292, and Behrens-Abouseif dates it to before 1463, Behrens-Abouseif, 2010, p. 234 (The mosque of Emir Tanam Rasas).

110. BC 40, 1946-1953, "Mosquée de Tamīm ar-Raṣṣāfi", p. 293; photos: "Le minaret de la mosquée de Tamīm ar-Raṣṣāfi (avant les réparations)", pl. XVIII, and "Le minaret de la mosquée de Tamīm ar-Raṣṣāfi (après les réparations)", pl. XIX.

111. As discussed above there are three mosques attributed to Qāḍī Yahyā Zayn al-Dīn. This one was identified by the *Comité* as the *Kādi Yehia Bein el-Nehdein*.

112. Ormos, 2009a, vol. I, pp. 149-150.

113. BC II, 1894<sup>2</sup>, "1<sup>o</sup> Visite des chantiers des travaux en cours d'exécution, a) Mosquée de Kādi Yehya à Bein el-Nehdein", p. 96.

114. MT, folder # 182, and published in Ormos, 2009a, vol. I, p. 177, fig. 80.

replaced with a new octagonal shaft and the third with eight columns and an onion-shaped bulb. One notices that the second shaft (with arrow-like motifs in blue tiles) follows the same design as the octagonal shaft of the minaret of al-Ġūrī (1511) at al-Azhar mosque, which as noted by Behrens-Abouseif is “an anachronism” (fig. 12).<sup>115</sup> The third shaft differs from al-Ġūrī’s minaret design with the double onion-shape bulbs.

While the first, and only remaining, shaft of the minaret of Qāḍī Yaḥyā Zayn al-Dīn mosque on al-Ḥaliḡ, as well as those of Qāḍī Yaḥyā Zayn al-Dīn mosques at Būlāq and Ḥabbāniyya (1452–1453) bear some similarities to the first shaft of al-Ġūrī’s minaret at al-Azhar mosque, there are many contemporary and earlier minarets that have a similar first shaft, but diverse second shafts. So far there is no evidence to explain the selection, approval and implementation of the new design for the second and third shafts. It must be noted that the second and third shafts of the minarets of Qāḍī Yaḥyā Zayn al-Dīn mosques at Būlāq and Ḥabbāniyya were also missing and hence the *Comité* could not use them as a base for their new design. It can be argued that the design was approved at a time when access to earlier photographs or other material evidence was lacking, and that this or any other design was considered a necessary innovation.

Today, the complete minaret might appear to the regular viewer as a 15th century Mamluk minaret; however, an inscription band running along the top of the new second storey carries valuable information. The inscription states that the restoration of the second shaft and what is above it was carried out during the reign of ‘Abbās Ḥilmī II under the supervision of the *Comité* in 1315 AH—hence—AD 1897–1898 (fig. 12).



Fig. 12. [Upper part of the Minaret of Qāḍī Yaḥyā Zayn al-Dīn mosque, showing the *Comité*’s inscription], 2015. Digital photograph.  
© Matjaž Kačičnik.

115. Behrens-Abouseif, 2010, p. 224.

### *The Minaret of Maṅḡak al-Yūsufī Mosque*

In a *Comité* photograph of the Maṅḡak al-Yūsufī mosque (748/1347, 750/1349), published in 1922,<sup>116</sup> but possibly taken when the *Comité* was photographing the building in 1897,<sup>117</sup> the minaret appears without its upper part.

It is believed that the minaret, which is now free standing and not attached to the adjacent mosque and *ḥānqāh* of Maṅḡak, belongs to this complex, only parts of which survive today.<sup>118</sup>

While Patricolo was the *Comité*'s chief architect, a report was published in the *Comité Bulletin* of 1915–1919 discussing the structures adjacent to the “Maṅḡak minaret”, noting that they seem to be the product of three different eras, and considering the following about the minaret:<sup>119</sup>

D'autre part, le minaret tout à fait isolé à quelques mètres seulement du portail ci-dessus, et élevé là comme par hasard, constitue une énigme qui serait difficile à résoudre en établissant un simple parallèle entre celui-là et les constructions avoisinantes.

This report continues by noting the difficulty of understanding this complex and the ruins around it; it also lists the works executed during the year 1916, which doesn't include any work on the actual minaret.

Decades later, during the *Comité*'s meeting of January 17, 1939, the engineer Maḥmūd Aḥmad noted the discovery of original stone blocks of the minaret, buried in the land west of the mosque and suggested that the *Comité* undertake the completion of the minaret. The project was approved unanimously by the members<sup>120</sup> and the pavilion was reconstructed by January 1941 (fig. 13).

A *Comité* drawing signed by Maḥmūd Aḥmad and ʿAbd al-Fattāḥ Ḥilmī dated to April 5, 1940 shows the proposal for reconstructing the upper part with stone piers, topped by stalactites and a ribbed helmet.<sup>121</sup> Behrens-Abouseif has proposed that this design is based on a representation by David Roberts.<sup>122</sup> The *Comité Bulletin* does not reference Roberts, but does note that an old photograph served as the basis of the design, along with stone blocks of the missing part that were found on the ground:<sup>123</sup>

116. BC 32, 1915–1919, II, “Mosquée et tombeau de l'émir Mandjak al-Yousseuf. La façade ouest de la mosquée et son minaret isolé (cliché C.M.A.)”, pl. CII.

117. BC 14, 1897, “10° Mosquée Mandjak el-Youssefi”, p. 65.

118. Behrens-Abouseif, 2010, p. 179, and Warner, 2005, p. 112.

119. BC 32, 1915–1919, I, “XXV.— Mosquée et tombeau de l'émir Mandjak al-Yousseufi”, pp. 96–97.

120. BC 38, 1936–1940, “4. Mosquée de Mandjak al-Yūsufī”, p. 208: “M. Maḥmūd effendi expose, que les éléments en pierre qui formaient la partie supérieure du minaret de Mandjak al-Yūsufī, ayant été dégagés du terrain vague situé à l'ouest de la mosquée dans lequel ils ont été enfouis, suggère d'entreprendre l'achèvement du minaret en question. Cette proposition est approuvée à l'unanimité.”

121. MT, folder # 138. The drawing of this minaret in Behrens-Abouseif, 2010, p. 178, fig. 122 is a reproduction of the one at the archives.

122. Behrens-Abouseif, 2010, p. 179.

123. BC 38, 1936–1940, “2. Visites sur les lieux, (d) Mosquée de Mandjak al-Yūsufī”, p. 350; the visit was reported on 20 January 1941. Some buildings around the minaret were removed between 1891 and 1900.

Les Membres visitent la mosquée de Mandjak al-Yūsufi, dont le minaret isolé a été complété à l'aide des blocs de pierre subsistants de la partie manquante et d'une ancienne photographie. Les merlons manquants ont été également ajoutés en s'inspirant du modèle originel dont les exemples existent encore dans la mosquée. Le Comité donne son approbation aux travaux exécutés.

The discovery of original stone blocks might have provided strong evidence to support arguments for its reconstruction. The decision was also strengthened by the availability of an older representation of the minaret, which provided sufficiently strong evidence of its design. The above case shows, however, that in its early period the *Comité* was not enthusiastic to reconstruct the minaret. As will be demonstrated with other case studies, a growing interest in reconstructing minarets during the late 1930s can be traced.

The above examples, to which the minarets of al-Mu'ayyad mosque also belong, show that in most of the cases where the minaret's upper pavilion was missing, the *Comité* was keen on finding evidence or references for the reconstructions. Exceptions did exist as demonstrated by the reconstruction of the minaret of Qāḍī Yaḥyā Zayn al-Dīn, where the design selected for the second shaft remains a question.



**Fig. 13.** [Minaret of Maṅḡak al-Yūsufi mosque], 2015. Digital photograph.  
© Matjaž Kačičnik.

## Restored from an Ottoman Back to a Mamluk Pavilion

The *Comité* also carried out interventions to restore the upper parts of Mamluk minarets, which had been replaced with Ottoman pencil-like structures, to their original forms. Such was the case for the minarets belonging to the mosques of Ġānim al-Bahlawān (restored 1902–1905), Abū al-ʿIlā in Būlāq (restored *ca.*1915–1919), Qāḍī ʿAbd al-Bāsiṭ (restored 1936–1938), Ashraf Barsbāy on al-Muʿizz street (restored in the 1940s), and Taġrī Birdī (restored in the early 1950s).

### *The Minaret of the Mosque of Ġānim al-Bahlawān*

What initially triggered the work on the mosque of Ġānim al-Bahlawān (883/1478), were stones falling from the façade prompting the General Administration of *Awqāf* to request that the *Comité* inspect the mosque. Upon inspection by the *Comité*'s Technical Section, it was decided to classify the mosque among the Arab monuments to be conserved, to draw its plans and elevations and to prepare a quotation for its complete restoration. With regard to the minaret it was noted: “*Ce minaret quoique endommagé laisse voir des traces d’une jolie architecture arabe qui rivalise avec celle de la coupole.*”<sup>124</sup>

When the *Comité* started its work on the minaret around 1902 under the direction of Herz, the minaret's two lower shafts were in their original Mamluk style, while the last shaft was formed by eight columns, but carried the Ottoman pencil-like cap. The *Comité*'s decision to restore the upper part back to its Mamluk design is best described in Herz's monograph on the mosque, published in 1908:<sup>125</sup>

Aucune partie de la mosquée n'avait tant souffert du ravage des siècles que le minaret. Non seulement son dernier étage avait perdu sa couronne de stalactites et son bulbe terminal, mais même les deux galeries subsistantes se trouvaient privées de leurs balustrades si décoratives, tandis que le côté sud-ouest des stalactites qui les forment se trouvaient [sic] remplacées [sic] sommairement par du plâtre [...]. Au premier abord, comme on ignorait les plans originaux de ce minaret et qu'on manquait de tout document authentique, on pensa naturellement à se borner à une simple réparation de la tour, en consolidant les parties les plus atteintes. Le premier projet consista donc à renforcer la galerie en bois du premier étage, à doter le second d'une galerie semblable et à réparer la coiffure moderne du pyramidion du minaret.

Mais lorsqu'au cours des travaux, on eut mis à jour un nombre de plus en plus grand d'éléments authentiques de la tour, lorsqu'on eut trouvé des exemplaires de dalles perforées provenant des galeries, collées contre le mur d'appui de la terrasse ou bouchant une fenêtre du tombeau, lorsqu'on

124. BC 16, 1899, “3<sup>o</sup> Mosquée Ġānem el-Tāguer”, p. 127. Note: The mosque was referred to by the *Comité* at earlier times as Ganem el-Tāguer; Herz corrected this in his monograph, 1908, p. 15, footnote 1.

125. Herz, 1908, pp. 10–11.

eut retrouvé dans les décombres un nombre considérable des stalactites ayant appartenu à la dernière galerie disparue et qu'enfin reparut un grand fragment à incrustations du bulbe même, qui donc aurait poussé l'abnégation au point de s'en tenir aux consolidations projetées, et dédaigner la lumière soudainement jaillie de ces précieux documents?

Comme on avait constaté que le minaret subsistant conservait sa parfaite verticalité, on put récuser en doute que le dernier étage eut été démoli par précaution statique. Aucune difficulté donc du côté technique à ce que le minaret fut réédifié sur son modèle authentique. Tout ce qui fut jugé bon à l'usage parmi les trouvailles mentionnées fut utilisé et mis en évidence dans la nouvelle construction. On y reconnaît facilement aujourd'hui les anciennes pièces des galeries, quelques stalactites du dernier étage; et, dans le bulbe, le fragment, grâce auquel sa ligne sphérique a pu être exactement retracée.

Photographs of the minaret prior to and after reconstruction accompany the above text. Another photograph also shows the wooden scaffolding surrounding the minaret during the execution of the works, where the new stalactite stones could be indeed clearly identified. Ormos published two plates from the *Comité's* architectural archive.<sup>126</sup> The first is a drawing of the minaret before restoration with the Ottoman pencil-like cap; it is drawn by Pellegro Manham, who also provided the *Comité* with three photographs of the building.<sup>127</sup> The second is drawn by Steyrer, an Austrian architect who started to work for the *Comité* in 1902;<sup>128</sup> this plate contains two drawings of the minaret: one is an existing condition drawing with the third pavilion having an Ottoman cap, while the other is the design drawing for the substitution of it with a Mamluk style pavilion following the typical eight marble column pavilion and the onion-shape bulb; the drawing also shows that the wooden balustrades of the second shaft will be replaced with pierced stone panels. At the archives, there are three other plates with detailed design drawings, also prepared by Steyrer in June and July 1903 and approved by Herz.<sup>129</sup> These include 1) one detailed drawing of the upper part of the minaret indicates the dimensions of each and every stone (fig. 14); 2) one drawing of the bulb and the weight of each and every stone in kg; and 3) one drawing of the proposed prototype shape of the new columns of the pavilion. Another drawing, less detailed, shows the design of some of the stone balustrades of the balconies.

Before starting the reconstruction works and based on Herz's instructions, Steyrer measured the verticality of the minaret in September 1903 and presented his results to Herz, accompanied by a sketch of the minaret with the Ottoman cap, concluding that the minaret is absolutely vertical. Upon a later request by Herz, Steyrer repeated the test in January 1905 reaching the same reassuring results.<sup>130</sup>

126. MT, folder # 129, and published by Ormos, 2009a, vol. 1, p. 245, figs. 124 and 125. The photographs in Herz's monograph were also published by Ormos, figs. 128 and 129 on page 246.

127. BC 18, 1901, p. 13. On Manham, see Agstner, 2001.

128. Agstner, 2001, p. 151, and Ormos, 2009a, vol. 1, pp. 199–200, footnote 357.

129. MT, folder # 129.

130. MT, folder # 129.

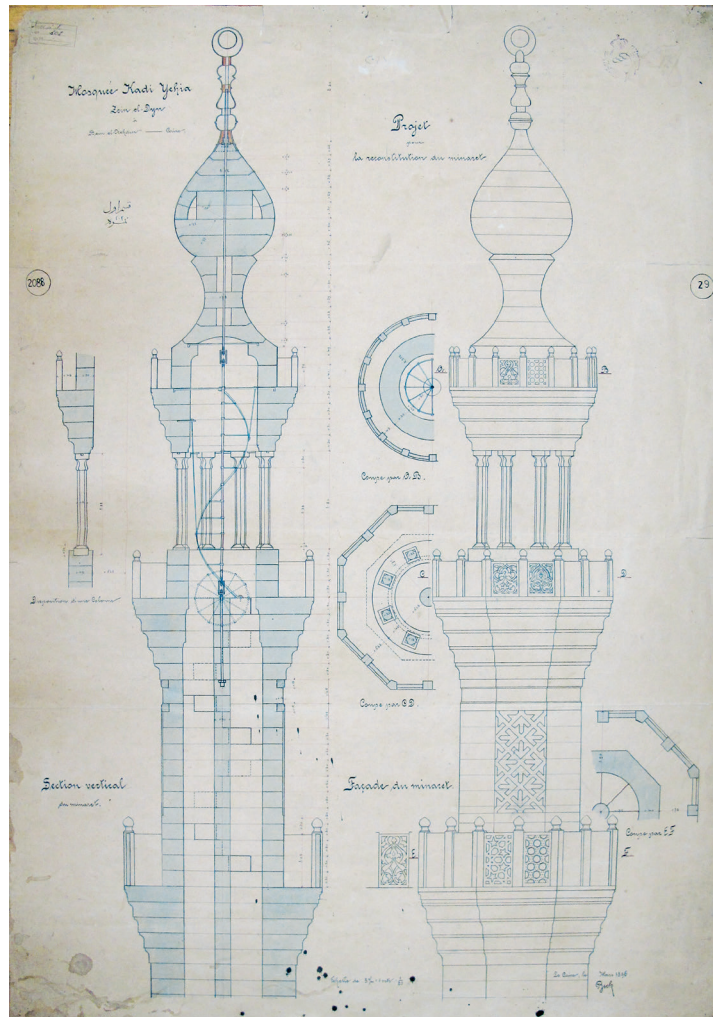


Fig. 14. Steyrer, [Reconstruction drawing of the Minaret of Ġānim al-Bahlawān mosque], Cairo, 1903. *Markaz taṣṣīl al-āṭār al-islāmiyya wa-l-qibṭiyya*, Archives of the Supreme Council of Antiquities. Courtesy of the Ministry of Antiquities.

Herz's monograph demonstrates that initially the *Comité's* plan was not to remove the Ottoman cap and that their aim was to simply consolidate the minaret. It was the discovery of original blocks that triggered the restoration of the balustrades and the replacement of the Ottoman top with a Mamluk one. Herz was keen to note that the pieces found were used to trace the shape of the bulb with accuracy, and also to make sure that the two existing shafts were structurally safe to support the new construction.

Sanders' argument that the *Comité's* "decisions were, in fact, highly politically charged; dominated by French and Austro-Hungarian engineers and architects, the *Comité* was decidedly anti-Ottoman"<sup>131</sup> has been countered by Ormos.<sup>132</sup> He explains from a political perspective

131. Sanders, 2004, p. 133, and 2008, p. 36.

132. Ormos, 2009b, pp. 533–544.

that Herz could not have been anti-Ottoman, noting among other factors, that although the Ottomans occupied Hungary from 1526–1686, anti-Ottoman sentiments were on the wane there, especially after the Habsburgs took control, and the fact that those who revolted in 1848–1849 against the Habsburg rule found refuge in Turkey. Ormos has demonstrated that Herz's attitude in this respect was based on professional considerations. While an ardent admirer of Mamluk architecture, he had a very low opinion of Ottoman architecture in general and considered it alien to Egypt; he referred to it as "Stambouli".<sup>133</sup> Regarding Herz's restorations of Mamluk minarets whose Ottoman additions were removed and restored back to their Mamluk design, the decisions were based on his conservation principles, favoring "stylistic restoration" and "purity of style".<sup>134</sup>

It must also be noted that there are some cases, where Herz didn't remove the Ottoman tops of Mamluk minarets, such as the minaret of the Mamluk mosque of Aṣlam al-Silāḥdār (or Aṣlam al-Bahā'ī, 745/1344). The original minaret seems to have collapsed at an unknown date and was replaced during the Ottoman Period by a new minaret built with a brick base and the Ottoman style cap.<sup>135</sup> The *Comité* and Herz restored the mosque in the early 1900s, almost at the same time as the restoration of Ġānim al-Bahlawān's minaret was carried out. Nevertheless, the restoration work of Aṣlam's mosque did not include work on the minaret.<sup>136</sup> There is also no discussion in the *Comité's* Bulletins indicating if plans for replacing the Ottoman top or constructing a new Mamluk style minaret were foreseen. This is possibly due to the lack of any evidence indicating how the original Mamluk minaret would have looked. This example demonstrates that restoring all Mamluk minarets that had Ottoman pencil-like caps back to their dynastic style was not a general attitude or strategy followed by the *Comité*. When evidence was found, however, it triggered such an intervention as will be demonstrated with a later and seemingly similar case, namely that of the minaret of the mosque of Qāḍī 'Abd al-Bāsiṭ.

### *The Minaret of Qāḍī 'Abd al-Bāsiṭ Mosque*

Two photographs of the minaret belonging to the mosque of Qāḍī 'Abd al-Bāsiṭ (823/1420) were published in the *Comité* Bulletin of 1936–1940 showing its state before and after restoration.<sup>137</sup> Before restoration, the minaret had three shafts: the first and the second are octagonal and Mamluk, while the third is cylindrical and covered with the Ottoman conical pencil-like cap in wood (fig. 4). After restoration the minaret's third shaft appears in Mamluk style with marble columns, *muqarnaṣ* decoration and the onion-shaped bulb (fig. 5).

133. Ormos, 2009a, vol. 1, p. 81.

134. Ormos, 2009b, p. 539. For more on "stylistic restoration" see Jokilehto, 2011, chapter 6, pp. 137–174.

135. Karim, 1978, pp. 58–63.

136. Karim, 1978, pp. 44–46.

137. BC 38, 1936–1940, "Mosquée du Qāḍī 'Abd al-Bāsiṭ (Minaret, avant les travaux)", pl. VIII, and "Mosquée du Qāḍī 'Abd al-Bāsiṭ (Minaret, après les travaux)", pl. IX.

The interventions were summarized in a *Comité* meeting that took place on January 19, 1937, where Maḥmūd Aḥmad described the condition of the minaret and offered recommendations. He explained that the initial plan was to consolidate the minaret, but that during the work, eight original marble columns and part of the stalactites were discovered and that this discovery exempts them from having to use contemporary models as reference for the reconstruction of this part:<sup>138</sup>

M. Maḥmūd effendi Aḥmad soumet un projet de reconstruction de la partie terminale du minaret de la mosquée du Ḳāḍī ‘Abd al-Bāsiṭ. Il explique en même temps, qu’au cours de travaux de consolidation exécutés dans ce minaret, il a découvert dans sa partie supérieure huit colonnes originelles enfouies sous les maçonneries récentes, ainsi qu’une partie des stalactites qui les surmontent. Cette découverte l’a dispensé de recourir aux modèles de minarets contemporains de celui de ‘Abd al-Bāsiṭ, le rôle du Bureau s’étant réduit à présent à dégager les colonnettes et compléter les stalactites et la calotte qui les surmontent. Les Membres présents approuvent les dispositions prises par M. Maḥmūd effendi Aḥmad et l’autorisent à poursuivre le dégagement de la partie supérieure du minaret.

The above report summarizes quite well the decision on which the restoration of the upper part of the minaret from Ottoman back to Mamluk was taken. And although it seems to be a similar case to that of the mosque of Ḡānim al-Bahlawān discussed above, or Maṅḡak, the *Comité* archives provide more information regarding the work on this minaret that does not necessarily contradict the above summary, but does illustrate some discrepancies.

In fact, the intervention of returning the Ottoman top back to Mamluk was not planned at the early stage of the *Comité*’s work on this mosque, which had started since 1892,<sup>139</sup> some of which was summarized in the 1915-1919 Bulletin under the direction of Patricolo.<sup>140</sup>

In 1916, an inclination in the minaret’s Ottoman cap was noted by the inhabitants and accordingly, Patricolo asked (on May 17, 1916) Maḥmūd Aḥmad, who was at the time working as an engineer for the *Comité*, to go and examine the minaret. The examination concluded that the minaret showed no defect, except that the bottom cladding of the wooden cap, which is referred to as *misalla* (*obélisque*), was detached and that this part had inclined a bit due to the wind pressure and required little work. Patricolo instructed Aḥmad to proceed with the repairs of the detached part of the wooden cap,<sup>141</sup> and the works were carried out and completed on July 13, and approved by Aḥmad and Patricolo.<sup>142</sup>

138. BC 38, 1936–1940, “9. Mosquée du Ḳāḍī ‘Abd al-Bāsiṭ”, p. 62.

139. Herz, 1914, p. 2.

140. BC 32, 1915–1919, I, “B. Aperçu des travaux exécutés. XL. Madrasah du qāḍī Abd al-Bāssit”, pp. 129–131.

141. IMIQ, folder # 60.

142. IMIQ, folder # 60; based on a form with three sections: 1) designed works and their approximate cost; 2) the real cost; and 3) the payment notice.

Decades later, in 1936, residents around the mosque sent a letter to the Ministry of *Awqāf*, where they voiced their worry about the minaret, noting that its crescent was leaning and the walls of the balcony where the *mu'addin* stood for the call to prayer showed cracking.<sup>143</sup> Accordingly, the Ministry of *Awqāf*'s Engineering Department (*qism al-handasa, qalam al-idāra*) sent a letter (dated July 25, 1936) to the *Comité* (*qism al-ātār al-ʿarabiyya*, the department of Arab monuments), stating that it was forwarding a communication from the Ministry's Mosques Department (*qism al-masāğid*) (dated July 19, 1936) regarding the Qāḍī ʿAbd al-Bāsiṭ mosque. The Ministry requested that the *Comité* consider repairing the minaret's crescent because this mosque was a registered monument.<sup>144</sup> Maḥmūd Aḥmad forwarded the letter (on July 28, 1936) to ʿAbd al-Fattāḥ Effendi (at that time probably an inspector), who after visiting the mosque of Qāḍī ʿAbd al-Bāsiṭ wrote to the director of the *Comité*, informing him that upon inspection, he found that the crescent was indeed at an inclination, and the balustrades of both shafts were in a bad condition and suggested that it be fixed as part of the ongoing restoration project at the mosque led by the engineer Ḥasan Tawfiq.<sup>145</sup> Maḥmūd Aḥmad also wrote to the *Awqāf*'s Mosques' Department informing them that the balustrades on both shafts were loose and that they should warn the *mu'addin* not to climb the minaret until the necessary repairs were made.<sup>146</sup>

After consolidation work on the minaret began, Ḥasan ʿAbd al-Wahhāb<sup>147</sup> wrote to the *Comité*'s director (on October 28, 1936):<sup>148</sup>

[Since] you approved the repair of the balustrades of the shafts of the minaret of the mosque of Qāḍī ʿAbd al-Bāsiṭ and the work is proceeding, and considering that in its third storey some of its columns remain inside the new masonry construction, and noting that what remains to complete it is only placing the columns, the stalactites and the cap, which could be completed based on contemporary minarets especially the two minarets of the mosque of al-Muʿayyad, therefore, I present this matter to you, hoping you will approve completing it, especially because the scaffolding is still in place.

143. IMIQ, folder # 60; letter dated July 13, 1936.

144. IMIQ, folder # 60.

145. IMIQ, folder # 60.

146. IMIQ, folder # 60; letter dated August 12, 1936.

147. Ḥasan ʿAbd al-Wahhāb was a photographer and inspector at the *Comité*. His book *Tārīḥ al-masāğid al-ʿarabiyya* provides useful notes on the works carried out by the *Comité* on mosques. Unfortunately his archive, including his photographs, has been lost or dispersed. Some are held in the SCA archives, others are in private collections and could hold valuable information on the *Comité*'s interventions.

148. IMIQ, folder # 60: *Tafaḍḍaltum bi-l-muwāfaqa ʿalā iṣlāḥ darābazīn dawarāt manārat masğid al-Qāḍī ʿAbd al-Bāsiṭ wa-ğārī al-ʿamal bihā. Wa-bimā annahū muḥlaf bi-l-dawra al-tālīta baʿda ʿumudihā dāḥila al-mabānī bi-l-badan al-hādiṭ [sic] wa-lam yabqa ʿalā takmilatihā siwā al-ʿumud wa-l-muqarnaṣ wa-l-hūda wa-hādā mumkin takmilatuhu min al-manārāt muʿāṣiratihā wa-hāṣṣatan manāratay masğid al-Muʿayyad. Li-dālīka ataṣarrafu bi-an aʿriḍa al-amr ʿalā ḥaḍratikum rağāʿa al-tafaḍḍul bi-l-muwāfaqa ʿalā takmilatihā ḥuṣūṣan wa-anna al-saqāʿ il mawğūda.*

At this point, Maḥmūd Aḥmad requested Ḥasan Tawfiq to prepare a project for completing the minaret and presented the matter to the *Comité*. Once the *Comité* approved the concept of reconstructing the upper part in the original Mamluk form, a new bill of quantities for dismantling the discovered columns and other masonry and completing the minaret's reconstruction was prepared and finalized in June 1937.<sup>149</sup> In the *Comité*'s meeting of December 21, 1937, the funds were approved as part of the work program for the fiscal year of 1937–1938.<sup>150</sup>

On March 26, 1938, after completion of the work, Gaston Wiet, the director of Cairo's Museum of Arab Art, and *Comité* member (1926–1953)<sup>151</sup> sent a letter to the president of the *Comité* requesting that the minaret's copper crescent be sent to the museum, and indeed three days later it was delivered.<sup>152</sup>

The above case study reveals a number of interesting points. Firstly, in terms of the local perception of the work: it is clear that the whole project was initiated based on concerns from the local residents, which authorities subsequently addressed. The letter was sent to the Minister of *Awqāf*, and not directly to the *Comité*. It is true that the *Comité* at that time was being transferred to the Ministry of Public Instruction, but such information would not have been known to the residents, indicating that for them the Ministry of *Awqāf* was the main authority in charge. It must be noted that during the period in which the *Comité* was producing drawings of the minaret and selecting a contractor, the members of the community sent another complaint (on May 30, 1937) to the Minister of *Awqāf* regarding a halt in work and that the scaffolding was still in place. The residents requested that restoration work recommences so that the *aḍān* (call to prayer) would reach all the neighbourhood. This was forwarded to *qism al-masāʿid* in order to forward it to the *Comité*.<sup>153</sup>

Secondly, the idea of changing Ottoman caps back into Mamluk style was not very common at the early stage of the *Comité*'s work and sometimes only consolidation of the Ottoman cap was opted for as demonstrated by the works of Patricolo on the minaret of Qāḍī 'Abd al-Bāsiṭ and as attested by the existence of Mamluk minarets with Ottoman tops that the *Comité* did not restore back to their "original" design.

Thirdly, in terms of design, the similarity in shape and proximity in date between the minarets of al-Mu'ayyad mosque and that of Qāḍī 'Abd al-Bāsiṭ, noted by Ḥasan 'Abd al-Wahhāb, were attributed by Behrens-Abouseif to the fact that "the same master-builder, Ibn al-Qazzas, was responsible for its construction".<sup>154</sup> Therefore, from an art historical and stylistic perspective,

149. IMIQ, folder # 60; as per the detailed bill of quantities and cost estimate of 170 EGP.

150. BC 38, 1936–1940, "2. Budget des travaux de l'exercice en cours", p. 98, and BC 38, 1936–1940, "Annexes au 730<sup>e</sup> rapport. I. Programme des travaux pour l'exercice en cours 1937-1938", p. 103.

151. Speiser, 2001, p. 234.

152. IMIQ, folder # 60; Arabic letter entitled: Inspection of the crescent that remained from the work of the mosque of Qāḍī 'Abd al-Bāsiṭ. Wiet, who was an Arabist, from a well-established family of diplomatic dragomans, also signed in Arabic (see Messaoudi, 2015). Wiet's *Catalogue général du musée arabe du Caire: objets en cuivre*, was published in 1932, hence prior to the museum's receipt of the finial.

153. IMIQ, folder # 60.

154. Behrens-Abouseif, 2010, p. 215.

the design adopted for the reconstruction of the Mamluk part could be considered in keeping with the integrity of the original style of the building. The question therefore might be, why did Maḥmūd Aḥmad have to stress that the analogy doesn't play a role in the reconstruction decision?

It seems that Maḥmūd Aḥmad, prior to the discovery of the eight columns had already wanted to reconstruct the upper part of the minaret using al-Mu'ayyad's minarets as a model. In the *Comité* archives, an unpublished and undated report signed by him states that the work had indeed begun as consolidation work to some parts of the minaret. He goes on to admit that he had envisioned the possibility of reconstructing the upper part of the minaret based on the minarets of al-Mu'ayyad mosque, whose construction date is only one year earlier than that of the mosque of Qāḍī 'Abd al-Bāsiṭ. Maḥmūd Aḥmad then concludes that the discovery of the eight columns exempts them from looking for contemporary models.<sup>155</sup>

Although Ḥasan 'Abd al-Wahhāb was the one who discovered these columns, in his *Tārīḥ al-masāğid al-aṭariyya*, illustrated with his own photographs, he does not discuss the restoration of this minaret and only alludes to its obvious similarity to those of al-Mu'ayyad, while providing a photograph labelled "the minaret after its repair".<sup>156</sup> While 'Abd al-Wahhāb is known for publishing details of the *Comité* restoration works,<sup>157</sup> the author is yet to find evidence in the archives that would allude to why he omitted discussing the story of the restoration of this minaret and the physical evidence he discovered in this case.

It is not clear to what extent there was a strong debate among the *Comité* members whether to give precedence to physical evidence over analogy. Was it Ḥasan 'Abd al-Wahhāb or Maḥmūd Aḥmad or both who proposed the reconstruction of the minaret of Qāḍī 'Abd al-Bāsiṭ based on the model of al-Mu'ayyad? Was their proposal rejected? And if yes, which *Comité* members were against such a reconstruction? If the marble columns had not been found, would the minaret have been reconstructed in Mamluk style?<sup>158</sup> Was an analogy enough of an argument to justify reconstruction?

I would argue that the argument was not sufficiently convincing for the *Comité* members to approve the reconstruction, especially because there are other cases where disagreements regarding reconstructions were clearly voiced among the *Comité* members and noted in their Bulletins. It is possible that Maḥmūd Aḥmad might have repeatedly argued for the reconstruction of upper parts of numerous other minarets, but did not have the support of all *Comité*

155. IMIQ, folder # 60. In the report he mentioned that a drawing was attached, but nothing was found in the IMIQ archive; at MT, folder # 60, there is a drawing (without dimensions) of the minaret, signed by the architect 'Abd al-Fattāḥ Ḥilmī and approved by Maḥmūd Aḥmad, dated 24.10.1937.

156. 'Abd al-Wahhāb, 1994, vol. 2, p. 93, fig. 140.

157. 'Abd al-Wahhāb, 1994, vol. 1, p. 205.

158. Although there is no reason to doubt 'Abd al-Wahhāb's letter, where he mentions finding eight marble columns *in situ*, the bills of quantities have been thoroughly researched and they do indicate the dismantling of the marble columns. Initial investigations have yielded the discovery of two photographs of old marble columns *in situ* but more research is needed to see if 'Abd al-Wahhāb took these photos when he discovered the columns and if they were indeed taken of this minaret.

members. For example, when on April 3, 1939, he presented the reconstruction of the minaret of al-Ġamālī Yūsuf (845/1441–1442), whose design was carried out based on a reproduction of an old photograph and in comparison with other minarets of the time, Wiet reminded the members that the *Comité*'s mission was to consolidate or restore, but not reconstruct, especially due to their limited budget.

According to the minutes:<sup>159</sup>

M. Maḥmūd effendi Aḥmad soumet un projet de reconstruction du minaret de la mosquée d'Adj-Djamālī Yūsuf, établi à l'aide d'une reproduction photographique de l'ancien minaret dont une partie subsistait, ainsi que des minarets de la même époque.

M. Wiet rappelle à cette occasion ce qu'il a souvent répété, à savoir que le Comité a pour mission de consolider ou de restaurer et non de reconstruire; cette dernière mesure nous entraînerait dans des dépenses que ne justifie pas l'état limité de notre budget, et porterait de ce fait préjudice aux monuments dont la condition précaire nécessite des soins urgents.

Tout en partageant, en principe, la façon de voir de M. Wiet, les Membres présents décident de faire établir par le Bureau un devis pour l'achèvement du minaret et de l'examiner à une prochaine réunion.

The design drawing of the minaret prepared already in June 1936 was approved by the *Comité* members, among them Robert Greg and Creswell, on 17 June 1940, but Wiet did not sign it.<sup>160</sup>

Both the desire to reconstruct minarets and the debates around the topic were to continue. In 1941, the idea to reconstruct the upper part of the minaret of the Qānībāy al-Šarkasī, presented earlier in this paper, again brought up the discussion on what to do with the incomplete minarets as summarized below:<sup>161</sup>

À cette occasion, le Président [Muḥammad Riyāḍ Pacha] est d'avis que le Comité envisage la possibilité de restaurer les nombreux minarets incomplets au Caire, car indépendamment de leur effet disgracieux pour l'esthétique de la ville, leur aspect porte le public à penser que le Comité ne remplit pas sa mission d'une manière parfaite.

M. Wiet tout en appréciant ce point de vue, estime que les frais de restauration des minarets devraient incomber au Ministère des Wakfs qui se préoccupe des besoins du culte auxquels on doit rattacher la reconstruction des minarets.

159. BC 38, 1936–1940, “1. Mosquée d'Adj-Djamālī Yūsuf”, pp. 216–217. For more on Maḥmūd Aḥmad, see El-Habashi, 2003, pp. 155–183.

160. MT, folder # 178; drawing's header: the Ministry of Public Instruction, as were all drawings after 1936.

161. BC 39, 1941–1945, “2° Mosquée de Qānībāy al-Šarkasī”, pp. 44–45.

Il est donc décidé de faire dresser par le Bureau une liste des minarets incomplets, avec les frais approximatifs de restauration de chaque minaret, et de soumettre cette liste à l'examen du Comité.

Although plans were duly prepared and approved for both minarets to be executed when circumstances were favorable,<sup>162</sup> these plans were never materialized.

It is important to note, however, that although the prepared and approved plans for the above mentioned minarets were not realized, the interest to restore and reconstruct minarets remained in the 1940s and 1950s, while the *Comité* was under the Ministry of Public Instruction, as will be demonstrated below with the cases of two Mamluk minarets whose Ottoman additions were removed to restore them back to their Mamluk style.

### *The Minaret of al-Ašraf Barsbāy and the Minaret of Taḡrī Birdī*

The minaret of al-Ašraf Barsbāy (1425) on al-Mu‘izz street with the Ottoman cap (fig. 3) was restored back to its Mamluk style in the early 1940s. During the *Comité*'s meeting of November 8, 1944, ‘Abd al-Fattāḥ Ḥilmī presented the design of the completion of the minaret. After being examined, the *Comité* members approved the design and authorized its execution,<sup>163</sup> which was completed as noted by Ḥasan ‘Abd al-Wahhāb in 1945.<sup>164</sup> The drawing of the minaret held at the archives, with the third shaft designed as a pavilion with marble columns, was signed and approved by the *Comité* members including Robert Greg, Creswell and also Gaston Wiet.<sup>165</sup> During the meeting Creswell also praised the quality of the drawings produced. The reconstruction was executed.

Two photographs of the minaret of the mosque of Taḡrī Birdī (1440–1444) appear in the *Comité*'s Bulletin, published in 1961 and covering works between 1946 and 1953.<sup>166</sup> The first one shows the Mamluk minaret with its two Mamluk shafts, one square and one circular; the third shaft is missing and replaced by the Ottoman pencil-like cap (without a cylindrical shaft). The second photograph of the minaret shows it after restoration. The interventions carried out were replacing the wooden balustrades of the second shaft's balcony with pierced stone ones and reconstructing the third shaft in the Mamluk style pavilion. Drawings for the reconstructions were prepared and approved in July 1952.<sup>167</sup> During the *Comité*'s meeting of November 5, 1952 the minaret's condition was discussed, noting that some of the plaster from

162. BC 39, 1941–1945, “3° Projets de restauration des minarets de Ḳānibāy ash-Sharkasi et d’Um as-Sulṭān Sha‘bān”, p. 81.

163. BC 39, 1941–1945, “2° Mosquée d’al-Ašraf Barsbāy”, p. 292.

164. ‘Abd al-Wahhāb, 1994, vol. 1, p. 222.

165. MT, folder # 121; other drawings from that period show a similar system of signing the drawings as approval for the design.

166. BC 40, 1946–1953, “Le minaret de Taghri Bardi, à Salibah (avant les réparations)”, pl. X and “Le minaret de Taghri Bardi, à Salibah (après les réparations)”, pl. XI.

167. MT, folder # 209.

the top part (the pencil-like part) had detached and was falling, and that considering that the minaret's top is modern the director prepared a project for the reconstruction of the upper part inspired by contemporary ones. After examining the project, the *Comité* approved it.<sup>168</sup>

It must be noted, however, that the design didn't follow the eight marble columns, but instead used stone piers with attached columns (fig. 15).



**Fig. 15.** Minaret of Tağrī Birdī mosque, 2015. Digital photograph.  
© Matjaž Kačičnik.

168. BC 40, 1946–1953, “5. Mosquée de Tağhrī Bardī à Šaliba”, p. 382.

The minaret of al-Ašraf Barsbāy and that of Tağrī Birdī follow the rectangular-circular composition, where the first shaft is rectangular and the second is circular. Other minarets built in the early 15th century that follow such a composition are the twin minarets of the *ḥānqāh* of Farağ ibn Barqūq and the minaret of Qānībāy al-Šarkasī. The third storeys of the minarets of Farağ ibn Barqūq and that of Qānībāy al-Šarkasī had their third shaft intact when the *Comité* started working on them and as demonstrated above, the third storey is a pavilion with marble columns. This design was followed for the minaret of al-Ašraf Barsbāy but not for Tağrī Birdī. The question is then why did the *Comité* produce the design of the last storey in piers with engaged columns and not in marble columns, and which “contemporary models” inspired them? Nothing has yet been found in the archives to justify this decision. From an art historical perspective, I would argue that Max Herz, who was well aware of the minaret’s typology and who had voiced his wish to reconstruct it<sup>169</sup> would have been dissatisfied with the choice of piers and not columns.

Through the cases discussed above, this section has argued against the presence of a comprehensive, ideological plan pursued by the *Comité* to remove Ottoman tops from Mamluk minarets and restore them back to an original design. The majority of cases of such reconstruction as do exist in addition to major restoration of minarets occurred from the 1930s onward.

### Financial and Structural Challenges During the 1930s and the 1931 Minarets Report

In the *Comité*’s meeting of June 23, 1931, the members discussed a note from the engineers of the Technical Section regarding the vulnerability of minarets, the danger they cause to the public and the high cost they require for their maintenance; they request the *Comité* to establish a special credit for the minarets at a time of financial constraints. It seems that the Wall Street 1929 crisis had also affected the *Comité*’s budget. In May 1932, the Minister of *Awqāf*, Aḥmad ‘Alī, attended a meeting with the *Comité* members.<sup>170</sup> At the meeting Simaika Pasha<sup>171</sup> eloquently explained to the Minister how the *Comité* was trying to balance the financial challenges with their understanding of the government’s financial constraints. Interestingly, he noted that due to the crisis, which affected Egypt along with most of the world, the *Comité* had limited its work to simple conservation and avoided serious restoration works that were not absolutely necessary. He continued by saying:<sup>172</sup>

169. BC 25, 1908, “7<sup>e</sup> Mosquée Kānbāi el-Charkassi”, pp. 37–38.

170. BC 36, 1930–1932, “Procès-verbal n° 276”, p. 180.

171. Simaika Pasha was a member of the *Comité* (1906–1944) and the director of the Coptic Museum (1908–1944). For more on Simaika Pasha and the Coptic Museum, see the essay by Julien Auber de Lapierre in the same volume.

172. BC 36, 1930–1932, “Procès-verbal n° 276”, p. 183.

Mais il y a une certaine classe de travaux qui exige des crédits extraordinaires, pas trop grands toutefois, tels que la consolidation et la préservation d'un certain nombre de minarets, qui, s'ils étaient négligés, constitueraient une menace pour la sécurité publique.

With regard to the structural and financial concerns, in 1931 ten minarets were listed as being in urgent need for repair or consolidation; the *Comité* members demanded a detailed study regarding the minarets in order to present it to the Ministry of Finance.<sup>173</sup> A report was duly prepared and published in the *Comité's* Bulletin entitled *Rapport sur les minarets du Caire*.<sup>174</sup> The findings of this report were that all the minarets in question were to some degree in a very critical condition due to their inclination. The report gives summarized technical engineering explanations regarding the minarets' inclination and concludes that it is mostly due to the condition of the foundations' masonry or the nature of soil, or both. It also states that in some cases when the margin of safety for the inclination was exceeded, the minarets had to be dismantled and reconstructed.<sup>175</sup> In conclusion, the report explains that in the majority of the cases studied there was a structural concern and that intervention was crucial. The two solutions proposed were either to consolidate the foundation or to dismantle and reconstruct the given minaret.<sup>176</sup> Although it is beyond the scope of this paper to go into details regarding the structural engineering analysis of minarets, it is important to note that in the 1930s international firms were involved in carrying out structural analysis and works on a number of monuments.<sup>177</sup> For example, the minaret of Şarġatmiş (757/1356) was among the ten discussed in the 1931 report. Because of its dangerous inclination, in 1933, the *Comité* commissioned the Société Rodio & Co.<sup>178</sup> and H. Moreillon ing. National House<sup>179</sup> to carry out studies and proposal of works for the minaret. A drawing of the Société Rodio & Co. shows a restoration proposal with steel bracing.<sup>180</sup> The *Comité* members decided, however, not to experiment with a new process on this monument and recommended sticking to implementing the system of dismantling and reconstruction.<sup>181</sup>

173. BC 36, 1930–1932, “Procès-verbal n° 275. III”, pp. 70–71.

174. BC 36, 1930–1932, “Annexes au P.-V. No. 276, I. Rapport sur les minarets du Caire”, pp. 189–191, and p. 71.

175. The report states that this was followed for the minaret of Tatar al-Ḥiġāziyya (761/1360) and that of the mosque of Abū al-ʿIlā in Būlāq.

176. The description seems to indicate that in some cases the whole minaret should be dismantled, not only its upper part. Such interventions were indeed carried out on a number of cases.

177. Volait, 2012, pp. 175–183.

178. BC 37, 1933–1935, “Visite sur les lieux, (b) Mosquée de Şarġatmiş”, pp. 4–5.

179. IMIQ, folder # 218. Two reports were submitted by this firm. One report is dated on March 27, 1933 and another one, seemingly in response to further details requested by the *Comité* on April 20, 1933.

180. IMIQ, folder # 218; the drawing is not dated.

181. BC 37, 1933–1935, “4.–Mosquée de Şarġatmiş”, pp. 21–22; “Après avoir examiné la question sous ses différents points de vue, la majorité des Membres présents estime qu'il est préférable de ne pas expérimenter sur ce monument un procédé nouveau pour eux, et de s'en tenir au système de démontage et remontage des matériaux”.

The above discussion demonstrates that well into the early 1930s structural concerns about minarets have been a strong motive for intervention, while financial matters remained a constraint.

## Conclusion: A Clearer But Not Complete Picture

The *Comité's* Mamluk style restorations and reconstructions of minarets have left many traces in the archives and on the buildings, but little analysis in the secondary literature. Regardless of whether the interventions are considered as conservation projects, modern additions, or even inventions, they form a layer that cannot be ignored and whose analysis and critique will provide a more profound understanding of Cairo's architectural and artistic transformation.

This paper demonstrates that although the Bulletins published by the *Comité* contain much information still awaiting further study, the research of their non-published archival material, scattered over different archives in Egypt, is indispensable and deserves more attention and research. The archives and the buildings themselves provide us with first-hand information on how the documentation and restoration interventions took place and who were the Egyptian and foreign photographers, artists, architects, engineers, contractors involved in the process.

The cases presented so far describe the *Comité's* work on Mamluk minarets, including aspects of their documentation and implementation philosophy. The diversity of the interventions indicates that the *Comité* had no single, definitive methodology and that decisions were often taken on a case-by-case basis.

With regard to the actual design for the restoration of minarets, it is clear that when the minarets' upper parts were extant, but had to be dismantled and reconstructed due to structural and safety reasons, the *Comité* followed the shape they found, whether it was composed of marble columns, as in most of the cases discussed above, or in stone piers, as in the minaret of Asanbuḡā (1370), not discussed in this paper.<sup>182</sup>

When the upper part was missing, usually either analogy was used, or earlier available documentation; in some cases the discovery of authentic material *in situ* or in its original place triggered the reconstruction. It must be noted however that unless a trusted drawing or photograph was used as a base for the design, all reconstructions of missing parts of minarets could be considered inventions, as attested by the case of the minaret of Qāḍī Yaḥyā.

The minaret of Āqsunqur mosque (747/1346) for example was represented by Pascal Coste, Girault de Prangey, David Roberts and Prosper Marilhat with four shafts,<sup>183</sup> but in the early 1900s Herz restored it with three shafts; a choice that remains a question,<sup>184</sup> especially considering his understanding regarding the typology of Islamic architecture and minarets as attested with the cases of Qānībāy al-Šarkasī and Taḡrī Birdī discussed here.

182. IMIQ, folder # 185; based on the bill of quantities.

183. Behrens-Abouseif, 2010, p. 175.

184. Ormos, 2009a, vol. 1, p. 148.

The study of a number of bill of quantities, specifications, quotations, design drawings and implemented projects demonstrate that the work of the *Comité* led to the emergence of a number of architects and contractors who seem to have mastered the dismantling and reconstruction process,<sup>185</sup> as well as the design and reconstruction of new pavilions. It could be argued that the skills and know-how gained through the documentation and restoration projects qualified architects and contractors to also design, construct and invent new structures in the Mamluk style.

With regard to the replacement of Ottoman tops added to Mamluk minarets, these seem to have been carried out more often during the later period of the *Comité*'s existence when its members were predominantly Egyptians. There is, however, no indication that the *Comité* had a systematic plan or strategy to remove all Ottoman interventions on Mamluk minarets. It is true that in order to understand the *Comité*'s attitude towards Ottoman architecture, the restoration of minarets is central; however, other aspects such as the destruction of Ottoman, and also Mamluk minarets, as well as the registration, studies and restorations of Ottoman monuments carried out in the 1930s need to be profoundly researched.

With regard to the motives behind restoring and reconstructing minarets, the *Comité* members were obviously enthusiastic to preserve the historic, aesthetic, social and religious values of the minarets, and possibly had in mind how Cairo's landscape would look to its tourists. But what often initiated a minaret's restoration project were structural reasons especially during the early period and well into the 1930s. The balance between conserving the historic building and protecting lives in light of their limited budget must have been quite a difficult task, especially considering the amount of letters and warnings received from the *Tanzīm* that led them to accept in some cases the delisting and destruction of some minarets.<sup>186</sup>

It must be noted that other political motives (both colonial and national) also played a role, as argued by some modern scholars. However, evaluating the *Comité*'s work mainly based on ideology, through a post-colonial lens, only tells part of the story. Therefore, in order to understand the reasons behind some of the interventions, and whether they were initiated or rejected by the foreign or Egyptian members of the *Comité*, a complete chronological inventory and more in-depth analysis of all minarets' restoration projects over the 70-year span of its work must be carried out. This would allow us to contextualize each of the interventions, taking into consideration the attitudes and intentions of the *Comité*'s chief architects and members in addition to the political and cultural circumstances.

It remains clear that despite the profound research of non-published documents, as well as the material culture, gaps in the story remain and the availability or lack of one document might significantly change our understanding and interpretation. Although the sample of case studies selected for this paper might not be large enough to draw firm and definitive

185. Behrens-Abouseif noted that during the dismantling and reconstruction process of the minaret of Abū al-ʿIlā (not researched for this paper) the inscribed stones were not assembled properly and hence the inscription cannot be read.

186. BC 35, 1927–1929, “644<sup>e</sup> rapport de la section technique”, pp. 208–214.

conclusions regarding the *Comité's* work, they do indeed trigger more questions, especially with regard to the 1930s that were charged with political and cultural changes. How the rising Egyptian nationalism, the issuing of the 1931 Athens Charter for the restoration of historic monuments and the transfer of the *Comité* from the Ministry of *Awqāf* to the Ministry of Public Instruction in 1936, have impacted the decisions taken by the *Comité* post the 1930s are among many questions awaiting further research.

Last but not least, although we speak and will probably keep on speaking of the *Comité*, we need to reconsider our understanding of this entity and question whether we should treat it as one homogenous body, while its members, presidents, chief architects, philosophies, methodologies and politics varied over time.

## Bibliography

### Abbreviations

BC: The reports (Bulletin) of the *Comité de conservation des monuments de l'art arabe*.  
 IMIQ: *Idārat al-mahfūzāt al-islāmiyya wa-l-qibṭiyya*.

MT: *Markaz tasgīl al-āṭār al-islāmiyya wa-l-qibṭiyya*.  
 RBSC: Rare Books and Special Collections Library, The American University in Cairo.

### Primary Sources

#### \* Iconographic and Cartographic Sources

Cairo, *Markaz tasgīl al-āṭār al-islāmiyya wa-l-qibṭiyya*.  
 It is part of the Egyptian Supreme Council of Antiquities, the Ministry of Antiquities.  
 It is located at the Cairo Citadel and houses drawings of the *Comité*; the folders are organized as per the monument number given to each by the *Comité*.

Cairo, Rare Books and Special Collections Library at the American University in Cairo, Creswell Photographic Archive. It includes

photographs by Creswell as well as others by Gabriel Lekegian, Hippolyte Béchard and Giuntini.

Marseille, Bibliothèque de L'Alcazar, Pascal Coste, *Égypte. Le Caire*, MS 1310, Série "Monuments de l'Afrique septentrionale".

Paris, Bibliothèque de l'INHA, *Raccolta Artistica Di Fotografie Sull'Architettura Araba, Ornati Ecc. Dal XII° Al XVIII° Secolo Fotografia Italiana Del Cav. B. Facchinelli Cairo, 1887 (Egitto)*.

#### \* Manuscripts

Cairo, *Idārat al-mahfūzāt al-islāmiyya wa-l-qibṭiyya*.  
 It is part of the Egyptian Supreme Council of Antiquities, the Ministry of Antiquities.  
 It contains non-published correspondence files between the *Comité* and other bodies.  
 It used to be located at the headquarters of the Supreme Council of Antiquities in 'Abbāsiyya. In 2015, the files were moved to another office

in the complex of Qurqumās at the Northern Cemetery. The folders are organized as per the monument number given to each by the *Comité*.

Paris, Bibliothèque nationale de France, Département des manuscrits, papiers Prisse d'Avennes, Nouvelles acquisitions françaises 20426, volume Art arabe I.

✦ *Bulletins du Comité de conservation des monuments de l'art arabe*

BC vols. 1–41, Cairo, 1883–1961. These were published almost annually by the *Comité* and included summary of their meetings (*Procès-verbaux des séances*) and the technical reports (*Rapports de la deuxième Commission*, later, *Rapports de la Section technique*). The bulletins are available

online in image mode on Islamic Art Network and in full searchable mode on the portal Persée, thanks to a partnership with InVisu (INHA/CNRS) and Ifao.  
[www.persee.fr/collection/ccmaa](http://www.persee.fr/collection/ccmaa)

### Published Sources

- ‘Abd al-Wahhāb, Ḥasan, *Tārīḥ al-masāğid al-aṭariyya*, 2nd ed., al-Hay’a al-Miṣriyya al-‘Āmma li-l-Kitāb, Cairo, 1994.
- Artin-Bey, Jacob, “Bab Zoueyleh et la mosquée d’El-Moéyéd: notice historique et anecdotique”, *BIE*, 2nd series, no. 4, 1883, pp. 127–152.
- Charmes, Gabriel, “L’art arabe au Caire, I. Feuilleton du *Journal des débats* du 2 août 1881”, *Journal des débats*, 2 August 1881.
- Coste, Pascal, *Architecture arabe ou monuments du Kaire, mesurés et dessinés de 1818 à 1825*, Firmin Didot Frères, Paris, 1839.
- Creswell, K.A.C., *The Muslim Architecture of Egypt*, Clarendon Press, Oxford, 1952–1959.
- Herz, Max, *La mosquée de l’Emir Ganem el-Bahlaouan au Caire*, Comité de Conservation des Monuments de l’art Arabe, Boehme & Anderer, Cairo, 1908.
- Herz, Max, *Index général des Bulletins du Comité des années 1882 à 1910*, Ifao, Cairo, 1914.
- International Charter for the Conservation and Restoration of Monuments and Sites (The Venice Charter 1964)*, ICOMOS, 1965.
- Lane, Edward William, *Cairo Fifty Years Ago*, Lane-Poole, Stanley (ed.), Murray, London, 1896.
- Prisse d’Avennes, Émile, *L’Art arabe d’après les monuments du Kaire depuis le VII<sup>e</sup> siècle jusqu’à la fin du XVIII<sup>e</sup>*, vol. I, J. Savoy et C<sup>ie</sup>, Paris, 1877.
- Prisse d’Avennes, Émile, *L’Art arabe [d’après les monuments du Kaire depuis le VII<sup>e</sup> siècle jusqu’à la fin du XVIII<sup>e</sup>]*, Text, Paris, 1877.
- Wiet, Gaston, *Catalogue général du musée arabe du Caire: objets en cuivre*, Ifao, Cairo, 1932.

### Secondary Sources

- Agstner, Rudolf, “Dream and Reality: Austrian Architects in Egypt”, in Volait, Mercedes (ed.), *Le Caire-Alexandrie. Architectures européennes 1850-1950*, EtudUrb 5, Ifao, Cairo, 2004, 2nd ed., pp. 141–159.
- Amīn, Muḥammad, *al-Awqāf wa-l-ḥayāt al-iğtimā’iyya fī Miṣr 648–923 h./1250–1517 m.*, *Dirāsa tārīḥiyya waṭā’iqiyya*, Dār al-Nahḍa al-‘Arabiyya, Cairo, 1980.
- Ambraseys, N.N., Melville C.P. & Adams, R.D., *The Seismicity of Egypt, Arabia and the Red Sea: A Historical Review*, Cambridge University Press, Cambridge, 1994.
- AlSayyad, Nezar, Bierman, Irene A. & Rabbat, Nasser O. (eds.), *Making Cairo Medieval*, Lexington Books, Lanham, Boulder, New York, Toronto, Oxford, 2005.
- Bakhoun, Dina Ishak, “The Waqf in Relation to Maintenance and Repair: The Medieval Sources and Their Uses for Contemporary Practices”, M.A. diss., The American University in Cairo, 2004.
- Bakhoun, Dina Ishak, “The Waqf System: Maintenance, Repair and Upkeep”, in Ghazaleh, Pascale (ed.), *Held in Trust: Waqf in the Islamic World*, The American University in Cairo, Cairo, New York, 2011, pp. 179–196.
- Behrens-Abouseif, Doris, *Cairo of the Mamluks*, The American University in Cairo Press, Cairo, 2007.
- Behrens-Abouseif, Doris, *Minarets of Cairo*, The American University in Cairo Press, Cairo, 2010.

- El-ʿAttar, A.G., Saleh, A.M., Osman, A., "Seismic Response of a Historic Mamluk Style Minaret", in Alberto, Brebbia Carlos & Corz, Alfonso (eds.), *Earthquake Resistant Engineering Structures III*, (WIT Transactions on the built environment, 57), Southampton, WIT [Wessex Institute of Technology] Press, 2001, v. 57, pp. 745–754.
- El-Habashi, Alaa El-Din, "Athar to Monuments. The Intervention of the *Comité de conservation des monuments de l'art arabe*", Ph.D. diss., University of Pennsylvania, 2001.
- El-Habashi, Alaa El-Din, "The Preservation of Egyptian Cultural Heritage Through the Case of the *Comité de Conservation des Monuments de l'Art Arabe*", in Nasr, Joe & Volait, Mercedes (eds.), *Urbanism: Imported or Exported?*, Wiley-Academy, Chichester, 2003, pp. 155–183.
- El-Habashi, Alaa & Warner, Nicholas, "Recording the Monuments of Cairo: An Introduction and Overview", *AnIsl* 32, 1998, pp. 81–99.
- Fahmy, Khaled, "Modernizing Cairo: A Revisionist Narrative", in AlSayyad, Nezar, Bierman, Irene A. & Rabbat, Nasser O. (eds.), *Making Cairo Medieval*, Lexington Books, Lanham, Boulder, New York, Toronto, Oxford, 2005, pp. 173–199.
- Gānim, Ibrāhīm al-Bayyūmī, *al-Awqāf wa-l-siyāsa fī Miṣr*, Dār al-Šurūq, Cairo, 1998.
- Hampikian, Nairy, *Al-Šālihiyya Complex Through Time*, ADAIK, Islamische Reihe 9, Heidelberger Orientverlag, Heidelberg, 2004.
- Iverson, Barry, *Comparative Views of Egypt: Cairo One Hundred Years Later*, Zeitouna, Cairo, 1994.
- Jokilehto, Jukka, *A History of Architectural Conservation*, Routledge, New York, 2011.
- Karim, Chahinda F., "The Mosque of Aṣlam al-Silāḥdār", M.A. diss., The American University in Cairo, 1978.
- Messaoudi, Alain, *Les arabisants et la France coloniale. Savants, conseillers, médiateurs (1780-1930)*, Annexes, ENS Éditions, Lyon, 2015, <http://books.openedition.org/enseditions/3726>
- Mostafa, Saleh Lamei, *Kloster und Mausoleum des Farağ Ibn Barqūq in Kairo mit einem Beitrag von Ulrich Haarmann*, ADAIK, Islamische Reihe 2, Verlag von J.J. Augustin, Glückstadt, 1968.
- O'Kane, Bernard (ed.), *Creswell Photographs Re-Examined: New Perspectives on Islamic Architecture*, The American University in Cairo Press, Cairo, New York, 2009.
- O'Kane, Bernard, "Book Review of *Max Herz Pasha 1859-1919: His Life and Career*", *BCAI* 29, 2014, pp. 130–131.
- Ormos, István, "Max Herz (1856-1919): His Life and Activities in Egypt", in Volait, Mercedes (ed.), *Le Caire-Alexandrie. Architectures européennes 1850-1950*, EtudUurb 5, Ifao, Cairo, 2004, 2nd ed., pp. 161–177.
- Ormos, István, *Max Herz Pasha 1859-1919: His Life and Career*, 2 vols., EtudUurb 6, Ifao, Cairo, 2009a.
- Ormos, István, "The Attitude of Max Herz Pasha and the Comité de Conservation des Monuments de l'Art Arabe Towards Ottoman Architecture in Egypt at the End of the 19th Century", in Dávid, Géza & Gerelyes, Ibolya (eds.), *Proceedings of the Thirteenth International Congress of Turkish Art*, Hungarian National Museum, Budapest, 2009b, pp. 533–544.
- Pflugradt-Abdelaziz, Elke, "Julius Franz-Pasha's *Die Baukunst des Islam* (Islamic Architecture) of 1887 as Part of the *Manual of Architecture*", in Volait, Mercedes (ed.), *Le Caire dessiné et photographié au XIX<sup>e</sup> siècle*, Picard, Paris, 2013, pp. 297–310.
- Reid, Donald Malcolm, "Cultural Imperialism and Nationalism: The Struggle to Define and Control the Heritage of Arab Art in Egypt", *IJMES* 24, 1992, pp. 57–76.
- Reid, Donald Malcolm, *Whose Pharaohs? Archaeology, Museums, and Egyptian National Identity from Napoleon to World War I*, The American University in Cairo Press, Cairo, 2002.
- Reid, Donald Malcolm, *Contesting Antiquity in Egypt: Archaeologies, Museums, and the Struggle for Identities from World War I to Nasser*, The American University in Cairo Press, Cairo, 2015.
- Sanders, Paula, "The Contest Over Context: Fatimid Cairo in the Twentieth Century", in Bierman, I.A. (ed.), *Text & Context in Islamic Societies*, Ithaca Press, Reading, 2004, pp. 131–154.
- Sanders, Paula, *Creating Medieval Cairo*, The American University in Cairo Press, Cairo, New York, 2008.
- Seif, Ola, "Topographical Photography in Cairo: The Lens of Biniamino Facchinelli", in Volait, Mercedes (ed.), *Le Caire dessiné et photographié au XIX<sup>e</sup> siècle*, Picard, Paris, 2013, pp. 195–214.
- Speiser, Philip, *Die Geschichte der Erhaltung arabischer Baudenkmäler in Ägypten. Die Restaurierung der Madrasa Tatar al-Ḥiğāziya und des Sabīl Kuttāb ʿAbd ar-Raḥmān Kathūdā im Rahmen*

- des Darb-al-Qirmiz-Projektes in Kairo*, ADAIK, Islamische Reihe 8, Heidelberger Orientverlag, Heidelberg, 2001.
- Volait, Mercedes, "Amateurs français et dynamique patrimoniale : aux origines du Comité de conservation des monuments de l'art arabe", in Panzac, Daniel & Raymond, André (eds.), *La France & l'Égypte à l'époque des vice-rois 1805-1882*, CAI 22, 2002, pp. 311–325.
- Volait, Mercedes, *Fous du Caire. Excentriques, architectes et amateurs d'art en Égypte (1867-1914)*, L'archange minotaure, Montpellier, 2009.
- Volait, Mercedes, "La 'mise en état' de la mosquée Mohammad Ali au Caire (1931-1938)", in Piaton, Claudine, Godoli, Ezio & Peyceré, David (eds.), *Construire au-delà de la Méditerranée, l'apport des archives d'entreprises européennes (1860-1970)*, Honoré Clair, Arles, 2012, pp. 175–183.
- Volait, Mercedes (ed.), *Émile Prisse d'Avennes. Un artiste-antiquaire en Égypte au XIX<sup>e</sup> siècle*, BiEtud 156, Ifao, Cairo, 2013a.
- Volait, Mercedes (ed.), *Le Caire dessiné et photographié au XIX<sup>e</sup> siècle*, Picard, Paris, 2013b.
- Warner, Nicholas, *The Monuments of Historic Cairo: A Map and Descriptive Catalogue*, The American Research Center in Egypt, The American University in Cairo Press, Cairo, New York, 2005.
- Zaki, M.A., Hassan, A.F., Mourad, S.A. & Osman, A.M., "Evaluation of the Structural Integrity of Historical Stone Minarets", *Proceedings of the 14th World Conference on Earthquake Engineering*, October 12–17, 2008, Beijing, China, 2008.