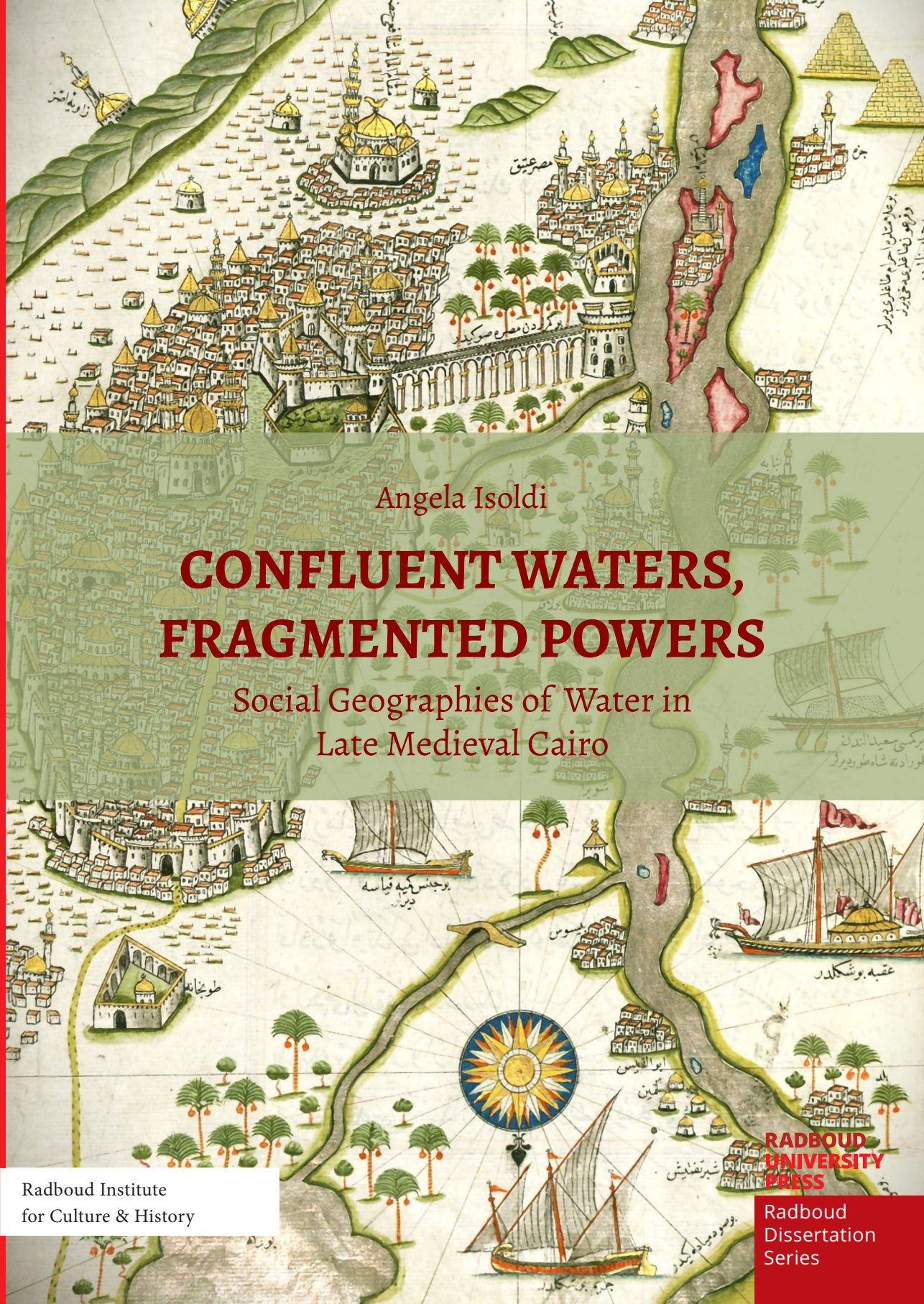




Angela Isoldi

CONFLUENT WATERS, FRAGMENTED POWERS

Social Geographies of Water in
Late Medieval Cairo

Radboud Institute
for Culture & History

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Confluent Waters, Fragmented Powers

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Table of contents

Introduction	iii
1. Institutional Obligations vs Strategic Interventions	3
<i>Sultans managing water as natural resource or hazard</i>	
2. Wāqifūn and water carriers as stakeholders of urban water supply	67
<i>Multi-Actor Dynamics of Urban Water Provision</i>	
3. The Precious Commodity	135
<i>Water Systems in Revenue-generating Waqf Properties</i>	
4. Source of Grace	197
<i>Water Giving as a Form of Charity</i>	
Conclusions	271
Appendix	281
Bibliography	351
Summaries	369
Curriculum Vitae	377
Acknowledgements	381



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شوبر

بورجس کیه قیاسه

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Introduction

While wandering the streets of Cairo, one is struck by the sight of earthenware jars, brightly coloured plastic tanks, and gleaming metal coolers placed by the sidewalks. They are the *ollas*, *zeers*, *colemans*, and *coldairs*. Though varied in shape and size, they share a common purpose: offering cool, free drinking water to passersby. A welcome respite from the Cairo heat, these containers provided by the city dwellers represent a deeply ingrained tradition of almsgiving, a simple act of charity with profound meaning in Islamic culture, where providing water is considered a highly meritorious deed. Earlier traces of this tradition are still visible in the rich landscape of the city, where one can see, often at the corner of religious buildings, beautifully decorated *sabils*—structures from which sweet water was distributed “on behalf of God”, *fi sabīl Allāh*.¹ The *ollas*, *zeers*, *colemans*, and *coldairs* also represent the living remains of a form of water provision rooted in the history of Cairo, a city that until the introduction of modern hydraulic infrastructure in the twentieth century relied on a complex and multilayered water supply, in which multiple city dwellers and neighbourhood communities had a role to play.²

This work investigates Cairo’s complex water supply during the Mamlūk period (648-923/1250-1517), an over two-century-long timespan which left an enormous mark in the city, still constellated by a remarkable number of its vestiges. It was at this stage of its history that Cairo developed into a large city, with significant expansion beyond the old clusters of Fatimid Cairo (al-Qāhira) and Fustāṭ. Its population also experienced phases of substantial growth, reaching, according to historian André Raymond, an estimated peak of 250,000 inhabitants before the Black Death, a scale that established it as one of the largest capital cities in the Mediterranean region at the time.³ The growth in size and population made the provision of a sufficient water supply more complex and challenging. While recent scholarly research has shed light on the hybrid nature of water management in Mamlūk Cairo, many aspects remain to be investigated further.⁴ The present analysis aims to understand which social, political and economic entities and dynamics were involved in the provision of water and in the management of water facilities in the growing city, what were

¹ Clifford E. Bosworth and Doris Behrens-Abouseif, “Sabīl,” in *Encyclopaedia of Islam New Edition Online* (EI-2 English), ed. P. Bearman (Brill, 2012) doi: https://doi.org/10.1163/1573-3912_islam_COM_0954.

² The anthropologist Tessa Farmer interprets the *ollas*, *zeers*, *colemans*, and *coldairs* as the “vernacular forms” of the *sabils*. See: Tessa Farmer, Mel Throckmorton and Fazlah Rahaman, “The Sabils of Cairo: Small Scale Urban Adaptations to Water Stress,” *Journal of Sustainability Education* (2020): 2-3.

³ André Raymond, “Cairo’s Area and Population in the Early Fifteenth Century,” *Muqarnas* 2, no. 30 (1984): 30. Raymond emphasized that, concurrently, the estimated populations of major European capitals such as London and Paris did not exceed 80,000 inhabitants. Only Constantinople’s population might have rivalled Cairo’s in size.

⁴ See, for instance: Amalia Levanoni, “Water Supply in Medieval Middle Eastern Cities: The Case of Cairo,” *al-Masāq* 20, no. 2 (2008): 179-205. More literature on the topic will be discussed below.

their respective roles, and how did they interact and complement each other. Within this analysis, particular attention is given to the role of Islamic endowments (Ar. *waqf*, pl. *awqāf*), institutions which proliferated during the period in question. These foundations controlled multiple urban assets, including water facilities, bathhouses, residences with their domestic hydraulic systems, religious structures, and their charitable *sabīls*. The bulk of this dissertation is based on case studies drawn specifically from *waqf* documents related to foundations that established and maintained both lucrative water structures and charitable water facilities across the city. While the primary focus is on the role of these foundations, their influence can only be fully understood by examining other agents and practices of water provision active outside the *awqāf*, such as the sultanic administration and water carriers, which are also treated in this work.

Through the lens of water management, the ultimate goal of this work is to shed light on governance dynamics, social practices, economic forces, and political negotiations between the different groups and entities which made of Mamlūk era Cairo a complex and heterogenous pre-modern city. Reconstructing a full picture of Cairo's urban life between the mid-seventh/thirteenth and the early tenth/sixteenth century remains an unattainable goal, for a great deal of historical data have been lost, or were perhaps not even recorded. However, examining the organization of water supply offers a valuable avenue for the exploration of under-researched actors and dynamics, thereby expanding the scope of historical inquiry. As explained in what follows, the study of water supply has, in recent decades, emerged as a crucial tool for revealing previously hidden dimensions of society, from material practices to power relationships, due to the many ways in which water and society interrelate.

I. Water as a Tool for Historical and Sociological Inquiry

In a paper published in 2010, anthropologists Ben Orlove and Steven C. Caton proposed to approach water as a “total social fact”.⁵ The term, borrowed from Marcel Mauss's conceptualization of exchanges in archaic societies, implies that water should be studied as an element connecting different domains of social life.⁶ In particular, Orlove and Caton invited fellow anthropologists to holistically approach the connections between water and a given society, focusing not only on

⁵ Ben Orlove and Stephen C. Caton, “Water Sustainability: Anthropological Approaches,” *Annual Review of Anthropology* 39, (2009): 401-15.

⁶ Orlove and Caton, “Water Sustainability,” 402; Marcel Mauss, *The Gift. The form and reason for exchange in archaic societies* (Routledge, 1990), 3. See also: Tessa Farmer, *Well Connected. Everyday Water Practices in Cairo* (Johns Hopkins University Press, 2023), 6.

the material aspects of water as a natural resource, but also on the various socio-cultural values attributed to water in different spatial and historical contexts. These authors stressed the importance of analysing “the wide range of people, agencies, and processes involved in addressing concrete water problems” together with the “waterscapes”—the different cultural understandings, perceptions, and representations of water within a specific context.⁷ Orlove and Caton’s article was a ground-breaking contribution that demonstrated the significant potential of water as a lens for understanding important aspects of societies.

A few years later, an article on *Geoforum* by geographers Jamie Linton and Jessica Budds introduced the “hydrosocial cycle” concept, defining it as the “socio-natural process by which water and society make and remake each other over space and time”.⁸ Linton and Budds argued that the need to manage water shapes the organization of society, which in turn influences how water is distributed, leading to new forms of social organizations, thus creating a continuous cycle of mutual influence.⁹ Like Orlove and Caton, also Linton and Budds invited scholars to move beyond the understanding of water as a mere natural resource and as a passive object of politics. The innovative aspect of the “hydrosocial cycle”, heir of the Marxist idea that the interaction between men and natural resources simultaneously changes the nature of both, consists of looking at water as an agent actively shaping social processes.¹⁰ Furthermore, Linton and Budds demonstrated that examining water management through the “hydrosocial cycle” allows focusing on the different socio-political actors and interests at play, together with their different discourses, understandings and views of “water”.¹¹ Building on the hydrosocial theory proposed by Linton and Budds, research focusing on the social aspects of water must also consider its different “ontologies”—that is, the various understandings of what water “is” and their socio-political implications.¹² Thus, for example, understanding the functioning of *ollas*, *zeers*, *colemans*, and *coldairs* requires examining not only the identities of givers and consumers, but also their perception of water as a divine gift and the most worthy object of charity.¹³

⁷ Orlove and Caton, “Water Sustainability,” 408 and 411.

⁸ Jamie Linton and Jessica Budds, “The hydrosocial cycle: Defining and mobilizing a relational-dialectical approach to water,” *Geoforum* 57, (2014): 175.

⁹ Linton and Budds, “The hydrosocial cycle,” 175.

¹⁰ Linton and Budds, “The hydrosocial cycle,” 173 and 177.

¹¹ Linton and Budds, “The hydrosocial cycle,” 178.

¹² Julian S. Yates, Leila M. Harris and Nicole J. Wilson, “Multiple ontologies of water: Politics, conflict and implications for governance,” *Environment and Planning D: Society and Space* 35, no. 5 (2017): 797–815. Peter Schulz and Alexis Gros, “Toward a Sociology of Water: Reconstructing the Missing ‘Big Picture’ of Social Water Research,” *Water* 16, no. 13 (2024): 6–7.

¹³ Farmer, Throckmorton and Rahaman, “The Sabils of Cairo,” 5. On the value of water as a divine gift see also: Saleh Lamei Mostafa, “The Cairene Sabil: Form and Meaning,” *Muqarnas* 6 (1989): 35.

Despite growing interest in the social dimensions of water, a fully-developed theoretical framework for approaching the complex relationship between water and societies remains to be established, as a recent article emphasized.¹⁴ Significant progress towards a better understanding of societies through water can be made by combining the various approaches mentioned above. In an article published in 1982, the historian Pierre Guichard summarized the legal aspects of water management in the medieval Islamic world. This scholar emphasized that, while Islamic law provides certain general rules for water usage, the various areas of the Islamic world knew different styles of water management due to the widespread application of local customs.¹⁵ Although Guichard's article predated the theoretical works discussed here, it identified two crucial aspects of the relationship between water and societies of the pre-modern Islamic world which resonate with these later theories. First, Guichard noted the existence of multiple social and environmental contexts within the medieval Islamic world, such as different geographical regions or different urban and rural realities within the same region.¹⁶ Such emphasis on the environmental differentiation is a crucial aspect of the hydrosocial approach, which posits that the environmental characteristics of water shape societal organization, which, in turn, influences the organization of water resources, and so on. Second, Guichard highlighted the coexistence of different understandings (or, "ontologies") of water, namely those underpinning general Islamic rules and the specific local norms regulating water use.¹⁷

The two aspects emphasized by Guichard—namely, environmental differences and the coexistence of different cultural perceptions of water—resonate with the structural development of historical research on water in the pre-modern or early-modern Islamic world. The existing publications in this field tend to either address the general theoretical framework of Islamic water law and its interaction with customary norms, or focus on specific regional water systems. The former group highlights the broad scope of *shari'a* (Islamic law) regarding water use.¹⁸ Islamic law in fact simply indicates that water from natural springs and rivers is a common good and cannot be appropriated, but if a well, spring or (minor) canal is located within someone's land, the owner of such land has the primary right to use

¹⁴ Schulz and Gros, "Toward a Sociology of Water," 11-12.

¹⁵ Pierre Guichard, "L'eau dans le monde musulman medieval," in *L'Homme et l'eau en Méditerranée et au Proche Orient. II. Aménagements hydrauliques, État et législation. Séminaire de recherche 1980-1981*, ed. Françoise et Jean Métral (Maison de l'Orient et de la Méditerranée, 1982), 117-118.

¹⁶ Guichard, "L'eau," 118-123.

¹⁷ Guichard, "L'eau," 117-118.

¹⁸ See, for instance: John C. Wilkinson, "Muslim Land and Water Law," *Journal of Islamic Studies* 1, (1990): 54-72. Thomas Naff, "Islamic Law and the Politics of Water," in *The Evolution of the Law and Politics of Water*, ed. J.W. Dellapenna, J. Gupta (Springer, 2009), 37-52.

its water.¹⁹ This broad legal framework allowed for the application of more context-specific regulatory customs on water use, provided they did not conflict with *shari'a* rules.²⁰ Because these regulatory customs varied geographically, recent studies on the practical aspects of water management in the medieval Islamic world concentrate on particular areas or cities. In the last few years, for instance, archaeologist Bethany Walker has investigated how local communities responded to issues related to water supply and irrigation systems in late-medieval Jordan.²¹ An archaeological paper by Marcus Milwright and Evanthia Baboula examined instead the water engineering systems built with the patronage of Ottoman notables (functionaries, wealthy individuals and religious authorities) in the Greek port cities of Nafplio and Nafpakos.²² More recently, historian Yehoshua Frenkel analysed the complex political and social dynamics underlying eighth/fourteenth-century Damascus' water system, emphasizing the participation of several actors (including governors, military personnel, religious leaders, and the general populace) in the struggle for local water control.²³ Historian Alan Mikhail's monograph analysed the environmental history of provincial Egypt under Ottoman rule, focusing on the relationship between local peasant communities (termed "water communities" due to their deep intertwining with the irrigation system) and the Ottoman authorities. Mikhail demonstrated how the relationship between rural communities and state authorities in Ottoman Egypt evolved from the eighteenth to the nineteenth century, with the state increasingly asserting control over water resources and irrigation systems.²⁴

Mikhail's work represents a significant contribution to the expanding field of historical research on Egyptian water management. The past two decades have witnessed increasing scholarly interest in this area, particularly concerning Cairo's water systems, which has led to several other important studies. In 2008 historian Amalia Levanoni published a seminal article on late-medieval Cairo's water system.

^{19.} Wilkinson, "Muslim Land," 60; Naff, "Islamic Law," 41; Guichard, "L'eau," 117. For a detailed summary of such rules see also: Maaïke van Berkel, "Who Owns and Controls the Water? Water Management in Mamluk Cairo," in *Communities, Environment and Regulation in the Premodern World*, ed. Claire Weeda, Robert Stein (Brepols, 2022), 138-9. These rules are famously described by the Iraqi Jurist al-Māwardī (d. 450/1058) in his book on governance. See al-Māwardī, *al-Aḥkām al-sultāniyya* (Maktabat Dār Ibn Qutayba, 1989), 231-241.

^{20.} Guichard, "L'eau," 118. Wilkinson, "Muslim Land," 63-65. Naff, "Islamic Law," 41-42.

^{21.} Bethany Walker, "The Struggle over Water: Evaluating the 'Water Culture' of Syrian Peasants under Mamluk Rule," in *Developing Perspectives in Mamluk History*, ed. Yuval Ben-Bassat (Brill, 2017), 287-310.

^{22.} Marcus Milwright and Evanthia Baboula, "Water on the Ground: Water Systems in two Ottoman Greek port Cities," in *Rivers of Paradise. Water in Islamic Culture*, ed. Sheila Blair (Yale University Press 2009), 213-238.

^{23.} Yehoshua Frenkel, "The Management of Water in Fourteenth-Century Damascus," in *Egypt and Syria under Mamluk Rule*, ed. Amalia Levanoni (Brill, 2021), 235-254.

^{24.} Alan Mikhail, *Nature and Empire in Ottoman Egypt* (Cambridge University Press, 2011), 293.

Her work provided an overview of the city's water infrastructure, highlighting the presence of multiple, coexisting water systems. Furthermore, Levanoni's article underscored the crucial role of the ruling elite in developing Cairo's urban water supply, emphasizing its financial capacity to undertake water-related projects.²⁵ In a later publication, Levanoni focused instead on the construction and maintenance of dykes and canals around Cairo during the Mamlūk period, arguing that the organization of such projects did not involve a specialized bureaucratic institution, and that the capacity of the central government to sponsor large hydraulic infrastructures decreased from the late eighth/fourteenth century onwards.²⁶ A comprehensive PhD thesis on the water system of Cairo during the Mamlūk period was completed by Valentine Denizeau in 2010.²⁷ This thesis, which unfortunately remains unpublished, discusses multiple aspects of the urban water system focusing on three key elements—natural phenomena, technological solutions, and political instrumentalization of water by the ruling elite. Denizeau particularly highlights the sultans' involvement in the construction and upkeep of Cairo's waterworks, suggesting that the decline in such projects during the latter half of the Mamlūk period was a consequence of the Sultanate's economic and political crises. Like Levanoni, Denizeau also emphasized the lack of a dedicated central government body for water management. In addition, she highlighted the potential of other social and political entities to contribute to Cairo's water supply, such as the charitable foundations (the *awqāf*) established by the elite.²⁸ More recently, the significance of Islamic pious endowments for Mamlūk Cairo's water supply, and the potential of their founding documents (Ar. *waqfiyya*, pl. *waqfiyyāt*) as sources for reconstructing water provision in the medieval city, have been underscored by historian Maaïke van Berkel.²⁹ In her research on water management, Van Berkel demonstrated, echoing Levanoni's earlier findings, that Cairo's water supply relied on a hybrid system of structures and socio-political actors.³⁰

²⁵ Levanoni, "Water Supply," 179–205.

²⁶ Amalia Levanoni, "Urban Water Management in the Medieval Middle East: The Case of Mamluk Cairo," in *Egypt and Syria under Mamluk Rule*, ed. Amalia Levanoni (Brill, 2021), 255–276.

²⁷ Valentine Denizeau, "Conduire l'eau dans Le Caire mamlūk: installations hydrauliques et politiques d'aménagements dans la capitale égyptienne (1250–1517)," (PhD diss., Université de Provence, 2010).

²⁸ Denizeau did not tackle in detail the everyday water supply systems of the households, which instead have been the object of an PhD thesis in archaeology completed in 2016. See: Matthew James Harrison, "Fuṣṭāṭ Reconsidered: Urban Housing and Domestic Life in a Medieval Islamic City," (PhD diss., University of Southampton, 2016). Harrison's thesis will be discussed in more detail in the third chapter of the present work.

²⁹ Maaïke van Berkel, "Waqf Documents on the Provision of Water in Mamluk Egypt," in *Legal Documents as Sources for the History of Muslim Societies*, ed. Maaïke van Berkel, Léon Buskens, Petra M. Sijpesteijn (Brill, 2017), 229–244.

³⁰ Van Berkel, "Who Owns and Controls the Water?," 135–145.

These earlier works lay a solid foundation by shedding light on some of the different social and political entities that harnessed, organized, and controlled water resources. However, a comprehensive understanding of Cairo's water supply demands further research into the complex, reciprocal interplay between socio-political actors, economic forces, natural phenomena, and into how various provision modes shaped urban dynamics. This study addresses this gap by delving deeper into identifying specific actors, networks, norms, strategies, beliefs, traditions, and innovations that mutually influenced and were influenced by Cairo's water management. By adopting a pluralistic perspective that embraces different intersections, it offers a more dynamic view of both water management and Mamlūk-era society, examining diverse social actors from various strata without imposing pre-conceived social schemes (e.g., "State" or "elites"), thereby seeking to understand the socio-economic dynamics of water supply on their own terms. This work's extensive use of *waqf* deeds as documentary sources enables an in-depth analysis of the intricate networks of individuals (including women) and resources that shaped the trajectory of numerous water facilities and practices in the city. Furthermore, it illuminates the roles of other social actors, like water carriers and *waqf* servants, who are largely underrepresented in existing historiography. This approach allows the analysis to encompass social elements beyond those traditionally identified as elites (e.g., high-ranking military and civilian officials and religious authorities), by also considering networks outside the central administration. Consequently, it significantly enlarges the scope of the research to include elements of society that have only recently become areas of interest in Mamlūk studies.³¹ Finally, this work also shows how water was perceived and managed in different ways—as a resource, a symbol of power, a hazard, a commodity, and a sacred gift—and how these varied perceptions directly influenced distinct forms of water management and supply, which in turn profoundly shaped social and economic realities. This perspective allows for the integration of the built environment with the natural one, thereby incorporating the environmental element into the research—an aspect that has been gradually introduced and gained traction in Mamlūk studies over the last two decades.³²

Through this socio-political and economic analysis of water management, this dissertation offers a nuanced understanding of Mamlūk society. While perhaps not introducing a "new paradigm of a model of social action" that scholars identify as lacking in Mamlūk studies, this work nevertheless reveals the enormous complexity of a society in which various and evolving forms of aggregation and division coexisted.³³

^{31.} Yossef Rapoport, "New Directions in the Social History of the Mamluk Era," in *History and Society During the Mamluk Period (1250-1517)*, ed. Stephan Conermann (Bonn University Press, 2014), 145-6.

^{32.} Rapoport, "New Directions," 151.

^{33.} Rapoport, "New Directions," 152.

The findings presented here, therefore, can help form a more advanced theoretical sociological framework, applicable to Mamlūk society and, potentially, to broader historical and sociological contexts. Indeed, while the dynamics uncovered by this work remain proper to Mamlūk Cairo, it is hoped that the findings will provide material for cross-regional comparisons. A few comparative studies have come to light as outputs of the NWO project “Source of Life” led by Maaïke van Berkel, of which this dissertation is also a part. Together with Josephine van den Bent, for instance, I have explored parallels in the role of charitable giving for water provision in Mamlūk Cairo and Abbasid Baghdād.³⁴ Similarly, Josephine van den Bent and Peter Brown have identified relevant parallels in the construction of royal water conduits in Abbasid Baghdād and Samarra and the Tulūnid citadel of al-Qaṭā’i.³⁵ Stemming from the “Source of Life” project, Maaïke van Berkel’s comparative study of urban water management across the medieval Islamic world is expected for publication in the coming years. Concurrently, a forthcoming volume will compile contributions from the project’s final conference, focusing on top-down and bottom-up water management dynamics in various historical and geographical contexts. Gathering the pieces of this complex puzzle for Mamlūk Cairo thus offers a contribution to this larger comparative framework.

II. The Socio-Spatial Context: Cairo During the Mamlūk Period

ii.i The City and its Waters

Before discussing the methodology and structure of this work, a brief overview of Cairo’s geographical and political context is in order. Between 648/1250 and 923/1517, Cairo served as the capital of a large Sultanate encompassing the various provinces of Egypt, and the regions of the Hijāz and the Shām. By the seventh/thirteenth and eighth/fourteenth centuries, Cairo had emerged as not only the seat of the sultanī administration but also a pivotal economic hub and the paramount centre of the Sunni Islamic world. This trajectory led to its evolution into one of the world’s most populous and dynamic metropolises, attracting people from across the Middle East, North Africa, Europe, and Central Asia.³⁶ The urban space underwent a period of

³⁴ Josephine van den Bent and Angela Isoldi, “Pleasing God, Serving the Citizens: Charity and Water Supply in Cairo and Baghdad,” in *City, Citizen, Citizenship, 400–1500: A Comparative Approach*, ed. Els Rose, Robert Flierman, Merel de Bruin-van de Beek (Palgrave, 2024), 199–229.

³⁵ Josephine van den Bent and Peter J Brown, “Constructing Hydraulic Infrastructure in the ‘Abbāsīd and Ṭulūnid Capitals: Water Conduits in Baghdad, Samarra and Cairo between the Eighth and Ninth Centuries,” *al-Masāq* 37, no. 1 (2025): 126–145.

³⁶ Stephen Humphreys, “Egypt in the world system of the later Middle Ages,” in *The Cambridge History of Egypt, Volume 1: Islamic Egypt, 640–1517*, ed. Carl Petry (Cambridge University Press, 1998), 445–461.

significant development, traces of which still dot Cairo's modern landscape. The city's growth and increasing population necessitated a more extensive and efficient water supply.³⁷ Long-lived traditions and improvised solutions were adopted throughout the Mamlūk period to fulfil Cairo's water demand. The geography of the city, however, presented several challenges.

By the mid-seventh/thirteenth century, four main urban clusters existed on the eastern side of the Nile. The oldest and southernmost settlement, Fuṣṭāṭ-Miṣr, was established in 20/642 by the troops of 'Amr ibn al-ʿĀṣ. Initially a garrison town, Fuṣṭāṭ developed into a true city during the first century of Muslim rule over Egypt, merging with the pre-Islamic nucleus of Babylon.³⁸ North of Fuṣṭāṭ, the hubs of al-ʿAskar and al-Qaṭāʾi were founded respectively by the Abbasids in 133/750 and by Ibn Ṭūlūn in 256/870.³⁹ Further north lay the Fatimid walled palace-city of al-Qāhira (referred to in this work also as Fatimid Cairo), established in 385/969. After the Fatimids, this hub developed into the capital's most important urban area, retaining its distinct socio-political importance throughout the Mamlūk period.⁴⁰ The latest of these clusters, and the furthest settlements from the Nile, was the citadel situated on the rocky hill south-east of Fatimid Cairo. Known as Qalʿat al-Jabal (Citadel of the Mountain), it was founded in 572/1176 as the headquarters of the Ayyubīd leadership and remained the royal seat throughout the Mamlūk period as well.⁴¹ All these urban hubs became enclosed within a single defence wall after Ṣalāḥ al-Dīn (r. 569-589/1174-1193) started the construction of a large fortification in 572/1176-7.⁴²

Of these clusters, Fuṣṭāṭ-Miṣr was the one closer to the Nile shore. When at the beginning of the fourth/eleventh century the Egyptian physician Ibn Ridwān (d. 460/1068) wrote his treatise *Risālā fī dafʿ maḍārr al-abdān bi-arḍ* Miṣr ("On the Prevention of Bodily Ills in Egypt"), this urban centre was adjacent to the Nile, its primary source of drinking water. The river, however, was polluted by sewage outlets, droppings, and animal carcasses people threw in it. Moreover, low Nile levels sometimes resulted in

³⁷. According to an estimate by archaeologist Tim Williams, in the pre-modern "Islamic city" the average water consumption amounted to 20-40 liters per capita per day. Tim Williams, "Flowing into the city: Approaches to water management in the early Islamic city of Sultan Kala, Turkmenistan," in *Water Societies and Technologies from the Past and Present*, ed. Yijie Zhuang and Mark Altaweel (UCL Press, 2018), 160-161.

³⁸. André Raymond, *Cairo*, trans. Willard Wood (Harvard University Press, 2000), 17-19.

³⁹. Tarek Swelim, "Al-Qata'i: A Lost City in Cairo – Revisited," in *Routledge Handbook on Cairo: Histories, Representations and Discourses*, ed. Nezar Al-Sayyad (Routledge, 2022), 10-11; Janet L. Abu-Lughod, *Cairo. 1001 Years of the City Victorious* (Princeton University Press, 1971), 13-25.

⁴⁰. Raymond, *Cairo*, 31-40.

⁴¹. Nasser Rabbat, *The Citadel of Cairo. A New Interpretation of Royal Mamluk Architecture* (Brill, 1995), 9-17.

⁴². Neil D. MacKenzie, *Ayyubid Cairo. A Topographical Study* (AUC Press, 1992), 52-58.

limited river flow along Fuṣṭāṭ's shores, which worsened the water's quality and the air of the city.⁴³ The Fatimid city was situated farther from the Nile banks, which made its water supply more complicated. Ibn Ridwān recorded that al-Qāhira's population relied primarily on well water, also for drinking. Cairo's well water, however, was far from palatable. The same Ibn Ridwān attested that "the proximity of the well water of Cairo to the surface of the earth, combined with the thinness of the soil, makes it inevitable that some of the waste from the latrines reaches the underground water by secretion".⁴⁴ Moreover, the saline soil on which the city is built affected the quality of groundwater. The Persian traveller Nāṣir-i Khusraw, who visited Cairo around 437/1045, reported that the city's well water "becomes more brackish the farther you get from the Nile".⁴⁵ These early descriptions reflect a reality that persisted in later periods: the Sultanate's capital relied on two primary water sources—the Nile and wells. However, well water was generally considered unsuitable for drinking, and the Nile was distant from parts of the city. A major environmental change further complicated the situation: from the second half of the sixth/twelfth century onwards, the Nile gradually changed its course, slowly receding from the western walls of al-Qāhira, and leaving a large, empty area between the city and the riverbanks.⁴⁶ This phenomenon had significant repercussions for the city's water supply and the development of the urban space, even after the river course stabilized around the end of the seventh/thirteenth century.

By 648/1250, two dilapidated aqueducts crossed the landscape of Cairo south of the Fatimid city. The oldest, built by a Christian architect at the service of Ibn Ṭūlūn in the late third/ninth century, extended between the citadel of al-Qaṭā'ī and the area south of Fuṣṭāṭ. It probably fell into disuse already by the fourth/tenth century, when the Ṭūlūnid capital was destroyed by the Abbasid forces.⁴⁷ The other aqueduct, built in the late sixth/twelfth century, was embedded in a section of Ṣalāḥ al-Dīn's wall running between the Nile and the Citadel. As will be discussed in Chapter 1 of

⁴³ Ibn Ridwān, *Medieval Islamic Medicine: Ibn Ridwān's Treatise "On the Prevention of Bodily Ills in Egypt,"* trans. Michael W. Dols (University of California Press, 1984), 105–9.

⁴⁴ Ibn Ridwān, *Medieval Islamic Medicine*, 107.

⁴⁵ Nāṣir-i Khusraw, *Nāṣir-e Khosraw's Book of Travels (Safarnāma)*, trans W. M. Thackston Jr (Bibliotheca Persica, 1986), 46. See also: Paulina B. Lewicka, *Food and Foodways of Medieval Cairenes. Aspects of Life in an Islamic Metropolis of the Eastern Mediterranean* (Brill, 2011), 457.

⁴⁶ Nelly Hanna, *An Urban History of Būlāq in the Mamluk and Ottoman Periods* (IFAO, 1983), 3. This phenomenon will be discussed further in Chapter 1.

⁴⁷ Swelim, "Al-Qata'ī," 11; al-Balāwī, *Sirat Aḥmad ibn Ṭūlūn* (Maktabat al-Thaqāfa al-Dīniyya, 1939), 56 and 181–3. On the basis of al-Balāwī, Swelim claims that this aqueduct was meant as a water source accessible to everyone, and not only for the palace of Ibn Ṭūlūn. Yet some doubts remain, also because only a small section of the monument is extant south of Fuṣṭāṭ in addition to the remains of the Ṭūlūnid *sāqiya* at the Kabsh hill. See also: Van den Bent and Brown, "Constructing Hydraulic Infrastructure," 14–17.

this work, part of its route was incorporated in the Citadel's new aqueduct built in the early eighth/fourteenth century by Sultan al-Nāṣir Muḥammad (third reign: 709-741/1310-1341), and by Sultan al-Ghawrī (r. 906-922/1501-1516) in the early tenth/sixteenth century.⁴⁸ From its initial construction through subsequent restorations, this aqueduct was exclusively dedicated to supplying water to the Citadel and the sultanic court, and did not serve the urban population.

The areas around the urban centres were scattered with seasonal water bodies. Of utmost importance was the canal which ran from the Nile shores north of Fuṣṭāṭ to the northern outskirts of the Fatimid city. This canal, known variously as al-Khalīj al-Kabīr (the Great Canal), al-Khalīj al-Miṣrī, or Khalīj al-Ḥākīmī, predated the Islamic conquest of Egypt, but was excavated anew around 23/643, during the reign of the Caliph 'Umar ibn al-Khaṭṭāb, for which it was also designated as Khalīj Amīr al-Mu'minīn (Canal of the Commander of the Faithful).⁴⁹ The dyke closing the mouth of the Khalīj al-Kabīr was opened during the yearly Nile flood, and the canal was filled with the river's water throughout the late summer and early autumn, becoming an additional source of water for the city.⁵⁰ However, as the Nile level started to decrease after the month of October, reaching its minimum height between February and June, the water in the Khalīj al-Kabīr became scarce, stagnant, and polluted. Besides the Khalīj al-Kabīr, a few minor canals connected the Nile to other areas around the city. The Khalīj Banī Wā'il extended to the southern periphery of Fuṣṭāṭ.⁵¹ Located on the northwestern outskirts of Fatimid Cairo were Khalīj al-Dhakar and the Fumm al-Khawr. The latter was expanded during the reign of the Fatimid Caliph al-Zāhir ibn al-Ḥākīm (r. 411-427/1021-1036) to irrigate a nearby orchard. The Khalīj al-Dhakar was enlarged and then abandoned in the early eighth/fourteenth century, due to a sultanic project discussed in Chapter 1 of this work (Fig. 1).⁵²

⁴⁸. Rabbat, *The Citadel of Cairo*, 198.

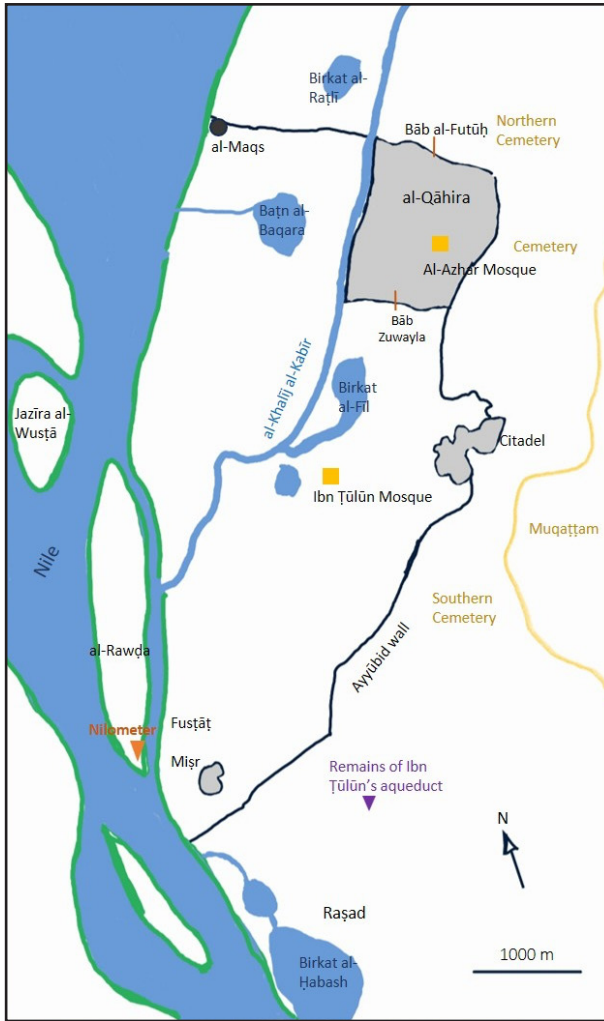
⁴⁹. al-Maqrīzī, *al-Mawā'iz wa al-i'tibār fī dhikr al-khiṭaṭ wa al-athār* (Dār al-Kutub al-'Ilmiyya, 1998), 1:135; John P. Cooper, *The Medieval Nile. Route, Navigation and Landscape in Islamic Egypt* (AUC Press, 2014), 96-7.

⁵⁰. Ibn Riḍwān, *Medieval Islamic Medicine*, 108.

⁵¹. al-Maqrīzī, *Khiṭaṭ*, 3:275.

⁵². al-Maqrīzī, *Khiṭaṭ*, 3:257-8.

1. Cairo and its environs by the mid-seventh/thirteenth century



During the annual Nile flood, occurring between June and October, a number of seasonal ponds (Ar. *birka*, pl. *birak*) appeared in the areas surrounding the urban centres. The physician Ibn Riḍwān attested that these ponds were “filled with the secretion of the earth from the days of the Nile flood”, adding that their water was “ruined because it is stagnant and because their soil is salty and substances flowing into them are putrid”.⁵³ As the Nile level decreased during the winter months, these ponds turned into green areas and were used as orchards or pasture grounds.⁵⁴

⁵³ Ibn Riḍwān, *Medieval Islamic Medicine*, 107.

⁵⁴ Angela Isoldi, “The *birkas* of Cairo in the Mamlūk Period: A Topographic and Socio-Economic Study,” *al-Masāq* 36, no. 3 (2024): 374–5.

Despite their seasonal nature and the non-potable quality of their water, some of these ponds held considerable socio-economic importance even prior to the Mamlūk period. The ones located south of Fuṣṭāṭ, namely the Birkat al-Ḥabash, Birka al-Shu‘aybiyya and the Birkat al-Shaṭā, supported the agricultural productions of the villages around the area. During the Umayyad period, the governor Qurra ibn Sharīk (in office 90-96/709-715) converted the wasteland around the Birkat al-Ḥabash into a plantation of reeds. Throughout the Fatimid period, celebrations for Nawrūz, Epiphany, and Christmas took place around the same pond. Beneath the hill of al-Kabsh, where the Ṭūlūnid citadel of al-Qaṭā‘ī was located, lay the Birkat Qārūn and the Birkat al-Fīl. The former served as a source of water for al-Qaṭā‘ī, and the latter, still scarcely populated in the seventh/thirteenth century, became the heart of one of the most important urban quarters of Mamlūk-era Cairo.⁵⁵ A pond called Baṭn al-Baqara, situated between Fatimid Cairo and the Nile and used as a leisure ground by the Fatimid court, disappeared at the beginning of the Mamlūk period, during the reign of Sultan al-‘Ādil Kitbughā (r. 694-696/1294-1296), due to the progressive shifting of the river westwards.⁵⁶ The site of this pond remained scarcely populated until the late ninth/fifteenth century, when it became the stage of the ambitious construction project promoted by the *atābak al-‘asākīr* (commander of the army) Azbak min Ṭuṭukh, discussed in detail in this work.

The Nile cycle had implications not only for the city’s water resources but also for its socio-economic stability. The agrarian economy of the whole of Egypt depended on the yearly Nile flood, carefully monitored from the Nilometer (the *miqyās al-nīl*). This structure was built during the reign of the Abbasid Caliph al-Mutawakkil (r. 232-247/847-861) on the southern extremity of the Rawḍa Island, in front of Fuṣṭāṭ.⁵⁷ When the Nilometer readings indicated a disruption in the delicate balance required for adequate irrigation, and forecasts predicted either drought or devastating floods, the Sultanate’s economy was jeopardized, often leading to instability and social unrest in the capital.⁵⁸ The presence of the Nilometer is emblematic of the social, economic and political role water played in the city. The river’s influence on the Sultanate’s economy, coupled with the strategies employed by the sultans, their court, and the

^{55.} Isoldi, “The *birkas* of Cairo,” 369-70 and 375-6.

^{56.} Isoldi, “The *birkas* of Cairo,” 371-2.

^{57.} al-Maqrīzī, *Khīṭaṭ*, 1:111-3; Jalāl al-Dīn al-Suyūṭī, *Kawkab rawḍa fī tārikh al-Nīl Jazīrat al-Rawḍa*, ed. Muhammad al-Shishtawi (Dār al-Afāq al-‘Arabiyya, 2002), 146-151. See also: Zaraza Friedman, “Nilometer,” in *Encyclopaedia of the History of Science, Technology and Medicine in Non-Western Cultures*, 3rd ed., ed. Helaine Selin (Springer, 2016), 3386-3404.

^{58.} The recurrence of such dynamics is one of the subjects treated by the scholar al-Maqrīzī in his essay *Ighāthat al-umma bi-kashf al-ghumma*. See Taqī al-Dīn Ahmad ibn ‘Alī al-Maqrīzī, *Mamluk Economics: A Study and Translation of al-Maqrīzī’s Ighāthah*, trans. Adel Allouche (University of Utah Press, 1994), 27-49.

urban populace to adapt to and utilize the available water resources, were critical factors in shaping the organization of late-medieval Cairene society.

ii.ii The political scene

Throughout the period covered by this work, Cairo was the capital of the Sultanate and the heart of a regime marked by complex socio-political dynamics. The Sultanate relied on different socio-political groups, which became more or less influential depending on constantly shifting power balances. Following the death of the Ayyūbid Sultan al-Malik al-Ṣāliḥ (r. 637-647/1240-1249), the Turkish recruits that this ruler had consistently added to his army as military slaves (Ar. *mamlūk*, pl. *mamālīk*) gained significant political influence. After a few years of political struggle, the regime established by al-Malik al-Ṣāliḥ's recruits gained relative stability under Sultan al-Ẓāhir Baybars (r. 658-676/1260-1277). This sultan did not succeed in establishing his descendants as successors to the throne, and the last decades of the seventh/thirteenth century were dominated by the figures of Sultan al-Manṣūr Qalāwūn (r. 678-689/1279-1290) and his sons, al-Ashraf Khalīl (r. 689-693/1290-1293) and al-Nāṣir Muḥammad. Al-Nāṣir Muḥammad reigned throughout the end of the seventh/thirteenth and the first half of the eighth/fourteenth century, although with two interruptions. Between 694/1294 and 698/1299, al-ʿĀdil Kitbughā and al-Manṣūr Lājīn, both former recruits of Qalāwūn, briefly held power. Subsequently, from 708/1309 to 709/1310, Qalāwūn's former *mamlūk* Baybars al-Jāshankīr occupied the throne. Al-Nāṣir Muḥammad eventually re-established and fully secured his reign in 709/1310.

Throughout the final decades of the seventh/thirteenth century, a period marked by conflicts against the Crusaders and the Mongols in the Levant, the Turkish recruits imported from Central Asia as military slaves constituted the Sultanate's most influential political group.⁵⁹ Members of the military were compensated for their services with the temporary assignation of *iqṭāʿ* lands, lots belonging to the Treasury (*bayt al-māl*) and allotted to military officials with the right of tax collection.⁶⁰ The system, established in Egypt already under the Ayyūbids, was reorganized during the third reign of al-Nāṣir Muḥammad (r. 709-741/1310-1341). This Sultan realized a survey of *iqṭāʿ* lands (*al-rawk al-nāṣiri*), and reformed the distribution of lots in a

^{59.} This brief summary is based on: Robert Irwin, *The Middle East in the Middle Ages. The Early Mamluk Sultanate, 1250-1382* (Southern Illinois University Press, 1986), 1-102; Linda Northrup, "The Bahri Mamlūk Sultanate, 1250-1390," in *The Cambridge History of Egypt, Volume 1: Islamic Egypt, 640-1517*, ed. Carl Petry (Cambridge University Press, 1998), 242-253.

^{60.} Hassanein Rabie, *The Financial System of Egypt AH 564-741/AD 1169-1341* (Oxford University Press, 1972), 32-41.

way that benefitted especially his own entourage, to the detriment of senior officials raised to power under his predecessors.⁶¹

The third reign of al-Nāṣir Muḥammad saw the end of conflicts with the Ilkhanid Mongols, and was marked by relative peace. This ruler consolidated his power by favouring his household and entourage, and invested in multiple construction projects in Cairo and its surroundings.⁶² The second half of the eighth/fourteenth century, however, did not enjoy the same degree of stability. Although al-Nāṣir Muḥammad's descendants reigned (mostly only nominally) until 784/1382, the spread of the bubonic plague in the mid-eighth/fourteenth century, together with major economic difficulties and power struggles between the dominant factions, made of these decades a period of considerable turmoil.⁶³ A major political change occurred as a former *mamlūk*, the *amīr* Barqūq (d. 801/1399), ascended to the throne. Like this ruler, the majority of sultans that ascended to the throne up to 923/1517 were former military slaves.⁶⁴ The rise of Barqūq also coincided with the onset of profound economic changes that significantly impacted the Sultanate and the internal structure of the regime. Sultan Barqūq's reign in fact followed a series of epidemics that had caused a major demographic crisis, which resulted in a reduced control of the Sultanate over the agricultural lands allotted to the military.⁶⁵ As the yields of the agrarian lands decreased, the Sultan had to rely on different financial means. In this context, the sale of administrative posts became an alternative source of revenues.⁶⁶ The proliferation of this practice led to the rise of powerful bureaucrats who from the early ninth/fifteenth century obtained prestigious and influential positions at court.⁶⁷

^{61.} Sato Tsugitaka, *State And Rural Society In Medieval Islam. Sultans, Muqta's and Fallahun* (Brill, 1997), 145–152.

^{62.} Raymond, *Cairo*, 118–137. Willem Flinterman and Jo Van Steenbergen, “Al-Nasir Muhammad and the Formation of the Qalawunid State,” in *Pearls on a String: Art in the Age of Great Islamic Empires*, ed. A. Landau (The Walters Art Museum and University of Washington Press, 2015), 96–98.

^{63.} Northrup, “The Bahri Mamlūk Sultanate,” 253.

^{64.} Jo Van Steenbergen, Patrick Wing, and Kristof D'hulster, “The Mamlukization of the Mamluk Sultanate? State Formation and the History of Fifteenth Century Egypt and Syria: Part II: Comparative Solutions and a New Research Agenda,” *History Compass* 14, no. 11 (2016): 565.

^{65.} Michael W. Dols, *The Black Death in the Middle East* (Princeton University Press, 1977), 154–169; Boaz Shoshan, “Notes sur les epidemies de peste en Egypte,” *Annales de Demographie Historique* 1, (1981): 395–400; Stuart J. Borsch, “Environment and Population: The Collapse of the Large Irrigation System Reconsidered,” *Comparative Studies in Society and History* 46, no. 3 (2004): 461–3; Jean-Claude Garcin, “The Regime of the Circassian Mamlūks,” in *The Cambridge History of Egypt, Volume 1: Islamic Egypt, 640–1517*, ed. Carl Petry (Cambridge University Press, 1998), 314. This major change will be discussed in more detail at the beginning of Chapter 1.

^{66.} al-Maqrīzī, *Mamluk Economics*, 53; Miura Toru, “Administrative Networks in the Late Mamlūk Period: Taxation, Legal Execution, and Bribery,” in *Islamic Urbanism in Human History. Political, Power and Social Networks*, ed. Sato Tsugitaka (Kegan Paul International, 1996), 42.

^{67.} Julien Loiseau, *Reconstruire la Maison du Sultan. Ruine et recomposition de l'ordre urbain au Caire (1350–1450)* (IFAO, 2011), 206–9.

Under Barqūq's son and successor Faraj ibn Barqūq (r. 801-808/1399-1405 and 808-815/1405-1412), the Sultanate witnessed a new phase of economic crisis and political turmoil. Successive outbreaks of the plague, together with the failure of the military campaign against Timur in Syria at the beginning of the century, and the internal strife between the Sultan and the *amīrs*, make of the reign of Faraj a period of significant socio-economic hardship. In the period following the assassination of Faraj and the ascent of Barqūq's former *mamlūk* al-Mu'ayyad Shaykh (r. 815-824/1412-1421), a number of families of religious scholars from Syria migrated to the capital and established their influence within the sultanic administration.⁶⁸ During the reign of al-Ashraf Barsbāy (r. 825-841/1422-1438), the establishment of the sultanic monopoly over key trade commodities, particularly spices, led to the inclusion of wealthy merchants (*khawājā*) within the ruling group, as they became essential to the sultan's commercial ventures.⁶⁹ Though bureaucrats remained key actors of the political scene throughout the ninth/fifteenth century, the last decades of the Mamlūk regime, marked by the long reigns of al-Ashraf Qāytbāy (r. 872-901/1468-1498) and Qāniṣawh al-Ghawrī (r. 906-922/1501-1516) saw the emergence of senior military officials as pivotal figures within the ruling group.⁷⁰

The many political changes that occurred throughout this two-and-a-half-century span, here briefly summarized, are not to be interpreted as phases of a linear process of State formation, but rather a complex sequence of transformations in the composition of the ruling groups. Such understanding of the Sultanate as constituted of dynamic and alternating power networks of individuals sharing political influence and economic resources is crucial to the present work, where I argue that such organization had significant repercussions on the management of water resources, and on the construction and upkeep of water systems in Cairo. These effects stemmed essentially from the distribution of resources from the *bayt al-māl* (the Sultanate's treasury) to the ruling group, and the subsequent endowment of these resources in *waqf* foundations. The conversion of Treasury resources into *waqf* properties, which recent scholarship designates as *waqfization*, transformed the Sultanate's land-holding system and the organization of multiple urban assets

^{68.} Bernadette Martel-Thoumian, *Les Civils et L'Administration Dans L'État Militaire Mamluk (IXe/XVe Siècle)* (IFPO, 1992), 244, 258, and 275. See also: Jo Van Steenberg, *A History of the Islamic World. Empire, Dynastic Formation and Heterogeneities in Pre-Modern Islamic West Asia* (Routledge: 2021), 399.

^{69.} Francisco Apellaniz, *Pouvoir et Finance en Méditerranée Pré-Moderne: Le Deuxième Etat Mamelouk et le Commerce des Épices (1382-1517)* (CISC, 2009) 106-110.

^{70.} Garcin, "The Regime of the Circassian Mamlūks," 305. Jo Van Steenberg and Maya Termonia, "Social Infrastructures, Military Entrepreneurship, and the Making of the Sultan's Court in Fifteenth-Century Cairo. The Case of the Court Office of 'the Chief Head of the Guards' (*ra's nawbat al-nuwab*)," *JESHO* 65 (2022), 823.

and structures, including water facilities.⁷¹ The phenomenon of *waqfization* and the proliferation of *awqāf* represent a key aspect of the Mamlūk period. Given that this study greatly focuses on their role in Cairo's water management, they require a dedicated introduction.

ii.iii The mushrooming of *waqf* foundations in Mamlūk Cairo

Between the late seventh/thirteenth and the early tenth/sixteenth century, *waqf* foundations became particularly widespread in Egypt. It has been estimated that by the time the Ottomans entered the country in 923/1517, about 40% of Egypt's agricultural lands and the majority of Cairo's buildings constituted part of *waqf* foundations.⁷² Throughout the Mamlūk period, the *awqāf* financed and managed most of Cairo's religious buildings, commercial facilities, and residential structures. These urban assets included also essential water facilities, like communal hammams (bathhouses), wells, waterwheels and basins for common use, in addition to domestic hydraulic systems, and those associated with commercial and religious buildings, notably ablution facilities and *sabīls* (charitable water dispensers). *Waqf* documents are central to the analysis of this dissertation, and this centrality stems from two key factors: the abundance of water structures controlled by *waqf* foundations in the urban space, and the rich data *waqf* documents provide concerning the location, layout, and functioning of these structures, as well as the socio-economic dynamics that shaped their trajectories. Almost no other extant source offers such a wealth of detailed information on the water structures of Mamlūk Cairo.⁷³ At the same time, by meticulously examining the functioning and trajectory of water structures endowed within certain *awqāf*, this research also contributes significantly to the broader understanding of *waqf* as a socio-economic force, illustrating its dynamic role in urban development and social organization beyond its apparent charitable purpose.

Prior to a discussion of the causes and effects of the mushrooming of *waqf* foundations in Mamlūk Cairo, it is necessary to provide a brief overview of the nature and

⁷¹ Daisuke Igarashi, *Land Tenure, Fiscal Policy and Imperial Power in Medieval Syro-Egypt* (Middle East Documentation Center, 2015), 178-182; *Land Tenure and Mamluk Waqfs* (EB Verlag, 2014), 7. Albrecht Fues, "Waqfization in the late Mamluk Empire: A deliberate policy or chaos management?," *EGY Landscape Project, Working Paper 1* (2020): 1-3. Jo Van Steenberg, "From Temür to Selim: Trajectories of Turko-Mongol State Formation in Islamic West-Asia's Long Fifteenth Century," in *Trajectories of State Formation across Fifteenth-Century Islamic West-Asia. Eurasian Parallels, Connections and Divergences*, ed. Jo Van Steenberg (Brill, 2020), 44-45.

⁷² Muhammad Amin, *Izdihār al-Awqāf fi 'aṣr Salāṭīn al-Mamālīk: dirāsa tārikhiyya wathā'iqiyya* (Wizarat al-Awqāf, 2001), 257. Igarashi, *Land Tenure and Mamluk Waqfs*, 8.

⁷³ While al-Maqrīzī's topography of Cairo (discussed below) offers an exception, this source only details a selection of structures and its coverage extends only up to the first half of the ninth/fifteenth century.

function of Islamic endowments. In the Islamic tradition, a *waqf* is a deed by which a founder (in Arabic, *wāqif*, pl. *wāqifūn*) perpetually endows for a pious cause a set of properties (*mawqūf*), alienating it from market transactions, inheritance and the like. Part of the endowed set of properties must be income-generating to ensure the *waqf* foundation's financial self-sufficiency and long-term functionality. The income-generating properties endowed as the part of the *mawqūf* are called *ʿayn*, and the revenues they produce, the *manfaʿa*, is to be used for the maintenance of the foundation and for financing the charitable endeavours established by the founder. The people and institutions benefitting from the income of the *waqf* (called *ahl al-waqf* or *mawqūf ʿalayhi*) are designated by the founders and indicated more or less specifically in a *waqf* deed. Depending on the nature of the beneficiaries, *waqf* deeds are traditionally categorized either as *awqāf ahliyya* (benefitting the family of the founders) or *awqāf khayriyya* (benefitting a group of people that are not related to the founders). However, such distinction does not necessarily represent a sharp dichotomy. Many foundations included among their beneficiaries the families of the founders together with institutions or social groups outside the founders' households. Moreover, since the *waqf* is meant to be everlasting and families are susceptible to extinction, even the foundations established for the benefit of the founders' families indicate a general social group (for instance, the needy and the poor) as ultimate beneficiary.⁷⁴

The founder, the endowed properties, and the beneficiaries of a *waqf* foundation are indicated and described in the *waqf* deed (or *waqfiyya*). The terminology used within these foundational documents designates them as a *maktūb waqf* or *kitāb waqf*.⁷⁵ These documents stipulate also the conditions (*shurūf*) for the maintenance, management, and upkeep of the foundations. The management of a *waqf* is entrusted to an administrator, called *nāzir* or *mutawallī*, appointed by the founder, or chosen according to criteria established by the founder in the *waqf* deed. In order to be valid, the stipulation of a *waqf* deed must be approved by the judicial authority (the *qadi*) and endorsed by two witnesses. In theory, once it meets the necessary legal requirement and is validated, a *waqf* can not be altered in any of its parts unless the founders agree to do so. Any variation in the *waqf* must be recorded and approved by the judicial authorities too.⁷⁶

⁷⁴ Muhammad Zubair Abbasi, "The Classical Islamic Law of Waqf: A Concise Introduction," *Arab Law Quarterly* 26 (2012): 124-130; Ruud Peters, Doris Behrens-Abouseif, D.S. Powers, A. Carmona, A. Layish, Ann K.S. Lambton, Randi Deguilhem, R.D. McChesney, G.C. Kozłowski, M.B. Hooker, and J.O. Hunwick, "Wakf," in *Encyclopaedia of Islam New Edition Online (EI-2 English)*, ed. P. Bearman (Brill, 2012) doi: https://doi.org/10.1163/1573-3912_islam_COM_1333.

⁷⁵ Daisy Livingston, "Managing paperwork in Mamluk Egypt (c. 1250-1517): a documentary approach to archival practices," (PhD diss., SOAS, 2018), 55.

⁷⁶ Abbasi, "The Classical Islamic Law of Waqf," 130-144. Peters, "Wakf".

Despite the many references to the value of charity and almsgiving, the Qur'an does not contain any explicit reference to the institution of *waqf*.⁷⁷ The norms regulating this institution had therefore to be elaborated on the basis of the hadiths (i.e. the traditions and sayings attributed to the Prophet Muḥammad). The legal sources that discuss the characteristics and regulations of the *waqf* report at least two hadiths supporting the validity of this institution. In one of them, the prophet Muhammad stated that "When a man dies, his deeds cease except three: perpetual almsgiving (*ṣadaqa jāriya*), knowledge which is beneficial (*'ilm yuntafa'u bihi*), or an upright son who prays for him (*walad ṣāliḥ yad'u lahu*)."⁷⁸ In the other hadith that is at the basis of the legal discussion on *waqf*, the Prophet gives advice to 'Umar ibn al-Khaṭṭāb on how to make the best use of his property by suggesting to alienate the substance (*ḥabīs al-aṣl*) and donate the usufruct (*sabīl al-thamara*).⁷⁹ Moreover, the development of the Islamic *waqf* drew upon several pre-Islamic institutions, such as the tribal collective properties of the Hijaz, as well as the Byzantine *piae causae*, and the religious Jewish foundations known as *heqdes*.⁸⁰

By virtue of its relatively flexible legal framework, the Islamic *waqf* constituted a versatile institution capable of serving both the personal interests of the founders and the needs of the wider community. As some scholars have emphasized, by its nature the *waqf* falls within a zone between the individual and the community that cannot be fit into either the "private" nor the "public" domain.⁸¹ A *waqf* is in fact established by the initiative of an individual, but its functioning involves, to a certain extent at least, the collectivity. This fluid boundary between the individual and the collectivity reflects the Islamic perception of common life "not as an antithesis to the private individual but as an integral or synthetic component of his life as Muslim"⁸², a perception that extends to other realities managed on a collective basis such as confessional communities, tribes, households, crafts associations, and

^{77.} Peters, "Waqf".

^{78.} Muḥammad Amin, *al-Awqāf wa-al-ḥayyā al-ijtimā'iyya fi Miṣr* (Dār al-Kutub, 2014), 15-16.

^{79.} Abbasi, "The Classical Islamic Law of Waqf," 128.

^{80.} Sylvie Denoix, "Introduction: Formes juridiques, enjeux sociaux et stratégies foncières," *Revue du monde musulman et de la Méditerranée* 79-80, (1996): 14-16; Gabriel Baer, "The Muslim Waqf and Similar Institutions in Other Civilizations," in *Stiftungen in Christentum, Judentum und Islam vor der Moderne*, ed. Michael Borgolte and Tillmann Lohse (Akademie Verlag, 2009), 258-261.

^{81.} Denoix, "Formes juridiques," 14; "Les notions de 'privé' et de 'public' dans le monde Musulman sunnite médiéval," in *Public et Privé en Islam. Espaces, autorités et libertés*, ed. Mohamed Kerrou (Institut de recherche sur le Maghreb contemporain, 2002), 131-149; Miriam Hoexter, "The Waqf and the Public Sphere," in *The Public Sphere in Muslim Societies*, ed. Miriam Hoexter, Shmuel N. Eisenstadt, Nehemia Levtzion (State University of New York Press, 2002), 119-138. Denoix emphasized that in Islamic Law a distinction between public (*'āmm*) and private (*khāṣṣ*) does exist, but it is not applied in the context of *waqf* law.

^{82.} Hoexter, "The Waqf and the Public Sphere," 122.

neighbourhoods.⁸³ Because of this collective character, *awqāf* had a significant socio-economic impact on the rural and urban communities of the pre-modern Islamic world. Archaeologist and historian Bethany Walker, for instance, suggested that more than governmental institutions, *waqf*-based collective management systems were responsible for the survival and prosperity of rural assets and infrastructure in late-medieval Jordan.⁸⁴ Similarly, Stefan Heidemann has argued that *waqf* foundations established by affluent individuals in Zengid Syria became the basis of an urban, political and economic growth, as they funded essential services, created employment, and fostered cultural development.⁸⁵ More recently, sociologist Nimrod Luz emphasized how Mamlūk-era charitable trusts bolstered the development of Tripoli and other cities of the Levant, arguing that these foundations became “a dominant factor in the running, upkeep and development of cities”.⁸⁶

In Egypt, the existence of *waqf* foundations (also designated as *ḥabūs*) is attested as early as the third/ninth century, although it is possible that some of these foundations and a bureaucratic organ controlling them (the *dīwān al-aḥbās*) appeared soon after the Islamic conquest.⁸⁷ *Waqf* foundations were established in Cairo also during the Fatimid and Ayyūbid periods (fourth/tenth to mid-seventh/thirteenth century), during which the administration of these endowments underwent a few reforms.⁸⁸ However, the scale of the *waqf* foundations’ relevance and spread in Egypt from the mid-seventh/thirteenth century onwards was unprecedented. The mushrooming of *awqāf* during the Mamlūk period was a multifaceted development with diverse motivations and significant repercussions, some of which remain to

^{83.} Denoix, “Formes juridiques,” 14–16.

^{84.} Bethany Walker, “Sowing the Seeds of Rural Decline?: Agriculture as an Economic Barometer for Late Mamluk Jordan,” *MSR* 11, no.1 (2007): 195–199.

^{85.} Stefan Heidemann, “Charity and Piety for the Transformation of the City,” in *Charity and Giving in Monotheistic Religions*, ed. Miriam Frenkel and Yaacov Lev (De Gruyter, 2009), 160–174.

^{86.} Nimrod Luz, *The Mamluk City in the Middle East: History, Culture, and the Urban Landscape* (Cambridge University Press, 2014), 147.

^{87.} Behrens-Abouseif, “Wakf”. Valentine Denizeau and Sylvie Denoix mentioned a *ḥabūs* (i.e. a *waqf*) established during the third/ninth century by the chief of the police (*wālī al-shurṭa*) of Miṣr and including the *jinān al-Zuhri*, an area north of the first Islamic capital of Egypt, about which more will be said in the first chapter of this work. See: Valentine Denizeau and Sylvie Denoix, “Le sultan promoteur. Aménagement urbain dans Le Caire du VIIIe/XIVe siècle,” *Annales Islamologiques* 46, (2013): 172–3.

^{88.} Behrens-Abouseif, “Wkf”. Amin, *al-Awqāf*, 59–68. The Fatimid Caliph al-Ḥākim (r. 386–411/996–1021), for instance, established a large *waqf* foundation for the mosques of al-Azhar and al-Ḥākim. Part of the deed survives in: al-Maqrīzī, *Khīṭaṭ*, 4:52–54. An Ayyūbid-era *waqf* foundation was, as mentioned in other instances in this work, the one established by Salāḥ al-Dīn (r. 564–589/1169–1193) for the *khānqāh* (Sufi lodge) of Sa’id al-Su’adā’. See: Nathan Hofer, *The Popularisation of Sufism in Ayyubid and Mamluk Egypt, 1173–1325* (Edinburgh University Press, 2015), 35; Leonor Fernandes, *The Evolution of a Sufi Institution in Mamluk Egypt: The Khanqah* (Klaus Schwarz Verlag, 1988), 21–15.

be fully understood. Among the factors facilitating the dissemination of the *awqāf*, the introduction of the quadruple system of justice promoted by al-Zāhir Baybars in 663/1265, and the appointment of a chief qadi for each of the four main *madhāhib* (Islamic school of law) certainly played an important role. In a context that until then had been dominated by the Shāfi'ī *madhhab*, the official inclusion of the other Sunni schools of law created a more flexible legal framework which allowed a greater variety of legal solutions also in matters related to the *awqāf*.⁸⁹ Baybars' legal reform facilitated the utilization of *awqāf* by founders and *waqf* managers for their respective political and economic agendas.

Recent scholarship has focused mainly on motives connected to financial benefits among the factors influencing the dissemination of *awqāf* during the Mamlūk period. Imad Abu Ghazi and Daisuke Igarashi highlighted how *iqṭā'* lands were frequently converted into *waqf* properties. This conversion allowed the lands to be transmitted to the founders' descendants instead of reverting to the *bayt al-māl* (the benefit of an *iqṭā'* was granted to the military on a temporary basis).⁹⁰ Igarashi also remarked that, by endowing their assets in a *waqf* foundation, the founders sought a solution to shield their properties from any mulcting or confiscation.⁹¹ In practice, as we will see, this purpose was not always met. Julien Loiseau, as well as Thierry Bianquis and Muhammad Amin before him, remarked that *awqāf* were also used by the founders to manage their patrimony and transmit it to their descendant and relatives, bypassing at the same time the rigid norms imposed by the Islamic inheritance law.⁹² Carl Petry has successfully demonstrated how *waqf* foundations could be harnessed as lucrative enterprises. On the basis of the endowment deeds of the sultans al-Ashraf Qāyrbāy (r. 872-901/1468-1496) and al-Ashraf Qāniṣawh al-Ghawrī (r. 906-921/1501-1516), Petry showed that up to almost 90% of the estimated revenues of these sultanī foundations represented an "unassigned surplus", not spent for charitable endeavours but kept in the hands of the founders and their households.⁹³ With a similar strategy Sultan al-Ashraf Barsbāy (r. 825-841/1422-1437) assigned the surplus of his foundation's proceeds to himself and his descendants. With a later deed, this sultan added

^{89.} Yossef Rapoport, "Royal Justice and Religious Law: Siyasaḥ and Shari'ah under the Mamluks," *MSR* 16 (2012): 76-79. More concrete examples on the repercussions of these reforms will be discussed in the second chapter of this thesis.

^{90.} Imad Badr al-Din Abu Ghazi, *Ṭaṭawwūr al-Ḥiyāza al-Zirā'iyya Zaman al-Mamālīk al-Jarākisa: Dirāsa fī Bay' Amlāk Bayt al-Māl* (Ein, 2000); Igarashi, *Land Tenure and Mamluk Waqfs*, 7.

^{91.} Igarashi, *Land Tenure and Mamluk Waqfs*, 18; Amin, *Izdihār al-Awqāf*, 252.

^{92.} Julien Loiseau, "'Boy and Girl on Equal Terms': Women, Waqf, and Wealth Transmission in Mamluk Egypt," *ORIENT* 54, (2019): 23-39. Thierry Bianquis, *La Famille Arabe Médiévale* (Editions Complexe, 2005), 80; Amin, *Izdihār al-Awqāf*, 253; Denoix, "Formes juridiques," 15.

^{93.} Carl Petry, "A Geniza for Mamluk Studies? Charitable Trust (*Waqf*) Documents as a Source for Economic and Social History," *MSR* 2, (1998): 51-60.

more profitable properties to the first endowment but kept the same charitable expenditures, thus increasing the surplus benefitting himself and his household.⁹⁴ Substantial discrepancies between income and charitable expenditures were also observed in the *waqf* foundations of Sultan al-Ashraf Ināl (r. 857-865/1453-1461), his son al-Mu'ayyad Aḥmad, and the influential eunuch Jawhar al-Lālā (d. 842/1438), who served as educator to Sultan al-Ashraf Barsbāy's sons.⁹⁵

Daisuke Igarashi, Julien Loiseau, Jo Van Steenberghe, and Maya Termonia have revealed that the administratorship of certain important foundations in Cairo consistently became a prerogative of specific courtly offices.⁹⁶ While some earlier foundations were entrusted to court officials even when their original deed designated other individuals as administrators, after the mid-eighth/fourteenth century the designation of a court official as *nāẓir* (manager) was commonly stipulated directly in the *waqf* deeds of large foundations. For instance, Sultan al-Mu'ayyad Shaykh's foundation for his madrasa, established in 818/1415, explicitly designated the Dawādār Kabīr—one of the highest courtly positions—as the eligible *nāẓir*.⁹⁷ Numerous other foundations, including some analysed in this work, similarly entrusted their administration to high court officials. Given that the *nāẓir* typically received the highest salary among the foundation's employees and exerted full control over the foundation's revenues, this phenomenon implies that *waqf* foundations became lucrative revenue streams for court officials. Foundations whose deeds designated court officials as administrators, therefore, might have intentionally fulfilled this function. This phenomenon, which created an overlap between courtly institutions and charitable foundations, will be further discussed in Chapter 2.

Although economic considerations are now prominent in studies of Mamlūk-era *awqāf*, it is crucial to recognize that the proliferation of these foundations also stemmed from a particular perspective on charity and almsgiving. A traditional line of *waqf* studies attributes the dissemination of *awqāf* to the religious zeal of the Mamlūk “military elite”, and to their desire of gaining divine favour and forgiveness

⁹⁴ Amin, *Izdihār al-Awqāf*, 250.

⁹⁵ Daisuke Igarashi, “*Waqf* as a Means of Securing Financial Assets: The ‘Self-Benefiting *Waqf*’ in Mamluk Egypt and Syria,” in *Egypt and Syria under Mamluk rule: Political, Social and Cultural Aspects*, ed. Amalia Levanoni (Brill, 2022), 279; Lucian Reinfandt, *Mamlukische Sultansstiftungen* (Klaus Schwarz Verlag, 2003), 87-91.

⁹⁶ Igarashi, *Land Tenure, Fiscal Policy*, 188-197 and 206-211; Loiseau, *Maison*, 434-440; Van Steenberghe and Termonia, “Social Infrastructures,” 827-31.

⁹⁷ Igarashi, *Land Tenure, Fiscal Policy*, 206-7.

in the afterlife, and legitimacy in the eyes of their subjects in this life.⁹⁸ In light of the more recent studies, the terms of such interpretation seem outdated. However, it would be a mistake to dismiss socio-political motivations stemming from the religious consciousness of Mamlūk-era endowers. In a society where, as Michael Chamberlain nicely put, “gaining and giving benefit was seen as the point of life”, the charitable deeds supported by *awqāf* were likely perceived as a way for those enjoying the privileges of the dominant social group to repay divine favour.⁹⁹ A similar mindset is also what emerges from a Mamlūk-era religious treatise, the *Muʿīd al-niʿam wa-mubīd al-niqām* (“The restorer of Favours and the Restrainer of Chastisement”) by Tāj al-Dīn al-Subkī (d. 771/1370). As elaborated in Chapter 4 of this thesis, which is dedicated to charitable water provision, al-Subkī’s treatise is based on the two key concepts of *niʿmat Allāh* and *shukr al-niʿma*, meaning the divine grace that is granted to the individual in this life and in the hereafter, and the gratitude for such grace the individual should express with their heart (*shukr bi-al-qalb*), words (*shukr bi-al-lisān*), and deeds (*shukr bil-afʿāl*).¹⁰⁰ Moreover, while the idea that the dominant social groups sought some sort of legitimization by dispensing charity is probably inaccurate, certain forms of evergetism suggest that, if not legitimacy, the founders sought to showcase their social status.¹⁰¹ Finally, some founders kept the power of interfering with the religious institutions (e.g. madrasas and Sufi lodges) endowed in their *awqāf*, and therefore of exerting political influence over part of the religious establishment.¹⁰²

The proliferation of endowments stemming from these social, economic, and political factors, generated a vast amount of documentation. While a great deal of *waqf* deeds must have been lost throughout the course of history, a confluence of historical, legal, and archival circumstances has ensured the preservation of a substantial amount of *waqf* and *waqf*-related documents (such as *istibdāl*, or property exchange agreements) that are now kept in the Egyptian Archives. This constitutes the largest extant documentary corpus from Mamlūk Egypt.¹⁰³ Due to the wealth of information they

^{98.} Amin, *Izdihār al-Awqāf*, 243-6; Yehoshua Frenkel, “Piety and Charity in Late Medieval Egypt and Syria,” in *Charity and Giving in Monotheistic Religions*, ed. Miriam Frenkel and Yaacov Lev (De Gruyter, 2009), 175-202; Yaacov Lev, *Charity, Endowments, and Charitable Institutions in Medieval Islam* (University Press of Florida, 2005), 21-52; Adam Sabra, *Poverty and Charity in Medieval Islam. Mamluk Egypt, 1250-1517* (Cambridge University Press, 2000), 69.

^{99.} Michael Chamberlain, *Knowledge and Social Practice in Medieval Damascus, 1190-1350* (Cambridge University Press, 1994), 111.

^{100.} Tāj al-Dīn al-Subkī, *Muʿīd al-niʿam wa-mubīd al-niqām*, ed. David W. Myhrman (Luzac, 1908), 37-43.

^{101.} On this interpretation see also: Sylvie Denoix, “Les notions de ‘privé’ et de ‘public’,” 131-149.

^{102.} Frenkel, “Piety and Charity,” 198; Fernandes, *The Evolution of a Sufi Institution*, 47-51 and 60-63.

^{103.} Petry, “A Geniza for Mamluk Studies?,” 51-52; Daisy Livingston, “Documentary Constellations in Late-Mamlūk Cairo: Property- and Waqf-Related Archiving on the Eve of the Ottoman Conquest of Egypt,” *Itinerario* 44, no. 3 (2021): 528-530.

provide, these documents have enormous potential as historical sources, and can offer a broader perspective onto aspects of Mamlūk society that could not be fully reconstructed on the basis of the narrative sources alone. Crucial evidence related to the material characteristics and socio-economic dynamics of water supply in Mamlūk Cairo can be found in these documents. As discussed below, however, the use of these sources requires to take certain caveats into account.

III. Methodology

The present work aims to understand the role and interaction of various socio-political actors and economic forces shaping water supply in Mamlūk Cairo. Achieving this goal necessitates drawing upon a diverse range of sources, which is possible thanks to the rich legacy of written documentation from the Mamlūk period. Extant *waqf* documents play a pivotal role in this analysis, providing a wealth of information on water structures. This dissertation relies significantly on previously unedited *waqf* deeds housed at the Dār al-Wathā'iq al-Qawmiyya (the National Archive) in Cairo. However, the documentary evidence from *waqf* documents must be critically compared and integrated with evidence found in narrative sources. Because *waqf* documents are legal and non-narrative in nature, they alone cannot sufficiently illuminate the dynamics of events that impacted the city's water supply or the foundations themselves. Moreover, since *waqf* foundations were not the sole agents of water provision in Cairo, these documents alone do not permit a comprehensive reconstruction of the roles of other providers. Therefore, other sources are essential for understanding the full range of protagonists and the dynamics of water supply in Mamlūk Cairo. These include chronicles, biographies, and manuals providing moral and hygienic guidelines for workers. This section details the types of sources used, explains their contribution to the investigation, and outlines how they were integrated into the analysis.

iii.i Using *waqf* deeds as documentary sources

Provided that there are no lacunas, a *waqf* deed contains precise references to the founder (*wāqif*), a description of the properties endowed (*mawqūf*), the indication of the beneficiaries (*mawqūf 'alayhi*), and of the modalities by which the foundation operates, including the criteria for appointing its administrator (*nāẓir*). For this reason, *waqf* documents are a rich source of data that can be exploited in various types of historical research. For example, the detailed description of the endowed properties represents a precious resource for reconstructing the aspect, layout, and location of buildings, or even neighbourhoods, that no longer exist. Historians

specialized in Mamlūk (and Ottoman) art and architecture, and in the history of the urban space during these periods, have largely used *waqf* documents especially for their detailed building descriptions.¹⁰⁴ Though this dissertation does not focus on architecture, understanding the value of the endowed water systems required a detailed examination of their descriptions to reconstruct their layout and functioning. Equally important was the identification of the endowed water structures' locations, given that certain sites, as detailed in Chapters 3 and 4, held substantial socio-economic significance in Cairo.

The inclusion in *waqf* documents of honorific titles and other personal details—such as *nisbas* (names indicating an individual's place of origin or tribal affiliation) and patronymics—provides rich prosopographical insight into the individuals mentioned in these documents. Such data allow researchers to delineate the backgrounds and social group affiliations of the founders and other involved parties, including beneficiaries (if specified), the *nāẓir* (administrator), and the qadi and witnesses validating the deed.¹⁰⁵ Furthermore, by combining information related to the identity of founders and other parties, researchers can uncover potential connections, which might provide a valuable insight into founders' motivations for establishing their *waqfs*. Instances where the *wāqif* designates themselves as the foundation's administrator, for example, illuminate their intent to exercise continued control over the endowed assets, which are formally no longer their properties. Especially when cross-referenced with evidence from chronicles and biographical dictionaries, this information facilitates the identification and profiling of the individuals mentioned in the documents. In Chapter 2, this dissertation extensively integrates *waqf* documents and narrative sources to reconstruct the socio-economic backgrounds of individuals connected to urban water structures. This integrative approach sheds light on who, via the establishment of *waqf* foundations or other *waqf*-related

^{104.} To mention a few examples: on the basis of a *waqf* document, Husam Ismail has reconstructed the *qayṣariyya* of the Sultan al-Ashraf Ināl. See: Husain Ismail, "The *Qaysariyya* of Sultan al-Ashraf Inal According to *Waqf* Documents," in *The Cairo Heritage. Essays in Honor of Laila Ali Ibrahim*, ed. Doris Behrens-Abouseif (AUC Press, 2000), 183-190. In the same volume, see also: André Raymond, "The Sabil of Yusuf Agha Dar al-Sa'ada (1088/1677) According to its *Waqf* Document," 223-233. In an article published in 1994, James and Janusz Bylinski reconstructed the layout of the Darb Ibn al-Bābā neighbourhood on the basis of several *waqfiyyāt*. See: Janusz Bylinski and James Bylinski, "Darb Ibn Al-Baba. A Quarter in Mamluk Cairo in the Light of *Waqf* Documents," *Journal of the American Research Center in Egypt* 31, (1994): 203-222. *Waqf* documents have been used also for a more recent archaeological study: Ghazwan Yaghi, *al-Quṣūr wa-al-buyūt al-Mamlūkiya fi al-Qāhira* (Brill, 2021).

^{105.} Sylvie Denoix, "Pour une exploitation d'ensemble d'un corpus. Les *Waqfs* Mamelouks du Caire," in *Le waqf dans l'espace Islamique: outil de pouvoir socio-politique*, ed. Randi Deguilhem (IFPO, 1995), 29-44. See also Jo Van Steenbergen, "Mamluk Eunuchs, Ḥabashīsh and *Waqf* in the 1340s," *Orientalia Lovaniensia Analecta* 169, (2007): 542-3.

transactions, founded, benefited from, managed, or took possession of these urban water structures. This approach also proves crucial for understanding the economic and social value of specific urban water structures, enabling the formulation of hypotheses on why and how an individual acquired a particular water structure, or with what aim they endowed it at a specific moment of their life.

The meticulously formulated conditions (*shurūṭ*) prescribed by founders for the maintenance and upkeep of their endowments, legally binding as rules, also constitute a valuable source of information.¹⁰⁶ The *shurūṭ* provide insights into pious obligations, budgetary allocations, and daily practices related to the management of an endowment. Furthermore, the *shurūṭ* enumerate the duties and salaries of service workers—such as doorkeepers, cleaners, gardeners, and plumbers—who, though largely overlooked by the chronicles, demonstrably fulfilled important functions in the upkeep of the endowed properties and were part of the daily life of the city. The analysis of the *shurūṭ* was fundamental to understanding how charitable water structures, such as the *sabīls*, functioned. It also enabled the reconstruction of the socio-economic profiles of the workers employed by the foundation to operate these structures. Such analysis was crucial for comprehending the significance of these endowed charitable water structures and for formulating hypotheses regarding their role in the city.

Owing to this wealth of information in *waqf* documents, a growing number of studies examining the socio-economic history of the Mamlūk Sultanate have emerged, particularly following the publication of Muhammad Amin's groundbreaking monograph on the role of the *awqāf* in Mamlūk Egyptian society.¹⁰⁷ The use of these documentary sources, however, has its own limits as well. The inclusion of founder identity, date, attestation by religious authorities, and descriptions of endowed buildings within these documents constitutes factual evidence of actual circumstances. However, in utilizing *shurūṭ* to elucidate the socio-economic dimensions of these foundations, one must proceed with caution. These are in fact rules dictated by the founders, and do not necessarily depict the foundation's lived reality. The *waqf* documents selected for this study, for instance, prove that *a certain person endowed such and such water structure at a specific time*, but they do not necessarily prove that the endowed water structures in question worked as intended by the endower after the *waqf* was established.

^{106.} According to the legal formulation, “the conditions of the *wāqif* are like a *shari’a* text” (*shurūṭ al-wāqif ka-naṣṣ al-shāra’*). Abbasi, “The Classical Islamic Law of Waqf,” 142.

^{107.} Amin, *al-Awqāf*.

To understand what actually happened to these foundations after their establishment it is necessary to integrate, when possible, the information of the documents with those provided by the chronicles. A very emblematic case in this sense is represented by the foundation of Baybars al-Jāshankīr (r. 709-710/1309-1310). In 707/1308, one year before becoming Sultan, al-Jāshankīr established a *khānqāh* (Sufi lodge) in the north-eastern area of Fatimid Cairo. The functioning of this structures, which was supposed to host and cater for 400 Sufis every day, was regulated by a series of detailed conditions stipulated by al-Jāshankīr and recorded in two *waqf* deeds which are still extant today.¹⁰⁸ Al-Maqrīzī's ninth/fifteenth-century topography of Cairo, however, indicates that al-Jāshankīr's *khānqāh* remained closed for a while after the ascent of al-Nāṣir Muḥammad to the throne in 709/1310. It reopened after 726/1325, but due to the environmental problems that affected Cairo in the second half of the eighth/fourteenth century, the *khānqāh* had to reduce its services and close some of its facilities, such as its bakery and kitchen, which according to al-Jāshankīr's deeds should have provided daily meals to the Sufis.¹⁰⁹ By the first half of the ninth/fifteenth century, when al-Maqrīzī wrote his topography, the *khānqāh* was still functioning and hosting a number of Sufis, but it did not operate according to the conditions stipulated in the *waqfiyya*. As discussed in this thesis, the example of al-Jāshankīr's *khānqāh* is not an isolated case. Environmental adversities, economic crises, and socio-political changes which are recorded in the chronicles but not in the *waqf* documents affected the functioning of the foundations. Therefore, these factors must be taken into account when reconstructing a long-durée history of the role of the *awqāf* in Mamlūk Cairo.

In addition to being integrated with narrative sources, *waqf* deeds must be analysed in conjunction with other related documentary records. The extant condition of some Mamlūk-era *waqfiyyāt* occasionally proves advantageous. Within certain scrolls, successive records pertaining to the same foundation, spanning periods of up to a century, are recorded on the margins or verso of the original deed, designated as the "documentary matrix" or "matrice documentaire".¹¹⁰ Among these logs one finds proofs of validity (such as *isjāl*—judicial authentications—and testimonies); and

^{108.} DW22 and 23. On this foundation see also: Leonor Fernandes, "The Foundation of Baybars al-Jashankir: Its Waqf, History, and Architecture," *Muqarnas* 4 (1987): 21-42; *The Evolution of a Sufi Institution*, 25-29.

^{109.} Al-Maqrīzī, *Khiṭaṭ*, 4:286.

^{110.} Julien Loiseau, "Le silence des archives. Conservation documentaire et historiographie de l'État dans le sultanat mamelouk (XIIIe-XVIe s.)," in *L'autorité de l'écrit au Moyen Âge, actes du XXXIXe congrès*, ed. SHMESP (Publications de la Sorbonne, 2009), 285-298; Konrad Hirschler, "From Archive to Archival Practices: Rethinking the Preservation of Mamluk Administrative Documents," *Journal of the American Oriental Society* 136, no. 1 (2016): 1-28; Livingston, "Documentary Constellations," 528-551; "Managing paperwork," 57-64.

records of modifications to the original stipulations, such as *ta'dīl shurūṭ al-waqf* (adjustments—generally stipulated by the founders—to properties or salaries), *istibdāl* (asset exchanges), *intiḳāl* (property transfers), and sales. The existence of these logs reflects the decentralized nature of Mamlūk archival practices, a subject of recent scholarly inquiry. Scholarly contributions by Julien Loiseau, Daisy Livingston, and Konrad Hirschler have shown in fact that *waqfiyyāt* and related documents were stored in various locations, including the households of founders and the foundations themselves, rather than a central archive. Likewise, some chancery documents were kept in the palaces of sultanic secretaries, not at the Citadel.¹¹¹ As a result of such archival practices, some documents were continuously annotated, updated, or cross-referenced by successive administrators or judicial authorities. Since *waqf* deeds and *waqf*-related logs record their exact drafting dates, they provide a precise chronological framework for the accurate historical reconstruction of the endowments' trajectories. This makes it possible to use these documents as stratified sources or "veritable archives" recording various stages of a given foundation's life beyond its initial establishment.¹¹² The potential of this layered nature of *waqf* documents is demonstrated in Chapter 3 of this dissertation, which tracks the trajectory of lucrative urban properties that housed water systems, namely residential palaces and hammams. The successive records and cross-references found in the case studies reveal that some of these palaces and hammams were acquired, endowed, or exchanged multiple times throughout the Mamlūk period, thus showing a great dynamism in the life of these structures.

iii.i.i Introducing the case studies

While previous studies have generally stated that *waqf* foundations controlled several water facilities and participated in the water management of Mamlūk-era Cairo, the actual nature and precise extent of these foundations' involvement remain to be explored in detail. The vast amount of unpublished *waqf*-related documentary material kept at Cairo's Dār al-Wathā'iq holds immense potential to reveal crucial aspects of the foundations' role in the city's water management. As the volume of this material is too vast to be addressed in a single study, this project necessarily based its analysis on a limited number of unedited documents selected as case

^{111.} Livingston, "Documentary Constellations," 531; Hirschler, "From Archive to Archival Practices," 3-7; Loiseau, "Le silence des archives," 289.

^{112.} Loiseau, "Le silence des archives," 292; Livingston, "Documentary Constellations," 531; Lucian Reinfandt, "Mamlūk Documentary Studies," in *Ubi sumus? Quo vademus? Mamluk Studies, State of the Art*, ed. Stephan Conermann (Bonn University Press, 2013), 287; Linda Northrup, "Documents as Literary Texts: Mamluk Historiography Revisited," in *Mamluk Historiography Revisited*, ed. Stephan Conermann (Bonn University Press, 2018), 123. As Linda Northrup nicely put "documents, when read together, tell 'a story'."

studies. However, such a limitation does not hinder the validity of the findings. On the contrary, a case study approach allows for an in-depth and detailed analysis that yields nuanced and contextualized results. This close-up perspective allows one to delve into the complexity of specific phenomena while simultaneously enabling the identification of recurrent patterns essential for formulating general hypotheses based on the particular data from individual cases.

The nine case studies analysed in this thesis are based on a set of Mamlūk-era documents from the Dār al-Wathā'iq, which are listed in the table below. The choice of such documents was the result of a deliberate and complex selection process, the criteria of which are outlined in this section. During the initial phase of fieldwork at the Dār al-Wathā'iq (between late 2021 and early 2022), I conducted a preliminary survey of the archive's collection, which contains almost 300 Mamlūk-era documents, including several lengthy ones. From this extensive corpus, I selected documents containing mentions or descriptions of water facilities, hydraulic systems, or water related practices, using keywords such as *sāqiya* (waterwheel), *bi'r* (water well), *sabīl* (water-dispenser), *tasbīl* (water distribution), *ṣahrīj* (cistern), *ḥammām* (bathhouse), *aqsāb* (conduits). The resulting selection, while refined, still comprised over 80 documents, largely from the ninth/fifteenth century. This distribution mirrored the archive's collection of Mamlūk *waqf* documents, where ninth/fifteenth-century records are also most prevalent.¹¹³ The selection was then further narrowed by a second criterion: ensuring that the documents selected dated from different periods between the mid-seventh/thirteenth and early tenth/sixteenth centuries, and were issued by different social groups (military, non-military, eunuchs, women). I also prioritized documents containing descriptions of water structures both among the revenue generating assets (e.g., hammams, domestic hydraulic systems) and among the charitable endeavours sponsored by the foundations (e.g., *sabīls*). Finally, I have chosen documents that display, as much as possible, the documentary stratification discussed above. Some of the documents selected are connected to records written in different scrolls.¹¹⁴ Most of them feature marginal and *verso* logs that, in conjunction with the “matrice documentaire”, enable the reconstruction of the properties' history. The documentary stratification of these records is in fact crucial for understanding the dynamic life of the *waqf* foundations, as it reveals different stages

^{113.} This situation emerges clearly also from Muḥammad Amin's catalogue of pre-Ottoman archival documents in Cairo, which lists the 296 documents kept at the Dār al-Wathā'iq. See Muḥammad Amin, *Fihrist wathā'iq al-Qāhira ḥattā nihāyat 'aṣr salāṭin al-mamālīk*, 239/853-922/1516 (IFAO, 1981), 3-72. Daisy Livingston included a very helpful graph summarizing the archival situation in her dissertation. Livingston, “Managing Paperwork,” 87.

^{114.} For example there is a connection between DW125 (analysed in this work) and DW79; DW177 and DW184 were issued by the same founder (and are both analysed in this work).

of transformation, expansion, or reduction. The final selection of documents and their water-related information are summarized in the table below (*Tab. 1*):

Table 1: Selection of the case studies and outline of their water-related information

Document No.	Date	Document type and issuer	Water reference
DW7	659/1261	<i>Waqf</i> of <i>amīr</i> Majd al-Dīn Abū Bakr ibn As'ad ibn Yaḥyā al-Hakkārī	Charitable drinking water distribution, Hammams
DW26	717/1317	<i>Waqf</i> of Khawand Ardukīn bint Sayf al-Dīn Nūkyā	Hammams
DW355	810/1408	<i>Waqf</i> of Faṭḥ Allāh ibn Mu'taṣīm ibn Nafīs	<i>Sabils</i> and cisterns, Charitable waterwheels
DW91	830/1427	<i>Waqf</i> of Sharaf al-Dīn Mūsā ibn al-Burhān	Domestic hydraulic system, <i>Sabils</i> and cisterns
DW125	864/1460	<i>Istibḍāl</i> of the eunuch 'Anbar ibn 'Abd Allāh al-Nūrī	Hammam
DW175	879/1474	<i>Waqf</i> of Zayn al-Dīn Abū Bakr ibn Muzhir	Domestic hydraulic system, <i>Sabil</i>
DW177	880/1475	<i>Waqf</i> of <i>amīr</i> al-Sayfī Qarājā al-Jamālī	Charitable waterwheel, <i>Sabil</i> and cistern,
DW184	882/1477	al-Khāṣṣakī al-Malikī al-Ashrafi.	Charitable drinking water distribution
DW198	890/1485	<i>Waqf</i> of <i>amīr</i> Azbak min Ṭuṭukh	Pond, Domestic hydraulic system, Hammams, <i>Sabil</i> and cistern Waterwheel
DW241	908/1503	<i>Waqf</i> of <i>amīr</i> Azdamur min 'Alī Bāy	Domestic hydraulic system, <i>Sabil</i> and cistern Charitable waterwheel

In selecting case studies, I prioritized previously unedited documents, and gathered my edition of the relevant excerpts in the appendix, hoping to offer a valuable contribution to the study of Mamlūk-era *waqf* documents.¹¹⁵ Other edited documents and studies based on Mamlūk-era *waqf* deeds, including *waqfiyyāt* issued by sultans, were used as supplementary sources providing a framework for comparison with the selected case studies. The decision to use unedited documents as case studies allowed

^{115.} Only a partial edition of DW355 was published in: Doris Behrens-Abouseif, *Faṭḥ Allāh and Abū Zakariyya: Physicians under the Mamlūks* (IFAO, 1987), 39–44. The edited excerpt of this document in the Appendix includes a section that was not edited before. Overall, the editing process presented challenges stemming from the variety of scripts, the systematic omission of diacritics, and the absence of a dedicated reference work for *waqf* documents on the model of the Arabic Papyrology Database. The occasional uncertainties are indicated within the editions. Any remaining errors are my own.

for the inclusion of deeds from a more heterogeneous group of individuals, thereby illuminating the diverse actors involved in Cairo's water supply.

While the selection of case studies was carefully executed, it still presents certain issues that must be addressed here. As illustrated in the table, the selection aimed to span the two-and-a-half-century of the Mamlūk period. However, the majority of selected documents date from the ninth/fifteenth century, reflecting the greater prevalence of documents from this period within the collection. Although I included a foundation established by a woman (DW26), the founders mentioned in the selected documents were predominantly males, as is also the case for most of the founders represented in the broader archive collection. Moreover, all the documents presented in this study were written by members of the Muslim community. The Jewish and Christian foundations that existed in Mamlūk Cairo alongside the Islamic ones were not taken into consideration, because I did not have access to any relevant documents and I do not possess the expertise on these religious communities required to effectively utilize such materials. Nevertheless, as Lucian Reinfandt rightfully remarked, the documentary material produced by these communities is also crucial to the field of Mamlūk studies.¹¹⁶ Reinfandt also emphasized the importance of viewing documents as “complex and multilayered information carriers”, which tell their story through both their textual and non-textual components such as writing supports, and traces of use, reuse, and destruction.¹¹⁷ However, as I could examine only the microfilm version of the documents at the Dār al-Wathā'iq, I was not able to integrate the non-textual elements in my analysis. Finally, while the selected documents constitute a valid sample of the Dār al-Wathā'iq collection, it is important to acknowledge that this archive does not contain all extant Mamlūk-era *waqf* documents from Cairo. The nearly 300 Mamlūk-era documents housed in this archive form a substantial corpus, yet a larger collection resides at the Wizārat al-Awqāf (the Ministry of Awqāf) in Cairo,¹¹⁸ to which, unfortunately, I had no access. Expanding this research to include a wider array of documents would undoubtedly be valuable, and it is hoped that future research will advance in this direction. Nonetheless, the dynamics revealed by the limited sample of documents selected for this work still offer compelling insights into Mamlūk Cairo's water management.

^{116.} For a brief overview of the publications using documentary material from the Jewish and Christian communities see: Reinfandt, “Mamlūk Documentary Studies,” 290-1.

^{117.} Reinfandt, “Mamlūk Documentary Studies,” 287-301.

^{118.} Amin, *Fihrist*, 73-318; Livingston, “Managing Paperwork,” 86-7. Livingston emphasized that the majority of the documents kept in the Wizārat al-Awqāf date from the last 30 years of Mamlūk rule, and a great deal of them are connected to the foundation of Sultan al-Ghawri.

iii.ii Looking at water through the narrative sources

A comprehensive assessment of the complex forces and dynamics of Mamlūk Cairo's water management requires an analysis of diverse sources. Beyond documentary evidence, the Mamlūk-era's extensive literary production offer crucial insights, illuminating the circumstances surrounding the establishment and evolution of water structures, the motivations and methods of individuals involved in the creation, acquisition, or dismantling of water facilities in Cairo, as well as the socio-political and environmental factors that dictated the continuity or disruption of specific water-related practices. As previously noted, chronicles and narrative sources also offer crucial supplementary information to documentary evidence. For instance, they provide valuable insights into the socio-political role and significance of specific foundations, as well as the lives of their founders. This enrichment deepens our understanding of both the documents and the institutions they represent. To use Reinfandt's words, narrative sources are crucial for understanding the documents' "living background", meaning the broader historical phenomena and the context in which documents were issued.¹¹⁹ A detailed survey of the abundant historical literature that has come down to us from the Mamlūk period goes beyond the scope of this introduction. However, as some of these narrative sources have been used more consistently in the present work, it is worth briefly introducing them, to justify their prominence and delineate their limitations.

The study of urban water supply is inherently environmental and spatial. As the preceding discussion demonstrated, understanding a society's water management fundamentally requires examining both resource availability and environmental challenges to water supply. Furthermore, as Chapter 1 will underscore, the development of water-rich areas and the strategic placement of water facilities held significant socio-economic value. Fortunately, the rich literary output of the Mamlūk period includes several important topographies, which are essential for mapping water availability and facilities within and around Cairo's urban space. The earliest of these works, *al-Rawḍa al-bahiyya al-zāhira fī khiṭaṭ al-mu'izziyya al-qāhira* of the seventh/thirteenth-century scholar and secretary Ibn 'Abd al-Zāhir (d. 692/1293), is a relatively brief compilation of the main courtly landmarks, religious and secular buildings of Fatimid Cairo.¹²⁰ Although largely used as a source by later

¹¹⁹. Reinfandt "Mamlūk Documentary Studies," 300.

¹²⁰. Ibn 'Abd al-Zāhir, *al-Rawḍa al-bahiyya al-zāhira fī khiṭaṭ al-Mu'izziyya al-Qāhira* (Maktaba Dār al-'arabiyya lil-kitāb, 1996); Frédéric Bauden, "Ibn 'Abd al-Zāhir," in *Encyclopaedia of Islam Three Online*, ed. K. Fleet, G. Krämer, D. Matringe, J. Nawas and D. J. Stewart (Brill, 2017) doi: https://doi.org/10.1163/1573-3912_ei3_COM_30652; Nasser Rabbat, "Maqrizi's Khitat: An Egyptian Lieu de Mémoire," in *The Cairo Heritage. Essays in Honor of Layla Ali Ibrahim*, ed. Doris Behrens-Abouseif (AUC Press, 2000), 21.

authors, this topography, of which only one manuscript has survived, does not always provide historical data on the development of the urban space.¹²¹ As it was written before the large expansion of Cairo in the eighth/fourteenth century, however, this topography has been useful to reconstruct the spatial distribution of water structures in the early Mamlūk period. The second topography, *al-Intiṣār li-wāṣiṭat ‘iqd al-amṣār* by the scholar Ibn Duqmāq (d. 809/1406), is only partially extant. Compiled possibly between 796/1394 and 804/1401, this topography is essential for reconstructing the urban layout of Fustāt-Miṣr, the description of which dominates the extant part of the work.¹²² However, as the majority of the water structures analysed in this work were located within or around the perimeter of al-Qāhira, al-Maqrīzī’s *al-Mawā’iz wa-al-i’tibār bi-dhikr al-khiṭaṭ wa-al-āthār* (known as *Khiṭaṭ*) served as the primary topographical reference for this study.

Al-Maqrīzī’s *Khiṭaṭ* is invaluable for reconstructing the development of Cairo’s water landscape up until the early ninth/fifteenth century. It meticulously reports the history of the creation, evolution, and occasional disappearance of water bodies around the city, along with details on dykes and embankments built on the Nile (a topic discussed in Chapter 1). The work also records the urbanization of the Nile shores and of areas surrounding canals and ponds. Furthermore, this topography provides detailed information on specific water structures, aiding in the reconstruction of the functioning and historical trajectory of urban water facilities. The account related to the *khānqāh* of Baybars al-Jāshankīr, mentioned above, demonstrates the importance of integrating al-Maqrīzī’s spatial history of the city with data derived from documentary sources.¹²³ This author often indicates whether a facility was part of a *waqf* foundation, provides biographical details about its founders, and informs the reader about the foundation’s successive phases of evolution or decline.¹²⁴ The *Khiṭaṭ*, however, ought to be read knowing that the themes of ruin (*kharāb*) and urban decline are its pervasive leitmotif. The many instances in which al-Maqrīzī laments the destructions of buildings or entire neighbourhoods is partially justified by the historical circumstances after which this work was compiled—the first decade of the ninth/fifteenth century was indeed marked by political disorders and environmental

^{121.} Bauden, “Ibn ‘Abd al-Zāhir”; Ayman Fu‘ad Sayyid, “L’Évolution de la composition du genre de *Khiṭaṭ* en Égypte Musulmane,” in *The Historiography of Islamic Egypt (c. 950–1800)*, ed. Hugh Kennedy (Brill, 2001), 83–4.

^{122.} Ibn Duqmāq, *al-Intiṣār li-wāṣiṭat ‘iqd al-amṣār* (Būlāq, 1892), vols. 4–5; Sayyid, “L’Évolution,” 85–6. Sami Massoud, “Ibn Duqmāq,” in *Encyclopaedia of Islam Three Online*, ed. K. Fleet, G. Krämer, D. Matringe, J. Nawas and D. J. Stewart (Brill, 2017) doi: https://doi.org/10.1163/1573-3912_ei3_COM_30127.

^{123.} al-Maqrīzī, *Khiṭaṭ*, 4:286.

^{124.} One such example is represented by the biography of Faṭḥ Allāh ibn Mu‘taṣim ibn Nafis, inserted within the description of his palace. See al-Maqrīzī, *Khiṭaṭ*, 3:115–117.

calamities, including a devastating outburst of pneumonic plague in 806/1403.¹²⁵ At the same time, with his elegiac tone al-Maqrīzī transforms Cairo in a “lieu de memoire” offering moral lessons through past examples to emulate or avoid.¹²⁶ Thus, while the *Khiṭaṭ* remains the quintessential topography of Mamlūk-era Cairo, historians must consider al-Maqrīzī’s remarks on decline within the context of a work intended to give moral lessons about the past. Perhaps the destruction lamented by this author was not as dire as depicted, since documents sometimes indicate that ruins could become a valuable resource for new development.¹²⁷

Alongside topographies, biographical dictionaries are sources of pivotal importance to this research. Given this study’s distinctly social approach and focus on the agents of water supply in Mamlūk Cairo, biographical dictionaries are essential for reconstructing the identities of those individuals who initiated or supervised the city’s water-related projects. For example, the earliest biographical dictionary among those quoted in this work, the *A’yān al-‘aṣr wa-a’wān al-naṣr* of the scholar Khalīl ibn Aybak al-Ṣafadī (d. 764/1363), provided relevant information on the individuals in charge of water projects promoted by the sultans throughout the eighth/thirteenth century.¹²⁸ In addition, biographical dictionaries often complement *waqf* documents by providing detailed information about the individuals mentioned therein. These biographical entries typically outline the backgrounds and careers of these figures, sometimes even including relevant anecdotes that shed further light on their lives. Some ninth/fifteenth-century biographical dictionaries proved particularly helpful for delineating the socio-political profiles and reconstructing the broader networks of the individuals mentioned in the selected documents. The most important of these biographical dictionaries were *al-Durar al-kāmina* by Ibn Ḥajar al-‘Asqalānī (d. 852/1449), and *al-Ḍaw’ al-lāmi’ fī a’yān al-qarn al-tāsi’* by Shams al-Dīn Muḥammad ibn ‘Abd al-Raḥmān al-Sakhāwī (d. 902/1497), alongside al-Maqrīzī’s *Durar al-‘uqūd al-farīda fī tarājīm al-a’yān al-mufīda*, and *al-Manhal al-ṣāfi wa-al-mustawfā ba’da al-wāfi* by Ibn Taghrī Birdī (d. 874/1470). However, a critical limitation is that the majority of entries in these works are biographies of individuals who were either religious scholars or members of the ruling group. Consequently, these sources offer little

^{125.} Loiseau, *Maison*, 25-27; Shoshan, “Notes sur les épidémies de peste,” 396.

^{126.} Rabbat, “Maqrizi’s *Khitat*,” 24; “The Historian and the City: al-Maqrīzī’s *Kitāb al-Mawā’iz wa-l-i’tibār bi-dhikr al-khiṭaṭ wa-l-āthār*,” *ASK Working Paper* 30 (2018), 5-6. Rabbat emphasized that terms *al-mawā’iz* (“moral sermons”), and *al-i’tibār* (“deducing moral lessons”) in the title clearly show the moralizing nature of this topography.

^{127.} This perspective will be discussed in detail in the third chapter of this thesis. See also: Loiseau, *Maison*, 139-40.

^{128.} In the *A’yān al-‘aṣr wa-a’wān al-naṣr*, al-Ṣafadī collected the biographies of notables of his own lifetime. See: Franz Rosenthal, “al-Ṣafadī,” in *Encyclopaedia of Islam New Edition Online (EI-2 English)*, ed. P. Bearman (Brill, 2012) doi: https://doi.org/10.1163/1573-3912_islam_SIM_6437.

information on the less privileged workers who nonetheless played a significant role in Cairo's water supply. Moreover, the biographical records are sometimes insufficient for a comprehensive reconstruction of the socio-political backgrounds even of the individuals they describe. Therefore insights from biographical dictionaries were corroborated and expanded upon, whenever possible, with information from chronicles, some of which were authored by the same scholars.¹²⁹

Without delving into the details of the abundant annalistic production of the Mamlūk period, it is important here to add a note on the limitations of this valuable resource. Mamlūk-era chronicles are the results of a meticulous yet partial selection of information made by their respective authors. Some of these authors had access to chancery documents and other documentary sources, and even reported parts of them in their works.¹³⁰ Owing to the rich information they contain, chronicles are crucial for understanding the economic factors, political dynamics, and environmental circumstances that affected or were determined by Cairo's water supply. However, the selection and presentation of information and events in the chronicles are inevitably shaped by the intellectual position and political allegiances of their authors.¹³¹ For instance, al-Maqrīzī's laudatory accounts of Faṭḥ Allāh ibn Mu'ṭaṣim ibn Nafīs reflect the fact that this person was al-Maqrīzī's patron.¹³² Comparably, the criticism that the historian Ibn Iyās (d. 930/1523) levels against the great construction project of Azbak min Ṭuṭukh might stem from his aversion towards the late-Mamlūk establishment.¹³³ Therefore, a balanced and nuanced understanding requires the identification and consideration of authorial biases. In this study, I have highlighted instances where such biases potentially distorted the interpretation of certain events.

^{129.} On the presence of anecdotes as a characteristic of biographical dictionaries see: Donald P. Little, *An Introduction to Mamlūk Historiography* (Franz Steiner Verlag, 1970), 135-6.

^{130.} Two such instances, discussed in the present work, are Ibn al-Furāt's inclusion of a sultanic decree in his work *Ta'rikh al-duwal wa-al-mulūk* (7:196-200), and al-Maqrīzī's inclusion of a section from Caliph al-Hākim's *waqf* deed in the *Khiṭaṭ* (4:52-54). About this documentary attitude see also: Chase F. Robinson, *Islamic Historiography* (Cambridge University Press, 2003), 143-148.

^{131.} Jo Van Steenbergen, "History Writing, Adab, and Intertextuality in Late Medieval Egypt and Syria: Old and New Readings," in *New Readings in Arabic Historiography from Late Medieval Egypt and Syria Proceedings of the Themed day of the Fifth Conference of the School of Mamluk Studies*, ed. Jo Van Steenbergen and Maya Termonia (Brill, 2021), 15-19; Petry, "A Geniza for Mamluk Studies?," 51-2. For an emblematic case study on the relationship between intellectual position and literary production within this period, see: Li Guo, "Al-Biqā'ī's Chronicle: A Fifteenth-Century Learned Man's Reflection on his Time and World," in *The Historiography of Islamic Egypt (c. 950-1800)*, ed. Hugh Kennedy (Brill, 2001), 121-148.

^{132.} More on this will be said in Chapter 2. On the importance of Faṭḥ Allāh's patronage for al-Maqrīzī, see: Nasser Rabbat, *Writing Egypt: Al-Maqrizi and his Historical Project* (Edinburgh University Press, 2023) 80-99.

^{133.} On Ibn Iyās' comments on Azbak min Ṭuṭukh's project see Chapter 2. See also: Doris Behrens-Abouseif, *Egypt's adjustment to Ottoman rule. Institutions, waqf and architecture in Cairo, 16th and 17th centuries* (Brill, 1994), 9.

Another element that must be taken into account is that these chronicles focus primarily on events involving members of the court or the religious establishment. This angle reflects the social background of the historians, who were either prominent religious scholars or members of the sultan's entourage.¹³⁴ While it offers valuable insights into dynamics related to the ruling groups, this perspective limits the chronicles' coverage of less privileged social groups and aspects of everyday city life—both crucial for a comprehensive understanding of the urban water supply. Including these actors, who are sparsely documented in the chronicles, necessitates the utilization of supplementary source materials. The analysis of manuals providing practical and moral guidance tailored to distinct elements of the population can partially fill such lacunae.

iii.iii “Commanding good and forbidding wrong”: moral guidelines as sources

The humble workers and the commoners, ubiquitous in the urban space, seldom attracted the attention of authors recording the history of Mamlūk-era Cairo. Nevertheless, their involvement in matters pertaining to the water supply of Cairo, at minimum as consumers, is undeniable. In addition, *waqf* documents hint at the presence of workers whose profession involved the transportation of drinking water or the maintenance of certain water facilities. As neither these documents nor the chronicles provide much detail in this regard, it is necessary to seek further information in an alternative type of source material: the *ḥisba* manuals. These texts provide normative guidelines to the *muḥtasib*, a figure usually described as “market regulator” or “market inspector”, and associated with moral and fiscal policing in the markets of the pre-modern Islamic world. The Arabic word *ḥisba* and its derivative *muḥtasib* are in fact etymologically connected with the idea of “seeking God’s favour by acting righteously” and by enforcing the Qur’anic precept of “commanding right and forbidding wrong” (*al-amru bi-al-ma’rūfi wa-al-nahyu ‘an al-munkari*).¹³⁵ Specifically, *ḥisba* manuals provide *muḥtasibs* with guidelines for preventing market

^{134.} For instance, Ibn Ḥajar and al-Sakhāwī were prominent figures within the religious scholarly milieu. Al-Maqrīzī had a turbulent affiliation with the court of Barqūq. See: Rabbat, *Writing Egypt*, 72–83). Ibn Taghrī Birdī was active at the court of Sultan Barsbāy. See: W. Popper, “Abu ‘l-Mahāsīn Djamāl al-Dīn Yūsuf b. Taghrībirdī,” in *Encyclopaedia of Islam New Edition Online (EI-2 English)*, ed. P. Bearman (Brill, 2012) doi: https://doi.org/10.1163/1573-3912_islam_SIM_0227. Ibn Iyās was close to the ruling circles of the late Mamlūk period, See: W. M. Brinner, “Ibn Iyās,” in *Encyclopaedia of Islam New Edition Online (EI-2 English)*, ed. P. Bearman (Brill, 2012) doi: https://doi.org/10.1163/1573-3912_islam_SIM_3225. See also: Robinson, *Islamic Historiography*, 161–170.

^{135.} Jonatan P. Berkey, “The *muḥtasibs* of Cairo under the Mamluks: towards an understanding of an Islamic Institution,” in *The Mamluks in Egyptian and Syrian politics and society*, ed. Michael Winter and Amalia Levanoni (Brill, 2004), 245; Ahmad Ghabin, *Ḥisba, Arts and Crafts in Islam* (Harrassowitz Verlag, 2009), 13.

frauds and abuses, controlling weights and measures, safeguarding public hygiene and morality in streets and communal spaces (such as hammams), and addressing immoral conduct in public, including through discretionary punishments (*ta'zīr*).¹³⁶ By virtue of these moral duties, Muslim scholars traditionally described the position of the *muḥtasib* as a religious post (*wazīfa dīniyya*)—so did, for instance, al-Māwardī (d. 450/1058), al-Ghazālī (d. 505/1111), and Ibn Taymiyya (d. 728/1328).¹³⁷ It must be said, however, that this description is not representative of the complex evolution this post underwent during the Mamlūk period. In fact, if up until the late eighth/fourteenth century the *muḥtasibs* of Cairo were selected mainly from among the 'ulama' (the religious scholars), later on many of the individuals who held this position were appointed from outside the religious establishment and, most importantly, worked as fiscal agents of the sultans, extorting taxes on behalf of the treasury rather than enforcing moral precepts for the integrity of the community.¹³⁸

This transformation in the *muḥtasib*'s role however is not reflected in the *ḥisba* manuals, which maintained a distinctly normative nature and an ethical and hygienic focus. In the context of this study, these normative texts prove invaluable for reconstructing the roles of workers and daily practices integral to Cairo's water supply, yet underrepresented in other sources. Indeed, the two *ḥisba* manuals written in the eighth/fourteenth century, namely the *Ma'ālīm al-qurba fī aḥkām al-ḥisba*, and the *Nihāyat al-rutba fī ṭalab al-ḥisba*, provide "a lively picture of the Muslim town in the late middle ages".¹³⁹ The former manual, authored by the Egyptian Shāfi'ī Muḥammad al-Qurayshī, known as Ibn al-Ukhuwwa (d. 729/1329), refers to 85 different types of crafts and occupations active in the city's market (*sūq*), streets, and communal spaces. It also describes the practices of certain craftsmen and the materials they employed in their professions.¹⁴⁰ The other manual, *Nihāyat al-rutba fī*

¹³⁶. Berkey, "The *muḥtasibs* of Cairo," 248, 250 and 260.

¹³⁷. Berkey, "The *muḥtasibs* of Cairo," 247; Ghabin, *Ḥisba*, 117; Claude Cahen, M. Talbi, R. Mantran, A.K.S. Lambton, and A.S. Bazmee Ansari, "Ḥisba," in *Encyclopaedia of Islam New Edition Online (EI-2 English)*, ed. P. Bearman (Brill, 2012) doi: https://doi.org/10.1163/1573-3912_islam_COM_0293.

¹³⁸. Berkey, "The *muḥtasibs* of Cairo," 253-8; Ghabin, *Ḥisba*, 96-118; Kristen Stilt, *Islamic Law in Action. Authority, Discretion, and Everyday Experiences in Mamluk Egypt* (Oxford University Press, 2011), 68 and 203-4. Three main *muḥtasibs* were active in Egypt during the Mamlūk period—one in Cairo, one in Fuṣṭāṭ and one in Alexandria. The *muḥtasib* of Cairo was the most influential and his authority extended to the cities of the Delta area. These *muḥtasibs* did not work alone but with a variety of trusted informers ('*arīf*), spies ('*uyūn*), and assistants (*a'wān*). Ghabin, *Ḥisba*, 100 and 166; Berkey, "The *muḥtasibs* of Cairo," 251.

¹³⁹. Ibn al-Ukhuwwa, *Ma'ālīm al-qurba fī aḥkām al-ḥisba*, ed. Reuben Levy (Luzac, 1938), xiii. Ghabin, *Ḥisba*, 163.

¹⁴⁰. Ghabin, *Ḥisba*, 161-162; Stilt, *Islamic Law in Action*, 59-60; Maaiké van Berkel and Edmund Hayes, "Governing Water and Public Health in a Muslim City: Cairo in the Thirteenth and Fourteenth Century CE," forthcoming.

ṭalab al-ḥisba, was written by Muḥammad ibn Aḥmad ibn Bassām, an Egyptian author of whom little is known and who probably lived in the eighth/fourteenth century.¹⁴¹ This treatise is the most extensive of the two, and lists as much as 118 different crafts, thus providing us with an even wider picture of the variety of different specialized workers active in the city.¹⁴² Both these manuals are based on an earlier model, the *Nihāyat al-rutba fī ṭalab al-ḥisba* by al-Shayzarī (d. 589/1193 circa), written in Syria at the beginning of the Ayyūbid period and often quoted verbatim by Ibn al-Ukhuwwa and Ibn Bassām.¹⁴³ The reliance on this earlier model from a different geographical context indicates a continuity in moral norms for market regulation, stemming from the Islamic legal tradition, rather than an unchanged urban reality. It appears in fact that the works of Ibn al-Ukhuwwa and Ibn Bassām refer to the markets of Egypt.¹⁴⁴ Nonetheless, the normative nature of these works does not fully account for the complex variables of urban reality. Therefore, when utilizing these texts as sources—as done in Chapters 2 and 3 of this work—one must discern the underlying facts of the actual Cairene situation behind the stated norms. For example, when the manuals mandate that street water-sellers clean the mugs in which they serve consumers, the critical insight is not necessarily that the rule was always followed, but that water-sellers were present and provided water in mugs on the streets.

Similar insightful glimpses of everyday realities can also be drawn from two moral treatises written in the eighth/fourteenth century—the already mentioned *Muʿīd al-niʿam* by Tāj al-Dīn al-Subkī, and the more extensive *Madkhal al-sharʿ al-sharīf ʿalā al-madhāhib al-arbaʿa* (“Introduction to the Sublime Law of the Four Legal Schools”) by the religious scholar Ibn al-Ḥājj al-ʿAbdarī (d. 737/1336).¹⁴⁵ Although these are essentially doctrinal texts, they exhibit an overlap with the *ḥisba* manuals as they describe specific ethical guidelines designed for various professions, including water-related ones. Al-Subkī’s treatise, which deals with how a person should behave in order to deserve the divine benevolence and show gratitude to Allah, lists over a hundred professions and offices of his time, and provides for each one of them a

^{141.} Ghabin, *Ḥisba*, 165; Stilt, *Islamic Law in Action*, 60.

^{142.} Ghabin, *Ḥisba*, 165–166; Stilt, *Islamic Law in Action*, 61.

^{143.} R. P. Buckley, *The Book of the Islamic Market Inspector: Nihāyat al-Rutba fī Ṭalab al-Ḥisba (Utmost Authority in the Pursuit of Hisba) by ʿAbd al-Rahmān b. Nasr al-Shayzarī* (Oxford University Press, 1999) 12; Van Berkel and Hayes, “Governing Water.”

^{144.} Stilt, *Islamic Law in Action*, 56–58; Van Berkel, Hayes, “Governing Water”. Ibn Bassām in particular refers to Egyptian weights and measures. The large circulation of Ibn al-Ukhuwwa’s manuscripts in both Egypt and Syria indicates that the manual was valid throughout the Middle East. See: Stilt, *Islamic Law in Action*, 60–61; Ghabin, *Ḥisba*, 163.

^{145.} On the latter scholar see: Jon Hoover, “Ibn al-Ḥājj al-ʿAbdarī,” in *Christian-Muslim Relations. A Bibliographical History*, ed. David Thomas and Alex Mallet (Brill, 2012), 4:893–6.

specific code of conduct.¹⁴⁶ Similarly, a part of Ibn al-Ḥājj's *Madkhal* is devoted to providing moral guidance to different professions, and reprimanding the behaviours of workers that do not comply with the Islamic values.¹⁴⁷ Even if the character of these sources is normative and not descriptive, in these authors' comments and complains the modern scholar can find a remarkable wealth of details, crucial for understanding the role of essential yet almost invisible workers such as the water carriers and the bath attendants.

iii.iv Avoiding terminological traps

The preceding discussion reveals that uncovering the actors and dynamics of water supply in Cairo requires the use of many different sources. The picture that emerges is that of a complex and multilayered reality. In order to accurately represent this complexity, I found it necessary to omit terms that are familiar to the Western context, but fail to capture the nuances of late-medieval Cairo. The problem of terminology is obviously not new. As early as 2003, sociologist Shmuel Eisenstadt argued that the critiques against the orientalist approach had so far missed the opportunity to explore non-Western societies "in their own terms", and avoid categories that would automatically prompt a biased comparison with the Western context.¹⁴⁸ Nearly a decade earlier, historian Michael Chamberlain had already emphasized how the use of categories proper to the Modern Western context for describing realities of the medieval Middle East had led to anachronisms and confusion, and fostered the tendency to identify the phenomena that did not fit such categories as abnormalities.¹⁴⁹ Chamberlain's remark clearly indicates that certain terms and concepts are far from neutral, unhelpful for historical analysis, and should not be applied uncritically.

In the last few decades, several studies have questioned the application of such misleading labels and terms in the medieval Middle Eastern context. A first issue to be addressed, notably by the scholars Sylvie Denoix and Miriam Hoexter, is the existence of two sharply defined "public" and "private" dimensions in pre-Modern Islamic societies.¹⁵⁰ As already discussed above, both Denoix and Hoexter emphasized that institutions such as the *waqf* urge researchers to take alternative

^{146.} al-Subkī, *Mu'īd al-ni'am*, 43-7; Ghabin, *Hisba*, 169-170.

^{147.} Ibn al-Ḥājj al-'Abdarī, *Madkhal al-shar' al-sharif' alā al-madhāhib al-arba'a*, (Cairo: Maktaba Dār al-Turāth), vol. 4; Cahen, "Hisba."

^{148.} Shmuel N. Eisenstadt, *Comparative Civilizations and Multiple Modernities 1* (Brill, 2003), 420.

^{149.} Chamberlain, *Knowledge and social practice*, 1-2.

^{150.} This issue was mentioned also by Chamberlain. See: Chamberlain, *Knowledge and social practice*, 52.

dimensions into consideration.¹⁵¹ Denoix in particular showed that the terms “collective” and “communal” are more appropriate to describe the organization of the *awqāf*’s resources. In line with this scholar, I have purposefully avoided describing water facilities as “public” or “private”, whether or not they were endowed in *waqf* foundations. I have opted for different terms, such as “domestic”, or “communal”, more suited for the context and not loaded with misleading implications. The unsuitability of the term “public” in particular emerges in Chapter 4 of this thesis, where I argue that the water facilities *waqf* foundations sponsored as forms of charitable endeavours, such as the *sabils*, cannot be described as “public fountains” like many scholarly works have done so far.

Besides the *waqf*’s special status, another reason to avoid the term “public” is its intrinsic connection, in modern Western societies, to the notion of “State” as provider of “public services”. The source material analysed in this work, however, does not justify such association. In fact, as Chamberlain already highlighted, the notion of an impersonal “State” entity is absent from these sources, which instead provide clear evidence of a political order essentially founded on fluid networks of personal ties.¹⁵² To designate this dynamic power structure, this work utilizes two terms derived from Mamlūk-period Arabic sources: *dawla* and *ahl al-dawla*. The use of the term *dawla*, etymologically linked to the idea of alternation (the root *d-w-l* indicating in Arabic the change from a condition to another), better conveys the notion of a political order that, grounded in a specific set of interpersonal connections, is prone to change.¹⁵³ In this work, the term *dawla* denotes a political order intended not as a long-durée institution but as a temporary power configuration, encompassing specific sets of hierarchies, centred around a certain sultan. This understanding of *dawla* in Mamlūk-era sources has been underscored by Jo Van Steenberghe, who showed how authors such as the historian Ibn Taghrī Birdī used this term to indicate a social construction “built around a relational core of individual agents”.¹⁵⁴ The term *ahl al-dawla* was instead used by the historian al-Maqrīzī (d. 845/1442) to specifically designate the group of individuals who, as part of the *dawla*, shared access to the main financial resources of the Sultanate.¹⁵⁵ Indeed, the word *ahl* in Arabic denotes a

^{151.} Hoexter, “The Waqf and the Public Sphere,” 119-120; Denoix, “Formes juridiques,” 14 and 20; “Les notions de ‘privé’ et de ‘public’,” 131-149.

^{152.} Chamberlain, *Knowledge and social practice*, 60.

^{153.} Lane, *Arabic-English Lexicon*, 940.

^{154.} Jo Van Steenberghe, “Appearances of *Dawla* and Political Order in Late Medieval Syro-Egypt: The State, Social Theory, and the Political History of the Cairo Sultanate (Thirteenth-Sixteenth Centuries),” in *History and Society during the Mamluk Period (1250-1517): Studies of the Annemarie Schimmel Institute for Advanced Studies II*, ed. S. Conermann (Bonn University Press 2016), 65.

^{155.} al-Maqrīzī, *Ighāthat al-umma bi-kashf al-ghumma* (Dār al-Hilāl, 1990), 121.

group of people sharing a connection to the same entity (which could be a family, or a city, or a less concrete element).¹⁵⁶ Following al-Maqrīzī's example, in this work *ahl al-dawla* designates the heterogeneous group of individuals connected to the *dawla* and benefitting from its associated socio-economic privileges, either via "formal" ties (such as holding official positions within the sultanic administration) or "informal" ones (households members, or clients of various nature).

Historian Julien Loiseau already used the term *ahl al-dawla* in his work, translating it as "people of the State".¹⁵⁷ However, I purposefully avoid translating *dawla* as "State" due to its intrinsically dynamic nature and the different connotations it carries compared to the modern concept of the State. Unlike a rigid "State" model, the term *dawla* better represents a socio-political order arranged not as a predetermined asset, but rather, as Michael Mann put it, as a set of "overlapping and intersecting socio spatial networks of power".¹⁵⁸ I have also refrained from employing "Mamlūk state" or "Mamlūk Sultanate" since, as Jo van Steenbergen has extensively argued, these terms contradict the sources' tendency to refer to the ruling system as *dawlat al-Atrāk* ("dawla of the Turks"), and do not reflect the evolving political situation between the mid-seventh/thirteenth and the early-tenth/sixteenth century.¹⁵⁹ Moreover, the designation "Mamlūk Sultanate" fails to adequately acknowledge that the members of the *dawlat al-Atrāk* were primarily identified by their Turkish ethnic background, rather than by their status as *mamlūks* (military slaves).¹⁶⁰ I do, however, refer to the timeframe 648-923/1250-1517 as "Mamlūk period" for the sake of brevity.

In this dissertation, I consistently employ the term "court" as an equivalent for *dawla*, moving beyond the common spatial connotation of court as the sovereign's residence. Instead, I align with Christian Mauder's eloquent description in his recent publication on al-Ghawrī's reign, where he conceptualizes the court as "fluid concentric circles arranged around the ruler, with members moving from one circle to the other depending on their current relationship with the ruler".¹⁶¹ Mauder

¹⁵⁶. Ibn Manẓūr, *Lisān al-'Arab*, 11: 28-3. Lane, *Arabic-English Lexicon*, 121.

¹⁵⁷. Loiseau, "Boy and Girl," 24; *Les Mamelouks (xiii^e-xv^e siècle): Une expérience de pouvoir dans l'islam medieval* (Paris: Seuil, 2014).

¹⁵⁸. Michael Mann, *The sources of social power, Volume 1: A history of power from the beginning to AD 1760* (Cambridge University Press, 2012), 1.

¹⁵⁹. Van Steenbergen, "Appearances of Dawla," 55; Van Steenbergen, Wing, and D'hulster, "The Mamlukization II," 561-6.

¹⁶⁰. Koby Yosef, "Dawlat al-Atrāk or Dawlat al-Mamālīk? Ethnic Origin or Slave Origin as the Defining Characteristic of the Ruling Elite in the Mamluk Sultanate," *Jerusalem Studies in Arabic and Islam* 39, (2012): 391.

¹⁶¹. Christian Mauder, *In the Sultan's Salon. Learning, Religion, and Rulership at the Mamluk Court of Qāniṣawh al-Ghawrī (r. 1501-1516)* (Brill, 2021), 55.

emphasized that this understanding of “court” embraces a heterogeneous assembly of influential figures linked to the ruler and to one another through intricate ties of clientelism. Building on this conceptualization, in this dissertation the meaning of “court” extends beyond the formal offices of the sultanic administration to include a broader network of informal relationships and influential individuals who collectively controlled access to the Sultanate’s primary financial resources, and hence covers the same meaning as *dawla*.¹⁶²

Regarding the term *ahl al-dawla*, I found no suitable English equivalent. While “elite” is frequently used in contemporary scholarship, it often fails to account for the heterogeneity and transient nature of the *ahl al-dawla* network. Throughout the Mamlūk period, individuals from diverse social backgrounds became part of the *ahl al-dawla* in various ways. The term “elite”, typically used to indicate a unified group enjoying specific socio-economic privileges, thus does not adequately capture the heterogeneity that characterized the *ahl al-dawla*. A recent paper successfully circumvented this homogeneous connotation by employing the plural form, “elites”, considered as more representative of the “diversity and complexity of early Islamic social structures”.¹⁶³ Nonetheless, even this solution proves unsuitable to fully capture the precarious nature of the *ahl al-dawla* as it emerges from this investigation. As Chapter 2 discusses, the privileges of the people who were part of this network were entirely contingent upon their often ephemeral connection with the power configuration of the moment. A person’s inclusion within the *ahl al-dawla* persisted only as long as their ties with the *dawla* remained intact. If an event, such as a fall from grace or a broader change in the power configuration, caused these ties to be severed, the individual ceased to be part of the *ahl al-dawla*. The consistent use of the term *ahl al-dawla* in this work facilitates an understanding of the economic and political dynamics that permitted certain individuals to enhance, alter, or interfere with Cairo’s water management throughout the Mamlūk period.¹⁶⁴

^{162.} Mauder, *In the Sultan’s Salon*, 57–9.

^{163.} Hannah-Lena Hagemann, Katharina Mewes and Peter Verkinderen, “Studying Elites in Early Islamic History: Concepts and Terminology” in *Transregional and Regional Elites: Connecting the Early Islamic Empire*, ed. Hannah-Lena Hagemann and Stefan Heidemann (De Gruyter, 2020), 33.

^{164.} The term *nās* (“people”) frequently appears in the chronicles utilized for this dissertation (especially within the accounts analysed in Chapter 1) to indicate groups having clear socio-economic privileges. My investigation reveals that, in these specific instances, *nās* refers to the same identifiable group of individuals designated as *ahl al-dawla*. To maintain analytical precision, I have not translated the term *nās* in Chapter 1.

IV. Structure of the thesis

This dissertation offers a comprehensive and analytical investigation into the diverse actors and dynamics that shaped water supply in Mamlūk Cairo. Building on previous scholarship that underscored the hybrid nature of this medieval metropolis' water supply, this research demonstrates that this essential aspect of urban life was concurrently reliant on multiple, interconnected, and co-dependent socio-political entities that were not solely defined by water-related practices. To gain a nuanced understanding of their roles, this work adopts a multi-angled approach, revealing urban water supply's inherent complexities. This approach highlights in fact that a comprehensive understanding of water in society must account for its multifaceted significance—whether viewed as a resource, a hazard, a divine gift, or a commodity. Each interpretation shapes social dynamics and institutions, which, in turn, contribute to shaping society itself.

This thesis comprises four chapters, each delving into a distinct angle and focus that collectively illuminate the complexities of water supply in Mamlūk Cairo. Chapter 1 explores the role of the sultanī institution in managing water, both as a natural resource and a natural hazard, through the construction and maintenance of Cairo's major waterworks. The chapter begins by analysing the provincial irrigation system under sultanī control, showing how water, in this context, was managed as a natural resource crucial for generating agricultural revenues that fuelled the Treasury. This analysis also reveals how environmental and political shifts that occurred between the late eighth/fourteenth and ninth/fifteenth centuries transformed the sultanī management of this resource. Investigating this apparent sultanī prerogative to manage water, both as a natural resource and a hazard, the chapter examines the sultans' involvement in Nilotic ceremonies taking place in Cairo. It also analyses the sultans' role in the construction of waterworks around the city, including those built in response to water-related crises, such as the Nile's westward recession. The core objective of this chapter is to illuminate the nature and scope of the sultans' institutional involvement in the management of water resources.

Chapter 2 shifts the focus to a broader network of stakeholders involved in Cairo's water provision. The first, and more extensive, section of this chapter analyses the nine case studies chosen for this work, identifying the key protagonists. By reconstructing their social backgrounds, political careers, and connections to the *dawla* from documentary evidence and historical accounts, this section proposes hypotheses about the motivations driving their respective foundations, which incorporated water-related facilities or practices. Moving from these wealthy patrons to less privileged labourers, the second part of this chapter examines the vital role

of water carriers in Cairo's drinking water supply. Though they were an important element of the urban fabric and played a crucial role in Cairo's drinking water supply, sources offer scant information about these workers. My analysis seeks to reconstruct their activities and significance through normative texts, notably *hisba* manuals, and scattered mentions in foreign travel accounts. By juxtaposing the *waqf* founders from the *ahl al-dawla* and the water carriers, this chapter underscores that the water supply of the city was a multilayered reality depending on a wide range of actors.

In contrast to Chapters 1 and 2's actor-oriented focus, Chapters 3 and 4 investigate water-related structures and practices as documented in the selected *waqf* deeds. The analysis within these chapters illuminates broader socio-economic dynamics, showing how they both influenced the trajectory of water-related infrastructure and were shaped by specific water practices. Chapter 3 centres on lucrative water structures in which water represented a valuable amenity, specifically communal hammams and hydraulic systems within lavish residential palaces. Through the documentary stratification exhibited by some of the selected *waqf* deeds, the chapter traces the convoluted trajectories of construction, reuse, and disrepair of these water facilities. This analysis reveals that lucrative water structures were integrated into a dynamic asset market that shaped their existence over long periods. Additionally, this chapter examines the impact of other agents and dynamics on these lucrative structures. Through the lens of a specific event—a clash between al-Ghawrī and the tenants of the *awqāf*'s revenue-generating properties—this chapter reveals that the lucrative water facilities embedded in the foundations responded not only to dynamics proper to the foundations themselves, but also to broader economic and political forces.

Chapter 4 examines facilities and practices funded by *awqāf* as charitable initiatives, through which water was provided as a symbolically imbued gift to the community. The analysis includes the periodic drinking water distribution (*tasbīl*) stipulated by some *waqf* deeds, as well as charitable water dispensers (*sabīls*) and charitable well-waterwheel systems sponsored by *waqf* foundations. Moving beyond previous quantitative assessments that questioned the impact of these charitable structures based on the amount of water they could potentially provide, this work instead emphasizes how these facilities contributed to shaping society through the creation of multiple employment posts with specific responsibilities over the charitable water structures.

The result of this multi-angled analysis is a mosaic-like representation of society—an assembly of distinct and seemingly independent elements that, taken together, form the picture of a complex, multilayered urban space in which water, in various forms, continually flows.



بازار جامع

مصر عتیق

بورگدن مصر صریدر

شوبر

بورجس کیه قیاسه

طوبخانه

ابوالیس

شیرین

شیرینیش

عیداندن

شاه صوری

قبه بوشکدر

بلد

1.

Institutional Obligations vs Strategic Interventions

Sultans managing water as natural resource or hazard

Introduction

This chapter investigates the nature of the sultanic involvement in matters pertaining the management of water resources and structures. The question whether the sultans ruling over Egypt throughout the Mamlūk period had special prerogatives over the management of the country's water resources is a crucial starting point to the study of the political dynamics and the governmental practices related to water management. This question is historically and scholarly justified. The first part of this chapter shows in fact that, for what concerns the management of Egypt's provincial irrigation system, late-medieval sources clearly defined the rights and responsibilities of the sultans. The participation of sultans or their representatives in long-standing Nilotic ceremonies in Cairo further suggests a symbolic connection between the river and those in power. Therefore, for scholars studying Cairo's water supply organization, searching a parallel set of sultanic duties within the urban context seems unavoidable. Furthermore, recent scholarly work highlighted the absence of a dedicated bureaucracy for water management in Mamlūk-era Cairo.¹ This scholarly approach appears to be based on the assumption that the Sultan held certain political prerogatives over the city's hydraulic systems.² Whether this was a political ideal or a reality remains a point requiring further clarification, and this chapter intends to offer a new perspective to the debate.³

To understand more broadly what role Mamlūk-era sultans played in Cairo's water management, this chapter begins by outlining the sultan's responsibilities regarding the irrigation system. There are numerous primary historical sources that, by codifying his responsibilities regarding the irrigation system, establish a bureaucratic framework that clearly defines the sultan's role in provincial irrigation. This framework included rules and traditions, inherited from earlier periods, that were crucial to the Sultanate's taxation system. While existing texts formally outlined continuous sultanic responsibilities for provincial irrigation, the practical application of these customary rules significantly changed from the late eighth/fourteenth century. These transformations, resulting from shifts in Egypt's environmental

^{1.} Denizeau, "Conduire l'eau," 388-9; Levanoni, "Urban Water Management," 272.

^{2.} Denizeau, "Conduire l'eau," 162. Denizeau argued that the water supply of the city relied, as much as the irrigation of the provinces, on the sultans' intervention.

^{3.} Levanoni claims that the responsibilities of the sultans for the water supply of the city had a moral and religious basis. See: Levanoni, "Urban Water Management," 257; and "Water Supply," 180. Levanoni's claim is based on the religious precept that the funds of the *bayt al-māl* (the Treasury) has to serve for the maintenance of the waterways, as remark in the politico-religious work of Ibn Taymiyya and Ibn al-Ukhuwwa. See: Ibn Taymiyya, *Ibn Taymiyya on Public and Private Law in Islam or Public Policy in Islamic Jurisprudence*, trans. Omar A. Farrukh (Khayats, 1966), 61; Ibn al-Ukhuwwa, *Ma'ālim al-Qurba*, trans. Reuben Levi, 8.

and socio-political conditions, corroborate this chapter's argument that sultanic involvement in irrigation management was primarily fiscal-oriented. Indeed, as new revenue streams emerged and altered courtly dynamics, the sultans' involvement in the maintenance of the irrigation system waned.

The second part of this chapter focuses on the sultanic involvement in the management of Cairo's water system, starting from the rulers' symbolically charged participation in yearly Nilotic ceremonies. Unlike the more clearly defined and institutionalized framework governing provincial irrigation, the sultanic involvement in the management of the urban water system appears to have lacked a formal structure. Yearly ceremonies connected with the Nile plenitude may have represented an urban display of the rulers' authority over the water resources of the Sultanate, but the Sultans' participation in these events was not consistent throughout the Mamlūk period. Several Mamlūk-era sources document instances in which the Sultans actively engaged in the creation of waterworks or in the implementation of water-related projects around Cairo. A thorough analysis of these accounts is essential for understanding the nature of the sultanic intervention in the water system of the city, and for assessing the motives and goals driving the implementation of large-scale undertakings, as well as the organizational and financial strategies adopted for their implementation.

While other chapters of this dissertation rely heavily on documentary evidence, this chapter primarily draws upon Mamlūk-era chronicles, encyclopaedias, and normative texts. Although these sources offer valuable insights, it is crucial to acknowledge that the reported events are filtered through the perceptions and potential biases of the authors. Therefore, especially when dealing with remarks that express awe at the grandeur of past rulers or bitterness at the decline of contemporary situation, researchers must strive to construct a nuanced understanding of these Mamlūk-era texts by carefully considering the complex interplay of socio-political and economic factors that inform the author's writing. For this reason, this study analyses each sultanic water project within its specific historical and political context, while simultaneously developing a more organic and nuanced understanding of these projects to avoid the imposition of linear narratives of progress or decline.

Re-examining the sultanic involvement and institutional obligations within the water system presents a challenging endeavour. In the past few decades numerous scholars have approached the same question in various ways, most of them analysing the very same source materials used in this chapter. Stuart Borsch and Tarek Sabraa's comprehensive analysis of the provincial irrigation system of Egypt during the Mamlūk period focused on the rules governing floodwater distribution

and emphasized the critical importance of these rules for the agricultural prosperity of the Nile Delta.⁴ Linda Northrup and Yossef Rapoport's works insisted on the role provincial irrigation played in the success of the *iqṭā'* system and the Sultanate's tax revenue stream.⁵ Together, these studies provide a crucial foundation for this chapter, which explores the complex environmental and socio-political dynamics that led to changes in how the Sultans engaged with the irrigation system in the Egyptian provinces, especially from the ninth/fifteenth century onwards.

In the last decade, Valentine Denizeau and Amalia Levanoni have specifically addressed the sultan's institutional role in the water management of Mamlūk Cairo, discussing also some of the large-scale urban water projects examined in the second part of this chapter.⁶ Both scholars primarily emphasized, as anticipated above, the absence of a formalized “bureaucratic system”⁷ and established procedures for addressing water-related challenges in Mamlūk Cairo. In her comprehensive PhD thesis “Conduire l'eau dans Le Caire mamlūk”, Denizeau stated that the sultans reserved the exclusivity of the construction and maintenance of water infrastructure “with great symbolic significance”, and interpreted any lack of sultanic interventions as the relinquishment of an urbanizing prerogative.⁸ Denizeau also highlighted that sultanic interventions in Cairo's urban water infrastructure were inconsistent, and observed that, in the “organized disorder” that defined these interventions, the military undertook water projects compensating for the lack of an institutional body dedicated to water management, but only during times of political stability.⁹ Levanoni presented a thorough overview of the large-scale water projects in Cairo that saw the involvement of the sultanic authority. This scholar underscored that such projects were characterized by a “lack of professional water management” and a clear technological stagnation, concluding that the sultanic involvement in the capital's water management was limited to sporadic *ad-hoc* interventions focused on coping with disasters rather than preventing them.¹⁰

4. Stuart Borsch and Tarek Sabraa. “Qānūn al-Riyy: The Water Law of Egypt,” *Sophia Journal of Asian, African, and Middle Eastern Studies* 35 (2017): 87-124.

5. Linda Northrup, *From Slave to Sultan: The Career of Al-Manṣūr Qalāwūn and the Consolidation of Mamluk Rule in Egypt and Syria (678-689 A.H./1279-1290 A.D.)* (Stuttgart: Steiner, 1998), 253-269; Yossef Rapoport, *Rural Economy and Tribal Society in Islamic Egypt. A study of al-Nābulusi's Villages of Fayyum* (Brepols, 2018), 53-74.

6. Levanoni, “Urban Water Management,” 255-276; Denizeau, “Conduire l'eau,” 347-389.

7. Levanoni in particular used this term. See: Levanoni, “Urban Water Management,” 257 and 272.

8. Denizeau, “Conduire l'eau,” 357-9.

9. Denizeau, “Conduire l'eau,” 355, 366 and 389.

10. Levanoni, “Urban Water Management,” 272-3.

By building on this existing scholarship but adopting an alternative perspective focused on the underlying motivations of large water projects initiated by the Sultans, this chapter argues that sultanic interventions into Cairo's water system were essentially driven by the economic and court-oriented goals of each individual Sultan. This perspective challenges linear historical narratives that suggest sultanic water management steadily declined throughout the Mamlūk period due to institutional disorganization.¹¹ As the historical trajectory of the irrigation system reveals, established bureaucratic institutions alone would not have been sufficient to guarantee the prosperity of Cairo's water systems. Furthermore, this chapter's analysis of major Sultanic water projects in Cairo reveals recurring patterns in organization, funding, and labour recruitment throughout the Mamlūk period. While these patterns do not account for a specialized institutional apparatus, they suggest the existence of established practices in managing large-scale waterworks in the capital.

1.1 Exploiting the Most Precious Resource: Plenitude and Irrigation Management in the Provinces

1.1.1 Time is money: customary practices to exploit the plenitude

As an agrarian economy based primarily on grain production, pre-Modern Egypt largely depended on the cultivation and irrigation of land.¹² The areas around the Nile course and the Delta represented the bulk of Egypt's agricultural areas. The prosperity of these lands relied on the presence of the river and its yearly flood, the primary source of water for the irrigation of Egypt's land. For this reason, the Nile level was closely monitored by means of scales, the nilometers. In 96/715 one of these scales was installed on al-Rawḍa, the island in front of the first Islamic settlement of Fuṣṭāṭ. From then on, the Nile cycle was monitored with the Nilometer of al-Rawḍa.¹³ Every year, the summer rainfall on the Ethiopian Highlands flowed into the Nile, and the level of the river started to increase in Egypt around mid-July. By mid-August (corresponding to the Coptic month of *Misrā*) the Nile level typically reached

^{11.} Levanoni, "Urban Water Management," 271.

^{12.} Ira Lapidus, "The Grain Economy of Mamlūk Egypt," *JESHO* 12, no. 1 (1969): 2.

^{13.} The origins of the nilometers are pre-Islamic: other such scales already existed (e.g. in Memphis) before the Islamic conquest of Egypt. More about the Nilometer of Rawḍa will be said in the second part of this chapter. See: William Popper, *The Cairo Nilometer. Studies in Ibn Taghri Birdī's Chronicles of Egypt I* (University of California Press, 1951), 5; Fekri A. Hassan, "Extreme Nile floods and famines in Medieval Egypt (AD 930-1500) and their climatic implications," *Quaternary International* 173-174, (2007): 102; John P. Cooper, *The Medieval Nile. Route, Navigation and Landscape in Islamic Egypt* (AUC Press, 2014), 107-113.

its highest point. If the scale of the Nilometer showed a reading between 16 and 18 cubits (one cubit measuring about 0.54 meters), the “Fulfillment of the Nile” (*Wafā’ al-Nīl*) was declared, signifying a plentiful year ahead.¹⁴ A lower peak (when the Nile level indicated by the Nilometer remained below 16 cubits) signified insufficient water and poor harvests. Conversely, a much higher peak (between 18 and 20 cubits) foreshadowed a devastating flood.¹⁵ After August, the Nile level would then remain stationary for a while, possibly with a further rise in the month of October, after which it decreased until reaching its minimum level by May.¹⁶ As floodwater was available only for a short period of time every year, its timely exploitation was vital to the subsistence of the region.

The regime that established its domain over Egypt from 648/1250 inherited a set of traditional water management and irrigation practices to optimize the exploitation of the annual Nile flood for the irrigation of the agricultural lands. At the core of these traditions lay a sophisticated set of rules, including calibrated schedules regulating the distribution of floodwater in the rural areas. Two partially extant administrative manuals written before the mid-seventh/thirteenth century include detailed regulations for distributing floodwaters in the provinces. The earliest of these manuals, the *Minhāj fi ‘ilm kharāj Miṣr* (“Instructions on the science of taxation in Egypt”), was authored by the secretary al-Makhzūmī (d. 585/1189), who served first in the Fatimid and then in the Ayyūbid administrations, under Ṣalāḥ al-Dīn (r. 564-589/1169-1193). Al-Makhzūmī compiled the first version of the *Minhāj* in 569/1169-70, immediately after Ṣalāḥ al-Dīn gained control over Egypt, and he completed a second extended version of the manual in 581/1185-6.¹⁷ The second manual, the *Kitāb Qawānīn al-dawāwīn* (“The book of rules for the *dīwāns*”) by the secretary Ibn Mammātī (d. 606/1209), was written approximatively two decades after the *Minhāj* and shared similar information.¹⁸ Both these manuals describe the various categories of lands in Egypt, the times at which these lands should be cultivated and harvested,

¹⁴ The exact equivalence of an eighth/fourteenth-century Egyptian cubit (*dhirā’*) is unclear. At the Nilometer it corresponds to 0.54 meters, but when used for measuring land areas it was probably about 0.58 meters. Valentine Denizeau and Sylvie Denoix, “Le sultan promoteur. Aménagement urbain dans Le Caire du VIIIe/XIVe siècle,” *Annales Islamologiques* 46, (2013): 170.

¹⁵ al-Nuwayrī, *Nihāyat al-arab fi funūn al-adab* (Dār al-Kutub al-‘Ilmiyya, 2004), 1:246; al-Maqrīzī, *Khitat*, 1:112-13. Al-Maqrīzī mentions a prayer uttered by people at the time of the inundation to avert the damages of a devastating high rise: “we take refuge from Allah from a finger in twenty (cubits)” (*na’udhū bi-llāh min isbā’ min ‘ashrīn*). al-Maqrīzī, *Khitat*, 1:113.

¹⁶ Hassan, “Extreme Nile floods and famines,” 101-2; Cooper, *The Medieval Nile*, 108-110; Mikhail, *Nature and Empire*, 9-10.

¹⁷ Hasan Rabie, *The Financial System of Egypt, A.H. 564-741/A.D. 1169-1341* (Oxford University Press, 1972), 11.

¹⁸ Northrup, *From Slave to Sultan*, 255; Rabie, *The financial System*, 14-15.

and the types of crops produced in each region of Egypt. The cultivation and harvest schedule in Ibn Mammātī's work, based on the Coptic calendar, details how the Nile's floodwaters should be used for irrigation.¹⁹ These regulations were reported almost identically in two early-ninth/fifteenth-century works —the encyclopedic administrative manual *Ṣubḥ al-a'shā fi šinā'at al-inshā'* by the chancery official Shihāb al-Dīn Aḥmad al-Qalqashandī (d. 821/1418), and the topographical work *al-Mawā'iz wa al-i'tibār fi dhikr al-khiṭaṭ wa al-athār* by the historian Taqī al-Dīn Aḥmad al-Maqrīzī (d. 845/1442).²⁰ This consistent reporting of similar information regarding agricultural practices in Egypt's provinces reveals the existence, on a textual level at least, of well-established customs in land use and crop production. However, while these works outlined what was considered the most effective way of enhancing Egypt's agricultural production, their normative or encyclopedic nature may have precluded them from accurately reflecting the realities on the ground.

The title of al-Makhzūmī's work indicates that these texts were not only husbandry manuals (known as the *kutub al-filāḥa*), but also administrative works instructing authorities on when and how to collect agrarian taxes (*kharāj*) from the provinces of Egypt.²¹ Taxation was calculated on the basis of land measure and agricultural yields, and throughout the Ayyūbid and the first half of the Mamlūk periods, rents and taxes from Egypt's agricultural lands represented the bulk of the sultan and *iqṭā'* holders' yearly revenue.²² Exploiting the agricultural lands to their fullest in order

^{19.} Rabie, *The Financial System*, 11 and 15.

^{20.} al-Qalqashandī, *Ṣubḥ al-a'shā fi šinā'at al-inshā'* (Dār al-Kutub al-Miṣriyya, 1922), 3:450-452; al-Maqrīzī, *Khiṭaṭ*, 1:188-194. Al-Maqrīzī did not mention Ibn Mammātī as a source, but it is likely that he also used his material, which the *Khiṭaṭ* reproduces with only minor changes. Northrup, *From Slave to Sultan*, 256.

^{21.} Rabie, *The Financial System*, 11 and 15; Rapoport, *Rural Economy*, 21. Both Rabie and Rapoport showed that these works were part of a cluster of administrative manuals composed throughout the Ayyūbid period. The *kutub al-filāḥa* are agricultural manuals, or books on farming, that drew upon the knowledge of peasant farmers and botanical science. They combined theoretical and scientific principles with practical, hands-on instructions. Bethany Walker, "The Struggle over Water. Evaluating the 'Water Culture' of Syrian Peasants under Mamluk Rule," in *Developing Perspectives in Mamluk History. Essays in Honor of Amalia Levanoni*, ed. Yuval Ben-Bassat (Brill, 2017), 296.

^{22.} Lapidus, "The Grain Economy," 3-5. As explained in the Introduction, the *iqṭā'* system consisted in the distribution of land lots (the *iqṭā'*) belonging to the Treasury for tax farming, and it was used as a way of compensating the members of the army for their military services. The sultan bestowed the *iqṭā'* lands on a temporary basis, and if an *iqṭā'* holder (*muqṭa'*) died or was dismissed, the lot under his control had to be returned to the Treasury (the *bayt al-māl*) and could not be inherited by his descendants. The *iqṭā'* system was introduced in Egypt by the Ayyūbids, though a similar land-holding system existed already under the Fatimids. For an overview of the *iqṭā'* system and an historical overview of its use during the Ayyūbid and Mamlūk periods see: Rabie, *The Financial System*, 26-45; Sato Tsugitaka, *State and Rural Society in Medieval Islam. Sultans, Muqṭa's and Fallahun* (Brill, 1997), 42-76.

to increase their yields and produce greater tax revenues required a well-organized irrigation system. The sources mentioned above describe a system of dykes and canals connecting the Nile to Egypt's provincial cultivations, and show that this irrigation system was regulated by a specific set of rules (*qānūn al-riyy*) that included a carefully calculated schedule for when to open which dykes and canals to ensure the equal distribution of floodwater in the provinces.²³ These dykes and canals were classified into two categories, each of which fell under the responsibility of distinct political entities. The first category, the *jusūr al-baladiyya* (the *baladī* irrigation system), connected larger waterworks to village cultivations.²⁴ They were managed by local village communities and *iqṭā'* holders, who disbursed the sums necessary for their maintenance.²⁵ Al-Qalqashandī's *Ṣubḥ al-a'shā* reveals that if a *muqṭā'* had paid for the maintenance of the dykes and canals within his assigned *iqṭā'* but was no longer the holder of that *iqṭā'* when the taxes and harvest were collected, he could claim reimbursement for the expenses incurred.²⁶ The second category, the *jusūr al-sulṭāniyya* (the *sulṭānī* irrigation system), fell under the responsibility of the Sultan and encompassed major dykes and canals directly connected to the Nile.²⁷ Al-Qalqashandī and al-Maqrīzī explained the difference between the two categories with an evocative metaphor: the *jusūr al-sulṭāniyya* in the villages are like a city wall (*sūr al-madīna*), the care of which is a duty of the Sultan (*yata'ayyanu 'alā al-sulṭān al-ihtimām bi-'imāratihi*); while the *jusūr al-baladiyya* are like the houses inside the city walls (*al-dūr allatī min dākhil al-sūr*), the maintenance and upkeep of which is a duty of the house owners (*fa-yulzam šāhib kullī dār an yaṣlahāhā wa-yuzayyila ḍarārahā*).²⁸

The functioning of the *sulṭānī* irrigation system and the sultan's responsibilities for its proper maintenance are clearly described in two documents written during the reign of Sultan al-Manṣūr Qalāwūn (r. 678-689/1279-1290). These documents, known as *tadhkirāt* (memoranda), outline governing guidelines for the vice-regents, including how to properly maintain and manage the *sulṭānī* irrigation system. The *tadhkirāt* were

²³. Borsch and Sabraa, "Qānūn," 88. The schedule rotated the dyke and canal openings to best maintain and regulate the waterflow into the villages. Borsch and Sabraa created an experiment to simulate the schedule and concluded that it was the result of a sophisticated hydraulic calculation based on environmental (not political) considerations. Also, this schedule was calculated according to the Coptic calendar. See Borsch and Sabraa, "Qānūn," 104-111.

²⁴. Borsch and Sabraa, "Qānūn," 91.

²⁵. al-Qalqashandī, *Ṣubḥ*, 3:449; al-Maqrīzī, *Khīṭaṭ*, 1:189.

²⁶. al-Qalqashandī, *Ṣubḥ*, 3:449.

²⁷. al-Qalqashandī, *Ṣubḥ*, 3:448-9; al-Maqrīzī, *Khīṭaṭ*, 1:189. A description of this system is also reported by the mid-ninth/fifteenth century scholar Ibn Shāhīn al-Zāhirī. See: Ibn Shāhīn al-Zāhirī, *Zubdat Kashf al-mamālik* (Mat'aba al-Jumhūriyya, 1894), 129-30. See also: Borsch and Sabraa, "Qānūn," 91.

²⁸. al-Qalqashandī, *Ṣubḥ*, 3:449; al-Maqrīzī, *Khīṭaṭ*, 1:189. Al-Qalqashandī attributes this metaphor to Ibn Mammātī.

customarily issued for the sultan's representatives upon his departure from Egypt, and they had the value of sultanic decrees to be read in the mosques "on all *minbars*, section by section" in order to be "heard by everyone, close-by or far away".²⁹ Of these two *tadhkirāt*, one was addressed to *amīr* Kitbughā al-Manṣūrī (d. 702/1303), who was appointed *nā'ib al-salṭana* (vice-regent) in 679/1280. The document is reported in the chronicle *Ta'rikh al-duwal wa-l-mulūk* by historian Ibn al-Furāt (d. 807/1405), and was originally written by the chancery official Ibn al-Mukarram, also known as Ibn Manẓūr (d. 711/1311), the author of the famous dictionary *Lisān al-'Araibn*.³⁰ The other *tadhkira* was authored by the historian and chancery official Muḥyī al-Dīn ibn 'Abd al-Zāhir (d. 692/1293), and it was issued to Sultan Qalāwūn's eldest son, al-Ṣāliḥ 'Alī (d. 687/1288), who ruled in his father's place while he was in Syria.³¹ As they tackle a variety of socio-economic aspects related to the Sultanate organization in the early Mamlūk period, these documents have attracted the attention of modern scholarship.³²

Both the *memoranda* devote a few sections to instructing the sultan's representative on how to manage the *suṭṭānī* dykes and canals, and though they vary somewhat in the information they provide, the two documents address the same core matters. First, they both urge the sultan's representative to proactively issue royal decrees (*al-amthila al-sharīfa al-suṭṭāniyya*) "for the construction of dykes, their repair and extension, the investigation of the bridges (*qanāṭir*) and small canals (*tura'*), the reconstruction of those in ruin, the repair of the weak portions and broken water gates, and the collection of various taxes required at the time of the flood of the Nile".³³ Ibn 'Abd al-Zāhir's *tadhkira* states that the sultan's representative (*al-walad*) must issue orders to local governors (*al-wulāt*) to repair and maintain the dykes (*al-jusūr*) and irrigation

²⁹ Sato Tsugitaka, *State and Rural Society*, 107-8; Leonor Fernandes, "On conducting the Affairs of the State: a Guideline of the Fourteenth Century," *Annales Islamologiques* 24, (1988): 89.

³⁰ Northrup, *From Slave to Sultan*, 36-7; Sato, *State and Rural Society*, 107; Fernandes, "On conducting the Affairs," 81.

³¹ Northrup, *From Slave to Sultan*, 259; Axel Moberg, "Regierungspromemoria Eines Ägyptischen Sultans," in *Festschrift Eduard Sachau zum siebzigsten Geburtstage gewidmet von Freunden und Schülern*, ed. Gotthold Weil, (Berlin: Georg Reimer, 1915), 408. Muḥyī al-Dīn ibn 'Abd al-Zāhir was also the author of the early topography of Cairo (*al-Rawḍa al-bahiyya al-zāhira fī khitāṭ al-mu'izziyya al-qāhira*) mentioned in the Introduction, and of the biographies of three early Mamlūk Sultans: al-Zāhir Baybars (r. 658-76/1260-77), al-Manṣūr Qalāwūn (r. 678-89/1279-90), and al-Ashraf Khalīl (r. 689-92/1290-3). See: Gowaart Van Den Bossche, "Muḥyī al-Dīn Ibn 'Abd al-Zāhir," in *Arabic Textual Sources for the Crusades*, ed. Alexander Mallett (Brill, 2024), 42-63.

³² Sato, *State and Rural Society*, 105-123; Northrup, *From Slave to Sultan*, 257-60; Moberg, "Regierungspromemoria," 406-421; Fernandes, "On conducting the Affairs," 81-91.

³³ Sato, *State and Rural Society*, 111; Ibn al-Furāt, *Ta'rikh al-duwal wa-l-mulūk*, ed. C. Zurayk (Beirut, 1942), 7:198.

canals (*al-turāʾ*, sic) during the Nile plenitude.³⁴ Both documents insist on the importance of prompt communication between the sultanic court in Cairo and the provinces controlled by local governors (the *wālīs*).³⁵ The *memorandum* for al-Ṣāliḥ ʿAlī recommends that the *walad* set up carrier pigeons (*al-ḥamām al-rasāʾilī*) when dykes and canals are being repaired or maintained “so that if a break (*khalal*) occurs, the damage can be quickly dealt with by a high-ranking *amīr* (*amīr kabīr*), who will be sent to oversee the reparations”.³⁶ The *memorandum* for Kitbughā also adds that, upon finishing any maintenance or repairs, “the *wālīs* are to write themselves that the dikes have been completed (...) according to what was ordered”.³⁷

These documents also urge the vice-regents to make sure that the provinces are provided with the equipment necessary to repair and maintain the dykes and canals. The availability of maintenance equipment was necessary “so that no levee is broken without the necessary tools being at hand”.³⁸ The *memorandum* for Kitbughā states that “harrows (*jarrāfa*) and large ploughs (*muqalqila*) are to be furnished according to these orders”.³⁹ The *memorandum* for al-Ṣāliḥ ʿAlī also recommends that irrigation experts (*khawlā*) and engineers (*muhandisūn*) be entrusted with supervising the dyke openings.⁴⁰ Finally, both documents urge the sultan’s representative to prevent any abuses in the distribution of floodwater and ensure that all lands are irrigated properly.⁴¹ Any form of favouritism or *ḥimāya* (paid protection) that would jeopardize the equal distribution of water must be avoided,⁴² and it was the representative’s

^{34.} Moberg, “Regierungspromemoria,” 413.

^{35.} Later on, probably beginning in the early-eighth/fourteenth century, the post of *wālī* coexisted with the office of *kāshif al-jusūr*, an inspector in charge of supervising irrigation dykes and canals. See: Takenori Yoshimura, “The Role of Middle and Lower Rank Military Officers in Fourteenth-Century Mamluk Egypt: Establishment and Development of the Regional Administration Offices of *wālī* and *kāshif*,” in *Studies on the History and Culture of the Mamluk Sultanate (1250–1517)*, ed. Stephan Conermann and Toru Miura (Bonn University Press, 2021), 300. The provincial officers were meant to work together with engineers (*muhandisūn*) and irrigation experts (*khawlā*). See: Borsch and Sabraa, “Qānūn,” 112.

^{36.} Moberg, “Regierungspromemoria,” 413.

^{37.} Sato, *State and Rural Society*, 112; Ibn al-Furāt, *Taʾrīkh*, 7:198.

^{38.} Moberg, “Regierungspromemoria,” 413.

^{39.} Sato, *State and Rural Society*, 111; Ibn al-Furāt, *Taʾrīkh*, 7:198; Fernandes, “On conducting the Affairs,” 86.

^{40.} Moberg, “Regierungspromemoria,” 413. The participation of these expert workers in maintaining the *sulṭānī* dykes and canals is also attested in: al-Qalqashandī, *Ṣubḥ*, 3:449.

^{41.} Moberg, “Regierungspromemoria,” 413.

^{42.} Sato, *State and Rural Society*, 111; Ibn al-Furāt, *Taʾrīkh*, 7:198; Moberg, “Regierungspromemoria,” 413. In an insightful article on the extortion of protection taxes, John Meloy points out that the *ḥimāya* in rural areas consisted of extorting money from farmers *in lieu* of the resources normally requested from farmers for the work done on the irrigation system. See: John Meloy, “The privatization of protection: extortion and the state in the Circassian Mamluk period,” *JESHO* 47, no. 2 (2004): 205.

responsibility to enforce the established irrigation schedule and ensure that no *amīr* broke a dyke for the benefit of their own *iqṭāʿ*, thus violating the orders of the local governors and the agreements stipulated by village authorities and irrigation experts (*akābir al-bilād*, *mashāʾikh*, and *khawlā*).⁴³

Like the administrative manuals discussed above, the *tadhkirāt* also represent normative sources—as such, they do not necessarily describe the realities on the ground, but highlight the key measures the sultan or his representative needed to take to guarantee the proper functioning of Egypt’s provincial irrigation system. Also, like the administrative manuals, the *memoranda*’s concerns stemmed from the *sulṭānī* irrigation system’s importance to tax revenues. Linda Northrup emphasized how the taxation system determined sultanic management of the irrigation system, arguing that the sultans’ relationship with provincial irrigation was “dictated by fiscal motives and the fiscal structure itself”, for with agricultural production at the basis of the *kharāj* revenues, a functioning irrigation system was “of primary interest to the tax collector”.⁴⁴ Northrup’s emphasis on the fiscal underpinnings of irrigation system management provides a crucial lens for understanding the broad scope of sultanic involvement in water projects in Mamlūk Egypt.

Although this involvement was primarily driven by the aim of enhancing tax revenues, eighth/fourteenth and ninth/fifteenth-century authors considered diligent care for the *sulṭānī* irrigation system and proactive involvement in maintaining its provincial dykes and canals to be hallmarks of a “good ruler”. The historian Ibn Faḍl Allāh al-ʿUmārī (d. 749/1349), for instance, described the Ayyūbid Sultan al-Kāmil (r. 615–635/1218–1238) as an “honourable, venerable and resolute ruler” (*malikan jalīlan muhīban ḥāziman*), who personally inspected the status of the dykes (*wa-kāna yakhruju al-kāmil bi-naḥsihi fa-yanṣur fī umūr al-jusūr*).⁴⁵ Likewise, the later historian Ibn Taghrī Birdī (d. 874/1470) lauded Sultan al-Nāṣir Muḥammad ibn Qalāwūn (third reign: 710–741/1310–1341) for spending two months personally overseeing the construction of dykes in every village of the Giza province.⁴⁶ Both these authors lived much later than the rulers they praised in their works, so the accuracy of their information may

⁴³ Moberg, “Regierungspromemoria,” 413.

⁴⁴ Northrup, *From Slave to Sultan*, 256; Fernandes, “On conducting the Affairs,” 90.

⁴⁵ al-ʿUmārī, *Masālik al-abṣār fī mamālik al-amṣār* (Dār al-Kutub al-ʿIlmiya, 2010), 27:199. The information is also attested in a treatise by al-Nabulūṣī on the villages of Fayyūm (mentioned below). Al-Nabulūṣī, *The Villages of the Fayyum. A thirteenth Century Register of Rural Islamic Egypt*, ed. Yossef Rapoport and Ido Shahar (Brepols, 2018), 44.

⁴⁶ Ibn Taghrī Birdī, *al-Nujūm al-zāhira fī mulūk Miṣr wa-al-Qāhira*, (Muʿassasa al-Miṣriya al-ʿĀmmah, 1963–1972), 9:190. Al-Nasir Muḥammad’s interventions in the maintenance and expansion of the provincial irrigation system has also been discussed in: Sarah Kate Raphael, *Climate and Political Climate. Environmental Disasters in the Medieval Levant* (Brill, 2013), 97–101.

be somewhat questionable. However, despite living in different moments of the Mamlūk period, both historians consistently identified effective management and maintenance of the *suḷṭānī* irrigation system as a hallmark of a Sultan's successful rulership. As will be discussed in the next section, other authors from the ninth/fifteenth century, echoing this perspective, saw in the neglect of the irrigation system a symptom of the Sultanate's mismanagement.

1.1.2 Old customs versus new realities

Albeit of a regulatory nature, the two *tadhkirāt* reveal an important aspect of the regulations concerning the maintenance of the provinces' irrigation system. The *memorandum* for *amīr* Kitbughā refers to the duties required from the rulers and the local governors as a custom, '*āda*, already in use during the days of Sultan al-Malik al-Sāliḥ ('*alā al-āda fī al-ayyām al-Ṣāliḥiyya*').⁴⁷ The *memorandum* for al-Sāliḥ 'Alī refers to these regulations as *qawānīn al-riyy*. The term *qānūn* generally designates a norm established by the rulers, distinct to the religious *sharī'a* rules, and implies that such norm had a customary or traditional value.⁴⁸ Clearly, the *tadhkirāt* imply that the irrigation of the provinces had to be regulated according to customary rules established already before the mid-seventh/thirteenth century. Something in the application of these customary norms, however, visibly changed from the beginning of the ninth/fifteenth century onwards.

Throughout the ninth/fifteenth century, a number of authors lamented the disrepair of the provincial irrigation system, suggesting its failings were caused by sultanīc mismanagement and misallocation of tax revenues.⁴⁹ In his chancery manual, al-Qalqashandī stated that by his time the majority of the *baladī* dykes were being neglected (*taraka 'imārat akthar al-jusūr al-baladīyya*), while the *suḷṭānī* ones were not maintained well enough to have a positive impact on the provincial lands (*iqṭaṣara fī 'imārat al-jusūr al-suḷṭāniyya 'alā al-shay' al-yasīr alladhī lā yaḥṣal bihi kabīr naf*).⁵⁰ A few years later, al-Maqrīzī denounced Sultan Faraj ibn Barqūq's (r. 801-815/1399-1412) abuses in administrating the tax levies collected from the provinces. In his topographical work, al-Maqrīzī mentions that before Faraj ibn Barqūq's ascent to

⁴⁷. Sato, *State and Rural Society*, 111; Ibn al-Furāt, *Ta' rīkh*, 7:198. Al-Malik al-Sāliḥ, last Ayyūbid Sultan of Egypt, ruled between 637/1240 and 647/1249.

⁴⁸. Moberg, "Regierungspromemoria," 413; Clément Huart, "Qānūn" in *Encyclopaedia of Islam First Edition Online* (Brill, 2012) doi:https://doi.org/10.1163/2214-871X_ei_SIM_3900; Mikhail, *Nature and Empire*, 14; Borsch and Sabraa. "Qānūn," 92. As these authors emphasize, in the case of Egyptian irrigation systems, the term *qānūn* was not used to indicate a corpus of codified laws, but rather a set of long-lived norms.

⁴⁹. Stuart Borsch, *The Black Death in Egypt and England. A Comparative Study* (University of Texas Press, 2005), 44.

⁵⁰. al-Qalqashandī, *Ṣubḥ*, 3:449.

the throne, the taxes collected from the provincial districts were used to finance the repairs of dykes and canals, and that any surplus from the tax levies was sent to the *bayt al-māl* (the Sultanate's treasury). During the reign of Faraj ibn Barqūq, however, despite a great amount of tax levies being collected from villages (*fa-ṣāra yujbā min al-bilād māl azīm*), these levies were delivered to the sultan and distributed among the members of his entourage instead of being used to maintain the irrigation system (*yurfi 'a ilā al-sulṭān wa-yatafarraqa kathīr minhu bi-aydī al-a'wān*).⁵¹ On multiple occasions (not only in the *Khiṭaṭ* but in other works as well), al-Maqrīzī blamed Faraj ibn Barqūq and his administration for the Sultanate's state of disarray at the beginning of the ninth/fifteenth century.⁵² In his 808/1405 economic treatise *Ighāthat al-Ummah bi-Kashf al-Ghumma* ("Saving the community by revealing distress"), al-Maqrīzī blamed the "malfeasance and poor judgement" of the court for the appalling state of the country and its agriculture.⁵³ In al-Maqrīzī's eyes the economic crisis affecting the Sultanate at the time stemmed not only from the characteristic increase in prices that followed a scarce Nile rise in 806/1403, but also (and especially) from the fact that "the state monopoly kept foodstuff out of the reach of people", causing a severe grain scarcity and a reduction in cultivation. Al-Maqrīzī connected Faraj ibn Barqūq's unsuitable response to the crisis with the pervasive sale of administrative positions and the subsequent spread of corrupt practices, claiming in particular that Faraj ibn Barqūq's rule led to the rise of oppressive political figures who exploited the provincial districts with heavy taxation and forced labour. Consequently, the population of some provinces, "burdened with a multitude of taxes and a variety of injustices", abandoned the lands, further exacerbating the deterioration of the irrigation system.⁵⁴

Also the Syrian author Muḥammad ibn Muḥammad ibn Khalīl al-Asadī, active in the mid- ninth/fifteenth century, denounced over-taxing villages and exploiting the local

⁵¹ al-Maqrīzī, *Khiṭaṭ*, 1: 189.

⁵² Julien Loiseau, "Les événements de l'année 806. Ou comment al-Maqrīzī a pensé une rupture majeure dans l'histoire de l'Égypte," *Médiévales* 64, (2013): 119-134. As various recent studies have pointed out, al-Maqrīzī's aversion towards Faraj ibn Barqūq stemmed from his personal experience. The historian gradually lost patrons' support under this ruler, which eventually led to his retirement from public life. See Nasser Rabbat, "Who was al-Maqrīzī? A biographical sketch," *MSR* 7, no. 2 (2003): 15-16; *Writing Egypt. Al-Maqrīzī and his Historical Project*, (Edinburgh University Press, 2023), 146-9; Jo Van Steenberghe, *Caliphate and Kingship in a Fifteenth-Century Literary History of Muslim Leadership and Pilgrimage: al-Dahab al-masbūk fī ḍikr man ḥajja min al-khulafā' wa-l-mulūk* (Brill, 2016), 35; Sami Massoud "al-Maqrīzī as an Historian of the Reign of Barqūq," *MSR* 7, no.2 (2003): 119-136.

⁵³ al-Maqrīzī, *Mamluk Economics*, 51-52.

⁵⁴ al-Maqrīzī, *Mamluk Economics*, 52; *Ighāthat al-umma bi-kashf al-ghumma* (Dār al-Hilāl, 1990), 81-3.

workforce in his treatise *al-Taysīr wa-l-i'tibār*, completed in 855/1451.⁵⁵ According to al-Asadī, the Sultanate's authorities were neglecting the construction and repair of the canal and dyke system (*ihmāl...ḥaḡr al-khuljān wa-l-turā'...wa-iṣlāḡ al-jusūr wa-l-qanāṭir*) due to pervasive corruption (*fasād*) within the government.⁵⁶ This author suggested that the disarray of the *sulṭānī* irrigation system was one of the leading causes of the crisis affecting Egypt during his time.⁵⁷ Al-Asadī stated that there had to be a large number of peasants in both Upper Egypt and the Delta region working on the supervision and maintenance of the *sulṭānī* irrigation system, and that, as mentioned in the earlier *tadhkirāt*, these peasants had to be provided with the necessary equipment for these jobs. In the past these peasants had fulfilled their duties with a clear understanding of their responsibilities and no undue restrictions, and they were aware of the tax fluctuations and when to expect an increase or decrease in tax levies. But by the mid ninth/fifteenth century, peasant men were gathered with violence and threats, forced to carry out their labours in harsh and debilitating conditions, and pressured by extremely heavy taxation.⁵⁸ In concluding his overview of the situation, al-Asadī observed that the mismanagement of taxes and workforces was detrimental to the maintenance of the irrigation system.⁵⁹

Both al-Maqrīzī's *Ighātha* and al-Asadī's *al-Taysīr* emphasize the disastrous consequences of the irrigation system's neglect in their etiological analyses of the "ordeals" (*miḡan*, in al-Maqrīzī) or "disorder" (*khalal*, in al-Asadī) afflicting the Sultanate during their time. In both these works, such analysis serves as a foundation for proposed solutions, such as fiscal reforms, which the authors offer to the ruling authorities.⁶⁰ Although each of these treatises discusses economic problems in a unique way, they are not unprecedented in bringing problems related to the

⁵⁵. Abdul Azim Islahi, "Economic and Financial Crises in Fifteenth-Century Egypt: Lessons From the History," *Islamic Economic Studies* 21, no. 2 (2013): 84. The birth and death dates of al-Asadī are unknown, and the *Taysīr* is the only source we know of written by al-Asadī, who lived in Damascus. In this treatise, the full title of which is *al-Taysīr wa-al-i'tibār wa-al-taḡrīr wa-al-ikhtibār bi-mā yajib min ḡusn al-tadbīr wa-al-taṣarruf wa-al-ikhtiyār* ("Facilitation and Consideration, Registration and Scrutiny in matters that need Good Governance, Management and Choice"), al-Asadī deals with various issues of the time, such as the monetary situation, corruption, and oppressive taxation.

⁵⁶. Muḡammad ibn Muḡammad ibn Khalīl al-Asadī, *al-Taysīr wa-l-i'tibār wa-l-taḡrīr wa-l-ikhtiyār* (Dār al-Fikr al-'Arabī, 1968), 92-3.

⁵⁷. Islahi, "Economic and Financial Crises," 84; Meloy, "The Privatization of Protection," 199.

⁵⁸. al-Asadī, *Taysīr*, 93. The importance of fair treatment of local workers seems to have been already in the mind of the author of the memorandum for al-Ṣāliḡ 'Alī, who recommends the vice-regent to make sure that "the peasants are sent back home [from the work on the dykes and canals] so they can take care of their families". Moberg, "Regierungspromemoria," 414.

⁵⁹. al-Asadī, *Taysīr*, 92-3; Islahi, "Economic and Financial Crises," 83.

⁶⁰. Islahi, "Economic and Financial Crises," 83 and 86-7; John Meloy, "The Merits of Economic History: Re-Reading al-Maqrīzī's *Ighāthah* and *Shudhūr*," *MSR* 7, no. 2 (2003): 190.

Egyptian irrigation system to the attention of the rulers. As early as the mid-seventh/thirteenth century, the Ayyūbid functionary Abū ‘Amr ‘Uthman Ibn al-Nābulūsī had compiled a treatise called the *Iḡhār ṣan‘at al-ḥayy al-qayyūm fī tartīb bilād al-Fayyūm* that listed the fiscal obligations of al-Fayyūm villages for the Ayyūbid chancery. In one section of his book, al-Nābulūsī deplored the ruinous state of two irrigation canals in the district of al-Fayyūm, and concluded that the refurbishment of these canals was only possible “over a long period of time and with considerable expenses” (*lā yumkin ‘imāratu-humā illā...fī al-mudda al-ṭawīla bi-al-amwāl al-jazīla*).⁶¹ The nature of al-Nābulūsī’s work, however, is very different than that of the *Ighātha* and *al-Taysīr*, which reflect different historical circumstances. Al-Nābulūsī’s book represents in fact a fiscal survey commissioned by the Ayyūbid court, which needed to increase the revenues of the *kharāj* taxes to pay their army.⁶² The *Ighātha* and *al-Taysīr* are instead the product of two scholars affected by profound changes happening within the Sultanate, which they both interpreted as signs of an ongoing crisis.⁶³ Although their analyses are carefully planned to introduce suggestions for improving the Sultanate’s financial situation, they also bear the signs of a complex and stratified socio-economic transformation that visibly altered the organization of the Sultanate at the beginning of the ninth/fifteenth century.

Underlying the disrepair of the irrigation system deplored by al-Asadī and al-Maqrīzī was a substantial decrease in the population of the Egyptian rural areas. Both al-Asadī and al-Maqrīzī hinted at the decrease of workforce in the provinces, the former comparing it with the amount of people which used to be involved in the maintenance of the irrigation system in the past, the latter commenting that a great number of peasants fled the villages. To a large extent, this demographic crisis was a direct consequence of the successive epidemics that affected Egypt between the second

^{61.} al-Nābulūsī, *The Villages of the Fayyūm*, 47; Rapoport, *Rural Economy*, 62-66.

^{62.} al-Nābulūsī, *The Villages of the Fayyūm*, 8. For a thorough discussion on the taxation of *iqṭā’* holdings in Fayyūm see: Rapoport, *Rural Economy*, 143-170. Rapoport emphasizes that in the late-Ayyūbid period the *iqṭā’* holders in al-Fayyūm became dependent on the cooperation of the local village communities to collect the yearly taxes. On the importance of these revenues for the Ayyūbid and early-Mamlūk armies, see Rabie, *The financial System*, 32-41.

^{63.} While little is known about al-Asadī, we can presume that, like al-Maqrīzī, he was close to the institutions of learning financed by *waqf* foundations. In the *Ighātha*, al-Maqrīzī laments that the scholars who received a fixed income from the *awqāf* had been heavily affected by inflation and the increase of prices at the beginning of the ninth/fifteenth century. al-Maqrīzī, *Mamluk Economics*, 75; Meloy, “The Merits of Economic History,” 195.

half of the eighth/fourteenth century and the mid- ninth/fifteenth century.⁶⁴ Stuart Borsch argued that the post-plague population decline in rural Egypt led to a shortage of labour that hampered the maintenance of both the *sulṭānī* and *baladī* irrigation systems and drastically diminished agricultural production, with essential staples (such as grain) becoming a scarce commodity.⁶⁵ At the same time, both al-Asadī and al-Maqrīzī witnessed multiple migratory waves of people abandoning Egypt's villages and establishing themselves in major cities, especially Cairo.⁶⁶ This rural-to-urban migration was a phenomenon that not only changed the configuration of the city, where tenement houses for poor people (the *ḥawsh*) became more prominent, but also changed the socio-economic situation of the villages that had been depopulated.⁶⁷ Al-Asadī explained that the decay of the irrigation system led to upheaval among the Arab tribes (*al-'urbān*) that had previously been agricultural workers, and as a consequence of this upheaval, those people with power and money took possession of rural lands while those with no means were forced to flee.⁶⁸ When discussing this social and economic upheaval, al-Asadī seems to be referring to the Arab tribes settled in rural villages and devoted to cultivating cereals, for their agricultural production depended on the seasonal inundation of the Nile and the irrigation systems that fed their land. As Yossef Rapoport remarked, these Arab tribes were also the only part of the rural population that could bear arms, so they could use violence to seize power.⁶⁹ Indeed, the power of some Arab families controlling the resources in rural areas increased so

^{64.} Jean-Claude Garcin, "The Regime of the Circassian Mamlūks," in *The Cambridge History of Egypt I*, ed. Carl Petry (Cambridge University Press, 1998), 308. Garcin lists a succession of epidemics in 1388-9, 1397-8, 1403-7, 1410-11, 1415-19, 1429-30, 1438-39, 1444-9, and 1455; plus others from the second half of the ninth/fifteenth century to the end of the Mamlūk period in 1459-60, 1468-9, 1476-7, 1492, 1498, 1504-5 and 1513-14.

^{65.} Stuart Borsch, "Environment and Population: The Collapse of Large Irrigation Systems Reconsidered," *Comparative Studies in Society and History* 45, no. 3 (2004): 459-63.

^{66.} al-Maqrīzī, *Mamluk Economics*, 52-54; al-Asadī, *Taysīr*, 93; Garcin, "The Regime of the Circassian Mamlūks," 309; Borsch, "Environment and Population," 461.

^{67.} Garcin, "The Regime of the Circassian Mamlūks," 309; Garcin et al. *Palais et maisons du Caire. Tome I* (CNRS Éditions, 1982), 202-3.

^{68.} al-Asadī, *Taysīr*, 93-4.

^{69.} Yossef Rapoport, "Invisible Peasants, Marauding Nomads: Taxation, Tribalism, and Rebellion in Mamluk Egypt," *MSR* 8, no. 2 (2004): 10-11. Rapoport emphasizes that these Arab tribes (also indicated as *badw*) represented the majority of Egypt's rural population and included not only the descendants of the first Arab settlers in Egypt, but also part of the local population that converted to Islam and adopted a "*badw* identity" (which did not necessarily entail pastoral nomadism and could be adopted by sedentary agricultural people as well). Kitbughā's *memorandum* contains a note ordering the sultan's representative to forbid the sale of weapons to the '*urbān* and confiscate those already in their possession. Sato, *State and Rural Society*, 113. Clearly, then, these tribal insurrections already represented a threat to the Sultanate by the late seventh/thirteenth century.

much during the ninth/fifteenth century that they became the substitutes (if not the opponents) of the sultanic authorities in the provinces.⁷⁰

Indeed, the growing power of the Arab tribes corresponded to the weakening authority of the sultanic officials in the provinces along the Nile valley.⁷¹ Until the early-ninth fifteenth century, the sultan appointed each year three *amīrs* as *kāshif al-jusūr* (“inspector of the dykes”)—a practice established at the beginning of the eight/fourteenth century. These sultanic officials were in charge of overseeing the state of the *sulṭānī* dykes in the provinces and collecting the tax revenues necessary to maintain the irrigation system.⁷² Ibn Shāhīn al-Zāhirī (d. 873/1468), active in the court of Sultan al-Ashraf Barsbāy (r. 825-841/1422-1438), reports, however, that by his time these inspectors were more numerous and had lost much of their political influence.⁷³

Yet, despite this decreased political influence, sultanic officials’ abuses of power were still a problem for peasants when the *Ighātha* and *al-Taysīr* were written. Both al-Asadī and al-Maqrīzī deplored in fact the fiscal oppression of the villagers by the local governors, and the mistreatment of the local workforce. Al-Maqrīzī stated that tax levies were collected with increased frequency from already oppressed peasants, and al-Asadī condemned the violence used to force rural workers into slavery-like conditions after they had already been deprived of their financial resources. Both authors concluded that the oppression of the local communities was detrimental to the provincial irrigation system, and criticized the authorities for appropriating funds forcibly collected from farmers, rather than allocating them for the maintenance

⁷⁰ Garcin, “The Regime of the Circassian Mamlūks,” 314-6.

⁷¹ Jean Claude Garcin emphasizes how, from the second half of the eighth/fourteenth century onward, the demography crisis which followed the plague, the general impoverishment of the Nile valley, and the clashes between the Sultanate’s authorities and the Bedouins caused a shift in the axis of the Sultanate’s power. Since the Fatimid period, the Nile valley had been pivotal to the Sultanate’s power over Egypt, but beginning in the ninth/fifteenth century, the Sultanate’s focus shifted to the coastal regions around the Mediterranean. See Jean Claude Garcin, “La ‘Méditerranéisation’ de l’Empire Mamelouk sous les Sultans Bahrides,” *Rivista degli Studi Orientali* 48, no. 1/2/3/4 (1973): 109-16.

⁷² Borsch and Sabraa. “Qānūn,” 112-4; Yoshimura, “The Role of Middle and Lower Rank Military Officers,” 300-3. The three inspectors were delegated to oversee the *sulṭānī* dykes throughout Egypt: one oversaw Upper Egypt (*kāshif al-wajh al-qiblī*), one Lower Egypt (*kāshif al-wajh al-baḥrī*), and one the district of Giza (*kāshif al-jiza*). Ibn Shāhīn claims that these inspectors were selected from among the *amīrs* of a thousand (*Zubda*, 129), while al-Qalqashandī suggests that they were chosen from among the *amīrs* of forty (*umarā’ al-ṭablkhāna*). Al-Qalqashandī, *Ṣubḥ*, 4:25 and 8:221.

⁷³ Ibn Shāhīn, *Zubda*, 130.

of provincial dykes and canals.⁷⁴ While the increased number of certain officials (such as the *kāshif al-jusūr*) resulted from institutional changes within the sultanic administration, the fiscal oppression of the villagers represented instead a symptom of a radical, although non-institutionalized, transformation in courtly dynamics. Al-Maqrīzī and al-Asadī vehemently argued that the widespread practice of selling administrative positions represented one of the main causes of the “crisis” described in their texts—such practice, they suggested, led to the political ascent of unqualified individuals who, having expended considerable sums to secure their posts, resorted to fiscal extortion to recover these costs.⁷⁵ The fiscal exploitation of villages and peasants was the obvious consequence of the sale of administrative posts, which especially from the ninth/fifteenth century onwards became a consistently adopted practice at court. Toru Miura has argued that the selling of official posts emerged as a courtly fiscal response to the economic challenges marking the end of the eighth/fourteenth century, and became a standard practice and an indispensable source of funds for the sultanic administration from the ninth/fifteenth century onwards.⁷⁶ The creation of this source of income may be part of the “relative growth...in the financial means available to the sultans” which Jean-Claude Garcin indicated as one of the large-scale transformations the Sultanate underwent from Sultan Barqūq’s reigns (784-791/1382-1389 and 792-801/1390-1399) onwards.⁷⁷

While these transformations should not be reductively explained as a “crisis” or “decline” because they represented different aspects of broader and complex socio-economic dynamics,⁷⁸ it is clear that they corresponded to the Sultanate’s increasing disinterest in both managing the *sultānī* irrigation system and investing the funds needed to maintain its dykes and canals. Only a few cases of (not always successful) sultanic interventions into repairing the *sultānī* irrigation system were recorded in the ninth/fifteenth century. Al-Ashraf Qāytbāy (r. 872-901/1468-1496), for instance, financed repair works for the *qanāṭir* of the Giza district in 877/1472. During these repairs, thousands of workers were forcibly conscripted and placed under the

⁷⁴. al-Maqrīzī, *Mamluk Economics*, 52-4; al-Asadī, *Taysīr*, 93. This kind of dynamic is also attested in much later periods. Ibn Iyās (d. 930/1523), for instance, reports that in 918/1512 the *kushshāf* of Gharbiyya and Sharqiyya violently extorted money for the *himāya* from the local farmers. Ibn Iyās, *Badā’i’ al-zuhūr fī waqā’i’ al-duhūr*, ed. M. Muṣṭafā (Franz Steiner Verlag, 1960-1975), 4:262; Meloy, “The Privatization of Protection,” 205.

⁷⁵. al-Maqrīzī, *Mamluk Economics*, 52; al-Asadī, *Taysīr*, 95-6; Loiseau, *Maison*, 192.

⁷⁶. Miura, “Administrative Networks,” 42-8. John Meloy objects to Miura’s conclusion that the sale of offices was “institutionalized”, but he recognizes this form of systematized *himāya* (protection) as a key feature of the Mamlūk Sultanate from the ninth/fifteenth century onwards. Meloy, “The Privatization of Protection,” 208.

⁷⁷. Garcin, “The regime of the Circassian Mamlūks,” 299.

⁷⁸. Walker, “Sowing the Seeds,” 173.

supervision of the *amīr* and *atābak al-ʿasākīr* (commander of the army) Azbak min Ṭuṭukh (d. 904/1498).⁷⁹ The same sultan invested in maintaining these structures in Giza also in 883/1479, and again in 896/1491.⁸⁰ Overall, however, the *sulṭānī* irrigation system throughout the Nile valley became less of an urgent matter for a Sultanate that, from the beginning of ninth/fifteenth century onwards, focused on the Mediterranean coastal regions, where its lucrative trade monopolies concentrated.⁸¹

This brief overview of the organization and development of the *sulṭānī* irrigation system during the Mamlūk period cannot do justice to the system's long history and importance to the Sultanate's finances, but this overview was necessary to introduce the following case studies of sultanī water projects around Cairo. The case of the provincial irrigation system shows that the political configuration established in mid-seventh/thirteenth-century Egypt inherited long-lived water management practices based on the cooperation of sultanī officials and local communities. It also reveals that the sultans' institutional commitment to irrigation system maintenance stemmed essentially from the critical role of agricultural production in generating *kharāj* tax revenues. When environmental and socio-political changes transformed the configuration of the Sultanate on the eve of the ninth/fifteenth century, the state of the irrigation system was also affected. The decreased availability of manpower, the clashes between the Arab tribes and sultanī authorities, and the Sultanate's growing use of revenue sources alternative to the *kharāj* disrupted the traditional relationship between the local communities and the sultanī administration. The institutional apparatus that governed the *sulṭānī* irrigation system remained in place, but its concrete capacity in maintaining the irrigation system appears to have significantly diminished. This goes against Levanoni's claim that the absence of specific bureaucratic institutions jeopardized the development of water management in Mamlūk Cairo.⁸² Clearly, the existence of apposite water-managing institutions alone could not ensure the effective functioning of a water system that relied on the collaborative efforts of multiple socio-economic agents.

⁷⁹ Ibn al-Ṣayrafī, *Inbāʾ al-Ḥaṣr fī Abnāʾ al-ʿAṣr*, ed. Hasan Habashi, (Haiʾa al-miṣriyya al-ʿamma li-l-kitāb, 2002), 483. These repair works were partially unsuccessful because the Nile's rise capsized the structures (*kullu-mā zāda al-baḥr itlaḥḥa mā ṣana ʿūhu*). The importance of Azbak min Ṭuṭukh during Qāyṭbāy's reign will be discussed in the next chapter.

⁸⁰ Ibn Iyās, *Badāʾiʿ*, 3:150 and 277-8. In both cases, Azbak min Ṭuṭukh was entrusted to supervise the work.

⁸¹ Garcin, "La 'Méditerranéisation'," 110-11; Apellániz, *Pouvoir et Finance*, 42. Apellániz emphasizes how the ninth/fifteenth century was marked by a gradual "commercialization", which implied the Sultanate's growing participation in lucrative trades and the emergence of a new group of merchants at the Sultan's service.

⁸² Levanoni, "Urban Water Management," 272.

1.2 Managing the Nile in Cairo: Power Displays, Financial Strategies, and Ineffective Solutions

1.2.1 Continuation Is Political: The Takhliq al-Miqyās and the Faṭḥ al-Khalīj as Inherited Manifestations of Sovereignty

As the seat of power, Cairo played a significant role in the management of Egypt's irrigation system: the Nile's water level was monitored in the capital, its dyke was the first to be opened each plenitude, and the Sultanic orders to open the dykes in the provinces were issued there. By the mid-seventh/thirteenth century, Cairo's urban space stretched far north of Fuṣṭāṭ, but the heart of the Nile economy remained confined to a small area in front of the first Islamic capital of Egypt, specifically between the southern end of al-Rawḍa Island and the Great Khalīj inlet on the Nile's eastern shore, an area that contained the Cairo Nilometer (*miqyās al-Nīl*) and the dyke closing Cairo's main canal. Monitoring the Nilometer and opening the Great Khalīj represented the sultans' core responsibilities in Cairo's water system, and these responsibilities were intertwined with the Nilotic traditions inherited from previous regimes.

The first nilometer on al-Rawḍa was built during the Umayyad period, but devices used to measure the Nile's water level already existed in other locations before the Umayyad period.⁸³ Al-Rawḍa was selected as an installation site for a new nilometer as soon as 92/711, during the caliphate of al-Walīd I (r. 86-96/705-715), and a second nilometer was built there in 97/715 by al-Walīd's successor, Sulayman ibn 'Abd al-Malik (r. 96-99/715-717).⁸⁴ However, the Nilometer known as *miqyās al-hāshimī* ("the Hashemite Nilometer"), which was used as the main device for measuring the Nile's water level throughout the Mamlūk period, dates from the caliphate of the Abbasid al-Mutawakkil (r. 232-247/847-861) and was built on the remains of the Umayyad Nilometer of 97/715.⁸⁵ The structure (part of which still exists) consists of an octagonal, graduated column, vertically divided into 22 cubits (*dhirā'a*) and a total of 576 fingers (*iṣba'*).⁸⁶ The column is situated in the middle of a well-staircase, and the combination of these two elements (the well and the column) is a hybrid design based

^{83.} al-Maqrīzī, *Khiṭaṭ*, 1:108; al-Suyūṭī, *Kawkab al-rawḍa fī tārikh al-Nīl wa-jazīrat al-Rawḍa*, ed. Muhammad al-Shishtawi (Dār al-Afāq al-'Arabiyya, 2002), 146; Popper, *The Cairo Nilometer*, 5-15; Heba Mostafa, "The Nile as Nexus. The Nilometer at al-Rawḍa Island between Veneration and Mediation is Medieval Islamic Egypt," in *The Nile Delta. Histories from Antiquities to the Modern Period*, ed. Katherine Blouin (Cambridge University Press, 2024), 431.

^{84.} al-Suyūṭī, *Kawkab*, 148; Popper, *The Cairo Nilometer*, 16-19.

^{85.} al-Suyūṭī, *Kawkab*, 148; Mostafa, "The Nile as Nexus," 434. The term "Hashemite" refers to the tribe of the Abbasid dynasty.

^{86.} al-Maqrīzī, *Khiṭaṭ*, 1:111. Al-Maqrīzī states that the first 12 cubits were divided in 28 equal fingers each, while the remaining ones were divided in 24 equal fingers each.

on two different types of late-Antique nilometers.⁸⁷ The construction of the Abbasid Nilometer took place in 247/861 under Yazīd ibn ‘Abd Allāh (in office: 242-253/856-867), and its construction was entrusted to the engineer (*muhandis*) and astronomer Muḥammad ibn Kathīr al-Farghānī, who was summoned from Irāq to undertake the project.⁸⁸ Yazīd ibn ‘Abd Allāh also appointed as *ṣāhib al-miqyās* (guardian of the Nilometer) the Iraqī Abū al-Raddād, from Basra, who became the progenitor of a dynasty of Nilometer attendants. Each subsequent *ṣāhib al-miqyās* assumed the symbolic name Ibn Abī al-Raddād (“son of Abū al-Raddād”), signifying their descent from the original officeholder.⁸⁹ The *ṣāhib al-miqyās* announced the plenitude when the Nile’s water level reached the sixteenth cubit of the Nilometer’s column, a task that held immense economic and political significance since accurate calculations of staple food prices and tax revenues could only be made after determining the precise level of the annual Nile rise. Each year, the Nile plenitude was announced by hanging a drape at the window of the Nilometer that faced Fuṣṭāṭ. The colour of the drape—black under the Abbasids and yellow during the Mamlūk period—represented the official colour of the power in charge.⁹⁰ The role the Nilometer played in the economy of Egypt was so great that the country’s leader maintained strong control over it and sometimes changed how the Nilometer announced the Nile’s water levels to protect their power. For example, in 362/973, to prevent commercial instability caused by a discontinuous rise in the Nile’s water level, the Fatimid Caliph al-Mu‘izz (r. 341-365/953-975) prohibited the *ṣāhib al-miqyās* from publicly announcing the Nile’s level, instead instructing him to report this information exclusively to the caliph or the *wazīr* until the plenitude reached its peak.⁹¹

⁸⁷. Mostafa, “The Nile as Nexus,” 433.

⁸⁸. al-Suyūṭī, *Kawkab*, 148. Al-Farghānī was also responsible for the (unsuccessful) Ja‘farī canal (*nahr al-Ja‘farī*) project in Samarra, and he held a prestigious position at the Abbasid court before being summoned to Egypt to construct the Nilometer. Mostafa, “The Nile as Nexus,” 443.

⁸⁹. al-Suyūṭī, *Kawkab*, 148. Al-Suyūṭī claims that both al-Farghānī and Abū al-Raddād were summoned to Egypt from Iraq; however, Popper emphasizes the existence of traditions which identified both these persons as Copts. Popper, *The Cairo Nilometer*, 25 and 58. The *ṣāhib al-miqyās* is also indicated in the sources as *mutawallī* or *amin al-miqyās*, *qāḍī al-baḥr* (“qadi of the Nile”), *qayyās* (“measurer”), or *munāḍī* (“announcer”).

⁹⁰. al-Suyūṭī, *Kawkab*, 146; Ibrāhīm ibn Muḥammad Ibn Duqmāq, *Al-Intiṣār li-Wāsiṭat ‘Iqd al-Amṣār* (Būlāq, 1893) 4:114. On the use of yellow as the colour of Mamlūk royalty, see: Karl Stowasser, “Manners and Customs at the Mamluk Court,” *Muqarnas* 2 (1984): 19; Boaz Shoshan, *Popular Culture in Medieval Cairo* (Cambridge University Press, 1993), 74.

⁹¹. al-Maqrīzī, *Khīṭaṭ*, 1:114-15; al-Qalqashandī, *Ṣubḥ*, 3:516; Popper, *The Cairo Nilometer*, 59; Paula Sanders, *Ritual, Politics, and the City in Fatimid Cairo* (SUNY Press, 1994), 99-100. Al-Maqrīzī praises al-Mu‘izz’s decree as a wise political strategy (*min aḥsan al-siyāsāt*) that would avert a shortage of supply caused by the people who had hoarded staples when prices had been expected to raise.

Under the Fatimids, the Nilometer of al-Rawḍa became the object of particular political and cultural attention for the rulers. Large funds for the maintenance of this Nilometer were invested already by Aḥmad ibn Ṭūlūn in 266/879, but only under the Fatimids, after the mid fifth/eleventh century, the structure became the stage of a ritualized ceremony, the *takhliq al-miqyās* (“the anointment of the Nilometer”).⁹² The ceremony, held the day after the official announcement of the Nile’s plenitude, was presided over by the Fatimid Caliph and his deputies and started with a procession from the Fatimid city to the Nilometer. Once at the Nilometer, the Caliph performed two *rak‘as* (the sequence of movements in Muslim prayer) before handing a cup filled with a mixture of saffron and musk to the secretary of the Treasury (the *wakīl bayt al-māl*). The secretary then handed the cup to the *ṣāhib al-miqyās*, who jumped into the well-staircase of the Nilometer fully clothed and anointed the column with the contents of the cup.⁹³ The day following this ritual, the *ṣāhib al-miqyās* was bestowed with a robe of honour (*khil‘a*) and offered a substantial cash reward.⁹⁴ The *takhliq*, which likely originated from pre-Islamic ritualistic practices and exhibited parallels with the worship of relics, remained an important Nilotic festivity throughout the Mamlūk period, although over time its ceremonial became less rigid.⁹⁵

Along with the *takhliq al-miqyās*, another Nilotic ceremony connected with the plenitude was maintained during the Mamlūk period: the opening of the Great Khalīj (*fath al-khalīj*). This ceremony corresponded with the yearly breaking of the dyke (*kasr al-sadd*) that closed the inlet of the Great Khalīj (the Khalīj al-Kabīr, also called Khalīj al-Miṣrī or Khalīj al-Ḥākimī). This pre-Islamic canal was reopened during the reign of ‘Umar ibn al-Khaṭṭāb (r. 13-23/634-644) following the conquest of Egypt in 23/643, and since that time it had remained the most important canal running near the Islamic capital.⁹⁶ The opening of the Great Khalīj typically occurred a few days after the plenitude was officially announced, and it was a key event not only for the

^{92.} Popper, *The Cairo Nilometer*, 25. For the dating of the *takhliq al-miqyās*, see: Sanders, *Ritual, Politics, and the City*, 114-17. Sanders argues that there was no such ceremony before 441/1049, and that it might have been introduced between 485/1092 and 516/1122.

^{93.} al-Qalqashandī, *Ṣubḥ*, 3:516-17; al-Nuwayrī, *Nihāya*, 1:246; Sanders, *Ritual, Politics, and the City*, 113; Popper, *The Cairo Nilometer*, 71-3; Shoshan, *Popular Culture*, 73.

^{94.} al-Qalqashandī, *Ṣubḥ*, 3:517. Al-Qalqashandī states that the cash prize consisted of five bags (*akiyās*), each one filled with 500 silver *dirhams*.

^{95.} Ibn Duqmāq, *al-Intiṣār*, 4:114-15; Popper, *The Cairo Nilometer*, 72-3; Mostafa, “The Nile as Nexus,” 445.

^{96.} al-Maqrizī, *Khiṭaṭ*, 1:135. In the early Islamic period, this canal was also called Khalīj amīr al-mu‘minin (“Canal of the Commander of the Faithful”) after Caliph ‘Umar ibn al-Khaṭṭāb. As mentioned in the introduction, this canal ran north-east of Cairo. The Roman and early-Islamic canal connected Miṣr/Fuṣṭāṭ to the Red Sea, but in an attempt to repress an anti-Abbasid rebellion, this connection was cut at the beginning of the Abbasid period to prevent Egypt’s food supply from reaching the Ḥijāz. See Cooper, *The Medieval Nile*, 96-7.

areas crossed by this canal but also for the entire region because it signalled the start of the sequential openings of Egypt's provincial irrigation canals. The *tadhkira* written for Kitbughā lists the maintenance of this Khalij (*khalij al-qāhira*) as among the duties that by “custom” (*‘āda*) fell under the direct responsibility of the sultan or his representative.⁹⁷ The Great Khalij thus synecdochally represented the entire *sulṭāni* irrigation system, and Egypt's leaders had long played an important, if largely symbolic, role in its annual opening.

A royal procession for the *fatḥ al-khalij* was introduced in the early Fatimid period, thus existed even before the *takhliq al-miqyās* ritual was established. Al-Mu‘izz, the first Fatimid Caliph to rule over Egypt, led a grand procession to open the dyke, although at the time it was probably not the Khalij al-Kabīr dyke but that of Khalij Banī Wā’il which ran south of Fuṣṭāṭ. Paula Sanders argues that, by participating in the opening of this canal, the Fatimid Caliph intended to demonstrate that he was in control of the irrigation system and of Egypt's resources at large.⁹⁸ The Persian traveller Nāṣir-i Khusraw (d. circa 470/1077), who visited Egypt around 437/1045 under the Caliphate of the Fatimid al-Mustaṣṣir (r. 427/1036–487/1094), described the *fatḥ al-khalij* ceremony in his travelogue (the *Safarnāma*). In his account, this traveller depicts an enormous parade with “ten thousand horses with gold saddles and bridles and jewel-studded reins”, as well as “many camels and mules with handsome panniers and howdahs, all studded with gold and jewels” and coverings “sewn with pearls”. Nāṣir-i Khusraw also mentions that an enormous amount of the Caliph's soldiers were standing “in groups and battalions” at the ceremony; that there was a “contingent of princes from all over the world” and “people from other ranks and stations”; and, finally, that the Caliph appeared as “a well-built, clean shaven youth with cropped hair”, accompanied by the bearer of an “extremely ornate” parasol.⁹⁹ The grandiose procession Nāṣir-i Khusraw describes in his travelogue served as a powerful display of the Caliph's power, wealth, authority, and legitimacy—even the bejewelled parasol, or *shamsa*, held above the Caliph's head was a royal insignia used by the Fatimids at the time.¹⁰⁰ Even though Nāṣir-i Khusraw's vivid description is perhaps exaggerated to some extent, it nonetheless reveals the purpose of the *fatḥ al-khalij* procession: to awe and impress onlookers with a dazzling display of the ruler's power and authority.

⁹⁷ Ibn al-Furāt, *Ta'rikh*, 7:198; Sato, *State and Rural Society*, 111; Fernandes, “On conducting the Affairs,” 85. Sanders, *Ritual, Politics, and the City*, 102.

⁹⁹ Nāṣir-i Khusraw, *Nāṣer-e Khosraw's Book of Travels*, ed. and trans. Wheeler McIntosh Thackston (Bibliotheca Persica, 1986), 48–50.

¹⁰⁰ H. Halm, “Shamsa,” in *Encyclopaedia of Islam New Edition Online (EI-2 English)*, ed. P. Bearman (Brill, 2012) doi: https://doi.org/10.1163/1573-3912_islam_SIM_6814.

During the Ayyūbid and the Mamlūk periods, both the *takhliq al-miqyās* and *fath al-khalij* remained key socio-political events connected to the annual Nile plenitude.¹⁰¹ In the chancery manual of al-Qalqashandī, the *rukūb* (ride) for the anointment of the Nilometer and the opening of the *khalij* are treated as a single event within a section dedicated to the sultan's "appearances" (*hay'āt*) in the organization of the reign (*fī tartīb al-mulk*).¹⁰² Al-Qalqashandī, who in the same work described the solemn *takhliq al-miqyās* and the *fath al-khalij* ceremonies of the Fatimid court, specified that the sultans of his time did not follow a rigid schedule for the annual parade for the Nilometer's anointment and the breaking of the dyke, but initiated these ceremonies "at any time" (*fī ayy waqt*) after the guardian of the Nilometer announced that the plenitude had been reached.¹⁰³ During these ceremonies, al-Qalqashandī further notes, it was not customary (*lam tajri al-'āda*) for the sultans to ride "with the canopy or with a retinue of cavalry or with a cortege," as was the custom in parades at the hippodrome (*maydān*) and during the *'īdayn* (the two Muslim holidays). Rather, the sultan's parade for the *takhliq al-miqyās* and *fath al-khalij* only involved the presence of banners (*sanājiq*), halberdiers (*al-ṭabardāriyya*), and heralds (*al-jāwishiyya*).¹⁰⁴ Moreover, while under the Fatimids the rituals for the *takhliq al-miqyās* and *fath al-khalij* were spread over two days, by the ninth/fifteenth century sultans attended both ceremonies on the same day, presiding over both the Nilometer's anointment and the breaking of the dyke from their embellished boat (the *dhahabiyya*).¹⁰⁵ Regarding popular participation, sources spanning the Fatimid and the Mamlūk periods, as well as early-modern and modern accounts, consistently describe large crowds attending these events. Until the nineteenth century, in fact, the *fath al-khalij* likely constituted the largest annual festival in Cairo.¹⁰⁶

^{101.} While it is not in this chapter's scope to delve into the significance of these events during the Ayyūbid period, it is worth mentioning that in 636/1239, the Ayyūbid Sultan al-Malik al-'Ādil II (r. 635-637/1238-1240) left the Citadel exclusively to participate in the Canal's opening despite his safety being threatened by an *amīr* plot against him. Al-Nuwayrī, *Nihāya*, 29:164. His attendance on that occasion is noteworthy because Ayyūbid Sultans did not regularly attend Nilotic ceremonies. Popper, *The Cairo Nilometer*, 86.

^{102.} al-Qalqashandī, *Ṣubḥ*, 4:47-8.

^{103.} al-Qalqashandī, *Ṣubḥ*, 4: 47.

^{104.} al-Qalqashandī, *Ṣubḥ*, 4:47. The *ṭabardāriyya* and the *jāwishiya* were also present during the accession ceremonies of new Sultans. Stowasser, "Manners and Customs," 16.

^{105.} al-Qalqashandī, *Ṣubḥ*, 4:48.

^{106.} al-Qalqashandī, *Ṣubḥ*, 4:48; Ibn Duqmāq, *al-Intiṣār*, 115; al-Maqrīzī, *Khīṭaṭ*, 2:441; al-Suyūṭī, *Kawkab*, 162 (emphasizes the importance of the *fath al-khalij* for the Fatimid court based on various sources), 168 (mentions the opening of the Canal under the Ayyūbids); Shoshan, *Popular Culture*, 72-4. British orientalist Edward Lane (1801-1876) described the celebrations of the Canal opening in the Modern Era. Edward Lane, *An Account of the Manners and Customs of the Modern Egyptians* (AUC Press, 2003), 493 (although in the modern period the opening of the Canal became unlinked from the date of the plenitude); Agnieszka Dobrowolska and Jarosław Dobrowolsky, *The Sultan's Fountain. An imperial Story of Cairo, Istanbul and Amsterdam* (AUC press, 2011), 68; Popper, *The Cairo Nilometer*, 86.

Although they lacked the ceremonial dimension that they enjoyed under the Fatimids, the *fath al-khalij* and *takhliq al-miqyās* do seem to have kept a distinct political significance between the mid-seventh/thirteenth and the early tenth/sixteenth century. The presence of the *sanājiq*, the *ṭabardāriyya*, and the *jāwīshiyya* escorting the Sultans to the Nilometer and to the Khalij's dyke clearly indicates that these Nilotic ceremonies represented important courtly events and power displays. The political relevance these parades held during the Mamlūk period becomes more evident when examining the specific occasions on which sultans chose to participate. Indeed, not all the sultans who ruled Egypt between 648/1250 and 923/1517 paid the same degree of attention to this tradition. Sultan al-Manṣūr Qalāwūn (r. 678-689/1279-1290), for instance, seems to have personally attended the *takhliq al-miqyās* and *fath al-khalij* in Rabi' II 679 (August 1280).¹⁰⁷ This sultan's attendance at the events, however, is only recorded in later chronicles (e.g. Ibn al-Furāt, al-Maqrizī); while the chronicles written during Qalāwūn's reign instead focused on this ruler's 679/1280 war against the Mongols.¹⁰⁸ Considering that in 679/1280 Qalāwūn had only recently ascended to the throne, and that in the same year he left Egypt for Syria appointing his son al-Ṣāliḥ 'Alī as his representative (hence the *tadhkira* mentioned above), it is possible that his participation to the *fath al-khalij* represented a public display of his authority as actual ruler. At the same time, it is also possible that later sources emphasized the event to juxtapose Qalāwūn's commitment to the *fath al-khalij* with the less-participated attendance of later rulers to this annual festival.

Indeed, few Mamlūk rulers participated in the Nilotic ceremonies throughout the eighth/fourteenth century, choosing instead to visit the dykes at their leisure or send high ranking officials in their stead. Al-Maqrizī for example records, though without much detail, that in Rajab 755 (August 1354) Sultan al-Malik Ṣāliḥ ibn al-Nāṣir Muhammad (r. 752-755/1351-1354) rode to the *maydān* overlooking the Nile *after* the Khalij had been opened.¹⁰⁹ In Jumādā 783 (August 1381) it was not the young Sultan al-Ṣāliḥ Hajjī (r. 783-784/1382 and 791-792/1389-1390) who presided over the opening of the Khalij, but one of his high-ranking *amīrs* (*amīr kabīr*).¹¹⁰ In recounting Sultan Barqūq's participation in the *takhliq* and *fath al-khalij* in Jumādā I 785 (July 1383), al-

^{107.} Ibn al-Furāt, *Tārīkh*, 7:181-2; al-Maqrizī, *Sulūk*, 2:135. Both historians refer to this day as a participated event (*yawm mashhūd*). Al-Suyūṭī, *Kawkab*, 169.

^{108.} For instance, I could not find any mention of this event in: Baybars al-Manṣūrī. *Zubdat al-Fikra fī Tārīkh al-Hijra. al-Juz' al-Tāsi'*, ed. Zubayda Muḥammad 'Aṭā ('Ayn, 2001), 163-175 (accounts of the year 679/1280); or in Ibn Ḥabīb al-Ḥalabī, Badr al-Dīn al-Ḥasan ibn 'Umar, *Tadhkirat al-Nabīh fī Ayyām al-Manṣūr wa-Banīh*, ed. Muḥammad Amin (Maṭba'at Dār al-Kutub 1976-1986), 1:53-61.

^{109.} al-Maqrizī, *Sulūk*, 4:205.

^{110.} al-Maqrizī, *Sulūk*, 5:120. The name of the *amīr* in question is not specified. Al-Ṣāliḥ Hajjī, who was born in 774/1372, was just a child by then.

Maqrīzī remarks that Barqūq was the first Sultan to show commitment to the Nilotic ceremonies since al-Ẓāhir Baybars (r. 658–76/1260–77).¹¹¹ Indeed, Barqūq personally attended the *fath al-khalīj* also in Dhū al-Qa‘da 800 (August 1398).¹¹² Barqūq’s participation in these ceremonies can be interpreted as a display of loyalty to the long-lived custom, or *‘āda*, of Egypt’s rulers—a custom the descendants of Qalāwūn, whose dominance was ended by Barqūq, had not honoured.

However, Barqūq’s regard for these ceremonies was not shared by his successor Faraj (r. 801–815/1399–1412). During the disastrous year of 806/1403, which, as al-Maqrīzī indicates, was the beginning of the crisis due to high prices and spreading diseases, it was once again an *amīr* and not the sultan who opened the canal—and the opening took place even though the plenitude level had not been reached.¹¹³ The presiding of these ceremonies by high-ranking court officials, rather than the sultans themselves, continued after Faraj’s death: in Jumādā I 815 (August 1412), during the brief interregnum between the death of Faraj ibn Barqūq in 815/1412 and the ascent of al-Mu‘ayyad Shaykh in the same year, a group of high-ranking *amīrs* presided over the *takhliq* and *fath al-khalīj*, not the Caliph al-Musta‘īn Billāh (r. 815/1412), who had been symbolically nominated as sultan.¹¹⁴

Sultan al-Mu‘ayyad Shaykh (r. 815–824/1412–1421) serves as a noteworthy exception to the Mamlūk rulers’ propensity toward skipping or sending functionaries to the Nilotic ceremonies, for al-Mu‘ayyad Shaykh not only attended the *takhliq* and *fath al-khalīj* habitually (for instance in Rajab 822/August 1419 and Sha‘bān 823/August 1420), but also threw himself into the Nile to invoke the plenitude despite his poor health.¹¹⁵ Thus, as Julien Loiseau has underscored, al-Mu‘ayyad Shaykh paid special attention to ceremonies and displays of power,¹¹⁶ and he may have done this because he saw these ceremonies as a way to solidify his leadership. Al-Mu‘ayyad Shaykh’s

^{111.} al-Maqrīzī, *Sulūk*, 5:150.

^{112.} al-Maqrīzī, *Sulūk*, 5:417. In this case, al-Maqrīzī does not emphasize the sultan’s participation at the *fath al-khalīj*, but he inserts the information within the account of an incident that caused some tension between Barqūq and *amīr* Ulā Bāy.

^{113.} al-Maqrīzī, *Sulūk*, 6:99 and 107. Also in 694/1294, during the short reign of Kitbughā (r. 694–696/1294–1296), the Great Khalīj was opened despite an alarmingly low Nile rise. On such occasion the *fath al-khalīj*, usually a joyous event, became a day of distress for the population. See: Badr al-Dīn Maḥmūd ibn Aḥmad al-‘Aynī, *‘Iqd al-jum‘ān fī tārikh ahl al-zamān*, ed. Muḥammad Muḥammad Amīn (Dār al-Kutub, 2010), 3:275. The reign of Kitbughā was marked by a series of low Nile rises. See: al-Maqrīzī, *Mamluk Economics*, 43.

^{114.} al-Maqrīzī, *Sulūk*, 6:335. The group included *amīr majlis* Yalbughā al-Nāṣirī, *amīr silāḥ* Shāhīn al-Afram, and *amīr dawādār* Ṭughān al-Ḥasanī.

^{115.} Ibn Taghrī Birdī, *Nujūm*, 14:87; al-Maqrīzī, *Sulūk*, 7:16; Garcin, “The Regime of the Circassian Mamluks,” 313.

^{116.} Loiseau, *Maison*, 201.

ascent to power came in fact after the violent end of Barqūq's household dominance, and al-Mu'ayyad Shaykh himself had played a key role in the revolt against and assassination of Faraj ibn Barqūq.¹¹⁷ Showcasing his loyalty to long-lived customs may therefore have been al-Mu'ayyad Shaykh's way of legitimating his power after helping to overthrow his predecessor. When he came to power four decades later, al-Zāhir Khushqadam (r. 865-872/1461-1467) followed the example of his former master, al-Mu'ayyad Shaykh, in his commitment to the Nilotic ceremonies.¹¹⁸ In the meantime, al-Ashraf Barsbāy (r. 825-841/1422-1438) personally attended the *takhliq* and *fath al-khalij* for the first and only time in 833/1430, eight years after ascending to the throne,¹¹⁹ and during the Sultanate of Jaqmaq (r. 842-857/1438-1453), his young son al-Manṣūr 'Uthmān presided over the *takhliq* and *fath al-khalij* in Jaqmaq's stead more than once.¹²⁰ This may be explained by Jaqmaq's intention to pass the reins of leadership to his son: Jaqmaq abdicated the Sultanate to al-Manṣūr 'Uthmān in 857/1453,¹²¹ so it is likely that 'Uthmān's participation in the Nilotic ceremonies was intended as a way to promote the prospective ruler.

Under al-Ashraf Qāyrbāy, the powerful *atābak al-'asākir* Azbak min Ṭuṭukh, presided over the *fath al-khalij* at least twelve times, in the years 876/1471, 877/1472, 879/1474, 880/1475, 881/1476, 883/1478, 885/1480, 887/1482, 892/1487, 894/1489, 897/1492, and 900/1495.¹²² Azbak's political influence during the reign of Qāyrbāy will be discussed more thoroughly in the following chapters since his *waqf* foundation is one of the case studies examined in this thesis—for now, it suffices to say that Azbak's documented participation in the *fath al-khalij* likely makes him the person who most often presided over this Nilotic ceremony during the Mamlūk period. Azbak's consistent participation in this ceremony is explained by his prominent and stable position within Qāyrbāy's court, as well as by his pivotal role in sultanic construction

¹¹⁷ Holt, "al-Mu'ayyad Shaykh," in *Encyclopaedia of Islam New Edition Online (EI-2 English)*, ed. P. Bearman (Brill, 2012) doi: https://doi.org/10.1163/1573-3912_islam_SIM_5285; Clément Animus, *Les maîtres du jeu Pouvoir et violence politique à l'aube du sultanat mamlouk circassien (784-815/1382-1412)* (Éditions de la Sorbonne, 2019), 219-70.

¹¹⁸ Ibn Iyās, *Badā' i'*, 1.1:324. In this instance, Ibn Iyās reports a list of the Sultans who presided over these ceremonies, including al-Zāhir Baybars Barqūq, Faraj ibn Baqūq, al-Mu'ayyad Shaykh, al-Ashraf Barsbāy, and Khushqadam. The list omits Qalāwūn, but it clearly shows that direct sultanic involvement was somewhat scarce throughout the ninth/fifteenth and especially scarce in the eighth/fourteenth century. See also: Doris Behrens-Abouseif, "The North-eastern Extension of Cairo under the Mamluks," *Annales Islamologiques* 17, (1981): 168.

¹¹⁹ Ibn Taghrī Birdī, *Nujūm*, 14:346.

¹²⁰ Loiseau, *Maison*, 201.

¹²¹ Ibn Taghrī Birdī, *Nujūm*, 16:23.

¹²² Ibn Iyās, *Badā' i'*, 3:63, 76, 97, 108, 120, 146, 169, 195, 248, 267, 292, 310. Qāyrbāy ordered parts of the Nilometer to be repaired in 886/1481, but not on the occasion of the *takhliq*. See: Ibn Iyās, *Badā' i'*, 3:182; Popper, *The Cairo Nilometer*, 27.

projects.¹²³ Sultan Qāniṣawh al-Ghawrī (r. 906-922/1501-1516), the penultimate ruler of the Mamlūk period, seemed more concerned with the Nilometer and the Nilotic festivals than his predecessors, probably as part of his overall interest in using court ceremonies as representations of power.¹²⁴ In Ṣafar 917/May 1511, al-Ghawrī personally inspected the Nilometer and ordered its repair before the plenitude season.¹²⁵ Between 919/1513 and 920/1514 al-Ghawrī also built a palace with a loggia (*maqʿad*) overlooking the Nile east of the Nilometer—the same location where the drape announcing the plenitude was traditionally hung.¹²⁶ By constructing this loggia, al-Ghawrī appropriated a space symbolically linked to the rulership of Egypt, thereby implicitly asserting his strong connection to the Nilotic ceremonies.

Thus, while the *takhlīq* and *fath al-khalīj* were ceremonies with deep historical roots, the Mamlūk-era sultans' participation in these events appears to have been inconsistent. Al-Manṣūr Qalāwūn appears to have been one of the first Sultans to participate in the Nilotic ceremonies in the late seventh/thirteenth century, though later chronicles suggested that al-Zāhir Baybars was more concerned with these ceremonies than Qalāwūn.¹²⁷ Historical sources are silent regarding the continuation of sultanic participation in these Nilotic rituals under the reign of Qalāwūn's descendants in the eighth/fourteenth century, and it seems possible that high-ranking *amīrs* may have presided over the annual opening of the dyke during this time. The situation seems to have changed with the late-eighth/fourteenth century ascent of al-Zāhir Barqūq, who is presented in the sources as the ruler that revived the sultanic interest in the Nilotic traditions. From Barqūq's reign, the *takhlīq* and *fath al-khalīj*, heirs of the earlier Fatimid rituals, appear to have been performed with less rigid ceremonial rites, but they are still clearly symbolic of the sultan's court since the sultanic parades included his insignia, heralds, and halberdiers. The sultan's direct participation in these ceremonies remained somewhat discontinuous after Barqūq,

^{123.} For a comprehensive overview of Qāytbāy's reign and its relative stability see: Carl Petry, *Twilight of Majesty. The Reigns of the Mamlūk Sultans al-Ashraf Qāytbāy and Qānṣūh al-Ghawrī in Egypt* (University of Washington Press, 1993), 15-118. More will be said about Azbak's importance in Qāytbāy's court in the next chapter. See: Ibn Iyās, *Badāʾiʿ*, 3:150 on Azbak's involvement in great court-related construction projects; 3:277-8 on his involvement in the construction and repair of *qanāṭir* in the district of Giza; 3:292 on his role as *shādd* in the restoration of the Nāṣirī *maydān*; and 3:301 on his role in the restoration of the madrasa at the Manṣūrī hospital.

^{124.} Carl Petry, *Protectors or Praetorians?: The Last Mamluk Sultans and Egypt's Waning as a Great Power* (SUNY, 1994), 164. Christian Mauder has thoroughly analysed al-Ghawrī's use of court ceremonials for "reestablishing his supreme position". Mauder, *In the Sultan's Salon*, 958-982.

^{125.} Ibn Iyās, *Badāʾiʿ*, 4:212-13; Popper, *The Cairo Nilometer*, 27.

^{126.} Popper, *The Cairo Nilometer*, 27-8; Ibn Iyās (*Badāʾiʿ*, 4:384), writes about a celebration held at the palace of the *miqyās* upon its completion in Rabīʿ II 920 (June 1514); Mauder, *In the Sultan's Salon*, 934.

^{127.} al-Maqrīzī, *Sulūk*, 5:150; Ibn Iyās, *Badāʾiʿ*, 1.1:324.

but it occurred more frequently in the ninth/fifteenth century than before. In line with Julien Loiseau's argument, this increased frequency merely reflects a renewed courtly interest in demonstrations of power rather than any actual control over the *sulṭānī* irrigation system that the *takhliq* and *fath al-khalij* originally symbolized. The ninth/fifteenth-century revival of these traditions may have been motivated by sultanic desires to display a connection with past regimes in a bid to solidify their legitimacy, especially after violent disruptions that overthrew previous sultanic households, as in the cases of Barqūq and al-Mu'ayyad Shaykh. In this context, the continuation of Nilotic ceremonies takes on a distinct political function.

1.2.2 Innovation Is Personal: Great Waterworks as Courtly-Oriented Financial Enterprises

Understanding the significance of the urban water projects initiated by different Mamlūk-era sultans requires a thorough analysis of both the historical context in which these projects were undertaken and the specific goals they were intended to achieve. That some Mamlūk-era sultans were involved in the construction of large-scale urban water projects is well attested in the chronicles, and one such project, the aqueduct, still stands today. However, this section argues that the realization of these urban water projects does not, in itself, prove an institutionalized sultanic prerogative governing urban water management or the development of water facilities serving the city's water supply; and consequently, it refutes Denizeau's and Levanoni's suggestion that the sultans' neglect of urban water-related projects reflected a "relinquishment" of such a prerogative.¹²⁸ This section examines some of the major urban water projects commissioned, repaired, or altered by Mamlūk-era sultans (Fig. 2). While it acknowledges the architectural and functional significance of these projects, this section primarily investigates the underlying motivations that prompted their development, and argues that they were the byproducts of individual sultans' courtly-oriented projects rather than the outcomes of comprehensive urban water policies designed to serve Cairo's water supply.¹²⁹ Three major water projects financed by the Sultans are the object of this analysis: the creation of a pond, the Birka al-Nāṣiriyya, during the reign of Sultan al-Nāṣir Muhammad; the addition of a canal, the Khalij al-Nāṣirī, also ordered by al-Nāṣir Muhammad, to the Cairene landscape; and finally the reconstruction and enhancement of the Citadel aqueduct under both al-Nāṣir Muhammad and al-Ghawrī.

1.2.2.1 The Birka al-Nāṣiriyya: Transforming a Wasteland into a Profitable Asset

¹²⁸. Denizeau, "Conduire l'eau," 355-9; Levanoni, "Urban Water Management," 268.

¹²⁹. For a discussion on the functioning of the Cairo aqueduct see: Nasser Rabbat, *The Citadel of Cairo. A New Interpretation of Royal Mamluk Architecture* (Brill, 1995), 194-9.

It is no coincidence that all these projects bear the name of al-Nāṣir Muḥammad, a ruler whom both Mamlūk-era sources and modern scholarship consider one of the most important urban developers in Cairo's history.¹³⁰ After two brief periods of nominal rule (first between 693-694/1293-1294, and then between 698-708/1299-1309), al-Nāṣir Muḥammad effectively ruled the Sultanate for three decades, during which time he showed a keen interest in large-scale construction projects and a clear aversion towards the buildings of his non-Qalāwūnid predecessors.¹³¹ The Birka al-Nāṣiriyya is the product of one of al-Nāṣir's large building projects—the 721/1321 expansion of the *maydān al-mahārī* (the hippodrome located near the Qanāṭir al-Sibā') and the creation of an embankment (*zarība*) near the Ṭaybarsī mosque on the Nile's shores, where al-Nāṣir Muḥammad was investing in the construction of multiple facilities.¹³² The realization of these works required a large amount of clay called *iblīz*, used as construction material. A nearby area, known as Jinān al-Zuhrī, was selected for this clay extraction (*maqāṭi' yuqṭi' minhā al-ṭīn al-iblīz bi-rasm al-'amā'ir*).¹³³ The Jinān al-Zuhrī was semi-deserted land that contained only a few Christian monasteries and churches among piles of rubble, and it belonged to an earlier *waqf* foundation that was established in the third/ninth century by 'Abd al-Wahhāb al-Zuhrī (d. 210/825), the *walī al-shurṭa* (head of the police) of Miṣr, for the

^{130.} Ibn Taghrī Birdī, for instance, reports that the construction activity under al-Nāṣir was so intense that "not a cubit was left without constructions" (*fa-ṣāra lā yurā qadru dhira' illā wa-fihi binā*). Ibn Taghrī Birdī, *Nujūm*, 9:185. The historian also reports a long list of construction projects promoted by al-Nāṣir Muḥammad and his entourage in the capital as well as in the provinces. See: Ibn Taghrī Birdī, *Nujūm*, 9:178-210; Raymond, *Cairo*, 118-121; Doris Behrens-Abouseif, *Islamic Architecture in Cairo, An Introduction* (AUC Press, 1989), 82-83.

^{131.} This is clearly stated by al-Maqrīzī, who reports that al-Nāṣir was annoyed by the presence of al-Zāhir Baybars' emblem (two lions) at the Qanāṭir al-Sibā', that al-Nāṣir hated any monument built by his predecessors. Al-Maqrīzī, *Khiṭaṭ*, 3: 260-1. Historian al-Shujā'ī (d. after 756/1356) wrote a similar statement about al-Nāṣir's hatred of the aqueduct (see below).

^{132.} al-Maqrīzī, *Khiṭaṭ*, 3:291. The *maydān al-mahārī* had been built by al-Nāṣir Muḥammad the previous year, in 720/1320. It was located near the Qanāṭir al-Sibā' on the west of the Great Khalij. Al-Maqrīzī, *Khiṭaṭ*, 3:348. The Ṭaybarsī mosque had instead been built by *amīr khāzindār* Ṭaybars, founder of the *Ṭaybarsiyya* madrasa next to al-Azhar, around 707/1307. It was located on the Nile's shore between Fuṣṭāṭ and Fatimid Cairo. The area, known as *bustān al-khashshāb*, included lands that were previously inundated by the Nile but emerged due to the westward shift of the Nile's course (a phenomenon discussed in the general introduction and mentioned again later in this chapter). See: al-Maqrīzī, *Khiṭaṭ*, 4:102. In this same area, al-Nāṣir Muḥammad had built another *maydān* (the *maydān al-Nāṣiri*) after destroying, in 714/1314, the *maydān* built by al-Zāhir Baybars. See: al-Maqrīzī, *Khiṭaṭ*, 3:350. The *zarība* that al-Nāṣir Muḥammad built south of the Ṭaybarsī mosque was a large embankment upon which the Sultan built a palace, a *wikāla*, and two large apartment units (*rab'*), one of which was endowed in the *waqf* for the *khānqāh* he built in Siryāqūs, and the other of which was donated to *amīr* Baktamur al-Sāqī. See: al-Maqrīzī, *Khiṭaṭ*, 3:236.

^{133.} al-Nuwayrī, *Nihāya*, 33:7; al-Maqrīzī, *Khiṭaṭ*, 3:291.

benefit of his children.¹³⁴ Al-Nāṣir Muḥammad ordered the *wakīl* (agent) of this *waqf* to lease him the lot for a predetermined rent (*fa-amara al-sultān wakīlahu bi-isti'jāriha li-l-sultān bi-ujra ma'lūma*), thereby acquiring the right to build and invest in the area.¹³⁵ Al-Nāṣir Muḥammad intended to transform the large depression caused by the extraction of *iblīz* clay from the Jinān al-Zuhrī into a pond, the shores of which could then be developed into an urban hub by leasing them as *ḥikr* lots.¹³⁶ This plan therefore allowed al-Nasir Muhammad to financially benefit from subletting the surroundings of this pond as *ḥikr* leases, while simultaneously gaining the political support of those to whom he conceded such advantageous leases. Indeed, the scholar Shihāb al-Dīn Ahmad al-Nuwayrī (d. 733/1333) reports that al-Nāṣir Muḥammad sought to recreate the exclusive environment of the Birkat al-Fil, the pond below the Citadel where members of the Sultanate ruling groups had built their palaces and related facilities.¹³⁷ The Birkat al-Fil was also part of a *waqf* foundation, and its surroundings were leased to high-ranking *amīrs* with *ḥikr* contracts.¹³⁸

After al-Nāṣir Muḥammad had personally inspected the Jinān al-Zuhrī, the excavation of the area started in Rabī' I 721 (April 1321) under the supervision of the

^{134.} Abū Sa'īd 'Abd al-Raḥmān ibn Aḥmad al-Ṣadafī, Ibn Yūnus, *Tā'rikh Ibn Yūnus al-Ṣadafī*, ed. 'Abd al-Fattāḥ Fathī 'Abd al-Fattāḥ (Dār al-Kutub al-'Ilmiyya, 2000) 2:138-9. The historian claims to possess a copy of 'Abd al-Wahhāb al-Zuhrī's *waqf* deed. See also: Denizeau and Denoix, "Le sultan promoteur," 172-3.

^{135.} al-Nuwayrī, *Nihāya*, 33:7. Isoldi, "The *birkas* of Cairo," 371 and 376.

^{136.} The *ḥikr*, an arrangement similar to the emphyteutic lease, involved the long-term or permanent lease of dilapidated or underutilized lands for construction projects. *Ḥikr* leases represented favourable arrangements through which members of the sultan's entourage could obtain the usufruct of empty lands and invest in construction projects. Moreover, since Islamic law establishes that a *ḥikr* lessee is the legitimate owner of any construction on the rented lot, this arrangement implied that these courtly investors automatically became the owner of what they built on their *ḥikr* lots and could endow such buildings in their *waqf* foundations. Al-Maqrīzī, *Khīṭaṭ*, 3:205; G. Baer, "Ḥikr," in *Encyclopaedia of Islam New Edition Online (EI-2 English)*, ed. P. Bearman (Brill, 2012) doi: https://doi.org/10.1163/1573-3912_islam_SIM_8619; Denizeau and Denoix, "Le sultan promoteur," 175; Loiseau, *Maison*, 57; Isoldi, "The *birkas* of Cairo," 375-377. As this dissertation will demonstrate in multiple instances, *ḥikr* leases played a pivotal role in the development of Cairo's suburban areas.

^{137.} al-Nuwayrī, *Nihāya*, 33:7; Isoldi, "The *birkas* of Cairo," 376.

^{138.} Sharaf al-Dīn Yaḥyā ibn al-Maqrī ibn al-Jī'ān, *Kitāb al-Tuḥfa al-Saniyya bi-Asmā' al-Bilād al-Miṣriyya*, ed. Bernhard Moritz (Maktabat al-Kulliyāt al-Azhariyah, 1974), 6; Isoldi, "The *birkas* of Cairo," 375.

ḥājib (chamberlain).¹³⁹ Engineers measured and delimited the excavation area, and the workload was divided among the *amīrs* proportionally to their rank (*‘alā qadr marātibihim*). This distribution was based on the number of *mamlūks* under each *amir*’s command, who, along with their personal servants (*ghulām*) and other labourers, could be employed as workforce.¹⁴⁰ The *amīrs* camped with their *mamlūks* on the building site in a military fashion, under their respective bands (*ṭablaḥhānāh*) and insignia (*sanjaqa*).¹⁴¹ Employing the army to help realize large construction projects was not unprecedented—al-Ẓāhir Baybars, for instance, had employed the army to aid in the repairs of the Alexandria Canal in 664/1265.¹⁴² This solution to the need for workforce was adopted for several other projects discussed in this chapter, including the excavation of the Khalij al-Nāṣirī.¹⁴³ During the excavations of the Jinān al-Zuhrī, the army and labourers constituting the project’s workforce violently attacked the churches in the area, pillaging and destroying them as part of a larger-scale series of riots which resulted in several churches around Cairo being set on fire.¹⁴⁴ Despite these seemingly uncontrolled outbreaks of violence, however, al-Nāṣir Muḥammad’s project was completed in a short time, and the hollow created by the Jinān al-Zuhrī excavations, measuring seven *faddāns* (1 *faddān* = 6,368 square meters)¹⁴⁵, was filled with Nile water via a canal running around the hippodrome of al-Nāṣir Muḥammad. As he had planned, the sultan rented the shores of the resulting pond, the Birka al-Nāṣiriyya, as *ḥikr* lots. Al-Maqrīzī reports that these *ḥikr* lots were gradually

^{139.} al-Nuwayrī (*Nihāya*, 33:8) attests that the *amīr* entrusted to supervise these works was the *ḥājib* Rukn al-Dīn Baybars. In a recent article on al-Nāṣir’s use of the army in civil works, Muhammad Fawzi identifies this *amīr* with the *ḥājib* Rukn al-Dīn Baybars who died in Rajab 743/1342, and whose biography is reported in: Ṣalāḥ al-Dīn Khalīl ibn Aybak al-Ṣafadī, *A’yān al-‘Aṣr wa-A’wān al-Naṣr*, ed. ‘Alī Abū Zayd et al. (Dār al-Fikr 1998), 2:78–9. See: Muhammad Fawzi, “The Role of the Army in Civil Works in Egypt During Al-Nasir Muhammad Ibin Qalawun era (709–741 H/1309–1340 AD),” *al-Majalla al-Tarikhīyya al-Miṣriyya* 56, (2022): 276–7. I believe, however, that Fawzi’s identification is problematic because the *ḥājib* Rukn al-Dīn Baybars mentioned by al-Ṣafadī was imprisoned in Alexandria between 715/1315 and 735/1334–5 and, thus, could not have supervised the excavation of the pond in Cairo. The *amīr ḥājib*’s (or *ḥājib al-ḥujjāb*) involvement in the large water projects will be a recurring discussion in this chapter. While the *amīr ḥājib* did not typically have specific responsibilities for construction projects (his duties were, in general, limited to announcing foreign ambassadors and administering justice), his close relationship with the Sultan led to his being trusted to supervise courtly projects on multiple occasions. Denizeau, “Conduire l’eau,” 376–7; Loiseau, *Maison*, 428.

^{140.} al-Nuwayrī, *Nihāya*, 33:7–8; al-Maqrīzī, *Khiṭaṭ*, 3:291.

^{141.} al-Nuwayrī, *Nihāya*, 33:8.

^{142.} Fawzī, “Role of the Army,” 267–8.

^{143.} Fawzī, “Role of the Army,” 268–283.

^{144.} al-Maqrīzī, *Khiṭaṭ*, 4:440–1; al-Nuwayrī, *Nihāya*, 33:8–9.

^{145.} Walther Hinz, *Islamische Masse und Gewichte* (Brill, 1955), 65.

populated and developed by the *nās*,¹⁴⁶ a term that carries a generic meaning but, in this context as well as in the cases discussed below, it typically denotes the sultans' entourage or the social network associated with his court—thus corresponding to the *ahl al-dawla*.¹⁴⁷

The circumstances that led to the creation of the Birka al-Nāṣiriyya and its later development deserve close attention, for the pond's alleged purpose indicates it was more a product of al-Nāṣir Muḥammad's personal political and economic plan rather than an urban water project designed to serve Cairo's water supply. The location where this pond was excavated was in fact an empty suburban area between the two main urban centres of Fuṣṭāṭ/Miṣr (a few kilometres to the south) and al-Qāhira (a few kilometres to the north). Sylvie Denoix and Valentine Denizeau have claimed that the creation of this pond was part of a large-scale, unfinished urbanization project aimed at enlarging Cairo via the creation of multiple interconnected suburban hubs.¹⁴⁸ This theory aligns with André Raymond's argument that al-Nāṣir Muḥammad's construction projects were part of a broader and ambitious (yet premature) policy of urbanization of the areas west of Cairo.¹⁴⁹ However, to my view, the evidence of the chronicles does not substantiate the interpretation that the Birka al-Nāṣiriyya was part of a massive plan to expand Cairo's urban space through the connection of multiple newly-constructed suburban hubs. Certainly, as the sources clearly state, the excavation of the hollow within the Jinān al-Zuhrī was related to other construction projects al-Nāṣir Muḥammad promoted in the empty areas surrounding the capital, such as the expansion of his hippodrome and the creation of an embankment on the Nile shores where he installed commercial and residential buildings. However, transforming the hollow into a pond and distributing its surrounding areas as *ḥikr* lots, I would argue, is indicative of al-Nāṣir Muḥammad's entrepreneurial acumen than any immense urbanizing ambition. By subletting these lands as *ḥikr* lots, al-Nāṣir Muḥammad was able to financially exploit a dilapidated area belonging to an old *waqf* foundation while simultaneously benefitting from the *ḥikr* rents paid by his

^{146.} al-Maqrīzī, *Khiṭaṭ*, 3:291-2. Al-Maqrīzī adds that the quarter which flourished around the pond was eventually depopulated and fell into disrepair after the first crisis of the ninth/fifteenth century.

^{147.} Al-Maqrīzī uses the term *nās* to refer to a large group of people from the sultan's entourage who either held official positions or simply benefitted from the socio-economic privileges of being associated with the court. On the encompassing character of this term, and specifically for a discussion of the term *awlād al-nās*, see: Anna Kollatz "Introduction: On to New Horizons—Tackling the Mamluks' Descendants," in *Mamluk Descendants: In search for the awlād al-nās*, ed. Anna Kollatz (Bonn University Press, 2022), 11. For a discussion on this network see: Hagemann, Mewes, and Verkinderen, "Studying Elites," 17–44.

^{148.} Denizeau, "Conduire l'eau," 175; Denizeau and Denoix, "Le sultan promoteur," 188–9.

^{149.} Raymond, *Cairo*, 137. Raymond even stated that "al-Nāṣir's construction and urbanization policies exhibit megalomania".

own entourage. The Birka al-Nāṣiriyya was simply a well-exploited byproduct of a series of lucrative construction projects undertaken by Sultan al-Nāṣir Muḥammad—primarily for his own financial gain and that of his court.

1.2.2.2 *The Khalīj al-Nāṣirī: Carrying Supplies to the Sultan's New District*

Shortly after the creation of the Birka al-Nāṣiriyya, al-Nāṣir Muḥammad embarked on a new project which resulted in the addition of a large canal, the Khalīj al-Nāṣirī, to the landscape surrounding the capital. Like the Birka al-Nāṣiriyya, the Khalīj al-Nāṣirī also represented a successful byproduct of a much larger courtly project: the development of a new sultanic retreat district in Siryāqūs, about 20 kilometres north of al-Qāhira, where in 723/1323 al-Nāṣir Muḥammad began the construction of a Sufi Lodge (*khānqāh*) and of other facilities.¹⁵⁰ As early as 724/1324, the Sultan ordered the enlargement of a pre-existing canal, the Khalīj al-Dhakar, that ran north-west of al-Qāhira, which he intended to connect to the Great Khalīj to increase the water intake of the latter, possibly with the aim of connecting Siryāqūs to the Nile, thus facilitating the transport of supplies into the new district.¹⁵¹ The operations on the Khalīj al-Dhakar started towards the end of Jumādā II 724 (May-June 1324), and the workload was apportioned among the *amīrs*, each of whom financially contributed to the associated expenses and utilized their recruits (*al-jund*) as the primary labour force for the excavations.¹⁵² However, these excavations appear to have been conducted without adequate planning. The bed of the Khalīj al-Dhakar was excavated to such a depth that groundwater began to seep in at various points. Moreover, during the Nile's annual flood, when the dyke separating the canal from the river was opened, the influx of water was so forceful that it overwhelmed the bridges spanning the canal and threatened to inundate Cairo.¹⁵³ Following these disastrous operations on the Khalīj al-Dhakar, al-Nāṣir Muḥammad decided to dig a new canal connecting

^{150.} al-Maqrizī, *Khīṭaṭ*, 4:293-5; Fernandes, *The Evolution of a Sufi Institution*, 29-32.

^{151.} A canal in that location was first created during the reign of Kāfūr al-Ikhshid (r.355-357/966-968) as an extension to the Fumm al-Khawr, a water inlet located in al-Maqs. During the Fatimid period, the area remained a suburban, courtly leisure ground, and the canal remained at its modest dimensions until it was enlarged during the reign of the Ayyūbid al-Malik al-Kāmil (r. 615-635/1218-1238). During the Sultanate of al-Zāhir Baybars, the canal received maintenance work and was eventually named after one of al-Zāhir Baybars's *amīrs*, Shams al-Dīn al-Dhakar al-Karakī. Al-Maqrizī, *Khīṭaṭ*, 3:257; Ibn Taghrī Birdī, *Nujūm*, 4:45.

^{152.} al-Nuwayrī, *Nihāya*, 33:52. This author states that the *amīrs* invested a lot of their own money in the works on the Khalīj al-Dhakar.

^{153.} al-Nuwayrī, *Nihāya*, 33:52; al-Maqrizī, *Khīṭaṭ*, 3:257.

Siryāqūs to the Nile. The intake of the Khalīj al-Dhakar was then closed and this canal eventually abandoned.¹⁵⁴

A few months later, al-Nāṣir started the excavation of the new canal to transport supplies to Siryāqūs (*li-ḥaml mā yaḥtāj ilayhi min al-ghilāl wa-ghayrihā*).¹⁵⁵ This time, the *na'ib al-salṭana* Sayf al-Din Arghūn (d. 731/1330) was entrusted with the task of planning the course of the new canal and supervising its construction. Escorted by a group of engineers, Arghūn first examined the Nile's shores and identified a suitable inlet point at the *mawrida al-ballāt* (where the Birka al-Nāṣiriyya's inlet was also located).¹⁵⁶ After this examination, Arghūn designed the route of the new canal from the nearby *maydān al-Zāhirī*, through the Birkat Qarmūt, between al-Lūq and al-Maqs, and then through the outskirt of Bāb al-Baḥr and the area north-west of Cairo called *Arḍ al-Ṭibala*, finally connecting the new canal's route with the Great Khalīj north of Siryāqūs.¹⁵⁷ When the plan for this project was presented to al-Nāṣir Muhammad, he ordered the *amīrs* to mobilize the peasants from the villages within their respective *iqṭā'* lands, in addition to asking the governors of the provinces to send labourers from the areas under their jurisdiction. A few days later, when the workers were gathered in Cairo, *amīr* Arghūn, assisted by the engineers and the chamberlains (*ḥujjāb*), measured the length of the track to be excavated and distributed the workload among the *amīrs*. The excavations started at the beginning of Jumādā I 725 (April 1325). The properties located along the trajectory of the new canal were demolished— some property owners (*arbāb al-amlāk*) received compensation from the Sultan's coffers (*akhadha thamanahu min māl al-sultān*) while others demolished their structures and relocated the debris themselves (*wa-minhum man hadama dārahu wa-naqala anqāḍaha*).¹⁵⁸

The canal excavations were completed by the end of the following month, and by the time of the plenitude that year, the newly created Khalīj al-Nāṣirī was filled with Nile water. Ships transporting grains and other goods were able to navigate the canal up to Siryāqūs as planned,¹⁵⁹ and the shores of the Khalīj al-Nāṣirī became a

^{154.} al-Nuwayrī, *Nihāya*, 33:135; al-Maqrīzī, *Khiṭaṭ*, 3:257. Al-Maqrīzī states that by the first half of the ninth/fifteenth century, only a few sections of the Khalīj al-Dhakar had survived and were covered with reeds. He recalls as well that and acquaintance of his, the chief architect (*shaykh al-mi'mār*) Ḥusām al-Dīn Ḥusayn ibn 'Umar al-Shahrazūrī, had shown him the remaining sections of the Khalīj al-Dhakar, in which he had swum a few times.

^{155.} al-Maqrīzī, *Khiṭaṭ*, 3:258.

^{156.} al-Maqrīzī, *Khiṭaṭ*, 3:258. Here al-Maqrīzī explains that the *mawrida al-ballāt* was the lowest point on the Nile's shores, making it an ideal point for the inlet of the new canal and pond.

^{157.} al-Maqrīzī, *Khiṭaṭ*, 3:258; al-Nuwayrī, *Nihāya*, 33:135.

^{158.} al-Maqrīzī, *Khiṭaṭ*, 3:258.

^{159.} al-Maqrīzī, *Khiṭaṭ*, 3:258-9.

coveted residential area for the *nās*, who made haste to buy land lots located along the new canal from the *bayt al-māl*. Not long after its creation, the Khalīj al-Nāṣirī was surrounded by the residential palaces of this privileged social group, which financed the construction of bridges across the canal and the installation of waterwheels (*sawāqī*) along its shores.¹⁶⁰ Together with their residences, the *nās* constructed also hammams, mosques, and markets in the area. In the following years, the shores of the Khalīj al-Nāṣirī became a place for feasts, promenades, boat trips, and leisure activities, remaining such until the political unrest which, in 778/1377, led to the assassination of Sultan al-Ashraf Shaʿbān (r. 764-778/1363-1377).¹⁶¹

In many ways, the construction of the Khalīj al-Nāṣirī's mirrors that of the Birka al-Nāṣiriyya and both similarly served the economic ends of al-Nāṣir Muhammad and his court more than they served the city's water supply. Both waterworks were initiated by the Sultan, and both were realized with the contribution of high-ranking *amīrs* and the use of their *mamlūks* as a labour force. However, while local labourers worked with the army to excavate the Birka al-Nāṣiriyya, the additional workforce required to dig the Khalīj al-Nāṣirī was gathered from the villages within the *amīrs'* *iqṭā'* lots. This indicates that the *amīrs* exploited the peasants of their *iqṭā'* lots as resources at their disposal, possibly benefitting also from the peasant's expertise in matters of canal digging. Despite the large-scale mobilization of workforce, the Khalīj al-Nāṣirī, like the Birka al-Nāṣiriyya, primarily served the economic interests of al-Nāṣir Muhammad. The hypothesis, formulated by André Raymond, that this canal was intended as an additional source of water supplementing the Great Khalīj, does not fully take into account the dynamics of its planning and subsequent urbanization.¹⁶² Rather, it appears that both the Birka al-Nāṣiriyya and the Khalīj al-Nāṣirī were instrumental to larger sultanī investments aimed at developing specific quarters for courtly use. In particular, the Birka al-Nāṣiriyya resulted from an opportunistic repurposing of a large excavation which had been necessary to the development of a royal *maydān* and *zarība* south of Fatimid Cairo, while the Khalīj

^{160.} al-Maqrīzī, *Khiṭaṭ*, 3:259; al-Nuwayrī, *Nihāya*, 33:135-6. The urbanization of the Khalīj al-Nāṣirī's shores also boosted the development of the area around the Birkat al-Raṭlī. Al-Nāṣir granted the pond to *amīr* Baktamur al-Ḥājib (d. 729/1329), who had been in charge of the project that connected it to the Khalīj al-Nāṣirī. Around the end of the eighth/fourteenth century, the surroundings of the Birkat al-Raṭlī were rented as *ḥikr* and became an important residential area for the courtly bureaucrats, which will be further discussed in Chapter 3. Isoldi, "The *birkas* of Cairo," 377.

^{161.} al-Maqrīzī, *Khiṭaṭ*, 3:259. The historian states that the passage of boats on the Khalīj al-Nāṣirī was forbidden after the assassination of al-Ashraf Shaʿbān. Al-Maqrīzī's description of the urbanization along the Khalīj al-Nāṣirī is likely somewhat exaggerated. It is more likely, as André Raymond has argued, that only sparse settlements were built along this canal. Raymond, *Cairo*, 127.

^{162.} Raymond, *Cairo*, 125.

al-Nāṣirī was created as a navigable waterway connecting Siryāqūs to the Nile, thus promoting the development of this royal district.

The court's disbursement of funds for the creation of these waterworks further supports their characterization as courtly investments. Al-Nuwayrī remarks that the *amīrs* partially covered the losses for the unsuccessful excavation works on the Khalīj al-Dhakar, and al-Maqrīzī states that al-Nāṣir used his own funds to purchase some of the assets along the Khalīj al-Nāṣirī's trajectory. To be sure, the resources at the disposal of the court included first and foremost the tax revenues of the Sultanate, but it is significant that in these cases no special levies were collected from the population, unlike in some of the examples discussed later. This funding strategy suggests that, just like the Birka al-Nāṣiriyya, the Khalīj al-Nāṣirī was not created in response to a collective need, an assertion further supported by the fact that, also just like the Birka al-Nāṣiriyya, the Khalīj al-Nāṣirī was created in an area far from the main urban centres of al-Qāhira and Fuṣṭāṭ. The construction of new facilities along the Khalīj al-Nāṣirī commenced following the creation of the canal once the land surrounding it was distributed among the Sultan's entourage, the *nās*. This influential social group possessed not only the financial means to sponsor structures such as waterwheels, bridges, hammams, and mosques, but also the socio-political influence necessary to obtain *ḥikr* leases from the *bayt al-māl*. At the same time, redistributing the lands around the Khalīj al-Nāṣirī as *ḥikr* lots leased to the members of his entourage must have been highly profitable for al-Nāṣir Muḥammad himself.

1.2.2.3 *The Aqueduct: Bringing Water to the Citadel and the Maydān*

Of all the waterworks discussed in this section, the Citadel's aqueduct has the longest and most stratified history. First built during the Ayyūbid period, this aqueduct continued to undergo restoration and modifications until the early tenth/sixteenth century. It was not the first structure of this kind to appear around the Islamic capital of Egypt: by the mid-third/ninth century, during the reign of Aḥmad Ibn Ṭulūn (r. 254- 270/868-884), an extensive aqueduct had been constructed between the southern outskirts of Fuṣṭāṭ (specifically at al-Basātīn on the northern shores of the Birkat al-Ḥabash) and the citadel of al-Qaṭā'ī'.¹⁶³ While it is unclear exactly when this Tulunid aqueduct fell into disuse, its northern extension might have been damaged as early as the Abbasid destruction of al-Qaṭā'ī' in 292/905. However, at least one branch of the Tulunid aqueduct was apparently reused in the Fatimid period during the vizierate

¹⁶³ For a thorough (but dated) description of what remains of this aqueduct see: K. A. C. Creswell, *Early Muslim Architecture II* (Hacker Art Books, 1979), 329-32. For a historical account of the aqueduct's foundation see: Tarek Swelim, *Ibn Ṭulūn: His Lost City and Great Mosque* (AUC Press, 2015), 42-44. Swelim claims that the project was designed not only to bring water to Ibn Ṭulūn's palace and garrison, but also to the population of the area. See also: Ibn Duqmāq, *al-Intiṣār*, 4:57-8.

of al-Afdal Shāhanshāh (in office: 487-514/1094-1121), who connected the aqueduct to the mosque of al-Aṭfiḥī in the Qarāfa (the cemetery).¹⁶⁴ It is also possible that a part of the Tulunid aqueduct was reused in 607/1210 as part of a project promoted by al-Malik al-Kāmil (r. 615-635/1218-1238) to bring water to the tomb of the Imam al-Shāf'ī in the southern cemetery.¹⁶⁵ In any case, it is unlikely that the aqueduct of Ibn Ṭulūn was still functioning at the beginning of the Mamlūk period. With the establishment of the main administrative quarter at the Citadel of Salāḥ al-Dīn, a new aqueduct was added to the Cairo landscape. This massive project that would convey Nile water to the Citadel was initiated under Salāḥ al-Dīn himself, when water conduits were incorporated into the defensive wall running between Fuṣṭāṭ and the Citadel.¹⁶⁶ Al-Malik al-Kāmil expanded part of this aqueduct and connected it to the *maydān* below the Citadel. The water supply of this *maydān*, and possibly its connection to the Ayyūbid aqueduct, was renovated under al-Kāmil's successors. However, by the mid seventh/thirteenth century, the *maydān* and its associated structures were destroyed by order of Sultan Aybak al-Turkmānī (r. 648-655/1250-1257).¹⁶⁷

Some modifications were made to the Citadel's aqueduct during the reign of al-Ashraf Khalīl (r. 689-693/1290-1293), when *amīr* 'Izz al-Dīn al-Afram (d. 695/1295), acting as *shādd al-'amā'ir* (superintendent of the royal construction projects), built a new intake tower near Bāb al-Qanṭara, the southern Gate of Fuṣṭāṭ/Misr.¹⁶⁸ In 713/1313, al-Nāṣir Muḥammad started refurbishing the aqueduct, starting from the intake tower of al-Afram. Later that year, after completing the construction of a new *maydān* beneath the Citadel, al-Nāṣir Muḥammad reactivated the waterwheels of the intake tower and connected the tower to four conduits running over the Ayyūbid wall. Along the trajectory of the conduits, al-Nāṣir Muḥammad installed a reservoir-well (*ḥufra thāniya 'alā shakl bi'r*) with three waterwheels, while another reservoir-well

^{164.} al-Maqrīzī, *Khiṭaṭ*, 4:341.

^{165.} Neil D. MacKenzie, *Ayyūbid Cairo. A Topographical Study* (AUC Press, 1992), 93. Creswell, *Early Muslim Architecture*, 332.

^{166.} Rabbat, *The Citadel of Cairo*, 198; Sami Muhammad Nawwar, *al-Minshāt al-Mā'iyya bi-Miṣr mundhu al-fath al-Islāmī wa-ḥattā nihāya al-'aṣr al-mamlūkī* (Dār al-Wafā', 1999), 85. The construction of the enceinte started around 572/1176-77. MacKenzie, *Ayyūbid Cairo*, 52-3.

^{167.} Ibn 'Abd al-Zāhir, *al-Rawḍa*, 132; al-Qalqashandī, *Ṣubḥ*, 3:377-8.

^{168.} al-Nuwayrī, *Nihāya*, 32:156; Rabbat, *The Citadel of Cairo*, 196; Shams al-Dīn al-Shujā'ī, *Tārīkh al-Malik al-Nāṣir Muḥammad ibn Qalāwūn al-Ṣāliḥī wa-Awlādihi*, ed. Barbara Schäfer (Franz Steiner Verlag, 1977), 95. 'Izz al-Dīn al-Afram consistently invested in large projects in the area south of Fuṣṭāṭ, where he created large orchards, gardens, and residential complexes. al-Maqrīzī, *Khiṭaṭ*, 3:281; Doris Behrens-Abouseif, "The Mamluk City," in *The City in The Islamic World*, ed. Salma K. Jayyusi (Brill, 2008), 297; Levanoni, "Water Supply," 195; Isoldi, "The *birkas* of Cairo," 375-6. The *shādd al-'amā'ir* was the master builder in charge of military and civil engineering works, including the hydraulic constructions in Cairo. Doris Behrens-Abouseif, *Cairo of the Mamluks. A History of the Architecture and its Culture* (AUC Press, 2007), 44.

was installed beneath the Citadel.¹⁶⁹ These installations were necessary to lift water up to the Citadel, which was located much higher than the intake tower. Once at the Citadel, the aqueduct water was distributed among the various residences and facilities located therein.¹⁷⁰ Al-Nāṣir Muḥammad started further modification works on the aqueduct shortly before the end of his reign, to increase the water flow to the orchards and livestock at the Citadel.¹⁷¹ In 741/1341 he inspected the aqueduct's intake tower with a group of engineers and, as was often the case when he encountered evidence of his predecessors' patronage, became displeased when he saw al-Afram's insignia on the intake tower.¹⁷² The project al-Nāṣir Muḥammad initiated that year included the addition of an intake tower and the creation of a new canal (*khalīj*) running under the hill of al-Raṣad (south of Fuṣṭāṭ) and joining the aqueduct.¹⁷³ The project started under the supervision of the *shādd al-'amā'ir* Āqbughā min 'Abd al-Wāḥid (d. 744/1343), a high-ranking *amīr* at al-Nāṣir Muḥammad's court,¹⁷⁴ entrusted with purchasing the properties to be demolished along the trajectory of the new *khalīj*.¹⁷⁵ Following al-Nāṣir Muḥammad's death in the same year, however, the project to enlarge the aqueduct was abandoned. The newly dug canal section fell into neglect, and by the beginning of the next century, only some remnants of this project remained near the *Ribāṭ al-Athār*.¹⁷⁶

When the German traveller Arnold von Harff (d. 1505) visited Cairo towards the end of the ninth/fifteenth century, he reported seeing "many stone arches leading from the Nile to the palace" south of the Citadel, and he stated that such arches "carried lead pipes, through which the water from the Nile was conducted with masterly skill up the hill to the palace".¹⁷⁷ The aqueduct von Harff saw remained as Sultan al-Nāṣir Muḥammad left it almost two centuries earlier, for no further interventions on this structure are documented before Dhū al-Ḥijja 912 (May 1507), when Sultan al-

^{169.} al-Nuwayrī, *Nihāya*, 32:156; Rabbat, *The Citadel of Cairo*, 196.

^{170.} al-Nuwayrī, *Nihāya*, 32:156; Rabbat, *The Citadel of Cairo*, 271.

^{171.} Rabbat, *The Citadel of Cairo*, 279; al-Maqrīzī, *Khīṭaṭ*, 3:400. Al-Maqrīzī states that by 728/1328 al-Nāṣir was willing to try increasing the Citadel's water intake by constructing a long canal between the Citadel and the Nile through Helwan, but his engineers estimated that the project would be too time consuming, so it was not started.

^{172.} al-Shujā'ī, *Tārīkh*, 95.

^{173.} al-Maqrīzī, *Khīṭaṭ*, 3:400; Rabbat, *The Citadel of Cairo*, 279-80; al-Shujā'ī, *Tārīkh*, 95. For a biographical account of Āqbughā min 'Abd al-Wāḥid see: al-Ṣafadī, *A'yān al-'aṣr*, 1:548-9.

^{174.} al-Shujā'ī, *Tārīkh*, 96; Ibn Taghrī Birdī, *Nujūm*, 9:160-161.

^{175.} al-Maqrīzī, *Khīṭaṭ*, 3:401. The realization of this large project required the demolition of various assets situated along the trajectory of the new canal, and the historian al-Shujā'ī reported that nothing could prevent al-Nāṣir from carrying out this plan. Al-Shujā'ī, *Tārīkh*, 96.

^{176.} al-Maqrīzī, *Khīṭaṭ*, 3:401; Rabbat, *The Citadel of Cairo*, 280.

^{177.} Arnold von Harff, *The Pilgrimage of Arnold von Harff Knight*, trans. Malcom Letts (Hakluyt Society, 1946), 108.

Ghawrī gathered engineers to start the construction of a new branch of the aqueduct. Al-Ghawrī's project aimed at increasing the water supply of the Citadel and the *maydān* below,¹⁷⁸ and it also entailed the disruption of the "old aqueduct" (*al-majrā al-qadīma*) which ran through Miṣr (*bi-miṣr al-ʿatīqa*).¹⁷⁹ The historian Ibn Iyās (d. 930/1523) reported that the engineers relocated the aqueduct's starting point to the *mawrida al-khulafāʾ*, north of Fuṣṭāṭ, near the mouth of the Great Khaliḡ. The intake tower constructed at this location, still visible today, was equipped with multiple waterwheels to lift the water uphill and was connected to a series of arches which extended upwards to the old gate of Bāb al-Zughla, one of the eastern gates of Salāḡ al-Dīn's fortification. At this gate, the new branch of the aqueduct merged with the existing route, ultimately reaching the Citadel and the *maydān* below.¹⁸⁰ Al-Ghawrī personally inspected the construction of the new aqueduct at least three times, once at the end of Ramadan 913 (February 1508), and again in Rabīʿ I and Rabīʿ II 914 (July and August 1508).¹⁸¹ The works were completed in Jumādā II 914 (October 1508), at which point the waterwheels were activated and Nile water flowed to the *maydān* beneath the Citadel.¹⁸² Al-Ghawrī had other waterwheels (*sawāqī naqqāla*) installed by the *maydān*, as well as three cisterns filled with Nile water for the *mamlūks* to use during their exercises in the hippodrome. Furthermore, the *maydān* was embellished with a pond (*baḡra*) filled with aqueduct water, which was also used to irrigate the garden (*bustān*) located nearby.¹⁸³ At the beginning of the following year (915/1509), al-Ghawrī gathered all the notables, *amīrs*, and bureaucrats by the *maydān* and issued orders that the pond be filled with all the flowers that could be collected in Cairo.¹⁸⁴ Ibn Iyās remarks that the costs associated with al-Ghawrī's works on the aqueduct were exorbitant, adding that a substantial portion of the resources invested in this project had been acquired through oppressive measures (*ẓulm*) and confiscations (*muṣāḡarāt*) that were typical of his reign.¹⁸⁵

¹⁷⁸. Mauder, *In the Sultan's Salon*, 933.

¹⁷⁹. Ibn Iyās, *Badāʾiʿ*, 4:110.

¹⁸⁰. Ibn Iyās, *Badāʾiʿ*, 4:110; Rabbat, *The Citadel of Cairo*, 198; Behrens-Abouseif, *Cairo of the Mamluks*, 303.

¹⁸¹. Ibn Iyās, *Badāʾiʿ*, 4:126-7 and 132-133. Ibn Iyās reports that during his first visit al-Ghawrī washed his face with Nile water coming from the aqueduct, suggesting that the works were at an advanced stage by that time. In addition to visiting the aqueduct, al-Ghawrī also visited the nearby funerary complex of Azdamur min ʿAlī Bāy, whose biography and *waqf* foundation will be discussed in following chapters.

¹⁸². Ibn Iyās, *Badāʾiʿ*, 4:137.

¹⁸³. Ibn Iyās, *Badāʾiʿ*, 4:137-8. Al-Ghawrī also added multiple loggias (*maqāʿid*) overlooking the garden. For the construction of this palatial complex, al-Ghawrī despoiled the Azbakiyya quarter (discussed in the following chapters) of its marblework.

¹⁸⁴. Ibn Iyās, *Badāʾiʿ*, 4:151; Mauder, *In the Sultan's Salon*, 942-43. Another description of this garden and its beauties is in: Ibn Iyās, *Badāʾiʿ*, 4:172. See also: Mauder, *In the Sultan's Salon*, 936.

¹⁸⁵. Ibn Iyās, *Badāʾiʿ*, 4:110.

The history of the Citadel aqueduct's construction and modifications extends from the reign of Salāḥ al-Dīn to the tenth/sixteenth century and continues into the Ottoman period, so its complexity as a structure and chronological stratification necessitates that it be classified as a unique water project. Nevertheless, the socio-political dynamics that influenced its creation and use do run parallel with the other water projects discussed in this section. As was the case with the Birka al-Nāṣiriyya and the Khalīj al-Nāṣirī, the aqueduct reconstruction and modification projects were undertaken exclusively at the behest of the sultans at the time. Both al-Nāṣir Muḥammad and al-Ghawrī actively participated in their aqueduct projects by personally inspecting the structure or visiting the worksite to oversee its progress, and the resources they invested in the aqueduct came from funds they had accumulated through their regular fiscal policies rather than through special taxes. More so than the Birka al-Nāṣiriyya and the Khalīj al-Nāṣirī, the aqueduct represented a major courtly project serving the needs of the Citadel, its annexes, and the member of the sultanic entourages dwelling therein. Contrary to what Denizeau argued in her thesis, the aqueduct of the Citadel cannot be interpreted as a "large scale equipment placed at the service of the community".¹⁸⁶ From its initial construction under the Ayyūbids, the aqueduct was never integrated in the water supply system of the city.

Moreover, unlike the other water projects discussed in this section, the Citadel aqueduct did not trigger the urban development of the areas surrounding it. Indeed, the aqueduct served exclusively as a water conduit for the Sultan and his court within the Citadel, and it crossed the city's boundaries without becoming the heart of any new urban areas. Under al-Nāṣir Muḥammad, the aqueduct's enhancement was integral to operations aimed at expanding the Citadel's resources and improving its amenities. The sultan specifically sought to increase the number of livestock within the Citadel while enhancing the gardens and the *maydān* located beneath the Citadel. Al-Ghawrī's goals, nearly two centuries later, were remarkably similar. In the eighth/fourteenth as well as in the tenth/sixteenth century, therefore, the sultanic interventions on the Citadel aqueduct were not driven by broader urban water policies, but by the desire to enhance the water supply of the courtly spaces within and beneath the Citadel.

The Birka al-Nāṣiriyya, the Khalīj al-Nāṣirī, and the Citadel aqueduct were all large-scale water projects created as part of ambitious, courtly-oriented

¹⁸⁶. Denizeau, "Conduire l'eau," 365. Denizeau emphasized that the presence of the *rank* (i.e. the *insignia* of the Sultans) over the aqueduct represented a form of appropriation and of symbolic propaganda. Denizeau, "Conduire l'eau," 359-365. While this interpretation is valid, I believe that it does not imply that the aqueduct was intended for the benefit of the whole city as Denizeau seems to suggest.

construction projects. They were not created for the urban population at large and remained largely removed from the main urban hubs of al-Qāhira and Fuṣṭāṭ. The neighbourhoods that developed around the pond and canal were the result of land grants the sultan dispensed to his entourage through the *bayt al-māl*. For al-Nāṣir Muḥammad, the conversion of these lands into *ḥikr* lots leased to his *nās* represented a lucrative political and financial strategy aimed at his personal financial gain and that of his entourage, rather than an “immense urban project” as Denizeau, Denoix, and Raymond before them suggested.¹⁸⁷ Similarly, for both al-Nāṣir Muḥammad and al-Ghawrī the aqueduct represented an necessary investment to enhance the courtly spaces connected to the Citadel. The large-scale water projects discussed in the next section stemmed from partially different economic and socio-political dynamics. While they were undertaken by Mamlūk-era sultans like the projects discussed above, they were conceived as solutions to environmental challenges and, as such, were driven by broader needs rather than by courtly interests.

1.2.3 From the Pan into the Embers: Natural Problems and (Attempted) Solutions

A survey of the waterworks promoted by the Mamlūk-era sultans and their entourages would not be complete without examining some of the projects commissioned to address the environmental emergencies Cairo faced during the period. Due to the absence of related documentary evidence, analyzing urban water projects undertaken to counter environmental disasters must rely solely on chronicles. These chronicles, however, were likely more inclined to record disasters than successful solutions. Among these historical sources, al-Maqrīzī's topography (*Khiṭaṭ*) and chronicle (*al-Sulūk li-ma'rifat duwal al-mulūk*) report the highest number of cases and the greatest amount of data, and are consequently used most extensively in this and the following sections. This is partly because the works of other historians from the second half of the eighth/fourteenth century, such as Ibn Duqmāq and Ibn al-Furāt (who were among al-Maqrīzī's own main sources),¹⁸⁸ present lacunae for the period under discussion or are still unedited, and I had no access to the manuscripts.¹⁸⁹ Furthermore, it is plausible that al-Maqrīzī described in detail projects dealing with environmental crises affecting Cairo both because his historiographical approach,

^{187.} Denizeau and Denoix, “Le sultan promoteur,” 188-9; Raymond, *Cairo*, 137.

^{188.} Koby Yosef, “Al-Maqrīzī's *Sulūk*, *Muqaffā*, and *Durar al-Uqūd*: Trends of ‘Literarization’ in the Historical Corpus of a 9th/15th-Century Egyptian Shāfi‘ī Religious Scholar,” in *New Readings in Arabic Historiography from Late Medieval Egypt and Syria*, ed. Jo Van Steenberghe and Maya Termonia (Brill, 2021), 50-1.

^{189.} Claude Cahen, “Ibn al-Furāt,” in *Encyclopaedia of Islam New Edition Online (EI-2 English)*, ed. P. Bearman (Brill, 2012) doi: https://doi.org/10.1163/1573-3912-islam_SIM_3164; Massoud, “Ibn Duqmāq,” in *Encyclopaedia of Islam Three Online*.

especially in the *Khīṭaṭ*, is arguably space-oriented, and because this series of ineffective projects held educative value for his history-writing, serving as moral lessons (*‘ibra* or *i’tibār*) in both the *Khīṭaṭ* and the *Sulūk*.¹⁹⁰ Because of this nature of al-Maqrīzī’s works, the description of these water-related projects, undertaken at the court-level, reads like a sequence of problematic and chaotic attempts to deal with excessive Nile floods or water scarcity. Still, these accounts are valuable as they show that these water-related projects, initiated throughout the Mamlūk period by different rulers or groups linked to the sultans, did not stem from a formalized crisis-response mechanism for water-related emergencies. Funding strategies and labor recruitment methods varied from case to case, although even in the absence of a systematic policy, certain recurring patterns in the course of action followed in different circumstances become apparent.

1.2.3.1 *Dealing with the Floods: al-Nāṣir Muḥammad and the Dykes of Būlāq*

The earliest emergency-coping projects discussed in this section were implemented along the Nile shores in Būlāq, an area that emerged west of the old port of al-Maqs between the late sixth/twelfth and the mid-seventh/thirteenth century. The westward recession of the Nile, a major environmental change discussed in the introduction of this work, led to the gradual abandonment of the port of al-Maqs and the expansion of the land area between Cairo and the river. As the Nile’s course stabilized towards the end of the seventh/thirteenth century, Būlāq became permanently dry. Since Būlāq was newly formed land and had not yet been allocated to anyone, it legally belonged to the *bayt al-māl*.¹⁹¹ Al-Nāṣir Muḥammad invested in urbanizing Būlāq and the Nile’s shores west of Cairo by financing the construction of multiple facilities, including a *zarība* (embankment) on which he built tenement buildings and hammams. Furthermore, al-Nāṣir Muḥammad distributed land lots within these areas to his entourage through the *bayt al-māl*, making also in this case extensive use of *ḥikr* leases.¹⁹²

By the early eighth/fourteenth century, Būlāq, while no longer submerged under the river, was still at risk of flooding. In 717/1317 the Nile’s level began to rise earlier than usual, and when the dyke closing the Great Khalīj was breached prematurely, the western outskirts of Cairo flooded. All provincial canals were opened in an attempt to reduce the overflow of water in the outskirts of Cairo, but this measure proved unsuccessful and the flooding resulted in the loss of several summer crops. In 723/1323, the Nile flood once again inundated Būlāq, submerging numerous houses

¹⁹⁰. Yosef, “Al-Maqrīzī’s *Sulūk*,” 52; Rabbat, “The Historian and the City,” 6.

¹⁹¹. According to Islamic law, the *bayt al-māl* is the legal owner of all unallocated lands. See Denizeau and Denoix, “Le sultan promoteur,” 174.

¹⁹². Hanna, *An Urban History of Būlāq*, 1-4; al-Maqrīzī, *Khīṭaṭ*, 3:234-5.

and orchards in the area. Al-Nāṣir Muḥammad was informed about the damages of the flood by the *nāẓir al-jaysh* (administrator of the army), Qadi Muḥammad Fakhr al-Dīn ibn Faḍl Allāh, who had been granted a land lot on the shores of Būlāq.¹⁹³ Upon learning of the situation, al-Nāṣir Muḥammad visited the affected area, accompanied by his *amīrs*. He then ordered the construction of an embankment dam (*jīsr*) at the precise location the river had overflowed. Before the works had even commenced, however, the Nile's water level rose dramatically, rendering the embankment impracticable. Al-Maqrīzī relates that the water level in Būlāq nearly reached the top of trees, so people "started to pick dates with their hands from the boats" (*ṣārū yatanāwalūna al-thimār bi-aydihim wa-hum fī al-marākib*).¹⁹⁴ Al-Nāṣir Muḥammad thus devised an impromptu solution: creating a barrier of soil (*turāb*) around the flooded areas. Orders were issued to the governors of al-Qāhira and Fuṣṭāṭ to redirect any draft animals carrying dirt towards Būlāq. The *ḥarāfish* (the urban riffraff) were also employed to transport soil to the site.¹⁹⁵ Despite these efforts, however, the flood caused immense damages, destroying the buildings of Būlāq as well as the cultivations and waterwheels on the shores of Fuṣṭāṭ. Furthermore, as the Nile receded, stagnant water remained in the flooded areas and caused all the grains stored there to rot.

Following this inundation, al-Nāṣir urged the tenants of the *ḥikr* lots in Būlāq to build embankments (*zarība*) between their properties and the Nile to protect them from further floods, and he granted rent exonerations to any tenants who invested in such structures. At that point, the construction of al-Nāṣir Muḥammad's embankment also commenced. Engineers were gathered, irrigation experts (*khawlā*) were summoned from the villages, and each *amīr* was assigned to construct a section of the embankment. The peasants of their respective *iqṭā'* lands were then conscripted as the labour force. The final structure, measuring four *qaṣabas* (1 *qaṣaba*= about 3,99 meters) in height and eight in width, protected Būlāq from further inundations, at least for a few years.¹⁹⁶

^{193.} al-Maqrīzī, *Khiṭaṭ*, 3:293; Ibn Taghrī Birdī, *Nujūm*, 9:201. Muḥammad Fakhr al-Dīn ibn Faḍl Allāh had built his mosque in the area of Būlāq. See also: Denizeau, "Conduire l'eau," 370.

^{194.} al-Maqrīzī, *Khiṭaṭ*, 3:293.

^{195.} al-Maqrīzī, *Sulūk*, 3:67. Al-Maqrīzī reported that, due to the high demand for labourers, the daily fee for workers increased to three *dirhams*, a considerable amount given that the average monthly salary of *waqf* employees at the time rarely exceeded 20 *dirhams* per month. See, for instance: Sabra, *Poverty and Charity*, 120. The term *ḥarāfish* refers to a specific group of the urban population with very low social status and limited resources but considerable political weight and possibly an organized social structure. Sabra, *Poverty and Charity*, 14-17. Robert Irwin "Futuwwa: Chivalry and Gangsterism in Medieval Cairo," *Muqarnas* 21, 1 (2004): 162-3. William M. Brinner, "The Significance of the Ḥarāfish and Their 'Sultan,'" *JESHO* 6, no. 2 (1963): 194-201. The employment of labourers from this social group will occur again in other cases discussed in this section.

^{196.} al-Maqrīzī, *Khiṭaṭ*, 3:294-5; *Sulūk*, 3:67-8. This mean that the dyke built by al-Nāṣir Muḥammad measured approximatively 16 meters in height and 32 in width.

Strong Nile floods continued to be a threat for the newly urbanized shores of Būlāq, however. Fearing further inundations, al-Nāṣir Muḥammad planned a large embankment in 738/1338 that would divert the river's flow from Būlāq towards Imbāba on the western shores of the Nile. To realize this project, irrigation experts were summoned from the Egyptian provinces, the regions of Damascus and Aleppo, and the areas surrounding the Euphrates River.¹⁹⁷ A preliminary expedition was organized for al-Nāṣir Muḥammad, the *amīrs*, and the engineers to inspect the shores of Būlāq, and they planned to build a dyke by sinking boats loaded with stone blocks in front of Būlāq, while simultaneously excavating a canal on the island opposite Būlāq to absorb part of the floodwater.¹⁹⁸ The *amīrs* Āqbughā min 'Abd al-Wāḥid and Barṣbughā (d. 742/1342), al-Nāṣir Muḥammad's *ḥājib*, were entrusted to supervise the works.¹⁹⁹ For the realization of the project, a large part of the population was mobilised: stone cutters were ordered to supply the blocks needed to sink the boats, while the local craftsmen provided reportedly 12 large vessels and 23,000 smaller boats that were loaded with stone blocks and sunk in front of Būlāq to complete the embankment.²⁰⁰ To complete the construction, labourers were conscripted from the provinces, while the governors of Cairo and Fuṣṭāṭ gathered other workers from among the *ḥarāfīsh* and the local population, some of whom, according to al-Maqrīzī, were forcibly taken from mosques or markets and compelled to join the works.²⁰¹ Because the construction works commenced during the summer months of June and July (Dhū al-Qa'da and Dhū al-Ḥijja) some labourers died due to the intense heat.²⁰² In addition, the impending Nile flood necessitated the works to proceed at full speed, prompting al-Nāṣir Muḥammad to personally visit the site to expedite the work of the *amīrs* and their labourers.²⁰³

^{197.} al-Maqrīzī, *Khiṭaṭ*, 3:295; al-Shujā'ī, *Tā'rikh*, 31-2.

^{198.} al-Maqrīzī, *Khiṭaṭ*, 3:295. The practice of creating a dyke by sinking loaded boats in the river is attested in the Ayyūbid period as well. In 620/1223-4 the Ayyūbid governor of al-Fayyūm, Fakhr al-Dīn 'Uthmān, former *ustādār* of al-Malik al-Kāmil, created a dyke to divert water towards the canal of al-Fayyūm (the Baḥr Yūsūf) by sinking several large boats in the Nile. Since the plan was executed following the advice of local engineers, it seems likely that creating dykes by sinking heavy objects was a long-lived local practice. Al-Nabulūsī, *The Villages of the Fayyum*, 46; Rapoport, *Rural Economy*, 66.

^{199.} al-Maqrīzī, *Khiṭaṭ*, 3:295. *Amīr* Barṣbughā was one of al-Nāṣir Muḥammad's mamlūks. Following al-Nāṣir Muḥammad's death, he was imprisoned and killed in Alexandria, along with *amīr* Qawṣūn. Al-Maqrīzī, *Kitāb al-Muqaffā al-kabīr*, ed. Muḥammad al-Ya'lāwī (Dār al-Gharb, 1991), 2:570; Khalīl ibn Aybak al-Ṣafadī, *al-Wāfi bi-al-wafayāt* (Dār Iḥiyā' al-Turāth al-'Arabī, 2000), 10:71.

^{200.} The number of sunk boats, which appears quite exaggerated, is reported in: al-Maqrīzī, *Khiṭaṭ*, 3:295.

^{201.} al-Maqrīzī, *Khiṭaṭ*, 3:295; *Sulūk*, 3:245.

^{202.} al-Maqrīzī, *Khiṭaṭ*, 3:295.

^{203.} al-Maqrīzī, *Khiṭaṭ*, 3:295.

The detailed accounts of the sources on these projects allow some comparison with the projects discussed earlier. The embankments al-Nāṣir Muḥammad commissioned in 723/1323 and 738/1338 were massive projects which required substantial resources and workforces. Some of the strategies used to build them were similar to those adopted for other large construction projects realized under this sultan. Having engineers and *amīrs* inspect the sites, appointing specific high-ranking *amīrs* (the *ḥājib* and the *shādd al-‘amā’ir*) to oversee the works, and recruiting labourers from the villages are all practices al-Nāṣir Muḥammad followed when constructing the large water-structures discussed in the previous section. These common practices probably are not indicative of a standard construction procedure or policy used throughout the Mamlūk period, but they do suggest that al-Nāṣir Muḥammad followed a specific course of action when designing and constructing large water projects. Moreover, while unlike the Birka al-Nāṣiriyya, the Khalīj al-Nāṣirī, and the Citadel aqueduct, which stemmed from the plan of enhancing courtly spaces such as the *maydān* and the Siryāqūs district, the embankments were initiated in response to the environmental hazard represented by the excessive Nile floods, these structures were essentially created to protect the shores of Būlāq, where both al-Nāṣir Muḥammad and his entourage had invested in construction projects and benefited from valuable *ḥikr* lots. For this reason, it would be a mistake to consider the embankments as a project outside the large-scale financial schemes of this sultan and his entourage.

Finally, these embankments did not actually represented effective solutions to Cairo’s environmental problems. Indeed, as subsequent events demonstrated, in constructing the Būlāq embankments, al-Nāṣir Muḥammad obviated one environmental problem by exacerbating another. While the embankments succeeded in protecting the profitable assets on the Nile’s eastern shores from further inundations, they aggravated the westward recession of the river, resulting in disastrous long-term consequences.²⁰⁴ Many of the water crises al-Nāṣir Muḥammad’s successors had to deal with in the following years stemmed, to some extent, from his subtracting lands from the Nile.

1.2.3.2 *Bringing the Nile Back: the Great Dykes after al-Nāṣir Muḥammad*

Following al-Nāṣir’s death, the urbanization of Būlāq came to a halt. The successive outbreaks of plague, as well as the political and economic instability that affected the Sultanate throughout the second half of the eighth/fourteenth century, gradually led to the destruction of what had been built in the area. Concurrently, the Nile

²⁰⁴. al-Shujā’ī, *Tā’rikh*, 32; al-Maqrīzī, *Khīṭaṭ*, 3:295. Al-Maqrīzī maintains that al-Nāṣir Muḥammad’s embankments exacerbated the Nile’s regression from the east shores. See also: Levanoni, “Urban Water Management,” 255.

kept receding westwards, causing the distance between Cairo and its main source of water to increase.²⁰⁵ As early as the reign of al-Nāṣir Muḥammad's successor, al-Kāmil Sha'bān (r. 746-747/1345-1346), the increasing distance between the river and the city had caused the price of drinking water sold by water carriers to rise dramatically,²⁰⁶ leading the *nās* to complain to *amīr* Arghūn al-'Alā'ī (d. 748/1347-8), then the *de facto* ruler of the Sultanate.²⁰⁷ After assessing the situation with the *amīrs* and the engineers, al-Kāmil Sha'bān approved the construction of a dyke between the shores of Giza and the Nilometer to divert the flow of the Nile towards the eastern banks.²⁰⁸ To construct this dyke, potsherds (*shaqaḥ*) from the sugar factories of Fuṣṭāṭ were transported to the Nile and used as construction material.²⁰⁹ Due to the inferior quality and insufficient strength of this construction material, the structure collapsed as soon as the river level began to raise. The subsequent assassination of al-Kāmil Sha'bān caused the project to be abandoned temporarily.²¹⁰

The escalating cost of drinking water, together with the expanding dry zone between the city and the river, led to renewed complaints during the reign of Sha'bān's successor, al-Muẓaffar Hajjī (r. 747-748/1346-1347). At the beginning of 748 (April 1347), a group of engineers and *amīrs* addressed the issue, and the plan of constructing

²⁰⁵. Hanna, *An Urban History of Būlāq*, 5-6.

²⁰⁶. al-Maqrīzī, *Sulūk*, 4:26-7. Al-Maqrīzī states that in that year the watercarriers started charging 2 instead of 0.75 *dirhams* per *rāwiya* (large waterskin).

²⁰⁷. al-Maqrīzī, *Sulūk*, 4:27; *Khiṭaṭ*, 3:295-6. Sayf al-Dīn Arghūn al-'Alā'ī was one of al-Nāṣir Muḥammad's former *mamlūks*, who married the mother of al-Ṣāliḥ Ismā'il and al-Kāmil Sha'bān. Arghūn al-'Alā'ī ascended to a powerful position under these two rulers, and was granted also with the administration of Qalāwūn's *bimāristān*, which he equipped with the *maktab* and *sabīl* discussed in Chapter 4 of this thesis. Al-Maqrīzī, *Muqaffā*, 2:25-6.

²⁰⁸. It is possible that objections had already been made to creating a dyke between Giza and the Nilometer. Al-Maqrīzī (*Sulūk*, 4:72) claims that one of the local shipmasters warned the *amīrs* that the Nile could not be blocked, and that a dyke would only bring more problems to the western shores. In addition, *amīr* Ṭuqztamur (d. 746/1345) claimed that the dyke would cause the Nile's flow to hit the western shores so violently that it would destroy the buildings in Fuṣṭāṭ and Būlāq. Al-Maqrīzī records these objections as part of an excursus introducing the construction of al-Manjak's dyke, but given the date of Ṭuqztamur's death, it is clear that these objections were made during the reign of al-Kāmil Sha'bān. Levanoni ("Urban Water Management," 263) reports the chronology of these events inaccurately.

²⁰⁹. al-Maqrīzī, *Sulūk*, 4:27.

²¹⁰. al-Maqrīzī, *Khiṭaṭ*, 3:296; Levanoni, "Urban Water Management," 262.

a dyke between the shores of Giza and the Nilometer was proposed once again.²¹¹ A budget of 120,000 *dirhams* (silver coin) was set for the project: such sum was to be collected by imposing a special tax on the owners of properties situated on the Nile's shores (*arbāb al-amlāk al-muṭalla 'alā al-nīl*), at a rate of 15 *dirhams* per cubit.²¹² The tasks of measuring the properties and collecting tax levies were delegated to the *muḥtasib* of Cairo, Qadi Ḍiyā' al-Dīn Yūsuf ibn Abū Bakr (d. 761/1359-1360).²¹³ Nearly half of the estimated budget was collected, but Ḍiyā' al-Dīn Yūsuf's dismissal from office and al-Muẓaffar Hajjī's assassination eventually prevented the project's implementation.²¹⁴ While this dyke was not initiated, its funding method provides valuable insight into the court's financial strategy for funding a large water project. In this instance, the money necessary to realize the project was levied from the individuals who would directly profit from its implementation.²¹⁵ The appointment of Cairo's *muḥtasib* to collect the tax levies to fund the dyke is also a significant aspect of this project, as it represents the first instance, among the cases discussed here, of an administrative official being entrusted with the extraction and management of a large construction project's resources. Subsequent examples will demonstrate a growing participation of administrative officials in the financial management of such undertakings. Concurrently, the *muḥtasib*'s involvement in this capacity appears consistent with the late eighth/fourteenth functional shift of this official noted by Ahmad Ghabin and Kristen Stilt—from policing communal urban spaces to collecting levies on the sultans' behalf.²¹⁶

At the beginning of Sultan al-Nāṣir Ḥasan's first reign (748-752/1347-1351), the plan to construct a dyke between the Nilometer and the shore of Giza is resumed once more. In 749/1348 a group of engineers and *amīrs*, including the *ḥājib*, the *nā'ib al-saltāna* Baybughā Urūs (d. 754/1353), and his brother, the *ustādār* (the manager of the sultan's household finances) Manjak al-Yūsufī (d. 776/1375) inspected the area.

^{211.} al-Maqrīzī, *Khiṭaṭ*, 3:296; *Sulūk*, 4:43. Two different construction plans were taken into consideration and attempted. The first was proposed by a protegee of *amīr* Ṭughay Tamur al-Najmī (d. 748/1347), who claimed his project would have cost only 4,000 *dirhams*. This project was approved at court, but soon after construction started, the Nile destroyed what little had been completed. A second project, proposed by a protegee of *amīr* Maliktamur al-Ḥijāzī (d. 748/1347), was then approved, and it was the money needed to realize this project that was collected from the owners of properties along the Nile's shores. See: al-Maqrīzī, *Sulūk*, 72-3; Levanoni, "Urban Water Management," 263-4.

^{212.} al-Maqrīzī, *Sulūk*, 4:43; *Khiṭaṭ*, 3:296.

^{213.} al-Maqrīzī, *Khiṭaṭ*, 3:296; *Sulūk*, 4:43. Ḍiyā' al-Dīn Yūsuf ibn Abū Bakr, originally from the Shām, held other important administrative posts in addition to the *ḥisba* of al-Qāhira, such as the administratorship of the Qalāwūnid *bimāristān* and other *waqf* foundations. Ibn Taghrī Birdī, *Nujūm*, 10:337.

^{214.} al-Maqrīzī, *Khiṭaṭ*, 3:296; *Sulūk*, 4:73.

^{215.} Levanoni, "Urban Water Management," 262-3.

^{216.} Ghabin, *Ḥisba*, 96-118; Stilt, *Islamic Law in Action*, 68 and 203-4.

Manjak al-Yūsufi was temporarily dismissed from his post as *wazīr*, which he had held since 748/1347, and in Rabī' I 749 (June 1348) was appointed as *shādd 'alā 'amal al-jusūr fi al-Nīl* ("superintendent of the construction of the dyke on the Nile"), a seemingly *ad hoc* office made specifically for this project.²¹⁷ Indeed, Manjak al-Yūsufi became the managerial architect of this project, and devised a comprehensive levy system to fund the construction of the dyke, the cost of which was expected to exceed 150,000 *dirhams*. In addition to imposing levies on the owners of the properties along the Nile's banks—a strategy adopted already during the reign of al-Muẓaffar Hajjī—Manjak also levied the military and the administrative official. Additional funds were collected from a series of urban assets expected to benefit from the dyke's construction, such as orchards, mosques, Sufi lodges, hammams, mills, *funduqs* (merchant lodges), and caravanserais, pottery factories, Christian monasteries and churches, and the cisterns (*ṣahrīj*, pl. *ṣahārīj*) of the mausolea located in the Qarāfa. These taxes were calculated based on the type and size of each asset.²¹⁸ Special administrators (*shādd*), cashiers (*ṣayrafi*), and book-keepers (*kuttāb*) were recruited in various parts of Cairo to collect the levies.²¹⁹ Manjak al-Yūsufi's taxations, which affected a large part of the urban population, caused some tensions among the notables. When confronted with accusations of collecting more levies than were necessary, Manjak al-Yūsufi explained that a substantial amount of the funds collected would be used to pay the labourers hired to construct the dyke.²²⁰

Upon securing the necessary funds, a work camp was installed on al-Rawḍa Island, and labourers were recruited from the *ḥarāfiṣh* and the local population. These labourers were compensated a daily fee of 1.5 *dirham*, in addition to a ration of three bread loaves. Furthermore, when the dyke's construction began, a canopy was installed on the site so that workers could shelter from the scorching sun.²²¹ Without a doubt the employment conditions under Manjak al-Yūsufi were far better than those during the construction of Būlāq's dyke under al-Nāṣir Muḥammad. In addition to the unskilled labourers, local craftsmen and stonemasons were recruited to aid

^{217.} al-Maqrīzī, *Sulūk*, 4:71.

^{218.} al-Maqrīzī, *Khiṭaṭ*, 3:297-8; *Sulūk*, 4:74. For instance, the cisterns at the mausolea and madrasas of the cemetery were taxed 5 to 10 *dirhams* each. Much higher amounts were collected from other properties: orchards, for example, were taxed between 10 and 20 *dirhams* per *faddān*, while Churches and Christian monasteries were taxed up to 200 *dirhams*. The madrasas and mausolea (as well as the cisterns belonging to them) were taxed even though they belonged to *waqf* foundations, which were normally exempt from tax levies. As happened in other instances discussed in this thesis, special levies were occasionally imposed on *waqf* foundations when the resources of the *bayt al-māl* were scarce.

^{219.} al-Maqrīzī, *Khiṭaṭ*, 3:297; *Sulūk*, 4:74.

^{220.} al-Maqrīzī (*Khiṭaṭ*, 3:298) relates that some of the *amīrs* accused Manjak of making a profit out of the levies collected for the dyke.

^{221.} al-Maqrīzī, *Khiṭaṭ*, 3:297; *Sulūk*, 4:74-5.

construction, and boats, harrows (*jarārīf*), oxen and other draft animals, including the Sultan's camels, were employed to break ground and haul soil and supplies. The dyke was built with timber on two sides and filled in the middle with stones, mud, and debris collected from the city. Concurrently, a canal was excavated along the Nile's eastern shores between the mouth of the Great Khalīj and Būlāq, to absorb part of the waterflow and attenuate the strength of the river on the eastern shores.²²² The dyke's construction continued for about four months until the end of Rabī' II 749 (August 1348), but only a third of the dyke had been constructed when the impending plenitude necessitated the rest of the structure be cobbled together in a hurry. When the Nile began to rise, the dyke initially succeeded in diverting the river's flow toward the eastern banks, but the results of this great endeavour proved to be ephemeral: the structure barely survived its first plenitude, and a few decades later only a few remnants (*baqiyya*) of it remained.²²³

Notwithstanding its limited success, the dyke built in 749/1348 is a remarkable example of infrastructural implementation. The execution of this project presents analogies with earlier attempts to build similar structures. For instance, the preliminary site inspections by a group of *amīrs* and engineers, the recruitment of workforce from the urban population and from the *ḥarāfīsh*, and the re-use and transportation of urban debris as construction material, are recorded also for the other water projects discussed above. In this case, however, a particularly articulated financial strategy was deployed to gather the necessary funds. With the calculation of variable amounts to be collected from different properties, and the *ad hoc* recruitment of accountants for the management of this temporary financial flow, the tax levy enacted by Manjak appears to be the refined and large-scale version of the funds collection enacted in 748/1347, when fees were exacted only from the property owners of the Nile shores under the supervision of the *muḥtasib*. In both cases, the economic burden was imposed to those who were expected to benefit the most from the construction of the dyke. Manjak, however, extended the criteria to the whole city and coordinated the exaction more efficiently. In addition, Manjak transformed the project into a profitable opportunity for the local workers. All the large construction projects discussed above involved the recruitment of labourers from the city or from the provinces, but only in the case of Manjak's dyke daily wages for the workforce are mentioned in the sources. Because of the many analogies with earlier projects, to my view Manjak's strategies cannot be considered indicative of "a major change...in the

^{222.} al-Maqrīzī, *Khiṭaṭ*, 3:297; *Sulūk*, 4:75. Construction material was also obtained from city debris, which people were required to bring to the dyke. During the construction of this dyke as well, boats loaded with stones were sunk in the river.

^{223.} al-Maqrīzī, *Khiṭaṭ*, 3:298; *Sulūk*, 4:75.

administration of great hydraulic installations”, as Amalia Levanoni has claimed.²²⁴ To this *amīr* goes the credit not of innovating financial and management practices, but of organizing them in a broader and more systematic way.

Evidence that Manjak al-Yūsufī's fiscal strategy did not constitute a step within a linear evolution of major hydraulic constructions management policies in Cairo is also provided by the realization of a new dyke in 784/1382, which illustrates a very different financial and organizational strategy adopted at court level for the implementation of a major water project. In Rabī' I/May of that year, as the westward recession of the Nile continued to pose serious challenges to Cairo's water supply, Jarkas al-Khalilī (d. 791/1389), a prominent *amīr* of that period, began the construction of a dyke between al-Rawḍa Island and Jazīra al-Wuṣṭā (also called Urwā).²²⁵ Like the earlier projects, Jarkas al-Khalilī's dyke aimed to redirect the Nile's water flow back towards the eastern shores, thereby reducing the distance between the river and the city. However, unlike Manjak's dyke and the one planned during the Sultanate of Muẓaffar Hajjī, the construction of this dyke was not financed through specially imposed taxes. Instead, Jarkas al-Khalilī used his personal resources, even employing his own *mamlūks* as the labour force, and did not recruit workers from the urban population or the provinces.²²⁶

Even though this dyke project relied exclusively on Jarkas al-Khalilī's resources, it was quickly completed by the end of Rabī' II 784 (July 1382). The resulting structure, a large earthen embankment reinforced with wooden sides, measured 10 *qaṣabas* (approximately 40 meters) in width and extended for 300 *qaṣabas* (over 1 kilometre) in length. To further divert the river and channel its flow eastwards, a canal was excavated within the riverbed between the dyke and the eastern shore, terminating at the *zarība* built by *amīr* Qawṣūn during the reign of al-Nāṣir Muḥammad.²²⁷ Even

^{224.} Levanoni, “Urban Water Management,” 262.

^{225.} al-Maqrīzī, *Khīṭaṭ*, 3:298; ‘Abd al-Bāsiṭ ibn Khalīl al-Malaṭī, *Nayl al-amal fī dhayl al-duwal*, ed. Omar Abd al-Salam Tadmuri (al-Maktaba al-‘Aṣriya, 2002), 2:191; Aḥmad ibn ‘Alī ibn Ḥajar al-‘Asqalānī, *Inbā’ al-ghumr bi’ abnā’ al-‘umr*, ed. Hasan Habashi (Wizārat al-Awqāf, 1998), 1:253. Ibn Taghrī Birdī, *Nujūm*, 11:213. Ibn Iyās, *Badā’i’*, 1.2:304. Jarkas al-Khalilī was Barqūq's *amīr akhūr* (master of the royal stables), and Barqūq also appointed him *mushīr al-dawla* (counselor) in 783/1381. See: Ibn Ḥajar, *Inbā’*, 1:236. al-Malaṭī, *Nayl*, 2:184.

^{226.} al-Maqrīzī, *Khīṭaṭ*, 3:299; *Sulūk*, 5:137; al-Malaṭī, *Nayl*, 2:191; Ibn Ḥajar, *Inbā’*, 1:253; Ibn Taghrī Birdī, *Nujūm*, 11:213.

^{227.} al-Maqrīzī, *Khīṭaṭ*, 3:299; *Sulūk*, 5:137; Ibn Ḥajar, *Inbā’*, 1:253; Ibn Taghrī Birdī, *Nujūm*, 11:213; Ibn Iyās, *Badā’i’*, 1.2:304. This *zarība* (embankment) was created on the Nile's eastern shore by the influential *amīr* Qawṣūn (d. 742/1341) on a land lot granted to him by al-Nāṣir Muḥammad. Muḥammad al-Shishtawī, *Mutanazzahāt al-Qāhira fī al-‘aṣrayn al-Mamlūkī wa-al-‘Uthmānī* (Dār al-Afāq al-‘Arabiya, 2012), 43.

Jarkas al-Khalilī's project, however, did not succeed in diverting the river's flow eastwards—on the contrary, it seems to have exacerbated its westward recession.²²⁸

Jarkas al-Khalilī's project proved to be another unsuccessful attempt to mitigate an environmental problem, leading instead to its further exacerbation: in this sense, this dyke is only another item in the list of similarly unsuccessful projects discussed in this section. However, the fact that Jarkas al-Khalilī financed the project entirely using his personal wealth makes it a particularly significant case from a socio-political perspective. The other large-scale projects discussed in this chapter were either financed via appositely levied taxes, or via the Sultan's coffers and the contribution of several *amīrs* (especially regarding workforce contributions), making Jarkas's dyke the first large-scale urban water project entirely sponsored and executed by the initiative and resources of a single *amīr*. Jarkas's ability to do so is indicative not only of his great wealth, but also of his political influence for which he was allowed to undertake large construction projects in Cairo, such as the large *khān* (covered market), located in the heart of the Fatimid city, which still bears his name.²²⁹ Jarkas al-Khalilī's dyke did not initiate a new pattern of waterworks management policy: instead, it represented an isolated initiative stemming from a particular political situation where this influential *amīr* had the power to undertake massive construction projects, relying on his own resources. Indeed, another large water project, initiated just a few decades later by Sultan al-Mu'ayyad Shaykh, reveals that old management strategies remained in use.

In 818/1415 it was Sultan al-Mu'ayyad Shaykh's turn to deal with the westward recession of the Nile. His efforts to divert the river's flow towards Cairo concentrated on the eastern banks of the Nile, between the north of Fuṣṭāṭ and Būlāq, where the river's alluvium had formed a large sand bank which remained dry for much of the year. Al-Mu'ayyad Shaykh intended to remove the sand bank so that water could flow

^{228.} al-Maqrizī, *Khiṭaṭ*, 3:299; *Sulūk*, 5:137; Ibn Ḥajar, *Inbā'*, 1:253; al-Malaṭī, *Nayl*, 2:191.

^{229.} al-Maqrizī, *Khiṭaṭ*, 3:171. Jarkas al-Khalilī's influence in urban planning is exemplified also by other instances. In Rajab 786 (September 1384) Jarkas al-Khalilī was appointed *shādd* (superintendent) over the construction of Barqūq's madrasa in Cairo. Ibn Iyās, *Badā'ī'*, 1.2:349. Michael Meinecke, *Die mamlukische Architektur in Ägypten und Syrien (648/1250 bis 923/1517) 2-Chronologische Liste der mamlukischen Baumassnahmen* (Verlag J.J. Augustin, 1992), 269; Loiseau, *Maison*, 265-5. In Ramaḍān 783 (November 1381) Jarkas al-Khalilī managed to bring Nile water back to the *maydān* under the Citadel after it had been dry for almost seventy years. Al-Malaṭī, *Nayl*, 2:184. This shows that Jarkas al-Khalilī was involved in courtly construction projects before the creation of the dyke discussed here.

closer to the city throughout all four seasons.²³⁰ At the beginning of Ṣafar (April), the sultan entrusted this dredging to the *amīr jāndār* (the chief of the sultan's guard) Kizil al-ʿAjamī al-Ajrūd (d. 849/1445) and the *ḥājib al-ḥujjāb* Sūdūn al-Qāḍī (d. 849/1419).²³¹ The operations continued throughout the spring, and at the beginning of Rabīʿ II (June), al-Muʿayyad Shaykh visited the worksite together with the *amīrs* and other dignitaries. On such occasion, the sultan summoned the *nās* and the merchants, who subsequently closed their shops in Cairo to join the excavations. The army, the *amīrs*, and the officers of the sultan's administration (*arbāb al-dawla*), as well as all their men, contributed to the operations, bringing along their drum and flute bands, so that a festive atmosphere briefly permeated the worksite as the sultan hosted a sumptuous banquet. Following the organizational pattern employed by al-Nāṣir Muḥammad a century prior, al-Muʿayyad Shaykh distributed the project's workload between his *amīrs* by assigning each to dredge a specific section of the sand bank, and each *amīr* mobilized his available manpower and resources to carry out these dredging operations.²³² In addition to their own *mamlūks*, some of the *amīrs* recruited staff from the *waqf* foundations they oversaw as labourers for these excavations. The *amīr akhūr* Alṭunbughā al-Qirmishī (d. 824/1421), for instance, utilized the employees and Sufis of Barqūq's madrasa in Bayn al-Qaṣrayn. Similarly, the *atābak al-ʿasākīr* Alṭunbughā al-ʿUthmanī (d. 821/1418) mobilized the staff of the Manṣūrī hospital, including the physicians and the surgeons, as well as the tenants of the properties endowed in the hospital *waqf* foundation he oversaw as the *nāẓir*.²³³ All the inhabitants of Cairo, including the Jews and the Christians, were compelled to participate in the dredging operations, and threats were made to those who did not join the works.²³⁴ Al-Maqrīzī records that even the sultan's son visited the worksite together with a group of notables at the beginning of Jumādā I/July. When the annual flood arrived, however, this massive undertaking did not succeed in diverting the river to the eastern shores—al-Maqrīzī simply reports that no traces of the dredging remained after the Nile's plenitude.²³⁵

²³⁰. al-Maqrīzī, *Sulūk*, 6:377-8; Loiseau, *Maison*, 411. Al-Muʿayyad Shaykh's project apparently also included the construction of a dyke between the mouth of the Great Khalīj and al-Rawḍa, but the sources focus primarily on the removal of the sand bank. Ibn Taghrī Birdī, *Nujūm*, 14:27.

²³¹. al-Maqrīzī, *Sulūk*, 6:378; Ibn Taghrī Birdī, *Nujūm*, 14:27. Kizil al-ʿAjamī al-Ajrūd had been *ḥājib al-ḥujjāb* during the reign of Faraj ibn Barqūq. al-Malaṭī, *Nayl*, 5:207.

²³². al-Maqrīzī, *Sulūk*, 6:384-5; Ibn Taghrī Birdī, *Nujūm*, 14:27-8.

²³³. al-Maqrīzī, *Sulūk*, 6:385; Ibn Taghrī Birdī, *Nujūm*, 14:28. The management of Barqūq's madrasa was assigned ex officio to the *amīr akhūr*, while the management of the *bimāristān* of Qalāwūn was assigned to the *atābak al-ʿasākīr*. Igarashi, *Land Tenure, Fiscal Policy*, 206-8. The ex-officio appointment of high-ranking members of the court to management positions in *waqf* foundations will be discussed in more detail in Chapter 2.

²³⁴. al-Maqrīzī, *Sulūk*, 6:385-6; Ibn Taghrī Birdī, *Nujūm*, 14:28-9.

²³⁵. al-Maqrīzī, *Sulūk*, 6:387.

Despite its unsuccessful outcome, al-Mu'ayyad's project stands out for its remarkably large-scale social mobilization. The sources do not tell us how the dredging operations were financed, but it seems that all the social groups involved participated at their own expense. The scale of the project's mobilization recalls, and possibly surpasses, that during the construction of Manjak's dyke; however, al-Mu'ayyad Shaykh's management strategy more closely resembles that adopted by al-Nāṣir Muḥammad. Employing all the *amīrs* and dividing the workload among them parallels al-Nāṣir Muḥammad project management during the realization of projects such as the Birka al-Nāṣiriyya and the Khalīj al-Nāṣirī, and both al-Nāṣir Muḥammad and al-Mu'ayyad Shaykh forcibly recruited the urban population as unpaid labour to complete their projects. Remarkably, the *amīrs* using their *waqf* foundations' staff members as labour force during al-Mu'ayyad Shaykh's dredging operation shows that by the beginning of the ninth/fifteenth century some *awqāf* had become exploitable resources in the hands of powerful *amīrs*.

Al-Mu'ayyad Shaykh's attempt to remove the sandbank appears to be the last major attempt to divert the Nile's flow eastwards, for no such projects were initiated under following rulers. While giving up on altering the Nile's course may have been motivated by multiple and intersecting socio-economic factors, it also appears that the problem was partially mitigated by natural changes. Ibn Ḥajar al-'Asqalānī (d. 852/1449) suggests that the Nile slowly returned to the eastern shores, without further human intervention, a few decades after Jarkas al-Khalilī had built the dyke between al-Rawḍa Island and Jazīra al-Wustā.²³⁶ Other major water projects implemented around Cairo between the late ninth/fifteenth and early tenth/sixteenth century were managed, financed, and executed in similar ways as the earlier undertakings discussed above. For instance when in Muḥarram 873 (August 1468), during a ride, Sultan Qāytbāy discovered that the Great Khalīj was obstructed near the dyke, he entrusted one of his most prominent *amīrs*, the *dawādār kabīr* Yashbak min Mahdī (d. 885/1480) to dredge the canal. The historian Ibn al-Ṣayrafī (d. 900/1495) recorded that Yashbak paid close attention to the operation, personally overseeing the works (*wa-ihtamma bi-amrihi ghāyat al-ihtimām bi-haythu innahu 'amala fihi bi-naṣsihi*) carried out by various people at his service (*fi khidmatihi khalā'iq min al-nās*).²³⁷ Not without some bitterness, historian Ibn Taghrī Birdī commented that Sultan Qāytbāy's zeal for cleaning the canal was

²³⁶. Ibn Ḥajar, *Inbā'*, 1:253-4.

²³⁷. Ibn al-Ṣayrafī, *Inbā'*, 9. Ibn al-Ṣayrafī describes Yashbak as the most influential political figure of the time ('*azīm al-dawla wa-ṣāhib ḥallihā wa-'aqdihā*). Ibn Taghrī Birdī, *Extracts from Abū l-Maḥāsin ibn Taghrī Birdī's Chronicle Entitled Ḥawāḍith ad-Duhūr fi Madā 'l-Ayyām wash-Shuhūr*, ed. William Popper (University of California Press, 1930-1942), 3:673. Petry, *Protectors or Praetorians?*, 114. On the political influence of Yashbak, who held several offices during the first decades of Qāytbāy's reign, see also: Behrens-Abouseif, "The North-eastern Extension," 172.

motivated by the need to facilitate military transits in the area, but the lack of further details about this project limits our ability to assess its true political significance.²³⁸ In any case, the incident further demonstrates the sultans' tendency to entrust important construction projects to the most influential *amīr* of the moment.²³⁹

In 917/1511 al-Ghawrī ordered the enlargement of Cairo's canals (*khuljān*), and he entrusted his *hājib al-ḥujjāb* with managing the project's operations.²⁴⁰ In Muḥarram/April, property owners along the canals were compelled to serve as labourers in the excavations.²⁴¹ In Rabi' II/June, the excavations continued around the Qanāṭir al-Iwazz (located in the northern suburbs of Cairo, near the area of al-Ḥusayniyya): the historian Ibn Iyās recorded that a quota corresponding to the yearly *kharāj* taxes was levied all at once from the owners of the properties receiving water from the canal. Approximately 50,000 *dīnārs* (gold coins) were collected through this levy, which was extremely burdensome for the taxpayers, but only a portion of these funds was used to defray the work on the canal, while the rest found its way into the Sultanate's coffers (*al-khazā'in al-sharīfa*).²⁴² Thus, whether by providing manual labour or paying the required tax levies, the property owners along the canals were coerced into shouldering the burden of the canal's enlargement. Once again, therefore, the burden of major urban water projects fell upon those expected to benefit from them most.

In the same year, Sultan al-Ghawrī ordered the construction of a dyke which would close the *khalīj* Jarkas al-Khalilī had built over a century earlier between the south of the Jazīra al-Wustā and the eastern Nile banks.²⁴³ The project's implementation, which apparently had a negative effect on the island, was entrusted to the supervisor of Maṭariyya (*shaykh jihāt al-maṭariyya*), a northern district situated alongside the

²³⁸. Petry, *Protectors or Praetorians?*, 114.

²³⁹. As mentioned in the first part of this chapter, also the 877/1472 restoration of the *qanāṭir* in Giza was entrusted to one of the most influential *amīrs* of the time, *atābak al-'asākir* Azbak min Ṭuṭukh. For this project, the workforce was once again forcibly gathered from the streets of Cairo. See: Ibn al-Ṣayrafī, *Inbā'*, 483.

²⁴⁰. Ibn Iyās, *Badā'i'*, 4:211 and 228.

²⁴¹. Ibn Iyās, *Badā'i'*, 4:211. In addition, the property owners working at the excavation were vexed by the men of the *hājib al-ḥujjāb*, and the sultan threatened to have their properties confiscated if they did not take part in the works. Al-Ghawrī did not inspect the canal until the beginning of the following month (Ṣafar/May), and he did so with a parade that passed through the empty canal bed. Ibn Iyās, *Badā'i'*, 4:212.

²⁴². Ibn Iyās, *Badā'i'*, 4:228.

²⁴³. Since the *khalīj* dug by Jarkas al-Khalilī ended at the *zarība* of Qawṣūn, I believe that it was called Khalīj al-Zarība, and not Khalīj al-Zarbiyya as reported by Ibn Iyās (*Badā'i'*, 4:228-9). The confusion might result from an editing mistake: the words *zarība* and *zarbiyya* have the same *rasm* (outline without diacritics) in Arabic.

Khalīj al-Nāṣirī.²⁴⁴ Entrusting a district supervisor with a major urban water project in Cairo appears as a remarkable exception to the pattern displayed by earlier examples. This choice, however, does not indicate a broader change in the offices customarily involved in the large urban projects (such as the *ḥājib*). Closing Jarkas al-Khalīlī's canal, and thereby increasing the water flow in the Khalīj al-Nāṣirī, was not a project aimed at altering Cairo's water infrastructure, but a strategic step taken to revitalize Maṭariyya. The gardens of this district were in fact renowned for the production of the famous Maṭariyya balsam, a precious export crop and royal monopoly the production of which al-Ghawrī sought to restore and exploit.²⁴⁵

Regardless of their ultimate unsuccess, these major urban water projects undertaken around Cairo by Mamlūk-era sultans exhibit recurring funding and construction patterns. There is a degree of continuity evident in the construction techniques employed for these projects, such as using ships laden with stone blocks to construct dykes, or reusing urban debris as construction material.²⁴⁶ More significantly, however, recurring political and economic dynamics underlie these projects, right from the planning stages to their completion. Consistently, influential high-ranking *amīrs* were delegated to staff worksites, and manage construction operations, constituting a clear pattern among projects undertaken across the eighth/fourteenth, ninth/fifteenth, and tenth/sixteenth centuries. This pattern was also noted by Denizeau, who rightly emphasized that the selection of the high-ranking *amīr* overseeing each of these projects depended on their personal proximity to the sultan, rather than on any institutional function specifically associated to their post.²⁴⁷ The financial strategies employed to fund major urban water projects also reveal a consistent approach across the period, albeit with variations in how specific projects implemented levies collection. The costs for these projects were generally imposed on the individuals or facilities that directly benefitted from them. Furthermore, notable parallels can be observed in the labour recruitment strategies adopted across these

^{244.} Ibn Iyās, *Badā'i*, 4:228-9. Ibn Iyās claims that the closure of this *khalīj* jeopardized the traffic of boats between the eastern shores and Urwā and affected the development of this island.

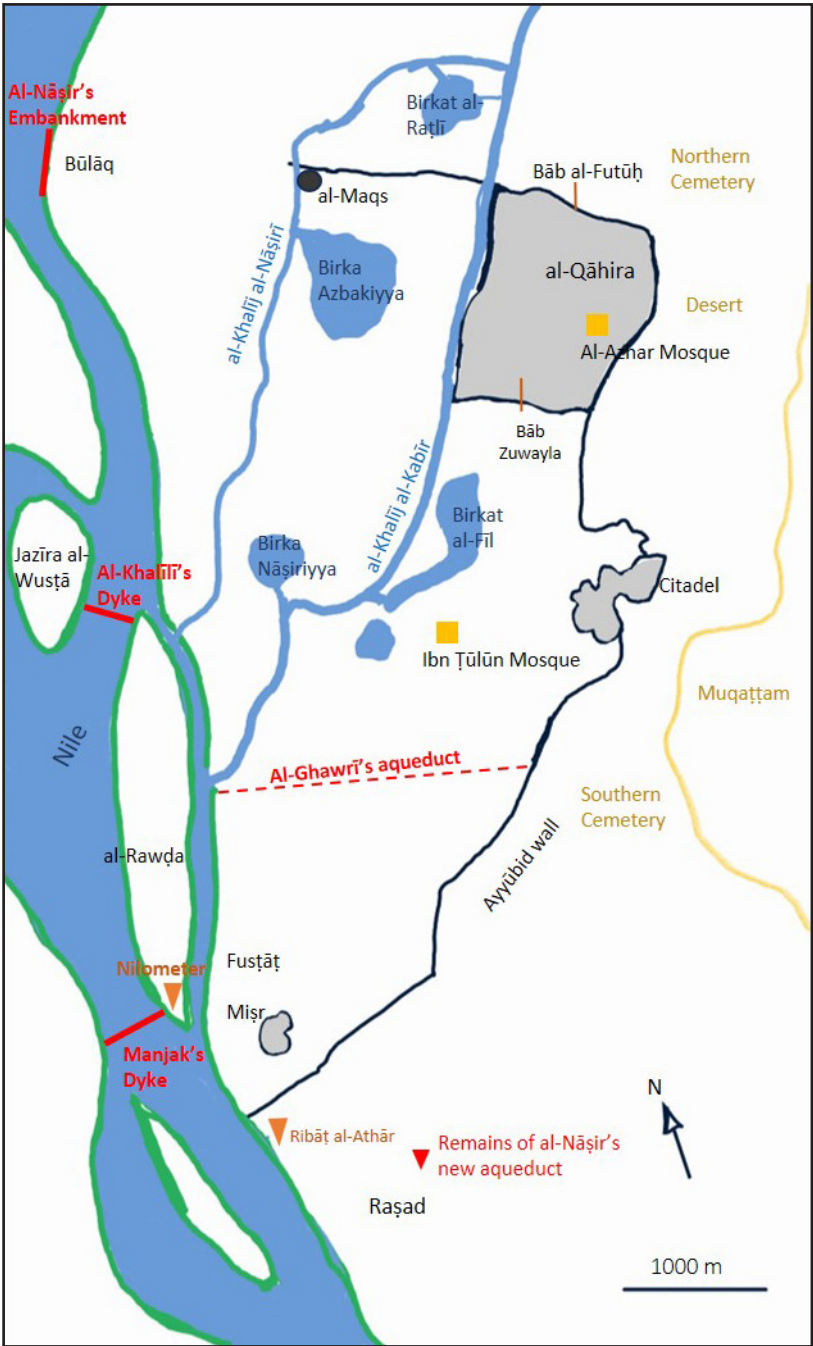
^{245.} The trade of this balsam was a royal monopoly. The balsam was highly requested in medical and ritual contexts, especially in Christian countries. The cultivations of the trees producing this balsam had been heavily damaged in 900/1494, during the Sultanate of Qāytbāy. In 914/1509, al-Ghawrī started to revitalize the balsam cultivations by importing new trees from the Hījāz. Behrens-Abouseif, "The North-eastern Extension," 160; "Gardens in Islamic Egypt," *Der Islam* 69, no. 2 (1992): 308; Petry, *Protectors or Praetorians?*, 119; Mauder, *In the Sultan's Salon*, 934; Marcus Milwright, "The Balsam of Maṭariyya: An Exploration of a Medieval Panacea," *Bulletin of the School of Oriental and African Studies, University of London* 66, no. 2 (2003): 205-6.

^{246.} Denizeau has also mentioned the recurrent use of this material in the large water projects. Denizeau, "Conduire l'eau," 385-7.

^{247.} Denizeau, "Conduire l'eau," 366-7.

projects. The exploitation of the *amīrs'* *mamlūks* as a primary labour force constitutes an established practice, while the (to varying degrees) coercive recruitment of the urban population also emerges as a common feature in numerous instances. Regarding the employment of the peasants from the provinces, it is noteworthy that this practice appears to be confined to the projects undertaken in the eighth/fourteenth century. Later projects demonstrate a shift towards using alternative human resources, the cause of which could be connected to the major socio-political and economic changes discussed in the first part of this chapter and may suggest a decline in the court's ability to effectively mobilize and control rural populations from the late eighth/fourteenth century onwards. Conversely, the exploitation of staff from *waqf* foundations in the project initiated by al-Mu'ayyad Shaykh indicates the court's growing influence on these institutions. While these examples collectively demonstrate a lack of formalized administrative procedures for undertaking major urban water projects during the Mamlūk period, the realization of these projects consistently followed established, albeit informal, funding and managerial practices that constituted coherent courses of action.

2. Major Urban Water Projects and Environmental Changes throughout the Mamlūk Period



Conclusions

This chapter has explored several instances when sultans actively intervened in the creation and maintenance of Egypt's vital water infrastructure during the Mamlūk period, and its primary focus has been to examine the sultans' institutional responsibilities in managing both the rural and urban waterworks. As discussed at the beginning of this chapter, the agricultural productivity in the Sultanate's rural areas hinged upon a dual irrigation system: while local communities bore the responsibility of maintaining village-level dykes and canals (*al-jusūr al-baladiyya*), the Sultanate bore the responsibility of upkeeping the major irrigation works (*al-jusūr al-sultāniyya*). This long-lived division of responsibilities in the management of Egypt's irrigation system, evident as early as the late-Fatimid period, persisted throughout the Ayyūbid and Mamlūk eras. Two *memoranda* (*tadhkirāt*) from the late seventh/thirteenth century underscores the Mamlūk court's keen interest in upholding the established customary practices (*'āda*) governing the management and enhancement of the irrigation system. The importance attributed to these traditional practices reflects the court's recognition of the irrigation system's crucial role in ensuring the stable agricultural production that formed the basis of the Sultanate's fiscal revenues. The sources also reveal that the administration of the *sultānī* irrigation system involved dedicated institutions with specific responsibilities for its management and upkeep. However, the effective implementation of these customary practices was hindered by the environmental and socio-political transformations that changed the Sultanate's organization from the mid-eighth/fourteenth century onwards. These included a demographic crisis leading to labour shortages, and shifts in power dynamics with the Bedouins exerting greater influence along the Nile. While the bureaucratic institutions formally in charge of the *sultānī* irrigation system remained essentially the same, the ninth/fifteenth century witnessed a weakening of sultanic authority in the agricultural areas along the Nile, as well as a decrease in court funded maintenance of the irrigation system. Together with the neglect of the provincial irrigation system, which had been vital to the Treasury in the early Mamlūk period, alternative fiscal and political practices progressively assumed greater significance within the court.

Within the urban context, the Nilotic ceremonies of the *fath al-khalij* and *takhliq al-miqyās* exemplify the long-standing traditions associated with the sultanic responsibilities over the irrigation system. Under the Fatimids, these ceremonies were highly ritualized and served as potent displays of the Caliphs' authority and power. While maintaining their function as symbolic displays of power, these rituals became less elaborate during the Mamlūk period. The sultans' direct participation

to these Nilotic rituals is attested during the reign of Qalāwūn, but his successors appear to have neglected these ceremonies. The sources relate that the *fath al-khalij* and *takhliq al-miqyās* were restored only at the end of the eighth/fourteenth century with the ascent of Sultan Barqūq, and subsequent sultans demonstrated varying degrees of involvement with these ceremonies. A survey of the sultans presiding over these Nilotic ceremonies throughout the Mamlūk period suggests that attending them served to legitimize the ruler's authority by showing their commitment to the Nile, the canals system, and, by extension, the prosperity of the Sultanate. For the Sultans of the Mamlūk period, then, the continuation of the Nilotic ceremonies had a distinct political value.

The *fath al-khalij* and the *takhliq al-miqyās* appear to constitute the only formalized instances of direct sultanic engagement with the capital's water management. Unlike the management of the *sulṭānī* irrigation system, which relied on established institutions (such as the *kāshif al-jusūr*), the construction and maintenance of major urban waterworks lacked a standardized approach. Denizeau and Levani are right to emphasize the lack of a specific institution managing urban water projects on behalf of the court,²⁴⁸ for it is true, as they claim, that the large-scale water projects within the city were typically undertaken on an *ad-hoc* basis, with different solutions adopted by individual sultans.²⁴⁹ The incoherent involvement of Mamlūk-era Sultans in urban water projects, however, was not necessarily indicative of their withdrawal from a sultanic prerogative over the management of this resource, as Denizeau seems to suggest.²⁵⁰ The sultans' moral prerogative over the urban water supply, an aspect stressed by Levani, appears to have remained an abstract ideal.²⁵¹ In reality, the sultanic water-related undertakings seem to have been driven, above anything else, by economic concerns. The construction of the Birka al-Nāṣiriyya and the Khalij al-Nāṣirī under al-Nāṣir Muḥammad, along with the enhancement of the Citadel's aqueduct during his reign and later under al-Ghawrī, were largely intended to develop spaces associated with the sultanic court. The Birka al-Nāṣiriyya and the Khalij al-Nāṣirī were turned into *ḥikr* lots and distributed among al-Nāṣir Muḥammad's entourage, and this ruler wisely exploited the availability of empty lands around the capital and the ambitions of his entourage for his financial gain. Similarly, few later undertakings financed by the sultans on the capital's water systems stemmed from court-oriented financial projects—specifically, al-Nasir Muḥammad's dyke in Būlāq

²⁴⁸. Denizeau, "Conduire l'eau," 389. Levani, "Urban Water Management," 257.

²⁴⁹. Levani, "Urban Water Management," 257. Denizeau, "Conduire l'eau," 358.

²⁵⁰. Denizeau, "Conduire l'eau," 357.

²⁵¹. Levani, "Urban Water Management," 257; "Water Supply," 180.

protected the areas leased to the *nās* through the *bayt al-māl*, and al-Ghawrī's works on the *zarība* canal served to revivify al-Maṭariyya's precious balsam crops.

Conversely, major court-initiated projects to deal with water crises affecting Cairo were mostly financed through the imposition of special taxes, particularly on those individuals and facilities that directly benefitted from the improvements—the only exception to this pattern being the dyke Jarkas al-Khalīlī financed with the resources already in his possession. This pattern shows that the financial resources necessary for the realization of these major urban water projects were not provided by the rulers, as the moral framework underscored by Levanoni would imply. Instead, a clear beneficiary-pays principle appears to have been enforced, which resonates with that articulated by al-Qalqashandī concerning the responsibilities of *iqta'* holders over *baladī* dykes: specifically, that the *muqṭa'* had to disburse the sums the maintenance of their *iqta'* but was entitled to reimbursement if he could not benefit from the works financed. In these major urban water projects, the Sultans or their closest *amīrs* mainly leveraged their socio-political capital to gather (often by force) and organize labourers and collect levies.

Despite the absence of formalized procedures and a dedicated bureaucratic apparatus for managing large-scale urban water projects, the analysis of some of these undertakings throughout the Mamlūk period reveals recurring patterns in their implementation. One such pattern, as Denizeau has also emphasized, was choosing high-ranking *amīrs* as the main overseers of these projects—possibly not because managing construction projects were among their official responsibilities, but because of their personal proximity to the sultans.²⁵² Coherent patterns can be also observed in the materials and technologies used (stone laden ships to create dykes, for instance) to complete urban water projects, as well as in the strategies used to gather funds and labour forces. These recurring patterns may suggest that, in lieu of formalized procedures, the management of urban water projects was guided by underlying customary practices akin to an *'āda*. If this is true, then the absence of a special bureaucratic apparatus responsible for managing urban water projects can be explained. Where an articulated system of functionaries overlooking the provincial irrigation system was necessary to ensure that agricultural revenues were collected and made their way into the Treasury in Cairo, the Sultan himself could control, either directly or via his trusted *amīrs*, the funding and management of urban water projects in the capital.

²⁵². Denizeau, "Conduire l'eau," 366-7.

Finally, while there are observable patterns that emerge between urban water projects during the Mamlūk period, it is hasty to suggest that these patterns reveal evidence of any linear progression. Levanoni has suggested there was a linear decline in the scope of Mamlūk-era urban water projects,²⁵³ but her analysis neglects the specific socio-political circumstances that influenced the various projects and does not account for any individual sultan's motivations for building urban water projects. Taking socio-political circumstances into account underscores instead the significant influence each sultan's agenda played in determining how urban water works were planned and realized, and it also highlights the absence of concretely established sultanic responsibilities for the urban water system.

The planning, funding, and construction of these major urban water projects, therefore, reveal that a complex network of economic and political factors shaped the water management of Mamlūk Cairo. The institutional role the sultans played in the capital's water management is only a portion of the story that does not inform us on the dynamics shaping the daily water supply of the city. These were, in fact, determined by broader networks of socio-economic actors: the following chapters will delve into their identities and roles, exploring how they contributed to the city's water supply system in various ways as part of their own socio-economic strategies. Elaborating on these networks and dynamics offers a more complex understanding of Mamlūk-era water management, one that resists linear narratives of progress or decline.

²⁵³. Levanoni, "Urban Water Management," 272-3.



زاویه

ترسه



بن

مصرع

بورگردن مصر صریدر

نابا

عیداندن

شاه صریدر

قبه بوشکدر

ابوالیس

سکین

شیرضایش

بورجس کیه قیاسه

دیر

طوبخانه

2.

Wāqifūn and water carriers as
stakeholders of urban water supply

Multi-Actor Dynamics of Urban Water Provision

Introduction

The previous chapter explored how sultans managed major urban water projects in Mamlūk-era Cairo, juxtaposing the institutional sultanī role in managing Egypt's provincial *sulṭānī* irrigation system with its involvement in funding and constructing Cairene waterworks. It argued that the major urban water projects funded by Mamlūk-era sultans primarily served the interests of their courts rather than Cairo's water supply, and it showed that while it was sultans and *amīrs* who mobilized the labour for projects mitigating water-related crises in Cairo, it was the people most expected to benefit from these projects who financed them through tax levies. Ultimately, the chapter revealed that, unlike the *sulṭānī* irrigation system, which operated under established customs (*ʿāda*) regulating the sultan's responsibilities, no definitive set of rules governed how sultans managed Cairo's major urban water projects. Nevertheless, it underscored that the consistent funding and construction patterns observed across these projects during the Mamlūk period demonstrate comparable approaches adopted by the sultans in their execution.

This chapter shifts the focus from sultanī urban water projects to the role various socio-economic forces played in Cairo's daily water provision, focusing specifically on the individuals who funded urban waterworks throughout Cairo and the water carriers who transported drinking water from the Nile to the city. Historical chronicles describing the Khalīj al-Nāṣirī and the Birka al-Nāṣiriyya clearly indicate that it was the *nās* who fostered the development of the areas around the new canal and pond by equipping them with essential water structures. While *nās* is a broad term, in these chronicles it specifically refers to individuals who enjoyed distinct social and economic privileges. Scholarship dealing with the organization of urban spaces, not only in Mamlūk-era Egypt and Syria but across the pre-modern Middle East, has underscored the pivotal role privileged societal groups such as the *nās* played in patronizing essential urban water services. In his seminal work *Muslim Cities in the Later Middle Ages*, Ira Lapidus concludes that “the Mamlūks built and maintained waterworks, repaired streets and public spaces, invested in commercial properties, and, above all, endowed the religious, educational, and philanthropic life of the community”.¹ Subsequent scholarship has further emphasized how patronage shaped the urban environment by equipping it with essential facilities, including water infrastructure. For example, Doris Behrens-Abouseif, who specializes in Mamlūk-era art and architecture, has shown that Cairo's urban development during the Mamlūk period was “shaped by the intensive patronage of the ruling establishment,” and that this “princely patronage” extended beyond major religious foundations to encompass

¹ Ira M. Lapidus, *Muslim Cities In the Later Middle Ages* (Harvard University Press, 1967), 189.

facilities such as hammams and other water installations.² Similarly, Amalia Levanoni has argued that urban water facilities in Mamlūk-era Cairo were primarily provided by members of “the upper class” as components of their commercial and philanthropic endeavours,³ while Julien Loiseau has explored the pivotal role “great officials” played in furnishing the city with water structures, including gratuitous facilities such as *sabīls* and fee-based services such as hammams.⁴ Loiseau further emphasized the role of *waqf* foundations as the primary vehicle for such patronage. Nimrod Luz’s study of Mamlūk Tripoli, Safad, and Jerusalem also underscored how *waqf* foundations became the primary “catalysts” for urban development and the institutional means by which cities were equipped with essential water infrastructure.⁵ Sylvie Denoix similarly stressed that the *awqāf* functioned as an “institution for urbanization,” which the “political personnel” used to provision medieval Cairo with necessary urban structures.⁶ This function of *waqf* foundations is also supported by Muhammad Amin’s work on the role of *awqāf* in the social life of Mamlūk-era Cairo.⁷

Awqāf were evidently an important part of urban development in Mamlūk-era Cairo, yet there has been little prosopographical research on the *wāqifūn* (the people who founded the *awqāf*), their motivations for doing so, and the economic and social privileges they enjoyed as a result. Many Mamlūk-era urban water structures in Cairo were indeed established as part of *waqf* foundations, either as sponsored charitable endeavours or as revenue generating assets,⁸ and while it is crucial to understand how their construction and operation shaped the organization and socio-economic realities of urban spaces in Cairo, it is also important to investigate the socio-economic dynamics motivating the people who established them. Indeed, Carl Petry’s and Daisuke Igarashi’s research into the organizational and financial patterns of Mamlūk-era *awqāf* has revealed that these foundations functioned not merely as vehicles of patronage, but as sophisticated revenue-generating enterprises and

² Behrens-Abuseif, “The Mamluk City,” 295 and 313; *Cairo of the Mamluks*, 18.

³ Levanoni, “Water Supply,” 205.

⁴ Loiseau, *Maison*, 376–382.

⁵ Luz, *The Mamluk City*, 117–130. Similar observations on the role of the *awqāf* have been done also for other contexts of the pre-modern Islamic world. See, for instance: Heidemann, “Charity and Piety for the Transformation of the City”, 153–174; Randi Deguilhem, “The Waqf in the City,” in *The City in The Islamic World*, ed. Salma Khadra Jayyusi, Renata Holod, Antillio Petruccioli, and André Raymond (Brill, 2008), 923–950.

⁶ Sylvie Denoix, “A Mamluk Institution for Urbanization: the *Waqf*,” in *The Cairo Heritage: Essays in Honor of Laila Ali Ibrahim*, ed. Doris Behrens-Abouseif (AUC Press, 2000), 191–202.

⁷ Amin, *al-Awqāf*, 131–177; *Izdihār al-awqāf*, 243–258.

⁸ Carl Petry, “Waqf as an Instrument of Investment in the Mamlūk Sultanate: Security vs Profit?,” in *Slave elites in the Middle East and Africa, A comparative Study*, ed. Toru Miura and John E. Philips (Kegan Paul International, 2000), 99–113.

strategic asset management instruments.⁹ Therefore, examining the identities and motivations of *waqf* founders, as well as the broader social and economic purposes of the *waqf* foundations they established, is crucial to understanding the socio-economic rationale behind their endowment of urban water facilities. Specifically, understanding a *waqf* founder's motivations may help reveal whether their patronage represented one component of a broader welfare project designed to serve the urban population, or merely supported and furthered the privileges of a particular social group.

This chapter lays the foundation for this investigation by reconstructing the identity of the *waqf* founders. It achieves this by drawing on evidence derived from selected *waqf* documents, combined with information gleaned from Mamlūk-era chronicles and biographical dictionaries. It is crucial to acknowledge that *waqf* documents do not offer a linear or refined narrative of the *wāqifūn*'s water-provision strategies, as chronicles might do for the large sultanī water projects discussed in the previous chapter. Instead, they provide complex and layered information that necessitates careful extraction and contextualization through comparison with other documents and historical sources. Consequently, a discussion of what the *wāqifūn*'s involvement and the water facilities they endowed meant for Cairo's water supply requires a multilayered and multi-angled approach that focuses and explores one element at a time. The prosopographical analysis conducted in this chapter serves as an essential premise for the dynamics explored in Chapters 3 and 4, which detail the creation and regulation of lucrative and charitable water facilities endowed in *waqf* foundations. This chapter helps to elucidate the broader social background of the *wāqifūn* and the comprehensive nature of their role in establishing and managing urban water facilities.

In addition to exploring the background of the individual *waqf* founders and their possible motivations for endowing urban water structures, this chapter also examines the organization of the water carriers responsible for distributing drinking water around Cairo. Cairene water carriers transported water from the Nile into the city each day; consequently, their labour made them crucial stakeholders in the urban water supply. Yet, limited scholarly attention has been given to these workers' contribution to Cairo's daily water supply, and especially to the ways their work complemented the role of other stakeholders such as the endowers of water structures. The few

⁹ I refer specifically to Carl Petry's studies on the *awqāf* of Qāyṭbāy and al-Ghawrī, as well as to Daisuke Igarashi's works on the *waqfization*. See: Petry, "A Geniza for Mamlūk Studies," 51-60; *Protectors or Praetorians*, 196-210; Igarashi, *Land Tenure, Fiscal Policy*, 177-197; "Waqf as a Means," 280. Igarashi described the *awqāf* as a "good asset management vehicle". See: Igarashi, *Land Tenure, Fiscal Policy*, 186.

scholarly publications that have addressed the water carriers have largely overlooked their significance within the broader context of urban water provision, often treating them in isolation rather than as part of a multi-actor network that supplied Cairo's water.¹⁰ This being said, in her doctoral thesis Valentine Denizeau made a pioneering effort to analyse the role water carriers played within the broader context of Mamlūk-era Cairo's water supply network, specifically by discussing their function in relation to Cairo's *sabils*.¹¹ This paucity of scholarly contributions on Cairene water carriers underscores the inherent challenges in reconstructing the significance of this trade based on the available sources. Indeed, while chronicles and documentary sources provide ample information regarding the *wāqifūn*, including those analysed in this chapter, due to their elevated social standing, the more numerous yet less socio-economically powerful water carriers received comparatively limited attention by contemporary authors. Most of our knowledge about water carriers during the Mamlūk period is derived from normative sources, such as *ḥisba* manuals and Ibn al-Ḥājj's moral treatise, or exoticizing accounts by travellers visiting Egypt between the late eighth/fourteenth and ninth/fifteenth centuries. Any historiographical mentions of Cairene water carriers are largely confined to accounts of crises that impacted the water carrying trade and its ability to supply drinking water. As a result, the subsequent discussion of water carriers occupies a comparatively smaller portion of this chapter: a brevity that does not, however, imply that their role in Cairo's water supply was less important.

In this chapter, I have chosen to examine water carriers within the broader framework of Cairo's water supply network by placing them alongside the *wāqifūn* in order to demonstrate each actor's interconnected and complementary roles while simultaneously illuminating this network's complexity.

2.1 Financing urban water facilities: the *wāqifūn*

2.1.1 Presenting the *wāqifūn* and their endowment strategies

This dissertation centres on nine case studies selected from *waqf* and *waqf*-related documents held in the Dār al-Wathā'iq collection in Cairo. As outlined in the general introduction, these documents were selected primarily because they contain detailed descriptions of the structure and/or function of the water facilities endowed. In addition, the selection criteria aimed to include *waqf* founders from a diverse range of social backgrounds, including *amīrs*, scholars, women, and eunuchs; and

^{10.} The existing literature on the topic is discussed in further detail in the second part of this chapter.

^{11.} Denizeau, "Conduire l'eau," 428-436.

to span the Mamlūk period from the mid-seventh/thirteenth to the early tenth/sixteenth centuries.

The following table (Table 2) identifies the *waqf* documents related to these nine case studies found in the Dār al-Wathā'iq collection and summarizes the water installations chosen as case studies for this project:

Table 2: Overview of the selected case studies

Document no. and date	Document type and issuer	Endowed water installations	
		Profitable	Charitable
DW7 659/1261	<i>Waqf</i> of <i>amīr</i> Majd al-Dīn Abū Bakr ibn As'ad ibn Yahyā al-Hakkārī	Hammams in Ḥārat Qarāqūsh	Drinking water distribution
DW26 717/1317	<i>Waqf</i> of Khawand Ardukin bint Sayf al-Dīn Nūkyā	Hammams	—
DW355 810/1408	<i>Waqf</i> of Faṭḥ Allāh ibn Mu'taṣim ibn Nafīs	—	<i>Sabīls</i> , cisterns, wells and waterwheels
DW91 830/1427	<i>Waqf</i> of Sharaf al-Dīn Mūsā ibn al-Burhān	Domestic hydraulic system	<i>Sabīls</i> , and cisterns
DW125 864/1460	<i>Istibdāl</i> of the eunuch 'Anbar ibn 'Abd Allāh al-Nūrī	Hammam	—
DW175 879/1474	<i>Waqf</i> of Zayn al-Dīn Abū Bakr ibn Muzhir	Domestic hydraulic system	<i>Sabīl</i> and cistern
DW177 880/1475 DW184 882/1477	<i>Waqf</i> of <i>amīr</i> al-Sayfī Qarājā al-Jamālī al-Khāṣṣakī al-Malikī al-Ashrafi.	—	Waterwheel, <i>sabīl</i> and cistern, drinking water distribution
DW198 890/1485	<i>Waqf</i> of <i>amīr</i> Azbak min Ṭuṭukh	Pond, domestic hydraulic system, hammams	Cistern, <i>sabīl</i> , waterwheel
DW241 908/1503	<i>Waqf</i> of <i>amīr</i> Azdamur min 'Alī Bāy	Domestic hydraulic system	<i>Sabīl</i> , cistern, waterwheel

While the *waqf* founders' specific socio-political roles were not a pre-requisite for selecting the case studies, understanding such roles became an essential outcome of this research. A 2019 article by Daisuke Igarashi clearly demonstrated the importance of examining *waqf* deeds in the light of biographical information related to the founders and other individuals mentioned in the documents. In his article, Igarashi reconstructed the “endowment strategy” of *amīr* Qijmās al-Ishāqī (d. 892/1487) by

integrating information from the *amīr*'s *waqf* deed with historical accounts of his life and political career.¹² By adopting such approach, Igarashi was in fact able to identify a pattern of correspondence between the types of structures endowed by *amīr* Qijmās and the stages of his career, demonstrating how the latter influenced the former. Through this insightful article, Igarashi demonstrated that *waqf* foundations possessed "multidimensional and complex functions", many of which can be understood by contextualizing the founders' identities and comprehending their socio-political and economic agendas.¹³

Following Igarashi's methodology, in the first part of this chapter I examine biographical information about the *waqf* founders in the chosen case studies, presented in chronological order. This analysis shows that the founders' background and endowment strategies were shaped by and reflected their contemporary social, political, and economic realities. In other words, the analysis reveals the complex nature of patronage during the Mamlūk period by identifying the different socio-economic factors that led these individuals to endow, seize, exchange, or acquire urban water structures, thereby shaping Cairo's water supply.

2.1.1.1 Kurdish families at the brink of a new era

The earliest deed analysed in this work (DW7) was stipulated on the 12th of Rajab of 659 (June 1261) and describes a variety of endowed properties, including land lots, a garden on the shores of the Great Khalīj in al-Maṭariyya (north of Cairo), two grain mills, commercial facilities (*ḥawānīt*), and residential palaces, all of which were located within the walls of Fatimid Cairo. In addition, two hammams located in Ḥārat Qarāqūsh (in the northern part of Fatimid Cairo) are indicated as part of this endowment.¹⁴

The founder of this *waqf*, *amīr* Majd al-Dīn Abū Bakr ibn As'ad ibn Yaḥyā al-Hakkārī, is mentioned only a few times in the chronicles, and some other information about him can be deduced from the fragmentary *waqfiyya*. The *nisba* indicates that Majd al-Dīn was originally from the Hakkārī region, located south of Lake Van (currently

¹² Daisuke Igarashi, "The *waqf*-endowment strategy of a Mamluk military man: the contexts, motives, and purposes of the endowments of Qijmās al-Ishāqī (d. 1487)," *Bulletin of SOAS* 82, no. 1 (2019): 25-53.

¹³ Igarashi, "The *waqf*-endowment strategy," 53. A similar methodology was employed earlier by Carl Petry in his 2004 article on the *waqf* foundation of al-Khuwand Fāṭima al-Khaṣṣbakiyya. See: Carl Petry, "The Estate of al-Khuwand Fāṭima al-Khaṣṣbakiyya: Royal Spouse, Autonomous Investor," in *The Mamluks in Egyptian and Syrian Politics and Society*, ed. Michael Winter and Amalia Levanoni (Brill, 2004), 277-294.

¹⁴ DW7. For the location of Ḥārat Qarāqūsh, see: Ibn Taghrī Birdī, *Nujūm*, 6:176. The neighbourhood was named after Bahā al-Dīn Qarāqūsh, the eunuch of Ṣalāḥ al-Dīn who coordinated the construction of the Citadel. See also: Raymond, *Cairo*, 84-6.

in south-east Turkey). The Kurdish tribe from this region, the Hakkāriyya, was an important component of the Ayyūbid army.¹⁵ The historical sources mention that Majd al-Dīn's brother, Ḍīyā' al-Dīn 'Aysā, was a *fiqh* scholar.¹⁶ Thus, we can deduce that *amīr* Majd al-Dīn belonged to a family of notables with Kurdish background. He also held a prestigious position in the Ayyūbid military hierarchy, for the chronicle of Ibn Wāṣil (d. 697/1298) mentions that Majd al-Dīn was a delegate of the Ayyūbid Sultan al-Malik al-Kāmil (r. 615-635/1218-1238) during a diplomatic mission to Ḥamā in 626/1229.¹⁷ A few years later, in 635/1238, Majd al-Dīn marched to Gaza against al-Malik Jawād as the leader (*muqaddam*) of al-Nāṣir Yūsuf's army.¹⁸

Judging by the large number of assets endowed in Majd al-Dīn's *waqf*, it would appear that this *amīr* had accumulated substantial wealth by 659/1261. An in-depth analysis of the deed and the identification of the beneficiaries mentioned therein adds further information on Majd al-Dīn's network and on the possible motivations underlying his endowment. The primary beneficiary of this endowment was Majd al-Dīn's fellow *amīr* Bahā' al-Dīn Khalīl ibn Muḥammad ibn Malikshaw, about whom, however, the sources provide scarce information. The *waqf* deed suggests that Bahā' al-Dīn shared Majd al-Dīn's Kurdish background, for he is also indicated with the *nisba* of *al-Hakkārī*.¹⁹ Like Majd al-Dīn, Bahā' al-Dīn was an *amīr* of the Ayyūbid Sultan al-Kāmil: he was the superintendent (*mushadd*) of the army's *dīwān*,²⁰ and in 626/1229, when al-Kāmil decided to secure the area of Ḥarrān (south Anatolia), *amīr* Bahā' al-Dīn was sent there at the head of 2,000 horsemen.²¹ At the end of 636/1239, during the reign of the Ayyūbid Sultan al-ʿĀdil (r. 635-637/1238-1240), Bahā' al-Dīn was dispatched with the army in Sharqiyya to end a violent conflict that had arisen between two Arab tribes.²² In Majd al-Dīn's *waqfiyya*, Bahā' is designated as *amīr kabīr* and presented with the *nisba* of *al-Ṣāliḥī*, which suggests that he also served the Ayyūbid Sultan al-Malik al-Ṣāliḥ (r. 637-647/1240-1249). Other titles the document attributes to Bahā' al-Dīn support the information provided by the sources: the title of *muqaddam al-juyūsh* (Chief of the Armies) indicates his high position in the military, while the terms

¹⁵ Sato, *State and Rural Society*, 50-2; Boris James, *Genèse du Kurdistan. Les Kurdes dans l'Orient mamelouk et mongol (1250-1340)* (Éditions de la Sorbonne, 2021), 61-96.

¹⁶ Jamāl al-Dīn Muḥammad ibn Sālim Ibn Wāṣil, *Muḥarrir al-Kurūb fī Akhbār Banī Ayyūb*, ed. Ḥasanayn Muḥammad Rabī' and Sa'īd 'Abd al-Fattāḥ 'Āshūr (Maṭba'at Dār al-Kutub, 1972, 1977), 4:269; al-Nuwayrī, *Nihāya*, 29:150.

¹⁷ Ibn Wāṣil, *Muḥarrir*, 4:269; al-'Aynī, *Iqd*, 4:215.

¹⁸ al-Nuwayrī, *Nihāya*, 29:150.

¹⁹ DW7.

²⁰ al-'Aynī, *Iqd*, 4:220. This chronicle describes this *amīr* as *mushadd dīwān al-juyūsh al-manṣūra*.

²¹ al-Makīn ibn al-'Amīd, *Akhbār al-Ayyūbiyyīn*, ed. Claude Cahen (Institut Français du Proche-Orient, 1955-1957), 138; al-'Aynī, *Iqd*, 4:220.

²² al-Maqrīzī, *Sulūk*, 1:393.

mujāhid and *murābiṭ* possibly refer to his role in securing the peripheral areas of the Sultanate, such as Ḥarrān. The *waqfiyya* also indicates that, when the *waqf* foundation was established, Bahā' had one son, Ṣārim al-Dīn, and five daughters, Āsiya, Kalūla, Ṣafiya, Maṣūra, and Fāṭima. All the daughters except for Fāṭima, who was then just seven years old, were married to men of high social status—Āsiya to the *shaykh al-shuyūkh*'s son and the other sisters to *amīrs*.²³ These marriages further confirm Bahā''s prestigious social position.

Bahā''s children are listed in the *waqfiyya* as the beneficiaries of the foundation after their father's death. According to the deed's stipulations, the *waqf*'s profits were to be distributed among Bahā''s descendants, except for the revenues from one endowed shop (*ḥānūt*), allotted instead to the purchase of drinking water to be distributed at al-Azhar mosque following Bahā''s death.²⁴ This is the only form of charitable water supply sponsored by this *waqf* foundation, thus only a relatively small part of the endowment's revenues were allotted for this purpose. The *waqf*'s *shurūṭ* (conditions) stipulate that the other assets' revenues were to be distributed among Bahā''s descendants. The revenues from the two hammams endowed in the Ḥārat Qarāqūsh, for instance, were to be divided equally among Bahā''s five daughters.²⁵ Chapter 3 will further discuss this example of a lucrative urban water facility managed through a *waqf* by an *amīr*'s female descendants.

The information gathered from this *waqfiyya*, paired with the mentions of Majd al-Dīn and Bahā' in other sources, suggest that these two high-ranking military representatives of the late-Ayyūbid military harnessed this *waqf* foundation as an efficient asset-management tool. Clearly, Majd al-Dīn established this *waqf* foundation for the benefit of Bahā' and his family. A few elements that emerge from the document, however, warrant further investigation. To begin, it appears that Bahā' enjoyed a higher social status than Majd al-Dīn, for the *waqfiyya* refers to Bahā' using the title *mawlāy* ("my lord"). This may suggest he was Majd al-Dīn's patron, thereby indicating a strong tie between these two *amīrs* who belonged to the same Kurdish tribe (the Hakkāriyya). In addition, by appointing Bahā' as both the beneficiary and administrator (*nāẓir*) of the foundation for his lifetime and naming his children as successors to these roles, the *waqfiyya* granted Bahā''s family not only

²³ DW7. At the time this document was stipulated, the title of *shaykh al-shuyūkh* was exclusively assigned to the chief Sufi of Ṣalāḥ al-Dīn's *khānqāh* of Sa'īd al-Su'adā'. This was a prestigious position that implied great social and economic power in addition to control over the *khānqāh*'s *waqf*. See: Fernandes, *The Evolution of a Sufi Institution*, 23.

²⁴ DW7. This early example of charitable water distribution is discussed further in Chapter 4 of this dissertation.

²⁵ DW7.

the right to benefit from the revenues of the foundation, but also the capacity to manage the endowed properties and their financial flows. Therefore, Majd al-Dīn's *waqf*, while it was ostensibly a charitable foundation, actually functioned as a well-planned financial arrangement through which Bahā's family obtained full control over numerous urban assets and their respective revenues. Furthermore, the *waqfiyya* indicates that one of the residential palaces endowed in the foundation had been newly established by Bahā himself (*al-dār al-mustajadd al-inshā' al-ma'rūf bi-inshā' bahā' al-dīn khalīl al-madhkūr*).²⁶ The deed is silent on how this property came into Majd al-Dīn's possession; however, its mention and the suggested tie between the two *amīrs* could imply that this *waqf* was not simply a donation of Majd al-Dīn's properties to Bahā, but a pre-arranged agreement between the two parties, whereby Majd al-Dīn returned a property which originally belonged to Bahā.

Different reasons might have motivated this strategic harnessing of the *waqf* foundation. The designation of Bahā's children as beneficiaries and administrators suggests that this endowment was intended as a way to distribute assets to Bahā's children circumventing the rigid rules established by the Islamic inheritance law. Indeed, Julien Loiseau has emphasized that throughout the Mamlūk period *waqf* foundations were commonly used as adaptable patrimony-transmission devices.²⁷ Concurrently, this foundation was possibly intended to protect Bahā's capital under the shield of *waqf* law. After all, the mid-seventh/thirteenth century was an uncertain time for Kurdish officials like Majd al-Dīn and Bahā due to the ascent of the Turkish *mamlūks* and the gradual overthrowing of the Kurdish military families who had been influential under the Ayyūbids.²⁸ All this considered, it seems very likely that this deed represented a strategic legal manoeuvre to save the fortunes of a family affiliated to a group whose political influence was waning.²⁹

If such interpretation is correct, this document demonstrates that *waqf* foundations were harnessed as convenient economic arrangements (and not merely for charitable endeavours) already at the very beginning of the Mamlūk period. A

²⁶. DW7.

²⁷. On the use of *waqf* foundations for this purpose see: Loiseau, "Boy and Girl," 27-30.

²⁸. Stephen Humphreys, *From Saladin to the Mongols. The Ayyubids of Damascus, 1193-1260* (SUNY Press, 1977), 312 and 361. Humphreys emphasized that the tensions were not motivated by ethnic claims, but by shifts of power within the groups forming the late Ayyūbid army. On these power struggles see also: James, *Genèse du Kurdistan*, 237-281; "Arab Ethnonyms ('Ajam, 'Arab, Badū and Turk): The Kurdish Case as a Paradigm for Thinking about Differences in the Middle Ages," *Iranian Studies* 47, no. 5 (2014): 697-699..

²⁹. On the use of *waqf* foundations to reinforce ties or serve pre-defined economic arrangements between their founders and the beneficiaries, see: Behrens-Abouseif, *Cairo of the Mamluks*, 18; Igarashi, *Land Tenure, Fiscal Policy*, 187.

few years after Majd al-Dīn's *waqf* was established, a reform promoted by al-Zāhir Baybars (r. 658/1260-676/1277) made such strategic use of *waqf* even more viable. The appointment, in 663/1265, of four chief qadis in Egypt (one for each *madhhab*) made the legal framework of *waqf* more flexible. This “quadruple structure of the judiciary” provided flexibility in resolving issues related to the establishment and maintenance of *waqf* foundations, allowing for the application of the most suitable legal solution from any of the four *madhhabs*. While formally the Shāfi‘ī chief qadi remained the main judicial authority in charge of the supervision of the *awqāf*, in practice the intervention of either the Ḥanafī, Ḥanbalī, or Malikī chief qadis became instrumental for influencing the outcome of *waqf*-related legal matters.³⁰ The following case study, dated only a few decades after DW7, offers an insight into the advantages this flexible legal framework implied for the founders.

2.1.1.2 A royal spouse and her (tactical?) foundation

With the *waqf* deed issued on the 18th of Rabī‘ II 717 (July 1317) Khawand Ardukin, wife of Sultan al-Nāṣir Muḥammad ibn Qalāwūn, established a rich foundation in which she endowed a great number of urban assets and agricultural lands. The extant part of this document describes a lavish residential palace located in Ḥārat Zuwayla (a quarter in the north-western sector of Fatimid Cairo), in which a complex hydraulic system was embedded. Two hammams, one for men and one for women, were endowed in the proximity of this palace. Two horse stables in the same Ḥārat Zuwayla, in addition to a palace on the shore of the Great Khalīj (near Bāb al-Khawkhā), and two palaces south of Fatimid Cairo (outside Bāb Zuwayla) are also described in the document among the endowed properties.³¹ In addition, this *waqfiyya* (DW26) also lists a series of commercial structures that were part of the foundation: a *funduq-rab‘* (a merchant lodge and rental complex) near al-Azhar mosque, a *funduq* near Bāb al-Futūḥ, a *rab‘* (rental building) south of Bāb Zuwayla, and a *qaysāriyya* (roofed market) in the western part of Fatimid Cairo.³² This foundation also included 14 land lots located south of Old Cairo (Miṣr), as well as other lands and structures in the

³⁰ Behrens-Abouseif, *Cairo of the Mamluks*, 10; Rapoport, “Royal Justice and Religious Law,” 76-7.

³¹ DW26. As discussed in the next chapter, the hammam and palace Ardukin endowed in Ḥārat Zuwayla provide an insightful example of how the water systems serving this type of urban facility were adapted and reused over extended periods.

³² DW26. The *funduq* was a type of commercial building that provided lodging, storage space, and security to merchants. These edifices also functioned as venues where the authorities collected taxes on commercial transactions and monitored the activities of merchants. The *rab‘* (pl. *irba‘*) referred a rental multi-unit, usually built above a commercial building. The apartments within the *irba‘* were probably the most widespread type of dwellings for the greater part of the middle class. Olivia Remie Constable, *Housing the Stranger in the Mediterranean World. Lodging, Trade, and Travel in Late Antiquity and the Middle Ages* (Cambridge University Press, 2009), 41; Lewicka, *Food and Foodways*, 21; Sabra, *Poverty and Charity*, 102-3.

extramural areas near Bāb al-Khawkhā (one of the western gates of Cairo), and near the Qanāṭir al-Iwazz (north-west of Cairo).³³

When Khawand Ardukin established this *waqf* in 717/1317, she had been married to al-Nāṣir Muḥammad for 17 years. Her ties with the Qalāwūnid household antedated this marriage: her father, Sayf al-Dīn Nūkyā, had been the *silāḥdār* of al-Manṣūr Qalāwūn; her sister Mankabak had married al-Šālīḥ ‘Alī ibn Qalāwūn; and Ardukin herself had been married to al-Ashraf Khalīl before marrying al-Nāṣir Muḥammad in 700/1300.³⁴ Ardukin and al-Nāṣir Muḥammad divorced in 717/1317, the same year the *waqf* deed was recorded, but the divorce did not sever the connection between the two. In fact, the separation was never announced publicly, Ardukin kept living at the Citadel until 719/1319, and even after she moved to her palace in Ḥārat Zuwayla (the one endowed in the 717/1317 *waqfiyya*), al-Nāṣir Muḥammad sent her a monthly alimony of 5,150 *dirhams* and daily provisions of goods valued at 15,000 *dirhams* per month.³⁵ Moreover, after Ardukin died in 724/1324, al-Nāṣir Muḥammad kept full jurisdiction over her patrimony. When Ardukin’s brother, Jamāl al-Dīn Khidr ibn Nūkyā, tried to claim his share of Ardukin’s inheritance by threatening her servants with violence, al-Nāṣir Muḥammad issued a temporary decree forbidding Jamāl al-Dīn from touching Ardukin’s patrimony. Only later, after he had returned to the Citadel from a hunting trip in Giza, did al-Nāṣir allow Jamāl al-Dīn to receive his share of a 110,000 *dirhams*.³⁶

The fact that the DW26 *waqfiyya* was issued in the same year Ardukin and al-Nāṣir Muḥammad divorced may indicate a connection between the two events. The *waqf* foundation might have been an arrangement Ardukin used to establish a secure source of wealth independent from the court. With the exception of the profits yielded from the *funduq-rab’*, which were allocated to the *mashhad* of Sayyida Ruqayya, Ardukin allocated the revenues of all the endowed properties to herself (*waqfan ṣaḥīḥan... ‘alā mawkila...ardukīn*).³⁷ This type of *waqf* in which the endower (*wāqif*) designated themselves as beneficiary (*mawqūf ‘alayhi*), is known as a *waqf ‘alā al-nafs* (“self-benefiting *waqf*”). The Shāfi‘ī *madhhab*, which before al-Zāhir Baybars’s

³³. DW26. The location indicates that these were prosperous agricultural lands, for the area south of Old Cairo and north-west of Fatimid Cairo were well irrigated during the Nile plenitude.

³⁴. al-Maqrīzī, *Sulūk*, 2:342.

³⁵. al-Nuwayrī, *Nihāya*, 33:52. The wives and concubines of al-Nāṣir Muḥammad formed part of his extended household and were the primary recipients of this Sultan’s expensive gifts. Flinterman and Van Steenbergen, “Al-Nāṣir Muḥammad,” 96. Ḥārat Zuwayla was a prosperous quarter laying between the Bayn al-Qaṣrayn street and the Great Khalīj. It was inhabited by shopkeepers and wealthy citizens and included Christian and Jewish residential and congregational areas. Raymond, *Cairo*, 78, 160 and 162.

³⁶. al-Nuwayrī, *Nihāya*, 33:52. Jamāl al-Dīn died in 728/1328. See: Ibn Taghrī Birdī, *Nujūm*, 9:275.

³⁷. DW26.

introduction of the quadruple structure of the judiciary was the only school of law accredited in Egypt, did not consider the *waqf* *'alā al-naḥs* legitimate—only the Ḥanafī *madhhab* acknowledged its legality.³⁸ Ardukin's deed shows that al-Zāhir Baybars's reform of the judiciary made it possible for the *wāqifūn* to make advantageous arrangements following rules other than those of the Shāfi'ī *madhhab*. While in 659/1261 *amīr* Bahā' al-Dīn could only benefit from a *waqf* established by another person, following the reform, Ardukin could establish a *waqf* for her own benefit thanks to a legal arrangement admitted exclusively by the Ḥanafī *madhhab*. Indeed, the self-benefiting *waqf* effectively allowed the founder to benefit from the revenues of their properties even after their endowment, remaining *de facto* the owner of those properties. This arrangement was widely adopted throughout the Mamlūk period, as evidenced by the fact that most of the case studies selected for this work are self-benefitting *waqfs*.

With the deed issued in 717/1317, Ardukin not only availed herself of the advantages offered by the *waqf* *'alā al-naḥs*, designating herself as the beneficiary of her own foundation, but even retained the right to administer her *waqf* by designating herself as its *nāẓir* for life. By doing so, she was able to attain full control over the foundation and the assets endowed therein. Given that she divorced al-Nāṣir Muḥammad in the same year the *waqfiyya* was issued, it is possible, if not likely, that this *waqf* was a planned financial arrangement that guaranteed Ardukin a substantial revenue flow and full control over their sources so that she could become financially independent after losing her status as a royal spouse (even though she kept receiving abundant alimonies from al-Nāṣir Muḥammad long after the divorce). Carl Petry has shown that Sultan Qāyṭbāy's (r. 872-901/1468-1496) wife, Khawand Fāṭima al-Khaṣṣabakiyya (d. 909/1504), used her *waqf* as an instrument to secure her financial autonomy and stability. Petry argues that Fāṭima used her *waqf* foundation to preserve her capital, and notes that her acquisition and endowment of properties intensified soon after an accident that put Qāyṭbāy's life and thereby Fāṭima's status at risk.³⁹ Clearly, for these royal spouses *waqf* represented an efficient way to manage their economic capital and consolidate their financial wellbeing even (or especially) when their socio-political privileges were at stake.

There is no evidence to suggest that al-Nāṣir Muḥammad, who took control of Ardukin's patrimony after her death, personally profited from her *waqf* foundation as a beneficiary or administrator. The deed stipulates that following Ardukin's death the *waqf*'s revenues were to maintain its endowed assets and pay the workers at her

³⁸ Igarashi, "Waqf as a Means," 280-1; Loiseau, "Boy and Girl," 28.

³⁹ Petry, "The Estate of al-Khuwand Fāṭima," 280-2.

shrine, consisting of twelve Qur'an readers and a cleaner whose combined salary totalled 410 silver *dirhams* per month.⁴⁰ In addition, according to the deed's terms any revenue surpluses (and they were likely substantial given the *waqf*'s assets) were allocated to Ardukin's offspring and, after its extinction, to the poor of Mecca and Medina. The *waqf*'s administration was entrusted to Ardukin's descendants or, in the event that she had no remaining descendants, to the Shāfi'ī chief qadi of Egypt.⁴¹ Two elements of DW26 do show, however, that al-Nāṣir Muḥammad was involved in establishing Ardukin's foundation. Firstly, al-Nāṣir Muḥammad made a testimony note in the margin of the *waqfiyya* confirming that Ardukin was the legitimate owner of the *waqf*'s endowed properties, thus facilitating the deed's issuance by guaranteeing its lawfulness before the religious authorities. Secondly, the deed states that the lands and buildings (a mill, four shops, a horse stable, etc.) endowed outside Bāb al-Khawkhā had been transferred to Ardukin by the minister of the Treasury (*intaqala bi-al-intiqāl al-shar'ī min wakīl bayt al-māl*).⁴² This indicates that such properties belonged to the Treasury before being transferred to Ardukin. Since the *wakīl bayt al-māl* was appointed by the sultan, the transfer of Treasury lands to Ardukin must have been authorized by al-Nāṣir Muḥammad himself.⁴³ The testimony note and the Treasury transfer both suggest that al-Nāṣir Muḥammad, while not profiting from Ardukin's *waqf* directly, supported and endorsed her financial arrangements.

That al-Nāṣir Muḥammad used the *bayt al-māl* for distributing grants and gifts to his closest *amīrs* is well attested in the sources and has been at the centre of much scholarly attention over the last few decades.⁴⁴ Recent publications have focused, in particular, on al-Nāṣir Muḥammad's tendency to sell *iqṭā'* lands to the military.

⁴⁰ DW26. The deed establishes that the monthly salary for each Qur'an reader was 30 silver dirhams, while the cleaner's monthly salary was 50 silver dirhams. The shrine (*turba*) of Ardukin was part of this foundation, but its description is missing from the document. Al-Maqrīzī (*Khīṭaṭ*, 3:95) identifies Ardukin's mausoleum as the *turbat al-sitt*, located in the western cemetery. See also: Howayda al-Harithy, "Female Patronage of Mamluk Architecture in Cairo," in *Beyond the Exotic: Women's Histories in Islamic Societies*, ed. Amira el-Azhari Sonbol (AUC Press, 2006), 325-6; "Turbat al-Sitt: An Identification," in *The Cairo Heritage: Essays in Honor of Laila Ali Ibrahim*, ed. Doris Behrens-Abouseif (AUC Press, 2000), 103-121.

⁴¹ DW26. The two children Ardukin had with al-Nāṣir Muḥammad (al-Mālik al-Manṣūr 'Alī and al-Mālik al-Muẓaffar) had died prematurely before this *waqf* was stipulated. Frederic Bauden, "The son of al-Nāṣir Muḥammad and the Politics of Puppets: Where Did It All Start?," *MSR* 13, no.1 (2009): 61.

⁴² DW26. On the *wakīl bayt al-māl*, see: Martel-Thoumian, *Les Civils*, 62.

⁴³ That Treasury lands could be obtained through court officials has also been emphasized in: Igarashi, *Land Tenure and Mamluk Waqfs*, 15; *Land Tenure, Fiscal Policy*, 181.

⁴⁴ Amalia Levanoni, *A turning point in Mamluk history: the third reign of al-Nāṣir Muḥammad ibn Qalāwūn (1310-1341)* (Brill, 1995), especially pp. 53-60. More recently, Jo Van Steenberg and Willem Flinterman have highlighted how al-Nāṣir's distribution of resources was instrumental for securing his dominance over his entourage. See: Flinterman and Van Steenberg, "Al-Nasir Muhammad," 98. See also: Igarashi, *Land Tenure and Mamluk Waqfs*, 10-11.

Iqtā' lands belonged to the *bayt al-māl* and were temporarily granted to *amīrs* in exchange for their military service. While normally these lands would return to the *bayt al-māl* once the *amīr's* usufruct had expired, so that they could be redistributed, their sale or donation implied that the *amīrs* who received them obtained their permanent ownership. Crucially, this gave them the possibility to endow the lands they obtained in their own *waqf* foundations. The transformation of Treasury lands into properties of the *amīrs'* and then into *awqāf*—a process modern scholarship refers to as *waqfization*—carried enormous socio-economic consequences for the Sultanate: since, formally, *iqtā'* lands that had been purchased and then endowed as *waqf* estates could not be taxed or returned to the *bayt al-māl* to be re-distributed among the military, on the long run the *waqfization* contributed to the depletion of the Treasury.⁴⁵ The intricate dynamics and long-term consequences of the *waqfization* will become more evident throughout the analysis of the case studies. Ardukin's case indicates that the *waqfization* process had already begun a few years after al-Nāṣir Muḥammad had finally established his authority in 710/1310, and that it not just involve provincial *iqtā'* lands and members of the military, but also members of the sultanic household and suburban estates. Like Ardukin, over a century later also Qāyrbāy's wife, Khawand Fāṭima al-Khaṣṣabakiyya, acquired lands that were formerly held by the *bayt al-māl* and endowed them in her *waqf* foundation.⁴⁶

Thus, Ardukin's case offers valuable insights into the dynamics and motivations underlying the establishment of a *waqf* foundation. Her self-benefitting *waqf*, in which Treasury assets were included, reveals that for this royal spouse the *waqf* represented an effective arrangement to gather, administer, and benefit from properties she was able to accumulate thanks to her privileged position in the sultanic household. What makes this case even more compelling is the presence, on the margins and on the *verso* of the *waqf* deed, of logs recorded nearly a century after Ardukin's foundation was established. This stratification of records documents later stages of Ardukin's *waqf*, offering a glimpse of the foundation's development over time. One of these logs, dated Rabī' II 825 (April 1422), is an *istibdāl* related to one of the hammams Ardukin had endowed in Ḥārat Zuwayla.⁴⁷

⁴⁵ Igarashi, *Land Tenure and Mamluk Waqfs*, 10–11; Fuess, "Waqfization in the late Mamluk Empire," 3; Van Steenberghe, "From Temūr to Selim," 44. It has been estimated that by the end of the Mamlūk period in 923/1517, up to 40% of Egypt's agricultural lands, as well as the majority of Cairo's buildings, were embedded in *waqf* foundations. Amin, *Izdiḥār al-Awqāf*, 257; Igarashi, *Land Tenure and Mamluk Waqfs*, 8.

⁴⁶ Petry, "The Estate of al-Khuwand Fāṭima al-Khaṣṣabakiyya," 281.

⁴⁷ DW26.

In general, the *istibdāl* represented the legal exchange of dilapidated *waqf* properties for other undamaged properties (or for an amount of money). It was intended as a solution to restore the revenues of damaged *waqf* foundations; although, in practice, it was often used as an opportunity to seize *waqf* properties.⁴⁸ As detailed in Chapter 3, the *istibdāl* of 825/1422 formalized the alienation of Ardukin's hammam from her foundation. The transaction recorded in this marginal log is part of a wave of *istibdāls* that, at the beginning of the ninth/fifteenth century, changed the order and distribution of *waqf* properties in Cairo. The case studies presented in the following sections will offer further insights into these dynamics.

2.1.1.3 Seizing and re-endowing: an influential physician and his recycled assets

This project's relatively small number of case studies from the seventh/thirteenth and eighth/fourteenth centuries reflects the general composition of the collection of Mamlūk-era deeds (*Ḥujjāj al-Umarā' wa-al-Salāṭīn*) kept at the Dār al-Wathā'iq in Cairo, where the majority of *waqf* documents dates from the ninth/fifteenth century.⁴⁹ The collection's chronological distribution could lead to assume that the number of *waqf* foundations drastically increased in the second half of the Mamlūk period. However, while the dissemination of *awqāf* in the ninth/fifteenth and early tenth/sixteenth centuries is certainly remarkable, the fact that there are fewer extant *waqf* documents from the first half of the Mamlūk period does not necessarily demonstrate that fewer *waqf* foundations existed then. Some of the case studies analysed in this thesis show that a significant number of properties belonging to *waqf* foundations established throughout the seventh/thirteenth and eighth/fourteenth centuries were alienated from their original *waqf* via *istibdāl* to be incorporated into newly-established *awqāf*. This large-scale phenomenon, along with the environmental and political crises that affected the Sultanate at the beginning of the ninth/fifteenth century, caused the extinction of several foundations from the seventh/thirteenth and eighth/fourteenth century that lost the revenues of the alienated assets. This being said, some important foundations from the seventh/thirteenth and eighth/fourteenth century did survive—especially large ones established by sultans or high-ranking *amīrs*, such as Sultan Qalāwūn's foundation and that of *amīr* Ṣarghitmish (d. 759/1358). The survival of these early *awqāf* can be explained by their special political

⁴⁸. Leonor Fernandes, "Istibdāl: The Game of Exchange and its Impact on the Urbanization of Mamluk Cairo," in *The Cairo Heritage: Essays in Honor of Laila Ali Ibrahim*, ed. Doris Behrens-Abouseif (AUC Press, 2000), 203-5.

⁴⁹. The skewed chronological distribution of *waqf* and *waqf*-related documents in the two main archives of Cairo, the Dār al-Wathā'iq and the Wizārat al-Awqāf, has been tackled by Daisy Livingston, who emphasized the prevalence of documents related to Sultan al-Ghawrī in the latter archive. Livingston, "Managing Paperwork," 86-7.

and economic value and the fact that, over time, their revenues were increased by supplementary donations.⁵⁰

The chronicles indicate that throughout the Mamlūk period *awqāf* proliferated in oscillating phases rather than a steady increase.⁵¹ Despite there being fewer extant *waqf* deeds from the eighth/fourteenth century, there is evidence to suggest that *awqāf* were already numerous by that time. As early as 780/1379, for example, *amīr* Barqūq expressed concern that the *bayt al-māl*'s resources had been drastically reduced because many Treasury-owned estates had been transformed into *waqf* assets.⁵² However, as al-Maqrīzī's *Khīṭaṭ* reveals, the political upheavals and environmental disasters that affected Egypt between the late eighth/fourteenth century and the first decade of the ninth/fifteenth century caused many *waqf* assets to be ruined, and even led to the extinction of several foundations. For example, the westward shift of the Nile during this period drastically reduced the water supply to the *khānqāh* Baybars al-Jāshankīr had endowed in Cairo in 707/1308. Although al-Jāshankīr's foundation survived, it was so affected by the environmental change that the *khānqāh*'s well dried up, which caused its kitchen to shut down from 776/1374 onwards and left 400 Sufis without their daily meal.⁵³ For al-Maqrīzī, it was especially the crisis that began in 806/1403-4 that most significantly contributed to the decay of assets belonging to *awqāf* established in the previous century.⁵⁴ While the perspective of this historian is, as explained, biased by personal events, the case study here explored bears testimony that the year 806/1403-4 did play a pivotal role in the redistribution of endowed urban properties.

Document DW355 contains the description of multiple water structures (three cisterns, two well-waterwheel systems, and two *sabīls*) endowed in a *waqf* Faṭḥ Allāh ibn Mu'taṣim ibn Nafīs (759-816/1358-1413) established on the 10th of Ramadan 810

⁵⁰ Behrens-Abouseif, *Cairo of the Mamluks*, 21. For instance, the 835/1433 *waqf* deed of Sultan Barsbāy inscribed on the façade of this sultan's *khānqāh* at the cemetery allots one third of the foundation's revenues to the *bimāristān* of Sultan Qalāwūn. *Thesaurus d'Epigraphie Islamique*, fiche 9755; Monument no. 121.

⁵¹ In line with this argument, Daisy Livingston has suggested that the predominance of al-Ghawrī's *waqf* and *waqf*-related deeds within the Wizārat al-Awqāf is largely due to the archive remaining "frozen" in time following the Ottoman conquest of Egypt and the gradual introduction of new archival practices. Livingston, "Managing Paperwork," 124-5.

⁵² Igarashi, *Land Tenure and Mamluk Waqfs*, 10.

⁵³ al-Maqrīzī, *Khīṭaṭ*, 4:286. The daily meal of the Sufis was replaced by a monthly compensation of seven *dirhams*. See also Fernandes, "The Foundation of Baybars al-Jashankir," 21-42. In the year 776/1374, a famine struck Egypt because the Nile did not reach the plenitude level. Allouche, *Mamluk Economics*, 49.

⁵⁴ Loiseau, *Maison*, 19-27; "Les événements," 119-133.

(February 1408).⁵⁵ By that date, this *wāqif* was one of the most influential figures of Faraj ibn Barqūq's (r. 801-808/1399-1405 and 808-815/1405-1412) court.⁵⁶ Faṭḥ Allāh belonged to a wealthy family of prominent Jewish physicians that moved from Tabriz to Cairo in 754/1353. Faṭḥ Allāh's grandfather, Nafis, served Sultan al-Nāṣir Ḥasan (r. 748-752/1357-1351 and 755-762/1354-1361) and converted to Islam in his presence,⁵⁷ and his uncle, Badī', held the office of chief physician (*ra'īs al-aṭibbā'*) until he was replaced by Faṭḥ Allāh himself. During his formative years, which corresponded with the reign of al-Ashraf Sha'bān (764-778/1363-1377), Faṭḥ Allāh established ties with Shaykh al-Ṣafawī (d. 801/1398), who later became an influential *amīr* at the court of Sultan Barqūq.⁵⁸ Shaykh al-Ṣafawī helped launch Faṭḥ Allāh's career by entrusting him with the management of his *diwān* and marrying him to his mother.⁵⁹ After being appointed as *ra'īs al-aṭibbā'* in 797/1395, Faṭḥ Allāh entered the graces of Sultan Barqūq, not only as his physician but also as his confidant and advisor. His influence grew until Barqūq installed him as *kātib al-sirr* (chief secretary) in 801/1399.⁶⁰ Faṭḥ Allāh kept this position through the transition of reigns from Barqūq to Faraj. In 808/1405, however, Faṭḥ Allāh's political adversaries had him imprisoned and

^{55.} This document has been studied and partially edited by Doris Behrens-Abouseif in her book *Faṭḥ Allāh and Abū Zakariyya*. The present work contains parts of the document that have not been edited before.

^{56.} al-Maqrīzī, *Durar al-'uqūd al-farīda fī tarājīm al-a'yān al-mufīda*, ed. Muḥammad al-Jalīlī (Dār al-Gharb, 2002), 3:12-13. Among the author of the time, al-Maqrīzī provides the longest and most detailed accounts of Faṭḥ Allāh. This wealth of information is due to the personal connection between the author and Faṭḥ Allāh himself, who was al-Maqrīzī's most important patron. For this same reason, al-Maqrīzī's biography of Faṭḥ Allāh is quite laudatory. For a detailed history of the relationship between al-Maqrīzī and Faṭḥ Allāh, see: Rabbat, *Writing Egypt*, 80-99.

^{57.} al-Maqrīzī, *Durar* 3:8-9; Ibn Taghrībirdī, *al-Manhal al-Ṣāfi wa-al-Mustawfā ba'da al-Wāfi*, ed. Muḥammad Muḥammad Amīn (al-Hay'ah al-Miṣriyah al-'Āmmah lil-Kitāb, 1984-2009), 8:376-7.

^{58.} al-Maqrīzī, *Khiṭaṭ*, 3:116. *Amīr* Shaykh al-Ṣafawī al-Khāṣṣakī appears to have been the protector of several scholars in the late eighth/fourteenth century. Ibn Taghrī Birdī, *al-Manhal*, 6:312-14; Rabbat, *Writing Egypt*, 78. Behrens-Abouseif wrongly identifies Faṭḥ Allāh's patron with the *amīr* Shaykh who will later become Sultan al-Mu'ayyad Shaykh. Behrens-Abouseif, *Faṭḥ Allāh and Abū Zakariyya*, 20.

^{59.} al-Maqrīzī, *Durar* 3:10; al-Sakhāwī, *al-Daw' al-Lāmi' li-Ahl al-Qarn al-Tāsi'* (Dār Maktabat al-Ḥayāh, 1966), 6:165-166; Rabbat, *Writing Egypt*, 80.

^{60.} al-Maqrīzī, *Durar* 3:10; al-Sakhāwī, *Daw'*, 6:165; Ibn Taghrī Birdī, *Nujūm*, 13:11; Badr al-Dīn al-'Aynī, *al-Sulṭān Barqūq mu'assis dawlat al-mamālik al-jarākisa*, ed. Imān 'Omar Shukrī (Maktaba al-Madbulī, 2003), 484. Al-'Aynī disagrees with the other authors concerning the reasons Faṭḥ Allāh was appointed *kātib al-sirr*. For al-Maqrīzī and al-Sakhāwī, Faṭḥ Allāh nominated himself as a suitable candidate for the office because of his high literacy and knowledge of various languages. According to al-'Aynī, however, Faṭḥ Allāh was granted the position for quite a different reason entirely. Al-'Aynī claimed that, once, when Barqūq had fallen ill, Faṭḥ Allāh was the only doctor to test Barqūq's urine by drinking it, which reassured the sultan and convinced him to give Faṭḥ Allāh the position of chief secretary.

confiscated his properties.⁶¹ Thanks to his strong connections to Barqūq's household, Faṭḥ Allāh was released after paying 500,000 *dirhams* to the sultan.⁶² At that point, Faṭḥ Allāh deemed it necessary to secure his wealth in a *waqf* foundation to protect it from his adversaries' schemes.

Al-Maqrīzī's *Khiṭaṭ* indicates that Faṭḥ Allāh acquired and endowed within his *waqf* assets belonging to two foundations established in the eighth/fourteenth century. At the Suwayqat al-Mas'ūdī, the same section of Ḥārat Zuwayla where the *sabīl*, cistern, and a well-waterwheel described in DW355 were located, Faṭḥ Allāh endowed a luxurious residential palace, the description of which is missing from the document. According to al-Maqrīzī, this palace was originally part of a *waqf* that a former administrator of the *dīwān al-jaysh* (the Army Bureau), Sa'ad al-Dīn Ibrāhīm al-Maymūnī (d. 795/1393), established for the benefit of his offspring and the cities of Mecca and Medina. While he was the chief physician, Faṭḥ Allāh lived in this palace as a tenant and paid rent to al-Maymūnī's *waqf*. Years later, when as *kātib al-sirr* he became a powerful political figure, Faṭḥ Allāh obtained the palace via *istibdāl* from al-Maymūnī's *waqf*. This financial manoeuvre required not only substantial financial resources, but also enough political influence to convince the qadis to authorize the *istibdāl*, since the legality of such exchanges was a matter of controversy among religious authorities.⁶³ According to al-Maqrīzī, the *istibdāl* was facilitated by the fact that, like many other structures in Cairo, the palace had been damaged by the environmental upheaval that began in 806/1403. The subsequent economic crisis prevented the palace from being restored to generate sufficient revenues to sustain its original *waqf*.⁶⁴

While Faṭḥ Allāh used an *istibdāl* to procure the palace in Ḥārat Zuwayla, at the cemetery outside Bāb al-Barqiyya, where he endowed the shrine (*turba*) the second *sabīl*, a well and waterwheel system, and two cisterns, he refurbished a number of

^{61.} The adversaries were Yashbak al-Dawādār (d. 810/1407) and Sa'ad al-Dīn Ibn Ghurāb (d. 808/1406), whose hatred towards Faṭḥ Allāh stemmed from personal as well as political circumstances. The sources explain that Faṭḥ Allāh sabotaged a coup against Faraj ibn Barqūq organized by his friends Yashbak al-Dawādār and Ibn Ghurāb; then, when Yashbak al-Dawādār had to escape to Syria leaving his family in Cairo, Faṭḥ Allāh did not offer Yashbak's family any assistance, even though they were lodged in a house neighbouring his own residence. Al-Maqrīzī, *Durar*, 3:12; al-Sakhāwī, *Ḍaw'*, 6:166. For al-Sakhāwī, Faṭḥ Allāh's failure to assist friends in need was one of his most unforgivable flaws.

^{62.} al-Maqrīzī, *Durar* 3:12-13; Ibn Taghrī Birdī, *Nujūm*, 12:326 and 13:43.

^{63.} Fernandes, "Istibdāl," 206-7.

^{64.} al-Maqrīzī, *Khiṭaṭ*, 3:115-16.

decaying properties belonging to an earlier *waqf*.⁶⁵ The *khānqāh*, hammam, cistern, and *sāqiya* (waterwheel) Faṭḥ Allāh restored there and supplied with new funds from his *waqf* were originally part of the foundation *amīr* Ṭughāy Tamur al-Najmī (d. 748/1347) had established in the first half of the eighth/fourteenth century. These structures had fallen into disrepair and remained unused for years before Faṭḥ Allāh took possession of the area.⁶⁶ Instead of appropriating these structures, Faṭḥ Allāh integrated them into his own foundation by allocating part of his *waqf*'s revenues to their maintenance and operation.⁶⁷

Both the *waqf* document and al-Maqrīzī's account demonstrate that Faṭḥ Allāh manipulated two earlier *awqāf* by appropriating, renewing, or modifying pre-existing structures. Al-Maqrīzī briefly outlines how Faṭḥ Allāh constructed the palace in Ḥārat Zuwayla: following the *istibdāl*, Faṭḥ Allāh purchased adjacent properties, evicted the residents, and demolished the buildings to expand his residence. He then embellished the palace with precious marble work and added a belvedere (*dahīsha*) overlooking a magnificent garden in which he planted trees and flowers imported from Syria. Faṭḥ Allāh also added a domestic mosque with a salaried *imām*, residential quarters for his own *mamlūks*, and a large horse stable to the palace. Al-Maqrīzī's account also confirms that Faṭḥ Allāh invested in the construction and restoration of the water facilities described in the *waqf* deed, both within the city and at the cemetery outside Bāb al-Barqiyya.⁶⁸

For Faṭḥ Allāh, the appropriation and restoration of previously endowed properties was not part of a deliberate project of re-urbanization, though his property development may have had a significant impact on the urban space. The conditions stipulated in DW355, which allocate the bulk of the *waqf*'s revenues to Faṭḥ Allāh's sister and descendants, unequivocally reveal that the main purpose of this endowment was to safeguard Faṭḥ Allāh's properties from mulcting and confiscation, as well as to ensure a substantial income for his family.⁶⁹ Faṭḥ Allāh was not entirely

⁶⁵. DW355. As will be further discussed in Chapter 4 of this dissertation, the term *turba* does not refer simply to a burial place such as a tomb, but to a larger funerary complex including multiple religious and residential structures. See: Hani Hamza, "The Curious Case of the Unrecognized turba of *amīr* Jirbāsh Qāshiq: New Dating and Attribution," *Journal of Material Cultures in the Muslim World* 1, no. 1-2 (2021): 97-98.

⁶⁶. al-Maqrīzī, *Khiṭaṭ*, 4:299.

⁶⁷. DW355.

⁶⁸. al-Maqrīzī, *Khiṭaṭ*, 3:115. DW355.

⁶⁹. This emerges clearly in the discrepancy between the quantity of money allotted for the *waqf*'s charitable functions and the comparatively much larger amount assigned to Faṭḥ Allāh's sister and family. These figures will be discussed in more detail in Chapter 4 of this dissertation. See also Behrens-Abouseif, *Faṭḥ Allāh and Abū Zakariyya*, 30.

successful in achieving these goals, however. After becoming deeply involved in the conflict between the Sultan Faraj ibn Barqūq and *amīr* Shaykh (who shortly after became Sultan al-Mu'ayyad Shaykh), Faṭḥ Allāh was imprisoned by the latter in 814/1412. He was restored to the position of *kātib al-sirr* shortly after, during the brief reign of the caliph al-Musta'īn, but in Shawwāl 815/January 1413, a few months after Shaykh became Sultan, he was arrested again. This time, Faṭḥ Allāh was mulcted 50,000 *dīnārs*, and forced to surrender his *waqf*'s revenues by designating al-Mu'ayyad Shaykh as the foundation's new beneficiary. These changes were revoked a decade later, after the death of al-Mu'ayyad Shaykh, but Faṭḥ Allāh did not survive long enough to see his *waqf* restored. Once more imprisoned by al-Mu'ayyad Shaykh and tortured for months, Faṭḥ Allāh was eventually strangled on the 5th of Rabi' I 816 (June 1413). His funeral was forbidden and his body, which had been thrown out of the prison unwashed and unshrouded, was eventually escorted by a meagre procession to the *turba* in the cemetery outside Bāb al-Barqiyya.⁷⁰

Al-Mu'ayyad Shaykh's manipulation of Faṭḥ Allāh's *waqf* raises questions about the efficiency of *waqf* foundations in securing the capital of the founders. Certainly, al-Mu'ayyad Shaykh forcing Faṭḥ Allāh to surrender his *waqf* revenues was a blatant abuse of power, but such abuses, as the next case study will show, were not out of the ordinary: instead, they seem to have been common in the dynamics that shaped the trajectories of Mamlūk-era *awqāf*. Gathering properties into a *waqf* was no guarantee that they would be completely invulnerable to the ambitions of powerful figures. As Faṭḥ Allāh's own legal manoeuvres show, while they were ostensibly intended for replacing damaged *waqf* assets, *istibdāls* were frequently exploited to seize previously endowed properties. This practice enabled lucrative *waqf* properties to be transferred to powerful individuals, including sultans. The other case study dating from the first half of the ninth/fifteenth century offers further insight into this phenomenon.

2.1.1.4 Rise and decline of a sub-secretary: the *waqf* deeds of Mūsā ibn al-Burhān

On the 25th Sha'bān 830 (June 1427), a man called Sharaf al-Dīn Mūsā ibn al-Burhān (or al-Burhānī) endowed several properties within Cairo and its suburbs, including a lavish palace with gardens and fountains on the Nile shore in the area of Būlāq.⁷¹ This was a self-benefitting *waqf* in which Mūsā indicated himself as the beneficiary

⁷⁰ al-Maqrīzī, *Durar* 3:14-5; Behrens-Abouseif, *Faṭḥ Allāh and Abū Zakariyya*, 27.

⁷¹ DW91. The document says that the residence was located near the mosque of al-Asyūṭī. This mosque, located in Būlāq in front of the Jazīrat al-Fil, was established in the eighth/fourteenth century by the *nāẓir* of the *bayt al-māl* Shams al-Dīn Muḥammad al-Suyūṭī (d. 749/1348). The *kātib al-sirr* Muḥammad Ibn al-Bārīzī renovated it at the beginning of the ninth/fifteenth century and reopened it in 822/1419. Al-Maqrīzī, *Khiṭaṭ*, 4:121. DW91 Indicates that the palace of Mūsā was located on a *ḥikr*.

of all the endowed properties' revenues, as well as the *waqf*'s administrator (*nāẓir*) for life. Based on the previous case studies, deed's conditions would suggest that Mūsā had accumulated substantial capital and decided to establish a *waqf* for securing and administering his properties. The chronicles of the time do confirm as much, although they do not provide as many details about Mūsā as they do about Faṭḥ Allāh, who had the benefit of patronizing a talented historian in al-Maqrīzī. The short entry about Mūsā in the biographical dictionary *al-Ḍaw' al-lāmi'* reports the *nisba* of *al-Kāzirūnī* followed by *thumma al-Qāhirī* ("then from Cairo"), suggesting that Mūsā was originally from the Persian city of Kazerun. When Mūsā moved to Cairo is unknown, but the 830/1427 *waqfiyya* shows that Mūsā had accumulated valuable properties in Cairo by that time. The deed also indicates that he had two sons (al-Badr Muḥammad and 'Abd al-Raḥman) and a daughter, who, along with Mūsā's *mustawladāt*, are mentioned among the beneficiaries of the *waqf* foundation after Mūsā's death.⁷² The document also indicates that Mūsā's daughter was married to a Kārimī merchant, meaning that his household had ties with this group of wealthy and powerful traders.⁷³ Most importantly, the chronicles state that Mūsā was the main agent of Zayn al-Dīn 'Abd al-Bāsiṭ ibn Khalīl (d. 854/1451), the influential qadi who held the post of *nāẓir al-jaysh* (secretary of the army) between 824/1421 and 842/1439.⁷⁴

Mūsā may have benefited from his ties with powerful people like 'Abd al-Bāsiṭ ibn Khalīl to accumulate properties, for scroll DW91, which contains the records related to Mūsā's foundation, registers that on the 10th of Muḥarram 831 (November 1427), only a few months after establishing his *waqf*, Mūsā acquired a land lot of 30 *faddāns* (about 47 acres) in Giza from the *bayt al-māl*.⁷⁵ This estate, together with other urban

⁷². DW91. The term *mustawlada* indicates the enslaved women who gave birth to the child of her master. Jan Hinrich Hagedorn, *Domestic Slavery in Syria and Egypt, 1200–1500* (Bonn University Press, 2020), 14.

⁷³. DW91. It must be pointed out, however, that this deed was stipulated during the Sultanate of al-Ashraf Barsbāy (825–841/1422–1438), when the power of the Kārimī merchants started to decline due to the increasing participation of the sultan in the spice trade and the emergence of a group of merchants, the *khawājā*, that was actively involved in the political circles of the Sultanate. Apellániz, *Pouvoir et Finance*, 85–114.

⁷⁴. Martel-Thoumian, *Les Civils*, 45. Al-Sakhāwī (*Ḍaw'*, 10:175) says that Mūsā was in full charge of Qadi 'Abd al-Bāsiṭ's affairs (*kāna al-qā'im bi-umūrihi kullihā*). Also Ibn Hajar (*Inbā'*, 4:120) describes Mūsā as the agent of Qadi 'Abd al-Bāsiṭ (*al-qā'im bi-umūrihi*). Qadi 'Abd al-Bāsiṭ ibn Khalīl, born in Damascus in 784/1382–3, had come to Cairo with al-Mu'ayyad Shaykh. In the capital, he achieved great political influence and accumulated substantial capital, until he eventually fell into disgrace during the Sultanate of al-Zāhir Jaqmaq. For a relatively recent biographical account of this figure, see: Daisuke Igarashi, "Madrasahs, Their shaykhs, and the Civilian Founder: The Bāsiṭiyah Madrasahs in the Mamlūk Era," *The Society for Near Eastern Studies in Japan* 48 (2013): 80–3.

⁷⁵. This equivalence is based on Walther Hinz's conversion of 1 *faddān* into 6,368 square meters. Hinz, *Islamische Masse und Gewichte*, 65.

assets (residential and commercial buildings), were later integrated into Mūsā's *waqf* by a deed issued on Rajab the 1st, 839 AH (January 1436). By this later deed, Mūsā assigned part of the endowed properties' revenues to charitable activities, including the purchase of Nile water that was to be distributed from two newly endowed *sabīls*. Still, the bulk of the *waqf*'s revenues remained assigned to Mūsā and his family, and, just as he had done in 830/1427, Mūsā designated himself as the *nāẓir* of the foundation for life (*ja'ala al-naẓar fī dhalika wa-al-wilāya 'alayhi li-nafsihi al-karīm ayyām ḥayātihī*).⁷⁶ In addition, Mūsā's brother and children were designated as eligible administrators of the foundation after his death. Within the deed of 839/1436, Mūsā stipulated a condition forbidding the *istibdāl* of the endowed properties after his death.

A few years after he issued this second deed, however, events took an unexpected turn when Mūsā's powerful patron, 'Abd al-Bāsiṭ ibn Khalīl, was arrested by Sultan al-Zāhir Jaqmaq on the 28th of Dhū al-Ḥijja 842 (June 1439). Jaqmaq confiscated 'Abd al-Bāsiṭ's properties, and Mūsā, dragged into his patron's downfall, was also arrested and mulcted.⁷⁷ Following this episode, all traces of Mūsā disappear from the sources, but DW91 provides a hint as to what happened to Mūsā's *waqf* afterwards. On the verso of the scroll, a log records an *istibdāl*, stipulated in 848/1444, that shows 'Abd al-Raḥman, Mūsā's son and then administrator of his *waqf*, transferred the lavish Būlāq residential palace endowed in 830/1427 to the *wakīl bayt al-māl*. This record's presence suggests that by 848/1444 Mūsā had died, leaving the administration of the *waqf* in the hands of his son. Why the *istibdāl* was executed despite Mūsā's stipulations in the 839/1436 deed is uncertain, but there are a number of circumstances that could help explain it. In 848/1444, Cairo was struck by an outbreak of the plague, resulting in a significant loss of life.⁷⁸ One of the socio-economic consequences of such environmental disasters, as shown above in the case of Faṭḥ Allāh, was that *istibdāl* transactions were facilitated because many endowed assets were damaged. However, even considering environmental adversities, it is hard to imagine that just a few years after Mūsā established his wealthy *waqf* one of its most precious assets had to be forsaken rather than repaired. To my view, the 848/1444 *istibdāl* is more likely linked to the downfall of Mūsā and his patron rather than to any environmentally-caused damage. Mūsā's disappearance from the sources after the events of 842/1439 suggests that he died without ever regaining the socio-economic privilege he enjoyed as the secretary of Qadi 'Abd al-Bāsiṭ. His fall from grace may have affected his

⁷⁶ DW91.

⁷⁷ al-Maqrīzī, *Sulūk*, 7:422 and 429; Ibn Ḥajar, *Inbā'*, 4:120; al-Sakhāwī, *Ḍaw'*, 10:175. Ibn Ḥajar records that on that occasion Mūsā was obliged to pay 10,000 *dīnārs* to Sultan Jaqmaq. 'Abd al-Bāsiṭ, on the other hand, had to surrender about a million *dīnārs*.

⁷⁸ Ibn Taghrī Birdī, *Nujūm*, 15:506.

family's status and the security of his properties, even those endowed in his *waqf*. Consequently, his son 'Abd al-Raḥman likely had to bow to the *istibdāl* request made by such a powerful figure as the *wakīl bayt al-māl*. Did this *istibdāl* continue the process of expropriation Mūsā underwent a few years earlier? Given that Jaqmaq was still in power in 848/1444, it is conceivable that the sultan was still drawing on the economic resources of his disgraced administrators using the *wakīl bayt al-māl* as a proxy. Using functionaries as proxies to obtain properties that belonged to *waqf* foundations was not uncommon—documentary evidence suggests that functionaries would act on behalf of sultans or high-ranking *amīrs* for this purpose. Sultan al-Ghawrī, for instance, benefited greatly to this effect using the services of the Ḥanafī Qadi Ibn al-Shiḥna, who used *istibdāl* to obtain assets for al-Ghawrī.⁷⁹ Likewise, the *amīr* Qijmās al-Ishāqī employed official and unofficial proxies for the same purpose.⁸⁰

A more attentive analysis (which I could not do due to time constraints) of the *istibdāl* record in DW91 should be done to validate this hypothesis, but, in any event, Mūsā's *waqfiyya* reveals a gradual increase in his economic capital, acquired and endowed over the course of a decade, that possibly parallels his career advancement. His decline in power, too, is paralleled by the 848/1444 *istibdāl*, which signals his reversal in fortune and its consequences for his offspring. Thus, the contents of DW91 demonstrate that individuals connected to the *dawla* employed *awqāf* as strategic economic instruments to accumulate diverse assets (some of which were purchased from the *bayt al-māl*) during their careers. By endowing these assets in *awqāf*, these individuals created unified administrative entities that enabled them and their families to manage and profit from the endowed properties' revenues. Like the case of Faṭḥ Allāh, however, also the case of Musa shows that the capital endowed by these figures was subjected to appropriation by other influential court authorities once the endowers fell into disgrace. Mūsā, who in his deed had specifically forbidden the *istibdāl* of any of his *waqf*'s assets, must have been aware of that.⁸¹

2.1.1.5 The revenue expansion and charitable endeavours of a military man

While Mūsā's two endowment deeds were recorded on the same scroll, in other cases subsequent deeds recording revenues additions or modifications to the same foundation were written on different scrolls, with any later records referring to the earlier ones. This is the case with the *waqf* of *amīr* al-Sayfī Qarājā, a military man who

⁷⁹. Livingston, "Documentary Constellations," 536-8.

⁸⁰. Igarashi, "The *waqf*-endowment strategy," 37.

⁸¹. Mūsā's *veto* is not an isolated case. Various other founders explicitly forbade the *istibdāl* of assets belonging to their foundation after their death. Fernandes, "*Istibdāl*," 210.

seems to have left no trace in the chronicles.⁸² The two *waqf* deeds attributed to him, DW177 and DW184, are dated Šafar 26th, 880 (July 1475) and Muḥarram 8th, 882 (April 1477), respectively.

In the first *waqfiyya* (DW177), established in 880/1475, Qarājā endowed a land lot in Minyā and several properties in Cairo, including three residential buildings and a horse stable between Bāb al-Khawka (one of the western gates of al-Qāhira) and the nearby Suwayqat al-Šāḥib market.⁸³ Near these properties, Qarājā also endowed a water structure, consisting of a well and *sāqiya* system supplying a water basin (*ḥawḍ*), that provided water for communal use as a form of charitable endeavour. Other properties were endowed in the cemetery outside Bāb al-Naṣr (one of the northern gates of Fatimid Cairo), including Qarājā's *turba* and charitable water structures—a *sabīl* and a cistern.⁸⁴ This was a self-benefitting *waqf*: the deed recorded in DW177 designates Qarājā as the sole beneficiary of the foundation and as its administrator (*nāẓir*) for life. Following Qarājā's death, the revenues accrued by the foundation's properties were to be distributed among his wife Zuhūr, his children Fāṭima and Yūnis, and any other descendants.⁸⁵

By the time the second *waqfiyya* (DW184) was issued in 882/1477, Qarājā added a land lot in Shandawīl, an area on the Nile's shores south of Asyūt, to the revenue-generating assets endowed in 880/1475. The document indicates that the endowed lot (*ḥiṣṣa*) of 1.58 *qirāt* (about 420 m²), was a portion of a larger land lot measuring one

^{82.} The documents (DW177 and DW184) refer to the *wāqif* as al-Sayfī Qarājā al-Jamālī al-Khāṣṣakī al-Malikī al-Ashrafī. Among the various entries for “Qarājā” in the chronicles, the only individual that could potentially be identified as the author of these documents is a *mamlūk* of Sultan Ināl, Qarājā al-Ashrafī (known as Qarājā al-Ṭawīl), who died in 885/1480. Al-Sakhāwī, *Ḍawʿ*, 6:214; al-Malaṭī, *Nayl*, 7:251; Ibn Iyās, *Badāʾiʿ*, 3:164. However, a few mismatching elements have led me to believe the Qarājā of these documents was not Qarājā al-Ṭawīl. For instance, the latter held the post of *nāʾib* of Ḥamā in 878/1474 (al-Malaṭī, *Nayl*, 7:82; Ibn Iyās, *Badāʾiʿ*, 3:92), but the documents do not mention any related title. Moreover, there is no evidence of Qarājā al-Ṭawīl being in the Khāṣṣakiyya corps, while the person of the documents is indicated as al-Khāṣṣakī. Finally, Qarājā al-Ṭawīl was married to the daughter of al-Ashraf Ināl, Khawand Badriyya (al-Malaṭī, *Nayl*, 7:82), while the wife of the *wāqif* is called simply Zuhūr in documents DW177 and DW184.

^{83.} On the location of the Suwayqat al-Šāḥib see: al-Maqrīzī, *Khīṭaṭ*, 3:189. Scroll DW177 mentions another asset endowed in the Khuṭṭ al-Kāfūrī (a quarter in the western section of Fatimid Cairo). This asset is said to be built on a *ḥikr* lot belonging to the *khānqāh* of Baybars al-Jashankīr. On the margin of the document, an *istibdāl* dated some years later (896/1491) records the asset was exchanged in the Khuṭṭ al-Kāfūrī for the sum of 100 *ḍinārs*.

^{84.} Chapter 4 will further discuss these facilities and the funds allotted for their maintenance.

^{85.} DW177.

faddān.⁸⁶ It also states that this land lot had become Qarājā's property several years before, in Jumādā II 866 (March 1462), but does not specify to whom it previously belonged. It is possible that the lot was originally part of the lands Qarājā received as *iqṭā'*, in which case it would have been purchased from the *bayt al-māl*. The addition of this land lot to the *waqf*'s already profitable assets did not correspond to an increase in the number of water facilities financed by Qarājā's foundation, however. As detailed in Chapter 4, the 882/1477 *waqf* deed only added limited supplements to the funds already allotted to the charitable water facilities in 880/1475.⁸⁷ While in this case the minor increase in charitable contributions may be attributed to the land lot's small size, in general the practice of boosting a *waqf*'s profits without proportionally increasing charitable funds is, as noted in the main introduction, attested in many cases.⁸⁸

Qarājā's second *waqfiyya* also modified the criteria for appointing the *waqf*'s *nāzir* after his death. While the 880/1475 *waqfiyya* designated the *dawādār kabīr* (the great *dawādār*) as the foundation's administrator upon the extinction of Qarājā's offspring, the 882/1477 *waqfiyya* substituted the *dawādār kabīr* with the administrator of the madrasa of al-Jamālī, former *nāzir al-khawāṣṣ*, located at the Suwayqat al-Ṣāhib where some of Qarājā's endowed properties were also situated.⁸⁹ It seems most likely that the document refers to the madrasa of Jamāl al-Dīn Yūsuf Ibn Kātib Jakam (d. 862/1458), who indeed held the post of *nāzir al-khawāṣṣ* and founded a *madrasa* at the

⁸⁶. DW184 (*waqafa...jamī'u mā huwa jār bi-yadihi wa-milkihi wa-taṣarrufihi wa-dhalika jamī'u al-ḥiṣṣa allatī qadruhā qirāt wa-thulth qirāt wa-rub' qirāt min aṣl arba' wa-ashrīn qirātan ḥinan sawwādan*) As square measure, the *qirāt* corresponds to 265.3 square meters and represents 1/24 of a *faddān*. Hinz, *Islamische Masse und Gewichte*, 66.

⁸⁷. DW184.

⁸⁸. Amin, *Izdihār*, 250; Igarashi, "Waqf as a Means," 279.

⁸⁹. DW184. The office of *dawādār kabīr* (the keeper of the royal inkwell) was initially held by religious scholars when it was established under the Saljūqs. At the beginning of the Mamlūk period, this office was transferred to the *amīrs* and became increasingly important from the ninth/fifteenth century onwards. Martel-Thoumian, *Les Civils*, 59; David Ayalon, "Dawādār," in *Encyclopaedia of Islam New Edition Online (EI-2 English)*, ed. P. Bearman (Brill, 2012) doi: https://doi.org/10.1163/1573-3912_islam_SIM_1740.

Suwayqat al-Šāhib.⁹⁰ It is plausible that this position was also filled by an official of the sultanīc administration, but I was unable to find evidence of this. Qarājā's decision to appoint this madrasa's administrator as *nāẓir* of his own foundation may suggest the existence of certain ties between this *amīr* and Jamāl al-Dīn Yūsuf Ibn Kātib Jakam. Clearly, not only familial ties but also a series of other socio-political ties determined the choice of a *waqf* administrator, a person who exerted control over the *waqf* revenues and properties, including the endowed water structures.

2.1.1.6 Shifting power networks in the *istibdāl* of a hammam

Scroll DW125 contains a sequence of records documenting the successive transfers of a communal hammam in Khuṭṭ al-Qaffāšīn, near Ḥārat Daylam, a quarter in the central area of al-Qāhira.⁹¹ While I initially selected DW125 based on the hammam's detailed description and the exchange value reported in the document, subsequent research into the individuals referenced within the transactions yielded compelling insight into the socio-economic dynamics that unfolded around this water facility. The first document recorded in DW125, dated the 27th of Dhū al-Ḥijja 864 (October 1460), is an *istibdāl* through which the eunuch (*al-akhaṣṣī*) 'Anbar b. 'Abd Allāh al-Nūrī (d. 867/1462) obtained ownership of the hammam in question.⁹² This hammam was originally part of a *waqf* established a few decades earlier by the wealthy merchant Nūr al-Dīn 'Alī al-Ṭanbadī (d. 836/1432) and managed by his children, Sharaf al-Dīn Yaḥyā, Badr al-Dīn Muḥammad, Nūr al-Dīn 'Alī, and Zaynab, who were also

⁹⁰ Jamāl al-Dīn Yūsuf Ibn Kātib Jakam was the scion of a powerful family of converted Copts active in the sultanīc administration throughout the first half of the ninth/fifteenth century. Jamāl al-Dīn Yūsuf held the office of *nāẓir al-khawāṣṣ* from 841/1437 until his death in 862/1458. He was buried in his family *turba*, situated near the mausoleum of Sultan Ināl. He had married Fāṭima bint al-Bārīzī, thus establishing ties with this other powerful family of bureaucrats. He established a *madrasa* at the Suwayqat al-Šāhib (as indicated in DW184), probably the one still standing today in the middle of Fatimid Cairo (Monument no. 178) and dated to 850/1446. Al-Sakhāwī, *Ḍaw'*, 10: 322-3; Martel-Thoumian, *Les Civils*, 283-6 and 403; Miriam Kühn, "Two Mamlūk minbars in Cairo: Approaching Material Culture through Narrative Sources," in *Material Evidence and Narrative Sources*, ed. Daniella J. Talmon-Heller and Katia Cytryn-Silverman (Brill, 2014), 219.

⁹¹ This was the Ayyūbid-era hammam listed in al-Maqrīzī's *Khiṭaṭ* as Hammām al-Qaffāšīn. Al-Maqrīzī, *Khiṭaṭ*, 3:153. The historical trajectory of this hammam and the significance of this *istibdāl* will be discussed further in Chapter 3.

⁹² DW125. See edited excerpt in the Appendix. The honorific *al-akhaṣṣī* was used for the eunuchs who were active at court and enjoyed the sultan's favour. See Jo Van Steenberghe, "Mamluk Eunuchs, Ḥabaṣīs and Waqf in the 1340s," *Orientalia Lovaniensia Analecta* 169 (2007): 544. The name 'Anbar was limited to the eunuchs. David Ayalon, "The Eunuchs in the Mamluk Sultanate," in *Studies in Memory of Gaston Wiet*, ed. Myriam Rosen-Ayalon (Jerusalem: Institute of Asian and African Studies, 1977), 275-8.

the beneficiaries of the foundation.⁹³ The *istibdāl* records that al-Ṭanbadī's children, acting as administrators of the foundation, agreed to the exchange of the hammam. A later log written on the verso of the same scroll reports that the same hammam was part of a transfer of property (*intiḡāl*) from 'Anbar to Zaynab, al-Ṭanbadī's daughter, on the 15th of Rabī' II 865 (January 1461), only a few months after the *istibdāl*.

The rapid succession of *istibdāl* and *intiḡāl* suggests that these transfers were the result of an arrangement made between 'Anbar and al-Ṭanbadī's family. The chronicles of the period help corroborate this hypothesis: they reveal that 'Anbar, indicated in DW125 as the *nā'ib muqaddam al-mamālīk* (i.e. the deputy chief of the sultan's *mamlūks*),⁹⁴ was originally the servant of the merchant al-Ṭanbadī.⁹⁵ A later record also reported on the verso of DW125 indicates al-Ṭanbadī as the *mu'tiq* (i.e. the former owner who granted freedom) of 'Anbar. The sources indicate that, following the death of his master in 836/1432, 'Anbar established ties with Jaqmaq, who ascended to the throne soon afterward and appointed the eunuch as *nā'ib muqaddam al-mamālīk* in 855/1451. 'Anbar remained in this position until the reign of al-Ẓāhir Khushqadam (r. 865-872/1461-1467), when he returned to the household of al-Ṭanbadī and remained in the service of his old master's family until he died in 867/1462.⁹⁶ Clearly, then, the ties between 'Anbar and his manumitter's family had remained strong even after al-Ṭanbadī's death. The sources also indicate that al-Ṭanbadī had

⁹³. The name of al-Ṭanbadī is also reported in another document, DW79. Among the several records registered on DW79, there is an *istibdāl* by which the merchant al-Ṭanbadī took possession of a previously endowed house in Cairo on the 28th of Ramadan 823 (October 1420). A later log indicates that on the 2nd of Jumada I 830 (March 1427) the house had become endowed in al-Ṭanbadī's foundation, which was established for the benefit of al-Ṭanbadī himself and his children. This record shows that al-Ṭanbadī was actively enlarging his foundation throughout the decade between 820-30/1420-30 circa.

⁹⁴. The eunuch *muqaddam al-mamālīk* was responsible for the sultan's new recruits, supervised their training, and prevented young *mamlūks* from becoming the object of sexual abuses by other recruits. David Ayalon, *Eunuchs, Caliphs and Sultans. A Study in Power Relationships* (The Hebrew University of Jerusalem, 1999), 54-55; Jane Hathaway, "Eunuchs and the State in the Mamlūk Sultanate and the Ottoman Empire: A Comparison," in *Ottoman War and Peace*, ed. Frank Castiglione, Ethan Menchinger, and Veyseil Şimşek (Brill, 2020), 317. For a more general discussion of the eunuchs' socio-political role in the Mamlūk period see: Van Steenbergen, "Mamluk Eunuchs, Ḥabāšīs and Waqf," 539-40; Ayalon, *Eunuchs, Caliphs and Sultans*, 39-60 and 175-194.

⁹⁵. Ibn Taghrī Birdī, *Nujūm*, 15:432; al-Malaṭī, *Nayl*, 6:151. The chronicles report the *nisba* as al-Ṭanbadhī. Here I chose the reading without the diacritic as it appears in the document and as chosen by Carl Petry. See: Petry, *The Civilian Elite*, 48 and 91. The *nisba* refers to the village of Ṭanbadī, south of al-Fayyūm.

⁹⁶. al-Sakhāwī, *Ḍaw'*, 6:148; *Wajīz al-kalām fi al-dhayl 'alā duwal al-Islām*, ed. Bashshār 'Awwād Ma'rūf, 'Iṣām Fāris al-Ḥarastānī, and Aḥmad al-Khuṭaymī (Beirut, 1995), 758; al-Malaṭī, *Nayl*, 6:151; *al-Rawḍ al-bāsim fi ḥawādith al-'umr wa-al-tarājim*, ed. 'Umar 'Abd al-Salām Tadmurī (Beirut, 2014), 2:278; Ibn Taghrī Birdī, *Nujūm*, 16:318.

accumulated enormous capital by trading profitable commodities on behalf of Sultan al-Ashraf Barsbāy,⁹⁷ but, according to Ibn Taghrī Birdī, al-Ṭanbadī's children had quickly lost the socio-economic capital their father had accrued.⁹⁸ Ibn Taghrī Birdī does not explain the reason al-Ṭanbadī's children's fortunes changed, but his remarks may suggest that they found themselves in need while their former eunuch enjoyed the privileges of the court. This helps support the hypothesis that the *istibdāl* and *intiḳāl* recorded in DW125 were part of an arrangement between 'Anbar and his manumitter's family, revealing yet another dynamic shaping the trajectory of urban water structures in Mamlūk Cairo.

Later records reported on the verso of scroll DW125 track the later phases in the trajectory of the hammam until it was eventually incorporated into Qāyrbāy's *waqf*. This document's greatest value is that it shows who could appropriate and exert control over an urban water facility like a hammam. When considered alongside chronicle accounts, scroll DW125 shows that this hammam's ownership was tied to individuals connected to successive power networks within Mamlūk-era Cairo. The merchant al-Ṭanbadī had enjoyed temporary economic prestige due to his trading activities connected to the court of Barsbāy, while 'Anbar cultivated ties with Jaqmaq and gained a favourable position when the latter ascended to the throne in 842/1438. This highlights that economic and political influence over water facilities like the hammam al-Qaffāṣīn depended on fluid personal connections with the *dawla*, not on static institutions.

2.1.1.7 Domestic water systems in the *waqf* of Abū Bakr ibn Muzhir

Scroll DW175 describes a hammam embedded within a luxurious palace at the Ḥārat Amīr Jawān, a quarter located in the north-western section of al-Qāhira. The scroll is partially damaged and its ink faded, but in its legible fragments is the description of another lavish palace situated on the shores of the Birkat al-Raṭlī, a pond in the northern outskirts of al-Qāhira, and the mention of a *maktab-sabīl*. This record represents the extant part of a long *waqfiyya* issued on the 8th of Ṣafar 879 (June 1474) by Zayn al-Dīn Abū Bakr ibn Muzhir (831-893/1428-1488), *kātib al-sirr* of Sultan Qāyrbāy.

⁹⁷ The sources unanimously name Nūr al-Dīn 'Alī al-Ṭanbadī as one of the most prominent and wealthy merchants of the time. Al-Malaṭī refers to al-Ṭanbadī as *khawājā*, a title used mainly to indicate merchants dealing with goods of critical importance to the Sultanate. Indeed, al-Ṭanbadī had accumulated substantial capital while selling the sultan's sugar in 826/1423 during a temporary monopoly. Al-Malaṭī, *Nayl*, 4:319; Ibn Ḥajar, *Inbā'*, 3:309; Ibn Taghrī Birdī, *al-Manhal*, 8:196; *Nujūm*, 15:178; Petry, *The Civialian Elite*, 245

⁹⁸ Ibn Taghrī Birdī, *al-Manhal*, 8:196.

Abū Bakr ibn Muzhir was one of the most renowned and influential figures of Qāytbāy's *dawla*, and he enjoyed prestigious social status due to his own political career and his family's connections. Abū Bakr was the scion of a family of Shāfi'ī notables, the Banū Muzhir, from Damascus. His father, Badr al-Dīn Muḥammad, established ties with Shaykh when this was still an *amīr* in Syria, and when Shaykh became Sultan, Badr al-Dīn moved to Cairo and started his career in the sultanī administration as *nāẓir al-is-ṭabl* (chief equerry). Badr al-Dīn grew in wealth and influence and was appointed as *kātib al-sirr* in 828/1425, a position which he held until his sudden death in 832/1429.⁹⁹ Abū Bakr did not just inherit the wealth and prestige of his father, but also that of his mother Khadīja, who promoted his career through her connections with the wife of Sultan al-Ashraf Ināl (r. 857-865/1453-1461). During al-Ashraf Ināl's reign, Abū Bakr was first appointed as *nāẓir al-is-ṭabl*, before becoming *nāẓir* of the *waqf* of the old Ayyūbid *khānqāh* of Sa'īd al-Su'adā' and later rising to the prestigious position of *nāẓir al-jaysh* (administrator of the army).¹⁰⁰ In addition, after the death of Abū Bakr's father, his mother Khadīja established strong ties with another family of notables by marrying the Shāfi'ī judge 'Alam al-Dīn Ṣāliḥ al-Bulqīnī (d. 868/1464), who also became Abū Bakr's teacher.¹⁰¹ In 866/1462, during the Sultanate of al-Zāḥir Khushqadam, Abū Bakr was appointed as *kātib al-sirr*, and he held this position until his death in 893/1488, with the exception of a short interval in 886/1481 following a disagreement with Qāytbāy.¹⁰²

By 879/1474 Abū Bakr owned enormous capital, which he gradually endowed in his *waqf* foundation with a series of successive deeds, including the one discussed in this study.¹⁰³ With the *waqfiyya* recorded in DW175, Abū Bakr endowed a mosque with

⁹⁹. Ibn Ḥajar describes the death of Badr al-Dīn, adding that he was probably poisoned. Ibn Ḥajar, *Dhayl al-durar al-kāmina fi a'yān al-mi'a al-thāmina*, ed. 'Adnān Darwīsh (Cairo, 1992) 324-325; Ibn Taghrī Birdī, *Nujūm*, 14:274 and 15:155; Erina Ota-Tsukada, "Formation of the Ideal Bureaucrat Image and Patronage in the Late Mamlūk Period: Zayn al-Dīn ibn Muzhir and 'Ulamā'," *al-Madaniyya: Keio Bulletin of Middle Eastern and Asian Urban History* 1, (2021): 58.

¹⁰⁰. Abū Bakr was appointed as *nāẓir al-is-ṭabl* in 857/1453. In 864/1460 he lost the post of *nāẓir* over the *khānqāh* Sa'īd al-Su'adā', and he was appointed as *nāẓir al-jaysh* at the beginning of 865/1460. Ibn Iyās, *Badā'i*, 2:314, and 2:362-3; Ibn Taghrī Birdī, *Nujūm*, 16:148; Ota-Tsukada, "Formation", 45-6; "The Muzhir Family: Marriage as a Disaster Mitigation Strategy," *ORIENT* 54, (2019): 130. Martel-Thoumian, *Les Civils*, 271.

¹⁰¹. Ota-Tsukada, "Formation," 44.

¹⁰². Ibn Taghrī Birdī, *Nujūm*, 16:272. For the incident that resulted in Abū Bakr ibn Muzhir being dismissed for 20 days from the post of *kātib al-sirr* see: Iyās, *Badā'i*, 3:183-4; Martel-Thoumian, *Les Civils*, 271-2. Abū Bakr ibn Muzhir was reinstated to the post after some *amīrs* interceded on his behalf and he paid the sultan a substantial amount of money.

¹⁰³. The *waqf* deed in DW175 refers to two earlier deeds stipulated by Abū Bakr ibn Muzhir in 853/1459 and 859/1455, respectively. This shows that Abū Bakr ibn Muzhir gradually enlarged his *waqf* foundation throughout his career in the sultanī administration.

the *maktab-sabīl* mentioned above, as well as two residential palaces in Ḥārat Amīr Jawān, one of which included the abovementioned hammam.¹⁰⁴ The endowment also included a luxurious palace on the Birkat al-Raṭlī, which Abū Bakr had inherited from his mother Khadīja, and whose description is only partially readable. This palace went down in history because of the extraordinary party that was hosted there in 886/1481 to celebrate the circumcision of Abū Bakr's sons.¹⁰⁵ In addition, the foundation also included agricultural lands in the districts of al-Manūfiyya, al-Gharbiyya, and Minyat al-Sīrj, as well as a sugarcane press (*ma'ṣara*) on the Jazīrat al-Wustā and a rental/commercial building in Būlāq.¹⁰⁶

Like most of the *waqfiyyāt* discussed so far, this one establishes a self-benefitting *waqf* by designating Abū Bakr as the sole beneficiary of the foundation for life. Upon his death, the revenues of the *waqf* were to be distributed among Abū Bakr's children who were alive when the deed was issued. The list of Abū Bakr's children reported in the document includes Badr al-Dīn Muḥammad (d. 910/1504), who despite his young age (he was born in 860/1455-6), held the office of *nāẓir al-khāṣṣ* (supervisor of the privy funds) between 876/1471 and 880/1475, and is named by this title in DW175.¹⁰⁷ As Ota-Tsukada has suggested, Abū Bakr's *waqf* served the purpose of securing financial resources for the whole family, but especially for Badr al-Dīn since he had already been initiated into this appealing yet risky career in the sultanī administration.¹⁰⁸ As for the management of the foundation, Abū Bakr designated himself as the sole

^{104.} DW175. What the document calls Ḥārat Amīr Jawān must have been in the north-west part of Fatimid Cairo. One of the two houses endowed in this neighbourhood, which will be analysed in detail in Chapter 3, is said to have a service door connected to the Ḥārat Barjawān— this narrows the location of these properties. The location of the mosque mentioned in the document is unclear due to the lacunae in the text. A famous mosque established by Ibn Muzhir still stands in Ḥārat Barjawān, but it was finished in 884/1479, after this document was issued. Even so, it is still probable that this was the same mosque referenced in the document, considering that its construction would have been well underway.

^{105.} DW175. The document mentions that the palace was inherited by Abū Bakr ibn Muzhir after the death of his mother. The party held in the palace was described by historian Ibn Iyās (*Badā'i*, 3:186), who records the spectacular display of lights and fireworks Abū Bakr ibn Muzhir financed around the Bikat al-Raṭlī. As it will be discussed in more detail in Chapter 3, the surroundings of Cairo's ponds represented coveted residential areas for the *ahl al-dawla* who financed luxurious palaces around the *birkas*.

^{106.} DW175. The description of the rental/commercial building in Būlāq includes a statement indicating that this property had been embedded in Abū Bakr ibn Muzhir's *waqf* by 853/1449.

^{107.} DW175. For the career of Abū Bakr's son Badr al-Dīn Muḥammad see: Martel-Thoumian, *Les Civils*, 273-4. The deed also mentions other children, namely Burhān al-Dīn Ibrāhīm (d. 895/1490), Yaḥyā (d. 888/1483), and 'Aysha (d. ?) and Sāra (d.?). Some of these children are also mentioned in the chronicles of the time. Martel-Thoumian, *Les Civils*, 272-4. After the extinction of Abū Bakr's offspring, his foundations' revenues were to be distributed among the poor of Mecca.

^{108.} Ota-Tsukada, "Formation," 60.

nāzir during his lifetime, while his successor was to be appointed from among his descendants (*yakūn al-naẓar ‘alā dhalika lil-arshad fa-al-arshad min awlādihi wa awlād awlādihi*). After the extinction of Abū Bakr’s offspring, the management of the foundation was to be held jointly by the Shāfi‘ī chief qadi and the *amīr akhūr kabīr* (i.e. the officer in charge of the sultan’s horse stables). By that time, the post of *amīr akhūr kabīr* was already associated ex officio with the management of some important foundations established before Abū Bakr’s endowment, such as the *khānqāh* of Qawṣūn (established in 736/1335-6), the madrasa of al-Zāhir Barqūq (788/1386), and the madrasa of *amīr Qānibāy* (816/1414).¹⁰⁹ Thus, Abū Bakr ibn Muzhir’s designation of the *amīr akhūr kabīr* as the foundation’s administrator appears to represent a broader trend: this official of the sultan’s administration was increasingly put in charge of large *waqf* foundations within the city, thereby gaining control over their endowed assets.

2.1.1.8 Water facilities in a quarter by the lake: the ambitious project of Azbak min Ṭuṭukh

Like Abū Bakr’s *waqfiyya*, also that recorded in scroll DW198 designates a high-ranking court official as *nāzir* of a foundation after the *wāqif*’s death. This document, issued on the 21st of Ramadan 890 (October 1485), records the establishment of the *waqf* of *amīr* Azbak min Ṭuṭukh (d. 904/1498), the *atābak al-‘asākīr* (commander of the army) and a prominent figure during Qāyṭbāy’s reign. In the *waqf* deed, Azbak stipulated that after his death his foundation was to be managed by the most suitable of his descendants alongside the second *dawādār* of Egypt (*lil-arshad ...min awlād al-wāqif ...bi-mushāraka man yakūn dawādāran thāniyan bi-al-diyār al-miṣriyya*).¹¹⁰ The appointment of such a powerful court official to manage a *waqf* is noteworthy, as it offers insight into the dynamics of *waqf* asset management. These dynamics also determined who controlled urban water structures embedded in *waqf* foundations and how that control was exerted.

Azbak’s endowment included a significant number of water structures, including a well and *sāqiya*, two hammams, a complex conduit system, an ablution fountain, a *maktab-sabīl* attached to a mosque, and domestic hydraulic installations embedded within a lavish residential palace. These facilities were part of a new quarter Azbak built and endowed in the north-western outskirts of al-Qāhira, a mostly derelict area filled with nothing but ruins and scattered shrines. DW198 also describes rental units, gardens, a bakery, a mill, and other commercial facilities that were part of the new

¹⁰⁹. Igarashi, *Land Tenure*, 208-9. For the management of Barqūq’s madrasa, other functionaries are indicated as eligible in the *waqf* deed.

¹¹⁰. DW198.

quarter Azbak built, as well as an extensive pond, the Birka Azbakiyya, located on the northern side of the quarter and endowed as part of the *waqf*'s revenue-generating assets. The development of this new neighbourhood was inextricably linked to the presence of this artificial pond, whose excavation Azbak had sponsored as part of his ambitious urban project.

The costs of Azbak's urbanization project, which amounted to approximately 200,000 *dīnārs*,¹¹¹ provides a sense of the enormous capital Azbak amassed throughout his long military career, which started when he became a *mamlūk* of Sultan al-Ashraf Barsbāy in 841/1438. Subsequently, Sultan Jaqmaq emancipated Azbak and appointed him as *sāqī* (cupbearer)—a role that effectively positioned him as the Sultan's personal attendant—and then as *amīr* 'ashara (*amīr* of ten) in 852/1448. Azbak even established household ties with Sultan Jaqmaq by marrying his daughter in 857/1453.¹¹² Following Jaqmaq's resignation in 857/1453 and the ascent of Sultan Ināl, Azbak was imprisoned in Alexandria for a time, exiled to Jerusalem, and finally called back to Cairo in 862/1458,¹¹³ where he grew in power and wealth until he became, as al-Sakhāwī writes, one of the most prominent figures in the Sultanate (*wa-istamarra fī al-tarqī ilā an šāra aḥad al-muqaddamīn*).¹¹⁴ Soon after al-Ashraf Qāyrbāy was enthroned in 872/1468, Azbak was appointed as *atābak al-'asākīr*, a post he held until his death in 904/1499.¹¹⁵

¹¹¹ Ibn Iyās, *Badā'i*, 3:117. Azbak's project was discussed also in: Doris Behrens-Abouseif, *Azbakiyya and Its Environs: From Azbak to Ismā'īl, 1476-1879* (IFAO, 1985), 22-25.

¹¹² al-Sakhāwī, *Ḍaw*, 2:270; Ibn Iyās, *Badā'i*, 2:265 and 277. Azbak's wife, Khawanda 'Ā'isha, was the daughter Jaqmaq had with Khawand Mughlā bint al-Nāṣir ibn al-Bārīzī (d. 876/1472). She died prematurely in 867/1463. Ibn Iyās, *Badā'i*, 2:404; Martel-Thoumian, *Les Civils*, 255 (but there are some inaccuracies with the names). This marriage obviously strengthened the ties between Azbak and Jaqmaq, as also demonstrated by the account, narrated by Ibn Iyās (*Badā'i*, 2:291), of a courtesy visit Jaqmaq paid to his daughter and Azbak. The strong tie between Azbak and Jaqmaq also emerges in the *waqf* document in DW198, in which the Qur'an reciters paid by the foundation are required to pray for Jaqmaq. Azbak's strong connection with the household of Jaqmaq continued after the latter's death, as demonstrated by Azbak's remarriage with another of Jaqmaq's daughters in 870/1465. Al-Sakhāwī, *Ḍaw*, 2:271.

¹¹³ al-Sakhāwī, *Ḍaw*, 2:270-1; Ibn Iyās, *Badā'i*, 2:310 and 344.

¹¹⁴ al-Sakhāwī, *Ḍaw*, 2:271. Al-Sakhāwī gives an overview of Azbak's political career. Upon his return to Cairo, Azbak was nominated as *amīr* 'ashara again, then as *amīr muqaddam al-f* in 865/1461. He was arrested together with other former *mamlūks* of Jaqmaq at the end of 867/1463, but he was released soon after and appointed as *hājib al-ḥujjāb* in 868/1464. The following year he obtained the post of *ra's nawbat al-nuwab* (chief head of the [sultan's] guards), which he held until 872/1467. During the short reign of Sultan Yalbāy (r. 872/1467), Azbak was appointed to the office of *nā'ib al-Shām* (governor of Syria). He returned to Cairo shortly after the enthronement of Qāyrbāy. See also: Ibn Iyās, *Badā'i*, 2:310, 344, 381, 410, 412, 417, 429, 461; Van Steenberghe & Termonia, "Social Infrastructures," 812.

¹¹⁵ Ibn Iyās, *Badā'i*, 3:411-12.

The construction of the Azbakiyya quarter and pond started in 880/1475, and the neighbourhood continued to expand until 901/1495-6. Azbak actively encouraged fellow courtiers and other powerful figures to settle there, quickly transforming a previously derelict area into a coveted neighbourhood.¹¹⁶ The water facilities, commercial properties, and religious buildings endowed in Azbak's *waqf* undoubtedly boosted the development of the Azbakiyya quarter so that, in the words of the historian Ibn Iyās, it soon "became a city on its own" (*ṣārat madīna 'alā infirādhā*).¹¹⁷ The rapid development of Azbakiyya must have generated a substantial revenue flow for Azbak's foundation, as the people gradually populating the quarter would make use of the services provided by the lucrative commercial and rental facilities endowed in the *waqf*.

The foundation's financial prosperity was further favoured as Qāyṭbāy issued an official decree (*murabba'a sharīfa*) bestowing Azbak ownership of the lands encompassing the pond and the quarter.¹¹⁸ These lands, which had been in a semi-abandoned state for several decades before Azbak started his urbanization project, were part of a *ḥikr* lot extending outside the north-western walls of Fatimid Cairo. This *ḥikr* lot officially belonged to a *waqf* foundation that the Ayyūbid Sultan al-'Ādil (r. 596-615/1200-1218) established for the *khazā'in al-silāḥ* (the Armoury Deposit).¹¹⁹ Qāyṭbāy's decree formally altered the legal status of these lands, and by making Azbak their official owner it enabled him to lease them to others and to profit from the rent.

As mentioned above, the document stipulates that this large foundation and its embedded water structures, including the extensive Birka Azbakiya, would be administered exclusively by Azbak and, after his death, by Azbak's descendant and the second *dawādār* of Egypt. The deed actually designates Sultan Qāyṭbāy as Azbak's successor in managing the foundation, but since Qāyṭbāy predeceased Azbak, it is safe to assume that he never played any role in managing the foundation.¹²⁰ According to the *waqfiyya*, the *nāẓir* from amongst Azbak's offspring was allotted a monthly salary of 500 *dirhams*, whereas the second *dawādār* was to receive 1,000 *dirhams* for managing the foundation. These administrators were also granted full control

¹¹⁶. al-Sakhāwī, *Ḍaw'*, 2:272; Ibn Iyās, *Badā'i'*, 3:117.

¹¹⁷. Ibn Iyās, *Badā'i'*, 3:117.

¹¹⁸. Ibn Iyās, *Badā'i'*, 3:118. The *murabba'a* (pl. *murabba'āt*, lit. "square") appears to have been a type of decree (a "document of authorization") issued primarily by the sultanic chancery for granting lands. The name derives from the format of these documents, written on a quadrangular piece of paper. D. S. Richards, "A Mamlūk Emir's 'Square' Decree," *Bulletin of the School of Oriental and African Studies* 54, (1991): 63.

¹¹⁹. al-Sakhāwī, *Ḍaw'*, 2:272; Ibn Iyās, *Badā'i'*, 3:116-7. For details on the *ḥikr* of the *khazā'in al-silāḥ* see also: al-Maqrīzī, *Khīṭaṭ*, 3:215.

¹²⁰. DW198.

over the foundation's revenue surplus (*wa-mā faḍala ba'da dhalika min rī' al-waqf al-madhkūr yurṣaduhu al-nāẓir taḥta yadihi*). According to the document, this surplus was to be maintained as a security fund for the *waqf*, but in practice, administrators could retain it as personal revenues.¹²¹ Indeed, Carl Petry's studies on the *awqāf* of Qāyṭbāy and al-Ghawrī have demonstrated that such unassigned surpluses, which could comprise a considerable portion of a *waqf*'s revenues, were often appropriated by the *waqf* foundation's managers as personal income.¹²² Azbak's *waqf* conditions, therefore, allowed his *waqf* to be controlled by a court official and exploited as a source of revenues.

2.1.1.9 Water facilities in the early tenth/sixteenth-century *waqf* of Azdamur min 'Alī Bāy

The final case study in this thesis also involves the appointment of a high-ranking court official, the *dawādār kabīr*, as the overseer of a *waqf* foundation in conjunction (*bi-mushāraka*) with the founder's descendants. Scroll DW241 contains three successive *waqf* deeds in which Azdamur min 'Alī Bāy (d. 913/1507), the *amīr dawādār kabīr* of Sultan al-Ghawrī, established and enlarged his self-benefitting foundation between 908/1503 and 912/1507. These deeds provide insight into the functioning of the water structures endowed as part of Azdamur's funerary complex in the southern cemetery.¹²³ Significantly, these water structures included a cistern and *sabīl* for the storage and distribution of Nile water, in addition to a well and *sāqiya* system that supplied a communal *ḥawḍ* and provided irrigation for the complex's garden. While the description of the funerary complex no longer exists in DW241, information about how the complex's water structures functioned and the funds allotted to maintain and operate them yet remains in the extant section of the document outlining the *shurūṭ*. The *shurūṭ* also outlines the stipends paid to the workers employed at the complex's water facilities—a *sawwāq* operating the waterwheel and a *sabīl* attendant—and reveal that the complex hosted 20 Sufis and their *shaykh* in addition to other employees (*arbāb al-wazā'if*).¹²⁴

Furthermore, scroll DW241 mentions a variety of lucrative urban properties Azdamur endowed as part of the foundation's revenue-generating assets. The earliest record, a *waqfiyya* dated Shawwāl 19th, 908 (April 1503), lists a substantial amount of properties,

¹²¹. DW198.

¹²². Petry, "A Geniza For Mamluk Studies?", 56-59; *Protectors or Praetorians?*, 196-210.

¹²³. A small part of the monument is still extant in the cemetery area south-east of Sayyida Nafisa mosque (Monument no.174). The attribution of this monument to Azdamur min 'Alī Bāy is corroborated by Ibn Iyās, who mentions the location of the mausoleum in his chronicle. Ibn Iyās, *Badā'i'*, 4:121.

¹²⁴. DW241.

including two residential buildings with gardens and horse stables near the Birkat al-Fīl, rental apartments and commercial facilities near Ibn Ṭūlūn mosque, other rental apartments and a *wikāla* in Būlāq, and several agricultural lands in Giza.¹²⁵ Among the properties endowed with this *waqfiyya* is a palace located in the north-western section of al-Qāhira, near Ḥārat Zuwayla. The document states that this palace previously belonged to Abū al-Khayr al-Naḥḥās (d. 864/1459), a notorious bureaucrat that rose to power and fell into disgrace between the reigns of Jaqmaq and al-Ashraf Ināl, and specifies that the palace had lawfully become the property of Azdamur via an *istibdāl* stipulated on the 11th of Ramaḍān 908 (March 1503).¹²⁶ The document also indicates that this palace had undergone renovations, but its original hydraulic system remained intact.¹²⁷ The same 908/1503 *waqf* deed also endows several other assets in Ḥārat Zuwayla, including the remains of some older buildings (indicated as *al-dār al-khirba*, and *mā baqā min abniya*) that are described as delimited by buildings known to belong to Khawand Ardukīn's *waqf* (*al-qā'a al-ma'rūfa bi-khawand, al-iṣṭabl al-ma'rūf qadīman bi-khawand al-sulṭāna, bāb sirr qā'at khawand ardukīn, ḥāṣil ḥammām ardukīn*).¹²⁸ These properties, explored in more detail in Chapter 3, provide valuable insight into the physical layering of the urban space and how this stratification reflected different phases of the Mamlūk period and shaped Cairo's lived space.

Two later records, dated Jumādā I 22nd 910 (October 1504) and 13th of Dhū al-Ḥijja 912 (April 1507) and written in the margin of the first *waqfiyya*, added still more revenue-generating properties to the foundation. The deed of 910/1504 records the addition of a palace located near the Citadel purchased by Azdamur in Rabī' II 909/August 1503, a *funduq/khān* and bakery near the Ibn-Ṭūlūn Mosque obtained via *istibdāl* in Rabī' II 909/August 1503, and structures connected to the residential palace Azdamur had endowed in 908/1503. The deed of 912/1507 adds a sugar-cane press to the foundation, specifying that Azdamur had obtained it via *istibdāl* earlier that year on the 21st of

¹²⁵. DW241. The dimensions of the land lots endowed in Giza vary between 15 and 65 *faddāns*.

¹²⁶. DW241. Abū al-Khayr al-Naḥḥās was a coppersmith who became extremely influential within the administration of Sultan Jaqmaq. His dubious administrative skills, rapacious financial strategies, and eventual dramatic downfall are considered emblematic of the general situation of bureaucrats in the ninth/fifteenth century Mamlūk administration. Richard T. Mortel, "The decline of Mamlūk civil bureaucracy in the fifteenth century: the career of Abū l-Khayr al-Naḥḥās," *Journal of Islamic Studies* 6, no. 2 (1995): 173-188; Julien Loiseau, "L'affaire al-Saṭṭī (1448-1450). Pouvoir souverain et usages de la légalité à l'époque mamelouke," *Annales Islamologiques* 46, (2012): 67-78. Angela Isoldi, "Multifaceted justice: punishment and retaliation in the case of al-Saṭṭī (852/1448)," forthcoming.

¹²⁷. DW241. The document mentions that other properties had also been acquired by Azdamur via *istibdāl*, such as the *wikāla* in Būlāq. DW241 refers to various *istibdāl* transactions recorded in a separate document.

¹²⁸. DW241. The mention of these structures means that not all of them had been destroyed at the beginning of the ninth/fifteenth century, as al-Maqrīzī suggested.

Shawwāl 912 (March 907); a *khān* and several shops in the Palestinian city of Gaza; and another palace overlooking the Birkat al-Fīl in Cairo. A portion of the revenues generated by these new facilities was allotted to the purchase of daily bread rations for the employees at the *turba* of Azdamur. The last deed also stipulated several new foundation expenses: monthly allowances for ten residents at a *zāwiya* (Sufi institution) near al-Sayyida Nafisa mosque; funds to maintain the *zawīya*; salaries for the *zāwiya*'s *muzammalātī* (an employee distributing drinking water)¹²⁹ and plumber; and provisions for the *zāwiya*'s drinking water supply.¹³⁰

These new expenses, however, would have been a mere fraction of the income generated by the profitable assets added to the foundation, so it is highly probable that these assets were included primarily to augment the unassigned revenue surpluses managed by the foundation's *nāẓir*. While adding new revenues and expenses, the 912/1507 deed maintained the *waqf*'s original management structure: namely, Azdamur would remain the foundation's *nāẓir* for his lifetime, and, upon his death, the foundation would be managed jointly by either a designated individual or one of his descendants and the *dawādār kabīr*.¹³¹ This arrangement sustained the foundation's function as a "good asset management vehicle", granting Azdamur and his successors control over its significant surplus revenues.¹³²

Clearly, between the issuance of the first *waqfiyya* in 908/1503 and the last one in 912/1507 Azdamur had been consistently expanding his capital by acquiring new assets in Cairo and other parts of the Sultanate. The accumulation of such a large amount of capital over the course of four years can be explained by the political influence Azdamur enjoyed at the court of al-Ghawrī. The chronicle of Ibn Iyās, the main source used to reconstruct Azdamur's life, reveals that between 908/1503 and 912/1507 Azdamur held the office of *dawādār kabīr*, a post that by that time had become one of the most influential positions within the court.¹³³ Azdamur's political career had started a few years earlier in 903/1497 when he was appointed to the office

¹²⁹. More about this employee will be said in Chapter 4.

¹³⁰. DW241. I could not determine from the document whether this *zāwiya* had been newly founded by Azdamur or was a pre-existing structure. The deed allocates a monthly sum of 300 copper *dirhams* to the purchase of Nile water for the *zāwiya*. The salaries of the employees of Azdamur's *waqf* will be further discussed in Chapter 4.

¹³¹. DW241.

¹³². The deed allots a monthly salary of 1,000 *dirhams* to the *nāẓir* of the foundation. The bulk of the *nāẓir*'s income, however, must have been represented by the unassigned surplus of the revenues.

¹³³. Especially towards the end of the Mamlūk period, the *amīr* holding the office of *dawādār kabīr* oversaw other important offices and managed large *waqf* foundations. Ayalon, "Dawādār," *EI-2 English*.

of *shādd al-sharāb-khānāh* (supervisor of the sultan's house of beverages).¹³⁴ Azdamur was actively involved in the turbulent events that marked the years between the end of Qāyṭbāy's reign and al-Ghawrī's enthronement: in particular, he had a key role in the arrest of al-Zāhir Qāniṣawh (r. 904-905/1498-1500), which was ordered by Sultan Jānbalāṭ (r. 905-906/1500-1501), and when al-ʿĀdil Ṭūmān Bāy declared himself sultan in 906-1500, Azdamur was imprisoned in the Citadel of Damascus with Jānbalāṭ's other *amīrs*.¹³⁵ A few months later, al-Ghawrī ascended to the throne and issued a decree to release the *amīrs* imprisoned in Damascus, and Azdamur returned to Cairo and was appointed *ḥājib al-ḥujjāb* (great chamberlain).¹³⁶ From that moment onward, Azdamur remained bound to al-Ghawrī, becoming one of the most prominent figures in his administration. On Muḥarram 14th, 907 (July 1501), Azdamur was appointed *dawādār kabīr*, a post he kept until his death.¹³⁷ At the end of Shawwāl 912 (July 1507), Azdamur was tasked with putting down Bedouin insurrections in Karak and Nablus. He departed from Cairo on the 7th of Dhū al-Ḥijja 912 (April 1507) at the head of 500 royal *mamlūks*, but a few months later he died in Gaza on the 15th of Jumādā I 913 (September 1507).¹³⁸ His body was carried back to Cairo and buried at the funerary complex endowed at the southern cemetery.¹³⁹

The chronicle of Ibn Iyās reveals a clear chronological alignment between the peak in Azdamur min ʿAlī Bāy's political career and the establishment of his *waqf* foundation. Similar alignments between political relevance and the founding of *awqāf* have emerged in several of other case studies surveyed here. Azbak min Ṭuṭukh, for instance, founded and enlarged his *waqf* during his long tenure as *atābak al-ʿasākīr*, as Abū Bakr ibn Muzhir did during his career as *kātib al-sirr*. Similarly, Faṭḥ Allāh established his foundation as he became an influential *kātib al-sirr* during the reign of Faraj Ibn Barqūq, and Mūsā al-Burhānī expanded his *waqf* while he worked in the

¹³⁴. Ibn Iyās, *Badāʾiʿ*, 3:378.

¹³⁵. Ibn Iyās, *Badāʾiʿ*, 3:441-2, 451, 453.

¹³⁶. Ibn Iyās, *Badāʾiʿ*, 4:12.

¹³⁷. Ibn Iyās, *Badāʾiʿ*, 4:18. A few days before being appointed as *dawādār kabīr*, Azdamur was entrusted with the duty of collecting the revenues of the Christian and Jewish *waqf* foundations. This was part of the operations al-Ghawrī ordered to collect the resources necessary to pay the army from the *awqāf* in Cairo. The measures adopted by al-Ghawrī, which implied the collection of one year of revenues from the *waqf* foundations, provoked a reaction from the tenants of the *awqāf*'s commercial structures, who gathered to protest. The revolt was violently repressed, and the situation was solved thanks to the mediation of Azdamur, who persuaded the sultan to collect only three months of rent from the endowed facilities in the city. These events will be discussed further in Chapter 3.

¹³⁸. Ibn Iyās *Badāʾiʿ*, 4:108.

¹³⁹. Ibn Iyās, *Badāʾiʿ*, 4:119-121. Ibn Iyās says that Azdamur was buried in the *turba* he had constructed near Bāb al-Zaghalla (one of the gates in the Ayyubid walls south of the Citadel). In another instance, Ibn Iyās also relates that in Ramadan 913 (January 1508) al-Ghawrī visited Azdamur's shrine while inspecting the works for the aqueduct. Ibn Iyās, *Badāʾiʿ*, 4:127.

service of the *nāẓir al-jaysh* ‘Abd al-Bāsiṭ b. Khalīl. It seems undeniable, then, that there was a correlation between the political affiliations and the socio-economic means these individuals needed to establish their *waqf* endowments. The next section discusses the broader meaning of this correlation to understand its implications on the life of the *awqāf* and on the water facilities they encompassed.

2.1.2 Defining a social network

Any attempt to define clear boundaries between social groups within a population is inherently problematic because it necessitates generalizations that risk misrepresentation. Nevertheless, social analyses often demand a methodological approach that delineates groups or networks to begin interpreting the dynamics underlying social, economic, and political phenomena. For the purpose of the present dissertation, it is important to understand who precisely constructed and managed water-related structures in Cairo and, if possible, to delineate a social group that encompasses these individuals while also taking their diversity into account.

Studies on Mamlūk-era society have traditionally focused on two social groups: the “military (or military-political) elite” and the “civilian (or non-military) elite”.¹⁴⁰ To a significant extent, the academic emphasis on these two categories reflects the perspective of most Mamlūk-era primary historical sources, which were overwhelmingly authored by individuals belonging to what modern scholarship defines as the “civilian elite”. The absence of primary source material not written by the “civilian elite” makes the academic focus on Egypt’s dominant groups somewhat inevitable, but it also means that the rest of Mamlūk society remains largely unexplored.

Furthermore, the biographical analysis of the individuals mentioned in the *waqf* documents that make up the case studies above shows that the distinction between “military” and “civilian elite” should not necessarily be adopted as a delineating standard when examining Mamlūk-era social groups. In fact, it is counter-productive to imagine these groups as neatly separated social categories. The notion of a “civilian elite” is valid if we focus, as Petry does in *The Civilian Elite of Cairo in the later Middle*

^{140.} Petry, *The Civilian Elite*; Mathieu Eychenne, *Liens personnels, clientélisme et réseaux de pouvoir dans le sultanat mamelouk (milieu XIIIe - fin XIVe siècle)* (IFPO, 2013); Reuven Amitai, “Political and Civilian Elites in Mamluk Palestine (1260–1516)- Some Preliminary Comments,” in *Die Interaktion von Herrschern und Eliten in imperialen Ordnungen des Mittelalters*, ed. Wolfram Drews (De Gruyter, 2018), 125–146. Albert Hourani divided the elites of the Ottoman provinces into ulama, military leaders, and secular notables (whose power stemmed from their commercial activities). See Albert Hourani, *The Emergence of the Modern Middle East* (University of California Press, 1981), 44–5.

Ages, on a group of notables and their shared cultural and scholarly background.¹⁴¹ However, a change in perspective reveals important discrepancies in the financial status, social influence, and professional agenda of the various members of what Petry designates as “civilian elite”. The notion of society as composed of a set of rigid and self-contained categories does not align with Mamlūk-era historical sources, many of which emphasize the accomplishments of individuals rather than those of broad collectives like the *nās* (the “people” with a certain social status).¹⁴² The sources consulted for reconstructing the biographies of the individuals mentioned in the selected documents pay special attention to the individual’s relationships and connections, which reveals, as one recent study has suggested, that these authors perceived society as a set of “movable and permeable” networks rather than as a series of rigid social categories.¹⁴³

The heterogeneity of the *wāqifūn* in the case studies warrants an analytical approach that, like the chronicles consulted to identify these individuals, prioritizes networks over categorical classifications. When seeking to understand the socio-political and economic effects these *awqāf* had on the urban water system, categorizing each *wāqif* into generalized social groups can lead to significant oversights that fail to account for the broader social phenomena underlying the documentary *corpus*. For instance, in her analysis of the Mamlūk-era *waqf* documents kept at the *Dār al-Wathā’iq*, Sylvie Denoix adopted a traditional categorization of social groups by classifying documents based on whether they were issued by political personalities, “civil/religious elites”, or merchants.¹⁴⁴ Her approach yielded interesting results, on the one hand, because it revealed that about 74% of the *waqf* surveyed documents in her study had been issued by political personalities (which included former *mamlūks*, eunuchs, and *amīrs*, as well as sultans and their relatives), while only 8,66% of the documents were issued by a group she designated as “groupe des religieux et des elite civiles” (qadis, scholars, administrators, and even a caliph), and 1,76% were issued by the group of “commerçants et artisans”.¹⁴⁵ On the other hand, these figures were calculated only on the basis of each *wāqif*’s name and title as reported in the index of the *corpus*, without considering the network connections that emerge from their biographies, which, as shown in the previous sections, provide a more significant insight.

^{141.} As Petry has explained, these individuals he grouped as “civilian elite” were often educated by the same instructors, attended the same scholarly institutions, dwelled in the same neighbourhoods, and worked in the same religious foundations. See Petry, *The Civilian Elite*, 132–146.

^{142.} Lapidus, *Muslim Cities*, 79–81.

^{143.} Hagemann, Mewes and Verkinderen, “Studying Elites,” 19–32.

^{144.} Sylvie Denoix, “Pour une exploitation d’ensemble d’un corpus,” in *Le waqf dans l’espace Islamique: outil de pouvoir socio-politique*, ed. Randi Deguilhem (IFPO, 1995), 34–35.

^{145.} Denoix, “Pour une exploitation d’ensemble,” 35.

The case studies surveyed here reveal that despite their different social backgrounds the individuals issuing the documents all belonged to social networks connected to the *dawla*. Both the *waqf* documents and contemporary narrative sources show that each *wāqif* (or *mustabdil*—the person requesting the exchange of a property endowed in another *waqf*) had personal ties with the members of the ruling network, thus had access to the Sultanate's financial resources and tax revenues, and in most cases was an active member of the Sultanate's administration. In most cases, moreover, the dates on which the documents were issued correspond with the period during which each *wāqif*'s ties to the sultans and their administrations was the strongest, while some cases also showed that foundations were expropriated by the sultans or their associates when the founders' ties to the ruling group weakened. Were traditional social classification systems adhered to, these crucial socio-political connections might have been overlooked. Therefore, emphasizing these ties is crucial to understanding the complex socio-economic role *awqāf* played in Mamlūk-era Cairo's urban water system.

In his treatise *Ighāthat al-Umma*, al-Maqrīzī provides a functional definition for a social network that encompasses individuals of diverse genders and socio-cultural origins while also outlining the structure's ties to the Sultanate's administration and resources. Al-Maqrīzī describes the Egyptian society of his time as such:

“(...) the population of Egypt is divided on the whole into seven categories (*aqsām*). The first category embraces those who hold the reins of power (*ahl al-dawla*). The second [is formed of] the rich merchants and the wealthy who lead a life of affluence. The third [encompasses] the retailers, who are merchants of average means, as are the cloth merchants. This also includes the small shopkeepers. The fourth category embraces the peasants, those who cultivate and plow the land. These are the inhabitants of the villages and of the countryside. The fifth category is made up of those who receive a stipend (*al-fuqarā'*) and includes most legists, students of theology, and most of the *ajnād al-ḥalqah* and the like. The sixth category [corresponds to] the artisans and the salaried persons who possess a skill. The seventh category [consists of] the needy and the paupers (*dhū al-ḥāja wa-al-maskana*); and these are the beggars who live off the [charities of] others.”¹⁴⁶

Al-Maqrīzī then explains that the revenues of the dominant group, the *ahl al-dawla*, were obtained by levying land taxes (*kharāj al-arāḍi*)—thus, he categorizes

¹⁴⁶. al-Maqrīzī, *Mamluk Economics*, 73. This division introduces al-Maqrīzī's explanation of how the economic crisis happening in Egypt in the first decade of the ninth/fifteenth century affected different social strata.

the *ahl al-dawla* based not so much on its members' socio-cultural backgrounds as he does on the sources of their livelihood. The *Ighātha* defines the *ahl al-dawla* as the social stratum with access to the Sultanate's most significant financial flows.¹⁴⁷ Hence, for al-Maqrīzī, the *ahl al-dawla* encompasses sultans, *amīrs* and other high-ranking military officials, bureaucrats, and administrators, as well as the respective households of all these various individuals. The different protagonists of the case studies presented above fit well into this category. All of them, at least for a certain period of their lives, had the power to exploit the financial resources of the *bayt al-māl*, especially the lands distributed as *iqṭā'* lots, the unallocated lands (such as the ones that emerged due to the westward recession of the Nile), and the revenues of the *kharāj* (the taxes imposed on agricultural lands).¹⁴⁸ As the case of Ardukin illustrates, the *ahl al-dawla* could acquire land parcels from the *bayt al-māl* provided the *wakīl bayt al-māl* granted approval. However, since the *wakīl bayt al-māl* was appointed by the sultan, it is evident that the process was not impeded for members of the *ahl al-dawla*.¹⁴⁹ In other instances, access to the *bayt al-māl* conferred control over tax levies and the potential to profit from surplus revenues.¹⁵⁰

The case studies also show that the *ahl al-dawla* was a mutable and dynamic network, because connected to an entity, the *dawla*, that was not a static "State", but rather a variable and dynamic configuration of administrative institutions, unofficial associations, and financial resources, with features changing throughout time due to variable power relations and socio-economic developments. Since the individuals forming the *ahl al-dawla* (including the protagonists in the case studies presented here) shared multiform connections to and within this configuration, the *ahl al-dawla* itself should be theorized as a fluid network rather than a rigid social category.¹⁵¹ People that were part of the *ahl al-dawla* prospered because they were in a social

^{147.} al-Maqrīzī, *Mamluk Economics*, 73-4.

^{148.} Coulson, N.J., Cl. Cahen, B. Lewis, and R. le Tourneau, "Bayt al-Māl," in *Encyclopaedia of Islam New Edition Online (EI-2 English)*, ed P. Bearman (Brill, 2012) doi: https://doi.org/10.1163/1573-3912_islam_COM_0109; al-Maqrīzī, *Mamluk Economics*, 73. Denizeau and Denoix, "Le sultan promoteur," 174.

^{149.} Igarashi, *Land Tenure and Mamluk Waqfs*, 15.

^{150.} al-Maqrīzī, *Mamluk Economics*, 52-3; al-Asadī, *Taysīr*, 94-5.

^{151.} Michael Mann's view of societies as "constituted of multiple overlapping and intersecting socio-spatial networks of power" fits well in this context. Mann, *The Sources of Social Power I*, 1. On the value of emphasizing the importance of networks and prosopography in the study of political entities, see: Jan Dumolyn and Jo Van Steenberghe, "Studying Rulers and States across Fifteenth-Century Western Eurasia," in *Trajectories of State Formation across Fifteenth-Century Islamic West-Asia. Eurasian Parallels, Connections and Divergences*, ed. Jo Van Steenberghe (Brill, 2020), 110-1. For the use of the term *dawla* as a social structure represented by a network of individuals see also: Van Steenberghe, "Appearances of Dawla," 63-66. As mentioned in the introduction to this thesis, historian Julien Loiseau has already incorporated the category *ahl al-dawla* in his research, translating it as "people of the State". Loiseau, "'Boy and Girl'," 24.

position that allowed them to exploit the Sultanate's main financial resources. However, transformations in the composition of this network could happen over short periods of time. As a result, the socio-economic privileges of the *ahl al-dawla* members could be easily lost in times of unfavourable political circumstances, for example when another network raised to power. As the case studies presented here suggest, for the members of the *ahl al-dawla* the establishment of *waqf* foundations could represent a way to organize and manage the resources they accumulated while in power, and possibly securing them from changes in the *dawla* configuration that could undermine their privileges.

The chronological survey of the case studies reflects fluctuations in the composition of *ahl al-dawla* network throughout the Mamlūk period. It is difficult to assess whether the overall *corpus* of Mamlūk-era documents mirrors broader shifts in the composition of the *ahl al-dawla* or merely represents what survived thanks to fortuitous document preservation. However, the dynamics observed within these case studies can be considered representative of their respective historical, socio-political, and economic context; and the identity of the individuals surveyed here can be considered representative of the composition of the *ahl al-dawla* of their respective time based on information provided by the historical sources and broader phenomena identified by recent scholarship. For instance, the earliest case study shows the social and economic capital of two Hakkārī *amīrs* shortly before the disappearance of the Kurds integrated into the Ayyūbid army from the high-ranking military in the mid seventh/thirteenth century—a large-scale phenomenon observed by Kurdish history expert Boris James.¹⁵² Khawand Ardukīn's *waqfiyya*, in turn, was issued at a time when al-Nāṣir Muḥammad's household enjoyed special status and access to the Sultanate's vast economic capital due to the lavish grants and gifts the sultan bestowed upon his network—a practice Amalia Levanoni discussed thoroughly.¹⁵³ Comparably, the two *waqfiyyāt* selected from the first half of the ninth/fifteenth century were issued by wealthy secretaries, Faṭḥ Allāh and Mūsā al-Burhānī, when they were most powerful, but when these secretaries' career ended in disgrace much of the capital they had accumulated was taken from them. Such stories of rising and falling fortunes, according to al-Maqrīzī's *Ighāthat al-Umma*, were not uncommon by the early ninth/fifteenth century: the practice of selling administrative positions to affluent individuals, as Toru Miura also observed, had become prevalent by that time, and their tenures in power often concluded with the confiscation of the fortunes

¹⁵². See, for instance: James, *Genèse du Kurdistan*, 61-96; "Constructing the Realm of the Kurds (al-Mamlaka al-Akradiyya): Kurdish In-betweenness and Mamluk Ethnic Engineering (1130-1340 CE)," in *Grounded Identities*, ed. Steve Tamari (Brill, 2019), 24-5.

¹⁵³. Levanoni, *A Turning Point*, 184-5.

they had acquired.¹⁵⁴ Furthermore, as historian Julien Loiseau has demonstrated, under the reign of Sultan Barqūq and his successors, influential bureaucrats began controlling significant financial resources, and their ascendancy corresponded with a diminution in the economic capital controlled by *amīrs*. This development facilitated the acquisition of economic capital by an increasing number of influential individuals from outside the military, who were able to establish lavish *waqf* foundations.¹⁵⁵ In the dynamics surrounding the *istibdāl* of the hammam endowed in al-Ṭanbadī's *waqf*, one can see the reflection of a broader trend—the inclusion of merchants, such as al-Ṭanbadī himself, who traded on behalf of the sultan, into the *ahl al-dawla* network. The rise to prominence of these merchants has been the subject of examination by Francisco Apellániz, who demonstrated how especially Sultan al-Ashraf Barsbāy leveraged these figures (the *khawājas*) for managing his monopolies.¹⁵⁶ The case of Abu Bakr ibn Muzhir exemplifies the movement of secretarial families from Syria to Cairo during the Sultanate of al-Mu'ayyad Shaykh, showcasing their continued prosperity in the capital throughout the ninth/fifteenth century as they served in the chancery of successive sultans. This migration pattern from Syria to Cairo has been thoroughly observed by Bernadette Martel-Thoumian, who in *Les civils et l'administration dans l'état militaire mamlūk* traced the history several secretarial families active at court throughout the ninth/fifteenth century.¹⁵⁷ Finally, two *waqf* deeds selected for the late Mamlūk period (the second half of the ninth/fifteenth century to the beginning of the tenth/sixteenth century) were issued by two prominent *amīrs* with long careers in the military and close personal ties with the sultan. Azbak min Ṭuṭukh was one of the most influential figures of Qāyṭbāy's court, as he held the post of *atābak al-'asākir* for several years and, as mentioned in Chapter 1, even presided over the annual ceremony of the *fath al-khalīj* on Qāyṭbāy's behalf. Azdamur min 'Alī Bāy occupied the post of *dawādār kabīr* for about four years during the reign of Sultan al-Ghawrī, a time when this position held great power including the control over multiple large *waqf* foundations. The presence of these two documents by high ranking *amīrs* in the sample selected for the late-Mamlūk period aligns with a general pattern, highlighted by Jo Van Steenberg and Maya Termonia, that saw senior military officials monopolizing the Sultanate's main court positions during that time.¹⁵⁸

The case studies presented here demonstrate that individuals financing water facilities in Mamlūk-era Cairo were primarily members of the *ahl al-dawla*, and are not necessarily represented by the established social categories typically used by modern

^{154.} al-Maqrīzī, *Mamluk Economics*, 52. Miura, "Administrative Networks," 43–51.

^{155.} Loiseau, *Maison*, 196–209. Behrens-Abouseif, *Cairo of the Mamluks*, 23.

^{156.} Apellániz, *Pouvoir et Finances*, 106–114.

^{157.} Martel-Thoumian, *Les Civils*, 244, 258, and 275.

^{158.} Van Steenberg and Termonia, "Social Infrastructures," 823.

scholarship to describe dominant groups within Mamlūk-era society. Charitable, domestic, and communal water facilities were integrated into endowments created and managed by the people within this dynamic network. Consequently, the creation and maintenance of these water structures was contingent on the various agendas of founders and administrators embedded in an *ahl al-dawla* with constantly shifting allegiances and power relations. As the case studies show, the *awqāf* established by the *ahl al-dawla* as financial arrangements were subjected to various changes over time. The number of assets endowed in a *waqf* could increase as founders accumulated more properties through their privileged positions, but upon a *wāqif*'s death or loss of socio-economic privileges, these assets could be seized via *istibdāl* by other influential members of the *ahl al-dawla*. To fully understand these dynamics, this analysis necessitates addressing the case studies' key socio-economic patterns that influenced the management of the *awqāf* and, consequently, of the endowed water structures. The next section will explore broad patterns concerning the relationship between *awqāf* founders and controllers, and their implications for water systems which were part of the foundations.

2.1.3 *Waqf* foundations in the hands of the *ahl al-dawla*

The case studies presented here provide further evidence supporting the well-established view (outlined in the introduction to this work) that *waqf* foundations were instrumental in conveying financial resources, managing assets and facilities, and exerting socio-economic influence over urban life. Using *waqf* foundations, the *ahl al-dawla* financed, controlled, and exploited a substantial number of urban structures and spaces, including water facilities, thereby establishing themselves as the main agents of urban development and expansion. The intricate and multifaceted ways in which the *ahl al-dawla* harnessed *waqf* foundations moulded the urban space, produced and exploited economic resources, contributed in shaping the organization of the city's social life, and, as the present work demonstrates, determined how *waqf* foundations financed and organized urban water supply.

Time and again in the case studies founders endow properties in their *awqāf* that they acquired from the *bayt al-māl*, which they had access to because they were affiliated with the *dawla*. Though Ardukīn, Mūsā al-Burhānī, and possibly Qarājā al-Jamālī's *waqfiyyāt* all endowed *iqṭā'* lands, *waqfization* was not limited to the provincial *iqṭā'*s. As Azbak's case shows, suburban *ḥikr* lands which were controlled by the *bayt al-māl* could also be granted to the *ahl al-dawla* and embedded in their respective *waqf*.

This process of *waqfization*, however, did not necessarily "privatize" or sever properties endowed in *awqāf* from the purview of *ahl al-dawla* members other than the *waqf*'s

founders.¹⁵⁹ In fact, the properties in a *waqf* foundation could still represent a resource the *dawla* could exploit in various ways. The cases of Faṭḥ Allāh and Mūsā al-Burhānī, for example, clearly illustrate that the *ahl al-dawla* could leverage their influence to appropriate endowed assets through *istibdāl*. At the same time, some founders intentionally provided other members of the *ahl al-dawla* access to their foundations' resources by designating specific office holders as *ex-officio* managers of their *waqf*. Faṭḥ Allāh's deed, for instance, specified that upon his death his foundation was to be jointly managed by the *shaykh* of the *khānqāh* of Ṭughāytamur al-Najmī and one of its Sufis as well as the *kātib al-sirr*.¹⁶⁰ Similarly, Abū Bakr ibn Muzhir designated the Shāfi'ī chief qadi and the *amīr akhūr kabīr* as joint administrators of his *waqf* after his death, Azbak min Ṭuṭukh the second *dawādār* of Egypt, and Azdamur min Alī Bāy the *dawādār kabīr*.

In *Land Tenure, Fiscal Policy and Imperial Power in Medieval Syro-Egypt*, Daisuke Igarashi provides an overview of the official post holders that were appointed as administrators of large *waqf* foundations, illustrating the systematic association between certain court offices and specific endowments.¹⁶¹ In line with Igarashi's findings, other recent studies have emphasized that "particular high-profile" foundations were consistently managed by high-ranking court officials appointed *ex-officio* as their *nāzīr*.¹⁶² The extensive *waqf* for the Maṣṣūrī hospital, for instance, was regularly placed under the administration of the *atābak al-'asākīr* even though Qalāwūn's *waqfiyya* designated the Shāfi'ī chief qadi as *nāzīr*.¹⁶³ *Amīr Ṣarghitmish's waqfiyya*, issued in 757/1356, designated the *ra's nawbat al-umarā' al-jamdāriyya al-sultāniyya* (chief head of the sultan's guards) as the administrator of the *waqf* for the *Ṣarghitmishiyya* madrasa.¹⁶⁴ Comparably, Sultan al-Mu'ayyad Shaykh's *waqfiyya* designated the *dawādār kabīr* and the *kātib al-sirr* to administer of the foundation jointly (*bi-mushāraka*) with his descendants.¹⁶⁵

^{159.} Igarashi associated the term *waqfization* with the idea of "privatization". Igarashi, *Land Tenure, Fiscal Policy*, 178-182. See also: Carl Petry, *The Mamluk Sultanate. A History* (Cambridge University Press, 2022), 196-200.

^{160.} DW355; Behrens-Abouseif, *Faṭḥ Allāh and Abū Zakariyya*, 29.

^{161.} Igarashi, *Land Tenure, Fiscal Policy*, 192-5 and 206-11.

^{162.} Van Steenberghe and Termonia, "Social Infrastructures," 827-31; Loiseau, *Maison*, 435-6. The case of Qarājā al-Khāṣṣakī's *waqf*, however, might indicate that the appointment of a *nāzīr* from the office holders did not necessarily depend on the dimensions of a foundation.

^{163.} Igarashi, *Land Tenure, Fiscal Policy*, 206-7.

^{164.} Abd al-Laṭīf Ibrahim, "Min al-wathā'iq al-'arabiyya fi al-'uṣūr al-wuṣṭā: naṣṣān jadīdān min wathā'iq al-amīr Ṣarghitmish," *Majallat kulliyat al-ādāb, jāmi'at al-Qāhira* 21, no. 1 (1965): 155; Igarashi, *Land Tenure, Fiscal Policy*, 208-9; Van Steenberghe and Termonia, "Social Infrastructures," 827-9.

^{165.} Igarashi, *Land Tenure, Fiscal Policy*, 207; Fahmi Abd al-Alim, *Al-'Imara al-Islāmiyya fi 'aṣr al-mamālīk al-jarākisa* (Wizārat al-Thaqāfa, 2003), 154.

What led these founders to designate court officials as administrators of their *awqāf* remains to be investigated further, although some scholars have advanced hypotheses to explain their motives. Igarashi, for instance, has suggested that designating court officials to manage *awqāf* offered organizational advantages for the foundations, because these officials had access to established administrative infrastructure (the individual *dīwāns*) that could be harnessed to manage the *awqāf*.¹⁶⁶ Igarashi's argument is not convincing, however, because large *awqāf*, such as the ones founded by Azbak min Ṭuṭukh, Abū Bakr ibn Muzhīr, and Azdamur min 'Alī Bāy, had sufficient funds to finance their own administrative apparatus, and their respective deeds all allot monthly salaries to the foundation's administrative staff (e.g. the *shādd*, the *mubāshir*, the *jābī*).¹⁶⁷ Igarashi has also argued that the *wāqifūn* "counted on the military men's power to protect their *waqf*".¹⁶⁸ However, as Igarashi himself also points out, entrusting a court official to administrate a *waqf* did not necessarily guarantee the foundation's integrity since, once they became a foundation's *nāzīr*, these officials could easily take possession of the *waqf*'s properties via *istibdāl* transactions and incorporate them into their own *awqāf*. This tactic may have been used by Azdamur min 'Alī Bāy to increment his *waqf* assets: the economic capital of this *amīr* grew rapidly between 908/1503 and 912/1507, and the properties he endowed included many assets obtained via *istibdāl* from other *awqāf* that, as *dawādār kabīr*, he might have had access to.¹⁶⁹

A hypothesis worth considering is that the founders who designated office holders as *nāzīr* of their foundations intended to financially benefit prospective officials, possibly those appointed after them to the position they held.¹⁷⁰ For instance, the *kātib al-sirr* Faṭḥ Allāh entrusted the future holders of the same post to administrate his foundation when he died. Azdamur min 'Alī Bāy, who held the post of *dawādār*

¹⁶⁶. Igarashi, *Land Tenure, Fiscal Policy*, 197.

¹⁶⁷. DW198, DW175 and DW241. These employees worked as assistants to the *nāzīr*. The *mubāshir* oversaw the general supervision of the *waqf*, while the *shādd* and the *jābī* were more specifically in charge of collecting the revenues of the *waqf* (such as the rents of the commercial and residential facilities endowed in the foundation). Fernandes, *The Evolution of a Sufi Institution*, 63–64.

¹⁶⁸. Igarashi, *Land Tenure, Fiscal Policy*, 197.

¹⁶⁹. As shown by Igarashi, the *dawādār kabīr* was in charge of the administration of several large *awqāf*, such as one for the mosque/*madrasa* of al-Mu'ayyad Shaykh, the *waqf* for the *khānqāh* of al-Ashraf Barsbāy, the *khānqāh* Sa'īd al-Su'adā, the *khānqāh* of al-Nāṣir Muḥammad in Siryāqūs, and the *khānqāh* of Baybars al-Jashankīr. In addition, the *dawādār kabīr* managed the *alḥbās* (i.e. the lands allotted from the Treasury to religious institutions in the villages) since the reforms introduced by al-Zāhir Baybars in the mid-seventh/thirteenth century. Igarashi, *Land Tenure, Fiscal Policy*, 195 and 206–8.

¹⁷⁰. This could be interpreted as a form of patronage, particularly valuable in a society where, as Michael Chamberlain has remarked, "social honour and position were won rather than inherited", and where "gaining and giving benefit was seen as the point of life". Chamberlain, *Knowledge and Social Practice*, 112.

kabīr, likewise indicated the future *dawādār kabīr* to administrate his *waqf*. As other scholars have shown, entrusting office-holders to administrate *awqāf* provided them with a significant revenue stream in addition to what they received via the *bayt al-māl*.¹⁷¹ Especially large *awqāf* made significant revenue and were essentially highly profitable businesses, so being the *nāẓir* of one of these foundations allowed one to amass significant wealth, especially because it entailed control of any unassigned revenue surpluses the endowments accrued.¹⁷² Petry's work on the late stages of the Mamlūk period shows how al-Ghawrī exploited his *waqf* as a "secure depository" to building up a "clandestine fisc" from the undesignated revenues.¹⁷³ This strategy was hardly a novelty by that time, since many members of the *ahl al-dawla* appear to have harnessed their *awqāf* for similar purposes throughout much of the Mamlūk period.

The use of *awqāf* as revenue sources alternative to the *bayt al-māl* determined not only who could exploit the foundation's assets but also how they could be exploited. The next chapter explores how the water facilities endowed in *awqāf* were manipulated by the *ahl al-dawla* that sought to increase their economic capital by leveraging their authority over the foundations. Indeed, the role the *ahl al-dawla* played in the urban water management went beyond that of *wāqifūn* establishing and funding water facilities as part of their endowments: this network constantly influenced the functioning and organization of endowed water facilities by harnessing foundations as sources of social and economic power. They were, however, not the only stakeholders of water provision in Cairo. The next part of this chapter deals with their less prominent counterpart: the water carriers.

¹⁷¹. Loiseau, *Maison*, 438-440; Van Steenberghe and Termonia, "Social Infrastructures," 830-1. Loiseau also observed that the practice of appointing a court official as administrators of the *awqāf* undermined the authority of the qadis, who had previously been entrusted with the administration of the large foundations. See: Loiseau, *Maison*, 441-4. It must be pointed out that following Barsbāy's reforms mentioned above, the Shāfi'ī chief qadi was the authority in charge of the *awqāf ḥukmiyya* (i.e. *awqāf* the revenues of which served charitable purposes outside the households of the founders). Amin, *al-Awqāf*, 107-8. If the Shāfi'ī chief qadi was to remain in control of all the *awqāf ḥukmiyya* that mushroomed during the Mamlūk period and absorbed Treasury lands, he would have had enormous political and economic power. This could support the hypothesis that *dawla* officials were nominated as supervisors of *awqāf* in order to limit the power and influence of the Shāfi'ī chief qadi.

¹⁷². Igarashi, *Land Tenure, Fiscal Policy*, 188-9; ;Loiseau, *Maison*, 434-6; Van Steenberghe and Termonia, "Social Infrastructures," 830.

¹⁷³. Petry, *Protectors or Praetorians?*, 208-9.

2.2 Water as craft: water carriers and drinking water supply

2.2.1 Ubiquitous yet underrepresented

Chronicles and documentary sources from the Mamlūk period provide detailed information about the *ahl al-dawla* and the water structures they controlled, but far less information about the water carriers (Ar. *saqqāʾ*, pl. *saqqāʾūn*) who transported drinking water throughout Cairo, serving both residences and water facilities (e.g. cisterns) embedded in religious institutions that were part of *waqf* foundations. The challenges of reconstructing the social profile and *modus operandi* of Mamlūk-era Cairo's water carriers are emblematic of the broader difficulties in studying the roles of common labourers in past societies and in the everyday life of pre-modern cities. Mamlūk-era narrative sources tend to focus on the socially dominating groups, specifically the *ahl al-dawla* or scholarly authorities, leaving out the artisans and unskilled workers who made up the majority in urban spaces. In the chronicles of Mamlūk-era historians active in Cairo, the *saqqāʾūn* blend into the background of the bustling medieval metropolis. For foreign travellers visiting the city, instead, the water carriers were a remarkable aspect of Cairo's urban life that they often noted in their travelogues—however, while these travellers' accounts do offer some information about Cairo's water carriers, they are often clouded by misinterpretations and narrative embellishments intended to impress their readers, and therefore must be interpreted with caution.

The scarcity of information regarding water carriers likely explains the limited scholarly attention these labourers have received in the past. The few articles written about water carriers conflate data from different geographical areas and historical periods. For instance, in his 1957 article “Les porteurs d'eau du Caire”, André Raymond merged sources from the Mamlūk period with accounts from the French expedition era, and, on the basis of these conflated documents, described the water carriers' organizational structure as a set or “corporations” working occasionally as a “brigade de pompiers”.¹⁷⁴ However, despite the long life of the water carriers' craft, which survived until the nineteenth century, information about Cairene water carriers from later periods may not be useful for examining those active during the Mamlūk

¹⁷⁴ André Raymond, “Les porteurs d'eau du Caire,” *BIFAO* 57, (1957): 183–202.

era.¹⁷⁵ Meanwhile, Muhammad Abdul Jabbar Beg examined the water carriers' craft using Islamic views of water giving, so his discussion of water carriers becomes an archetypal and somewhat romanticized depiction that lacks spatial and chronological context while offering no explicit conclusions regarding the water carriers' socio-economic role in the various pre-modern urban contexts of the Middle East.¹⁷⁶

A more context-specific study on water carriers, written by Samah Abd al-Munaim al-Salawi, presents a systematic survey of information about the *saqqā'ūn* available in Mamlūk-era sources; including *ḥisba* manuals, accounts from foreign travellers, and a few mentions in the chronicles.¹⁷⁷ Al-Salawi's article serves as a valuable reference work on the Mamlūk-era *saqqā'ūn*, but it treats the water carriers as a guild (*ṭā'ifā*), while such kind of internal trade organization is generally unattested in Mamlūk-era sources. Moreover, al-Salawi's article does not critically interpret the sources and, due to its specialized nature, also does not contextualize the water carriers within Mamlūk-era Cairo's complex water supply network. Valentine Denizeau's doctoral thesis takes instead a significant step toward contextualizing Cairene water carriers, though her conclusions are also based on information about water carriers from earlier periods. In addition, Denizeau argued that the *muḥtasib*'s control over the water carriers indicates that the "State" strictly regulated this trade in Medieval Cairo.¹⁷⁸ In actuality the *muḥtasib*'s oversight of all urban trades did not amount

^{175.} The water carriers were active in Cairo at least until the end of the Modern Era. At the beginning of the nineteenth century, Edward Lane wrote "As the water of the wells in Cairo is slightly brackish, numerous 'saqqas' (carriers or sellers of water) obtain their livelihood by supplying its inhabitants with water from the Nile". Lane, *Manners and Customs*, 319. The figure of the water carrier probably disappeared from the social landscape of Cairo in the following decades. In the first half of the twentieth century, the Egyptian historian Ahmad Amin wrote about these workers as a craft from the past that disappeared with the introduction of taps (*ḥanaḥiyyāt*) in the houses of Cairo. See Ahmad Amin, *Qāmūs al-'ādāt wa-al-taqālīd wa-al-ta'ābīr al-Miṣriya* (Hindawi, 2003), 235.

^{176.} Muhammad Abdul Jabbar Beg, "Water Carriers in Early Islamic Civilization," *Islamic Culture* 58, no.1 (1984): 75-78. Beg argues that water carriers "enjoyed probably the highest prestige among pre-industrial workers in Islamic society" due to the pious value attributed to water giving in the Islamic tradition. However, I believe that Beg confuses the professional water carriers with the Sufis who distributed drinking water as a form of charitable deed. The *saqqā'ūn* discussed in this chapter exercised their profession to earn a living, and as the sources of the time indicate, they sometimes tricked their customers. Quoting al-Jāhiz, who compares the scarce salary of workers providing essential services with the unfairly greater compensation of the bureaucrats, Beg also suggests that the water carriers were held in high consideration despite their unprivileged economic status; however, this suggestion appears unsubstantiated by the sources I analysed. Beg also states that "during the early Islamic period" a waterskin costed the "modest sum of about three dirhams", without really contextualizing such information. See Beg, "Water Carriers", 76.

^{177.} Samah Abd al-Munaim al-Salawi, "Ṭā'ifat al-saqqā'īn fi Miṣr al-Mamlūkiyya," *Hawliya al-Tārīkh al-Islāmī wa-al-Wasīf* 5, (2017): 225-253.

^{178.} Denizeau, "Conduire l'eau," 428-436.

to rigid “State” control, but primarily pertained to enforcing Islamic regulations concerning communal order and collecting taxes from the merchants and traders of the *sūq* on behalf of the sultans.

This section, following al-Salawi’s lead in focusing on Mamlūk-era sources, provides a more critical interpretation of the available accounts to re-evaluate the water carriers’ role within the broader and multilayered water supply network of the period. A critical approach to Mamlūk-era sources describing the water carriers’ duties and functions is necessary due to the nature of the sources themselves. To start with, the bulk of what we know about water carriers comes from *ḥisba* manuals and Ibn al-Ḥājj’s moral treatise, the *Madkhal*.¹⁷⁹ As previously mentioned, the *Madkhal* presents behavioural rules that comply with Islamic law and addresses the whole Muslim community, while *ḥisba* manuals set specific guidelines for the *muḥtasib* to follow. These are prescriptive sources that provide rules and regulations of both a moral and practical nature. Whether these rules and regulations were observed, and to what degree, remains an open question. As explained in the main introduction, throughout the Mamlūk period the *muḥtasib*’s function transformed from enforcing morality in communal spaces to collecting levies on behalf of the sultans.¹⁸⁰ This could imply that the moral guidelines delineated in the *ḥisba* manuals were not enforced as their authors deemed necessary. Nevertheless, aspects that these sources portray as commonplace or lament as widespread issues may offer insights into the actual work conditions of the water carriers at time.

Further information about Cairene water carriers and their *modus operandi* can be gathered from the accounts of foreign travellers visiting the city throughout the Mamlūk period. A group of Italian travellers visited Egypt on their way to Jerusalem between 1384 and 1385—among them were the Florentine nobleman and politician Lionardo di Niccolò Frescobaldi (d. after 1413) and the merchant and diplomat Giorgio Gucci (d.1392), who wrote detailed accounts of their journey.¹⁸¹ Although they visited Cairo together, they reported contrasting details concerning the water carriers’ number and organization. About a century later, in 1482, a Jewish businessman from

^{179.} As mentioned in the introduction, three *ḥisba* manuals were used as source for this work. The earliest of these manuals, al-Shayzarī’s *Nihāyat al-rutba fī ṭalab al-ḥisba*, was written before the Mamlūk period, but much of its content related to the water carriers is repeated without many variations in the two later manuals, namely the *Ma’ālim al-qurba fī aḥkām al-ḥisba* by Ibn al-Ukhuwwa (648-729/1258-1328) and the *Nihāyat al-rutba fī ṭalab al-ḥisba* by Ibn Bassām (fl. before 844/1440 ca.). Stilt, *Islamic Law in Action*, 56-62. Ibn al-Ḥājj al-‘Abdarī’s *Madkhal* does not instruct the *muḥtasib*, but provides more general moral and behavioural guidelines.

^{180.} Berkey, ““The *muḥtasibs*,” 274-5; Ghabin, *Ḥisba*, 116-8; Stilt, *Islamic Law in Action*, 68-72 and 203-204.

^{181.} Gabriella Bartolini, “Frescobaldi, Lionardo,” in *Dizionario Biografico degli Italiani* 50 (1998), Treccani. https://www.treccani.it/enciclopedia/lionardo-frescobaldi_%28Dizionario-Biografico%29/.

Tuscany, Rabbi Meshullam Ben R. Menahem of Volterra, visited Egypt on the way to Jerusalem and wrote an account of his journey, in which he noted information about the Jewish communities of the cities he visited and economic data. During his sojourn in Fuṣṭāṭ, he noted the abundance of water carriers in its streets.¹⁸² Around the same time, the Flemish explorer Joos van Ghistele (in Cairo between 1481 and 1485), and later the German knight Arnold von Harff (in Cairo between 1496 and 1499) visited the Sultanate's capital, and wrote travelogues describing what had caught their attention in the city, including the presence and *modus operandi* of the water carriers.¹⁸³ These travellers' accounts, while they are rich in detail and do provide a valuable perspective on Cariene water carriers, are marked by picturesque and exoticizing tones and rely heavily on second-hand information and personal interpretation, so they must be approached critically.

In sum, understanding the role and function of water carriers requires consulting, comparing, and critically interpreting varied sources such as normative manuals, travel reports, and scattered chronicle entries. Such endeavour will not yield an accurate chronological overview of this trade and its organization, but it can provide a valuable glimpse shedding light on the water carriers' role and significance in Cairo's water supply network.

2.2.2 From the river to the streets: the water carriers' supply system

All the *ḥisba* manuals, as well as Ibn al-Ḥājj's *Madkhal*, are adamant on two core rules when it came to water carriers—that they had to get their water from a running stream rather than a stagnant source, and that they had to draw water from a point that was far away from river shores where dirt accumulates, places where animals drink (*siqāya*), and places where hammams discharge their waste water (*majrā ḥammām*).¹⁸⁴ Such concern about the purity of fresh water suggests that wastewater was not managed using a separate system at the time, and that the streams used as a source of drinking water were contaminated by discharged wastewater. As early as the fifth/eleventh century, the physician Ibn Riḍwān, in his treatise *Risālā fī daf' maḍārr al-abdān bi-arḍ* ' Miṣr ("On the Prevention of Bodily Ills in Egypt"), argued that the pollution of fresh water was among the factors compromising the health of the

^{182.} Elkan Nathan Adler, *Jewish Travellers* (Routledge, 1930), 156–208.

^{183.} Joos van Ghistele, *Voyage en Egypte*, trans. Bauwens-Preaux (IFAO, 1975), 19; Von Harff, *Pilgrimage*, 111 and 124.

^{184.} 'Abd al-Raḥmān ibn Naṣr al-Shayzarī, *Nihāyat al-rutba fī ṭalab al-ḥisba*, ed. Muḥammad Ḥasan Ismā'īl (Dār al-Kutub al-'Ilmiyya, 2003), 275; Muḥammad ibn Muḥammad ibn Aḥmad al-Qurashī Ibn al-Ukhuwwa, *Ma'ālim al-qurba fī aḥkām al-ḥisba*, ed. Muḥammad Maḥmūd Sha'bān (al-Hay'ah al-Miṣrīyah al-'Āmmah lil-Kitāb, 1976), 348; Ibn Bassām, *Nihāyat al-rutba fī ṭalab al-ḥisba*, ed. Muḥammad Ḥasan Ismā'īl (Dār al-Kutub al-'Ilmiyya, 2003), 300; Ibn al-Ḥājj, *Madkhal*, 4:176–177.

people in Cairo and Fuṣṭāṭ.¹⁸⁵ The eighth/fourteenth-century *ḥisba* manuals and the *Madkhal* clearly indicate that the situation had not changed by then.

The *ḥisba* manuals and *Madkhal* also make it clear that the water carriers' main task was providing Cairo's people with drinking water from the Nile, the water from the wells scattered throughout the city being too saline and brackish for human consumption.¹⁸⁶ Ibn al-Ukhuwwa's manual clearly states that water carriers selling a mix of Nile and well water would be committing fraud (*ghishsh*).¹⁸⁷ The *ḥisba* manuals also mention that water carriers should not draw water from Cairo's canals, though other texts from the time suggest that, at least for a short period following the Nile plenitude, water carriers would collect water from the canals as well.¹⁸⁸ However, doing so was forbidden when the water flowing in the canal was scarce and stagnant, as was the case in 832/1428 and 838/1434 when, due to the low Nile level, the *wālī* of Cairo forbade water carriers from drawing water from either the Great Khalīj or the Khalīj al-Nāṣirī.¹⁸⁹

It seems that not all water carriers worked in the same way or used the same tools, suggesting that they had variations in their roles and organization depending on what urban spaces they served. The *ḥisba* manuals make a distinction between *saqqā' al-mā' bi-al-kizān* ("the water carrier using mugs") and the *aṣḥāb* (or *arbāb*) *al-riwāyā*

^{185.} Ibn Riḍwān, *Medieval Islamic Medicine*, 106–9. Ibn Riḍwān indicates the discharge of wastewater as one of the causes of pollution, especially in Fuṣṭāṭ; "the sewers from their latrines also empty in the Nile", and people "throw in the Nile, from which they drink, the droppings of their animals and their carrion". See also: Van Berkel and Hayes, "Governing Water."

^{186.} Lewicka, *Food and Foodways*, 457–8.

^{187.} Ibn al-Ukhuwwa, *Ma'ālīm*, 348.

^{188.} As it will be discussed in Chapter 4, Mūsā's *waqfiyya* (DW91) stipulates that the cisterns endowed in Cairo and at the cemetery had to be filled with water purchased every year "during the plenitude of the blessed Nile, when it flows in the canals" (*fī ayyām ziyādat al-Nīl al-mubārak wa-jariyānihi fī al-khuljān*). This might suggest that in that period of the year water carriers sold water drawn from the canals. Such practice was witnessed also in the nineteenth century by Lane, who wrote "During the season of the inundation, or rather during the period of about four months after the opening of the canal which runs through the metropolis, the *saqqas* draw their water from this canal: at other times they bring it from the river". Lane, *Manners and Customs*, 319. Muhammad Amin mentions a *waqf* deed that specifies the water purchased for the foundation should come from the Nile and not from the Khalīj. See Amin, *al-Awqāf*, 149–50. The use of canals as a source of drinking water is endorsed also by Azbak's *waqfiyya* (DW198), which indicates that the cistern endowed was filled via conduits with the water of the Azbakiyya pond, which was coming from the Khalīj al-Nāṣirī as mentioned before. It is important to remark that the other ponds do not seem to have been used by water carriers, probably because their stagnant water was mixed with the brackish underground water. See: Ibn Riḍwān, *Medieval Islamic Medicine*, 107–8; Isoldi, "The *birkas* of Cairo," 377.

^{189.} Ibn Ḥajar, *Inbā'*, 4:418 and 546; al-Salawī, "Ṭā'ifat al-saqqā'īn," 250.

wa-al-qirab (“the owners of waterskins”).¹⁹⁰ The former group may have been charged with selling drinking water to people in the streets of Cairo, for Ibn al-Ukhuwwa’s *Ma’ālim al-qurba* contains precise instructions concerning the cleanliness of the mugs they used to serve water. These water carriers had several types of vessels they used to sell water but probably used the same mug to serve water to many different people: the *ḥisba* manuals instruct the *saqqā’ al-mā’ bi-al-kizān* to serve important people with mugs that had not been used by anyone beforehand, and they strictly forbid serving people visibly affected by contagious illnesses such as leprosy.¹⁹¹ Whether these watercarriers respected such hygienic norms cannot be verified on the basis of the *ḥisba* manuals, but the presence and *modus operandi* of the *saqqā’ ūn al-mā’ bi-al-kizān* in Cairo are described also the travelogue of Rabbi Meshullam of Volterra. In his account of Cairo, the Jewish traveller reported:

“At every moment one can see more than 4,000 men carrying a cistern of water like a vessel which has a linen pipe, and they sell the water to anybody for 1 *filipo* to drink in good vessels, as much as he pleases; and if he wishes to drink from other men after he has given the *filipo* to one water-seller and gone elsewhere, he gives some *solidi* to the man for himself and takes the water from him, and they can tell whether he has originally paid his *filipo*. Every hour and every moment you can find water to drink. They have also scented water, which you can drink if you like, and they drink Nile water, that comes from that river”.¹⁹²

These observations should not be taken at face value— the number of *saqqā’ ūn al-mā’ bi-l-kizān* Rabbi Meshullam describes seems to be an approximation possibly intended to reflect how often they were seen in Cairo’s streets rather than an accurate tally of their numbers. In addition, the currency he mentions remains ambiguous.¹⁹³ However, despite these uncertainties, his account aligns with the *ḥisba* manuals’ descriptions of street water sellers and implies a potential organizational structure.

^{190.} al-Shayzarī, *Nihāya*, 275; Ibn al-Ukhuwwa, *Ma’ālim*, 348; Ibn Bassām, *Nihāya*, 301. See also Maya Shatzmiller, *Labour in the Medieval Islamic World* (Brill, 1994), 147 and 285. The existence of these two separate groups of water carriers is also attested to the Fatimid period. Nāṣir-i Khusraw reports that “Old and new Cairo are said to have fifty thousand camels belonging to water carriers. The water carriers who port water on their backs are separate: they have brass cups and jugs and go into the narrow lanes where a camel can not pass”. Nāṣir-i Khusraw, *Book of Travels*, 46. Valentine Denizeau also remarked this differentiation. Denizeau, “Conduire l’eau,” 430.

^{191.} Ibn al-Ukhuwwa, *Ma’ālim*, 348; Ibn Bassām, *Nihāya*, 301. These manuals indicate that the *kizān* had to be polished daily and fumigated with incense.

^{192.} Adler, *Jewish Travellers*, 168.

^{193.} The *solidus* was a golden coin, approximately equivalent to a *dinār*. Eliyahu Ashtor, *Histoire des Prix et des Salaires dans l’Orient Médiéval* (SEVPEN, 1969), 260 and 498. The price seems excessive for the water carriers. I was unable to find evidence of this price on the *filipo*.

Ibn al-Ukhuwwa's *Ma'ālim* suggests that there were also shops retailing drinking water in jars (*azyār*), and the manual instructs water sellers how to maintain shop hygiene and prevent the jars from becoming contaminated.¹⁹⁴ However, there are no other sources that substantiate the existence of such shops in Cairo, suggesting that they were limited in number. Drinking water might have been primarily delivered to houses rather than sold in the street, and the *aṣḥāb al-riwāyā wa-al-qirab* were in charge of this service. These water carriers used waterskins of varying sizes to transport water from the Nile into to the city. The *qirba* (pl. *qirab*) was a relatively small waterskin that could be transported on the water-carriers' back,¹⁹⁵ and it also seems to have been one of the reference measures used to set the water carriers' prices, for Ibn al-Ḥājj's *Madkhal* reprehends water carriers that sold partially filled *qirab*. The same treatise indicates that water carriers often filled the *qirba* from the *rāwiya* (pl. *riwāyā*), a larger waterskins carried by camels.¹⁹⁶ Walter Behrnauer's interpretation of Ibn al-Furāt's chronicle suggests that each *rāwiya* held 24 buckets of water, each weighing 40 pounds (about 18 litres), meaning that a *rāwiya* contained about 400 litres of water—or perhaps something less, but still a considerable amount of water that could fit in an ox skin and be carried by a camel.¹⁹⁷ Water could be sold per *rāwiya*, too: the *waqfiyya* of Mūsā al-Burhānī, as discussed in greater detail in Chapter 4, stipulates the yearly purchase of 400 *rāwiyas* to fill the cisterns endowed in

^{194.} Ibn al-Ukhuwwa, *Ma'ālim*, 348. The manual instructs the *muḥtasib* to control the shops of the water sellers, making sure that the water jars are well closed and that the water sellers handle water with clean hands.

^{195.} In an episode reported by Ibn Taghrī Birdī, an exasperated *saqqā'* was hit by a *mamlūk* and the *qirba* he was carrying was thrown to the ground. Ibn Taghrī Birdī, *Nujūm*, 14:353. This demonstrates that the *qirba* was a relatively small waterskin. As indicated below, young boys also carried *qirbas* to take water inside their customer's houses.

^{196.} Ibn al-Ḥājj, *Madkhal*, 4:177. The thirteenth-century dictionary *Lisān al-'Arab* states that the word *rāwiya* was originally used to indicate a camel carrying water, but people (*al-'amma*) used it to indicate the waterskin itself. *Lisān al-'Arab*, 1784. The different dimensions of waterskins are also mentioned by Lane, who wrote that the *rāwiya* was made of "a pair of wide bags of ox hide", and that one *rāwiya* had the capacity of three or four *qirbas*. Lane, *Manners and Customs*, 319–21.

^{197.} Walter Behrnauer, *Mémoire sur les institutions de police chez les Arabes, les Persans et les Turcs*, (Imprimerie Impériale, 1861), 72–73. Behrnauer's interpretation is based on a passage by the historian Ibn al-Furāt on the *ḥisba* during the Ayyūbid period, which establishes the standard (*'iyār*) weight of a *rāwiya* as 24 buckets of one *raṭl* each. Behrnauer seems to suggest that in this case each *raṭl* corresponded to 40 pounds (approximatively 18 liters), meaning that each *rāwiya* contained about 400 liters (100 gallons) of water. This equation seems more plausible than the one suggested by Denizeau, who equated the *raṭl* to one pound of water—meaning that each *rāwiya* only contained about 10 litres of water (too little for a container made of ox skin and carried on camel back). Denizeau, "Conduire l'eau," 434.

Cairo and at the cemetery.¹⁹⁸ The chronicles also usually mention the fees of the water carriers per *rāwiya*.

In all likelihood, the *saqqā'ūn al-mā' bi-al-kizān* and the *aṣḥāb al-riwāyā wa-al-qirab* had also a different economic status. While water carriers are often depicted as impoverished, those selling water with *rāwiyas* required camels for transport. Denizeau posited that the Treasury provided the water carriers with camels, since the cost to acquire and maintain these animals would have been prohibitive for people with limited means.¹⁹⁹ However, there is no concrete evidence to substantiate this hypothesis. Instead, it is more plausible that the water carriers with camels were among the small merchants “of average means” the *Ighātha* identifies as one societal stratum in Mamlūk Cairo, while those without camels and selling water in the streets possessed more limited financial resources.²⁰⁰

The use of waterskins implied specific hygienic concerns, especially because the substances used to tan them could contaminate the water within. The *ḥisba* manuals urge the *muḥtasib* to make sure water carriers did not sell water from newly tanned waterskins that were more apt to pollute their contents. To ensure that water had not been contaminated by the tanning substances, the *muḥtasib* was instructed to run quality tests to detect any alteration in the smell and taste of water transported in the waterskins.²⁰¹ Ibn al-Ḥājj also expresses his concerns about tanning substances contaminating water, and explains that water carriers who did not inform their costumers they were using a new waterskin were guilty of fraud (*ghishsh*).²⁰²

Using waterskins to transport water also caused logistical problems in urban spaces, especially when camels were used to carry bulky *rāwiyas* through Cairo's busy streets. Like other sellers transporting heavy merchandise through the streets, water carriers were requested to keep their *rāwiya*-loaded camels moving at a moderate speed, and they had to hang bells and chains on their animals so that blind people, children, and distracted passersby would notice their presence and make way.²⁰³ Ibn al-Ḥājj writes

^{198.} DW91. On the use of the *rāwiya* as a standard measure for the sale of water see also: Denizeau, “Conduire l'eau,” 434.

^{199.} Denizeau, “Conduire l'eau,” 436.

^{200.} al-Maqrīzī, *Mamluk Economics*, 73.

^{201.} The *Ma'ālim* also instructs the *muḥtasib* to make sure that the waterskins were not made with mule skin or skin that was dirty or eaten by worms. The *ḥisba* manuals state that water carriers using a new waterskin should discharge the contents by the clay factories until the water's taste and smell was unchanged by the waterskin, and therefore no longer contaminated by the tanning substances. Al-Shayzarī, *Nihāya*, 275; Ibn al-Ukhuwwa, *Ma'ālim*, 349; Ibn Bassām, *Nihāya*, 300-1.

^{202.} Ibn al-Ḥājj, *Madkhal*, 4:177.

^{203.} al-Shayzarī, *Nihāya*, 275; Ibn al-Ukhuwwa, *Ma'ālim*, 349-50; Ibn al-Ḥājj, *Madkhal*, 4:178.

that the passage of water carriers could also affect the cleanliness of the streets, especially if the waterskins were not closed tightly or had a hole in them, as the water spilling from the waterskins mixed with dirt on the streets and could create mud that smudged the clothes of passersby.²⁰⁴ The instructions found in these manuals, while not proving that these hygienic and logistical precautions were followed, demonstrate that the transit of water carriers and their camels constituted a notable traffic hazard in the city's thoroughfares.

The bulky presence of these workers and their camels through the streets of Cairo must have been a striking sight, for it left a memorable impression on foreign travellers visiting the city. Lionardo di Niccolò Frescobaldi, for instance, wrote:

“There is a very great number of saddled camels, very beautiful and fat, which do nothing else but carry water from the Nile to be sold at a price through the city. They said that there were a hundred and thirty thousand camels (...).”²⁰⁵

His fellow traveller Giorgio Gucci also wrote about the water carriers of Cairo in his memories, although he reported different data:

“And it is believed that there are over 40 thousand camels for the supply of water to the city, for these Saracens are great consumers, and all the water they have comes from said Caligine.”²⁰⁶

The discrepancies between Gucci's and Frescobaldi's accounts, despite their shared journey, suggest they recorded personal interpretations of what they heard. Notably, Gucci's claim that “all the water they [the Saracens] have” comes from the Khalij (the “Caligine”) contradicts Arabic sources, all of which name the Nile as Cairo's main source of potable water. Secondly, their figures concerning the number of water carriers working in Cairo are clearly estimated given the discrepancy between the two numbers (Frescobaldi 130,000, and Gucci 40,000). Indeed, every foreign traveller that visited Cairo during the Mamlūk period reports a different approximate number of water carriers. The Flemish traveller Joos van Ghistele reported there were 10,000 camels transporting water to Cairo, whereas Arnold von Harff, who visited approximately a decade later, recorded 20,000 camels and 10,000 men carrying

^{204.} Ibn al-Ḥājj, *Madkhal*, 4:179. For this scholar, that was also a matter of great concern because unpure water, if used for ablutions, could compromise the ritual purity (and therefore the validity of the prayers).

^{205.} Lionardo Frescobaldi, Giorgio Gucci, and Simone Sigoli, *Visit to the Holy Places of Egypt, Sinai, Palestine and Syria in 1384*, trans. Theophilus Bellorini and Eugene Hoade (Franciscan Press, 1948), 47.

^{206.} Frescobaldi, Gucci, and Sigoli, *Visit to the Holy Places*, 100.

waterskins.²⁰⁷ Determining which of these estimates is most accurate is impossible, but they do reveal that foreign travellers were struck by the great number of water carriers traversing the city, clearly indicating that water carriers were ubiquitous in Cairo's urban spaces.

2.2.3 A home-delivery service

It appears that the *aṣḥāb al-riwāyā wa-al-qirab* delivered water directly to houses rather than selling it in the streets. Ibn al-Ḥājj's *Madkhal* offers the most comprehensive depiction of this home-delivery system. Since *ḥisba* manuals concerned themselves primarily with rules to be enforced by the *muḥtasib* in communal rather than domestic urban spaces, they do not provide much detail regarding this aspect of the water carriers' work. Ibn al-Ḥājj's work instead thoroughly discusses the home-delivery service of water carriers and other sellers, due to the possible moral problems of having traders visiting private houses and handling payments with their customers. Due to the very specific situations it describes and moral concerns it expresses, Ibn al-Ḥājj's *Madkhal* offer insight into this daily practice at the core of the water carriers' profession. Based on the *Madkhal*, it is possible to deduce that water carriers generally served regular customers. The treatise indicates that water carriers received an advanced monthly payment (*mushāhara*) from their regular customers and sold water to non-regular customers at variable prices, sometimes taking advantage of the hottest hours to sell water at higher profit margins.²⁰⁸ As mentioned above, the *Madkhal* suggests that prices were established using fixed rates per *rāwiya* or *qirba*: the treatise insists multiple times that selling partially empty waterskins was fraud because buyers received less water than they paid for.²⁰⁹

While the *Madkhal* provides insight into the moral conduct and business acumen expected of water carriers, it does not reveal the prices water carriers charged their clients. This lack of water pricing information is not surprising, however, for even *waqf* deeds that funded drinking water purchase and distribution at religious institutions stipulated that the water required to fill the cisterns had to be purchased every year "at any price" (*bālighan mā balagha*).²¹⁰ This suggests that the water carriers fees were

^{207.} Van Ghistele, *Voyage en Egypte*, 19; Von Harff, *Pilgrimage*, 111 and 124. Housni Alkhateeb Shehada quotes an eighth/fourteenth century traveller, al-Balawī al-Maghribī, who estimates the number of water-carrying camels in Cairo at 200,000. See Housni Alkhateeb Shehada, *Mamluk and Animals. Veterinary Medicine in Medieval Islam* (Brill, 2013), 22.

^{208.} Ibn al-Ḥājj, *Madkhal*, 4:180-1. The text suggests that the advanced payment was based on the number of *rāwiyas* requested by the costumer.

^{209.} Ibn al-Ḥājj, *Madkhal*, 4:177, 178, 180, 181.

^{210.} For instance, DW355, DW91, and DW121 (the latter is mentioned in Chapter 4, but is not one of the case studies selected for this thesis). See also Amin, *al-Awqāf*, 149-50.

subject to regular fluctuations and contingent upon things like the distance water carriers covered between the Nile and the delivery place, or increases in camel forage prices, both of which were dependent on the Nile's plenitude.²¹¹ Providing a flexible allocation for drinking water in *waqf* deeds, then, constituted a strategic measure to ensure *awqāf* could accommodate oscillating prices. More precise information regarding the water carriers' fees can occasionally be found in the chronicles, but specific values are usually only mentioned in connection with some natural or human-made disaster that caused prices to drastically increase. Al-Maqrīzī, for instance, states that, following the construction of al-Nāṣir's embankments, the Nile shifted further from Cairo and the price of a *rāwiya* raised from 0,75 to 2 *dirhams* during the reign of al-Kāmil Sha'bān (r. 746-747/1345-1346). As discussed in Chapter 1, this price increase prompted the initial attempts to build a dike in the middle of the river that would redirect the flow toward the eastern banks.²¹² In 749/1348, when the plague ravaged Egypt, decimating both livestock and labour, the price of a *rāwiya* soared to 8 *dirhams*,²¹³ and some decades later, in 802/1399, the price of a *rāwiya* raised from 1,5 to 4 *dirhams* due to an unprecedentedly low Nile level.²¹⁴ The high prices of 802/1399 were so severe that they forced several households from among the *nās* (thus the wealthy social group) to forego the services of water carriers and fetch water themselves. Ibn Ḥajar comments that the *nās* had never experienced anything like that before (*lam yakun la-hum bi-dhalika 'ahd*);²¹⁵ however, they found themselves obliged to fetch water for themselves again in 892/1487 and 893/1488 due to the water carrier's soaring fees.²¹⁶ These instances reveal that the water carriers had no competitors beyond the autonomous efforts of people fetching water for themselves, but they also show that

^{211.} Denizeau, "Conduire l'eau," 434. The increase in the prices of forage in 855/1451 caused the price of a *rāwiya* to reach 20 copper *dirhams*. Ibn Taghrī Birdī, *Ḥawādith*, 318; al-Salawī, "Ṭā'ifat al-saqqā'in," 251.

^{212.} al-Maqrīzī, *Khiṭaṭ*, 3:295-6. It is important to state that the prices were not for the water itself but for the water-transport service offered by the water carriers. Theoretically, the sale of water coming from natural sources is not allowed according to Islamic law. Wilkinson, "Muslim Land," 60.

^{213.} al-Maqrīzī, *Sulūk*, 4:90

^{214.} al-Maqrīzī, *Sulūk*, 6:29-30.

^{215.} al-Maqrīzī, *Sulūk*, 6:30; Ibn Ḥajar, *Inbā'*, 2:105.

^{216.} al-Malaṭī, *Nayl*, 8:63 and 95; al-Salawī, "Ṭā'ifat al-saqqā'in," 251-2. In the second case, the increase in the price of the waterskins was due not to natural reasons but to the fact that the *julbān* had taken the water carriers' camels.

the water carriers' main domestic clientele were the wealthy (*al-nās*), while the rest of the urban population likely relied on their own means to obtain potable water.²¹⁷

Beyond issues related to payment, delivering water to costumers' houses had social and moral implications as well. Ibn al-Ḥājj emphasizes that access to other people's house was a matter of trust (*dukhūl al-bayt amāna*).²¹⁸ He criticizes those *saqqā'ūn* who took the liberty of entering their customers' houses without permission (*bi-ghayr isti'dhān*), and encouraged clients not to continue using the services of a *saqqā'* who behaved disrespectfully or used obscene language.²¹⁹ Ibn al-Ḥājj shows special concern regarding women's privacy and honour, condemning water carriers who delivered water to a house when women were alone there, or who snooped around once escorted to the domestic water deposit (*mawḍi' sakb al-mā'*) by a male of the household.²²⁰ To avoid inappropriate situations, Ibn al-Ḥājj suggests the water carriers should employ a pre-pubescent boy (*ṣabī*) to deliver water inside their customers' houses.²²¹ The world of popular fiction provides a much less restrained portrayal of water carriers, for a famous tale from the *Arabian Nights* depicts a water carrier, who had served the house of a goldsmith for thirty years, inappropriately touching and addressing the goldsmith's wife while her husband is away.²²² The *Arabian Nights'* tales obviously do not have documentary value, but, as is the case with all literature, they employ common cultural tropes, so they do "contain small everyday details or references to customs" that would have been familiar to Mamlūk-era audiences.²²³

2.2.4 Internal organization and external negotiations

^{217.} The figures indicated in the chronicles clearly represented an unaffordable price for the less privileged workers of the period. Based on a survey of *waqf* documents, Adam Sabra has estimated that the average salary of a *waqf* employee between 1347 and 1400 was around 56 *dirhams* per month. A household with such income could not possibly afford the wages of the water carriers together with food expenses (Sabra calculated that the amount of 56 *dirhams* was sufficient for the monthly bread provision of five individuals). Sabra, *Poverty and Charity*, 122.

^{218.} Ibn al-Ḥājj, *Madkhal*, 4:179.

^{219.} Ibn al-Ḥājj, *Madkhal*, 4:180-1.

^{220.} Ibn al-Ḥājj, *Madkhal*, 4:179.

^{221.} Ibn al-Ḥājj, *Madkhal*, 4:180. Amalia Levanoni, "Food and Cooking during the Mamluk Era: Social and Political Implications," *MSR* 9, no. 2 (2005): 207.

^{222.} Following this unusual gesture, the woman interrogates the husband, who admits to having held the wrist of a beautiful lady who had visited his shop for a bracelet. The next day, the water carrier apologizes to the goldsmith's wife, saying that he had been tempted to do what he had seen the goldsmith doing in the market. Hearing this, the goldsmith expresses relief for not having done more: "Tit for tat! If I had done more, the water-carrier had done more". *The Book of the Thousand Nights and One Night*, trans. John Payne (London, 1914), 4:229-30.

^{223.} Irmeli Perho, "The Arabian Nights as a Source for Daily Life in the Mamluk Period," *Studia Orientalia* 85, (1999): 139.

While neither the *Madkhal* nor *Arabian Nights* have the aim of documenting the water carriers' services, they both suggest that a certain familiarity existed between water carriers and their regular customers. Perhaps, we can deduce certain aspects of how the water carriers were organized based on this relationship. At the very least, it is clear that water carriers made agreements with customers to receive advanced payments for their service, indicating that water carriers returned many times to the same places and likely followed an established route. It is plausible, then, that water carriers organized their water distribution by area and each one took care of specific routes. Traces of their itinerary remained in the toponymy of the area south of the Fatimid city: between Bāb al-Lūq and Bāb al-Kharq, south-west of the Fatimid walls, al-Maqrīzī situates the *mawrida al-saqqā'īn* ("the water carriers' path"), and he also mentions an area called *majrā al-saqqā'īn* ("the water carriers' track") near the Āq Sunqur Mosque, south-east of Bāb Zuwayla.²²⁴

Precisely how the water carriers were organized as a trade is uncertain, but the fact that they likely divided sales territories and hired young boys as assistants to enter clients' homes suggest that they had some internal mechanism to distribute labour. Water carriers must have established water delivery routes and divided sales territories based on internal organizational agreements, but how any such agreements were mediated within the trade is not definitively known. Al-Maqrīzī mentions a congregational mosque in Bāb al-Lūq called *jāmi' muqaddam al-saqqā'īn* ("chief of the water carriers' mosque"),²²⁵ suggesting that the water carriers had a chief figure with enough socio-economic power to establish a mosque. However, I could find no further historical references to any such figure. In addition, the *Madkhal*'s suggestion that camel-driving water carriers (*sāhib al-jamal*) employ a young boy for delivering water to clients' residences may imply the existence of a recruitment system within this profession, though not necessarily a distinct hierarchy or of a family-based system like many crafts throughout the pre-industrial era.²²⁶

When it came to maintaining their relationship with the *dawla*, the water carriers had a representative who negotiated on their behalf and monitored the trade's actions. Ibn al-Ukhuwwa's and Ibn Bassām's *ḥisba* manuals instruct the *muḥtasib* to choose a trusted man as *'arīf* to control the trade's activities.²²⁷ The *'arīf* was a trade

²²⁴. al-Maqrīzī, *Khīṭaṭ*, 3:212. Being situated south of al-Qāhira, upstream of the Great Khalij, these locations allowed water carriers to draw water from the canals (when possible) before they were polluted by city discharges.

²²⁵. al-Maqrīzī, *Khīṭaṭ*, 4:146; Doris Behrens-Abouseif, "Craftsmen, upstarts and Sufis in the late Mamluk Period," *Bulletin of the School of Oriental and African Studies* 74, (2011): 385.

²²⁶. Shatzmiller, *Labour*, 65-6.

²²⁷. Ibn al-Ukhuwwa, *Ma'ālim*, 349; Ibn Bassām, *Nihāya*, 300.

informant from within his own trade, and was appointed by authorities (typically the *muḥtasib*) for water carriers as well as other trades. This figure acted as negotiator interacting with the *dawla* through the *muḥtasib*: as Ira Lapidus and Ahmad Ghabin have emphasized, however, the *ʿarīf* was not the “spokesman of independent interests and represented no internal solidarity” within his trade.²²⁸ Thus, the presence of this negotiator is generally not indicative of a guild-like internal trade organisation—neither in the case of the water carriers. The organisation of water carriers in “corporations” (Ar: *ṭāʾifa*, *ṭawāʾif*), corresponding to the partition of urban areas served, is attested for later periods but not in Mamlūk-era sources.²²⁹

Alongside trade regulation via the *ʿarīf*, water carriers were likely subject to taxation by the *muḥtasib* like other traders in Cairo. On this aspect, however, the *ḥisba* manuals do not provide any evidence, nor does any Cairo-based author of the time. The travellers Gucci and van Ghistele both reported that the water carriers regularly paid tributes to the sultan, and Gucci, in particular, claimed that “every camel that carries said water is registered, and pays a certain duty to the sultan for the water that is drawn from the river”.²³⁰ The veracity of this claim is uncertain as the Florentine traveller added no further data on the levy system, but van Ghistele seems to corroborate Gucci’s claim when he writes that for every water-carrying camel, the *saqqāʾūn* had to give a *dīnār* per day to the sultan.²³¹ The accuracy of van Ghistele’s statement is dubious, though, since the tax rate he mentions would mean that, near the end of the ninth/fifteenth century when van Ghistele visited Cairo, the average daily income of a camel-owning water carrier exceeded a *dīnār*, a figure that appears disproportionate when compared with the water carriers’ fees mentioned above.²³²

The water carriers’ interactions with the *dawla* were not limited to fiscal matters. On various occasions the *saqqāʾūn* were compelled to cooperate with the *amīrs* in dealing with fire emergencies in Cairo. For instance, when in the month of Jumādā I 721 (June 1321) a fire started in the Khuṭṭ al-Shawwāʾīn and burned many buildings in

²²⁸. Lapidus, *Muslim Cities*, 98-99; Ghabin, *Ḥisba*, 179.

²²⁹. Raymond, “Les porteurs d’eau,” 192; Lapidus, *Muslim Cities*, 98; Ghabin, *Ḥisba*, 179. Ghabin remarks that until the second half of the ninth/fifteenth century no information on organized guilds in Egypt exists.

²³⁰. Frescobaldi, Gucci, Sigoli, *Visit to the Holy Places*, 100.

²³¹. Van Ghistele, *Voyage*, 19; al-Salawi, “Ṭāʾifat al-saqqāʾīn,” 233.

²³². Although relevant data for van Ghistele’s visit is unavailable, it is noteworthy that shortly before, in 855/1451, the price of a *rāwīya* had reached 20 copper *dirhams*, a sum deemed excessive by Ibn Taghrī Birdī. Ibn Taghrī Birdī, *Ḥawādith al-Duhūr fī Maḍā al-Ayyām wa-al-Shuhūr*, ed. Muḥammad Kamāl al-Dīn ʿIzz al-Dīn (Beirut: ʿĀlam al-Kutub, 1990), 1:317-8. Given that by then a *dīnār* was equivalent to 285 copper *dirhams*, a water carrier would have been required to sell more than ten *rāwīyas* per day to attain a *dīnār*, even at this elevated price. Ashtor, *Histoire Des Prix*, 278.

Cairo, the *amīrs* employed the water carriers to quench the flames with water taken from the madrasas and hammams of the city.²³³ Likewise, in Ṣafar 751 (April 1350) the water carriers gathered with the *amīrs* to extinguish a fire that had started from the Khuṭṭ al-Bunduqāniyyīn and was destroying part of the city.²³⁴ On other occasions the interactions between the *dawla* and water carriers was more political in nature. In 755/1352, during a conflict between the Muslim notables and the Christian and Jewish communities, the *saqqā'ūn* were forbidden to deliver water to the Christians and Jews who had barricaded themselves in their homes to escape street violence.²³⁵ It could also happen that the *dawla* officials' decisions were detrimental to the *saqqā'ūn*'s business. In 893/1486, for instance, the *julbān* (the *mamlūks* of the ruling sultan) seized the water carriers' camels, as did the *amīr dawādār* Aqbirdī in 895/1490. In both cases the camels were taken to fulfil the *dawla*'s need for pack animals and not as a punitive measure against the *saqqā'ūn*, but they were nevertheless badly affected by the confiscation and had to increase their fees.²³⁶ In documenting these events, the chronicles do not reference the water carriers' camels as a resource provided by the Treasury, as Denizeau suggested, and, instead, indicate that the water carriers' camels were a resource occasionally utilized by members of the *dawla* for purposes beyond water transportation. Consequently, I disagree with Denizeau's hypothesis that the Treasury provided the water carriers with camels.²³⁷

Despite unresolved questions, particularly concerning the trade's internal organization and the traders' economic status, it is evident that water carriers played a crucial role in Cairo's water provision throughout the Mamlūk period. The water carriers primarily transported drinking water from the Nile (or occasionally from the canals) to the city, selling it in streets or delivering it to wealthy regular customers and *awqāf*-funded religious institutions. Thus, water carriers transformed a difficult-to-access natural resource into an urban commodity, and this long-standing water infrastructure, the existence of which is attested from the fifth/eleventh to the thirteenth/nineteenth century, appears to have faced no competition in Cairo until the introduction of modern hydraulic systems. When water carrier fees exceeded customers' financial means, residents resorted to self-provision, suggesting that the water carriers were the sole system connecting the city to its fresh water sources for at least eight centuries.

²³³ al-Maqrīzī, *Khiṭaṭ*, 4:443. The Sūq al-Shwwā'in was between the Ḥārat Daylam and the Ḥārat al-Rūm, located north-east of Bāb Zuwayla. See: al-Maqrīzī, *Khiṭaṭ*, 2:208.

²³⁴ al-Maqrīzī, *Khiṭaṭ*, 3:59.

²³⁵ al-Maqrīzī, *Sulūk*, 4:203; al-Salawī, "Ṭā'ifat al-saqqā'in," 248.

²³⁶ In 893/1486 the price of a *rāwiya* reached approximately 30 copper *dirhams*, forcing the *nās* to fetch water themselves. Al-Malaṭī, *Nayl*, 8:95 and 199; al-Salawī, "Ṭā'ifat al-saqqā'in," 251-2.

²³⁷ Denizeau, "Conduire l'eau," 436.

Though structurally independent, the water carriers operated within a broader social and institutional context. They engaged with diverse societal elements, including the *dawla*, the general population, and the religious institutions to which they delivered water. Their prominent presence in Cairo's streets, noted by foreign visitors, was regulated by the *muḥtasib*, who represented both religious law and, particularly from the ninth/fifteenth century onward, the *dawla*'s financial interests.²³⁸ Water carriers maintained constant interaction with regular and occasional customers, delivering fresh water to their homes, and, as further detailed in Chapter 4, they served charitable water-supply systems funded by the *ahl al-dawla*'s *awqāf*. In times of environmental or economic crises, water carriers were subject to directives from other *dawla* representatives, notably *amīrs* tasking them with managing emergencies such as fires. This interaction indicates that the *dawla* utilized water carriers as a resource rather than as a "militia" strictly controlled by the "State", as Denizeau has concluded.²³⁹

Operating between Cairo's natural landmarks, streets, neighbourhoods, religious institutions and domestic spaces, water carriers connected the city's diverse socio-spatial dimensions and water systems—including natural resources, sultan-built dykes and canals, *awqāf*-funded water facilities, and domestic systems—into a cohesive urban drinking water supply. Thus, they acted as vital intermediaries between these disparate water systems.²⁴⁰

2.3 Conclusions

This chapter investigated the identities and roles of two key stakeholders in the water supply of Mamlūk-era Cairo. First, it analysed the identity of the *wāqifūn* that financed and managed domestic and communal water structures, thereby enhancing

²³⁸. Stilt, *Islamic Law in Action*, 68-72 and 203-204.

²³⁹. Denizeau, "Conduire l'eau," 436.

²⁴⁰. During my fieldworks in Cairo, I came to realize that certain analogies can be found between the organization of the water carriers in the pre-modern period and the organization of the waste-collectors (*zabbālin*) that are still active in Cairo today. In particular, modern waste-collectors work as a system of self-employed workers, and each group (usually a family) takes care of a specific urban area. Interestingly, like the water carriers, this system of self-employed waste-collectors also seems to have no competition from state-financed companies or the like. Even newly emerging start-ups interested in recyclable materials struggle in sharing the management of waste with the much stronger and long-lived system of the waste-collectors. David Wood, "No rules in this job: Cairo's violent waste wars pit sorters against startups," *The Guardian*, April 12, 2019, <https://www.theguardian.com/world/2019/apr/12/no-rules-in-this-job-cairo-waste-wars-pit-sorters-against-startups-abaleen-garbage-people>.

water access throughout the urban space. Second, it explored the role and politico-economic significance of the water carriers that transported drinking water from the Nile to the city, selling it in the streets, or delivering it to private residences and endowed religious buildings.

A central inquiry of this chapter concerns the identification of individuals who endowed water facilities through *waqf* foundations, and the motivations underpinning their patronage. Analysis of the *waqf* deeds selected for this study and supplementary source materials both demonstrate that while *waqf* endowers during the Mamlūk period came from diverse social backgrounds, they were all affiliated with their contemporary political configuration, the *dawla*, either through formal or informal connections. As al-Maqrīzī noted, the *ahl al-dawla* was a network defined not by its members' social background but by the social and economic capital they could access—specifically, the principal financial streams of the Sultanate, most notably the resources of the *bayt al-māl*, and the capacity to manipulate such revenue streams, for example by imposing levies or appropriating urban assets. The case studies also show, however, that the socio-economic privileges of these individuals were not permanent but contingent upon their direct affiliation with the rapidly-changing *dawla*. The foundations established by these individuals, which incorporated several water facilities, enabled them to manage their capital and better navigate their unstable fortunes amidst the shifting power dynamics.

The *waqf* deeds, coupled with information derived from narrative sources, help reveal when and how specific endowers established their *awqāf* and what function these foundations served for their agenda. Primarily, it appears that members of the *ahl al-dawla* established *awqāf* so that they could derive revenue from the properties they amassed while they had access to the Sultanate's resources, for many of the properties they acquired from the *bayt al-māl* or seized from other foundations via *istibdāl* were later endowed in their *awqāf*, which functioned as asset management vehicles. In particular, self-benefitting *waqfs*, legitimized when al-Zāhir Baybars introduced the quadruple legal system, enabled *wāqifūn* to designate themselves as the beneficiaries, not just the administrators, of their own *waqf*, providing them with complete control over the endowed assets and foundation revenues. The quadruple legal system, however, also made it possible for other members of the *ahl al-dawla* to extract assets from *awqāf* through *istibdāl*, as it allowed them to exert pressure on more members of the judiciary in order to obtain lucrative *waqf* assets in exchange. This dynamic will be explored in detail in the following chapter.

The transformation of *bayt al-māl* assets into *waqf* properties, or *waqfization*, extended beyond the individual interests of the founders. Several of the *waqf* deeds reveal that their endowers designated specific officeholders of the *dawla* to administrate their *awqāf* after their death. While the motivations behind these choices warrant further investigation, it appears this practice provided these *dawla* officeholders with significant political and economic power, and, crucially, an alternative revenue stream to the *iqṭāʿ* allotments granted by the *bayt al-māl*. Remarkably, this common practice implies that the *ahl al-dawla* not only established urban water facilities through their *awqāf*, but also controlled them in the capacity of ex officio administrators of the foundations.

These case studies, therefore, indicate that *awqāf* were complex entities that served as vehicles for the interests of the *ahl al-dawla*, and that these foundations were subject to the internal dynamics and broader transformations of this power network. The water structures endowed within these foundations, whether as revenue-generating assets or charitable installations were likewise influenced by the *ahl al-dawla*'s power dynamics. The following chapters examine the financing, organization, appropriation, and restoration of both lucrative and charitable water facilities by the *ahl al-dawla*, in addition to exploring how endowed water facilities contributed to the socio-economic fabric of the city.

The long-lived trade of the water carriers, in addition to the ever-shifting *ahl al-dawla* that funded and controlled a dynamic constellation of urban water facilities, was a key stakeholder in Mamlūk Cairo's water network. Water carriers in Mamlūk-era Cairo primarily transported drinking water from the Nile (or from the canals following the inundation) to the city, distributing it to passersby or delivering it to the residences of regular clients or religious buildings. Water carriers exclusively provided drinking water, since non-potable water was available from urban wells and its provision did not necessitate an extensive transport system such as that of the water carriers. Even though they did not account for the entire urban water supply, water carriers nevertheless formed the city's primary, widespread, and enduring water infrastructure, connecting it to its main source of drinking water. During periods of environmental or political instability, when water carrier fees drastically increased, those who typically relied on the services of these traders were forced to fetch water on their own: no alternative system to that provided by the water carriers existed. In ordinary circumstances, the delivery clientele of water carriers likely consisted of well-to-do households and *waqf*-sponsored facilities. The fees of these traders, though relatively modest, were possibly unaffordable for the lowest social strata, who might have resorted to their own means for water.

Information concerning the water carrying trade, gleaned from *ḥisba* manuals and accounts of foreign travellers visiting Cairo, indicates that water carriers formed a ubiquitous presence in the city's streets, traversing them with laden camels or carrying waterskins on their backs. *Ḥisba* manuals and *al-Madkhal* reveal that the water carriers' activities were subject to both hygienic and moral scrutiny. The hygienic concerns centred on the purity of the carrier's water and equipment, as well as the potential hazards posed by camel traffic in Cairo's streets, while the moral concerns arose from potential fraud and social interactions with domestic clients, particularly women and girls. While limited information exists regarding the internal organization of the trade, references to regular clientele and monthly payments suggest that water carriers regularly served specific districts within the city, meaning that a concerted distribution of delivery areas must have existed.

Technically, the *muḥtasib* was responsible for ensuring that water carriers complied with moral and hygienic regulations, possibly with the assistance of an *'arif*, who was a trusted informant selected from within the trade. As the *muḥtasib* office became increasingly associated with the *dawla*'s fiscal operations, the enforcement of hygienic and moral rules outlined in *ḥisba* manuals may have been neglected: nevertheless, the water carriers' obligation to report to an authority representing the *dawla* demonstrates that they did not operate within an institutional vacuum, but within a framework subject to the power of the *dawla*. This was especially apparent in certain crisis situations, such as fires, when *amīrs*, would order water carriers to help quench the flames. Clearly, then, the water carriers interacted with diverse segments of society: they were subject to regulation by the *muḥtasib*, served the well-to-do households of the city and the religious institutions financed by *awqāf*, and were subject to the financial and political demands of the *dawla*.

The water facilities financed and administered by the *ahl al-dawla* through *waqf* foundations and the water distribution system embodied by the water carriers constituted different yet interconnected components in a complex and multifaceted urban water network that involved diverse actors and shifting political entities. The subsequent two chapters will delve further into the intricate socio-economic dynamics that shaped Mamlūk Cairo's waters and, consequently, its society.



بازار جامع

مصر عتیق

بورگوند مصر صریدر

شوبر

بورجس کیه قیاسه

طوبخانه

ابوالیس

شیرین

شیرینیش

عید اندن

شاه صریدر

قبه بوشکدر

بلد

شیرین

شیرینیش

3.

The Precious Commodity

Water Systems in Revenue-generating Waqf Properties

Introduction

The water facilities endowed in *awqāf* were part of either income-generating properties or charitable structures. Due to their different economic nature, lucrative and charitable properties were regulated differently and responded to different socio-economic factors. These differences are already evident in the *waqf* deeds themselves: while these documents describe all the foundation's endowed assets, they only list specific operating regulations for the charitable properties whose functioning was sponsored by the foundation's revenues. In addition, lucrative and charitable water installations were characterized by different understandings of water, which, in turn, led to distinct socio-economic dynamics determining their respective trajectories. Thus, the reconstruction of the socio-economic role of lucrative and charitable water installations embedded in the *awqāf*, and the factors affecting their management and operation, must be undertaken separately. This chapter focuses on the water systems embedded in two kinds of lucrative properties, namely residential palaces and communal hammams to understand how they were organized and managed, as well as the different socio-economic factors that affected their operation.¹

Scholarship on residential palaces and hammams in pre-modern Cairo tends to discuss them separately, prioritizing the examination of a singular architectural category rather than considering them together as profitable urban assets and as pieces of urban socio-economic networks. This separation occurs, not unreasonably, in architectural histories that examine patterns of stylistic evolution or continuity in Mamlūk-era Cairene architecture. Some of these works are seminal for their thorough analyses of Mamlūk-era residential architecture—most notably Jacques Revault and Jean Claud Garcin's *Palais et Maisons du Caire* (1982), Layla Ali Ibrahim's "Residential Architecture in Mamlūk Cairo" (1984), and Ghazwan Yaghi's *al-Quṣūr wa-al-buyūt al-Mamlūkiya fī-l-Qāhira* (2021).² Other publications focus instead on the architecture of Mamlūk-era communal hammams: Sylvie Denoix's 1999 collection

^{1.} The palaces examined in this chapter are what sources and documents call *dār* (pl. *dūr*) or *qaṣr* (pl. *quṣūr*). These were residences designed for the wealthiest members of society, while less privileged social groups occupied more humble rental units. Skilled workers with a modest income lived in *riwāq* and *ṭibāq*, residential apartments usually located on the upper floors of multiunit buildings (*rab'*) that included commercial businesses on the ground floor. These apartments had a simple layout and no direct access to water, though they were equipped with latrines and ventilation systems. Unskilled labourers and Cairo's poorest inhabitants lived in *ḥawsh*, rudimentary buildings constructed from low-quality materials that were essentially huts surrounding a central courtyard. Laila Ali Ibrahim, "Residential Architecture in Mamluk Cairo," *Muqarnas* 2, (1984): 57-8; Sabra, *Poverty and Charity*, 102-109.

^{2.} Garcin et al., *Palais et maisons du Caire*; Ibrahim, "Residential Architecture," 47-59. Ghazwan Yaghi, *al-Quṣūr wa-al-buyūt al-Mamlūkiya fī al-Qāhira* (Brill, 2021).

of essays, for example, deals with the architecture of these water facilities, with a specific emphasis on those situated within the vibrant Khān al-Khalīlī area, in the heart of Cairo.³ There are works that approach residential palaces and communal hammams from a socio-economic point of view, but these works also discuss these structures separately. Valentine Denizeau's PhD thesis on water management in Mamlūk-era Cairo, for instance, dedicates one section to the economic value of communal hammams endowed in *waqf* foundations while presenting the historical evolution of domestic hydraulic systems in Cairo and Fustāt in another chapter.⁴ Julien Loiseau instead tackles palaces and hammams within the same chapter of his work *Reconstruire la Maison du Sultan*, but he splits his focus between the value of *ahl al-dawla* palaces as political loci of the sultanic administration on the one hand and, on the other hand, on the economic value of hammams as lucrative urban assets endowed as part of *waqf* foundations.⁵

Given this established scholarly practice of examining residential palaces and communal hammams separately, my decision to combine them in this discussion might be perceived as a controversial shift. However, there are several reasons that justify this choice. Firstly, due to their potential to generate stable and substantial revenue streams through tenant leases, both palaces and hammams consistently appear as income generating assets in the *awqāf* of the *ahl al-dawla*.⁶ Carl Petry's study of al-Ghawrī's *waqf*, for instance, found over 16 residential palaces (generally designated as *dār*) and 16 communal hammams among its endowed properties.⁷ Similarly, Doris Behrens-Abouseif's list of properties endowed by Sultan Qāyṭbāy includes multiple residential palaces and three hammams.⁸ Of the nine case studies selected for this work, seven (listed in *Table 3*) contain extant or partially extant descriptions of endowed residential palaces or hammams, sometimes both.

Secondly, as described in *waqf* documents, residential palaces and communal hammams were equipped with analogous hydraulic systems, which further justifies their joint examination within this chapter. Earlier scholarly works have devoted considerable attention to the structural design of hydraulic systems embedded in residential buildings and hammams of pre-modern Cairo. Yaghi's work, for example,

^{3.} Sylvie Denoix, Jean-Charles Depaule, and Michel Tuchscherer (eds.), *Le Khan al-Khalili et ses Environs. Un Centre Commercial au Caire du XIII^e au XXI^e siècle* (IFAO, 1999).

^{4.} Denizeau, "Conduire l'eau," 391-427 and 291-342.

^{5.} Loiseau, *Maison*, 343-361 and 379-381.

^{6.} Petry, "Waqf as an Instrument of Investment," 106-7.

^{7.} Petry, "Waqf as an Instrument of Investment," 114-15.

^{8.} Doris Behrens-Abouseif, "Qāyṭbāy's investments in the city of Cairo: Waqf and Power," *Annales Islamologiques* 32, (1998): 36-40.

includes architectural descriptions of domestic baths, waterwheels, and kitchens, thus providing a thorough synthesis of the hydraulic systems in Mamlūk-era palaces.⁹ Matthew Harrison's 2016 PhD thesis analyzes the water features of Medieval houses excavated in Fuṣṭāṭ, combining archeological evidence with data from the Geniza archive, with particular attention to the sanitation systems featuring in these structures.¹⁰ In an article published in 2009, Valentine Denizeau reconstructs the standard layout of the hydraulic systems in Mamlūk-era Cairene hammams based on descriptions found in *waqf* documents.¹¹ Evidence emerging from the *waqf* documents examined in the first part of this chapter corroborates the findings of these scholars regarding the main components of the water systems embedded in palaces and hammams. At the same time, it expands upon them by revealing patterns of reuse and adaptation of hydraulics installations that have been mostly overlooked in earlier scholarship. As argued in this chapter, such patterns had important repercussions on the management and control of these lucrative properties.

Costly and adaptable hydraulic systems greatly increased the value of revenue-generating assets, facilitating the reuse and circulation of palaces and hammams endowed in the *awqāf* of the *ahl al-dawla*. Indeed, both palaces and hammams underwent successive passages of appropriation and endowment, especially as the *ahl al-dawla* network was reconfigured—these dynamics have been attested also for other revenue-generating *waqf* properties. As Doris Behrens-Abouseif and Lenor Fernandes emphasized, much of the circulation of lucrative properties happened via *istibdāl*, the legal institution that allowed the exchange of endowed assets.¹² As this chapter demonstrates, due to the widespread utilization of *istibdāl* and other transactions, lucrative *waqf* properties fairly circulated among successive *ahl al-dawla* networks rather than remaining in the hands of the founders' families for extended periods of time. Daisy Livingston's work brilliantly demonstrated the possibility of reconstructing the trajectories of lucrative *waqf* properties by utilizing the traces successive passages left on the documentary sources. In "Documentary Constellations in Late-Mamlūk Cairo", Livingston utilized the stratification of successive logs recorded in the same scroll to reconstruct the dynamic ownership trajectory of four shops, which were acquired via *istibdāl* from a *waqf*, sold to various individuals connected to al-Ghawrī, and ultimately endowed in this sultan's foundation.¹³

⁹ Yaghi, *al-Quṣūr*, 67-73.

¹⁰ Harrison, "Fuṣṭāṭ Reconsidered," 159-199.

¹¹ Valentine Denizeau, "Les Hammams du Caire. De l'équipement essentiel de la ville mamelouke à l'édifice patrimonial délaissé," in *Le Bain Collectif en Égypte*, ed. Marie-Françoise Boussac, Thibaud Fournet, and Bérangère Redon (IFAO, 2009), 313-327.

¹² Behrens-Abouseif, "Qāyṭbāy's investments," 33-34; Fernandes, "Istibdāl," 205-10.

¹³ Livingston, "Documentary constellation," 533-38.

In other instances, hints within the main *waqfiyya* suggest when endowed structures had previously belonged to other *awqāf*. Hamza Abdel Aziz Badr and Daniel Crecelius, for instance, showed that two hammams included in an Ottoman-era *waqf* were among the properties earlier endowed within Sultan al-Manṣūr Qalāwūn's *waqf*.¹⁴ Chronicles and historical topographies can also help reconstruct the dynamic trajectories of palaces and hammams, with their successive phases of endowment and appropriation. Valentine Denizeau, for instance, integrated documentary sources and chronicles to reconstruct the history of Ḥammām al-Khaṭīrī and its trajectory as an urban property, tracing its passage from one endower to another over a long period.¹⁵ The second part of this chapter follows the lead of these researchers and synthesizes data derived from *waqf* deeds, successive *waqf*-related records (such as *istibdāl* records), and narrative sources to discover how the ownership histories and economic trajectories of palaces and hammams affected the management and organization of their hydraulic systems.

The previous chapter showed how contextualizing documentary data with narrative sources can reveal the identities and agendas of *waqf* founders, and this chapter integrates narrative sources to shed light on the socio-economic factors that motivated the exchange and circulation of endowed palaces and hammams. Chronicles and topographies show that some of the palaces and hammams endowed in the *waqf* documents analysed here were part of much larger investments and construction projects in urban and suburban areas close to bodies of water. For this reason, this analysis illuminates not only how water facilities were managed and organized, but also how coveted water-rich sites within and outside the main urban centres were exploited by members of the *ahl al-dawla*.

Finally, this chapter uses *ḥisba* manuals, combined with narrative sources, to examine the various socio-political actors who shaped how palaces and hammams were organized and managed beyond the investments of the *ahl al-dawla*. Both Nicholas Warner and Valentine Denizeau already based their social analysis of communal hammams on the manuals for the *muḥtasib*, as these sources provide detailed regulations for the everyday functioning of these facilities.¹⁶ While depicting a vivid image of the Cairene hammams, Warner's and Denizeau's works also construct

¹⁴ Hamza Abdel Aziz Badr and Daniel Crecelius, "The Waqfiyya of Two Hammams in Cairo Known as al-Sukkariyya," in *Le Waqf dans l'Espace Islamique Outil de Pouvoir Socio-Politique*, ed. Randi Deguilhem (IFPO, 1995), 133-140.

¹⁵ Denizeau, "Conduire l'eau," 406-8.

¹⁶ Nicholas Warner, "Taking the Plunge. The Development and use of the Cairene Bathhouse," in *Historians in Cairo. Essays in Honor of George Scanlon*, ed. Jill Edwards (AUC Press, 2001), 49-79; Denizeau, "Les Hammams," 316-321; "Conduire l'eau," 409-427.

a “standardized” communal hammam that may not accurately reflect the diverse material and socio-economic realities on the ground. This standardized depiction stems partly from their combination of sources from different historical periods, as well as their use of *hisba* manuals as descriptive rather than normative sources. The final section of this chapter uses *hisba* manuals not for their detailed instructions, but for their mention of the many workers who operated communal hammams.¹⁷ Together with the chronicles, the *hisba* manuals reveal that the management and functioning of lucrative water facilities depended on multiple concurrent factors. While Denizeau concluded that communal hammams were “stereotypical public services” heavily regulated by the “State”,¹⁸ the evidence presented here suggests that both residential palaces and communal hammams had a more composite organizational framework. This intricate organizational structure was influenced by a multitude of economic factors and socio-political actors, encompassing endowers, judicial authorities, court officials, tenants, and workers.

3.1 Costly architectures, continuous technologies, and valuable resources

Waqf documents meticulously describe every property endowed in a *waqf* foundation, providing an accurate assessment of each property’s condition when the *waqf* was established. These descriptions were crucial for maintaining the endowed properties, as far as possible, in the same condition as when the founders endowed them in their *awqāf*, thereby ensuring the foundations’ continued operation as stipulated by the founders. To researchers, these descriptions offer invaluable insights into the historical built environment, as they reveal what construction materials were used, as well as the layout, location, appearance, and decorative elements of edifices that have long since vanished. For this reason, *waqf* documents are indispensable to studies of Mamlūk-era architecture, both domestic and communal. Jean-Claude Garcin’s seminal 1982 work on housing in Mamlūk Cairo, for example, draws upon descriptions of residential buildings contained within *waqf* documents to reconstruct the architectural evolution of residential structures and urban spaces during the Mamluk period.¹⁹ More recently, in *al-Quṣūr wa-al-buyūt al-Mamlūkiya fi-l-Qāhira* (2021), archaeologist Ghazwan Yaghi similarly integrated *waqf* documents with material evidence to reconstruct the styles, designs, and decorative elements of

¹⁷. Maaïke van Berkel has emphasized that these normative sources reflect the daily routines of the workers populating the urban space. See: van Berkel, “Who Owns and Controls the Water?,” 136.

¹⁸. Denizeau, “Conduire l’eau,” 427.

¹⁹. Garcin et al., *Palais et maisons du Caire*, 145–216.

palatial architecture in Mamlūk-era Cairo.²⁰ Finally, Valentine Denizeau's 2009 article on the hammams of Cairo used *waqf* documents to reconstruct their standard layout and functional elements.²¹ These works primarily explored broader architectural trends that are beyond the scope of this thesis, but they also touched upon the economic value of the construction techniques and materials employed in residential palaces and communal hammams. The economic value of these buildings and of their construction material is also emphasized throughout the first part of this chapter, where I argue that the reuse of costly hydraulic installations played an important role in how palaces and hammams were managed and circulated between members of the *ahl al-dawla*.

In addition to carefully describing the condition of the endowed properties, *waqf* documents also indicate their location by specifying the area of the city where they were located and their surrounding edifices, providing crucial information regarding the layout and evolution of particular quarters in Cairo's urban areas. These topographic data have been used to study the history and development of urban spaces in Cairo, as in the 1999 work *Le Khan al-Khalīlī et ses environs*, which reconstructs the layout and evolution of the central quarter of al-Qāhira by drawing on multiple sultanī *waqf* deeds—notably those of Qalāwūn, Barqūq, and Ināl—that detail the facilities within the area.²² Similarly, Janusz and James Bylinski's 1994 reconstruction of Darb Ibn al-Bābā, an affluent quarter located on the southern shores of the Birkat al-Fīl, is based on the descriptions of building layouts and locations found in the *waqf* deeds of Sultan Qāytbāy and Sultan Tūmānbāy (r.922-923/1516-1517).²³ These scholarly works underscore the importance of examining *waqf* assets and facilities within their spatial context, especially in urban spaces that, like the shores of the Birkat al-Fīl, possessed great socio-economic value as preferred residential locations for specific political groups.

The facilities discussed in this chapter (listed in *Table 3* and mapped in *Fig. 7*) gain enhanced significance when examined within their spatial context, a dimension further explored in the second part of this section. Crucially, understanding the economic value of these structures and their locations is vital for tracing their circulation, particularly as *waqf* assets, a topic thoroughly addressed in the second part of this chapter.

²⁰ Yaghi, *al-Quṣūr*, 313.

²¹ Valentine Denizeau, "Les Hammams," 313-327.

²² Denoix, Depaule, and Tuchscherer (eds.), *Le Khan al-Khalīlī et ses Environs*, 29-40, 141-42.

²³ Bylinski and Bylinski, "Darb Ibn Al-Baba," 203-222.

Table 3: Overview of the lucrative water facilities in the case studies

Document no. and date	Document type and issuer	Endowed lucrative water facilities
DW7 659/1261	<i>Waqf</i> of <i>amīr</i> Majd al-Dīn Abū Bakr ibn Asʿad ibn Yaḥyā al-Hakkārī	Two hammams in Ḥārat Qarāqūsh (al-Qāhira)
DW26 717/1317	<i>Waqf</i> of Khawand Ardukīn bint Sayf al-Dīn Nūkyā	Two hammams in Ḥārat Zuwayla (al-Qāhira)
DW91 830/1427	<i>Waqf</i> of Sharaf al-Dīn Mūsā ibn al-Burhān	Domestic hydraulic system on the eastern Nile bank
DW125 864/1460	<i>Istibdāl</i> of the eunuch ʿAnbar ibn ʿAbd Allāh al-Nūrī	Hammam al-Qaffāṣīn near Ḥārat Daylam (al-Qāhira)
DW175 879/1474	<i>Waqf</i> of Zayn al-Dīn Abū Bakr ibn Muzhir	Domestic hydraulic system with hammam in Ḥārat Amīr Jawān (al-Qāhira) Palace by the Birkat al-Raṭlī
DW198 890/1485	<i>Waqf</i> of <i>amīr</i> Azbak min Ṭuṭukh	Pond, domestic hydraulic system, hammams in Azbakiyya
DW241 908/1503	<i>Waqf</i> of <i>amīr</i> Azdamur min ʿAlī Bāy	Domestic hydraulic system in Ḥārat Zuwayla (al-Qāhira) Palace by the Birkat al-Fil

3.1.1 An Expensive Hydraulic System and Its Applications

The earliest description of a hydraulic system in the documents presented here is found in the *waqfiyya* of Khawand Ardukīn (DW26), who endowed a men's hammam and a women's hammam near her palace in Ḥārat Zuwayla in 717/1317. The extant part of the *waqfiyya* contains, in fact, a detailed description of both these facilities, which followed the tripartite layout typical of medieval Egyptian hammams—a sequence of three rooms with different functions and temperatures, where the hot room was heated by hot water rather than by a hypocaust system.²⁴ In the men's hammam endowed by Ardukīn, the facility's entrance led to a *maslakh* (dressing room) attached to an intermediate chamber, the *bayt al-awwal* or *bayt al-wuṣṭānī*, that in turn

²⁴. For a detailed discussion of the medieval Egyptian hammam's layout see: Denizeau, "Les Hammams," 314-316; Warner, "Taking the Plunge," 60-63. As indicated below, this layout was commonly used in palatial hammams as well. See: Yaḡhi, *al-Quṣūr*, 67-70. As early as the Islamic conquest of Egypt, Egyptian hammams contained just three environments, so they were much smaller than Roman baths. Ibn Duqmāq reported that the Christians of Egypt mocked the hammam built by ʿAmr Ibn al-ʿĀṣ, calling it *ḥammām al-fāʾr* (the mouse hammam) because its dimensions were so diminutive. Ibn Duqmāq, *Kitāb al-Intiṣār*, 4:105. An exception to the non-hypocaust standard exists: a bathhouse excavated in Fuṣṭāṭ and dating from the Ṭūlūnid period features a hypocaust system typical of Roman baths. Warner, "Taking the Plunge," 69.

led to the hot room, the *bayt al-ḥarāra*.²⁵ This tripartite scheme followed principles espoused in the Galenic medical tradition and was intended to gradually regulate body temperature and humidity to balance the Galenic qualities of hot, cold, dry, and humid.²⁶ The hammam's chambers also represented the different stages of the bathing routine. The *maslakh*, which cooled and moistened the body, prepared bathers to enter the hotter rooms and gather the necessaire for bathing, but it was also used to cool down before leaving the hammam.²⁷ The washing routine began in the *bayt al-awwal*, which was designed to heat and relax the body and functioned as the antechamber to the hottest room, the *bayt al-ḥarāra*.²⁸ The latter heated and dried the body, and it was also where the most thorough cleaning took place.²⁹ As Ardukin's *waqfiyya* shows, each one of these rooms contained specific hydraulic installations: in the men's hammam the *maslakh* had a water fountain (*fasqīya*) in the middle of the room; the *bayt al-awwal* had a *jurn* (stone basin) for hot water and a *maṭhara* (ablution basin) for cold water; and the *bayt al-ḥarāra* had four large basins (*aḥwād*) for hot water.³⁰

According to Ardukin's *waqfiyya*, the men hammam's water was sourced from a groundwater well (*bi'r mā' ma'in*) surmounted by a waterwheel (*sāqiya*), which was located beside the hammam and was accessible from the street through a door positioned next to the hammam's entrance. The *sāqiya* (Fig. 3 and 4) featured consistently in the palaces and hammams discussed in this chapter, as it was essential in supplying running water to these facilities. It was a complex and sophisticated water-lifting device that consisted of two geared wooden wheels arranged perpendicular to one another. The vertical wheel, positioned atop a rectangular well, drew water using a hanging bucket chain. This vertical wheel was driven by the cogs

²⁵ DW26. See edited excerpt in Appendix. Most of the names of the architectural and decorative elements mentioned in the documents were translated from Arabic on the basis of the definitions provided in: Muhammad Amin and Laila Ali Ibrahim, *al-Muṣṭalaḥāt al-mi'māriyya fī al-wathā'iq al-mamlūkiyya* (AUC Press, 1990); Yaghi, *al-Quṣūr*, 298-312; Valentine Denizeau and Berangere Redon, "Glossaire. Le vocabulaire du bain collectif, du balaneion au hammam," in *Le Bain Collectif en Égypte*, ed. Marie-Françoise Boussac, Thibaud Fournet, and Bérangère Redon (IFAO, 2009), 400-407.

²⁶ Ibn al-Ukhuwwa, *Ma'ālim*, 240.

²⁷ Warner, "Taking the Plunge," 60 and 65; Denizeau and Redon, "Glossaire," 402.

²⁸ Ibn al-Ukhuwwa (*Ma'ālim*, 240) says that this room was meant to warm up and moisten the body. See also: Denizeau and Redon, "Glossaire," 403. The presence of this intermediate room is a distinctive feature of the Cairene hammam.

²⁹ The *bayt al-awwal* and the *bayt al-ḥarāra* were customarily roofed with perforated domes that allowed sunlight to enter through coloured-glass openings (the *jāmāt*). The two rooms had a different layout, however, the *bayt al-awwal* being a simple room of modest dimensions, while the *bayt al-ḥarāra* had a more complex structure articulated in a cruciform plan with a central space and four *iwāns* with semi-closed recesses where the immersion tubs were installed. Denizeau and Redon, "Glossaire," 403-4; Yaghi, *al-Quṣūr*, 68.

³⁰ DW26. The part of the document containing the description of the hammam is damaged and some words are not readable.

of the horizontal wheel which, in turn, was operated by a draft animal (typically an ox or a cow) walking in circles on a platform (*madār*) around its vertical axis.³¹ Ardukin's deed indicates that a wooden ramp (*zallāqa*), placed between the entrance of the men hammam's waterwheel and the *madār*, allowed draft animals to access the *madār* from the street.³² The presence of this ramp reveals that the waterwheel was higher than the street—tactical difference in level that allowed the *sāqiya* to lift water above the hammam, so that it could then flow downstream into the hammam's hydraulic system. Indeed, the water lifted by the *sāqiya* was poured into a receptacle (*ḥāṣil*) that fed the hammam's pipes and provided the entire complex with running water by means of gravitational force.³³ This hammam's water system also included a room behind the facility with a furnace (*mustawqad*) where water was heated in four lead boilers (*arbaʿa quḍūr raṣāṣ*) that were placed on a stove (*dabakūniyya*).³⁴ The water heated by the *mustawqad* filled the water basins of the *bayt al-ḥarāra* and served to regulate its temperature.³⁵ Finally, Ardukin's *waqfiyya* indicates that the hammam's hydraulic system comprised conduits that carried clean water (*majārī al-māʾ al-ṭāhir*) and channels that expelled wastewater (*maghāʾis al-māʾ al-wasikh*).³⁶

^{31.} For a detailed description of how the *sāqiya* operates, see: Örjan Wikander, *Handbook of Ancient Water Technology* (Brill, 2000), 267-272; Thorklid Schiøler, *Roman and Islamic Water-lifting Wheels* (Odense University Press, 1973), 27-32. The early sources analysed by Wikander attest the presence of this installation mainly in Egypt, where it was probably invented and where it reached the final form by the second century BC.

^{32.} DW26. See edited excerpt in Appendix.

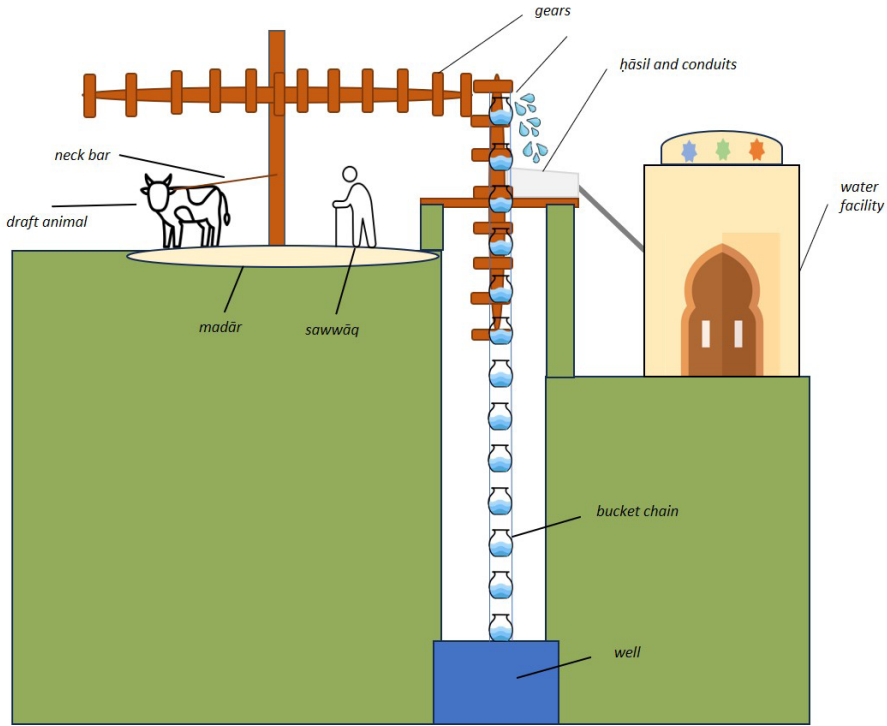
^{33.} Denizeau, "Les Hammams," 316.

^{34.} DW26. See edited excerpt in Appendix..

^{35.} Denizeau, "Les Hammams," 316; Warner, "Taking the Plunge," 63.

^{36.} DW26. See edited excerpt in Appendix.

3. Schematic representation of a *sāqiya* (Angela Isoldi)



Many of the other palaces and hammams discussed in this study contain similar hydraulic systems, with only slight variations to this basic design and layout. In one of the palaces endowed by Abū Bakr ibn Muzhir about a century and a half after Ardukin's deed was issued, for example, the technology employed to provide running (and hot) water to the house's various water facilities was essentially the same.³⁷ This palace (referred to as *makān* in the *waqf* document) was one of two personal residences Abū Bakr ibn Muzhir built and endowed in Ḥārat Amīr Jawān.³⁸ According to the description in the *waqfiyya*, the main entrance of the palace led to a vestibule (*dirkāh*) connected to a courtyard (*dawwār*) with a fountain (*fasqīya*). This courtyard

³⁷ DW175. As mentioned in the previous chapter, this deed was drafted in Ṣafar 879 (June 1474), while the *waqfiyya* of Ardukin (DW26) was drafted in Rabī' II 717 (June 1317). For the description of the palace discussed here, see edited excerpt in Appendix.

³⁸ DW175: "*al-makān al-kā'in bi-al-qāhira al-mahrūsa bi-khuṭṭ ḥārat amīr jawān al-madhkūra al-ma'rūf bi-inshā' al-wāqif ...bi-al-qurbi min al-dār al-madhkūra bi-a'lihi wa-huwa sakanuhu ayḍan*". See edited excerpt in Appendix. The document probably refers to a street adjacent to Ḥārat Barjawān that, according to the description, could be reached via a service door on one of the two residences. The palace discussed here is said to border on the south with the *mustawqad* of the Hammam al-Rūmī, which al-Maqrīzī locates near the Ḥārat Barjawān. See al-Maqrīzī, *Khiṭaṭ*, 3:150.

opened into a garden (*junayna*) where lemon trees, orange trees, *sidr*,³⁹ berries, and jasmine were planted; and a doorway from this garden led to a room housing a well and waterwheel (*bi-hā bāb muqanṭar muṭall ‘alā bi’r al-sāqiya*). Another well without a *sāqiya* was located under a staircase in the courtyard.

4. Domestic *sāqiya* in the palace of amīr Ṭāz (Angela Isoldi)



The *waqfiyya* describes the various rooms of this luxurious palace, including the *maq‘ad* (the loggia), bedrooms with ceilings painted in gold and lapis lazuli blue (*lāzaward*), a large kitchen (*maṭbakh kabīr*) equipped with its own water well, storage rooms (the *sharāb khānāh* and *ṭishtkhānāh*), and toilets (*kursī mirḥaḍ*).⁴⁰ The *maq‘ad* was richly decorated with a wall fountain made of a slanted marble slab (*shādhirwān*) placed above a square basin with a water-jet head in the middle (*fasqīya murabba‘a bi-wasaṭiha fawwār*). The wall behind the *shādhirwān* was painted in gold and lapis lazuli blue. There was another fountain in the palace’s *qā‘a*— made of a *shādhirwān* above a small *fasqīya* with a water-jet head in the middle, this fountain extended into a small pool (*baḥra*) with ten water-jets placed in the central section of the hall (*dūr qā‘a*). Gardens and fountains were important aesthetic additions to palaces, and they certainly went a long way in impressing visitors. When writing about his

visit to the palace of Qāyṭbāy in 887/1482, for example, Joos van Ghistele described the luscious gardens “full of all kinds of fragrant plants and trees” with awe and commented upon the many fountains “not natural but artificial” that provided the gardens with water. He mentioned that fountains decorated the interior of the palace

^{39.} The *sidr* (*Ziziphus spina-christi*) is a plant native to the Middle East and East African region. Its leaves, after being dried and powdered, were traditionally used as soap in the hammams (see below).

^{40.} DW175. See edited excerpt in Appendix. Several toilets are distributed throughout the palace. The *sharāb khānāh* was typically a small room used for storing drinks and fruits, and the *ṭishtkhānāh* was another storage room used for keeping the necessaire for the reception of guests (cloths, rugs, and other utensils). As was common in Mamlūk-era palace architecture, these rooms in Abū Bakr ibn Muzhir’s palace were located on the ground floor under the loggia, and their door opened onto the main courtyard. Yaghi, *al-Quṣūr wa-l-buyūt*, 71; Ibrahim. “Residential Architecture”, 58; Amin and Ibrahim, *Muṣṭalahāt*, 70 and 77.

as well—in the middle of the *qā'a* in which the sultan received visitors, van Ghistele recounted seeing “a square pond about a knee deep and about three or four feet wide, where water is always kept fresh and small fish swims in it. The sultan can refresh his hands and feet there whenever he wishes”.⁴¹ Beyond their aesthetic value, greenery and water played a crucial role in regulating the temperature of living spaces, enhancing ventilation and increasing the comfort of luxurious palaces, especially during the hot season.⁴²

In addition to the garden and domestic fountains, Abū Bakr ibn Muzhir's palace offered further comforts, including a domestic hammam whose *maslakh* windows overlooked the garden.⁴³ The document indicates that an elevated marble fountain (*fasqīya murtafi'a murakhhkama*) stood in the centre of the *maslakh*, which was connected via a corridor to the hammam's *bayt al-awwal*, where two tubs (*ḥawḍān*) were placed within a domed *iwān* with coloured-glass openings (*jāmāt*) on the ceiling (Fig. 5). The hammam's *bayt al-ḥarāra* included five tubs, one of which was placed in a semi-separate *khilwa* (a small windowless cell), as well as an ablution fountain with a hanging basin (*bi-hi ṭuhūr bi-hi ḥawḍ mu'allaq*). The *bayt al-ḥarāra* was paved with coloured marble (*al-mafrūsh arḍ dhalika bi-al-rukhhkhām al-mulawwan*), had walls plastered in white (*musabbal al-jadr bi-al-bayyāḍ*), and was covered with a *jāmāt*-perforated dome.

Adjacent to the palace's main gate, a secondary entrance provided additional access to the residence's *sāqiya*, which was also accessible from the palace garden. A ramp ascending to the turning-platform of the waterwheel (*madār al-sāqiya*) allowed the passage of draft oxen (*sullam mustaṭil mudarraḥ bi-rasm ṭulū' al-thawr ilā al-sāqiya*), and above the well to which this *sāqiya* was attached, a receptacle (*ḥāṣil*) collected the water lifted from the well via the waterwheel's bucket chain. This well and *sāqiya* were part of a larger hydraulic and heating system that included fuel storage for the hammam's furnace, the furnace (*mustawqad*) itself, and a *dabakūniyya* with a large copper boiler (*qidra kubrā naḥḥāsan*). Lead pipes extended from this boiler into the palace, providing the entire complex with non-potable running water. The palace

⁴¹ Van Ghistele, *Voyage en Egypte*, 23–24.

⁴² Garcin et al., *Palais et maisons du Caire*, 49–74; Harrison, “Fuṣṭāṭ Reconsidered,” 159. The wind catcher, or *bādāhanj* (or *malqaf*), cooled the living space in palaces by funnelling northern winds into the main *qā'a* and then distributing the fresh air into the palace's other rooms thanks to a series of air-conduits. The wooden *bādāhanj*/*malqaf* also functioned as an air-filter, removing sand and dirt from the air via a series of small wooden shelves. The *bādāhanj* on the roof and the fountain in the *qā'a* worked together to cool the palace. Loredana Ficarella, *Domestic space in the Mediterranean* (Gangemi, 2014), 91–4.

⁴³ Denizeau (“Conduire l'eau,” 398) claimed there was an absence of “private baths” in *waqf* documents. However, the inclusion of this domestic bath, along with others mentioned in *Azdamur min 'Alī Bāy's waqf* document, proves otherwise.

incorporated distinct storage spaces for drinking water, which was brought from the Nile by water carriers. The *waqfiyya* indicates the presence of at least one *bayt al-azyār* and three *muzammalas*, places where potable water was stored in large earthenware vessels.⁴⁴ These storage areas were positioned strategically within the palace's corridors, where ventilation would have kept the stored water cooler.

5. Jāmāt in the hammam of Sultan Ināl (left), and the hammam in Bayt al-Sinnārī (right) (Angela Isoldi)



The descriptions of the hydraulic systems used for the fountains, gardens, baths, and kitchens of palatial residences and for the communal hammams reveal that water supply technologies did not significantly change throughout the Mamlūk period. Specifically, the animal-powered *sāqiya* feeding the property's water facilities via interconnected conduits features consistently throughout the period. The amount of water these installations had to provide depended on the running time of the palatial amenities and the hammams' facilities: communal hammams like the ones Ardukīn endowed would have required a substantial and consistent water supply given that they operated from pre-dawn (to allow people to perform their ablution before

⁴⁴ Amin and Ibrahim, *Muṣṭalahāt*, 104; Levanoni, "Water Supply," 202; Yaghi, *al-Quṣūr*, 231.

morning prayer) until late afternoon.⁴⁵ Palaces such as Abū Bakr ibn Muzhir's may also have necessitated a consistent water supply for their fountains, gardens, kitchens, and hammam. While Ghazwan Yaghi has argued that the kitchens and hammams in residential palaces were typically only activated for special occasions rather than being operational every day,⁴⁶ his argument may not be entirely accurate, for in his descriptions of the opulent palaces surrounding the Birkat Qarmūṭ, al-Maqrīzī writes that passersby could smell the aromas emanating from their kitchens, possibly suggesting that these facilities were used more regularly.⁴⁷ Whether or not they were operated daily, the mere presence of kitchens and hammams within residential palaces was indicative of their inhabitants' financial prosperity: most people in Mamlūk Cairo cooked food at the market and bathed at communal hammams.⁴⁸ Both Yaghi and Nicholas Warner have suggested that domestic hammams were found only in the residences of the very wealthy, such as *amīrs*.⁴⁹ Loiseau, in turn, has speculated that palatial hammams might have been financed more frequently by the functionaries of the sultanīc administration as they gained increasing power and wealth in the early ninth/fifteenth century.⁵⁰ Within the documents examined in this study, domestic hammams are found only in Abū Bakr ibn Muzhir's palaces at the Ḥārat Amīr Jawān and at the Birkat al-Raṭlī, and in Azdamur min 'Alī Bāy's palace at the Birkat al-Fīl.⁵¹ Notably, these *waqfiyyāt* explicitly identify these palaces as the *wāqīf's* primary residences, indicating that palatial hammams were indeed rare and could only be attained by *ahl al-dawla* members with great wealth at their disposal.

Regardless of their operational frequency, the hydraulic systems of hammams and palatial facilities incurred substantial operational and maintenance costs. For instance, the *sāqiya* not only required a draft animal (including its daily fodder) for power, but also an attendant, the *sawwāq*, to monitor its functioning and care for the animal. Additionally, when repairs were needed to the *sāqiya*, specialized

^{45.} The *ḥisba* manual of Ibn al-Ukhuwwa indicates that hammams had to be open before dawn to allow prayer-goers to perform their ablutions. The same source suggests that people should not enter the hammams after dusk, which may indicate that some of these facilities were open until the evening. Ibn al-Ukhuwwa, *Ma'ālīm*, 241-242.

^{46.} Yaghi, *al-Quṣūr*, 70.

^{47.} In his description of the luxurious residences overlooking the Birkat Qarmūṭ, al-Maqrīzī lists the sounds of music, the scent of incense, and the aroma of kitchens among the indicators of these houses' comforts. al-Maqrīzī, *Khīṭaṭ*, 3:291.

^{48.} Levantoni, "Food and Cooking," 204; Lewicka, *Food and foodways*, 88-89.

^{49.} Yaghi, *al-Quṣūr*, 67-70; Warner, "Taking the Plunge," 52.

^{50.} Loiseau, *Maison*, 380-1.

^{51.} DW175 and DW241.

craftsmen had to be hired.⁵² Estimates for the operating and maintenance costs of *sāqiya* systems throughout the Mamlūk period can be derived from data found in *waqf* documents. For instance, in 703/1303, around the time Ardukīn established her *waqf*, the monthly salary of a *sawwāq* employed in Sultan al-Nāṣir Muḥammad's foundation amounted to 30 silver *dirhams*.⁵³ Around the time Abū Bakr ibn Muzhir established his foundation, the salary of a *sawwāq* could amount to 650 copper *dirhams* (*dirham fulūs*) per month, as stipulated in Azbak min Ṭuṭukh's *waqf* deed.⁵⁴ These were relatively high sums for unskilled labourers in their respective periods.⁵⁵ The costs of oxen and fodder are more difficult to estimate, but it is plausible that they were even more significant than a *sawwāq*'s salary, particularly in years when the Nile flood failed to reach optimal levels and the price of animals and crops drastically increased.⁵⁶

When a *sāqiya* and its hydraulic system were integrated into the revenue-generating assets of a *waqf* foundation, their operational and maintenance costs were transferred from the foundation to the asset's tenants, whether they be palace residents or a *ḥammāmīs* who leased and managed communal hammams from *waqf* foundations.⁵⁷ These tenants, therefore necessarily had access to significant revenues to ensure the functioning of the assets' hydraulic systems. Although these tenants bore the recurring operational expenses of the hydraulic systems, the initial building costs—including well excavation and the installation of a *sāqiya* and its conduits—remained the responsibility of the facility owners prior to rental. Determining the cost of these installations is challenging due to the scarcity of data regarding construction project costs. Existing records primarily pertain to exceptionally grand palaces whose exorbitant prices were documented in the historical sources of the time. For instance, al-Maqrīzī recounts that the construction of *amīr* Baktamur al-Sāqī's (d. 733/1333) palace surpassed one million silver *dirhams* and 50,000 gold *dīnārs*, while Yalbughā al-Yaḥyāwī's (d. 748/1347) exceeded 400 million and 70,000 silver *dirhams*.⁵⁸ These figures are possibly exaggerated to reflect how much wealth Sultan al-Nāṣir Muḥammad expended to finance the residences of his *amīrs*, and it is safe to assume that other members of the *ahl al-dawla* paid comparatively lower, though

^{52.} As detailed in the next chapter, some of the *waqf* deeds analysed in this work (e.g. DW198 and DW241) list, among other expenses for the *sāqiya*, a fee for a *najjār* (carpenter) to fix the waterwheel when needed.

^{53.} Sultan al-Nāṣir Muḥammad's *waqf* deed (reported by al-Nuwayrī) lists a 30 silver *dirhams* salary for the *sawwāq* employed at his funerary complex and madrasa in Bayn al-Qaṣrayn. al-Nuwayrī, *Nihāya*, 32:47.

^{54.} DW198. These figures will be discussed in more detail in the next chapter.

^{55.} Chapter 4 contains a more detailed discussion of the *sawwāq*'s salaries stipulated in *waqf* documents. The terms of comparison for the evaluation of these salaries were provided by Adam Sabra's survey of *waqf* servants wages in the Mamlūk period. Sabra, *Poverty and Charity*, 119–129.

^{56.} Denizeau, "Conduire l'eau," 412–13.

^{57.} Warner, "Taking the Plunge," 51; Denizeau, "Conduire l'eau," 411–14.

^{58.} al-Maqrīzī, *Khīṭaṭ*, 3:125 and 131; *Sulūk*, 3:246.

still substantial, construction costs for their residences and facilities. Regardless of the accuracy of al-Maqrīzī's figures, the initial installation of hydraulic systems within palatial residences and communal hammams required a significant financial investment, not only due to the complexity of the *sāqiya* and conduit system itself, but also for the construction material to be used: the heating apparatuses of kitchens and hammams, for instance, had to be integrated within stone structures to mitigate fire hazards.⁵⁹

Financial investments into the construction of palaces and hammams were recouped once these structures were leased to tenants, and the revenues generated by these assets likely constituted the primary source of income for the *waqf* foundations that incorporated them. While none of the *waqf* documents examined in this study specify the income derived from their revenue-generating properties, al-Nuwayrī's account of Sultan al-Nāṣir Muḥammad's *waqf* deed for his madrasa, established in 703/1303, reveal that two hammams were among most profitable assets of the foundation, yielding monthly incomes of 490 and 1550 silver *dirhams* among assets whose incomes ranged from 16 *dirhams* (a stable) to 1659 *dirhams* per month (a *qaysāriyya*).⁶⁰ Still, when possible, investors from the *ahl al-dawla* avoided the costs of creating complex and expensive water systems by repurposing existing ones. Indeed, Warner and Loiseau have suggested that the substantial cost of constructing hydraulic systems likely incentivized urban investors to reuse existing infrastructure.⁶¹ The substantial technological continuity of these water systems across the Mamlūk period would have significantly facilitated the repurposing of extant hydraulic installations, a widespread practice, as elaborated in the following section.

3.1.2 Adaptation and Reuse of Pre-existing Water Systems

Because the hydraulic technologies remained unchanged throughout the Mamlūk period, the hydraulic systems used in palaces and hammams never became obsolete. The exorbitant cost of constructing new hydraulic installations made existing ones all the more valuable in Cairo's asset market. Indeed, the case studies presented in this work and the chronicles reveal that some hydraulic systems remained functional over very long periods of time as they were reused or adapted to new purposes. How hydraulic systems were reused and adapted during the Mamlūk period illuminates key aspects of how water facilities were managed. Beyond their immediate implications on the functioning of certain facilities, the dynamic patterns of reuse

⁵⁹ Yaghi, *al-Quṣūr*, 70; Warner, "Taking the Plunge," 68; Garcin et al., *Palais et maisons du Caire*, 91-142; Levanoni, "Food and Cooking," 204-5.

⁶⁰ al-Nuwayrī, *Nihāya*, 32:49-50.

⁶¹ Warner, "Taking the Plunge," 68; Loiseau, *Maison*, 379.

and adaptation, driven by Cairo's evolving socio-political situation, created a physical urban stratification that mirrored the city's different historical phases.

Ardukīn's *waqfiyya* offers valuable insights into how pre-existing hydraulic systems were adapted and how urban properties evolved over time. The palace and hammams Ardukīn endowed in Ḥārat Zuwayla underwent in fact various stages of occupation and reuse, indicative of the socio-spatial evolution of this prestigious neighbourhood within the walls of Fatimid Cairo. Ardukīn's *waqfiyya* was drafted in 717/1317, but the document reveals that, prior to Ardukīn acquiring them, the palace and hammams had belonged to *amīr* Sunqur al-Alfī (d. 680/1281-2). According to the Syrian historian al-Birzālī (d. 739/1339),⁶² Sunqur al-Alfī was one of the most prominent *amīrs* of al-Ẓāhir Baybars' *dawla* (*kāna min a'yān al-umarā' fī al-dawla al-ẓāhiriyya*), and held the office of *nā'ib al-salṭana* during the brief reign of Baybars' son, al-Sa'īd Baraka (r. 676-678/1277-1279).⁶³ Sunqur al-Alfī, however, did not build these palace and hammams, for Ardukīn's *waqf* deed also indicates that they originally belonged to Falak al-Dīn al-Masīrī, *wazīr* of the Ayyūbid Sultan al-ʿĀdil II (r. 635-637/1238-1240).⁶⁴

The succession of different owners changed the layout of the structures over time. The *waqfiyya* indicates that the *dār* Ardukīn endowed in Ḥārat Zuwayla was south of the two hammams described in the document, one of which was for male visitors and the other for female visitors.⁶⁵ The women's hammam is described as originally being part of the *dār* (*al-ḥammām alladhī kāna min ḥuqūq hadhā al-dār*), but it was purchased separately before the whole property (*ubtī'a qablu tārikhihi*). Thus, Ardukīn took possession of Sunqur al-Alfī's palace and, before establishing her *waqf*, converted its domestic bath into a communal hammam for women.⁶⁶ Because domestic and communal hammams were essentially identical in layout and function, re-adapting Sunqur al-Alfī's palatial hammam would have required minimal structural changes. The *waqf* document even contains a few traces of how the hammam was adapted.

^{62.} Franz Rosenthal, "al-Birzālī," in *Encyclopaedia of Islam New Edition Online (EI-2 English)*, ed. P. Bearman (Brill, 2012) doi: https://doi.org/10.1163/1573-3912_islam_SIM_1440.

^{63.} 'Alam al-Dīn al-Qāsim al-Birzālī, *Tārīkh al-Birzālī*, ed. Omar Abd al-Salam Tadmuri (al-Maktaba al-ʿAşriya, 2006), 1:549; al-Şafadī, *al-Wāfi*, 15:297.

^{64.} DW26. See edited excerpt in Appendix. This chain of owners is endorsed by al-Maqrīzī's account on the square Raḥbat Khawand. Al-Maqrīzī, *Khiṭaṭ*, 3:95.

^{65.} DW26: "*al-ḥadd al-baḥrī yantahī ilā al-ḥammāmāyn al-ma'rūf aḥaduhumā bi-dukhūl al-rijāl wa-al-thānī bi-dukhūl al-nisā'*". See edited excerpt in Appendix.

^{66.} This conversion is also attested by al-Maqrīzī, who reports that the bathhouse called Ḥammām Khawand was originally part of the palace Ardukīn had acquired in the area, and that Ardukīn converted it into a communal hammam. Al-Maqrīzī, however, says that this hammam was visited by both women and men (in different moments of the day), and he does not mention the communal hammam for men described in DW26. Al-Maqrīzī, *Khiṭaṭ*, 3:148.

In the *maslakh*, for example, a toilet was converted into a stone bench (*kāna bihi mirḥāḍ wa-ṣāra maṣṭaba*), and a fourth basin was added to the three that were already in the *bayt al-harāra* (*wa-qad zuyyida fihā ḥawḍ rābiʿ*). While the hammam was made functionally independent from the house, the sewage system of the two structures remained connected. DW26 indicates that the hammam included a drainage conduit that discharged into the Great Khalij, carrying wastewater from the women's hammam and the adjacent *dār*.⁶⁷

DW26 also indicates that the men's hammam included an underground drain (*sarāb fī takhūm al-arḍ*) that served another nearby hammam not endowed in Ardukin's foundation. This hammam, like the men's hammam endowed by Ardukin, originally belonged to *amīr* Sunqur al-Alfī, but by the time Ardukin established her foundation, it had become the property of another owner (*ʿurifa bi-al-amīr shams al-dīn sunqur al-alfī al-madhhūr wa-huwa al-ān yuʿrafu bi-milk ghayrihi*).⁶⁸ It is likely that the two hammams shared the drainage system because they were originally part of a double hammam belonging to Sunqur al-Alfī. Notably, this drainage system remained intact even after the properties were divided. In sum, *amīr* Sunqur al-Alfī's properties in Ḥārat Zuwayla originally included a double hammam and a palace with a domestic bath. By 717/1317 Ardukin had acquired the palace and one of the paired hammams from Sunqur al-Alfī's properties. After minor alterations, the palace's domestic bath was repurposed as a women's communal hammam, but its drainage system remained connected to the palace's drainage network. The hammam acquired from Sunqur al-Alfī's double hammam continued to function as a communal hammam for men. Its drainage system, which remained connected to the other hammam, was not altered despite the latter being acquired by a different owner. This example shows that hammams and palaces sometimes passed into the hands of different owners who could change their arrangement and function while keeping the hydraulic systems essentially unchanged.

Ardukin's decision to adapt Sunqur al-Alfī palatial bath into a communal hammam was not unique, for al-Maqrīzī's survey of hammams in the *Khiṭaṭ* reports multiple instances of residential bathhouses that were later opened for communal use when properties changed hands. For example, the Fatimid-era Ḥammām al-Khushayba, which was originally part of the Fatimid *wazīr* al-Ma'mūn ibn al-Batā'ihī's (d. 522/1128) palace, was sold and later endowed as a communal hammam in the *waqf*

⁶⁷. DW26: "*al-sarāb al-mabnī al-mutawāṣil minhu ilā al-khalij al-mubārak bi-zāhir al-qāhira bi-rasm awsākh al-ḥammām al-madhhūr wa-awsākh al-dār al-ma'rūfa qadīman bi-falak al-dīn al-madhhūr al-mujāwira lil-ḥammām*". See edited excerpt in Appendix.

⁶⁸. DW26. See edited excerpt in Appendix.

of al-Nāṣir Muḥammad's spouse Khawand Ṭughāy.⁶⁹ Similarly, the Ḥammām al-Sābāṭ was originally constructed as part of the Fatimid Western Palace, but it was eventually incorporated as a communal hammam in the *waqf* foundation for the *bimāristān* of Sultan al-Manṣūr Qalāwūn.⁷⁰ Lastly, the Ḥammām al-Juyūshī, which was originally part of the residence that belonged to Badr al-Dīn al-Jamālī's (d. 487/1094) son, was converted into a communal hammam and included in the *waqf* of the Ayyūbid Sultan al-Malik al-ʿĀdil I (596-615/1200-1218) before being seized at the beginning of the eighth/fourteenth century by the Banū Kuwayk, a merchant family that benefitted from its revenues until its demolition in 740/1340.⁷¹ Transforming residential hammams into communal hammams was likely a profitable venture: to begin with, it allowed the structure to be sold separately from the palace, making it more marketable due to the lucrative nature of communal hammams. For instance, during the reign of the Ayyūbid Sultan al-Malik al-ʿAzīz (r. 588-594/1193-1198), the *wakīl bayt al-māl* sold the Ḥammām al-Sābāṭ to an *amīr* for the substantial sum of 1,200 *dīnārs*.⁷² Furthermore, by endowing a palace and its hammam as separate structures, as Ardukin did, founders could collect revenue from both the hammam and the palace, rather than just the palace. Given that communal hammams provided high income, the conversion of private baths offered substantial economic benefits, particularly if their conversion required minimal changes to the hydraulic system.

Converting residential hammams into communal ones was not the only way to reuse water installations, however, for Ardukin's *waqf* document also reveals that old hydraulic systems were sometimes repurposed as construction material. On the *verso* of DW26, an *istibdāl* record dated Rabīʿ II 825 (April 1422), more than a century after Ardukin's *waqf* was established, registers the exchange of the *dār* and one of the two hammams endowed in Ḥārat Zuwayla for two palaces and a land lot. I was unable to reconstruct the identity of the *mustabdil* (i.e. the person receiving the properties from

^{69.} al-Maqrīzī, *Khiṭaṭ*, 3:153.

^{70.} al-Maqrīzī, *Khiṭaṭ*, 3:146. Before al-Manṣūr Qalāwūn took possession of it, the Ḥammām al-Sābāṭ was owned by al-Zāhir Baybars' *ustādār*.

^{71.} al-Maqrīzī, *Khiṭaṭ*, 3:150. The Banū Kuwayk were a wealthy and powerful family of Kārimī merchants between the beginning of the seventh/thirteenth and the tenth/sixteenth century. The financial means of this family were so great that, according to Ibn Khaldūn, in 724/1324 they loaned 50,000 *dīnārs* to the exceptionally wealthy king Mansā Musā, the Emperor of Mali, on his way back from Mecca. ʿAbd al-Raḥmān Ibn Khaldūn, *Tārīkh Ibn Khaldūn*, ed. Khalīl Shaḥāda (Dār al-Fikr, 2000-2001), 5:496. A member of the Banū Kuwayk family also took possession of and renewed a former domestic bath—part of a Fatimid *wazīr*'s residence in Ḥārat Zuwayla—presumably opening it to the public. In al-Maqrīzī's survey, this hammam is named Ḥammām al-Kuwayk. Al-Maqrīzī, *Khiṭaṭ*, 3:153.

^{72.} al-Maqrīzī, *Khiṭaṭ*, 3:146.

the *waqf* foundation), who is called Abū ‘Abd Allāh Muḥammad ibn al-Zarkashī⁷³ in the record. The *istibdāl* refers to him as *nāẓir ‘alā al-ḥisba al-sharīfa bi-Miṣr al-maḥrūsa*, which means that he was the *muḥtasib* of Fustāt when he requested the exchange. This information is not sufficient to identify Ibn al-Zarkashī in the chronicles of the period, but given that he was *muḥtasib* of Fustāt, he was undoubtedly a member of the *ahl al-dawla* during the sultanate of al-Ashraf Barsbāy.⁷⁴ Via this *istibdāl*, Ibn al-Zarkashī became the exclusive legitimate owner of the *dār* and hammam previously endowed in Ardukin’s foundation.

Since *istibdāl* transactions were theoretically intended to replace dilapidated *waqf* properties, the presence of this record alone suggests that Ardukin’s hammam was in a state of disrepair by 825/1422. However, as throughout the Mamlūk period *istibdāl* was frequently harnessed to seize endowed properties regardless of legal requirements concerning the properties’ conditions, this transaction alone does not conclusively demonstrate Ardukin’s hammam was dilapidated. However, the *istibdāl* does specify that Ibn al-Zarkashī obtained the right to sell the lead from the hammam’s water conduits, and that lead amounted to 64 Egyptian *qinṭars*, corresponding to 35,000 copper *dirhams* (*dirham fulūs*).⁷⁵ This substantial sum underscores the significant economic value of the hydraulic system, demonstrating that these were costly installations worth reusing and repurposing even as construction material.⁷⁶ Ibn al-Zarkashī may, therefore, have requested the *istibdāl* of the dilapidated hammam with the intention of salvaging and selling its lead conduits, rather than restoring the facility. Indeed, recent studies have emphasized that purchasing ruins to salvage and resell their construction materials became a widespread practice, especially following the early ninth/fifteenth-century economic and environmental crises that affected

⁷³ The name may suggest that this person was the son of the famous scholar Abū ‘Abd Allāh Badr al-Dīn Muḥammad al-Zarkashī (d. 794/1392), active in Cairo in the second half of the eighth/fourteenth century and author of a legal treatise on the use of hashish (*Zahr al-‘arīsh fī taḥrīm al-ḥashīsh*). A. Rippin, “al-Zarkashī,” in *Encyclopaedia of Islam New Edition Online (EI-2 English)*, ed. P. Bearman (Brill, 2012), doi: https://doi.org/10.1163/1573-3912_islam_SIM_8945. However, I do not have enough evidence to support this hypothesis.

⁷⁴ As explained earlier in this work, the *muḥtasibs* of Cairo and Fustāt were appointed by the sultan. Stilt, *Islamic Law in Action*, 72.

⁷⁵ DW26: “*al-qīma yawma ‘idh ‘an al-raṣāṣ alladhī bi-al-ḥammām al-madhkūr bāṭinahu al-jārī fī al-waqf al-madhkūr bāṭinahu alladhī jumlatuhu arba’ wa-sittūn qinṭāran bi-al-miṣrī mā jumlatuhu min al-fulūs al-muṣarraf bi-hi khamsa wa-thalāthūn alf dirham*”.

⁷⁶ The sum indicated corresponds to approximately 150 golden *dīnārs* if we consider the equivalence *dīnār/dirham fulūs* reported by Ashtor for those years. Ashtor, *Histoire des prix*, 278.

the Sultanate and led to the decay of several urban areas.⁷⁷ Clearly, *istibdāl* played a crucial role in reclaiming materials from *waqf* foundations' properties.

The *istibdāl* recorded in Ardukin's *waqfiyya* exemplifies how the hydraulic systems in dilapidated facilities remained a valuable resource in the city's construction market. The reuse of this resource did not invariably imply its dismantling and reuse as construction material. Dilapidated hammams' hydraulic systems, for instance, were often repurposed and reintegrated into new structures built on the same site. The ruins of the Fatimid-era Ḥammām al-Ṣanīma in the north-eastern area of al-Qāhira were integrated into an industrial yarn bleacher (*mubayyiḍat al-ghazl*) by the ninth/fifteenth century, while the ruins of the Ḥammām Kutayla in the western area of al-Qāhira were incorporated into a scalding house (*masmaʿ*).⁷⁸ Although the evidence refers to these structures generally and not their hydraulic systems specifically, it can be inferred that the former hammams' hydraulic systems were refurbished, as both yarn bleachers and scalding houses required water and drainage to function. Pre-existing hydraulic systems could also be repurposed other non-industrial structures. After the mid-eighth/fourteenth century demolition of Ḥammām al-Juyūshī, the remains of its water system—a well, a water tank (*ḥāṣil*) built above a vaulted passage (*qabw*), and a water conduit (*majrā*)—remained within a *ḥikr* lot rented to Qadi al-Makhzūmī, who integrated them into his new residence.⁷⁹

Existing hydraulic systems were reused outside the walls of al-Qāhira as well. In the semi-deserted area north of al-Lūq, where the Baṭn al-Baqara pond disappeared during the reign of al-ʿĀdil Kitbughā, an attempt was made to repurpose the conduit of an old hammam (*sarāb ḥammām*) located there.⁸⁰ Although the author and timeframe of this attempt remain unknown, its objective—to restore water to the area by connecting it to the Khalīj al-Nāṣirī—predated Azbak min Ṭuṭukh's later development of the Azbakiyya pond and quarter and, in essence, it anticipated Azbak's ambition to transform the area's water supply.

⁷⁷. Loiseau, *Maison*, 129–30; Hend El Sayed, “Re-assessing the Building Craze in Mamluk Cairo: Meeting the demand of Building Material,” in *Living with Nature and Things. Contributions to a New Social History of the Middle Islamic Periods*, ed. Bethany Walker and Abdelkader Al-Ghouz (Bonn University Press, 2020), 103–4 and 110–13.

⁷⁸. al-Maqrīzī, *Khiṭaṭ*, 3:147.

⁷⁹. al-Maqrīzī, *Khiṭaṭ*, 3:150. The historian indicates that the Qadi al-Makhzūmī was one of the administrators of al-ʿĀdil's *waqf* foundation. This, together with the fact that the area was rented as *ḥikr*, may indicate that the Ḥammām al-Juyūshī was still technically part of the *waqf* of al-ʿĀdil despite its appropriation by the Banū Kuwayk. Following the death of al-Makhzūmī, his residence fell into disrepair and eventually burned in a fire in 809/1406–7.

⁸⁰. Ibn Iyās, *Badāʾiʿ*, 3:116–7; al-Maqrīzī, *Khiṭaṭ*, 3:287–8.

The diverse ways pre-existing hydraulic systems were reused and repurposed demonstrate their considerable functional and economic value. These adaptable resources constituted a continuous material substratum that linked various layers of urban stratification. By allowing investors to construct assets without incurring the expense of new water installations, pre-existing hydraulic systems appear to have influenced urbanization patterns. The continuous repurposing of hydraulic systems explains the high concentration of hammams in the intra-mural area of al-Qāhira. Here, more than half of the 44 hammams listed in al-Maqrīzī's topography were restored Fatimid and Ayyūbid-era bathhouses constructed before the mid-seventh/thirteenth century,⁸¹ and remained functional throughout the Mamlūk period. In addition to pre-existing water systems, areas with natural access to water also shaped patterns of urbanization, as will be demonstrated in the following section.

3.1.3 Location matters: water as a driving force for urbanization

Like assets with pre-existing hydraulic systems, areas with readily available water also held heightened economic value, making them particularly desirable for investors. The accounts discussed in Chapter 1 concerning the Birkat al-Nāṣiriyya, the Khalīj al-Nāṣirī, and the Būlāq embankment constructed during al-Nāṣir Muḥammad's reign reveal that the areas surrounding these bodies of water became the locus of numerous construction projects financed by the *nās* (a group often overlapping with the *ahl al-dawla* in the sources). The case studies corroborate that areas close to bodies of water represented highly sought-after construction sites for the *ahl al-dawla*. Many of the residential properties endowed in the *waqf* foundations studied here were located within the western section of al-Qāhira—the intramural area closer to the Great Khalīj.⁸² In his 880/1475 *waqf*, for instance, *amīr* Qarājā al-Jamālī endowed his palace and horse stable near Bāb al-Khawkhā, and some of the palaces Azbak min Tuṭukh added to his foundation in 903/1498 were also in this area.⁸³ Faṭḥ Allāh endowed a residence and a hammam at the Suwayqat al-Mas'ūdī in Ḥārat Zuwayla, and in the same quarter Azdamur min 'Alī Bāy endowed a palaces almost a century later.⁸⁴ The eastern section of the city, being distant from the Khalīj and experiencing increasing groundwater scarcity due to the Nile's westward shift,⁸⁵ appears to have remained a less sought-after residential area for the *ahl al-dawla*.

^{81.} I counted 27 hammams built before the mid-seventh/thirteenth century out of the 44 listed by al-Maqrīzī.

^{82.} Loiseau has also emphasized that the western quarters of al-Qāhira were the intra-mural areas with the greatest concentration of (non-military) *ahl al-dawla* residences. Loiseau, *Maison*, 338.

^{83.} DW177 and DW198.

^{84.} al-Maqrīzī, *Khiṭaṭ*, 3:115-16. DW175 and DW241.

^{85.} The kitchen of Baybars al-Jāshankīr's *khānqāh*, which, as said before, in the late eighth/fourteenth century ceased to function due to lack of well water, exemplifies this problem.

The hammams and residential palaces built outside al-Qāhira's walls were clustered around the ponds, or along the canals and the Nile shores. Besides her residence and hammams in Ḥārāt Zuwayla, for example, Khawand Ardukin endowed a palace (*dār*) outside Bāb al-Khawkhā, on the shores of the Great Khalīj.⁸⁶ The large residence Mūsā al-Burhānī endowed in 830/1427 was built on the bank of the Nile; and the palaces of Azdamur min 'Alī Bāy and Abū Bakr ibn Muzhir were built by the Birkat al-Fil and Birkat al-Raṭlī, respectively. Finally, the palace and hammams Azbak min Ṭuṭukh constructed were adjacent to the newly excavated Azbakiyya pond. Analysing these facilities and their spatial context illuminates how the disposition of well-watered areas shaped the development of quarters in the city and in areas removed from the main urban centres throughout the Mamlūk period.

3.1.3.1 A palace on the Nile

Of the structures examined in this chapter, Mūsā al-Burhānī's palace in Būlāq is the closest to the Nile. As described in the *waqfiyya* issued in 830/1427, the northern side of Mūsā's palace had a stone-cut façade overlooking the river (*yashtamil 'alā wājiha mabniyya bi-al-ḥajar al-faṣṣ al-naḥīt min jihat baḥr al-nīl al-mubārak*), while the southern façade had three doors that faced the street and provided access to the building's courtyard and apartments, a well and waterwheel system, and a horse stable. The palace described in this document was remarkably luxurious and expansive, and included numerous private apartments and three richly ornamented reception halls. The main entrance of the palace opened onto a courtyard (*sāḥa*) with a well and basin (*ḥawḍ*) that fed the trees planted there (*ḥawḍ bi-rasm jariyān al-mā' minhu ilā al-asjār al-nābita bi-al-sāḥa al-madhkūra*). A loggia (*maq'ad*) paved in coloured marble overlooked the courtyard and was adorned with fountain with copper pipes (*bi-wasaṭ al-maq'ad al-madhkūr fasqīya murabba' a bi-mayāzīb naḥḥāsan*).⁸⁷

The palace also included a garden (*junayna*) flanked by a reception hall (*qā'a*), which had windows overlooking the Nile and a door opening to a waterfront (*qayṭūn*) directly on the river (*yatawaṣṣal minhu ilā baḥr al-nīl al-mubārak*).⁸⁸ A larger hall (*al-qā'a al-kubrā*) was located on the upper floor: also this room was structured according to the typical layout of a Mamlūk-era *qā'a*, featuring two opposite *iwāns* of different dimensions built around a central space (the *dūr qā'a*).⁸⁹ This *qā'a* featured a ceiling decorated in gold and lapis lazuli blue and a large fountain with an inclined marble slab (*shādhirwān murakkhkam*) at the centre of the small *iwān*. Water flowed from the

⁸⁶. DW26.

⁸⁷. DW91. See edited excerpt in Appendix.

⁸⁸. The term *qayṭūn* indicates a domestic space overlooking an adjacent body of water. See Amin and Ibrahim, *Muṣṭalaḥāt*, 92; Yaghi, *al-Quṣūr*, 308.

⁸⁹. Yaghi, *al-Quṣūr*, 48-52.

slab into a small receptacle (*ṣaḥn laṭīf*), then through a marble water channel (*silsāl murakhhkam*), and finally into a large basin (*fasqīya kabīra*) placed in the middle of the *dūr qā'a*. The windows of the larger *iwān* overlooked the Nile. Adjacent to this main *qā'a* was a smaller, richly decorated hall (*al-qā'a al-ṣughrā*) featuring marble panelling (*wazara rukhkhām*) along the walls. These reception rooms represented the core elements of the palace, and the most richly decorated ones—in contrast, the private apartments, comprised of five *riwāq* (residential units) and several *ṭibāq* (upper units), featured much simpler stone flooring and white walls. The palace featured several domestic facilities, including over ten toilets (*kursī mirḥāq*) placed on the various floors of the palace, two storage areas for potable water (*bayt azyār*), and a kitchen (*maṭbakh*) equipped with a stone basin for water (*ḥawḍ ḥajar bi-rasm istiqrār al-mā'*) on the ground floor.⁹⁰

The full extent of the hydraulic system in Mūsā al-Burhānī's palace is somewhat unclear. The *waqfiyya* only mentions a well and basin located in the courtyard, a well and waterwheel system accessible through a door on the palace's southern façade, and a water reservoir (*maṣna' kāmīl al-binā' mu'add li-istiqrār al-mā' fīhi*) located near the waterwheel. It is safe to assume however that the palace was equipped with a complex hydraulic system distributing water to the garden, the horse stable, the kitchen, and the domestic fountains that decorated the *maq'ad* and the great *qā'a*. The well and waterwheel system likely served as the palace's primary water source, and its proximity to the Nile would have ensured a readily available groundwater supply. The river's nearby presence would have also facilitated the logistics of drinking water supply. It is also possible that the palace's wastewater drained toward the river, though the document does not contain any information supporting this hypothesis.⁹¹

Evidently, such proximity to the Nile made the area ideal for the lavish construction projects of the *ahl al-dawla*. Indeed, Mūsā's *waqf* document indicates that his newly built palace (*inshāha al-wāqif al-mushār ilayhi*) was surrounded by other buildings constructed or endowed by other members of the *ahl al-dawla*. Mūsā's palace was located in the same neighbourhood as the palace of the powerful *nāzir al-juyūsh* (the administrator of the Army's bureau) Zayn al-Dīn 'Abd al-Bāsiṭ, who, as explained in Chapter 2, was Mūsā's patron. The document also states that Mūsā's palace bordered a site (*makān*) belonging to the *nāzir dīwān al-inshā'* Badr al-Dīn ibn Muzhir; and was next to a *sāqiya* installed by the late (*al-marḥūm*) Nāṣir al-Dīn ibn al-Bārīzī.⁹² The Banū

⁹⁰. DW91. See edited excerpt in Appendix.

⁹¹. Ibn Riḍwān's treatise, however, attests that houses on the Nile shores of Fuṣṭāṭ discharged their wastewater directly into the river. It is thus possible that the houses built in Būlāq throughout the following centuries did the same. Ibn Riḍwān, *Medieval Islamic Medicine*, 106.

⁹². DW91. See edited excerpt in Appendix.

Muzhir and Banū al-Bārīzī were two of the most important bureaucratic families in Cairo throughout the ninth/fifteenth century. In 830/1427, when Mūsā endowed his palace in Būlāq, Badr al-Dīn Ibn Muzhir, the father of Abū Bakr ibn Muzhir, was the *kātib al-sirr* of Sultan Barsbāy, and Nāṣir al-Dīn Muḥammad Ibn al-Bārīzī, *kātib al-sirr* of al-Muʾayyad Shaykh, had died less than a decade earlier.⁹³

Mūsā's palace was also near the Jamiʿ al-Asyūṭī, a mosque that exemplifies the *ahl al-dawla*'s influence on Būlāq's urban development. The mosque had been founded by Shams al-Dīn Muḥammad al-Suyūṭī (d. 749/1348), *nāẓir* of the *bayt al-māl*, in the first half of the eighth/fourteenth century, when Būlāq underwent its first phase of urbanization under Sultan al-Nāṣir Muḥammad. Subsequently, the mosque fell into disrepair until Nāṣir al-Dīn Muḥammad ibn al-Bārīzī restored and reopened it in 822/1419.⁹⁴ Al-Maqrīzī states that Muḥammad ibn al-Bārīzī equipped the Jamiʿ al-Asyūṭī with running water (*ajrā fīhi al-māʾ*). A *sāqiya* situated on the west side of Mūsā's palace, and mentioned in the document as installed by *al-marḥūm* Nāṣir al-Dīn Muḥammad ibn al-Bārīzī, was likely part of this mosque's water system.⁹⁵ Other mosques, hammams, and residential buildings that had been built during Būlāq's initial urbanization and fallen into disrepair between the late eighth/fourteenth and early ninth/fifteenth centuries were also restored and reactivated around the time Jamiʿ al-Asyūṭī was refurbished. Not all the neighbourhoods along the Nile underwent such revitalization after the environmental and economic crises of the eighth/fourteenth and early ninth/fifteenth centuries, however. Of the Nile shore areas urbanized during al-Nāṣir Muḥammad's reign, only Būlāq experienced a new phase of development driven by the investments of the *ahl al-dawla* throughout the ninth/fifteenth century.⁹⁶

In her monograph on the history of Būlāq, historian Nelly Hanna has rightly emphasized that this ninth/fifteenth-century revival of the area was largely connected to its importance as a trade port.⁹⁷ Mūsā's *waqf* document, however, points to an additional element that might have contributed to Būlāq's revitalization. The

^{93.} The *nāẓir dīwān al-inshāʾ* is the same title as *kātib al-sirr*. Martel-Thoumian, *Les Civils*, 41. Badr al-Dīn Ibn Muzhir would remain *kātib al-sirr* until his death in 832/1429. Nāṣir al-Dīn Ibn al-Bārīzī held the post of *kātib al-sirr* between 815/1413 and 823/1420, the year of his death. Martel-Thoumian, *Les Civils*, 250-1 and 269.

^{94.} al-Maqrīzī, *Khīṭaṭ*, 4:121.

^{95.} DW91. See edited excerpt in Appendix.

^{96.} al-Maqrīzī, *Khīṭaṭ*, 3:234-5; Hanna, *An Urban History of Būlāq*, 4-7, 34-35, and 42-47. Al-Maqrīzī affirms that several other areas urbanized on the Nile's shores under al-Nāṣir Muḥammad were abandoned due to the economic crisis and plague outbreak, so by the beginning of the ninth/fifteenth century, almost none of the riverside neighbourhoods survived.

^{97.} Hanna, *An Urban History of Būlāq*, 34.

large palace this secretary endowed is, in fact, indicated in the document as built on a land lot rented as *ḥikr* ('*alā al-arḍ al-muḥtakara*). As previously explained, a *ḥikr* was a form of emphyteutic lease that granted lessees a long-term or permanent lease of a land lot, offering them the opportunity to construct edifices that would subsequently become their property.⁹⁸ Since Mūsā was a *ḥikr*-tenant who built his palace on a *ḥikr*, the palace legally belonged to him, and Mūsā could therefore endow it in his *waqf*. He could not, however, endow the underlying land, which the *waqf* deed explicitly confirms by stipulating that Mūsā's *waqf* included the palace and its connected structures, but not the land on which they stood (*khalā arḍihi fa-innahā muḥtakara*).⁹⁹ Clearly, *ḥikr* leases incentivized the development of deteriorated areas by providing investors with advantageous building plots. Concurrently, these agreements also facilitated participation by investors from a specific socioeconomic background. As Valentine Denizeau and Sylvie Denoix have noted, the concession of *ḥikr* leases was orchestrated by the sultans and their close circle,¹⁰⁰ so any arrangements of this type were the prerogative of the *ahl al-dawla*.¹⁰¹

Mūsā's palace was but one of many buildings that members of the *ahl al-dawla* constructed in Būlāq in the early ninth/fifteenth century, and these building projects transformed this district along the Nile's shore into a prestigious and coveted neighbourhood. This urban development would likely not have occurred had *ḥikr* leases not incentivized the *ahl al-dawla* to invest in costly construction and refurbishment projects that could later be included in their *waqf* foundation. The permanence of these valuable properties in the *awqāf* of the *ahl al-dawla* was not guaranteed, however. The surrender of Musa's palace via *istibdāl* to the *wakīl* of the *bayt al-māl* in 848/1444 demonstrates that these financial opportunities were directly contingent upon the founders' political privilege.

3.1.3.2 Living by the *birkas*

Like the Nile shores of Būlāq, the lands surrounding *birkas*, ponds that filled with water during the plenitude and turned into green orchards and pasture grounds during the winter months, were popular construction sites outside the main urban centres of Cairo.¹⁰² In his monograph *Mutanazzahāt al-Qāhira fī al-ʿaṣrayin al-Mamlūkī wa-l-ʿUthmānī* ("Parks of Cairo in the Mamlūk and Ottoman Eras"), historian

⁹⁸. Baer, "Ḥikr," *El-2 English*; Denizeau and Denoix, "Le sultan promoteur," 175.

⁹⁹. DW91. See edited excerpt in Appendix.

¹⁰⁰. Denizeau and Denoix, "Le sultan promoteur," 175.

¹⁰¹. Indeed, the areas along the Nile's shores leased as *ḥikr* lots were urbanized by the *nās*, a term seemingly used by al-Maqrīzī to refer to the *ahl al-dawla*, as articulated in Chapter 1. Al-Maqrīzī, *Khiṭaṭ*, 3:234-5.

¹⁰². Isoldi, "The *birkas* of Cairo," 377-80.

Muhammad al-Shishtawi has emphasized the social value of the *birkas* as leisure ground for Cairo's population and as residential areas for the wealthy and influential echelons of society throughout the Mamlūk period.¹⁰³ More recently, in an article examining the socio-economic value of these ponds, I highlighted that the areas surrounding the *birkas* were predominantly urbanized by the *ahl al-dawla*, a process significantly influenced by the institutions of *waqf* and *ḥikr*.¹⁰⁴ The *waqf* deeds of Abū Bakr ibn Muzhir and Azdamur min 'Alī Bāy provide concrete examples of this pattern: the *ahl al-dawla* acquired and endowed various properties situated around *birkas*, including residential palaces and hammams.

In addition to his palaces in Ḥārat Amīr Jawān, with the *waqf* deed drafted in Ṣafar 879 (June 1474), Abū Bakr ibn Muzhir endowed an extensive palace on the shore of the Birkat al-Raṭlī, one of the ponds located in the north-western outskirts of al-Qāhira. Due to the document's deteriorated condition, the description of the palace on the Birkat al-Raṭlī is fragmentary. The extant details provide an adequate impression of the residence's extensive dimensions and grandeur, however, for they mention a waterfront (*qayṭūn*) decorated with a wall fountain (*shādhirwān*), as well as a wooden roof painted in gold and lapis lazuli blue. The *waqfiyya* also mentions the presence of gardens of varying dimensions—one of which is indicated as *al-junayna al-kubrā*, "largest garden"—and a horse stable (*iṣṭabl*). In the courtyard, two wells and a waterwheel supplied water to the palace and its domestic hammam, which was equipped with a *maslakh* (made of an *iwān* and *dūr qā'a*) with one water basin (*ḥawḍ*), a *bayt awwal* with another *ḥawḍ*, a toilet, a *bayt al-ḥarāra* with five basins, and a hot-water tub (*maghṭas*). The hammam's rooms featured polychrome marble floors and pierced dome ceilings, and the structure included a furnace (*mustawqad*) and a conduit system that provided water to the tubs (*mayāzīb yatawaṣṣal minhā al-mā' ilā al-iḥwāḍ al-madhkūra*).¹⁰⁵

The document suggests that the large palace on the Birkat al-Raṭlī was not Abū Bakr ibn Muzhir's primary residence. Rather, the palaces endowed in the intramural area of al-Qāhira are explicitly designated as Ibn Muzhir's dwelling (*sakan al-wāqif*), and it seems likely that the Birkat al-Raṭlī palace served as a seasonal residence and venue for important receptions. Indeed, in 886/1481 Abū Bakr ibn Muzhir hosted a spectacular party at Birkat al-Raṭlī to celebrate his sons' circumcisions, and, according to Ibn Iyās, many prominent members of the *ahl al-dawla* (especially high-ranking *amīrs*) gathered at ibn Muzhir's palace for a three-day celebration complete with fireworks,

^{103.} al-Shishtawi, *Mutanazzahāt*, 90-186.

^{104.} Isoldi, "The *birkas* of Cairo," 375-9.

^{105.} DW175.

lanterns, sweets, and delicacies. The historian records the party's grandeur with awe, noting that its light brightened the nights so much that "one could have threaded a needle" (*yukād al-insān an yudkhil al-khīṭ fī khurm al-ibra min 'aẓam al-daw'*).¹⁰⁶ To create this spectacular light display, Ibn Muzhir had sent ten *raṭls* of lamp oil and a tray of delicacies to each of the houses located around the pond,¹⁰⁷ a costly expense given that the area surrounding the Birkat al-Raṭlī was significantly urbanized by the late ninth/fifteenth century.

The urbanization of Birkat al-Raṭlī had begun over a century earlier when, in 725/1325, *amīr* Baktamur, the *ḥājib* of Sultan al-Nāṣir Muḥammad, connected it to the newly excavated Khalīj al-Nāṣirī. Before this, the area around Birkat al-Raṭlī was occupied by little more than a *zāwiya*, a palm groove, and the workshop of a craftsman manufacturing iron weights (*arṭāl*) used for market scales. Once he had connected the area to the Khalīj al-Nāṣirī, Baktamur was granted Birkat al-Raṭlī's lands, which he later endowed in a *waqf* foundation that still survived at the end of the Mamlūk period.¹⁰⁸ As was the case with Būlāq, it was the leasing of this *waqf* land as *ḥikr* that incentivized the construction of palaces around the Birkat al-Raṭlī. Due to the *ḥikr* leases in the area, by the late eighth/fourteenth century, the Birkat al-Raṭlī was surrounded by the palaces constructed by the *nās*.¹⁰⁹

The environmental and politico-economic crisis of 806/1403 temporarily halted the area's urbanization— al-Maqrīzī attests that, by the early ninth/fifteenth century, only the ruins of the palaces stood around the pond.¹¹⁰ It is possible, however, that al-Maqrīzī's portrayal of the Birkat al-Raṭlī's decay was somewhat overstated, or that the area saw a relatively swift restoration. In 817/1414 Sultan al-Mu'ayyad Shaykh confiscated a secretary's palace on this *birka*'s shore, suggesting that the area was reoccupied by then.¹¹¹ By the third decade of the ninth/fifteenth century, members of famous secretary families had palaces in the area: in Ramadan 820 (October 1417) the *ustādār* 'Abd al-Ghanī al-Fakhrī (d. 821/1418) endowed two palaces on the dyke between the Birkat al-Raṭlī and the Khalīj al-Nāṣirī.¹¹² Around the same time, Ṣalāh al-

^{106.} Ibn Iyās, *Badā'ī*, 3:186; Behrens-Abouseif, *Azbakiyya*, 21.

^{107.} Ibn Iyās, *Badā'ī*, 3:186.

^{108.} al-Maqrīzī, *Khiṭaṭ*, 3:287; Ibn Iyās, *Badā'ī*, 1:456; Isoldi, "The *birkas* of Cairo," 372 and 377. Because of *amīr* Baktamur al-Ḥājib's works in the area, the Birkat al-Raṭlī was temporarily renamed Birkat al-Ḥājib.

^{109.} al-Maqrīzī, *Khiṭaṭ*, 3:287.

^{110.} al-Maqrīzī, *Khiṭaṭ*, 3:287.

^{111.} Ibn Iyās, *Badā'ī*, 2:17; al-Shishtawī, *Mutanazzahāt*, 175.

^{112.} al-Shishtawī, *Mutanazzahāt*, 175. 'Abd al-Ghanī al-Fakhrī was part of a family of secretaries of Armenian origin, the Banū Abī al-Faraj, active throughout the first half of the ninth/fifteenth century. See Martel-Thoumian, *Les Civils*, 227-237. The *waqfiyya* 'Abd al-Ghanī al-Fakhrī stipulated in 820/1417 is still extant (DW72).

Dīn Khalīl ibn Kuwayz (d. 823/1420), *nāzir* of the *dīwān al-mufrad* (the bureau in charge of the wages of the sultan's *mamlūks*)¹¹³ under al-Mu'ayyad Shaykh, owned a residence on the shores of the pond.¹¹⁴ In the late ninth/fifteenth and early tenth/sixteenth centuries, the shores of the Birkat al-Raṭlī were still a popular residential quarter inhabited by some of the most important members of the *ahl al-dawla*. For instance, the Banū al-Jī'ān, a family of bureaucrats that held posts in the *dīwān al-jaysh* (the Army Bureau) for over a century, and later Zaynī Barakāt ibn Musā, a famous *muḥtasib* during the reign of al-Ghawrī, owned palaces around the pond.¹¹⁵ The *waqf* deed of Abū Bakr ibn Muzhir also confirms that the environs of the Birkat al-Raṭlī were a prestigious location where high-ranking officials from the ninth/fifteenth-century *ahl al-dawla* established their residential complexes. In the document, a note validating Abū Bakr's ownership of the palace (*makān*) attests that the asset was previously owned by Zayn al-Dīn 'Abd al-Bāsiṭ, the powerful qadi active in the courts of Sultan al-Mu'ayyad Shaykh and Sultan Barsbāy.¹¹⁶

Also the surroundings of the Birkat al-Fil, at the feet of the Citadel, were intensively urbanized by the *ahl al-dawla*. This area was occupied especially by the residential palaces of the military officials.¹¹⁷ In Shawwāl 908 (April 1503), *amīr* Azdamur min 'Alī Bāy endowed two residential complexes around this pond.¹¹⁸ One of these structures included two facing buildings with three *tibāq*, two kitchens, a bathing facility (*mustaḥamm*), and a horse stable. This property was built on a *ḥikr* lot named *ḥikr al-khāzin* after Sanjar al-Khāzin (d. 735/1335), the *amīr* and *wālī* of Cairo who had started the urbanization of the lot in the early eighth/fourteenth century.¹¹⁹ Situated between the mosque of Ibn Ṭūlūn and the Birkat al-Fil, this lot was inhabited mostly by *amīrs* and *mamlūks*, and it was part of the larger *bustān* Sayf al-Islām, a land that belonged

¹¹³. Daisuke Igarashi, "The Establishment and Development of al-Dīwān al-Mufrad: Its Background and Implications," *MSR* 10, no. 1 (2006): 118.

¹¹⁴. al-Maqrīzī, *Sulūk*, 7:11; al-Shishtawī, *Mutanazzahāt*, 175. The Banū al-Kuwayz moved to Cairo from Syria after the ascent of al-Mu'ayyad Shaykh (as was the case of the Banū al-Bārīzī and the Banū Muzhir) and remained active in the sultan's administration until the late ninth/fifteenth century. Martel-Thoumian, *Les Civils*, 239-248.

¹¹⁵. al-Shishtawī, *Mutanazzahāt*, 184-5; Isoldi, "The *birkas* of Cairo," 378. For the Banū al-Jī'ān, see: Martel-Thoumian, *Les Civils*, 295-319.

¹¹⁶. DW175: "al-makān al-kāmil arḍan wa-binā'an ... al-ma'rūf qadīman bi-al-maqarr al-ashraf al-zaynī 'abd al-bāsiṭ". Al-Shishtawī's work confirms the presence of 'Abd al-Bāsiṭ's palace at the Birkat al-Raṭlī. See: al-Shishtawī, *Mutanazzahāt*, 176.

¹¹⁷. Petry, *The Civilian Elite*, 133 and 202; Loiseau, *Maison*, 337.

¹¹⁸. DW241. See also Husayn Mostafa Husayn Ramadan, "Minshā'āt al-amīr Azdamur min 'Alī Bāy. Dirāsa athariyya wathā'iqiyya," *Majallat Kulliyat al-Athār Jāmi'at al-Qāhira* 5, (1991): 184-186.

¹¹⁹. al-Maqrīzī, *Khiṭaṭ*, 3: 38.

to the sultanic *dīwān* and had been converted into a *ḥikr* during the sultanates of al-Zāhir Baybars and al-Manṣūr Qalāwūn.¹²⁰

The partially surviving description of the other palatial complex Azdamur endowed near the Birkat al-Fil reveals that the structure included at least two domestic hammams, the smaller of which was for the harem (*ḥammām ṣuḡhrā bi-rasm al-ḥarīm*), a water fountain, a well and waterwheel, a new garden (*al-junayna al-mustajadda al-inshā'*), a horse stable, and a *maq'ad* overlooking the *birka*.¹²¹ This large palace, which served as Azdamur's main residence, was in the Darb Ibn al-Bābā. This quarter developed within the *bustān* Sayf al-Islām from the early eighth/fourteenth century, specifically after al-Nāṣir Muḥammad granted the area to Āqbughā min 'Abd al-Wāḥid (the same *amīr* mentioned in Chapter 1 concerning al-Nāṣir Muḥammad's large water projects). Āqbughā min 'Abd al-Wāḥid rented this area as *ḥikr* to fund his madrasa near al-Azhar Mosque, thereby encouraging other *amīrs* from al-Nāṣir Muḥammad's court to invest in large construction projects there. In particular, *amīr* Jankali ibn al-Bābā (d. 746/1345) promoted urbanization in the area, which was subsequently named Darb Ibn al-Bābā after him. By establishing a mosque, two hammams, and a market, Jankali ibn al-Bābā paved the way for the urbanization of the area—which was previously raided by neighbourhood brigands (*zu'ar*)¹²²—and eventually transformed it into one of the most prestigious quarters around the Birkat al-Fil.¹²³ As Azdamur's residence demonstrates, by the late Mamlūk period the Darb Ibn al-Bābā was still occupied by eminent political figures. The quarter housed three palaces endowed in the *waqf* of Sultan Qāyṭbāy, the palace and madrasa of *amīr* Azbak al-Yūsufi (d. 904/1498), and the palace of Qāyṭbāy's uncle, al-Zāhir Qanisawh (r. 904-905/1498-1500), just to mention a few.¹²⁴

^{120.} DW241: "*jami' al-binā'in...alā al-arḍ al-muḥtakara bi-l-ḥikr al-ma'rūf bi-bustān sayf al-islām...bi-ḥikr al-khāzin*". al-Maqrīzī, *Khiṭaṭ*, 3: 38 and 241. According to the cadastral survey of Yaḥyā ibn Shākir ibn al-Jī'ān (d. 885/1480), the Birkat al-Fil was part of a *waqf* established by al-Zāhir Baybars for the benefit of the orphans. Ibn al-Jī'ān, *al-Tuḥfa*, 6. This could explain why the surroundings of the Birkat al-Fil were mostly *ḥikr* lands.

^{121.} DW241.

^{122.} The *zu'ar* were brigands in the Syrian and Egyptian urban milieux during the Mamlūk and Ottoman periods. Thierry Bianquis, "*Zu'ar*," in *Encyclopédie de l'Islam en ligne (EI-2 French)*, ed. P. Bearman (Brill, 2010) doi: https://doi.org/10.1163/9789004206106_eifo_SIM_8185; Irwin, "Futuwwa," 163.

^{123.} al-Maqrīzī, *Khiṭaṭ*, 3:208-9 and 3:285; Levanoni, "Water Supply," 187. A hammam close to the mosque of Azbak al-Yūsufi called Ḥammām al-Bābā was still extant at the beginning of the twentieth century. See Bylinski and Bylinski, "Darb Ibn Al-Baba," 205-6.

^{124.} Bylinski and Bylinski, "Darb Ibn Al-Baba," 207-8. In 904/1498, Azdamur replaced Azbak al-Yūsufi (who was too old and weak to undertake the position) as *amīr muqaddam alf* (*amīr* of thousand).

Abū Bakr ibn Muzhir's and Azdamur min 'Alī Bāy's palaces exemplify how the *ahl al-dawla* exploited *ḥikr* lands near bodies of water throughout the Mamlūk period. *Ḥikr* lots by the water incentivized large investments from the *ahl al-dawla*, who parlayed these leases—orchestrated by sultans and their close administrative circle—into lucrative buildings such as residential structures and hammams. These investments not only urbanized these underdeveloped areas but also ultimately transformed them into prestigious and high-demand quarters. This economic process was well known throughout the Mamlūk period and exploited on various occasions. As explained in Chapter 1, when in 721/1321 al-Nāṣir Muḥammad converted an excavation site into the Birka al-Nāṣiriyya and rented its surrounding as *ḥikr*, he intended to reproduce the same dynamics that had led to the urbanization of the Birkat al-Fil's surroundings.¹²⁵ Al-Nāṣir's project proved successful, and it transformed a semi-deserted area into a flourishing neighbourhood, at least until the crisis of 806/1403. It was likely with a similar plan in mind that, towards the end of the ninth/fifteenth century, Azbak min Ṭuṭukh invested enormous capital into creating the Azbakiyya pond and developing an initial urban hub on its shores. The area around this pond later grew so populous that, as stated by Ibn Iyās, it became a city on its own.¹²⁶

3.1.3.3 *Anatomy of a Major Investment: the Development of Azbakiyya*

The establishment of the Azbakiyya quarter further demonstrates how *ḥikr* leases surrounding a body of water attracted investors from the *ahl al-dawla* and favoured the development of suburban areas into prestigious residential quarters. Azbak min Ṭuṭukh's *waqfiyya* offers a valuable insight into the onset of Azbakiyya's urbanization process by describing the first hub built on the pond's shores and the essential facilities that initiated its subsequent development. The buildings listed in the *waqfiyya*, which was issued on the 21st of Ramadan 890 (October 1485), were the result of an extensive and costly construction project started by the powerful *atābak al-'asākir* a decade earlier. Beginning in 880/1475, Azbak invested no less than 200,000 *dīnārs* into transforming an area between the Great Khalīj and the Khalīj al-Nāṣirī that had lain largely dormant since the disappearance of the Baṭn al-Baqara and blockage of the Khalīj al-Dhakar had left it without water almost two centuries earlier. Except for the attempted reuse of an old hammam's conduit in the area recorded by Ibn Iyās, no other projects were undertaken until Azbak excavated an extensive pond there and constructed an urban hub on its shores.¹²⁷

^{125.} al-Maqrīzī, *Khiṭaṭ*, 3:291-2; al-Nuwayrī, *Nihāya*, 33:7; Isoldi, "The birkas of Cairo," 370-1.

^{126.} Ibn Iyās, *Badā'i*, 3:117.

^{127.} Ibn Iyās, *Badā'i*, 3:117-18; al-Sakhāwī, *Ḍaw'*, 2:272. Doris Behrens-Abouseif has stated that the pond covered a surface of fifty *faddān* (approximately 0.3 km²). Behrens-Abouseif, *Azbakiyya*, 26. I was unable to find this figure in other sources. However, the map of Cairo drawn by the French expedition does show that the Azbakiyya pond was indeed an extensive body of water.

In addition to the large amount of capital invested to realize this project, Azbak's new pond and urban quarter required substantial maintenance costs. The funds necessary to cover such expenses were provided by Azbak's *waqf* foundation. The *waqfiyya* of 890/1485 allotted a sum of 3,000 dirhams *fulūs* per year to opening the canal (*khalīj*) connecting the Birka Azbakiyya to the Khalīj al-Nāṣirī during the Nile plenitude. This sum included the expense of cleaning the channel (*kaṣḥ al-bajamūn*) connecting the pond to the cistern in the quarter's mosque.¹²⁸ As stipulated in the deed, the *waqf* foundation also had to cover the maintenance costs of the buildings that formed Azbak's new quarter (*sharaṭa an yabda'a min ri'i dhalika bi-'imāratihi wa-'imārat jamī' mā shamila-hu al-waqf al-madhkūr*). These buildings were organized into two clusters separated by a street. The northern cluster, located directly on the *birka*'s shore, included Azbak's palace (*qaṣr*), the residence (*sakan*) of the buildings' supervisor (*shādd al-'amā'ir*) al-Sayfī Ināl, and a row of ten shops topped with ten apartment units (*ṭibāq*).¹²⁹ The southern cluster included Azbak's mosque, with its ablution facilities, garden, and *maktab-sabīl*, as well as a large commercial/residential building comprised of a bakery (*furn*), a mill (*ṭahūn*), one storage room (*ḥāṣil*), ten shops (*ḥawānīt*), two communal hammams (one for men and one for women), and eighteen apartment units (*ṭibāq*) located above these businesses.¹³⁰

The hydraulic systems required to supply this urban quarter with water made up a significant part of the quarter's maintenance costs. While the *bajamūn* connected to the pond provided water to the mosque's cistern and the horse stable at the *shādd al-'amā'ir*'s residence, the other facilities that needed a constant supply of water relied on a complex set of hydraulic installations.¹³¹ Azbak's palace featured a *sāqiya* system which included a well and a wooden ox-powered waterwheel that deposited water into a plastered receptacle with a copper outlet (*ḥāṣil al-mā' maḍrūb bi-al-*

¹²⁸. DW198. I based my understanding of the term *bajamūn* on the definition provided by: Ahmad Taymur Basha, *Mu'jam Taymūr al-kabīr fī al-alfāz al-'āmmiyya* (Dār al-Kutub, 2002), 2:113. The opening of the Azbakiyya dyke became an eagerly awaited event, and Azbak hosted its festive celebrations at his palace overlooking the pond. See: al-Sakhāwī, *Ḍaw'*, 2:272; Ibn Iyās, *Badā'i'*, 3:219 and 305.

¹²⁹. DW198.

¹³⁰. DW198. A sketch of the quarter's layout is included in: Behrens-Abouseif, *Azbakiyya*, 28-35. For the description of the residential/commercial building, see the edited excerpt in Appendix. The two hammams included in this complex were built similarly to one another. The women's hammam was accessible from the seventh door of the row (starting from the east), while the men's hammam was accessible from the twelfth door. Both hammams include a *maslakh* with four *iwāns* and a fountain in the middle, a *bayt awwal* with one *iwān* and three basins, and a *bayt al-ḥarāra* with four *iwāns*, each of which has its own a basin (*ḥawḍ*). The document reports that the men's hammam was equipped with an extra *maghṭas* and a *ṭahr* in the *bayt al-ḥarāra*.

¹³¹. As the *birka* was only temporarily filled during the plenitude, any water facilities necessitating a constant supply of water were connected to more reliable groundwater resources that required water-lifting devices such as a *sāqiya*.

khāfiqī bi-ma'bar naḥḥāsan).¹³² This water was then channelled through a conduit system (*bayt mayāzīb*) to a marble fountain in the middle of the palace's *qā'a*, a richly decorated reception hall overlooking the pond. From the *qā'a*'s fountain, the water then flowed to the palace's garden,¹³³ which was cultivated with olive, orange, apricot, and pomegranate trees. On the ground floor of the palace, one kitchen (*maṭbakh*) accessible from the courtyard (*dawwār*) was equipped with a water basin fed from the same *sāqiya*, and another kitchen that served the harem was situated near the *sāqiya* and possibly served by it.¹³⁴ There was another *sāqiya* system that featured a well and two wooden wheels lifting water to a large *hāṣil* between the ablution fountain (*mayḍā'*) of the mosque and the large commercial/residential complex that included the two hammams. This *sāqiya* served the *mayḍā'* and garden of the mosque, the two hammams, the bakery, and the mill. This complex hydraulic system included the in-built lead pipes (*aqṣāb raṣāṣ mabniya fī al-jadr*) that provided the water needed for the hammams' eight lead cauldrons (*thamān quḍūr*), and the conduit systems connected to the other facilities.¹³⁵ These hydraulic systems required constant maintenance and upkeep: Azbak's *waqfiyya* specifies that a *sabbāk* (plumber) had to be regularly employed to inspect and repair the conduits connecting the various facilities with the *sāqiya*. In addition, a *sawwāq* had to be hired to supervise and care for the draft animals operating the waterwheels, a *khawlā* (irrigation expert) had to tend to the irrigation of the gardens, and a *farrāsh* (cleaner) was hired to maintain the ablution fountain.¹³⁶ The hydraulic system in this urban quarter was further enhanced by successive endowments (documented in scroll DW198) that expanded Azbak's foundation. In Rajab 899 (April 1494), Azbak added a water trough for animals, new ablution basins (a *baḥra* and a *fasqiya*) for passersby and the quarter's inhabitants, and an additional well and waterwheel system. That same year, more revenues were allocated toward fodder for the *sāqiyas*' draft animals. These new expenses were offset by new income-generating facilities Azbak kept adding to the endowment until the 21st of Ramadan 904 (May 1499), just a few days before his death.¹³⁷

¹³². DW198. See edited excerpt in Appendix. The installation also included a round platform for the draft ox operating the waterwheel (*madār sāqiya*). The ox shelter (*bayt thawr al-sāqiya*) was located near the *sāqiya*.

¹³³. DW198: "*bi-wasaṭ dūr al-qā'a al-madhkūra fasqiyya muthammana ...bi-'ashara fawāwīr wa-ma'bar yajrī al-mā' ilā al-junayna*". See edited excerpt in Appendix.

¹³⁴. DW198. See edited excerpt in Appendix. The palace was also equipped with several toilets (*kursī rāḥa*) and storage for potable water (*bayt azyār*) distributed throughout the building.

¹³⁵. DW198. See edited excerpt in Appendix.

¹³⁶. DW198. See edited excerpt in Appendix. The tasks and wages of these employees will be discussed in more detail in the following chapter.

¹³⁷. DW198. Azbak died on Ramadan the 24th that same year. Ibn Iyās, *Badā'i*, 3:411. In the scroll, later additions to the first deed were recorded in Rajab 899 (April 1494), Jumādā I 903 (January 1498), Sha'bān 903 (April 1498), and Ramadan 904 (May 1499). In one of these later logs, Azbak endowed a library in the Azbakiyya quarter, an addition also mentioned by al-Sakhāwī (*Ḍaw'*: 2:272).

The creation of the Azbakiyya quarter was made possible due to Azbak's considerable financial resources. The initial investments of this *amīr* must have been largely compensated by the success of his project, which allowed him to continually expand the quarter throughout his life. Indeed, after obtaining the land where the Azbakiyya quarter was built from Sultan Qāyrbāy, Azbak profited not only from the income-generating buildings endowed in his foundation, but also from renting the land around the Birka Azbakiyya.¹³⁸ Although no sources explicitly state that Azbak rented the land around the pond as *hikr*, the *waqfiyya* of 890/1485 lists "the lands among which the Birka Azbakiyya and others" (*al-arāḍi allatī minhā al-Birka al-Azbakiyya wa-ghayr-hā*) among the revenue-generating assets of the foundation.¹³⁹ By creating the Birka Azbakiyya and constructing the urban quarter equipped with essential facilities, Azbak transformed the semi-abandoned land into a functional urban space that incentivized other *ahl al-dawla* members to build lucrative construction projects there.¹⁴⁰ This investment strategy resembled the one al-Nāṣir Muḥammad implemented when he constructed the Birka al-Nāṣiriyya, and it was adopted by another high-ranking *amīr* of Sultan Qāyrbāy's court. Between 882/1477 and 884/1480—around the same time as Azbak was constructing the Birka Azbakiyya and its initial urban quarter—*amīr* Yashbak min Mahdī (d. 885/1480), the Great *Dawādār* of Qāyrbāy, sponsored major hydraulic works channelling Nile water to new facilities and a pond between al-Ḥusayniyya and al-Maṭariyya in the north-western outskirts of al-Qāhira. Yashbak's project was truncated by his death, however, and the buildings he had financed north of al-Qāhira were seized by Sultan al-Ghawrī and al-ʿĀdil Ṭūmānbāy.¹⁴¹

The Azbakiyya quarter and its pond were much more successful: beyond the *waqfiyya* recording the early stages of the quarter's development, the historian Ibn Iyās noted that the quarter around the pond was still growing in 901/1496 due to the

^{138.} As explained in Chapter 2, the land on which Azbak realized his project was originally part of an Ayyūbid-era *waqf* of the *khazāʾin al-silāḥ* (the Armoury). Ibn Iyās states that, following the construction of Azbakiyya, Qāyrbāy issued a royal decree by which this land was granted to Azbak. Ibn Iyās, *Badāʾiʾ*, 3:116–7.

^{139.} DW198. See edited excerpt in Appendix.

^{140.} al-Sakhāwī, *Dawʾ*, 2:272. This scholar states that Azbak personally encouraged the rest of the *ahl al-dawla* to settle around the new quarter. Ibn Iyās states that Azbakiyya was still inhabited by high-ranking *amīrs* and other people from the *nās* at the time of his writing (*taskunuhā al-umarāʾ min al-muqaddamīn wa-ghayruhā wa-aʾyyān al-nās ilā al-ān*). Ibn Iyās, *Badāʾiʾ*, 3:413.

^{141.} Behrens-Abouseif, "The Mamluk City," 306; *Cairo of the Mamluks*, 62; "The North-eastern Extension," 171–183; "A Circassian Mamluk Suburb North of Cairo" in *The City in the Islamic World and South Asia*, ed. Dalu Jones and George Mitchell (AARP, 1978), 20–21.

nās' investments in the area.¹⁴² In addition to fostering investment from the *ahl al-dawla*, Azbak created the basis for a functional and heterogeneous urban nucleus: the buildings initially included in the Azbakiyya quarter provided work and housing for less affluent social groups, such as the craftsmen and small merchants who could leased and operate the commercial facilities endowed in Azbak's *waqf* foundation. The presence of these workers essential to the functioning of the quarter's facilities undoubtedly favoured its subsequent expansion.¹⁴³

The rapid development of the Azbakiyya quarter, which al-Sakhāwī compares to that of the area around the Birkat al-Raṭlī, would have yielded considerable revenues for Azbak through the leasing of the lands adjacent to the pond and the facilities in the quarter.¹⁴⁴ According to Ibn Iyās, after Azbak's death his patrimony was seized by Sultan al-Zāhir Qāniṣawh and yielded over 600,000 *dīnārs* in gold and about 100,000 *dīnārs* in other goods. Ibn Iyās claimed that Azbak's capital would have been even larger if the *atābak* had not poured such great sums into the creation of Azbakiyya.¹⁴⁵ His assertion, however, disregards the affluence of Azbak's *waqf* foundation and its assets.¹⁴⁶ As demonstrated also by the Birkat al-Raṭlī and Birkat al-Fil, the ponds of Cairo had enormous economic value as venues for the investments of the *ahl al-dawla*.

3.2 Economic Strategies and Asset Circulation: The Dynamic Trajectories of Palaces and Hammams

The case studies discussed in the preceding section demonstrate how hydraulic installations such as conduits, wells, and animal-powered waterwheels were integrated within the palaces and hammams the *ahl al-dawla* endowed in their *awqāf*. The installation and maintenance of these hydraulic systems required large

^{142.} Ibn Iyās, *Badā'i*, 3:118 and 413. Among the people who invested in the area was Sultan Qāyrbāy, who endowed a house with a garden, a bath, and a trough for animals in Azbakiyya. See: Behrens-Abouseif, "Qāyrbāy's investments," 40.

^{143.} As Petry has noted, the neighbourhoods inhabited by the *ahl al-dawla* had to accommodate workers from less privileged social groups who catered to the needs of the *ahl al-dawla*. Petry, *The Civilian Elite*, 133. On the heterogeneity of the neighbourhoods in Mamlūk-era cities see also: Luz, *The Mamlūk City*, 94. These quarters, however, did not accommodate the poorest social groups, who occupied less privileged areas such as the north-eastern district of Cairo. Sabra, *Poverty and Charity*, 102-107.

^{144.} al-Sakhāwī, *Ḍaw'*, 2:272.

^{145.} Ibn Iyās, *Badā'i*, 3:412-13.

^{146.} Ibn Iyās expresses his clear disapproval of Azbak's project, claiming that "it was not done as an act of obedience to Allah and it did not bring any advantage to the Muslims" (*wa-kāna dhalika fī ghayr ṭā'at allāh ta'ālā wa-lā bihi naf lil-muslimīn*). The historian clearly did not care for the economic value of Azbakiyya.

investments, but these initial expenses were offset by the income the facilities generated. These hydraulic systems were, therefore, a valuable resource in the urban economy, and augmented the value of properties circulating in Cairo's asset market. The continuity of water technologies used to realize these hydraulic systems facilitated their reuse when assets changed hands. During the Mamlūk period, hydraulic systems in residential palaces and hammams dating from before the mid-seventh/thirteenth century experienced varied fates: some were consistently reused, while others were adapted for different functions or repurposed as building material. Some of the case studies demonstrate that urban asset values were increased not only by their hydraulic systems, but also by nearby bodies of water. Within al-Qāhira, for example, the *ahl al-dawla* palaces and hammams mostly occupied the western part of the city, where they benefitted from their proximity to the Great Khalīj, while in the suburban areas, the palaces and hammams built by the *ahl al-dawla* were clustered near the Nile shore in Būlāq, or around ponds such as the Birkat al-Raṭlī and Birkat al-Fil.

The profitable nature of palaces and hammams made them ideal revenue-generating assets for *waqf* foundations, and the high costs associated with their construction made existing palaces and hammams even more attractive to the *ahl al-dawla*. The high economic value of these facilities made them subject to transmissions, appropriations, and exchanges on the Cairene asset market, and some palaces and hammams circulated among the *ahl al-dawla* for long periods of time. In the case of some long-lived assets, both the documentary stratification featuring in the *waqfiyyāt* and the historiographical sources allow one to reconstruct the dynamic trajectories of these palaces and hammams. These trajectories reveal the changing socio-political and economic realities that influenced the transmission, organization, and management of these properties.

3.2.1 Transmitted through Waqf: Hammams as “Inherited” Assets

The *waqf* established by *amīr* Majd al-Dīn Abū Bakr al-Hakkārī in 659/1261 shows that family transmission represented one possible trajectory for lucrative assets such as palaces and hammams. The deed stipulates that, after the death of *amīr* Bahā' al-Dīn Khalīl ibn Muḥammad ibn Malikshaw (the foundation's primary beneficiary), his son Ṣārim al-Dīn and five daughters, Āsiya, Kalūla, Ṣafiya, Maṣūra, and Faṭīma, were to be the main recipients of the *waqf*'s revenues and administrators of its endowed assets. For each of the properties endowed in the foundation, the *waqfiyya* indicates a specific order of the beneficiaries entitled to its revenues after Bahā' al-Dīn's death. The palace indicated in the document as “*dār* Bahā' al-Dīn Khalīl”, for instance, was assigned to Ṣārim al-Dīn first, and then to his offspring after his death. Another

palace (*dār*) was allotted to Bahā' al-Dīn's daughter Āsiya, the wife of the *shaykh al-shuyūkh's* son, while a third palace was allotted to Fāṭima first, and then to Ṣārim al-Dīn after her death. The revenues of a mill endowed in Ḥārat Zuwayla were instead allotted to Ṣafiya and Maṣṣūra.¹⁴⁷

The revenues from the two communal hammams endowed in Ḥārat Qarāqūsh (inside Bāb al-Futūḥ) were jointly assigned to the five sisters. That five women could share the hammams' revenues indicates the profitability of this property. The *waqfiyya* stipulates that the hammam's revenues were to be distributed equally between the sisters during their lifetimes (*bi-al-sawīya baynahunna ayyām hayātihinna*), and that, upon the death of any of the sisters, their share was to be divided equally between the remaining sisters until all were deceased. After all were deceased, the hammam's revenues would pass to their brother Ṣārim al-Dīn and any of Bahā' al-Dīn's children born after the *waqf* had been established. If none of Bahā' al-Dīn's children remained alive, the revenues would be distributed to Ṣārim al-Dīn's offspring and, finally, to the poor if no descendants of Bahā' al-Dīn yet survived. Besides profiting from the revenues of the *waqf's* assets, Bahā' al-Dīn's children controlled the assets as the administrators of Majd al-Dīn's foundation, for the *waqf* deed also designates the beneficiaries as the supervisors of the foundation. After Bahā' al-Dīn's death, therefore, his son Ṣārim al-Dīn and his five daughters jointly administered the endowed assets, including the hammams.¹⁴⁸

This carefully structured succession suggests that, in this case, the *waqf* was employed as a patrimony transmission method—as argued in the previous chapter, Majd al-Dīn's foundation appears to have been a planned agreement favouring Bahā' al-Dīn and his descendants. The role *waqf* served in transmitting patrimonies has been explored by Julien Loiseau, who has argued that this institution provided a flexible legal framework that could be used to bypass the rigid inheritance rules and patrimony criteria generally imposed by Islamic law.¹⁴⁹ In particular, Loiseau has pointed out that *awqāf* allowed the *wāqif* to transmit more wealth to female descendants than Islamic inheritance laws.¹⁵⁰ The transmission criteria outlined in Majd al-Dīn's *waqfiyya* favoured Bahā' al-Dīn's daughters, granting them a degree of control over funds and properties that they would unlikely have achieved by inheritance.

^{147.} DW7.

^{148.} DW7. See edited excerpt in Appendix.

^{149.} Loiseau, "Boy and Girl," 27–30.

^{150.} Loiseau, "Boy and Girl," 33–35.

Endowed around the same time as the properties in Majd al-Dīn's *waqf* foundation, *amīr* Uldūd's (d. after 657/1259) communal hammam also highlights the *waqf*'s role in transmitting patrimony. Uldūd's hammam was included in a *waqf* foundation he established primarily for the benefit of his female descendants.¹⁵¹ While Uldūd, who was an *amīr* of Sultan Aybak al-Turkmānī and the maternal uncle of al-Malik al-Manṣūr 'Alī (r. 655-657/1257-1259), was arrested when Quṭuz rose to power in 657/1259, his hammam remained in the hands of his daughters' descendants until at least the early ninth/fifteenth century.¹⁵² Only after that was the hammam subtracted from Uldūd's *waqf* and transacted into others' *awqāf*—first Qāyṭbāy's and eventually al-Ghawrī's.¹⁵³

The fate of the hammams in Ḥārat Qarāqūsh after Majd al-Dīn's *waqf* foundation was established remains unknown, but Uldūd's hammam illustrates that transmitting patrimony via *waqf* could facilitate long-term family control of profitable assets. In such cases, hammams represented valuable family assets that provided wealth even if a household had lost political influence. According to Carl Petry, designating women as the beneficiaries and supervisors of endowed facilities was instrumental in ensuring the patrimony and economic stability of households.¹⁵⁴ Petry argues that women were, in fact, relatively immune from the political precarity and abusive policies that affected the wealth of the male members of the *ahl al-dawla*.¹⁵⁵ Petry may be understating the impact political instability and changing power networks had on women's material resources, however; after all, he has also noted that al-Ashraf Ināl's wealthy and powerful wife, Khawand Zaynab, had a vast portion of her fortune confiscated when her husband died and al-Zāhir Khushqadam ascended to the throne.¹⁵⁶ Nevertheless, Petry's observations and Majd al-Dīn's and Uldūd's examples reveal that assets transmission through *waqf* implied the inclusion of women descendants of former *ahl al-dawla* members in the control and management of lucrative urban assets, among which communal hammams.¹⁵⁷ Transmitting assets via *waqf* extended control over endowed hammams to individuals whose ties with the

^{151.} al-Maqrīzī, *Khiṭaṭ*, 3:155.

^{152.} al-Maqrīzī, *Khiṭaṭ*, 3:155; *Sulūk*, 1:508; al-Nuwayrī, *Nihāya*, 29:300. The façade of the hammam, restored during the Ottoman period, is still visible today in Muhammad Ali Street. For an architectural description of this hammam see: Edmond Pauty, *Les Hammams Du Caire* (IFAO, 1933), 58.

^{153.} Denizeau, "Conduire l'eau," 387; Behrens-Abouseif, "Qāyṭbāy's investments," 37.

^{154.} Carl Petry, "Class Solidarity versus Gender Gain: Women as Custodian of Property in Later Medieval Egypt," in *Women in Middle Eastern History: Shifting boundaries in Sex and Gender*, ed. Nikki R. Keddie and Beth Baron (Yale University Press, 1991), 130 and 136.

^{155.} Petry, "Class Solidarity," 126-9.

^{156.} Petry, "Class Solidarity," 122.

^{157.} This concurs with Loiseau's assertion that "women played all roles in dealing with the holding and transmission of wealth in Mamlūk society". Loiseau, "Boy and Girl," 37.

ahl al-dawla had shifted or broken due to changes in its composition. As illustrated in the following, this extended control was challenged by the *ahl al-dawla*'s systematic use of *istibdāl* to acquire lucrative *waqf* properties.

3.2.2 Exploiting *Istibdāl*: Appropriation Strategies and Dubiously Lawful Arrangements

3.2.2.1 The case of *Ḥammām al-Qaffāṣīn*

South of al-Azhar Mosque, in the area of Ḥārat Daylam, a hammam exemplified the convoluted trajectory of these water facilities in Mamlūk-era Cairo. Its history reveals how transmission via *waqf* and acquisition via *istibdāl* determined control over these lucrative urban assets. Listed in al-Maqrīzī's topography with the name of Ḥammām al-Qaffāṣīn, this bathhouse was built near the end of the sixth/twelfth century by a *wazīr* of the Ayyūbid Sultan al-Malik al-ʿAzīz ʿUthmān (r. 589-595/1193-1198).¹⁵⁸ In the first half of the ninth/fifteenth century, the long-lived Ḥammām al-Qaffāṣīn was endowed in the *waqf* of the wealthy merchant Nūr al-Dīn ʿAlī al-Ṭanbadī, who managed profitable trades on behalf of Sultan Barsbāy. The foundation, as recorded in another document kept within the Dār al-Wathāʾiq archive, was a self-benefitting *waqf*, and al-Ṭanbadī's children were designated as its beneficiaries and administrators after their father.¹⁵⁹ Following al-Ṭanbadī's death in 836/1432, the hammam became jointly controlled by al-Ṭanbadī's children, who at that point did not benefit from their father's connections in the sultanic court. A few decades later, however, something changed the management of this hammam. As discussed in Chapter 2, at the end of Dhū al-Ḥijja 864 (October 1460), al-Ṭanbadī's children, namely Sharaf al-Dīn Yaḥyā, Badr al-Dīn Muḥammad, Nūr al-Dīn ʿAlī and Zaynab, surrendered the Ḥammām al-Qaffāṣīn via *istibdāl* to al-Ṭanbadī's former eunuch ʿAnbar ibn ʿAbd Allāh, who was then active in the court of Ināl as *nāʾib muqaddam al-mamālīk*.

The *istibdāl*, which is recorded in scroll DW125, describes the status of the Ḥammām al-Qaffāṣīn when it was exchanged. The hammam included a *maslakh* reached via a corridor and furnished with benches around a central *fasqīya*; a *bayt awwal* with one-

^{158.} al-Maqrīzī, *Khiṭaṭ*, 3:153.

^{159.} DW79 contains a record dated the 2nd of Jumādā I 830 (March 1427) that refers to al-Ṭanbadī's *waqf*. This is merely a note recording the addition of one property to al-Ṭanbadī's foundation and it is not the actual *kitāb al-waqf* of al-Ṭanbadī, but it indicates that al-Ṭanbadī's children were designated as the foundation's beneficiaries after his death. The list of al-Ṭanbadī's children mentioned in this record includes Zaynab, Muḥammad and ʿAlī, as well as Ibrāhīm (who is not mentioned in DW125), but it does not include Yaḥyā (who must have been born later). It also specifies that Zaynab, Muḥammad, and Ibrāhīm were the children al-Ṭanbadī had from his wife, while ʿAlī was the son he had from his concubine.

iwān layout equipped with a water basin (*ḥawḍ*); a *bayt al-ḥarāra* with a four-*iwān* layout equipped with a *maghṭas* (hot-water tub), a *ṭuhūr* (ablution fountain), a *jurn* (stone hot-water basin) and four *ḥawḍs*. The hammam included also a furnace (*dabakūniyya*); and an intact well and *sāqiya* system accessible from the *maslakh* via a secondary door. According to the document, the facility was in need of repair and restoration (*muḥtāj lil-‘imāra wa-al-iṣlāḥ wa-al-tarmīm*),¹⁶⁰ but the description mentions only a few specific damage concerns, including the wooden ceiling of the *maslakh* (*saqaf naqī mu‘ayyab*) and the ceiling of the *bayt al-ḥarāra*, while the rest of the structure appears to have been sound.¹⁶¹ Despite these seemingly minor damages, al-Ṭanbadī’s children may have been unwilling or unable to invest in its repair. Ceding the hammam to ‘Anbar via *istibdāl* might have served as a solution for avoiding the financial burden of the restoration. Indeed, as noted in the previous chapter, this *istibdāl* suggests a mutual agreement between al-Ṭanbadī’s children and ‘Anbar, who were still bound by household ties, rather than an actual takeover of the property. Indeed, a few months after the *istibdāl*, on the 15th of Rabi‘ II 865 (December 1460), the Ḥammām al-Qaffāṣīn was granted by ‘Anbar to Zaynab, al-Ṭanbadī’s daughter, via *intiḳāl* (property transfer).¹⁶²

In the same scroll, a record dating from the 3rd of Rabi‘ II 867 (December 1462) indicates that, following ‘Anbar’s death, the hammam was inherited (*awṣā*) by Sharaf al-Dīn Yaḥyā and Nūr al-Dīn ‘Alī, al-Ṭanbadī’s sons.¹⁶³ The record, which indicates al-Ṭanbadī as ‘Anbar’s *mu‘tiq* (enfranchiser), is compliant with Islamic inheritance law, which states that the patrimony of freed slaves goes by default to their manumitters or their manumitters’ heirs.¹⁶⁴ It indicates, however, that at the time the hammam was formally ‘Anbar’s property despite the *intiḳāl* stipulated two years earlier. While the legal and economic motives underlying these successive transfers remain unclear, the records suggest that the hammam remained part of al-Ṭanbadī’s household estate even after being subtracted from the *waqf* foundation. This situation changed, however, when in 867/1462 Sharaf al-Dīn Yaḥyā and Nūr al-Dīn ‘Alī sold the bathhouse to the *wakīl* (agent) of *amīr* Qāyṭbāy. Some years later, on the 28th of Jumādā II 879 (November 1474), the bathhouse was integrated into the *waqf* of Qāyṭbāy, who by that time had ascended to the throne.¹⁶⁵

^{160.} DW125. See edited excerpt in Appendix.

^{161.} DW125. See edited excerpt in Appendix.

^{162.} DW125.

^{163.} DW125.

^{164.} Hagedorn, *Domestic Slavery*, 188.

^{165.} All these transfers are recorded in scroll DW125. For the integration of this hammam into Sultan Qāyṭbāy’s and then Sultan al-Ghawrī’s *waqf* see also: Abouseif, “Qāyṭbāy’s investments,” 36; Denizeau, “Conduire l’eau,” 404-5; ‘Alī Bāshā Mubārak, *al-Khiṭaṭ al-tawfiḳiyya al-jadīda li-Miṣr wa-al-Qāhira wa-mudun-ha wa-bilād-ha al-qadīma al-shahīra* (Dār al-Kutub, 2004), 2:266 and 5:164.

The conditions of the 864/1460 exchange provide insight into the complex reality of *waqf* assets circulating via *istibdāl*. The document indicates that ‘Anbar paid 2,000 golden *dīnārs* for the transfer, which is noteworthy because the exchange of *waqf* properties for cash was legally controversial. In principle, *istibdāl* had to be used to exchange deteriorated *waqf* properties for profitable replacements to revitalize the foundation's revenue. Exchanging *waqf* properties for money was instead considered an ineffective way to revitalize a *waqf*; therefore, as Lenor Fernandes has noted, not all qadis agreed to validate the *istibdāl* of a *waqf* property for money.¹⁶⁶ The *istibdāl* of the Ḥammām al-Qaffāṣīn is remarkable also because of how the sum ‘Anbar paid for the exchange was distributed. The document specifies that just 50 of the 2,000 *dīnārs* ‘Anbar paid were allocated to replacing the hammam, while the remaining 1,950 *dīnārs* were allocated to Abū ‘Abd Allāh Muḥammad ibn al-Ṭarābulṣī, the Ḥanafī chief qadi validating the *istibdāl*.¹⁶⁷ These extreme disproportions suggest, on one hand, that the hammam had great economic potential to justify such a considerable investment and, on the other hand, that ‘Anbar was determined to obtain the hammam even despite the qadi's substantial fee. Therefore, this payment reinforces the view that the *istibdāl* was a strategic household asset manoeuvre that transformed the hammam from a *waqf* property into an inheritable, marketable asset to exempt the foundation from the repair costs.

3.2.2.2 Judicial Connivance, Predatory Practices, and Natural Disasters Shaping Asset Market Dynamics

The substantial sum ‘Anbar ibn ‘Abd Allāh paid to the Ḥanafī Qadi al-Ṭarābulṣī suggests judicial authorities facilitated the circulation of *waqf* properties by validating exchanges and transfers even when their legality was questionable. The *istibdāl* document does not provide further details regarding al-Ṭarābulṣī's complicity in the exchange, but other endowed hammam transfers recorded in the chronicles illuminate the role qadis played in the traffic of *waqf* properties. Al-Maqrīzī, for example, recorded one blatant case of judicial connivance dating from the first half of the eighth/fourteenth century, when Qawṣūn (d. 742/1342), one of the most influential *amīrs* of al-Nāṣir Muḥammad's court, took possession of an area in the southern outskirts of al-Qāhira. At the time, such area contained the palace and hammam of the late Jamāl al-Dīn Aqūsh al-Manṣūrī (d. 710/1310), also known as Qattāl al-Sabu’ (“the Lion Slaughterer”), who had been a powerful *amīr* of al-Manṣūr Qalāwūn.¹⁶⁸ Qawṣūn dismantled Aqūsh's palace to build his own mosque on the site

^{166.} Fernandes, “*Istibdāl*,” 209.

^{167.} DW125. See edited excerpt in Appendix. Denizeau, who refers to the document in a few instances, incorrectly assumes that the entire sum was for the hammam's replacement, ignoring that most of it went to the qadi. See Denizeau, “Conduire l'eau,” 404; “Les Hammams,” 321.

^{168.} Ibn Taghrī Birdī, *Nujūm*, 9:216; *Manhal*, 3:26.

and planned to seize the hammam as well, but this was endowed in Aqūsh's *waqf* foundation. Qawṣūn thus razed part of the bathhouse to acquire it as dilapidated *waqf* property via *istibdāl*, and gathered witnesses to attest before a Ḥanbalī qadi that the hammam was, in fact, in a state of disrepair, thus eligible for exchange. Although one of the deponents testified that he had bathed in the hammam earlier that day, claiming that the structure was intact in the early morning and half-destroyed by forenoon, the qadi disregarded his deposition and validated the *istibdāl*.¹⁶⁹ Al-Maqrīzī does not address the qadi's accountability in this instance, but it is clear that his verdict complied more with Qawṣūn's plans to appropriate the hammam than with his obligation to protect the *waqf* foundation's integrity.

Further chronicle accounts demonstrate that the qadis' acquiescence played a pivotal role in the execution of legally dubious *istibdāls*. Depending on their juridical orientation and personal integrity, qadis responded differently to political pressure. The inherent flexibility of the quadruple system of justice helped unscrupulous individuals strategically acquire endowed *waqf* assets via *istibdāl* by enabling them to select from various qadis the one who would issue a judicial opinion most favourable to their schemes. In 717/1313, for instance, al-Nāṣir Muḥammad wanted to obtain a part of the Birkat al-Fil from al-Zāhir Baybars' *waqf* so that he could enlarge the palace of his *amīr* Baktamur al-Sāqī (d. 733/1333). When the first Ḥanafī qadi he petitioned denied al-Nāṣir Muḥammad's *istibdāl* request, the sultan simply sought and received approval from a different Ḥanafī judge.¹⁷⁰ Similarly, in 879/1474 Yashbak al-Dawādār exchanged 5,000 *dīnārs* for a hall and belvedere (called Qā'āt al-Barābkhīya) overlooking the Nile at Bulāq. This *istibdāl* was validated by the Shāfi'ī Qadi 'Alam al-Dīn Shākīr Ibn al-Ji'ān (d. 882/1477) after the Ḥanafī Qadi Shams al-Dīn al-Amshāṭī (d. 885/1480) had categorically rejected Yashbak's initial requests.¹⁷¹

The judicial decisions that kept profitable *waqf* properties circulating in Cairo's asset market via *istibdāl* were, in most cases, the product of political influence. The preceding chapter's account of how Faṭḥ Allāh ibn Mu'taṣim ibn Nafis obtained the palace in Ḥārat Zuwayla illustrates how political influence enabled members of the *ahl al-dawla* to readily acquire endowed assets. While serving as chief physician, Faṭḥ Allāh resided as a tenant in a palace belonging to al-Maymūnī's *waqf*. Only after

^{169.} al-Maqrīzī, *Khīṭaṭ*, 3:156.

^{170.} al-Maqrīzī, *Khīṭaṭ*, 3:125; Doris Behrens-Abouseif, "Waqf as remuneration and the Family Affairs of al-Nāṣir Muḥammad and Baktimur al-Sāqī," in *The Cairo Heritage. Essays in Honor of Laila Ali Ibrahim*, ed. Doris Behrens-Abouseif (AUC Press, 2000), 57.

^{171.} Ibn Iyās, *Badā'i*, 3:97; Fernandes, "Istibdāl," 207. The episode does not cast a positive light on 'Alam al-Dīn Shākīr ibn al-Ji'ān, who however enjoyed great social and political prestige as a jurist. Marthel-Thoumian, *Les Civils*, 297.

achieving significant political power as *kātib al-sirr* was Faṭḥ Allāh able to acquire the palace through *istibdāl*—a legal manoeuvre also facilitated, according to al-Maqrīzī, by the crisis of 806/1403.¹⁷² His contemporary Jamāl al-Dīn Yūsuf, *ustādār* of Faraj ibn Barqūq, similarly leveraged his influential court position to rapaciously expropriate many urban assets belonging to others' *awqāf* and add them to his own capital.¹⁷³ At Sūq al-Farrāyīn, near al-Azhar, Jamāl al-Dīn seized part of the Ḥammām al-Kharrāṭīn and added it to his endowment to fund the madrasa he had established in Cairo. This old facility, which had already undergone various phases of reuse, was at the time endowed in the *waqf* of amīr Sanjar al-Sarūrī (d. 698/1299), a former *wālī* of Cairo.¹⁷⁴ Jamāl al-Dīn's political power also enabled members of his family to seize lucrative *waqf* assets. His nephew, for instance, seized palaces in Ḥārat Zuwayla and the Ḥammām Ibn 'Abūd, which was built during the reign of al-Malik al-'Ādil I (r. 596-615/1200-1218) and was at the time endowed in the *waqf* for the *zāwiya* of Najm al-Dīn Abū al-Ḥusayn ibn 'Abūd al-Qurashī (d. 722/1322), an influential Sufi *shaykh* during the Sultanate of al-Manṣūr Lājīn (r. 696-698/1296-1299).¹⁷⁵

One further case that occurred in the mid- ninth/fifteenth century solidifies the connection between abuses of power, the acquisition of *waqf* properties, and the circulation of assets amongst successive *ahl al-dawla* networks. In 852/1448, the Shāfi'ī Qadi Muḥammad Walī al-Dīn al-Saftī (d. 854/1450), an influential figure in the court of Jaqmaq, was brought to trial for seizing two hammams, a bakery (*furn*), and some shops (*dakākīn*) located in Ḥārat Zuwayla. These properties were part of the *waqf* foundation for the Taybarsiyya Madrasa, which was established around 709/1309.¹⁷⁶ Earlier that year, al-Saftī had similarly faced trial for acquiring a hammam from a different *waqf* at a significantly undervalued price that was

^{172.} al-Maqrīzī, *Khiṭaṭ*, 3:115-16.

^{173.} al-Maqrīzī, *Khiṭaṭ*, 3:152. Al-Maqrīzī writes about *Ustadār* Jamāl al-Dīn Yūsuf's seizure of properties as "*jumla mā ighṭaṣaba min al-awqāf wa-al-amlāk wa-ghayrihā*," using a term (*ighṭaṣaba*) that implies a forcible or illegitimate appropriation.

^{174.} al-Maqrīzī, *Khiṭaṭ*, 3:152.

^{175.} al-Maqrīzī, *Khiṭaṭ*, 3:148. Al-Maqrīzī explains that these structures were integrated into the enormous residence of Jamāl al-Dīn's nephew. A biography of *Shaykh* Najm al-Dīn Abū al-Ḥusayn ibn 'Abūd al-Qurashī is included in: Aḥmad ibn 'Alī Ibn Ḥajar al-'Asqalānī, *al-Durar al-kāmina fī a'yān al-mī'a al-thāmina*, ed. Sālim al-Karnūkī (Hayderabad, 1929-1931), 2:182. Ibn Ḥajar explains that this *shaykh* offered protection to Lājīn at the mosque of Ibn Ṭūlūn after the assassination of al-Ashraf Khalīl. In gratitude, Lājīn promoted the *shaykh* after gaining the throne.

^{176.} Ibn Taghrī Birdī, *Nujūm*, 15:386; *Hawāḍith*, 178. al-Sakhāwī, *Kitāb al-Tibr al-Masbūk fī Dhayl al-Sulūk*, ed. Najwā Muṣṭafā Kāmil and Labība Ibrāhīm Muṣṭafā (Cairo: Dār al-Kutub wa-al-Wathā'iq al-Qawmiyya, 2002), 2:74-5; Isoldi, "Multifaceted justice," forthcoming.

detrimental to the foundation.¹⁷⁷ Al-Saḥṭī had been able to seize these assets while he enjoyed a prestigious position at court, which entailed supervision over multiple *waqf* foundations.¹⁷⁸ The subsequent trials, where he faced accountability for these abuses of power, instead marked part of his downfall, which stemmed from the rise of his rival, Abū al-Khayr al-Naḥḥās.¹⁷⁹

Together with these abuses of power, environmental factors also contributed to the widespread use of *istibdāl* and the circulation of lucrative assets. The *waqf* foundation for the Ṭaybarsīyya Madrasa, from which al-Saḥṭī had seized two hammams and other properties, had been severely damaged by the environmental crisis of 806/1403, which left some of its buildings in a state of disrepair.¹⁸⁰ The dilapidated state of the foundation, therefore, possibly enabled al-Saḥṭī to seize part of its revenue-generating assets. Seizing assets following environmental crises was not unheard of: the *istibdāl* by which Faṭḥ Allāh was able to seize al-Maymūnī's palace was allegedly facilitated by the natural disasters that destroyed many buildings around the city at the beginning of the ninth/fifteenth century.¹⁸¹ This practice may have been much more widespread, for as Julien Loiseau has observed, the major environmental changes of 806/1403 resulted in many previously endowed *waqf* properties being acquired and reused throughout the ninth/fifteenth century when the *istibdāl* became common practice.¹⁸² Due to their economic, social, and spatial value, many palaces and hammams that had been damaged by natural causes were restored and reused multiple times throughout the Mamlūk period. Hence environmental factors,

^{177.} Ibn Taghrī Birdī, *Nujūm*, 15:384; *Ḥawādith*, 175; al-Sakhāwī, *Tibr*, 2:73. This hammam, located near the south-western gate of Bāb al-Kharq, belonged to the foundation of al-Zaynī Qāsim al-Mu'dhī (d. 854/1450), an officer in the sultanī administration with the role of *kāshif*, the "inspector" responsible for controlling the status of the dykes and canals in the provinces, as explained in Chapter 1. According to al-Sakhāwī (*Tibr*, 2:73), al-Saḥṭī's acquisition of the hammam was confirmed by a document authenticated by the Ḥanafī qadī (*bi-mustanad thābit 'alā al-ḥanaḥī*). Although the document's specific type is not stated, it is reasonable to assume that it was an *istibdāl* given that this was the exclusive legal method for transferring endowed properties from a *waqf* foundation.

^{178.} In 850/1446 al-Saḥṭī had been appointed as *nāzir* of the *bimaristān* al-Manṣūrī, one of the most important *waqf* foundations of Cairo. Al-Sakhāwī, *Tibr*, 1:300; Ibn Ḥajar, *Inbā'*, 4:236. In 851/1448, al-Saḥṭī was appointed as Shāfi'ī chief qadī, a position that implied great influence over the *awqāf* and gave him the possibility to exploit the foundations for his own financial gain. Ibn Taghrī Birdī, *Manhal* 9:300; al-Sakhāwī, *Tibr*, 2:21.

^{179.} al-Sakhāwī, *Tibr* 1:295; Ibn Ḥajar, *Inbā'*, 4:245. Mortel, "The Decline of Mamlūk Civil Bureaucracy," 176. Julien Loiseau has rightly emphasized the political nature of these trials, which Sultan Jaqmaq manipulated for his personal goal of seizing al-Saḥṭī's enormous capital. Loiseau, "L'affaire al-Saḥṭī," 67-78.

^{180.} al-Maqrīzī, *Khiṭaṭ*, 4:102, 231-32 and 301.

^{181.} al-Maqrīzī, *Khiṭaṭ*, 3:115-16.

^{182.} Loiseau, *Maison*, 121 and 379-81; Fernandes, "Istibdāl," 208.

political power relations, and judicial acquiescence all combined to determine the social and economic trajectories of many Cariene assets and their water facilities.

3.2.2.3 *Repeated Appropriation and Reuse: The long-term Trajectories of Lucrative Assets*

The story of the Ḥammām al-Qaffāṣīn, built in the late sixth/twelfth century and still in use at the end of the ninth/fifteenth century after multiple exchanges, is emblematic of the long and intricate trajectories some hammams had as marketable assets. Cairo featured a constellation of hammams that remained in active circulation over extended periods due to the economically-driven intervention of successive *ahl al-dawla* members. The Ḥammām al-Sulṭān, built by the *ustādār* of the Ayyūbid Sultan al-Malik al-Kāmil in the early seventh/thirteenth century, passed through various owners until it was eventually incorporated into al-Nāṣir Muḥammad's *waqf* foundation.¹⁸³ The Ayyūbid Ḥammām al-Ṣāhib, built by the *wazīr* Ṣāfi al-Dīn 'Abd Allāh ibn Shukr al-Damirī (d. 622/1225), was restored and re-opened by the *wālī* of Cairo during the Sultanate of al-Mu'ayyad Shaykh after it had been out of service for several years.¹⁸⁴ Finally, the Fatimid Ḥammām al-Awḥad circulated in the asset market at least until the ninth/fifteenth century. Throughout its long trajectory, this hammam was known by different names—such as Ḥammām Ibn Yaḥyā during the Ayyūbid period and Ḥammām Taybarsī later on—depending on who owned it at the time. When al-Maqrīzī wrote his topography of Cairo, this bathhouse was also called Ḥammām al-Sulṭān.¹⁸⁵

Palaces were subject to analogous successions of transfers. The documents analysed in this chapter offer a valuable insight into the dynamism of these assets' trajectory as well. Abū Bakr ibn Muzhir's *waqf* deed, for instance, includes a statement indicating that in 878/1474 the secretary inherited his palace and its land at the Birkat al-Raṭlī from his late mother Khadīja bint Amīr Ḥājj ibn al-Baysarī.¹⁸⁶ The statement also specifies that Khadīja had purchased the property in Rajab 875 (January 1471), and that the palace had previously belonged to Qadi Zayn al-Dīn 'Abd al-Bāsiṭ.¹⁸⁷ Thus, the property had changed hands several times before it was included in Abū Bakr ibn Muzhir's *waqf* and had been owned by former members of the *ahl al-dawla*.

One of the properties Azdamur min 'Alī Bāy endowed in Ḥārat Zuwayla reveals an even longer and more stratified history of consecutive property transfers. As

^{183.} al-Maqrīzī, *Khiṭaṭ*, 3:149.

^{184.} al-Maqrīzī, *Khiṭaṭ*, 3:149.

^{185.} al-Maqrīzī, *Khiṭaṭ*, 3:148.

^{186.} DW175. The fact that the property Khadīja purchased at the Birkat al-Raṭlī included the land on which the palace was built implies that the lot was no longer part of the *ḥikr* of Baktamur al-Ḥājjib.

^{187.} DW175.

detailed in the *waqf* deed of Shawwāl 19th, 908 (April 1503), the property's stratified ownership history was even reflected in its architectural composition. According to the document, the palace incorporated both old and new features (*al-mushtamil 'alā ṣifāt qadīma wa-mustajadda*), meaning those present during the previous owners' tenure and those subsequently added by Azdamur min 'Alī Bāy. Among the old architectural features were a well, *sāqiya* system, and water basin (*ḥawḍ bi-rasm al-mā'*) located in a courtyard (*raḥba*) that could be reached via the main entrance. The pre-existing features also included a second well and *sāqiya* system with a water tank (*maṣna' bi-rasm al-mā'*) accessible by a staircase, along with a kitchen (*maṭbakh*) and a water conduit system (*al-aqṣāb al-miyāh*).¹⁸⁸ This confirms earlier observations that pre-existing hydraulic systems were often reused when lucrative properties such as palaces and hammams changed ownership.

Azdamur's *waqf* deed also specifies that the palace, which Azdamur acquired via *istibdāl* on the 11th of Ramadan 908 (March 1503), was previously known as the palace of Abū al-Khayr al-Naḥḥās (*al-makān alladhī huwa dār...al-ma'rūf qadīman bi-bayt abī al-khayr al-naḥḥās*).¹⁸⁹ As mentioned in Chapter 2, al-Naḥḥās was an influential member of the *ahl al-dawla* in the mid-ninth/fifteenth century: under the protection of Sultan Jaqmaq, he quickly ascended to a position of great power, and gathered a substantial wealth by taking advantage of the administrative offices entrusted to him.¹⁹⁰ During his career at the court of Sultan Jaqmaq, Abū al-Khayr al-Naḥḥās resided in the palace that was eventually acquired and endowed by Azdamur min 'Alī Bāy. In Jumādā I 854 (June 1450), when Abū al-Khayr al-Naḥḥās's career started to collapse due to the actions of his political adversaries, a group of enraged *mamlūks*

^{188.} DW241. See edited excerpt in Appendix. The hydraulic system is not the only pre-existing element of the palace: other spaces such as the *maq'ad* and the *qā'a* are also listed among the old features of the building.

^{189.} DW241. See edited excerpt in Appendix. DW241, which is a partial copy of Azdamur's original *waqf* record (DW240), does not report the details of the transaction while the original does. Regrettably, I realized that DW240 contained Azdamur's original *waqf* deed only after selecting DW241 for this case study. Information concerning Abū al-Khayr al-Naḥḥās's *waqf* and its constituent assets at the time of his death is unavailable. It is possible that Azdamur min 'Alī Bāy obtained the palace directly from Abū al-Khayr al-Naḥḥās' foundation, but considering how this bureaucrat died in penury, it is also possible that his palace had been seized and endowed by someone else before it was eventually acquired by Azdamur min 'Alī Bāy via *istibdāl*.

^{190.} The ascent of Abū al-Khayr al-Naḥḥās was connected to a dispute that, in 853/1449, led to the downfall and imprisonment of Qadī al-Saftī. After enjoying a prestigious political position, Abū al-Khayr al-Naḥḥās fell into disgrace and was mulcted, imprisoned, stripped of all his administrative offices, and banished to Syria in 854/1450. In 863/1458 al-Ashraf Ināl allowed Abū al-Khayr al-Naḥḥās to return to Cairo and entrusted him with the administration of the *dhakhīra* (the sultan's treasury). Soon after he had been reinstated, however, Abū al-Khayr al-Naḥḥās lost the favour of the Sultan and died in poverty in 864/1459. See: Mortel, "The Decline of Mamlūk Civil Bureaucracy", 175-187; Ibn Taghrī Birdī, *Nujūm*, 16:210.

besieged and looted the palace. The historian Ibn Taghrī Birdī, who recorded the events, states that the palace had passed through the hands of various owners before being acquired and renewed by Abū al-Khayr al-Naḥḥās (*intaqalat ba‘dahu ilā aqwām kathīra ḥattā malakahā al-naḥḥās hadhā wa-jaddadahā*). Ibn Taghrī Birdī also adds that the palace had previously been (*qadīman*) restored by the *ustādār* Ṣalāḥ al-Dīn ibn Naṣr Allāh (d. 841/1438), an influential member of the *ahl al-dawla* in the early-ninth/fifteenth century.¹⁹¹

Thanks to al-Maqrīzī’s *Khiṭaṭ*, it is possible to reconstruct an even earlier stage of this palace’s history as well. Al-Maqrīzī writes that in 824/1421 Ṣalāḥ al-Dīn ibn Naṣr Allāh built his residential palace at Ḥārat Zuwayla on the site of Ardukin’s palace and hammam, the remains of which he incorporated into his *dār*.¹⁹² Azdamur min ‘Alī Bāy’s *waqf* deed reveals traces of this earlier phase, for it indicates that some of the properties bordering his endowed assets still retained Ardukin’s name. For example, a lot Azdamur endowed near the palace bordered on the north and east with a stable which had previously belonged to Ardukin and then to other owners (*al-is-ṭabl al-ma‘rūf qadīman bi-khawand al-sultāna thumma ‘urifa bi-ghayrihā*).¹⁹³ A second lot said to contain Ardukin’s *qā‘a* (*al-qā‘a al-ma‘rūfa bi-khawand*) bordered Azdamur’s properties on the west, and a third lot was bordered by Ardukin’s *qā‘a* on the south, her horse stable on the east, and the *ḥāṣil* of her hammam on the west.¹⁹⁴ When compared against the layout of the area as outlined in Ardukin’s *waqf* deed, there is overlap between the properties endowed by Ardukin in the early-eighth/fourteenth century and those Azdamur endowed almost two centuries later (Fig. 6).

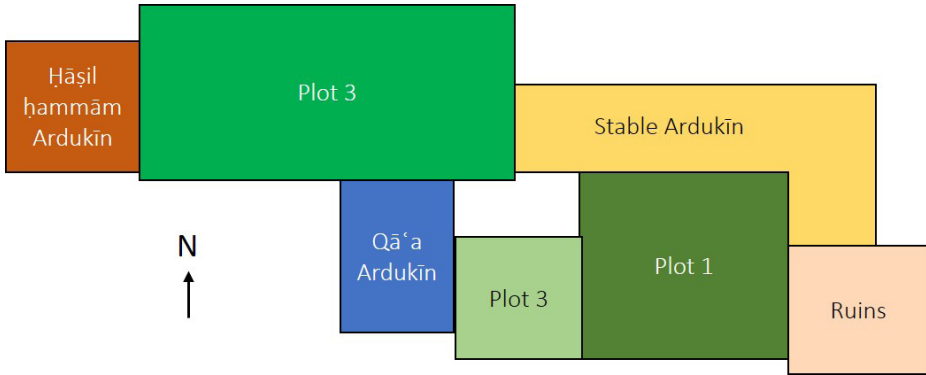
^{191.} Ibn Taghrī Birdī, *Nujūm*, 15:410–11; Loiseau, *Maison*, 588. Ṣalāḥ al-Dīn Muḥammad ibn Naṣr Allāh was the scion of a family, the Banū Naṣr Allāh, that was active in the administration of the Sultanate throughout the first half of the ninth/fifteenth century. Besides the office of *ustādār*, which he held in 824/1421 and again in 827/1423, Ṣalāḥ al-Dīn Muḥammad was also the *nāẓir* of the *bimāristān* al-Manṣūrī in 814/1411, *muḥtasib* in 835/1432, and *kātib al-sirr* in 840/1437. Martel-Thoumian, *Les Civils*, 213–220; Ibn Taghrī Birdī, *Nujūm*, 14:183, 220, 264, 272, and 357.

^{192.} al-Maqrīzī, *Khiṭaṭ*, 3:117 and 148. The hammam seized by Ṣalāḥ al-Dīn Ibn Naṣr Allāh was the one attached to the palace of Ardukin and endowed by her as communal women’s hammam. The previously discussed *istibdāl* related to the pipes of the hammam must have referred to the communal men’s hammam endowed in the same neighbourhood. Al-Maqrīzī writes that the assets of Ardukin were destroyed (*hudimat*) after Ṣalāḥ al-Dīn ibn Naṣr Allāh took possession of them. Ibn Taghrī Birdī, however, describes Ṣalāḥ al-Dīn ibn Naṣr Allāh’s building activity with the word *‘ammara* (*wa-hiya al-dār allatī ‘ammarahā qadīman ṣalāḥ al-dīn bin naṣr allāh*) which broadly denotes the act of restoring, refurbishing, and populating rather than building anew. Ibn Taghrī Birdī, *Nujūm*, 15:411. On the connotations of the word *‘ammara* see: Fernandes, “The foundation of Baybars al-Jashankir,” 23.

^{193.} DW241. This lot is said to have been occupied by the ruins of a palace (*jami‘ al-arḍ allatī kānat ḥāmila lil-dār al-khirba*).

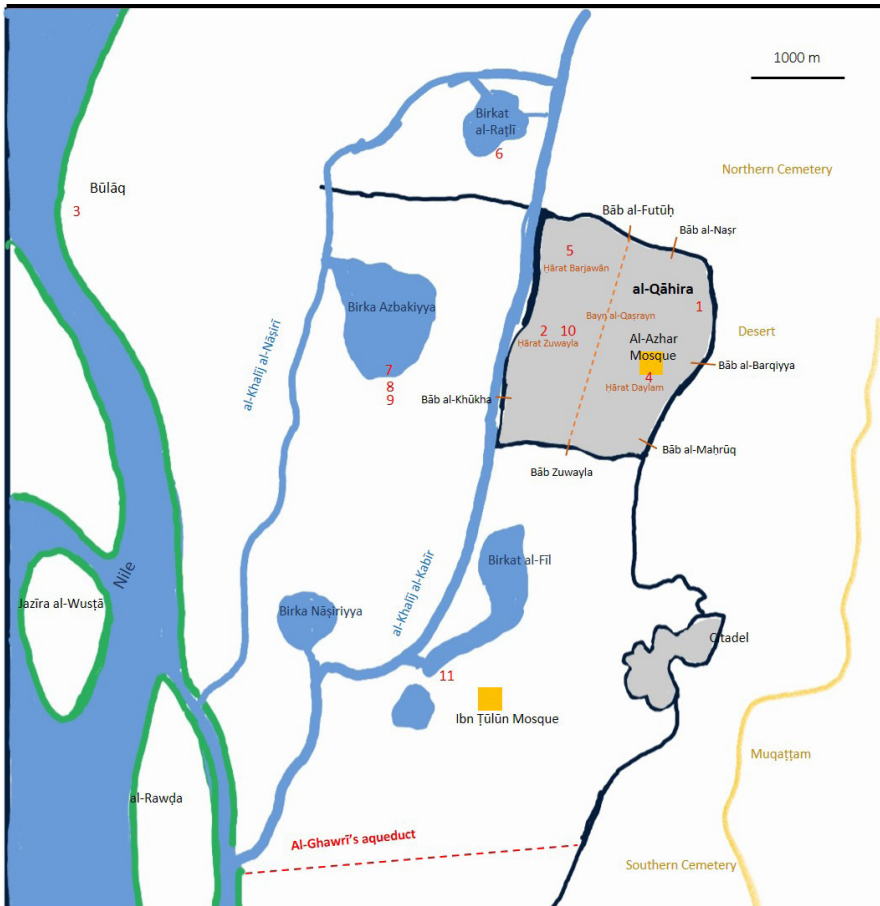
^{194.} DW241.

6. Schematic rendering of Azdamur's endowed plots in Ḥārat Zuwayla. The palace discussed here was located near these properties but bordered with other houses



Since Arduḳīn's palace and hammams were owned previously by *amīr* Sunqur al-Alfī under al-Zāhir Baybars and the Ayyubid *wazīr* Falak al-Dīn al-Masīrī in the early seventh/thirteenth century, this area's properties reveal a complex, diachronic stratification extending over two and a half centuries. As Fernandes and Loiseau have rightly emphasized, *istibdāl* played a pivotal role in the renovation of urban spaces, especially between the eighth/fourteenth and the ninth/fifteenth century, and enabled new generations of investors to reuse urban spaces that contained the ruins of earlier constructions.¹⁹⁵ The properties Azdamur endowed in Ḥārat Zuwayla show that the stratification of urban spaces reflected changes within the composition of the *ahl al-dawla*. The extended sequence of property transfers, in which *istibdāl* played a key role, illustrates the dynamic economic trajectory of palaces and hammams. These structures were continuously endowed, seized, and repurposed by members of successive *ahl al-dawla* networks, circulating as valuable resources within Cairo's asset market over extended periods. These trajectories resulted in palaces and hammams becoming complex organizational realities. Treated as personal investments by the *ahl al-dawla* members who seized and endowed them, these structures were not organized through general, organic, or comprehensive policies. Instead, they responded to contingent and diverse asset market dynamics shaped by the ever-changing composition of the power networks. In addition, palaces and hammams were influenced by intersecting socio-political forces external to the aforementioned dynamics. The following section will explore how sultanic policies and tenants' responsibilities affected the functioning of these properties.

¹⁹⁵ Lenor Fernandes and Julien Loiseau have previously emphasized the role of *istibdāl* in the renovation of the urban space. Fernandes, "Istibdāl," 210-11; Loiseau, *Maison*, 128-30.



7. Location of the lucrative water structures discussed in Chapter 3, namely:

1. Two hammams in Ḥārat Qarāqūsh endowed by Majd al-Dīn Abū Bakr ibn As'ad ibn Yahyā al-Hakkārī (DW7)
2. Two hammams in Ḥārat Zuwayla endowed by Khawand Ardukin (DW26)
3. Domestic hydraulic system on the eastern Nile bank in the residential palace of Mūsā ibn al-Burhān (DW91)
4. Hammam al-Qaffāshīn near Ḥārat Daylam, exchanged by 'Anbar ibn 'Abd Allāh (DW125)
5. Domestic hydraulic system and hammam in Abū Bakr ibn Muzhir's palace at Ḥārat Amīr Jawān (DW175)
6. Abū Bakr ibn Muzhir's palace by the Birkat al-Raṭlī (DW175)
7. Azbakiyya pond (DW198)
8. Domestic hydraulic system at the residential palace of Azbakiyya (DW198)
9. Two hammams in the Azbakiyya quarter (DW198)
10. Domestic hydraulic system in the palace endowed by Azdamur min 'Alī Bāy in Ḥārat Zuwayla (DW241)
11. Azdamur min 'Alī Bāy's palace by the Birkat al-Fil (DW241)

3.3 Concurrent and Intersecting Forces: Sultanic Policies and Tenants' Responsibilities Affecting the Organization and Functioning of Palaces and Hammams

3.3.1 *Awqāfas* Contested Resource

Palaces and hammams circulated in Cairo's real estate market as lucrative urban assets subject to the *ahl al-dawla's* investment and endowment strategies. Concurrently, their operation was also shaped by external socio-economic forces that intersected with the *waqf* system and affected their organizational structure. Ibn Iyās recounts an episode from the early tenth/sixteenth century that offers valuable insight into these intersecting forces and their effects on how palaces and hammams operated. At the end of 906 (mid 1501), Sultan al-Ghawrī, facing pressure from *mamlūks* demanding their compensation and a critical shortage of Treasury funds, resorted to extracting revenues from *waqf* foundations to pay his recruits. In Muḥarram 907 (July 1501), during the chief qadis' New Year visit to the Citadel, al-Ghawrī unveiled his plan to fund the army by confiscating one year's revenue from every *waqf* foundation. This decision would have left the foundations with only the bare minimum to finance religious ceremonies (*sha'ā'ir*).¹⁹⁶ The Shāfi'ī, Mālikī, and Ḥanbalī chief qadis all opposed the sultan's proposal—the Ḥanbalī qadi objected so vehemently that al-Ghawrī, visibly annoyed, replied: "Then if the *mamlūks* get on their horses and demand their alimony from me, I will send them to your house and you'll talk to them with your know-how!"¹⁹⁷ The session ended with the judges departing considerably dissatisfied. Later that day, however, the Ḥanafī Chief Qadi 'Abd al-Barr ibn al-Shiḥna (d. 921/1515) returned alone to the Citadel and approved al-Ghawrī's decision. Following this, the sultan assembled the *amīrs* and issued the order to seize one year's revenue from every *waqf* foundation, including the largest ones. Palaces and hammams were among the urban assets from which such revenues were to be collected.¹⁹⁸

All the *waqf* administrators, including women, were instructed to deliver the requested amount to the palace of Qayt al-Rajabī, the *atābak al-ʿasākīr*, or the palace of the Secretary of the Treasury (*wakīl bayt al-māl*). In addition, al-Ghawrī entrusted eight *amīrs*, among them Azdamur min 'Alī Bāy, with collecting revenues from Muslim, Jewish, and Christian trusts.¹⁹⁹ A few days later, on the 8th of Muḥarram 907 (July 1501),

^{196.} Ibn Iyās, *Badā'ī*, 4:13-14.

^{197.} Ibn Iyās, *Badā'ī*, 4:14 (translation of the quote is mine).

^{198.} Ibn Iyās, *Badā'ī*, 4:14-15.

^{199.} Ibn Iyās, *Badā'ī*, 4:15-16; Carl Petry, "Late Mamlūk military institution and innovation," in *The Cambridge History of Egypt I*, ed. Carl Petry (Cambridge University Press, 2008), 485.

a large group of commoners (*jamā'a kathīra min al-'awāmm*) approached Qayt al-Rajabī after the Friday prayer, to lament that because of al-Ghawrī's decision to seize a year's rent from every *waqf*, the foundations were requiring their property tenants to pay ten months' rent in advance, an amount they could not afford. When Qayt al-Rajabī ignored their pleas, the crowd became tumultuous. The *mamlūks* escorting Qayt al-Rajabī drew their swords, and began violently repressing the incipient popular revolt in clashes that lasted until the evening. In the meantime, local brigands (*zu'ar*) took advantage of the chaos to loot shops that had been left unattended by shopkeepers joining the protests. The following day, a second group of commoners (*sūqa*) from Ṣalība Street approached Azdamur min 'Alī Bāy to reiterate their complaints about al-Ghawrī's decision. Unlike Qayt al-Rajabī the day before, Azdamur heeded the commoners' appeal and presented it to al-Ghawrī, who reduced the sum demanded from ten to seven months, thereby temporarily alleviating the tension.²⁰⁰

This episode constitutes a clear instance of sultanic encroachment upon *waqf* foundations, aimed at exploiting endowed property revenues to alleviate deficits of the *bayt al-māl*. By the late Mamlūk period, the aggregate of *waqf* foundations had evolved into an economic power more prosperous than the Treasury. The idea to subsidize the *bayt al-māl* with funds seized from *awqāf* had been proposed as early as the reign of al-Ashraf Qāyrbāy. During a meeting at the Citadel in Dhū al-Qa'da 872 (May-June 1468), the *kātib al-sirr* Abū Bakr ibn Muzhir, addressing the qadis and caliph on behalf of the sultan, conveyed that an impending military campaign against Shah Suwār (d. 877/1472) required funding, but since the *bayt al-māl* was empty, the sultan wanted to seize funds from the more affluent *awqāf* in Cairo, leaving them only with the money necessary to fund the ritual ceremonies (*sha'ā'ir*). On this occasion, the Ḥanafī Qadi al-Āqṣarā'ī strongly opposed Qāyrbāy's decision, arguing that instead of seizing the money from the foundations, the sultan should tap the riches of the *amīrs*, the *jund*, and “the jewels of the ladies”—in other words, the capital of the *ahl al-dawla*.²⁰¹ Despite al-Āqṣarā'ī's objection, Qāyrbāy extracted seven months' revenue from the *awqāf*, setting a precedent that, according to Ibn Iyās, al-Ghawrī followed when he seized *awqāf* revenues a few decades later.²⁰² This type of sultanic interference in the *awqāf*'s economy stemmed from the *waqfization*—the widespread conversion of Treasury resources into *waqf* properties—and occurred outside both established *waqf* law and the asset market dynamics examined above, for sultans seized resources from the *awqāf* not through confiscation or *istibdāl* but by temporarily diverting revenues.

^{200.} Ibn Iyās, *Badā'ī*, 4:17.

^{201.} Ibn Iyās, *Badā'ī*, 3:14.

^{202.} Ibn Iyās, *Badā'ī*, 4:17.

Ibn Iyās' account also shows that al-Ghawrī's decision to seize *awqāf* revenues greatly affected the tenants who rented the foundations' properties. The imposition on *awqāf* administrators to surrender one year's revenue resulted in a fiscal burden that fell upon the tenants of the foundations' revenue-generating properties, obliging them to pay amounts exceeding their financial means. To clarify, the people Ibn Iyās designates as "commoners" (*'awāmm*) or "subjects" (*sūqa*) did not represent the poorest strata of Cairene society. In his record of the clashes between the commoners and Qayt al-Rajabī's *mamlūks*, Ibn Iyās recounts that a silk merchant who had left his shop unattended to join the protests was robbed of 500 *dīnārs*, candles, fruits, and sugar.²⁰³ This indicates that the tenants protesting against the sultan's extortion of *waqf* revenues were, at least in part, traders and craftsmen of average or above-average financial means. Nonetheless, their businesses would have been severely impacted by the demand for ten-month's rent. These tenants were not without political capital either: their ability to protest against the sultan's decision and negotiate with authorities through Azdamur min 'Alī Bāy demonstrates that they had considerable political agency. As their pleas successfully influenced the sultan's resolution to reduce the amount of revenues extracted from the *awqāf*, the political agency of the tenants was clearly crucial to the foundations' economic stability and survival. Thus, the episode reveals that the *awqāf* resources were subjected to socio-political forces beyond the investment strategies of the *ahl al-dawla*— including both sultanic financial decrees and the politico-economic agency of the tenants and business owners who operated the *waqf* assets. The functioning of palaces and hammams endowed in the *awqāf*, therefore, was continuously shaped by various social and political forces that intersected with and, at times, competed against the interests of the founders.

3.3.2 Palaces as political spaces

In his account of al-Ghawrī's 907/1501 systematic extortion of *waqf* revenues, Ibn Iyās mentions that the palaces of Qayt al-Rajabī and the *wakīl bayt al-māl* were designated as revenue collection points. Using residential palaces as spaces for administrative operations was not uncommon: in fact, throughout the Mamlūk period the residences of the *ahl al-dawla* regularly served as venues for the official activities of the sultanic administration. The practice of keeping official documents at the premises of the various chancellery officials, rather than in a centralized archive, stemmed from this common use of *ahl al-dawla* residences as administrative venues.²⁰⁴ An episode documented by al-Maqrīzī demonstrates that the residences of the *ahl al-dawla* were used as decentralized offices of the sultanic administration as early as the Sultanate

²⁰³ Ibn Iyās, *Badā'ir*, 4:17.

²⁰⁴ Hirschler, "From Archive to Archival Practices," 17-18.

of al-Nāṣir Muhammad. In 721/1321, when a fire started in Khuṭṭ al-Shawwā'in, al-Nāṣir Muhammad became greatly worried for the sultan's provisions (*ḥawāṣil sulṭāniyya*) kept at the palace of the *nāẓir al-khawaṣṣ*, located dangerously close to the flames. Among the *amīrs* who hastened to extinguish the fire, Baktamur al-Sāqī and Arghūn al-Nā'ib devoted themselves to transferring the sultan's provisions from the *nāẓir al-khawaṣṣ*'s palace to that of his son, which was in another quarter.²⁰⁵

The use of the *ahl al-dawla*'s residential palaces as political spaces had important organizational implications that are relevant for the argument of the present chapter. The need to make these residences suitable for receiving other important members of the *ahl al-dawla* resulted in the construction of palaces with luxurious and costly features, among them the hydraulic systems and facilities (fountains, hammams, kitchens, and gardens) discussed here. The palaces' political function likely influenced location choices as well, as prestigious areas, such as those surrounding *birkas*, may have been considered more suitable for official receptions. Indeed, the palaces Azbak and Yashbak built towards the end of the ninth/fifteenth century were the venues of sumptuous celebrations and sultan's visits.²⁰⁶ In addition, using residential palaces as loci of the sultan's administration may have led individuals connected to the same chancery branches to cluster their palaces in the same area, as demonstrated by the placement of Mūsā al-Burhānī's residences near those of his patron, Qadi 'Abd al-Bāsiṭ.²⁰⁷

Furthermore, the common use of palaces as political offices resulted in some of them, including those endowed in *waqf* foundations, becoming associated with specific *dawla* offices, especially military ones. This meant that sultans assigned specific palaces to specific office holders regardless of the conditions regulating the palace's respective *waqf*. After the death of Azbak min Ṭuṭukh, for instance, the sultan allocated Azbak's palace in Azbakiyya to the person appointed as *atābak al-'asākir* (the same office Azbak had held).²⁰⁸ In Shawwāl 907 (April 1502), therefore, Qayt al-Rajabī moved into Azbak's former residence.²⁰⁹ Comparably, the palace Azdamur min 'Alī Bāy endowed at the Birkat al-Fīl was occupied, immediately after his death in

²⁰⁵. al-Maqrizī, *Khiṭaṭ*, 4:443. On the use of *dawla* officials' residential palaces as storage spaces and archives see also: Loiseau, *Maison*, 334.

²⁰⁶. Ibn Iyās, *Badā'ir*, 3:118, 219; Behrens-Abouseif, "The North-eastern Extension," 25. Due to the excessive popularity of the areas around the Birkat al-Raṭlī, al-Ghawrī forbade his secretaries (*mubāshirīn*) from investing in residences there in 917/1511, claiming that too much of his money had been wasted for that purpose. Ibn Iyās, *Badā'ir*, 4:234.

²⁰⁷. DW91.

²⁰⁸. al-Shishtawī, *Mutanazzahāt*, 155.

²⁰⁹. Ibn Iyās, *Badā'ir*, 4:29.

913/1507, by the newly appointed *dawādār* Ṭūmānbāy.²¹⁰ Palaces built and endowed throughout the eighth/fourteenth century were also occupied by consecutive generations of military officials: for instance the palace of Qawṣūn, built between 730/1330 and 737/1337 was assigned to *amīr* Shaykhū al-‘Umārī (d. 758/1357), and later to *amīrs* Ināl and Khushqadam, before eventually being occupied and enlarged by Yashbak min Mahdī during the Sultanate of Qāyṭbāy.²¹¹

Ghazwan Yaghi designated as *quṣūr al-waṣā’if* (“palaces of the offices”) the palaces that were consistently assigned to specific office holders, which included also palaces embedded in *waqf* foundations such as those of Azbak and Azdamur.²¹² The allocation of these properties to high-ranking military functionaries occurred outside the legal framework of the *awqāf*, however. The sultans’ involvement in assigning these palaces implies that they maintained some jurisdiction over *waqf* assets even when the *shurūṭ* the endowers stipulated did not explicitly endorse the sultans’ actions. Hence, the management of these palaces and their respective water facilities was not solely the prerogative of a *waqf*’s endower or administrator but involved the most powerful agents in the *dawla* as well. Given that large *waqf* foundations such as Azbak’s and Azdamur’s were administered by office holders from the *ahl al-dawla* (such as the second *dawādār* and the *dawādār kabīr*), it is clear that the *dawla* was involved to a considerable extent in the operation and exploitation of endowed palaces. In the context of endowed communal *hammams*, the involvement of local workers in their daily functioning added further complexity to the social stratification of their management.

3.3.3 Hammams, Ḥammāmīs and Muḥtasibs

Although differently regulated, also the communal hammams embedded in *waqf* foundations presented a complex management configuration. The daily operation of these sophisticated and expensive structures, endowed as lucrative facilities in the *awqāf* of the *ahl al-dawla* and circulating throughout extended periods in the real estate market of Cairo, involved socio-economic actors other than the endowers and the *waqf* administrators. The role of these actors, however, is not explicitly articulated in the *waqf* documents, which do not provide information regarding the daily management and upkeep of the income-generating structures. While the foundations were responsible for ensuring the structural integrity and financing the necessary restorations of the revenue-generating properties, the daily running of these structures was a responsibility of the tenants. In particular, communal

^{210.} Ibn Iyās, *Badā’i’*, 4:121.

^{211.} Yaghi, *al-Quṣūr*, 29; Loiseau, *Maison*, 348.

^{212.} Yaghi, *al-Quṣūr*, 29-30; Loiseau, *Maison*, 341-351.

hammams were rented to traders, the *ḥammāmīs*, in charge of operating these facilities, opening them to the public, collecting the entrance fees from the visitors, and hiring the necessary staff.²¹³

Ḥisba manuals, with their meticulous lists of items subject to the *muḥtasib*'s inspection within communal hammams, constitute the most insightful source for reconstructing the daily functioning of these facilities and the role of the hammams' employees. These sources reveal that the operation of hammams typically required a variety of attendants for different daily tasks: *sidr* sellers at the door of the hammams provided bathers with the herb used for washing; the *muzayyin* (barber) shaved bathers; the *ballān* (bath attendant) cared for the bathers and prepared their cleaning products; the *mudallik* (masseur) rubbed bathers with a dried pomegranate peel scrub; and *waqqādūn* oversaw the hammam's furnace. Meanwhile, the *ḥammāmī*, also called the *dāmin al-ḥammām* ("guarantor of the bathhouse"), was in charge of opening the hammam before the morning prayer so that people could perform their ritual ablutions, in addition to other managerial tasks such as procuring towels, *sidr* leaves, and potable water for the bathers.²¹⁴ As the hammam's tenant, however, the *ḥammāmī*'s managerial responsibilities must have been much broader. In addition to paying a rental fee for the facility, the *ḥammāmī* was likely in charge of paying the hammam employees' salaries.²¹⁵ Some of the hammam's employees may have received monetary compensation for their services directly from customers, but others, like the furnace operators, must have relied exclusively on the salary provided by the *ḥammāmī* as they had no interactions with visitors. Similarly, any expenses not directly funded by the *waqf* foundation, such as fuel for the hammams' furnaces, the cost of draft animals (and their fodder) for the *sāqiya*, and the salary for the *sawwāq*, must have fallen to the *ḥammāmī*.²¹⁶

As Denizeau has correctly observed, the numerous expenses of operating a bathhouse would have been economically sustainable only if the income of the facility substantially exceeded its rental price.²¹⁷ A hammam's income depended on both the entrance fee, potentially set by the *ḥammāmī*, and on the number of bathers visiting the facility. Unfortunately, sources offer scant details regarding these aspects. Entrance fees may have been different from one hammam to another. The

²¹³. Warner, "Taking the Plunge," 51; Denizeau, "Conduire l'eau," 411. Ardukin's *waqfiyya* (DW26) indicates the presence of an apartment for the *ḥammāmī* (not included in the foundation) near the men's hammam endowed in her *waqf*. See edited excerpt in Appendix.

²¹⁴. Ibn al-Ukhuwwa, *Ma'ālim*, 242; Ibn Bassām, *Nihāya*, 321-2.

²¹⁵. Denizeau, "Conduire l'eau," 414.

²¹⁶. Denizeau, "Conduire l'eau," 414.

²¹⁷. Denizeau, "Conduire l'eau," 414-16.

waqf foundation Baybars al-Jāshankīr established in 707/1308 provided a hammam entrance allowance of one silver *dirham* per month to each Sufi dwelling at his *khānqāh* and each resident of the *ribāṭ* (hospice) endowed in the foundation.²¹⁸ Interestingly, Barqūq's *waqf* deed, drafted almost eighty years later (in 788/1386), also stipulates one silver *dirham* as the monthly allowance provided to each Sufi at his *khānqāh* to cover the hammam's entrance fee.²¹⁹ The similarity of these figures, however, may simply be indicative of a customary practice followed by *waqf* foundations rather than a standard hammam entrance fee, and it is also possible that non-Sufi visitors paid a higher price to enter the hammams. Interpreting these figures is further complicated because we cannot know how frequently Sufis visited the hammams, making it impossible to determine if one silver *dirham* represented a single-entrance fee or covered the cost of multiple visits. In general, however, it is clear that a hammam's income depended on variable factors (most significantly, the number of visitors and each visitor's bathing frequency) that were not entirely under the *ḥammāmī*'s control. Thus, operating hammams represented considerable financial risk and required the ability to absorb any losses due to these variables, implying that a *ḥammāmī* had considerable economic resources and was not a low-income labourer.

Ḥisba manuals also indicate that the responsibilities of the hammam managers encompassed not only financial matters but also the hygienic conditions of their hammams, an aspect to which these sources devote a great deal of attention. Indeed, *ḥisba* manuals urge the *muḥtasib* to inspect bathhouses "at every moment" (*fī kull waqt*) to ensure the water in the tubs is refreshed daily, the tubs are washed every night, the structure is constantly fumigated with incense, the walls are washed with clean water, and the floors are brushed and wiped to remove any slippery residue such as *sidr* powder and marsh-mallow roots (*khaṭmī*).²²⁰ The manuals even instruct the *muḥtasib* to verify that the hammams' outlets are stopped using clean rugs or

²¹⁸. DW23. Fernandes, "The Foundation of Baybars al-Jashankir," 26.

²¹⁹. Saleh Lamei Mostafa, *Madrasa, Ḥānqāh und Mausoleum des Barqūq in Kairo* (Verlag, 1982), 135; Denizeau, "Conduire l'eau," 417.

²²⁰. Ibn al-Ukhuwwa, *Ma'ālim*, 241-2; Ibn Bassām, *Nihāya*, 321-22. Ibn Bassām's manual recommends that *muḥtasibs* determine whether the water in the tubs has been changed by comparing the weight of a vessel filled with clean water to the weight of another identical vessel filled with a sample of water from the hammam's tubs. If the latter weighed more, the water in the tubs had not been changed and was contaminated by dirt and residue. *Sidr* leaves and the marsh-mallow roots (*khaṭmī*) were used as soap by bathers and bath attendants. These materials were sold in the market but were also available in the hammams for visitors (Ibn al-Ukhuwwa, *Ma'ālim*, 242). *Sidr* leaves sellers are also mentioned in: Ibn al-Ukhuwwa, *Ma'ālim*, 245-6. Besides these two cosmetics, Ibn Bassām's *ḥisba* manual also mentions dried pomegranate skin powder, used by bath attendants to scrub and massage the customers, and a mix of arsenic and calx used as a (whitening?) mask. Ibn Bassām, *Nihāya*, 322.

palm fibres rather than dirty combings of hair, that the water tanks, cauldrons, and conduits are regularly checked and cleaned of slime or sediment, and that wood is used to fuel the furnaces rather than the much cheaper but dirtier dung (*samād*).²²¹ Although these hygienic standards were, according to the *ḥisba* manuals, controlled by the *muḥtasib*, the *ḥammāmī* must have been responsible for implementing them. According to the *ḥisba* manuals, the *muḥtasib* was expected to order the hammams' managers to comply with these hygiene rules (*yanbaghī an ya'murahum al-muḥtasib*).²²² Part of a *ḥammāmī*'s duties may have included restricting visitor entry if they were too unhygienic. Indeed, some *ḥisba* manuals indicate that visitors who had handled malodorous things, such as fishmongers or transporters of dung and corpses, should be asked to wash themselves before being admitted to the hammam in order not to compromise its smell.²²³

While it is not possible to ascertain whether the hammams' staff regularly complied with the rules outlined in *ḥisba* manuals, these sources demonstrate that the hammams' daily operation significantly depended on the *ḥammāmīs*' management. In addition, the *ḥisba* manuals imply that, theoretically at least, the *muḥtasib* retained a substantial degree of jurisdictional authority over how hammams were managed. In particular, the instructions listed in these books stress the moral nature of the *muḥtasib*'s control over the hammam, for they invite the market inspector to rebuke hammam attendants who uncovered their loins or touched their customers' private parts, specifying that all hammam attendants must be wrapped in a towel that covered the area between their navel and their knee. In addition, the manuals reproach women's lascivious behaviour at hammams, especially for their trend of wearing revealing clothing at the bathhouse, and also conversations in the hammams in general (*yukrah al-kalām fī al-ḥammām*).²²⁴ Other sources (that are not prescriptive but narrative), however, suggest that in reality these rigid moral rules could be overlooked. For example, in *al-Mutayyam wa-al-Ḍā'i' al-Yutayyim* ("The man Distracted by Passion and the Little Vagabond Orphan"), a humorous shadow play written by Ibn Dāniyāl (d. 710/1311), a hammam is the setting of a homoerotic courtship that does

^{221.} al-Shayzarī, *Nihāya*, 257; Ibn Bassām, *Nihāya*, 323. Al-Shayzarī's manual also indicates that the attendant in charge of cleaning the water tanks must enter them with clean feet to avoid contamination.

^{222.} Ibn al-Ukhuwwa, *Ma'ālim*, 241.

^{223.} al-Shayzarī, *Nihāya*, 257; Ibn al-Ukhuwwa, *Ma'ālim*, 241; Ibn Bassām, *Nihāya*, 321.

^{224.} Ibn al-Ukhuwwa, *Ma'ālim*, 241-2 and 244. Ibn Bassām, *Nihāya*, 321-2. Ibn al-Ukhuwwa's concern about women's behaviour in the hammam echoes the complaints of Ibn al-Ḥajj (*al-Madkhal*, 2:172), who warned against Muslim women exposing themselves to women of other faiths because they could describe them to the men of their own religious communities. While religious scholars restricted women's visits to hammams to a few permissible times, evidence suggests that women, particularly the affluent ones, visited bathhouses more frequently. The presence of hammams exclusively for women reinforces this idea. Warner, "Taking the Plunge," 53-4 and 66-7; Denizeau, "Conduire l'eau," 418-19.

not comply with the *muḥtasib*'s moral guidelines.²²⁵ Similarly, the obituary of al-Saḥfī written by al-Biqā'ī (d. 885/1480) includes a spicy description of the qadī's requests for four bath attendants to splash and rub his private parts during nighttime visits to the hammam when, according to the *ḥisba* manuals, hammams should be closed because of the demons' activity.²²⁶ While these sexually-charged literary accounts are possibly an intentional exaggeration, they suggest that the reality of the hammams did not necessarily comply with the *muḥtasib*'s moral regulations.

The extent to which hammams complied with the moral regulations described in *ḥisba* manuals remains an open question, but the mention of hammams and their staff in these sources indicate that these realities fell, to a certain extent, under the authority and jurisdiction of the *muḥtasib*. As throughout the ninth/fifteenth century the *muḥtasib*'s role became increasingly tied to sultans' fiscal agendas, his control over the hammams may have become more centred on tax collection than moral regulation. Regardless, the *muḥtasib*'s interaction with communal hammams, whether it was moral or fiscal in nature, represents a further social and political factor that affected their daily management. In her evaluation of the *muḥtasib*'s role, Denizeau concludes that Mamlūk-era communal hammams were tightly regulated by the "State" and responded to precise regulations.²²⁷ The present analysis, however, reveals instead that Mamlūk-era hammams were venues for investment that operated within a complex, heterarchical, multilayered, and intricate economic and institutional framework. This framework involved the *ahl al-dawla*, traders, customers, and the *muḥtasib*, and its dynamics were further shaped by Cairo's asset market, environmental changes, and the diverse social, political, and economic agendas of *wāqifūn*, administrators, tenants, and courtly networks.

3.4 Conclusions

Residential palaces and communal hammams were endowed throughout the Mamlūk period as revenue-generating assets, the lease of which produced a substantial and stable income for the *ahl al-dawla*'s *waqf* foundations. The analysis of *waqf* documents, enriched by data found in the sources, provide valuable insights into the nature and functioning of the hydraulic systems in palaces and hammams. The services provided

²²⁵. Everett K. Rowson, "Two Homoerotic Narratives from Mamlūk Literature: al-Ṣafadī's *Law'at al-Shāḥī* and Ibn Dāniyāl's *al-Mutayyam*," in *Homoeroticism in Classical Arabic Literature*, ed. J. W. Wright and Everett K. Rowson (Columbia University Press, 1997), 177-8.

²²⁶. Burhān al-Dīn Ibrāhīm ibn 'Umar al-Biqā'ī, *'Unwān al-zamān bi-tarājīm al-shuyūkh wa-al-aqrān*, ed. Ḥasan Ḥabashī (Dār al-Kutub, 2001), 5:108.

²²⁷. Denizeau, "Conduire l'eau," 427.

by the communal hammams and the amenities included in palaces, such as baths, kitchens, fountains, and gardens, necessitated a constant supply of water, and *waqf* documents provide detailed descriptions of the complex hydraulic systems used to meet these demands. These hydraulic systems, essentially comprised of wells, animal-powered waterwheels, conduit networks, fountains, and water basins, were consistent with those in earlier periods and did not substantially change throughout the Mamlūk period. This technological continuity, together with the high cost of hydraulic installations, made the existing hydraulic systems in Cairo's palaces and hammams valuable resources that could be reused and adapted over extended periods. Indeed, many palaces and hammams from the Fatimid and Ayyūbid period were kept in use or repurposed to fulfil different functions throughout the Mamlūk period. The palace and hammams Ardukīn endowed in Ḥārat Zuwayla in 717/1317 represent a significant example of reused Ayyūbid-era facilities, and an early ninth/fifteenth-century *istibdāl* detailing the exchange of her endowed properties shows that the hammam's conduit system remained valuable construction material long after its installation.

Just as a hydraulic system increased a palace or hammam's value, so did its location: the palaces of Mūsā al-Burhānī, Abū Bakr ibn Muzhir, and Azdamur min 'Alī Bāy reveal how much the *ahl al-dawla* coveted the Nile shore in Būlāq and the areas around *birkas*, which they occupied by renting *ḥikr* lots distributed via the *bayt al-mal*. Previously empty areas like Būlāq, the Birkat al-Fīl, and the Birkat al-Raṭlī were urbanized primarily because they were leased as *ḥikr* lots on which the *ahl al-dawla* could construct residential and commercial structures. The creation of the Azbakiyya pond and quarter, as well as that of the Birka al-Nāṣiriyya and Yashbak min Mahdī's project in Cairo's northern outskirts, show that developing an area as a future site for *ahl al-dawla* construction projects was a potentially profitable investment. Water played a pivotal role in these investment strategies since including a pond or equipping an area with palaces and hammams that included costly hydraulic systems spurred subsequent investments and urbanization.

Due to their revenue-generating potential, precious and adaptable hydraulic systems, and coveted locations, palaces and hammams represented valuable properties within Cairo's asset market. When integrated with information provided by the chronicles, *waqf* documents and *istibdāl* records show that palaces and hammams circulated within a dynamic real estate market as endowed familial properties or as exchangeable goods that were transferred to or seized by members of the *ahl al-dawla* whenever this social network was reconfigured. This was especially true after major political upheavals and environmental crises, like the one of the early ninth/fifteenth century, that triggered deep social and economic changes and created

new opportunities. In addition, judges who were acquiescent to the *ahl al-dawla's* *istibdāl* requests made this circulation of properties even easier. As the history of the Ḥammām al-Qaffāṣīn demonstrates, palaces and hammams subtracted from *awqāf* via *istibdāl* sometimes became available for inheritance and transfers outside the framework of *waqf* law. Even then, however, these properties were later endowed in other *waqf* foundations and the cycle of transfers started again.

The socio-economic dynamics of Cairo's asset market determined who owned and controlled the water facilities in palaces and hammams. At the same time, the management and organization of these water facilities depended significantly on factors and forces that intersected with the *awqāf* yet acted outside the framework of the asset market and of *waqf* law. Al-Ghawrī's 907/1501 decision to seize the *awqāf's* revenues and the *waqf* properties tenants' subsequent protests and negotiations reveal that the daily management and operation of lucrative *waqf* properties responded to an intricate set of social and political forces, including the fiscal decisions and policies implemented by sultans and the economic realities of the tenants who leased *waqf* properties. Sultans intervened in the management of some endowed palaces by attributing them to the holders of specific offices in their administrations, essentially transforming palaces into decentralized offices of the sultanic administration. The regulation of hammams by the *muḥtasib*, appointed by the sultan, also represented a form of sultanic intervention in the everyday administration of these structures, especially as this official evolved into a fiscal agent tasked with the collection of levies on behalf of the sultan. At the same time, the daily functioning of lucrative properties such as palaces and hammams, and the hydraulic systems they contained, relied primarily on the economic investments and labour of the tenants who leased them from the *awqāf*. Consequently, the water systems in palaces and hammams were part of a complex management structure characterized by the multiple and sometimes contradictory prerogatives of intersecting social, political, and economic agents.

The events of 907/1501 demonstrate the *waqf* tenants' capacity for collective action and negotiation with authorities, suggesting that they had some degree of political agency. *Waqf* properties provided tenants with spaces to exercise their professions, and tenants, in turn, generated revenues that enabled *awqāf* to finance charitable endeavours and institutions. Workers and investors such as the *ḥammāmīs*, therefore, constituted a pivotal component within a *waqf* foundation's socio-economic network, which consisted of the *waqf* endowers, the *waqf* beneficiaries, the *waqf* administrators, the endowed properties, the *waqf* employees, and the lessees. The following chapter, which addresses water provision as a form of charity, will focus on these polycentric realities that shaped Cairo's waters and the city's very social fabric.



بازار قیصری

مصر عتیق

بورگدن مصر صریدر

شوبر

بورجس کیه قیاسه
دیر

طوبخانه

ابوالیس

شیرین

شیرینیش

عیداندن
شاه صریدر

قبه بوشکدر

بلد

بازار

ترسه

بن

زایه

زاویه

بورج صریدر

زاویه

زاویه

4.

Source of Grace

Water Giving as a Form of Charity

وَيُطْعَمُونَ الطَّعَامَ عَلَى حُبِّهِ مِسْكِينًا وَيَتِيمًا وَأَسِيرًا
إِنَّمَا نُطْعِمُكُمْ لِوَجْهِ اللَّهِ لَا نُرِيدُ مِنْكُمْ جَزَاءً وَلَا شُكْرًا

“And they feed with food, for love of Him, the needy, and the orphan and the captive, saying: we feed you only for the sake of Allah; we desire not from you any recompense or thanks.”¹

¹. Qur'an, 76:8-9

Introduction

While Chapter 3 discussed the hydraulic systems in the revenue generating hammams and residential palaces that the *ahl al-dawla* endowed in their *awqāf*, this final chapter examines the hydraulic systems that *awqāf* sponsored as part of their charitable endeavours. A considerable number of Mamlūk-era *awqāf* provided water as a charitable act² due, in part, to the value the Islamic tradition attributes to water giving. Various passages in the Qur'an exalt water as one of the fundamental elements of creation: a verse of the Surat al-Anbiyā', for example, reads, "We created from water every living thing" (*wā-ja' al-nā min al-mā' kulla shay'*); a verse of the Surat al-Nūr reiterates, "Allah created every animal from water" (*wa-Allāh khalaqa kulla dhābbatin min al-mā'*); and a verse of the Surat al-Furqān refers to Allah as "He who created man from water" (*wa-huwa alladhī khalaqa min al-mā' bashar*).³ As such, water is considered the most sacred gift given to humans and animals within the Islamic tradition. Two famous hadiths refer to water giving as a highly rewarded pious deed. In one of them Prophet Muḥammad, interrogated on what is the best form of charity, responds "Giving water".⁴ In the other, the Prophet tells the story of a man who, after quenching his burning thirst at a well, saw a thirsty dog and gave it water—a small gesture for which Allah forgave the man all his sins.⁵

The case studies presented in this chapter describe three forms of charitable water giving financed by Mamlūk-era *awqāf*: the periodic almsgiving in cemeteries, mosques, and prisons; the daily distribution of drinking water from apposite structures (*sabils*) located throughout Cairo; and the installation and upkeep of wells, waterwheels, and basins (*ḥawḍ*, pl. *aḥwāḍ*) in areas accessible to urban communities. Almsgiving and *sabils* provided drinking water that water carriers collected mainly from the Nile and transported to designated distribution points or cisterns that were also *waqf*-financed. The third type provided non-potable groundwater that was unsuitable for human consumption (due to its salinity) but served for other uses such as watering animals or washing.

² Scholarship dealing with Mamlūk-era *awqāf* emphasized that water provision was a common charitable endeavour financed by the foundations. Amin, *al-Awqāf*, 148-150; Sabra, *Poverty and Charity*, 85-94; Maaikie van Berkel, "Waqf Documents," 235; Lev, *Charity, Endowments, and Charitable Institutions*, 75; Luz, *The Mamluk City*, 127-130.

³ Qur'an, 21:30, 24:45, and 25:54.

⁴ Muḥammad ibn 'Abd al-Laṭīf ibn 'Abd al-'Azīz al-Kirmānī al-Rūmī al-Ḥanafī, Ibn al-Malik, *Sharḥ al-Maṣābiḥ li-Ibn al-Malik* (Idārat al-Thaqāfa al-Islāmiyya, 2012), 2:475.

⁵ Muḥammad ibn Ismā'il al-Bukhārī, *Ṣaḥīḥ*, Book 42, Hadith 2363; van den Bent and Isoldi, "Pleasing God, Serving the Citizens," 200-202. In this hadith, Prophet Muḥammad affirms that "There is a reward for serving any living being" (*fī kullī kabidin raṭḭbatin ajrun*).

Scholarship addressing *waqf*-sponsored water giving in Mamlūk Cairo has focused on almsgiving and *sabīls*, generally treating them independently. Adam Sabra's 2000 work on poverty and charity argues that the periodic distribution of drinking water (*tasbīl*) and food in mosques, prisons, and cemeteries became a widespread act of charity in Mamlūk Cairo, particularly as the city expanded away from the Nile, its main source of drinking water.⁶ Sabra concludes, however, that it is difficult to assess the extent to which these forms of charitable almsgiving genuinely benefited the poor based on the available documents.⁷ Many of the works on Mamlūk-era *sabīls* have focused primarily on their material and architectural aspects and suggested that these charitable structures may have played a significant role in Cairo's urban water supply. Howaida al-Harithy's work, for example, examines the structural organization and architectural evolution of Mamlūk-era Cairene *sabīls* and suggests that these structures "became an integral part of the water supply network and public services".⁸ Comparably, Dina Bakhom has claimed that *sabīls* provided water "from sunrise until sunset and for a while at nighttime", thus suggesting that these structures served as steady water providers throughout the city.⁹ Doris Behrens-Abouseif's entry on *sabīls* in *The Encyclopaedia of Islam* mentions instead that *sabīls* distributed water for more variable and often short periods during the day, but defines these structures as providers of drinking water "for free public use", which appears to imply that supplying water to the public was their essential function.¹⁰

Other works have addressed *sabīls* from varying social and cultural perspectives, and they have likewise continued to define them as "public (drinking) fountains", a definition first presented in André Raymond's 1979 article on Ottoman-era *sabīls*, "Les fontaines publiques (Sabīl) du Caire à l'époque ottomane".¹¹ For instance, both Saleh Lamei Mostafa's work on the symbolic significance of *sabīls* and Sylvie Denoix's study on conceptions of "public" and "private" in Islam describe *sabīls* as "public (drinking)

⁶ Sabra, *Poverty and Charity*, 85-94.

⁷ Sabra, *Poverty and Charity*, 92.

⁸ Howaida al-Harithy, "Charity and Piety. Sabil-Kuttab and the conception of water during the Mamluk Period," in *Rivers of Paradise, Water in Islamic Art and Culture*, ed. Sheila Blair and Jonathan Bloom (Yale University Press, 2009), 162.

⁹ Dina Ishak Bakhom, "The Waqf System: Maintenance, Repair and Upkeep," in *Held in Trust: Waqf in the Islamic World*, ed. Pascale Ghazaleh (AUC Press, 2011), 186.

¹⁰ Behrens-Abouseif, "Sabīl," *EI-2 English*.

¹¹ André Raymond, "Les fontaines publiques (Sabīl) du Caire à l'époque ottomane (1517-1798)," *Annales Islamologiques* 15, (1979): 235-291.

fountains”.¹² Despite reaching the conclusion, endorsed by the present chapter, that *sabīls* were primarily intended to serve the founders’ socio-political agenda rather than to fulfil the needs of the urban population, Valentine Denizeau also refers to them as “public fountains”.¹³

Describing *sabīls* as “public fountains”, however, is problematic for several reasons. Firstly, as scholars such as Sylvie Denoix, Miriam Hoexter, and Maaïke van Berkel have emphasized, notions of “public” and “private” are arguably inapplicable to the context of *waqf* foundations.¹⁴ Secondly, the claim that *sabīls* provided a “public service” has not been empirically demonstrated, so this assumption could lead to historical misinterpretations. The assumption that *sabīls* and other *awqāf*-funded charitable endeavours primarily served a public role underpins a wider claim, articulated by Yehoshua Frenkel, that *awqāf* represented the “ruling Mamlūk military aristocracy’s” preferred tools for serving “the common good”.¹⁵ This idea, however, has been challenged in the last two chapters of this dissertation.

This chapter offers a more nuanced and comprehensive assessment of the charitable water giving described in *waqf* documents. The first part of this chapter reevaluates the very idea of charity underlying these structures: as scholars like Adam Sabra, Norman Stillman, Yaacov Lev, and Michael Borgolte have argued, in medieval Islam providing alms was a material means for the almsgiver to attain spiritual reward

¹². Lamei Mostafa, “The Cairene Sabils,” 34; Denoix, “Les notions de ‘privé’ et de ‘public’; Norman A. Stillman, “*Waqf* and the ideology of Charity in Medieval Islam,” in *Studies in Honour of Clifford Edmund Bosworth* 1, ed. Richard Netton (Brill, 2000), 369; Behrens-Abouseif, “Sabil,” *El-2 English*; Khaled Amad al-Hazmeh, “Late Mamluk Patronage: Qānṣūh al-Ghūrī’s *waqf* and his foundation in Cairo,” (PhD diss., The Ohio State University, 1993), 29; Sheila Blair and Jonathan Bloom, “Introduction,” in *Rivers of Paradise. Water in Islamic Art and Culture*, ed. Sheila Blair and Jonathan Bloom (Yale University Press, 2009), 15; Denizeau, “Conduire l’eau,” 439; van Berkel, “*Waqf* Documents,” 231; Igarashi, “The *waqf*-endowment strategy,” 44.

¹³. Denizeau, “Conduire l’eau,” 439 and 450.

¹⁴. Denoix, “Les notions de ‘privé’ et de ‘public’; “Formes Juridiques,” 14. Hoexter, “*Waqf* and the Public Sphere,” 121-122; van Berkel, “*Waqf* Documents,” 231. See also: Adam Sabra, “Public Policy or Private Charity? The Ambivalent Character of Islamic Charitable Endowments,” in *Stiftungen in Christentum, Judentum und Islam vor der Moderne*, ed. Michael Borgolte (De Gruyter, 2005), 95-6; Lev, *Charity, Endowments and Charitable Institutions*, 97.

¹⁵. Yehoshua Frenkel, “The *Waqf* System During the Last Decades of Mamluk Rule,” in *The Mamluk-Ottoman Transition Continuity and Change in Egypt and Bilād al-Shām in the Sixteenth Century* 2, ed. Stephan Conermann and Gül Şen (Bonn University Press, 2022), 221.

rather than a deliberate welfare policy.¹⁶ This re-evaluation begins by analysing data from documents concerning the charitable distribution of drinking water at cemeteries, prisons, and religious institutions. It then moves on to analyse the layout and organization of *sabīls* (which are at times translated here with the more neutral term “water dispensers”). Finally, it examines data related to the well and waterwheel systems endowed to supply ground water for communal use.

Although limited data on the outreach of charitable water supply precludes definitive conclusions regarding how much *waqf*-sponsored water giving contributed to water provision in the city, information within the *waqf* documents concerning the functioning of these structures and initiatives enables a reassessment of their impact. This reassessment focuses on the socio-economic dynamics charitable water provision helped shape. As sociologists Linton and Budds have posited, water is a “nature that is both shaped by, and shapes, social relations, structures, and subjectivities”.¹⁷ Charitable water provision in Mamlūk-era Cairo undoubtedly contributed to shaping its society—not necessarily by the volume of water charitable infrastructure distributed, but by the manners in which this distribution was organized. The second part of this chapter analyses *waqf* data focusing on their socio-economic significance, revealing how this method can illuminate large-scale phenomena that shaped Mamlūk-era urban society.

4.1 Charitable Water Giving: Practices, Structures, and their Significance

In seven out of the nine case studies selected for this work, the *awqāf* financed charitable water giving either in a single way, such as periodically distributing drinking water, or in multiple ways, such as sponsoring both *sabīls* and waterwheels (mapped in Fig. 11). The table below (Table 4) provides an overview of the cases examined in this chapter and the forms of charitable water provision they sponsored. In most of these documents, the physical description of the endowed charitable water structures is fragmentary, but this did not undermine my analysis, which is primarily based on the water structures’ operational conditions, stipulated in the *waqf* documents’ *shurūṭ* sections, rather than on their outward appearance.

¹⁶ Stillman, “*Waqf* and the ideology of Charity,” 359; “Charity and Social Service in Medieval Islam,” in *The Development of Islamic Ritual*, ed. Gerald Hawting (Routledge, 2006), 211–221; Sabra, “Public Policy or Private Charity?,” 95–6; *Poverty and Charity*, 89–92; Lev, *Charity, Endowments and Charitable Institutions*, 29 and 159; Michael Borgolte, *World history as the history of foundations, 3000 BCE to 1500 CE*, trans. Zachary Chitwood (Brill, 2019), 64–77.

¹⁷ Linton and Budds, “The hydrosocial cycle,” 170.

Moreover, not all the *waqf* documents provide the same wealth of data or information suitable for extensive analysis. The deed of Majd al-Dīn al-Hakkārī, for instance, is mentioned only in the first section of this chapter because it only briefly lists the distribution of drinking water in al-Azhar Mosque among its charitable endeavours. Similarly, while Abū Bakr Ibn Muzhir's deed mentions a *sabīl* endowed in Cairo, the document does not specify the facility's operating conditions. For these reasons, the bulk of this chapter is based on the remaining five case studies, which offer more comprehensive data about how *sabīls* and waterwheels functioned in various locations across Cairo.

Table 4: Overview of the charitable water structures and water-related initiatives mentioned in the case studies

Document no. and date	Document type and issuer	Charitable Water Giving
DW7 659/1261	<i>Waqf</i> of amīr Majd al-Dīn al-Hakkārī	Drinking water distribution
DW355 810/1408	<i>Waqf</i> of Faṭḥ Allāh ibn Mu'taṣim ibn Nafīs	<i>Sabīl</i> and waterwheel in Cairo <i>Sabīl</i> and waterwheel at the cemetery
DW91 839/1436	<i>Waqf</i> of Sharaf al-Dīn Mūsā ibn al-Burhān	<i>Sabīl</i> in Cairo <i>Sabīl</i> at the cemetery
DW177 880/1475	<i>Waqf</i> of amīr al-Sayfī Qarājā al-Jamālī	Waterwheel in Cairo <i>Sabīl</i> at the cemetery Drinking water distribution in Cairo
DW184 882/1477		
DW175 879/1474	<i>Waqf</i> of Zayn al-Dīn Abū Bakr ibn Muzhir	Drinking water distribution at the cemetery <i>Sabīl</i> in Cairo
DW198 890/1485	<i>Waqf</i> of amīr Azbak min Ṭuṭukh	<i>Sabīl</i> and waterwheel in Azbakiyya
DW241 908/1503	<i>Waqf</i> of amīr Azdamur min 'Alī Bāy	<i>Sabīl</i> and waterwheel at the cemetery Water distribution in al-Azhar

In addition to these case studies, this chapter references a broader range of *waqf* documents to establish a comprehensive framework for comparison. Some of these documents, namely the unpublished *waqfiyyāt* of Baktamur al-Jūkandār (DW20), Fāṭima bint Sūdūn (DW120), and Yashbak al-Muḥammadī (DW121), were consulted at the Dār al-Wathā'iq and provide valuable information on charitable water provision in Cairo. This analysis is further supported by previously edited *waqfiyyāt* from prominent figures. These include the deeds for Sultan Lājīn's restoration on Ibn

Ṭūlūn Mosque,¹⁸ Sultan Baybars al-Jāshankīr's funerary complex,¹⁹ *amīr* Ṣarghitmish's madrasa near Ibn Ṭūlūn Mosque,²⁰ Sultan Faraj ibn Barqūq's *sabīl* outside Bāb Zuwayla,²¹ *amīr* Qarāqujā al-Ḥasanī's madrasa and *sabīl* in the southern outskirts of al-Qāhira,²² Sultan al-Ashraf Barsbāy's *khānqāh*,²³ and Sultan al-Ghawrī's *sabīl* in the heart of the Fatimid city.²⁴ Furthermore, to understand the religious and socio-political motivations behind the establishment of these water dispensers, monumental inscriptions from *sabīls*—carefully collected and edited in the *Thesaurus d'Epigraphie Islamique*—were also analysed.

4.1.1 Water Distribution in its Simplest Form

Among the various charitable forms of water supply described in the *waqf* documents, distributing drinking water (*tasbīl mā' al-adhb*) in various urban and suburban venues was the simplest way to enact what the Islamic tradition considers the “best form of charity”. Distributing drinking water was not necessarily done using permanent water structures and, instead, generally took place at religious sites (mosques and funerary complexes) or in places containing people in need (prisons). Adam Sabra has noted that distributing drinking water became a particularly common form of charity from the mid-ninth/fifteenth century onwards.²⁵ Documentary evidence however shows that *tasbīl* was among the charitable deeds sponsored by *awqāf* as early as the mid-seventh/thirteenth century. The earliest document in this work, the *waqfiyya* of *amīr* Majd al-Dīn Abū Bakr al-Hakkārī (DW7) dated Rajab 659 (June 1261), indicates the distribution of water within a mosque as the only charitable endeavour undertaken by the foundation. As discussed in previous chapters, Majd al-Dīn's *waqf* foundation served the interests of Bahā' al-Dīn Khalīl ibn Malikshaw (Majd al-Dīn's fellow *amīr*)

^{18.} DW17. This document, dated from Rabī' II 697 (February 1298), is one of the earliest *waqf* documents kept at the National Archive of Cairo.

^{19.} Relevant data were gathered from the document itself (DW23) and from: Salma Umar Uthman al-Shabrawi, “Wathā'iq al-Sultān al-Muẓaffar Rukn al-Dīn Baybars al-Jāshankīr,” (MA thesis, Alexandria University, 2012), 246; Fernandes, “The foundation of Baybars al-Jāshankīr,” 24-28; *The Evolution of a Sufi Institution*, 25-29.

^{20.} Ibrahim, “Naṣṣān jadīdān,” 121-158.

^{21.} Lamei Mostafa, “The Cairene Sabil,” 40-1.

^{22.} Abd al-Latif Ibrahim, “Wathīqat al-Amīr Akhūr Kabīr Qarāqujā al-Ḥasanī,” *Majallat Kulliyat al-Adāb* 18, no. 2 (1956): 183-251.

^{23.} The deed issued in 827/1424 for the madrasa-*khānqāh* this sultan established in Cairo has been edited and studied by Ahmed Darrag, and examined also by Leonor Fernandes. Ahmed Darrag, *L'acte de Waqf de Barsbāy. Hujjat Waqf Barsbāy* (IFAO, 1963); Fernandes, *The Evolution of a Sufi Institution*, 42-45 and 83-85. Notably, the deed for the *khānqāh* at the cemetery was inscribed on the façade of the monument. *Thesaurus d'Epigraphie Islamique*, fiche 9755; Monument no. 121. See also: Leonor Fernandes, “Three Ṣūfī Foundations in a 15th Century Waqfiyya,” *Annales Islamologiques* 17, (1981): 141-156.

^{24.} al-Hazmeh, “Late Mamluk Patronage”.

^{25.} Sabra, *Poverty and Charity*, 86.

and his family. The list of beneficiaries designated in Majd al-Dīn's *waqfiyya* suggests that the foundation was intended as a form of bequest, and perhaps was planned to serve the same purpose as the then illegal self-benefiting *waqf*. All the properties in Majd al-Dīn's *waqf* were endowed for Bahā' al-Dīn's benefit, and upon his death the properties' revenues were to be meticulously distributed among Bahā' al-Dīn's five daughters and son, Šārim al-Dīn. Even this meticulously planned financial arrangement, however, included charitable provisions.

The *waqfiyya* specifies that, after the death of Bahā' al-Dīn, the revenue from one endowed shop (*ḥānūt*) was to be used to finance the distribution of drinking water to the Muslims (*tasbīl mā' al-adhb lil-muslimīn*).²⁶ This shop formed part of the ground floor of Bahā' al-Dīn Khalīl's palace (*dār*) included in the *waqf* foundation. This palace was situated by the *raḥbat al-jāmi' al-azhar*, an area in front of the northern entrance of al-Azhar Mosque.²⁷ The *waqfiyya* stipulates that Šārim al-Dīn held no rights to the shop (*fa-inna hadhā al-wāqif lam yaj' al li-šārim al-dīn muḥammad fihā haqqan*) following Bahā' al-Dīn's death. This implies that Šārim al-Dīn could not benefit from the shop's income even though the deed made him *nāẓir* and granted him administrative responsibilities over the *waqf*. The deed in fact stipulates that the *nāẓir* was obliged to allocate a portion of the shop's revenue to its maintenance (*wa-mā ḥaṣala min ri'ihā yabda'u minhā bi-'imāratihā*), but any remaining revenues were to be allocated toward transporting drinking water to al-Azhar Mosque (*wa-mā faḍala ba'da dhalika yuṣrif fī naql mā' al-adhb ilā al-jāmi' al-azhar*). According to the document, the *nāẓir* could decide whether to store this drinking water within the al-Azhar's cistern (*yadhkharahu li-ṣaḥrījīhi in shā'*) so that it could be distributed to the Muslims residing at or visiting the mosque (*wa-yufarriquhu 'alā al-muslimīn al-muqīmīn bi-al-jāmi' al-Azhar wa-al-wāridīn ilayhi*). In addition, the deed stipulates that, should distributing drinking water at al-Azhar Mosque prove infeasible for some reason, the *nāẓir* retained the discretionary authority to distribute water to Muslims elsewhere as he deemed appropriate.²⁸

It is plausible that the form of water distribution delineated in Majd al-Dīn's *waqfiyya* was already a customary practice when the document was issued, as evidenced by the mention of a pre-existing water cistern within al-Azhar. The mention of

²⁶. DW7. See edited excerpt in Appendix.

²⁷. DW7. See edited excerpt in Appendix. The *raḥbat al-jāmi' al-azhar* was a large open space in front of the northern gate of al-Azhar Mosque. During the Fatimid period, it was surrounded by the army that escorted the caliph every time he entered to pray at the mosque. The *raḥba* remained an open area until the Ayyubid period, when construction began, significantly reducing its size. Al-Maqrīzī, *Khīṭaṭ*, 3:89.

²⁸. DW7: "*fa-in yu'dhara al-ṣarf ilā hadhā al-jāmi' al-madhkūr 'alā hadhā al-wajh ṣurifa dhalika li-tasbīl al-mā' al-'adhb lil-muslimīn ḥaythu kānū 'alā mā yarāhu al-nāẓir*". See edited excerpt in Appendix.

water distribution among the charitable endeavours of another early Mamlūk *waqf* document indicates that this was a well-established form of almsgiving by the beginning of the eighth/fourteenth century. Dated the 14th of Muḥarram 707 (July 1307), the *waqfiyya* of *amīr* Baktamur al-Jūkandār (d.716/1316) allocated part of the foundation's revenues toward charitably distributing bread and water to the men and women held in the prisons of al-Qāhira and Fuṣṭāṭ.²⁹ The document stipulates that following the death of Baktamur al-Jūkandār, the primary beneficiary of this self-benefitting *waqf*, bread and water were to be distributed at the prisons every Thursday evening. Like Majd al-Dīn's *waqfiyya*, this document does not allocate a precise amount of revenues for bread and water distribution; however, it does stipulate that only 1/24 (roughly 4%) of the endowed properties' income was to fund this almsgiving, while the remaining 23/24 (approximately 95.8%) was designated for Baktamur's descendants after his death.³⁰ Clearly, then, only a small portion of the foundation's revenues was designated toward funding charitable water distribution.

Similar patterns of charity can be found in much later *waqfiyyāt* as well. In a deed drafted in 863/1459, Fāṭima, the daughter of *amīr* Sūdūn ibn 'Abd Allāh al-Nawrūzī, allotted a portion of the revenues from a land lot she endowed in Gharbiyya to charitable bread and water distribution.³¹ Unlike the previous cases, however, Fāṭima's

²⁹ DW20; Sabra, *Poverty and Charity*, 86. Baktamur al-Jūkandār was an influential *amīr* throughout the first decade of the eighth/fourteenth century. In 707/1307, the same year he established his *waqf* foundation, he collaborated with al-Nāṣir Muḥammad in an unsuccessful plot to overthrow Baybars al-Jāshankir. In the same year, Baktamur was appointed the *nā'ib* of Qal'at Ṣubayba (Nimrod) and of Ṣafad, in the Levant. In 711/1311 he was imprisoned by al-Nāṣir Muḥammad for plotting against him. Subsequently, he was transferred to the prison of Alexandria and then to Karak, where he was probably killed in 716/1316. See Ibn Ḥajar, *Durar*, 1:484-486; Abū Bakr ibn 'Abd Allāh ibn Aybak al-Dawādārī, *Kanz al-durar wa-jāmi' al-ghurar* (Isa al-Babani al-Halabi, 1960), 9:148 and 212; al-Maqrīzī, *Sulūk*, 2:471. Baktamur al-Jūkandār's connection to the *dawla* also emerges clearly in document DW20, which attests that some of the properties endowed in this *waqf* were obtained from the *bayt al-māl*.

³⁰ DW20. The document indicates that, following the extinction of Baktamur's offspring, the revenues of his *waqf* are to be used for a series of charitable deeds in Mecca and Medina. It is also worth mentioning that Baktamur indicates himself as the administrator of the foundation, to be followed in this function by the "most (legally) suitable" (*al-arshad*) among his descendants, and ultimately by the Shāfi'ī chief qadi of Egypt.

³¹ DW120; Sabra, *Poverty and Charity*, 86-7. The deed indicates Fāṭima as the only beneficiary and administrator of her foundation during her lifetime. Following her death, her children were to administer and benefit from the foundation. I was not able to find any biographical data on Fāṭima herself. Various *amīrs* named Sūdūn ibn 'Abd Allāh al-Nawrūzī are mentioned by the historian Ibn Taghī Birdī in *al-Manhal* (6:166-7, 172-3, 177-8). Fāṭima's father was probably the *amīr silāḥdār* Sūdūn ibn 'Abd Allāh al-Nawrūzī, who died in 862/1458, shortly before Fāṭima secured her properties by establishing this self-benefitting *waqf*. This *amīr*'s career spanned the reigns of three sultans. He was raised to the position of *silāḥdār* during the reign of Barsbāy, then Jaqmaq promoted him to the rank of *amīr 'ashara* and of *ra's al-nawba*. During the reign of al-Ashraf Ināl he was appointed as *nā'ib* Qal'at al-Jabal, a position he held until his death. See Ibn Taghī Birdī, *Nujūm*, 16:192; *al-Manhal*, 6:177-8.

waqfiyya specifies the sum to be spent on this charitable activity. Following the death of Fāṭima, who is indicated as the primary beneficiary and first administrator of the endowment, the *nāẓir* of the foundation was required to disburse 200 *dirhams fulūs* (copper *dirhams*) for bread and 160 *dirhams fulūs* for drinking water each month—both bread and water were to be distributed every week in the prisons of Cairo, namely al-Raḥba, Daylam, and al-Maqshara.³² Eliyahu Ashtor has estimated that one *raṭl* of bread (roughly 450 grams) cost approximately 4 *dirhams fulūs* in early 864/1460, so the sum Fāṭima earmarked for bread purchases would have provided approximately 50 *raṭls* (about 23 kgs) of bread per month.³³ Fāṭima's foundation also financed the annual distribution of specific foods at her shrine (*turba*), an annual sum of 500 *dirhams fulūs* being allocated towards distributing date and hazelnut cakes (*ka'k bi-tamr wa-bunduq*) on the eve of 'Id al-Fiṭr, while a sum of 1,000 *dirhams fulūs* per year was earmarked for acquiring a sacrificial animal whose meat could be distributed among the poor during the 'Id al-Aḏḥā.³⁴ Similarly, the *waqf* deed drafted by Abū Bakr Ibn Muzhir in 879/1474 also allocated a portion of the foundation's revenues to the purchase of drinking water and a sacrificial animal to be distributed at his father's shrine.³⁵

The *waqf* established in 864/1460 by the *amīr dawādār* Yashbak al-Muḥammadī also earmarked part of its revenues for distributing drinking water (*tasbīl*).³⁶ Yashbak's *waqfiyya* mandates that the foundation's *nāẓir* purchase two *rāwīyas* of Nile water every day to be distributed to the Muslims at Ibn Ṭūlūn Mosque.³⁷ Based on the calculation of the *rāwīya*'s capacity presented in Chapter 2, the *waqf* of Yashbak al-Muḥammadī appears to have financed the charitable provision of approximately 800 litres of drinking water per day.³⁸ Unlike Majd al-Dīn's *waqfiyya*, which explicitly indicates that al-Azhar Mosque contained a water cistern, Yashbak's deed does not mention any water storage facilities at the Ibn Ṭūlūn mosque.³⁹ It is possible,

³². DW120. The value of the *dirham fulūs* will be discussed later in more detail.

³³. Ashtor, *Histoire Des Prix et des Salaires*, 308.

³⁴. DW120: "li-ḡaḥiya muḥarrama tuḏḥbaḥ bi-al-turba wa-yu-farriq laḥmahā bi-hā 'alā al-fuqarā'". The document indicates other yearly expenses for financing the charitable distribution of food on religious holidays (e.g. the Ashura and the Mid-Sha'bān).

³⁵. DW175. See edited excerpt in Appendix.

³⁶. DW121. See also Amin, *Fihrist*, 27.

³⁷. DW121.

³⁸. The calculation was made on the base of: Behrnauer, *Mémoire*, 72-73. This amount is not surprising given that, during the Mamluk period, the mosque of Ibn Ṭūlūn served not only as a place of worship but also as a prestigious centre of learning where both religious studies and medicine were taught and a large number of students were accommodated. Jonathan P. Berkey, *The Transmission of Knowledge in Medieval Cairo: A Social History of Islamic Education* (Princeton University Press, 1992), 62.

³⁹. DW121.

however, that the water from the two *rāwiyas* was stored somewhere in the mosque so that it could be distributed throughout the day.

The self-benefitting foundation established by *amīr* Qarājā al-Jamālī al-Khāṣṣakī between 880/1475 and 882/1477 also sponsored the charitable distribution of water as a form of almsgiving.⁴⁰ In the first *waqfiyya*, recorded on Ṣafar the 26th, 880 (July 1475), Qarājā endowed various buildings in the western part of Fatimid Cairo, including two residential palaces, a horse stable, and a water basin (*ḥawḍ*) in the area between the Qanṭarat al-Muskī, the Suwayqat al-Ṣāḥib, and the western gate of Bāb al-Khawkhā.⁴¹ In the same deed, Qarājā endowed his *turba* at the cemetery outside Bāb al-Naṣr and set conditions that drinking water was to be distributed from the *sabīl* attached to it. Furthermore, Qarājā stipulated that the foundation's surplus revenues were to be allocated to needy craftsmen (*al-fuqarā' arbāb al-ṣanā'i' al-muḥtājīn*) and the purchase of sweets and drinking water after his death and the extinction of his offspring. These sweets and drinking water were to be distributed on Thursday evenings to Cairo's prisoners, who were requested to pray for Qarājā and his descendants.⁴² In the second *waqfiyya*, recorded on Muḥarram the 8th, 882 (April 1477), Qarājā added a land lot located in Upper Egypt (around the village of Shandawīl south of Asyut) to the *waqf*'s income-generating assets, and modified some of the conditions stipulated in the previous deed.⁴³ He allocated additional funds to the expenses already listed in the first *waqfiyya*, increasing the salaries of the foundation's employees after his death while keeping the unspecified surplus for his wife, children, and descendants. He also re-arranged how the *waqf*'s revenues were distributed after the extinction of his offspring, stipulating that the *waqf*'s entire income be divided into four equal parts to be used for charitable almsgiving in Mecca and Medina (two quarters), supplementing the salaries of the *waqf*'s employees (one quarter), and charitable almsgiving to needy craftsmen in Cairo and distributing sweets and drinking water to the prisoners of al-Daylam, al-Maqshara, and al-Raḥba prisons on Thursday nights

⁴⁰ As explained in Chapter 2, I was not able to reconstruct the biography of this endower. His *nisba* (*al-ashrafī*) suggests that he had been a *mamlūk*, presumably of Ināl considering the date of the *waqfiyya*, and that he was a member of the Sultan's bodyguards (the *khāṣṣakiyya*).

⁴¹ DW177. For the location of the Suwayqat al-Ṣāḥib see al-Maqrizī, *Khīṭaṭ*, 3:85 and 3:189. In the same deed, Qarājā also endowed a building in the western part of Fatimid Cairo (at the Khuṭṭ al-Kāfurī); the building was located on a *ḥikr* lot that belonged to the *waqf* of the *khānqāh* of Baybars al-Jāshankīr. A later log recorded in 896/1491 reports the exchange (*istibdāl*) of this building for 100 *dīnārs*. (DW177).

⁴² DW 177: "wa-mā faḍala ba'da dhalika yaṣrifu-hu al-nāzīr 'alā dhalika fī wujūh al-birr wa-al-qurbāt wa-al-ṣadaqāt 'alā al-fuqarā' arbāb al-ṣanā'i' al-muḥtājīn wa-fī it'ām ṭa'ām ḥulw yuṭbakh fī layālī al-jum'a min kulli shahr min shuhūr al-ahilla wa-li-tasbīl mā' adhab fī layālī al-jum'a a'idān min kulli shahr...yuhmal dhalika ilā al-masjūnīn bi-sijīn al-daylam wa-al-raḥba wa-al-maqshara bi-al-qāhira...wa-yufarriqu 'alayhim wa-yas'aluhum al-du'ā lil-wāqif wa-dhurriyati-hi". See edited excerpt in Appendix.

⁴³ DW184.

(one quarter).⁴⁴ While the number of endowed properties in Qarājā's *waqf* suggests that a quarter of its revenues may have been a significant amount, the *waqfiyya* does not specify the sum allocated to drinking water distribution within the prisons.

While the financial allocations for charitable bread and water distribution differed among the foundations, the preceding examples demonstrate that a relatively limited amount of resources was allocated to support this type of almsgiving. The *waqf* deed of *amīr* Majd al-Dīn suggests that the *nāẓir* was granted significant discretionary power in determining the amount allocated for distributing charitable alms after the upkeep of the foundation's properties was paid.⁴⁵ In the majority of cases, no specific funds were allocated for water acquisition, leaving administrators to establish to what extent surplus revenues should be used for maintaining assets or for executing the founders' prescribed charitable acts.. This lack of specification was due, in part, to the yearly fluctuations in foodstuffs prices and fees demanded by water carriers. Additionally, founders could not foresee revenue surpluses in the long term, so they had to delegate the necessary calculations of available funds to future administrators.

Most importantly, however, the significance of this almsgiving did not lay in the amount of bread and water distributed, but rather in the modalities of the distribution. Consistent elements in the almsgiving conditions point to a distinct religious meaning associated with the charitable distribution of water and bread, suggesting that the spiritual dimension constituted its primary value. For example, Fāṭima bint Sūdūn's and Abū Bakr ibn Muzhir's *waqfiyyāt* both show that religious holidays represented important occasions for charitable almsgiving, as Adam Sabra also observed.⁴⁶ Many *waqf* founders also stipulated that alms should be distributed on Thursday evenings, a time that holds special religious significance in the Islamic tradition—multiple *hadiths* refer in fact to Thursday nights as the time when deeds are presented to Allah, and good acts are multiplied in reward.⁴⁷

The places many *waqf* founders chose to distribute alms further underscore the spiritual value of their charitable acts. The *waqf* deeds of Baktamur, Fāṭima, and Qarājā all indicate that their *waqf* foundations were to regularly distribute alms at

⁴⁴. DW184. See edited excerpt in Appendix.

⁴⁵. DW7. See edited excerpt in Appendix.

⁴⁶. Sabra, *Poverty and Charity*, 52-4.

⁴⁷. Muslim ibn al-Ḥajjāj, *Ṣaḥīḥ*, Book 45, Hadith 2565; Muḥammad ibn 'Abd al-Raḥmān al-Sakhāwī, *al-Maqāṣid al-ḥasana fī bayān kathīr min al-aḥādīth al-mushtahira 'alā al-alsina* (Maktabat al-Maymana al-Madaniyya, 2017), 2:266. Al-Sakhāwī also refers to Thursday as the day "for asking what is needed" (*al-khamīs yawm ṭalab al-ḥawāi'*). al-Sakhāwī, *Maqāṣid*, 5:447.

Cairo's prisons.⁴⁸ While prisons themselves held no religious significance in the Islamic tradition, giving alms to prisoners is explicitly mentioned in the Qur'an as among those deeds accomplished "only for the sake of Allah" by his virtuous servants (*al-abrār*, 'ibād Allah').⁴⁹ *Waqf* founders also consistently chose to have their foundations distribute alms at their shrines (*turbas*). These funerary complexes, which included religious and secular facilities, were distinctly connected to the remembrance of the almsgivers as their resting places.⁵⁰ The deep connection between a *turba* and its founder's remembrance clearly emerges from Fāṭima's deed, which allocated 300 copper *dirhams* monthly for two Qur'an reciters at her *turba* every Friday, 100 copper *dirhams* monthly for a man to clean and open the *turba*, and 120 copper *dirhams* monthly to refresh the *turba's* basil plants and lamp oil.⁵¹ Such stipulations demonstrate that the almsgivers, rather than the alms recipients, were the central element of charitable acts. Qarājā's *waqfiyya*, in particular, suggests that the ultimate aim of the almsgiving was the salvation of the almsgiver's soul, since his *waqf's* *shurūṭ* demanded that the prisoners pray for the *wāqif* in return for the foundation's charity.⁵² Finally, mosques such as al-Azhar and Ibn Ṭūlūn had marked religious value as places where the Muslim community gathered to worship. Charitable deeds at mosques were more likely to target worthy recipients who would pray for the donor's spiritual reward. For this reason, as detailed in the following section, the distribution of water within mosques held great importance as a form of almsgiving.

4.1.2 Water Facilities and Water Distribution at the Mosques

Evidence from documents and chronicles indicates that mosques featured two main types of water facilities: ablution fountains and cisterns. Ablution fountains (*mīdā'*), which were used for the ritual ablutions required at prayer times, typically used groundwater provided by a well and *sāqiya* system.⁵³ Cisterns (*ṣahrīj*, pl. *ṣahārīj*), on the other hand, were used to store drinking water transported from the Nile by water carriers. The *waqfiyya* of *amīr* Majd al-Dīn, for instance, refers to a cistern embedded in al-Azhar Mosque;⁵⁴ other such cisterns were found in mosques, funerary complexes, or other religious buildings across the city. While writing about the 749/1348 construction of an embankment on the Nile, al-Maqrīzī records that *ustadār* Manjak al-Yūsufi collected levies from various urban structures in Cairo, among

⁴⁸ Sabra, *Poverty and Charity*, 86-7.

⁴⁹ Qur'an, 76:8-9.

⁵⁰ Hamza, "Turba of *amīr* Jīrbāsh Qāshīq," 97-8; Sabra, *Poverty and Charity*, 88-93.

⁵¹ DW120. In comparison, the revenues earmarked for the monthly distribution of alms were relatively less abundant than those allocated for the shrine of the founder.

⁵² Stillman, "Waqf and the ideology of Charity," 358-9.

⁵³ See, for instance, DW198 and DW141 (edited excerpts in Appendix).

⁵⁴ DW7. See edited excerpt in Appendix.

them “all the cisterns at the mausolea in the cemetery, or outside Cairo’s walls, or in the madrasas” (*kull ṣahrīj fī turba bi-al-qarāfa aw fī zāhir al-qāhira aw fī madrasa*), which were taxed between 5 and 10 *dirhams* each.⁵⁵ These cisterns supplied drinking water to the Muslims visiting or residing in the religious buildings, which could be a considerable undertaking since, as Sabra has noted, the mosques of Cairo sheltered large groups of poor scholars from outside the city during the Mamlūk period: al-Azhar Mosque, for instance, hosted up to 750 people at times.⁵⁶ Mosque cisterns were essential to meeting the water needs of these groups, but maintaining them and ensuring a consistent water supply required significant financial resources. The charitable endowments of the *ahl al-dawla* provided the necessary funds for these purposes. The case of al-Azhar exemplifies how important *ahl al-dawla* patronage was to maintaining a mosque’s water facilities.

Throughout the history of al-Azhar, water-storage facilities within the mosque underwent several phases of refurbishment and disrepair. It is not possible to assess whether water facilities were included in the initial design of the mosque, which was built between 359/970 and 361/972 by the Fatimid Caliph al-Mu‘izz (r. 341-365/953-975), or in the first renovation made during the Caliphate of al-‘Azīz (r. 365-386/975-996).⁵⁷ The *waqf* deed of the Fatimid Caliph al-Ḥākim (r. 386-411/996-1021), however, does show that the mosque’s water supply was financed via patronage as early as the fifth/eleventh century.⁵⁸ Among the various sums allotted for al-Azhar listed in this document, in fact, an annual amount of three *dīnārs* was designated for transporting clay jars (*azyār fakhkhār*) of drinking water that were to be deposited in a tank (*maṣnaʿ*) presumably embedded in the mosque. The same document allocated a yearly salary of 12 *dīnārs* for the keeper (*qayyim*) of the ablution fountain, provided that this facility was added to the mosque (*in ‘umilat*), revealing that the fountain was not yet included in the mosque at that time.⁵⁹

⁵⁵ al-Maqrīzī, *Khiṭaṭ*, 3:297.

⁵⁶ Sabra, *Poverty and Charity*, 109.

⁵⁷ Another Fatimid-era mosque built in the cemetery, the Qarāfa mosque, did include a cistern. As this mosque is said to have been constructed “in the fashion of al-Azhar”, one could assume there was a water storage facility in the original layout of al-Azhar, too. Al-Maqrīzī, *Khiṭaṭ*, 4:125; Nasser Rabbat, “Al-Azhar Mosque: An Architectural Chronicle of Cairo’s History,” *Muqarnas* 13, (1996): 80. On the foundation and first restoration of al-Azhar see also: al-Nuwayrī, *Nihāya*, 30:87; Ibn ‘Abd al-Zāhir, *al-Rawḍa*, 85; al-Qalqashandī, *Ṣubḥ*, 3:364; Rabbat, “Al-Azhar Mosque,” 75.

⁵⁸ Excerpts from the *waqfiyya* of al-Ḥākim are recorded in al-Maqrīzī’s *Khiṭaṭ*. The foundation sponsored the mosques of al-Azhar, al-Ḥākim, and al-Maqs, as well as for the Ḍār al-‘Ilm. See: al-Maqrīzī, *Khiṭaṭ*, 4:52-54; Ayman Fuad Sayyid, *La Capitale de L’Égypte jusqu’à l’époque Fatimide. al-Qāhira et al-Fusṭāṭ. Essai de reconstitution topographique* (Steiner Verlag, 1998), 191-196.

⁵⁹ al-Maqrīzī, *Khiṭaṭ*, 4:54.

While patronage for al-Azhar decreased during the Ayyubid period, the second half of the seventh/thirteenth century saw a new wave of *ahl al-dawla* investments to maintain the mosque and its water facilities. In 665/1267 Aydamur al-Ḥillī (d. 667/1269), an *amīr* of al-Zāhir Baybars, devoted part of his capital to restoring the mosque, and reinstated the *waqf* sponsoring the mosque by reclaiming seized properties previously included in the foundation. Various sources indicate that, in the same period, a large number of *awqāf* were established for the benefit of al-Azhar Mosque.⁶⁰ Majd al-Dīn's deed, dated only a few years before Aydamur al-Ḥillī's restorations, could be ascribed to this new wave of foundations financing the restoration of the mosque, its religious functions, and its water supply.

Throughout the following centuries, other members of the *ahl al-dawla* financed water facilities serving al-Azhar. Ablution fountains were eventually incorporated into the mosque as part of two adjacent madrasas—that of Jankali ibn al-Bābā and that of Āqbughā min 'Abd al-Wāhid that were established during the reign of al-Nāṣir Muḥammad and financed by the *waqf* foundations of these two *amīrs*.⁶¹ In 761/1360, the eunuch *amīr* Sa'ad al-Dīn Bashīr al-Jāmdār al-Nāṣirī funded the restoration of al-Azhar as a pious act and equipped it with an enclosed space (*ḥānūt*) to distribute drinking water daily.⁶² The patronage of water facilities in al-Azhar continued throughout the ninth/fifteenth century. Al-Maqrīzī reports that in 818/1415 *amīr* Tāj al-Dīn al-Shawbakī, *wālī* and *muḥtasib* of Cairo, restored parts of al-Azhar and started the excavation of a cistern (*ṣahrīj*) in the middle of the mosque's courtyard. Al-Shawbakī also financed the construction of a domed structure above the cistern that was used to distribute drinking water to people at the mosque.⁶³ In 827/1424 Sultan al-Ashraf Barsbāy ordered the creation of a cistern in the middle of al-Azhar's courtyard and the installation of a structure (which was eventually destroyed by al-Zāhir Jaqmaq) to distribute water to the residents of the mosque (*ahl al-jāmi*).⁶⁴

^{60.} Ibn 'Abd al-Zāhir, *al-Rawḍ al-Zāhir*, 277; al-Nuwayrī, *Nihāya*, 30:87; al-Maqrīzī, *Khiṭaṭ*, 4:55.

^{61.} al-Maqrīzī, *Khiṭaṭ*, 4:57. *Amīrs* Āqbughā min 'Abd al-Wāhid and Jankali ibn al-Bābā have already been mentioned in the previous chapter in relation to the *ḥikr* lot at the Birkat al-Fil and the creation of the Darb Ibn al-Bābā.

^{62.} al-Maqrīzī, *Khiṭaṭ*, 4:56. We cannot exclude that this *ḥānūt* was financed through a *waqf* since in the same year Sa'ad al-Dīn Bashīr al-Jāmdār financed the construction of his madrasa near the Birkat al-Fil. Al-Maqrīzī, *Khiṭaṭ*, 4:257. This small madrasa is still extant today, although its aspect has been altered by later restorations (Monument no. 269).

^{63.} al-Maqrīzī, *Khiṭaṭ*, 4:57. On this occasion, the excavations uncovered traces of a water fountain (*athār fasqīyat mā'*) and human remains.

^{64.} al-Maqrīzī, *Sulūk*, 7:101; Ibn Taghrī Birdī, *Nujūm*, 14:268. Also for this second excavation the historians report that human remains were uncovered. This repeated detail suggests either a literary *topos* or a duplicated record of the same event. However, it is possible that two separate cisterns were excavated in al-Azhar's courtyard in 818/1415 and 827/1424. 'Alī Mubārak indicates that four cisterns were embedded in al-Azhar. Mubārak, *al-Khiṭaṭ al-Tawfiqiyya*, 4:59.

In the second half of the ninth/fifteenth century, al-Ashraf Qāyrbāy added another water cistern to the mosque.⁶⁵ Finally, Azdamur min ‘Alī Bay’s *waqf* deed, dated 908/1503, allocated 3,000 *dirhams fulūs* annually to purchasing Nile water that was to be deposited in al-Azhar’s *ṣahrīj*.⁶⁶

Remarkably, the earliest and latest case studies in this work both financed the distribution of drinking water at al-Azhar, demonstrating that there was a long-standing tradition of charitable foundations financing the mosque’s water supply. The considerable number of patrons who sponsored al-Azhar’s water supply throughout the Mamlūk period may have been motivated by the mosque’s prominence as a place of worship and study in Cairo. However, the *ahl al-dawla*’s patronage was not limited to this particular mosque’s water supply. Indeed, chronicles and *waqf* documents clearly show that the construction and maintenance of water facilities serving mosques in Cairo and its surroundings financially relied on the initiatives and foundations of the *ahl al-dawla*. Sultan Lājīn’s *waqf* deed, for instance, allocated an undefined “necessary amount” of revenues (*mā tad’ū al-ḥāja ilayhi*) for filling the cistern of Ibn Ṭulūn Mosque with water purchased “when the Nile flows into the Khalīj”.⁶⁷ According to the document, this water was meant primarily for the mosque’s employees (*li-yantafi’ bi-hi arbāb al-wazā’if al-madhkūra bi-al-jāmi’ al-madhkūr*).⁶⁸ At the beginning of the eighth/fourteenth century, Baybars al-Jāshankīr superintended the restoration of al-Ḥākim mosque, which had been severely damaged by the violent earthquake that devastated Cairo in 702/1303.⁶⁹ As part of his renovation of al-Ḥākim mosque, al-Jāshankīr constructed a cistern in the mosque’s courtyard that was replenished annually with Nile water and intended to fulfil the daily water needs of the many students and scholars at the mosque, where al-Jāshankīr established multiple teaching activities and supported a significant number of students through *waqf* foundations.⁷⁰ The foundation Baybars al-Jāshankīr established in 707/1308, in turn, sponsored the maintenance of a well-waterwheel system, and the supply

⁶⁵. Mubārak, *al-Khiṭaṭ al-Tawfiqiyya*, 4:59.

⁶⁶. DW241. See edited excerpt in Appendix. This is one of the many charitable deeds financed by Azdamur’s foundation, which sponsored water distribution in Mecca and, as discussed below, at Azdamur’s funerary complex.

⁶⁷. DW17: “*wa-yuṣrafu fī māli’ al-ṣahrīj alladhī bi-ṣaḥn al-jāmi’ al-madhkūr ‘inda jariyān al-nīl fī al-khalīj al-mubārak*”, meaning during the yearly plenitude of the Nile.

⁶⁸. DW17.

⁶⁹. al-Maqrīzī, *Khiṭaṭ*, 4:59–60.

⁷⁰. al-Maqrīzī, *Khiṭaṭ*, 4:60. According to al-Maqrīzī, water from this cistern was distributed to the public on Fridays (*yastaqī minhu al-nās yawm al-jum’a*). However, similar to al-Azhar and other mentioned religious buildings, al-Ḥākim mosque’s cistern mainly served the daily needs of its religious community.

of Nile water for the residents and visitors of the *khānqāh*, the hospice (*ribāṭ*), and mausoleum (*qubba*) that formed part of his funerary complex.⁷¹

These examples are indicative of the role *waqf* foundations played in supporting water facilities and drinking water supply of major religious institutions housing communities of employees, scholars, and students. Caliph al-Ḥākim's deed demonstrates that sponsoring religious buildings' water supply through *waqf* foundations predated the Mamlūk period. From the late seventh/thirteenth century onward, *waqf* foundations financed the restoration and maintenance of religious buildings and the upkeep of their water supply. One-time charitable donations may also have contributed to financing the water supply of religious institutions. For example, al-Sakhāwī states that his fellow scholar Maḥmūd ibn Aḥmad al-'Ayntābī (known as Ibn al-Amshāṭī) donated part of his inheritance to the *ṣahrij* in the *khānqāh* of Siryāqūs.⁷² Lacking further details and any mention of a *waqf* foundation, it can be assumed that Ibn al-Amshāṭī funded the Siryāqūsiyya cistern's water supply with a single contribution.

The water facilities in religious buildings may have significantly contributed to the water supply of their respective communities. In some cases, the communities at religious buildings were quite large, comprising hundreds of individuals in a city whose population, even at its peak, likely did not surpass 250,000.⁷³ Still, the *waqf*-sponsored water facilities—financed as part of these buildings by the *awqāf* of the *ahl al-dawla*—were clearly meant for limited groups' water supply rather than for the urban population at large. This fact alone calls for a reassessment of the impact charitable foundations had on Cairo's overall water supply. Even extensive *awqāf* did not finance major water infrastructures that served the urban population at large; rather, they sponsored relatively small-scale water structures that served well-defined communities within the city.

Furthermore, most foundations that financed the purchase and distribution of potable water in the city and cemetery did not fund autonomous water systems

⁷¹ DW23; al-Shabrawī, "Wathā'iq al-Sultān al-Muẓaffar Rukn al-Dīn Baybars al-Jāshankīr," 246. Satisfying the water demands of the complex's population required a regular and substantial supply, given that the total number of residents at al-Jāshankīr's complex and the Sufis attending daily sessions surpassed five hundred, as specified in the document. According to the conditions set in the document, 400 Sufis were to attend the lessons at the Khānqāh every day, and 100 of them were allowed to dwell there. The nearby *ribāṭ* initially accommodated 100 individuals from among the discharged *amīrs*. Fernandes, "The foundation of Baybars al-Jāshankīr," 23-26; *The Evolution of a Sufi Institution*, 27.

⁷² al-Sakhāwī, *Ḍaw'*, 10:129.

⁷³ Raymond, "Cairo's Area and Population," 30.

that linked storage or distribution points to water sources. Although they are not explicitly mentioned in the sources describing mosques' water storage and distribution facilities, in most cases water carriers were undoubtedly responsible for transporting the drinking water needed to supply the mosques. Most of the deeds discussed in the next section financed the purchase drinking water from the water carriers who supplied it across the city. Only a few foundations, such as the ones of *amīr* Ṣarghitmish and Sultan Faraj ibn Barqūq, hired transporters solely for their own water supply.⁷⁴ A few remarkable exceptions financed structural connections to water sources. The *ṣahrīj* of al-Azbakiyya mosque, for instance, was filled during the Nile plenitude through a conduit connecting it with the Azbakiyya pond.⁷⁵ Likewise, the mosque established by the Fatimid *wazīr* al-Ṣāliḥ Ṭalā'ī' (d. 556/1161) outside Bāb Zuwayla (the southern gate of al-Qāhira) was equipped with a cistern fed by a system of conduits connected to a *sāqiya* located near Bāb al-Kharq (the south-western gate of al-Qāhira) on the shores of the Great Khalīj. During the Nile plenitude, this *sāqiya* drew the Nile water flowing in the Khalīj into the conduits feeding the cistern of al-Ṣāliḥ Ṭalā'ī' mosque.⁷⁶ Autonomous water supply systems may have been scarce in religious buildings due to the high costs associated with constructing the complex conduit systems required to feed them. For instance, the Fatimid *wazīr* al-Afḍal Shāhanshāh (d. 515/1121) spent over 5,000 *dīnārs* to refurbish part of the Ṭūlūnid aqueduct to bring water to the mosque of his revered *Shaykh* al-Aṭfīḥī at the Qarāfa—a structure al-Aṭfīḥī himself had equipped with a cistern, hammam, and garden.⁷⁷

4.1.3 Water Dispensers: the *Sabīls*

Ornate water dispensers financed by *waqf* foundations, *sabīls* stand as the quintessential example of charitable water provision. A significant number of these structures built during the Mamlūk period still exist in Cairo, and are predominantly found at the corners of mosques, madrasas, and *khānqāhs*. The conspicuous presence of *sabīls* within the city, coupled with their artistic value and distinctive religious symbolism, has resulted in them receiving greater scholarly attention than the other charitable water-giving practices examined in this chapter. Decades ago, Lamei Mostafa's seminal article on Cairene *sabīls* established their deep symbolic connection to the Islamic tradition's high regard for water giving as a charitable act, and

⁷⁴ Ibrahim, "Naṣṣān jadīdān," 152; Lamei Mostafa, "The Cairene Sabil," 40-1.

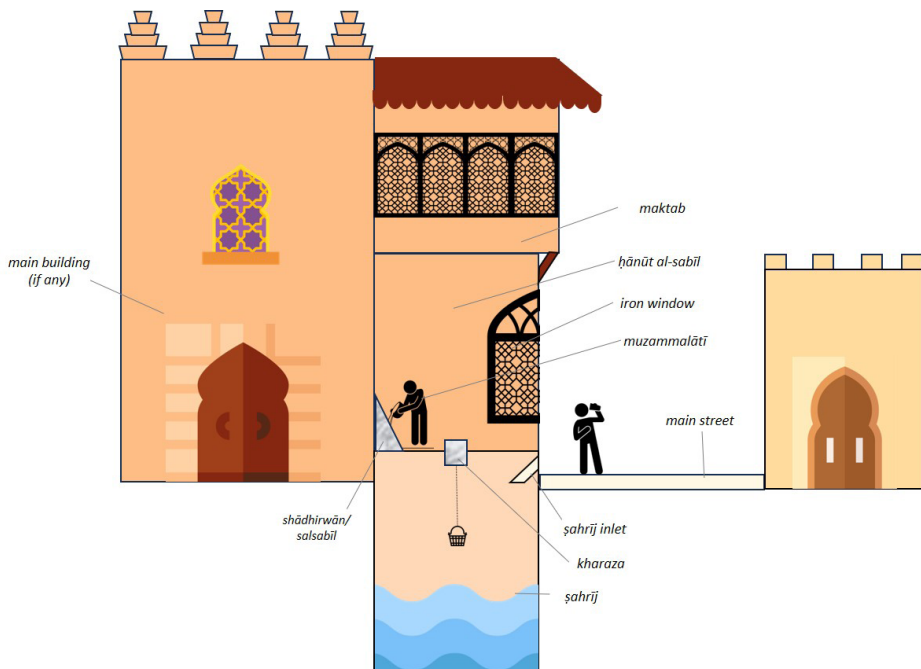
⁷⁵ DW198. See edited excerpt in Appendix. The connection, as detailed below, is noteworthy because Cairo's pond water was generally considered unsuitable for drinking because it was contaminated with brackish groundwater. Isoldi, "The *birkas* of Cairo," 377.

⁷⁶ Ibn 'Abd al-Zāhir, *al-Rawḍa*, 75; al-Maqrīzī, *Khiṭaṭ*, 4:84-5. Like the mosque of al-Ḥākim, the mosque of al-Ṣāliḥ Ṭalā'ī' was also damaged by the earthquake of 702/1303. Its restoration was entrusted to *amīr* Baktamur al-Jūkandār, whose *waqf* deed was discussed above.

⁷⁷ al-Maqrīzī, *Khiṭaṭ*, 4:341.

Qur'anic symbolism linking water springs and Paradise.⁷⁸ While Mostafa provides a brief overview of the primary structural features of *sabīls*, Howayda al-Harithy's 2009 publication offers a more comprehensive study of their historical and architectural development, as well as their function within Cairo's urban architectural landscape.⁷⁹ Doris Behrens-Abouseif also addressed the artistic and architectural aspects of *sabīls*.⁸⁰ Valentine Denizeau's doctoral thesis examined instead how significant *sabīls* were in Cairo's water supply and emphasized how their establishment depended on "political group" patronage rather than "State" funding. Denizeau further argued that *sabīls*, while contributing to the city's supply of drinking water, essentially constituted symbolic representations of the founders' social prestige.⁸¹ Building on these contributions, this section provides a socio-economic analysis of the water dispensers described in the case studies to understand their role in the city's water supply. To lay the foundation for this analysis, this section first provides an overview of Mamlūk *sabīls*' architectural elements.

8. Schematic rendering of a typical ninth/fifteenth-century Cairene *sabīl* (Angela Isoldi)



⁷⁸. Lamei Mostafa, "The Cairene Sabil," 34-8.

⁷⁹. al-Harithy, "Charity and Piety," 161-182.

⁸⁰. Behrens-Abouseif, "Sabil," *El-2 English*.

⁸¹. Denizeau, "Conduire l'eau," 449-52.

4.1.3.1 Architecture, Decoration, and Symbolism

The structural layout of most extant Mamlūk-era *sabīls* includes three units organized vertically: an underground cistern (*saḥrī*) used to store potable water; a distribution chamber (*ḥānūt al-sabīl*) built above the cistern and having windows at street level; and a Qurʾānic school for orphans (*maktab*, or *kuttāb*) atop the *ḥānūt al-sabīl* (Fig. 8).⁸² This tripartite vertical layout seems to have become an established standard for *sabīls* as early as the late eighth/fourteenth century. The earliest extant examples that display this structure, namely the *sabīls* at the mosque of Asanbughā, the madrasa of Uljāy al-Yūsufī, and the mosque of Ināl al-Yūsufī, date from 772/1370, 774/1373, and 794/1393, respectively.⁸³

Two extant *sabīls* dating from the early eighth/fourteenth century display different structural layouts. One of these *sabīls*, which is attributed to Sultan al-Nāṣir Muḥammad and is the oldest extant *sabīl* in Cairo, is located at the eastern corner of the Maṣṣūrī complex facing the mausoleum of al-Ṣāliḥ Ayyūb. It is unclear whether this *sabīl* included an underground cistern: the visible part of this water dispenser presents itself as a peculiar columned L-shaped structure that could be the result of structural stratification.⁸⁴ The sources attest that when this *sabīl* was constructed in 726/1326, *amīr* Jamāl al-Dīn Āqūsh al-Ashrafī (d. 736/1336), in charge of the Maṣṣūrī complex's restoration (including its hospital, madrasa, mausoleum, and minarets), replaced an evil-smelling watering trough (*ḥawḍ*) with the *sabīl* to provide drinking

⁸². Lamei Mostafa, "The Cairene Sabīl," 38.

⁸³. These monuments are listed as Monument no. 185, 131, and 118, respectively. al-Harithy, "Charity and Piety," 165; Behrens-Abouseif, "Sabīl," *EI-2 English*; Cairo of the Mamluks, 221; Lamei Mostafa, "The Cairene Sabīls," 38.

⁸⁴. Monument no. 561. Nicholas Warner, *The Monuments of Historic Cairo* (AUC Press, 2004), 167. Warner states that the *sabīl* was built instead of a *ḥawḍ* by *amīr* Arghūn. In light of what follows, however, this statement seems misplaced. While it is true that *amīr* Arghūn al-'Alā'ī held the *naẓar* over the Maṣṣūrī complex and equipped it with a new *sabīl* and *maktab*, this did not happen before 747/1346, while the *sabīl* mentioned here dates from 726/1326. Al-Maqrīzī, *Sulūk*, 4:24; Ahmad Isa, *Tārīkh al-Bimāristānāt fī al-Islām* (Dar al-Raed al-Arabi, 1998), 97. However, it is possible that some changes to the *sabīl* of 726/1326 were made at a later stage. The inscription above the *sabīl*, on the cornice of its wooden ceiling, refers to al-Nāṣir Muḥammad as *shahīd*, suggesting that the sultan was already dead when the inscription was installed and moving the date of the inscription to sometime after 741/1341. See *Thesaurus d'Épigraphie Islamique*, fiche 7483. Warner reports that a *maktab* above this *sabīl* was removed by the Comité to reveal the inscription running around the external wall of the adjacent madrasa (which is part of the Maṣṣūrī complex). This *maktab* must also have been a post-726/1326 addition, for it is not mentioned among the enhancements made by Jamāl al-Dīn Āqūsh al-Ashrafī. Michael Meinecke, *Die Mamlukische Architectur* II, 144 and 204.

water.⁸⁵ Hence, this *sabīl*'s peculiar structure might simply mirror the layout of the *ḥawḍ* it was built over. The second extant *sabīl* from the early eighth/fourteenth century, Shaykhū's *sabīl*, may also owe its unusual layout to the fact that it was built over pre-existing topographical elements. This *sabīl* is located below the Citadel next to the former Bāb al-Wadā' gate and was built in 755/1354 by Shaykhū al-ʿUmarī al-Nāṣirī (d. 758/1357), an influential *amīr* in the court of Sultan Ḥasan (second reign: 755-762/1354-1362). The extant part of this water dispenser comprises a semi-dome sitting above some bedrock, into which the water-distribution room is carved (Fig. 9). It has been suggested that the *sabīl*, which is not equipped with a cistern, made use of a cave with a natural spring for its water supply.⁸⁶ The inscriptions running along the base of the semi-dome make the *sabīl* even more atypical: *sabīls* commonly feature inscriptions of Qurʾanic quotations or celebrations of their founder, but Shaykhū's *sabīl* is inscribed with the *ḥadīth* quoted at the beginning of this chapter, in which the Prophet Muḥammad identifies providing water as the best form of charity.⁸⁷

⁸⁵. al-Maqrīzī, *Sulūk*, 3:89; al-Nuwayrī, *Nihāya*, 33:152, Isa, *Tārīkh al-Bimāristānāt*, 94-5. The influential *amīr* Jamāl al-Dīn Āqūsh al-Ashrafī held the office of *nāʾib* first in Karak and then in Damascus, and the *naẓar* (administratorship) over the Manṣūrī hospital. Al-Ṣafadī, *al-Wāfi bi-al-Wafayāt*, 9:195-7. Al-Maqrīzī states that Jamāl al-Dīn Āqūsh financed the restoration of the Manṣūrī complex with his own resources, without using the funds of the large *waqf* of Qalāwūn.

⁸⁶. Monument no. 144. Jarosław Dobrowolski, *The Living Stones of Cairo* (AUC Press, 2001), 28; Warner, *Monuments*, 114. Al-Harithy suggests, instead, that the *sabīl* of Shaykhū was built on the site of an older cistern: al-Harithy, "Charity and Piety," 163. However, reconstructing the original shape and functioning of the *sabīl* of Shaykhū is complicated by the lack of related records in al-Maqrīzī's *Khiṭaṭ*.

⁸⁷. *Thesaurus d'Epigraphie Islamique*, fiche 1807. The presence of a *ḥadīth* inscription in a monument patronized by Shaykhū is not casual. As emphasized in a recent paper by Noha Abou-Khatwa, Shaykhū was a lover of *ḥadīth* literature and commissioned various copies of *ḥadīth* compendia. *Ḥadīth* inscriptions also feature in both the mosque-madrasa and in the *khānqāh* Shaykhū endowed in the Ṣalība street. Such extensive use of *ḥadīth* inscriptions in the monuments Shaykhū patronized can also be explained by his personal ties with the Sufi *shaykh* Akmal al-Dīn al-Rūmī, one of the major *ḥadīth* scholars of the time, whom Shaykhū appointed as *shaykh* of his *khānqāh* when it was completed in 756/1355. Noha Abou-Khatwa, "The Word of the Beloved Prophet of Islam: *Ḥadīths* Inscribed on Cairo's Islamic Architecture," in *Beyond Authenticity. Alternative Approaches to Ḥadīth Narrations and Collections*, ed. Mohammad Gharaibeh (Brill, 2023), 371-9. There are only a few other *ḥadīth* inscriptions from Mamlūk Cairo in the database of the *Thesaurus d'Epigraphie Islamique*. One of them (fiche 50675), dated to approximately the same period as the one at the *sabīl* of Shaykhū (747/1346-7), is located in the mosque of Aydamur al-Bahlawān (d. 748/1347) (Monument no. 22). Also this inscription and its significance have been discussed in Abou-Khatwa, "The Word of the Beloved Prophet," 369-71. An examination of the *Thesaurus d'Epigraphie Islamique* suggests a higher incidence of *ḥadīth* inscriptions in Iranian architecture of the period. A considerable portion of these inscriptions are found in the early fourteenth-century mausoleum of the Ilkhanid ruler Ūljaytū, whose interactions with the Mamlūk court are well-established.

9. The *sabīl* of amīr Shaykhū at Bāb al-Wadā' (Angela Isoldi)

The madrasa of Umm al-Sulṭān Sha'bān, built in 770/1368, features both a *sabīl* and a *maktab*, but unlike later examples of Mamlūk-era water dispensers, the *maktab* and *sabīl* are separated by the madrasa's main portal, and the *maktab* is situated above a drinking trough.⁸⁸ In Cairo, this is the earliest extant example in which a *maktab* and a *sabīl* feature together as part of the same building. However, by the time Sultan al-Ashraf Sha'bān had completed this complex in honour of his mother Khawand Baraka, combining these two elements may have been a consolidated architectural practice.⁸⁹ As early as 662/1263, Sultan al-Ẓāhir Baybars had added a *sabīl* and a *maktab* for the education of the orphans to his madrasa in Bayn al-Qaṣrayn (the Ẓāhiriyya Madrasa).⁹⁰ Amīr Arghūn al-'Alā'ī (d. 748/1347), who was appointed the administrator of the Maṣṣūrī complex in 747/1346, added a *maktab* at the gate of the *bimāristān*, most

⁸⁸. Monument no. 125; al-Harithy, "Charity and Piety," 164. Behrens-Abouseif, *Cairo of the Mamluks*, 220 and 223.

⁸⁹. Various inscriptions at the monument indicate that al-Ashraf Sha'bān dedicated this complex to his mother (see, for instance, *Thesaurus d'Epigraphie Islamique*, fiche 932, 933, 934, and 964). However, since the sultan was born in 754/1353 and still very young at the time, it has been suggested that his mother Khawand Baraka, one of the most powerful women of the time, was the *de facto* founder of the madrasa. Behrens-Abouseif, *Cairo of the Mamluks*, 218.

⁹⁰. al-Maqrīzī, *Sulūk*, 2:4; *Khiṭaṭ*, 4:224; Ibn Taghrī Birdī, *Nujūm*, 7:121. The existence of this *maktab-sabīl* on Bayn al-Qaṣrayn is also attested in the *waqf* deed of Sultan Qalāwūn (DW658). Muhammad Amin, "Wathā'iq waqf al-Sulṭān Qalāwūn 'alā al-Bīmāristān al-Manṣūrī," in *Tadhkirat al-Nabīh fī Ayyām al-Manṣūr wa-Banīh* by Ḥasab ibn Ḥabīb, (Maṭba'at Dār al-Kutub, 1976) 1:346-347.

likely near the *sabīl amīr* Jamāl al-Dīn Āqūsh al-Ashrafi had built there a few decades earlier.⁹¹ The mosque of Āqsunqur, completed in 747/1346, also included both a *sabīl* and a *maktab*. In this case, it seems that the *sabīl* and *maktab* were combined into a single architectural unit, which however is no longer extant.⁹²

While the arrangement of a cistern, a *ḥānūt al-sabīl*, and a *maktab* in one vertical block is the most common among the extant examples of Mamlūk-era religious architecture from the late eighth/fourteenth century onwards, three case studies selected for this chapter show that even in the ninth/fifteenth century not all *sabīls* were organized according to this scheme. Faṭḥ Allāh's *waqf* deed, for instance, does not mention any *maktabs* connected to the two *sabīls* financed by his foundation. Likewise, the *sabīl* endowed by Qarājā al-Jamālī at his own *turba* included a cistern and distribution chamber but no *maktab*, which Qarājā intended to build near the watering trough endowed at the Suwayqat al-Sāḥib.⁹³ Moreover, the *sabīl* Faṭḥ Allāh endowed at the Suwayqat al-Mas'ūdī (where his luxurious palace was also located) used water drawn from one of the cisterns sponsored by the same *waqf* foundation. The document states that the *sabīl* was near this cistern (*muḥawwir lahu*), thus it seems unlikely that these two elements were built as a single unit like in other extant *sabīls*. The *sabīl* endowed at Faṭḥ Allāh's mausoleum distributed water drawn from two cisterns, one of which was part of his *turba* while the other was attached to the nearby *khānqāh* of Ṭughāy Tamur al-Najmī that Faṭḥ Allāh restored and financed through his foundation. In this case, too, it is not clear from the document whether the *sabīl* was built atop the cistern at the *turba*. Moreover, the document does not indicate any building attached to *sabīl* of Faṭḥ Allāh at the Suwayqat al-Mas'ūdī, which suggests that this was a self-standing structures.

The majority of extant Mamlūk-era *sabīls* are attached to religious buildings, while only a small minority are self-standing structures or attached to secular buildings.⁹⁴ To a certain extent, this disparity may be due to the fact that religious structures typically have a higher survival rate than non-religious structures, since they are kept as active places of worship. Documentary evidence reveals, however, that freestanding *sabīls* or those integrated into commercial and residential structures

⁹¹ al-Maqrīzī, *Sulūk*, 4:24; al-Malaṭī, *Nayl*, 1:148.

⁹² Monument no. 123; Saleh Lamei Mostafa, *al-Turāth al-Mi'mārī al-Islāmī fī Miṣr* (Dār al-Nahḍa, 1984), 28; al-Harithy, "Charity and Piety," 165.

⁹³ DW177 and DW184. In both deeds, Qarājā stipulated that his foundation's revenues be used to construct a *maktab* for the education of ten orphans. The deeds specify that the *maktab* had to be built near the *hawḍ* endowed at the Suwayqat al-Sāḥib.

⁹⁴ Two such examples are the self-standing *sabīl* of Qāyṭbāy at the Ṣalība street (Monument no. 324), and the *sabīl* attached to the *wikāla* of Qāyṭbāy (Monument no. 75 and 76) behind al-Azhar mosque.

may have been more common than the surviving material evidence suggests.⁹⁵ The *sabīl* Mūsā al-Burhānī endowed in Ḥārat Zuwayla, for instance, was attached to a secular building that was added to Mūsā's *waqf* in Rajab 839 (January 1436). This *sabīl*, built above an underground cistern, had a window overlooking the street and a door on the eastern side of the building, which bordered with a series of shops. According to the description in the *waqfiyya*, the building included the underground cistern, the *sabīl*, five shops, and a horse stable on the ground floor, as well as two apartments (*ṭabaqa*) with separate facilities (toilets and kitchens) on the upper floor.⁹⁶

Regardless of their differing structural layouts and whether they were freestanding or attached to other buildings, all *sabīls* were located along thoroughfares. Building *sabīls* along the main streets was a practical necessity: firstly, because the water carriers who filled the cisterns with drinking water required easy access to the buildings, and, secondly, because the *sabīls*' primary function was distributing water to passersby. In the *sabīls* with cisterns beneath their distribution chamber, small openings placed at street level allowed water carriers to deposit water in the *ṣahrīj* directly from the street.⁹⁷ Like the cisterns within mosques, the cisterns of *sabīls* served as cool, protected environments where drinking water collected during the Nile inundation could be stored for several months until the next flood season. It must be said, however, that the quality of this stored water must have been fairly poor: Ibn Iyās reports that in Muḥarram 881 (April 1476), the Nile's water had so greatly worsened in colour and taste that the *nās* resorted to drinking from the city's cisterns and wells.⁹⁸ Clearly, cisterns' water was not the preferred option for those who could normally purchase fresh Nile water. Often built atop of the cistern, the *ḥānūt al-sabīl* was a well-delimited space—its iron windows separating it from the street—used to distribute water regularly throughout the year. The charitable concept at the core of this structure was not different from that of the *tasbīl* at the mosque and at the

^{95.} For example, Denizeau indicates that only some *sabīls* of Qāyṭbāy appear as self-standing structures or in association with secular buildings. Denizeau "Conduire l'eau," 446. Yet the case studies discussed here indicate that more such examples existed. It is possible that more *sabīls* attached to religious buildings survived because the demolition of mosques was considered both socially and legally less acceptable. Fernandes, "Istibdāl," 208.

^{96.} DW91. The building is described in the second deed, stipulated in 839/1436. For the description of this *sabīl*, see edited excerpt in the Appendix.

^{97.} Behrens-Abouseif, *Islamic Architecture in Cairo*, 131; al-Harithy, "Charity and Piety," 165-7. Al-Harithy suggested that positioning *sabīls* at the corners of buildings served to enhance ventilation and contribute to the cooling of cistern water. This scholar noted how in various cases *sabīls* are located on the northern corners of religious buildings. Such placement had the advantage of being more shaded and cooler, but the position was also determined because the *sabīl* needed to be placed near the main entrance, usually opposite to the *qibla* wall (with a southeast orientation).

^{98.} Ibn Iyās, *Badā' i*, 3:119.

funerary complexes. The *sabīl*, however, provided an enclosed space for the person in charge of distributing water—the *muzammalātī*. Furthermore, *sabīls* functioned as spaces for the founders to showcase their piety and social status. Positioned along the principal thoroughfare, the *sabīl* was highly visible to the passersby receiving water through the iron windows separating the *ḥānūt al-sabīl* from the street, where they could admire the munificence of the founders.

In many of the extant Mamlūk-era *sabīls*, the water distribution chamber is embellished with a *shādhirwān*, the slanted marble slab which also decorated the domestic fountains in the palaces of the *ahl al-dawla*.⁹⁹ As in the domestic context, where the *shādhirwān* facilitated air and water circulation to lower room temperatures, in *sabīls* this element served a practical function beyond its decorative role. Before being offered to people, the water kept in the cistern was poured over the carved marble slab to be aerated and refreshed after stagnating in the *ṣahrīj* for a while. In addition, as Saleh Lamei Mostafa has emphasized, the *shādhirwān* also had symbolic significance. The water poured upon the slab evoked the “gushing water” described in the Qur’an, as well as the paradise fountain mentioned in Surat al-Insān, the *salsabīl*, a term that was also used to refer to the *shādhirwān*.¹⁰⁰

The long-lived tradition of associating the *sabīl* to a Qur’anic school for orphans, the *maktab*, indicates that the two structures were actually part of the same outlook on charity. Indeed, Islamic religious sources enshrine water giving, orphan care, and teaching the Qur’an as highly rewarded forms of charity.¹⁰¹ Inscriptions adorning some Mamlūk-period Cairene *sabīls* highlight these structures’ connection to a specific, religiously derived concept of charity, emphasizing the founders’ adherence to its principles. The hadith inscribed in *amīr* Shaykhū’ *sabīl* of is one of the most eloquent examples: it records the Prophet’s statement that water giving is the best form of charity and adds that the “humble servant of Allah” Shaykhū ordered the *sabīl*’s construction, therefore implying that Shaykhū acted in accordance with

^{99.} Nasser Rabbat has pointed out that the *shādhirwān* made its first appearance in the domestic context (examples have been found in Islamic Sicily and in the domestic architecture of Fustāt) and became a recurrent decorative element in the reception halls of the Ayyubid and, as mentioned in the previous chapter, Mamlūk periods. Nasser Rabbat, “Shādhirwān,” in *Encyclopaedia of Islam New Edition Online (EI-2 English)*, ed. P. Bearman (Brill, 2012) doi: https://doi.org/10.1163/1573-3912_islam_SIM_6737.

^{100.} Lamei Mostafa, “The Cairene Sabil,” 37.

^{101.} Borgolte, *World History*, 75. See also the hadiths mentioned in the introduction to this chapter. In the Qur’an, the Surat al-Insān represents a quintessential interpretative key for the symbolism of the *maktab-sabīl*. Several verses of this Sura refer to piety and divine recompense, and in this sura the Paradise fountain named *salsabīl* is mentioned.

prophetic instructions.¹⁰² Comparably, the *sabīl* attached to the complex of al-Ashraf Ināl, completed in 860/1456, and the one at the mausoleum of al-Ashraf Qāyrbāy, finished in 877/1472-3, are inscribed with the same verse from the Surat al-Insān: “the righteous will drink from a cup mixed with camphor” (*inna al-abrār yashrabūna min kā’s kāna mizājuhā kāfūran*).¹⁰³ In the *sabīl* attached to Qāyrbāy’s complex, the inscription reports also the two successive verses: “a spring from which the servants of Allah will drink; they will make it gush abundantly, They fulfil their vows and fear the Day in which evil will spread”.¹⁰⁴ Al-Ashraf Ināl’s complex is inscribed with part of another verse from the same sura that reads, “their Lord will give them a pure drink”.¹⁰⁵ As art historian Oleg Grabar has observed, the inscriptions from the Qur’an that decorate Qāyrbāy’s mausoleum are directly related to the function of the part of the building where they are located.¹⁰⁶ This seems to be the case for these *sabīls* as well, for the inscribed passages describe a fresh, pure drink offered in a cup, the precise way water was offered to people at the *sabīl*. At the same time, these inscriptions also allude to the divine reward awaiting the righteous servants of Allah, revealing the ultimate purpose of the charitable almsgiving: doing good deeds in order to gain spiritual benefits.¹⁰⁷

4.1.3.2 Function And Impact: Understanding the *Sabīl* through *Waqf* Documents

The *sabīls*’ architectural layout provides some insights into their operational function: water was stored in the cistern, and distributed from the apposite chamber overlooking the street. Additional essential information regarding how these structures operated is provided by the *waqf* documents that outline the functional requirements of water dispensers. In particular, *waqf* documents are crucial to understanding how significant *sabīls* were to Cairo’s water supply, a question that cannot be answered by examining their architectural organization alone.¹⁰⁸ Drawing from the operation and maintenance requirements specified by *waqf* founders, this analysis provides a detailed account of *sabīl* cistern water provision, water distribution, and the duties of *sabīl* attendants (Table 5). Six of the nine case studies selected for this dissertation refer to *sabīls* in either al-Qāhira and its environs or in the city’s cemeteries. Regrettably, one of these six documents, Abū Bakr Ibn Muzhir’s

^{102.} *Thesaurus d’Epigraphie Islamique*, fiche 1807; Abou-Khatwa, “The Word of the Beloved Prophet,” 379; Lamei Mostafa, “The Cairene Sabil,” 35.

^{103.} Qur’an, 76:5.

^{104.} Qur’an, 76:6-7. *Thesaurus d’Epigraphie Islamique*, fiche 42825. Monument no. 99.

^{105.} Qur’an, 76:21. *Thesaurus d’Epigraphie Islamique*, fiche 42797. Monument no. 158.

^{106.} Oleg Grabar, “The Inscriptions of the Madrasa-Mausoleum of Qāyrbāy,” in *Islamic Visual Culture, 1100-1800* (Ashgate, 2006), 273.

^{107.} Stillman, “Waqf and the Ideology of Charity,” 359; Borgolte, *World History*, 64.

^{108.} van Berkel, “Waqf Documents,” 237.

waqfiyya, which refers to a *ṣahrīj* and *maktab-sabīl* endowed in the Qashshāshīn quarter in Jumādā I 859 (May 1455), is missing information regarding the structure's upkeep due to a textual lacuna.¹⁰⁹ However, the other five documents provide valuable details on the functional and financial aspects of the *sabīls* they sponsored. By integrating these details with comparative evidence from other edited documents, I have identified operational patterns for Mamlūk-era *sabīls* and formulated conclusions regarding the role they played in Cairo's water supply.

4.1.3.3 Filling the cisterns

Significant insight into how *sabīls* operated can be derived from *waqf* stipulations regarding the water supply of their cisterns, which were a vital component of these structures' function. Faṭḥ Allāh's, Mūsā's, Qarājā's, Azbak's, and Azdamur's *waqf* deeds all stipulate that the cisterns in their *sabīls* were to be replenished on a yearly basis. The deeds of Mūsā and Qarājā both specify that the cisterns' water was to be bought during the Nile plenitude (*fī ayyām ziyādat al-nīl al-mubārak*) when the water from the river flowed in the canals (*fī zaman jariyān mā' al-nīl fī al-khuljān*).¹¹⁰ Sultan Barsbāy's *waqfiyya* uses a similar expression to specify when Nile water should be purchased to fill a *ṣahrīj*.¹¹¹ Most likely, these founders wanted water purchased during high Nile flood months because water was more abundant and of better quality during the plenitude, whereas water became stagnant and more expensive when the Nile's levels were low. These *waqf* stipulations also suggest that the cisterns could be filled using canal water, which was potable for a brief period during the annual flood but became too stagnant and polluted for consumption during the remaining months. Obtaining drinking water from the *khuljān* offered a clear logistical advantage because the canals were closer to the city, but not all founders took advantage of this. Amīr Qarāqujā al-Ḥasanī's (d. 853/1449) *waqf* deed, for example, stipulates that the *ṣahrīj* of the foundation had to be filled with Nile water and "not with water coming

¹⁰⁹. DW175. This document is dated Ṣafar 879 (June 1474) and refers to other *waqf* documents Abū Bakr ibn Muzhir had stipulated earlier but that are no longer extant. The *madrasa* Ibn Muzhir financed in Cairo, which is still extant (although in a terrible state) at the Ḥārat Barjawān, was built in 884/1479, just a few years after the stipulation of DW175. I am unsure about the location of the Qashshāshīn ("the rag sellers") quarter, but Ibn Iyās mentions a Sūq al-Qashshāshīn in the Taḥt al-Rab' area (just outside Bāb Zuwayla). Ibn Iyās, *Badā'i*, 3:43.

¹¹⁰. DW91 and DW177. See edited excerpts in Appendix.

¹¹¹. Amin, *al-Awqāf*, 149: "*wa-yuṣrafu dhalika fī thaman mā' 'aḍb yunqalu ilā al-ṣahrīj al-madhkūr fī kullī sana min mā' al-nīl al-mubārak 'inda jariyānihi fī al-khuljān*".

from the canals" (*lā min mā' al-khalij*), suggesting that canal water was not necessarily a preferable option in terms of quality.¹¹²

The considerable number of foundations that financially contributed to replenishing al-Azhar Mosque's *ṣahrījs* suggest that filling cisterns was an expensive undertaking. Azdamur min 'Alī Bāy's *waqf* document offers insight into the costs of filling a *sabīl*'s cistern. The document sets aside an annual sum of 12,000 *dirhams fulūs* for replenishing the *ṣahrīj* at Azdamur's funerary complex with Nile water.¹¹³ This amount is considerable, especially since among the stipends listed in the document for the foundation's employees, the highest one, allotted to the foundation's *nāẓir*, amounts to 1,000 *dirhams fulūs* per month.¹¹⁴ This means that the sum Azdamur allotted to purchasing water was equivalent to the yearly income of the *waqf*'s highest paid employee. Among the case studies examined here, however, Azdamur's *waqf* deed is the only document that indicates a specific budget for drinking water.¹¹⁵

In the other case studies, the budget for replenishing the cisterns is left unspecified. Faṭḥ Allāh, for example, allocated an indefinite budget for supplying the endowed cisterns with drinking water. Faṭḥ Allāh's foundation supported a cistern at Suwayqat al-Mas'ūdī in Cairo and two cisterns at the cemetery, one of which was restored as part of the *khānqāh* of Tuḡḡāy Tamur al-Najmī while the other was a newly constructed cistern at Faṭḥ Allāh's shrine. His *waqf* deed stipulates that the foundation must disburse the funds required to fill these three cisterns with water every year

¹¹². Ibrahim, "Wathīqat al-Amīr Akhūr Kabīr Qarāqujā al-Ḥasanī," 212; Amin, *al-Awqāf*, 149-50. The *waqf* deed is dated Sha'bān 1st, 845 (December 1441). Qarāqujā al-Ḥasanī (d. 853/1449) was a *mamlūk* of Barqūq and prominent *amīr* at the court of al-Ashraf Barsbāy and al-Zāhir Jaqmaq. See Ibn Taghrī Birdī, *al-Manhal*, 9:50-1; al-Sakhāwī, *Ḍaw'*, 6:216. The *sabīl*, which was part of Qarāqujā's mosque, is still extant (Monument no. 206): the position of the monument is very close to the former course of the Great Khalij, which reveals that the requirement to fill the cistern exclusively with Nile water was not dictated by practical convenience.

¹¹³. DW241: "wa-yuṣrafu fī thaman mā' 'aḍb yuhmalu min mā' al-nīl al-mubārak yuṣabbu bi-l-ṣahrīj al-kā'in bi-l-turba al-madhkūra a'lāhu fī kulli sana min al-fulūs mu'āmala tārikhihi ithnā' 'ashar alf dirham". See edited excerpt in Appendix.

¹¹⁴. DW241. See edited excerpt in Appendix. More will be said on the proportions of these salaries below.

¹¹⁵. It is not, however, the only deed that indicates a fixed amount for the purchase of drinking water: the deed of al-Ashraf Barsbāy (recorded in the inscription running on the façade of the *khānqāh* at the cemetery) sets a yearly amount of 1,000 *dirhams* for the purchase of water for the *sabīl*. See *Thesaurus d'Epigraphie Islamique*, fiche 9755. Also the *waqf* deed of Yashbak al-Muḥammadī (DW121), already mentioned above, sets a monthly budget of 200 *dirhams fulūs* for the purchase of drinking water to be distributed from the *sabīl* of Sudūn, located outside al-Qāhira.

“at any price” (*bālighan mā balagha*).¹¹⁶ Mūsā al-Burhānī’s *waqf* deed also allocates a flexible budget to supply water for the cisterns located beneath his *sabīl* in Cairo and at his *turba* in the cemetery outside Bāb al-Naṣr.¹¹⁷ Likewise, Qarājā al-Jamālī’s *waqf* deeds do not stipulate a specific sum for filling the cistern at his *turba* in the cemetery outside Bāb al-Naṣr.¹¹⁸ A flexible budgetary allocation for the purchase of drinking water allowed the foundations to replenish the cisterns regardless of price fluctuations, for, as explained in Chapter 2, the water carriers’ fees varied annually based on the Nile’s flood level. A substantial flood not only augmented the supply of accessible freshwater but also reduced fodder costs for the water carriers’ camels, while a low river level resulted in higher fees due to water shortages and increased crops expenses.¹¹⁹ For instance, in 802/1399, a catastrophically low flood caused the price of a *rāwiya* to rise from 1.5 to 4 *dirhams*.¹²⁰ Other environmental factors also influenced price fluctuations: in the mid-eighth/fourteenth century the cost of a *rāwiya* went from 0.75 to 2 *dirhams* due to the Nile’s westward shift;¹²¹ and following the 749/1348 plague that decimated both humans and camels, the price of a *rāwiya* soared to 8 *dirhams*.¹²² However, while a flexible budget for the purchase of drinking water allowed foundations to accommodate fluctuating costs, especially during *ghalā’* (high prices) years, extreme price variations could still place an unsustainable burden on foundation resources: in 892/1487, as the price of a *rāwiya* reached 4 *dirhams niṣf*, some *sabīls* were forced to close, likely due to financial constraints.¹²³

¹¹⁶. DW355: “*wa-fi kulfā malī’ al-ṣahārīj al-madhkūra mā yahtāju ilā ṣarfihī min dhalika bālighan mā balagha min al-naqd al-muta’āmul bihi yawm dhāka kulli sana ‘alā al-‘āda fī mithla dhalika*”. See edited excerpt in Appendix. The phrase “as usual for such matter” (*‘alā al-‘āda fī mithla dhalika*) implies a consistent pattern in how foundations financed the acquisition of Nile water for the *sabīls*.

¹¹⁷. DW91. The document indicates the location of Mūsā’s *turba* as “towards *turba* of (the *amīr*) Kūkāy, near the courtyard (*ḥawsh*) of the Hanbalī’s (*bi-zāhir al-qāhira al-maḥrūsa bi-al-ṣahrā’ tijāh turbat kūkāy qarīban min ḥawsh al-sāda al-ḥanābila*). Al-Maqrīzī lists the *turba* of Kūkāy among those built in the cemetery outside Bāb al-Naṣr (*Khiṭaṭ*, 4:361). These two monuments are used to indicate a certain area of the Qarāfa in other sources as well. See, for instance: al-Sakhāwī, *Ḍaw’*, 8:234.

¹¹⁸. DW177. See edited excerpt in Appendix.

¹¹⁹. In 855/1451, for instance, the scarcity of fodder caused the price of a *rāwiya* to exceed 20 *dirhams fulūs*. Ibn Taghrī Birdī, *Hawādith*, 317-8. Similarly, in 891/1486 increased fodder prices led to a rise in the water carriers’ fees. Al-Malaṭī, *Nayl*, 8:14.

¹²⁰. al-Maqrīzī, *Sulūk*, 6:29-30.

¹²¹. al-Maqrīzī, *Khiṭaṭ*, 3:295-6.

¹²². al-Maqrīzī, *Sulūk*, 4:90.

¹²³. al-Sakhāwī, *Wajīz*, 3:1001; al-Malaṭī, *Nayl*, 8:60-3; al-Salawī, “*Ṭā’ifat al-saqqā’īn*,” 251. The *dirham niṣf* (pl. *anṣāf*) was first coined in Syria by al-Mu’ayyad Shaykh’s rival, Nawrūz al-Ḥāfiẓī al-Zāhirī (d. 817/1414). The name of this coin derives from the fact that it weighted half (*niṣf*) of the silver *dirham* in Egypt. At the beginning, the *niṣf* was made almost exclusively with silver. This coin circulated in Egypt during the reign of al-Mu’ayyad Shaykh and his successors, but with a lower silver ratio. During the reign of Jaqmaq, the value of the *dirham niṣf* was drastically debased due to its silver percentage dropping to a minimum. Petry, *The Mamluk Sultanate*, 202.

While setting a flexible budget for filling the endowed cisterns, Mūsā's *waqfiyya* stipulates a precise number of waterskins to be purchased every year for filling the *ṣahrīj* at the *turba*—400 *rāwiyas*.¹²⁴ This data can be used to calculate the capacity of Mūsā's cistern at the cemetery. Based on the approximate equation proposed earlier (1 *rāwiya* = about 400 litres), this cistern would contain about 160,000 litres, a volume (160 m³) that could be accommodated by a chamber measuring roughly 6 meters on each side. The fact that Yashbak al-Muḥammadī's mid-ninth/fifteenth-century foundation sponsored the purchase of 2 *rāwiyas* per day for the mosque of Ibn Ṭulūn may suggest that 400 *rāwiyas* per year was a feasible amount for *awqāf* to fund and distribute. Determining the degree to which this volume of water supplemented the urban population's water needs is challenging. It is perhaps worth noting that while Mūsā sponsored 400 *rāwiyas* per year for his *turba*'s cisterns, al-Maqrīzī wrote that 'Abd al-'Azīz Ibn Marwān's (d. 86/705) vast palace in Fuṣṭāṭ consumed 400 *rāwiyas* each day.¹²⁵ Considering al-Maqrīzī's description of the palace, which included five mosques, two hammams, and multiple bread ovens for its many inhabitants, it is plausible that in a ninth/fifteenth-century Cairene's perception, 400 *rāwiyas* represented the daily water needs of a populated district. Spread out over an entire year, 400 *rāwiyas* may have represented a more modest quantity.

Just like mosque cisterns, *sabīl* cisterns relied on the Cairo's *saqqā'ūn* for drinking water supply. The annual filling of the many *ṣahrījs* scattered in the city undoubtedly demanded substantial effort and labour from the water carriers. Among the case studies examined here, only Azbak min Ṭuṭukh's foundation employed a system alternative to the water carriers to supply its cisterns with potable water. As described above, the *ṣahrīj* of the Azbakiyya *sabīl* was filled via a conduit from the Birkat al-Azbakiyya, which was filled with Nile water through the Khalīj al-Nāṣirī during the annual flood. Azbak's *waqf* deed allocates an annual budget of 3,000 *dirhams fulūs* for digging the channel (*jarf al-khalīj*) that supplied water to the pond. This sum also covered the opening of the conduit (*bajamūn*) that connected the *sabīl*'s cistern to the pond.¹²⁶ Nile water filled the Azbakiyya *ṣahrīj* after flowing through the Khalīj al-Nāṣirī to the Birkat al-Azbakiyya. Such a system could only function when the Nile's current was strong enough to ensure the flow of fresh water into the canal and pond, so the *ṣahrīj* of the Azbakiyya *sabīl* was filled each year before the pond and canal became stagnant and polluted during the low Nile period. A comparison with Azdamur's expenditures for drinking water clearly demonstrates that the

^{124.} DW91. See edited excerpt in Appendix.

^{125.} al-Maqrīzī, *Khiṭaṭ*, 2:155.

^{126.} DW241. See edited excerpt in Appendix. *Bajamūn* is a colloquial term indicating a channel of modest size. Taymūr Bashā, *Mu'jam Taymūr*, 2:113.

Azbakiyya's conduit system significantly lowered the cost of replenishing the *sabīl*'s cistern over the long term. However, this cost reduction must be weighed against the substantial initial investment that Azbak had made in building the *birka* and its associated conduit system. The Azbakiyya system was an exceptionally rare example of drinking water being supplied independently of water carrier services and fees—its uniqueness is explained by both the *sabīl*'s position in the western outskirts of Cairo and by the large sum Azbak invested in the quarter.

Two other examples of foundations that did not require the service of Cairo's water carriers hired their own water transporters, instead of implementing conduit systems similar to the one in Azbakiyya. Sultan Faraj Ibn Barqūq's *waqf* financed two camels (*jamalayn*), multiple cameleers (*'ummāl*), and several waterskins to ensure the *sabīl* endowed outside Bāb Zuwayla was supplied with water every day.¹²⁷ Similarly, *amīr* Ṣarghitmish al-Nāṣirī's *waqf* financed camels and cameleers to transport Nile water each day to the *muzammala* (water-storage area) of the madrasa he endowed next to Ibn Ṭūlūn mosque.¹²⁸ Both foundations allocated an unspecified budget for these expenses, entrusting the foundation's *nāẓir* to determine the funds necessary to cover the expenses, thereby reflecting similar operational dynamics as the foundations that employed the city's water carriers. The fact that neither *waqf* stipulates a specific water budget suggests that the primary advantage of employing independent water transporters was their consistent availability rather than predictable costs. This solution seems not to have been widely adopted, however, for these were the only two instances I could find where foundations hired their own water transporters.

The case studies examined here suggest that providing drinking water for *sabīl* cisterns each year represented a considerable financial burden, and that the majority of *sabīl* cisterns were filled by the same water carriers that served the city at large. The funds required to supply the cisterns with water varied depending on the annual Nile flood, which influenced not only water availability but also water transportation costs. The flexible budget established by most *waqf* foundations to replenish cisterns could have enabled *sabīls* to operate despite these water price variations; however, during periods of *ghalā'*, *sabīls* were unlikely to serve as dependable drinking water sources for the city at large. Their dependence on water carrier services demonstrates

^{127.} Mostafa, "The Cairene Sabīls," 40. The salary of these employees and the sum necessary for the maintenance of the camels are left to the discretion of the *nāẓir*.

^{128.} Ibrahim, "Naṣṣān jadīdān," 152. Al-Harithy ("Charity and Piety," 170-1) explains that the *muzammala* was a water storage area located within some religious institutions, typically between the main portal and the central courtyard. *Muzammalas* took the form of wall recesses covered by wooden screens and were ventilated. The word comes from the Arabic root *zammala* (to cover), referring to the covering the water vessels were wrapped in to keep the water cool.

that *sabils* did not function as autonomous water providers within the city. However, they did play a role in urban water storage and distribution within the confines of specific terms of distribution established by their respective founders.

4.1.3.4 Distributing water

Analysing the stipulations *waqf* founders placed on the daily maintenance of their *sabils* and the distribution of drinking water from the *ḥānūt al-sabīl* provides a deeper understanding of how these water dispensers functioned and what role they played in Cairo's water supply. Stipulations regarding how water should be distributed are detailed in the *waqf* documents alongside the responsibilities of the *muzammalātī*, the *sabīl* attendant, tasked with routine maintenance of the *sabīl* and providing water to passersby through the iron windows of the *sabīl*'s distribution chamber. An examination of the *sabils*' operating conditions reveals that their functionality was modulated by the specific provisions of their respective founders. However, despite this individuality, certain consistent operational patterns emerge across these structures.

One discernible pattern pertains to the nature of the responsibilities assigned to the *sabīl* attendants. These tasks included regularly opening and closing the *sabīl*, maintaining its cleanliness, and sanitizing the drinking vessels used to distribute water. On a practical level, the *muzammalātī*'s tasks were similar to those of a janitor. Indeed, Mūsā al-Burhānī's and Qarājā al-Jamālī's *waqf* deeds list analogous tasks for the *muzammalātī* and the *bawwāb* (doorman). Mūsā's deed stipulates that the *bawwāb* employed at his *turba* was responsible for dispensing drinking water, safekeeping the items (*amti'a*) kept within the *turba*, and opening, closing, sweeping, and carpeting the shrine when necessary. Similarly, the *muzammalātī* employed at the *sabīl* Mūsā endowed in Ḥārat Zuwayla was entrusted with opening and closing the *sabīl*, as well as maintaining the vessels used to distribute water (*ḥifẓ mā bi-hi min al-kizān wa-ālat al-istiqā'*).¹²⁹ Qarājā al-Jamālī's 880/1475 *waqfiyya* assigns the *bawwāb* at his shrine with similar responsibilities. The document indicates that this employee was in charge of opening, closing, and cleaning Qarājā's *turba* and its *ṣahrīj*.¹³⁰ Azbak min Ṭuṭukh's *waqf*

¹²⁹. DW91. See edited excerpt in Appendix.

¹³⁰. DW177: "yatawallī fath al-makān al-turba al-madhkūra a'lāhu wa-al-ṣahrīj al-madhkūr wa-ghuflahumā wa-kansahumā". See edited excerpt in Appendix. The *ṣahrīj* was most likely cleaned yearly before it was refilled during the plenitude. The cleaning of the *sabīl* is not consistently mentioned in *waqf* documents among the duties of the *muzammalātī*. Al-Ghawrī's *waqf* deed, for instance, allots a yearly sum of 2,000 *dirhams* for the *nāẓir* to hire cleaners "to clean, wash, and fumigate the cistern under the *khānqāh*" once a year in the month of January (Ṭūba). The amount includes the price of the wax and incense for fumigation. Al-Hazmeh, "Late Mamluk Patronage," 171; Behrens-Abouseif, "Sabīl," *El-2 English*. The use of incense for purifying the drinking vessels is attested in the *ḥisba* manuals (for the water carriers). See, for instance: Ibn al-Ukhuwwa, *Ma'ālim*, 348.

deed clearly indicates that the daily upkeep of the *sabīls* was customarily entrusted to the *muzammalātī*. In listing the duties of the attendant of the Azbakiyya *sabīl*, the deed mentions that this employee was required to clean the *sabīl* and its vessels, “as usual for the *muzammalātīs*” (*mimmā jarat ‘ādat al-muzammalātiyya*).¹³¹ Azdamur min ‘Alī Bāy’s *waqf* deed also includes sanitizing jars and vessels (*ghusl al-azyār wa-al-awānī*) amongst the tasks of the *muzammalātī* working at Azdamur’s funerary complex.¹³²

Alongside the custodial duties and water distribution, the *muzammalātī* was also responsible for gradually transferring water (generally using buckets) from the *ṣahrīj* to the *ḥānūt al-sabīl*.¹³³ When the *ḥānūt al-sabīl* was built atop of the *ṣahrīj*, an opening in the floor of the distribution chamber provided access to the cistern. In the *sabīl* Mūsā al-Burhānī endowed in Cairo, for instance, a shaft in the floor of the distribution chamber connected this room with the cistern below. The mouth of this shaft was enclosed in a circular white marble rim (called *kharaza*), giving it the semblance of a small well.¹³⁴ It is possible that Azbak’s and Qarājā’s *sabīls* had a similar opening as well. Although descriptions of their *sabīls* are missing from their *waqf* documents, it seems that the *ṣahrīj* Azbak endowed was located under the mosque of the new quarter, and the *sabīl* was attached to this mosque.¹³⁵ Similarly, the cistern Qarājā endowed is described in the document as being built underground (*mabnī fī takhūm al-arḍ*), suggesting it was located beneath the *sabīl*.¹³⁶ Faṭḥ Allāh’s *waqf* deed indicates, on the other hand, that the *ḥānūt al-sabīl* at the Suwayqat al-Mas’ūdī was near (*mujāwir*) the cistern endowed in the same neighbourhood, suggesting that the *muzammalātī* had to transfer water to the distribution chamber from a separate and possibly unconnected cistern. Likewise, the *muzammalātī* serving Faṭḥ Allāh’s *turba* was required to draw water from both the shrine’s cistern and the one at the nearby Khānqāh of Ṭuḡḡāy Tamur al-Najmī.¹³⁷

¹³¹ DW198: “*yunazzifa al-sabīl al-madhkūr wa-awānīhi wa-iḥrāzihā wa-ghayr dhalika mimmā jarat ‘ādat al-muzammalātiyya bi-‘amalihi fī mithla dhalika*”. See edited excerpt in Appendix.

¹³² DW241. See edited excerpt in Appendix.

¹³³ Exceptionally, in the *sabīl* of al-Ghawrī’s complex in Cairo, the cistern is located behind (not underneath) the distribution chamber, which allows water to flow directly on the *shādhirwān* without being lifted by the *muzammalātī*. Behrens-Abouseif, “Sabīl,” *EI-2 English*; al-Harithy, “Charity and Piety,” 176.

¹³⁴ DW91. See edited excerpt in Appendix. The *kharaza* features consistently in the *sabīls* built above the cisterns. Amin and Ibrahim, *Muṣṭalahāt*, 40.

¹³⁵ DW198. See edited excerpt in Appendix. The document refers to the cistern as *ṣahrīj al-jāmi‘*, hence it seems safe to assume that they were part of the same building. See also the map of the quarter in: Behrens-Abouseif, *Azbakiyya*, 31.

¹³⁶ DW177. See edited excerpt in Appendix.

¹³⁷ DW355. See edited excerpt in Appendix. Azdamur’s *waqfiyya* description of his funerary complex is missing, but the part edited for this study seem to refer to the cistern as part of the *turba* (DW241, edited excerpt in Appendix).

Once cistern water was transported to the *ḥānūt al-sabīl*, the *muzammalātī* was to offer it to passersby through the iron-grated windows of the distribution chamber, utilizing the vessels belonging to the *sabīl*. Notably, some *waqf* deeds indicate a relatively specific timeframe for the distribution of water from the *sabīls*, demonstrating that these structures offered water only for a limited interval during the day. Faṭḥ Allāh's *waqfiyya*, for instance, stipulates that the *muzammalātī* at his *turba*'s *sabīl* was to distribute water each day from forenoon to the time of the afternoon prayer (*min waqt al-ḍuḥā ilā waqt al-ʿaṣr*). During the month of Ramadan, instead, water was distributed between the sunset prayer and the end of the *tarāwīḥ* prayer (*waqt al-maghrib ilā ḥattā firāgh al-nās min ṣalāt al-tarāwīḥ*).¹³⁸ Azbak min Ṭuṭukh's *waqf* deed sets a similar water distribution schedule at the *sabīl* of Azbakiyya: each day between the noon prayer (*al-ẓuhr*) and the afternoon prayer (*al-ʿaṣr*), and during Ramadan between the sunset prayer (*al-maghrib*) and the end of the *tarāwīḥ* prayer.¹³⁹ Likewise, the foundation of Yashbak al-Muḥammadī, mentioned earlier, paid a *muzammalātī* to distribute water from a *sabīl* between *al-ẓuhr* and *al-ʿaṣr*.¹⁴⁰ In all these cases, the hours of operation stipulated by the *sabīls*' founders were rather brief, and although the interval between the designated moments (*al-ḍuḥā*, *al-ẓuhr*, *al-ʿaṣr*, *al-maghrib* and the end of the *tarāwīḥ* prayer) would have varied depending on the seasons, even during the extended daylight of summertime the *sabīls* would not have been active for more than four or five hours a day. It is likely that other *sabīls* followed a similar schedule,¹⁴¹ while some were active for longer intervals throughout the day. Sultan Faraj ibn Barqūq's *waqf* deed, for instance, stipulates that the *sabīl* outside Bāb Zuwayla was to distribute water every day between forenoon (*ḍuḥā*) and sunset (*maghrib*).¹⁴² The mosque of *amīr* Qarāquja al-Ḥasanī, established in 845/1441-2 near Darb al-Jamamīz and still extant, included a *sabīl* that, according to the *waqf* deed edited by the Egyptian scholar Abd al-Latif Ibrahim, distributed water daily from the beginning to the end of the day (*fī kullī yawm min awwal al-nahār wa-ilā ākhirihī*).¹⁴³ Similarly, al-Ghawrī's *waqf* deed stipulated that his *sabīl* distribute water every day "from sunrise until people return to their homes in the evening" and, during Ramadan, from sunset until dawn.¹⁴⁴

¹³⁸. DW355. See edited excerpt in Appendix. The *tarāwīḥ* is a prayer performed on the nights of Ramadan following the evening prayer (*al-ʿishāʾ*). It involves reading one thirtieth (*juzʾ*) of the Qurʾan and performing an even number of *rakʿāt* (normally 20) every night.

¹³⁹. DW198. See edited excerpt in Appendix.

¹⁴⁰. DW121. The *sabīl* in question is indicated in the document as *sabīl* Sudūnī.

¹⁴¹. Hasan al-Basha, *al-Funūn al-Islāmiyya wa-al-waṣāʾif ʿalā al-āthār al-ʿarabiyya* (Dār al-Nahḍa al-ʿArabiyya, 1966), 3:1080 (note 1).

¹⁴². Lamei Mostafa, "The Cairene Sabil," 40.

¹⁴³. Ibrahim, "Wathīqat al-Amīr Akhūr Kabīr Qarāqujā al-Ḥasanī," 211.

¹⁴⁴. al-Hazmeh, "Late Mamluk Patronage," 161.

Some other documents examined for this chapter do not set such specific distribution schedules. Mūsā al-Burhānī's *waqfiyya*, for example, stipulates that his two endowed *sabīls* operated during "habitual times" (*al-awqāt al-mu'tāda*),¹⁴⁵ an ambiguous phrase which may refer to a short schedule similar to those already discussed. Qarājā's deed uses similar phrasing when it states that the *bawwāb* at his *turba* was to distribute water every day "at any proper time" (*fī ayy waqt yatasaddad*).¹⁴⁶ It remains unclear whether "at any proper time" refers to a schedule decided *ad hoc* for this particular foundation, or to one customarily followed by the other *sabīls* in the city. Finally, the *waqfiyya* of Azdamur completely omits the *sabīl*'s schedule.

Previous studies have claimed that *sabīls* represented "an integral part" of Cairo's "water supply network and public services" because they provided drinking water "from sunrise until sunset".¹⁴⁷ The examples discussed above, however, compel a more nuanced reassessment of the role *sabīls* played in Cairo's water supply. It is evident that *sabīls* were facilities designed to store and distribute a substantial quantity of drinking water year-round, but the case studies suggest that it was common for *sabīls* to distribute water only during certain times of the day—generally those times coinciding with the hottest hours of the day throughout most of the year, and following the breaking of the fast during Ramadan.¹⁴⁸ Therefore, while the service *sabīls* provided must have mitigated part of the urban population's water demands, whether they played a pivotal role in Cairo's overall urban water supply remains debatable. The short operational schedules specified for some *sabīls* imply that their contribution to the city's drinking water supply was limited. Furthermore, even though some general organizational patterns are discernible between the various *sabīls*, the functioning of each individual water dispenser was contingent upon the stipulations of its founder. This implies, as Denizeau has proposed, that the activity of these structures was not directly tied to the needs of the urban population.¹⁴⁹ Additionally, the architectural arrangement of most Mamlūk-era *sabīls*, characterized by an underground cistern for storing drinking water and an enclosed *ḥānūt al-sabīl* from where a *muzammalātī* distributed water to passersby outside the structure, indicates that the primary objective of these structures was not providing people with freely accessible water. Therefore, *sabīls* ought not to be understood as components of a general policy aimed at water accessibility, as the term "public fountain" often used in research implies. Rather, these facilities are better understood as the products

¹⁴⁵. DW91. See edited excerpt in Appendix.

¹⁴⁶. DW177. See edited excerpt in Appendix. This reading is hypothetical as the text is unclear to me.

¹⁴⁷. al-Harithy, "Charity and Piety," 162; Bakhoum, "The Waqf System," 186.

¹⁴⁸. al-Basha, *Funūn*, 3:1080.

¹⁴⁹. Denizeau, "Conduire l'eau," 450.

of a collective understanding of “charity” whose primary objective was the spiritual salvation of the founders, not the establishment of an urban water system.

4.1.4 Waterwheels and Basins

Sabils were not the only endowed structures that provided water as a form of almsgiving: some of the case studies analysed here reveal that waterwheels were also endowed as charitable installations. Charitable waterwheels have not received as much scholarly attention as *sabils* possibly for two main reasons: firstly, they lacked the symbolic meaning and artistic value of the water dispensers; and secondly, no charitable waterwheels from the Mamlūk period have survived into the present day, so they have left no material evidence of interest for art historians and historians of Mamlūk architecture. Consequently, the functioning and operation of Mamlūk-era charitable waterwheels can only be reconstructed using textual sources. In particular, the conditions outlined in *waqf* documents regarding how these waterwheels were maintained and operated offer valuable insights into the role these installation played in Cairo’s water supply. Moreover, some of the foundations analysed in this chapter endowed both *sabils* and charitable waterwheels, allowing for a comparison between these charitable structures and their potential impact on the urban water supply (Table 6).

As explained in Chapter 3, the *sāqiya* was an animal-powered water lifting device made of two large wooden gear wheels oriented perpendicularly to one another. Operating this installation involved attaching a neck-bar to a draft animal that walked on a circular track around a vertical axis shaft. This vertical shaft supported a horizontal gear wheel that drove a vertical gear wheel connected to a wheel mounted on top of a water well or, in certain cases, over a canal. Water was lifted from the well by a bucket-chain attached to the vertical gear wheel and deposited into a receptacle (*ḥāṣil*), from which it flowed towards the facilities connected to the *sāqiya*.¹⁵⁰ Chapter 3 discussed waterwheels as components of the hydraulic systems of Mamlūk-era palaces and hammams. In palaces and hammams, waterwheels were connected exclusively to the facilities they fed and were only accessible to the people living or working in those buildings. Charitable waterwheels were instead installed in open spaces and provided freely accessible water. Unlike *sabils*, however, these waterwheels did not provide drinking water; rather they filled basins with groundwater that could be used for various purposes except human consumption.

Faṭḥ Allāh’s *waqf* foundation, for instance, financed two waterwheels that fed basins from which people could draw water at no cost. One of these waterwheels was

^{150.} Wikander, *Handbook of Ancient Water Technology*, 267-272; Schiøler, *Roman and Islamic Water-lifting Wheels*, 27-32.

located near the *khānqāh* of Ṭughāy Tamur al-Najmī at the cemetery, while the other was at the Suwayqat al-Mas‘udī in al-Qāhira. The *waqf* deed indicates that each of these waterwheels supplied a *ḥawḍ* that had to be kept full of water night and day so that people could use it for watering their animals, washing their clothes, and other such purposes.¹⁵¹ Qarājā al Jamālī’s foundation sponsored a *sāqiya* next to the residential palace the *amīr* had endowed at the Suwayqat al-Ṣāhib. The waterwheel fed a basin that, as stipulated in the *waqf* document, was to be kept filled with water from sunrise to sunset.¹⁵² The document also specifies that the basin was intended as a watering trough (*li-saqī al-dawāb*); however, it is possible that these basins served other purposes as well, for Faṭḥ Allāh’s deed notes that people “normally” used them for various needs (*‘alā al-‘āda fī mithli dhalika*).¹⁵³

Some waterwheels whose maintenance and operation were sponsored by the foundations fed multiple facilities. The *sāqiya* Azbak endowed in his quarter, for instance, supplied both charitable and lucrative facilities, including the mosque’s ablution fountain (*mīḍā’*), the hammams and their latrines, the bakery, the mill, and the garden of Azbakiyya.¹⁵⁴ Similarly, the waterwheel endowed as part of Azdamur min ‘Alī Bāy’s funerary complex supplied water to two gardens, a *ḥawḍ*, and a pool (*baḥra*) that either the Sufis dwelling at Azdamur’s *turba* or passersby could use to water their animals, perform ritual ablutions, or wash themselves.¹⁵⁵ Both Azbak’s and Azdamur’s deeds indicate, as in the examples mentioned above, that the their waterwheels had to be active throughout the day, ensuring a constant flow of water to the connected facilities.

The continuous operation and maintenance of these waterwheels required significant financial resources. While the operation and maintenance of waterwheels serving communal hammams and residential palaces was the responsibility of their tenants, the operating and maintenance costs of waterwheels serving charitable facilities were covered by the *waqf* foundations to which these installations belonged. Since waterwheels were animal-powered installations, a substantial and recurring cost

^{151.} DW355. See edited excerpt in Appendix. For the *sāqiya* at the cemetery the document stipulates: “*ḥattā yaṣīr mamlū ‘an laylan wa nahāran li-yantafi’ u al-nās fī saqī dawābihim wa-ghuṣl hidamihi*”. Behrens-Abouseif, *Faṭḥ Allāh and Abū Zakariyya*, 39. For the other *sāqiya* (the description of which was not edited by Behrens-Abouseif), the document reads: “*li-yantafi’ u bi-hi al-nās li-kulfa saqī dawābihim wa-ghayr dhalika*”.

^{152.} DW177: “*bi-haythu lā yanqaṭi’ u ‘anhu al-mā’ sā’a wāḥida min ṭulū’ al-shams ilā ghurūbihā*”. See edited excerpt in Appendix.

^{153.} DW355. See edited excerpt in Appendix. Behrens-Abouseif, *Faṭḥ Allāh and Abū Zakariyya*, 39.

^{154.} DW198. See edited excerpt in Appendix. The *sāqiya* in question is the one installed within the commercial and residential complex, which included the two hammams discussed in Chapter 3.

^{155.} DW241: “*li-yantafi’ u bi-dhalika al-mārrūn wa-al-mutaraddidūn ‘alayhi wa-ghayrhum wa-al-muqīmūn bi-al-turba al-madhkura fī saqī dawābihim wa-wuḍū’ihim wa-ighsālihīm wa-isti’ mālihīm wa-ghayr dhalika*”. See edited excerpt in Appendix.

for the foundations involved both the purchase and the feeding of the draft animals that powered them. Faṭḥ Allāh's *waqf* document includes, within the foundation's expenses, one non-specific allocation (*bālighan mā balagha*) to procure two oxen to power the *sāqiya* at the cemetery, and another to procure an ox to power the waterwheel in Cairo.¹⁵⁶ Similarly, Qarājā's *waqf* deed stipulates that the foundation must provide an ox for the *sāqiya* in Cairo at any cost, and Azbak's deed states that the foundation's *nāẓir* shall dedicate part of the revenues to purchasing and maintaining oxen for the waterwheel located near the *mīdā'* of the mosque.¹⁵⁷ These documents also indicate that if any of the oxen became incapable of operating the *sāqiyas*, the *nāẓir* had to arrange for their replacement.¹⁵⁸ In addition, these foundations provided for the fodder of oxen.¹⁵⁹ In the *waqf* documents of Faṭḥ Allah and Azbak, the amount allocated or fodder remains unspecified.¹⁶⁰ Qarājā's *waqf* deed stipulates that four *qadaḥs* (i.e. about 8 litres) of split fava beans (*ful*) must be acquired each day to feed the ox.¹⁶¹ This suggests that Qarājā's foundation needed to acquire over one *irdabb* (equivalent to 96 *qadaḥs*) of *ful* each month—an amount that in years of high prices could reach the cost of 700 *dirhams fulūs*.¹⁶² These deeds did not establish a fixed budget for fodder because crop prices fluctuated depending on the Nile's annual flood. Notably, among the case studies only Azdamur's deed allocates a fixed monthly sum of 1,800 *dirhams fulūs* to the purchase of fodder for the draft animals (*dawāb*) powering the *sāqiya*.¹⁶³ When compared to the amount the same document allocates toward purchasing Nile water (12,000 *dirhams fulūs* per year), this figure shows that maintaining a waterwheel entailed substantial expenses, a considerable part of which was associated with acquiring and feeding draft animals.

Besides the expenses related to the draft animals, a *sāqiya*'s operating and maintenance costs included salaries for a *sawwāq* (a *sāqiya* attendant) who supervised and cared for the draft animal operating the waterwheel and a craftsman in charge of repairing the waterwheel when necessary. The responsibilities and respective remuneration of these workers will be examined in more detail below, where the role

^{156.} DW355. See edited excerpt in Appendix.

^{157.} DW177 and DW198. See edited excerpts in Appendix.

^{158.} DW355 and DW198.

^{159.} The documents mention various types of fodder: *'alaf* (fodder), *ful* (fava beans), *tibn* (chopped straw), and *qurṭ* (clover).

^{160.} DW355 and DW198. In a later adjustment to the *waqfiyya*, Azbak added further revenues for purchasing fodder for the bulls of the *sāqiya* discussed here.

^{161.} DW177 and DW184. See edited excerpt in Appendix.

^{162.} Ashtor, *Histoire Des Prix et des Salaires*, 300.

^{163.} DW241. See edited excerpt in Appendix. As discussed above, this is the only deed (among the ones analysed here) which indicates a fixed amount for the purchase of goods (such as water) the price of which constantly varied.

and status of the attendants serving at the charitable water structures are discussed. The designation of specialized workers such as carpenters (*najjār*) for the upkeep of the waterwheels demonstrates that the *sāqiya*s were complex mechanisms whose construction and maintenance required precise professional skills.¹⁶⁴

In conclusion, despite lacking the aesthetic and symbolic value of *sabīls*, the *sāqiya*s appear to have been significant charitable investments for *waqf* foundations, which allocated substantial funds to their operation and upkeep. *Sāqiya*s provided a complementary service to the *sabīls* and cisterns, which were designed for distributing and storing drinking water, for they offered readily and freely available groundwater that, while unsuitable for human consumption, could be used to water animals, wash clothing, and attend to personal hygiene, among other purposes. Furthermore, in contrast to *sabīls*, the foundations mandated longer operational hours for the waterwheels throughout the day, thus making water easily accessible for longer periods. Therefore, any discussion of charitable contributions to the city's water supply must include these charitable waterwheels alongside *sabīls* and cisterns.

4.1.5 Reassessing the Aims: Charity and Patronage vs. Philanthropy and Welfare

The preceding analysis of *waqf* documents allows for several observations concerning the complex significance of structures and initiatives dedicated to providing water as a charitable deed. The detailed conditions *waqf* founders stipulated for distributing drinking water and operating *sabīls* and waterwheels indicate that these structures and charitable initiatives served a more intricate and stratified purpose than simply providing water to the people of Cairo. Indeed, providing water was just one facet of these endeavours, which also embodied specific outlooks on piety and charity, as well as shared social and political values. Reassessing the religious and socio-political ideals that underpinned these forms of charitable water provision, therefore, is crucial for drawing relevant conclusions regarding the purposes that these structures and initiatives served and the roles that they played in the urban context.

The outlook on piety and charity at the core of *waqf*-sponsored water provision, while not explicitly stated in the *waqf* documents, becomes evident in some of the recurring stipulations the founders included to regulate various forms of this charitable endeavour. For instance, the *awqāf* that funded weekly distribution of drinking water shared common criteria in determining the location and timing of these charitable

¹⁶⁴. Schiøler, *Roman and Islamic Water-lifting Wheels*, 168. A manual about the making of waterwheels (*dawlāb*) listed in the *Fihrist* of Ibn al-Nadīm. Shatzmiller, *Labour*, 195. Schiøler, *Roman and Islamic Water-lifting Wheels*, 59.

acts. The value traditionally attributed to Thursday nights, regarded as a moment when people's actions are presented to Allah, explains their consistent selection as the time for charitable almsgiving. This suggests that the timing was strategically chosen to enhance the donors' merit in providing water, indicating that the founders' primary interest lay in seeking spiritual deliverance rather than simply providing certain services. The systematic selection of *turbas* as the site for almsgiving was driven by similar strategic considerations. As Sabra rightly observed, the distribution of alms at the cemetery was associated with the visitation of tombs (usually taking place on Thursday nights), during which visitors could pray for the salvation of the dead. Receiving alms would have prompted the recipients to pray for the benefactors, thus contributing to the salvation of the latter's souls.¹⁶⁵ The *waqf* deed of Qarājā al-Jamālī clearly illustrates that prayers for the salvation of the founders' souls were the anticipated outcome of charitable water distribution. The document indeed states that the prisoners receiving his alms were to be requested to pray for the *wāqif* and his descendants.¹⁶⁶

This supports the view, already established by some scholars, that the charitable almsgiving funded by the *awqāf* was primarily “donor-driven”—thus ultimately intended as a means to achieve spiritual deliverance rather than as a response to social problems.¹⁶⁷ In his 1999 article exploring the “ideology of charity” that underpinned Islamic *waqf* foundations, historian Norman Stillman emphasizes that “the spiritual benefit accruing the giver” was the primary incentive for medieval Islamic foundations, outweighing the “physical benefit accruing the recipient.”¹⁶⁸ In line with this interpretation, Yaacov Lev's monograph on charity in medieval Islam concludes that the donors' quest for salvation represented the main goal of the charitable deeds sponsored by *waqf* foundations.¹⁶⁹ Quoting the theologian Ibn Taymiyya (d. 728/1328), Adam Sabra has emphasized that aiding the poor was a

^{165.} Sabra, *Poverty and Charity*, 89 and 99.

^{166.} DW177 and DW184. See edited excerpt in Appendix.

^{167.} Sabra, “Public Policy or Private Charity?,” 95–6. The number of mosques endowed during the Mamlūk period is emblematic in this sense. While describing the madrasa al-Zimāmiyya, endowed at the Suwayqat al-Ṣāhib by a eunuch of Barqūq in 797/1395, al-Maqrīzī laments that this was built too close to another mosque, to the point that people praying at these two mosques could hear each other's *takbīr*. According to al-Maqrīzī, this overabundance of mosques was an issue in multiple areas of the city and represented an abominable innovation (*bid'ā*): an unnecessarily high number of mosques in the same city is, in fact, in contrast with the Islamic tradition. al-Maqrīzī, *Khīṭaṭ*, 4:249; Marion H. Katz, “Friday prayer,” in *Encyclopaedia of Islam Three Online*, ed. K. Fleet, G. Krämer, D. Matringe, J. Nawas and D. J. Stewart (Brill, 2016) doi: https://doi.org/10.1163/1573-3912_ei3_COM_27193. Clearly, endowing mosques was not a response to a social need if even a religious scholar of the time lamented the unnecessary abundance of mosques. Rather, it resulted from the socio-political and religious agenda of the founders.

^{168.} Stillman, “*Waqf* and the ideology of Charity,” 359.

^{169.} Lev, *Charity, Endowments, and Charitable Institutions*, 159–60.

type of charitable act sponsored by *waqf* foundations in that it represented a deed “pleasing to God” and thus suitable for obtaining spiritual reward.¹⁷⁰ Finally, historian Michael Borgolte has argued that the almsgiving sponsored by the *awqāf* stemmed from the belief that posthumous charitable acts performed on behalf of the founders could bring them “closer to God.”¹⁷¹ Consequently, it is crucial to avoid the inaccurate yet common definition of *waqf*-sponsored charitable almsgiving as “philanthropy”, a term denoting acts made for humanitarian purposes.¹⁷² The primary reason *waqf* founders sponsored the charitable provision of water was to please Allah. While their charity benefited the people, it was primarily a means for the founders to attain closeness (*qurba*) to Allah rather than an effort to improve the urban water supply.

This outlook on charitable almsgiving also underpinned the establishment of *sabīls*. As mentioned in the main introduction, the very name of these structures denotes an act done on behalf of Allah (*fī sabīl Allāh*).¹⁷³ Furthermore, the presence of the *shādhirwān/salsabīl*, evoking the Qur’anic “gushing water” and spring, the fact that many *sabīls* were built with *maktabs* for orphans, and the occasional presence of Qur’anic inscriptions referencing the rewards of the “righteous servants of Allah” all demonstrate the profound spiritual value of these structures. Other inscriptions found in some Mamlūk-era *sabīls* further highlight that these structures were intended to provide the founders with spiritual reward. For instance, the inscription on the *sabīl* attached to the mosque of *amīr* ‘Alī ibn al-Turkmānī in al-Maqs states that in 740/1339 Salmā’, al-Turkmānī’s wife, added the water dispenser to the mosque “seeking Allah’s favour” (*taqarruban ilā Allāh ta‘ālā*).¹⁷⁴ At the *sabīl* of *amīr* Ināl al-Yūsufī, an inscription invites the wayfarer to look at the example of the founder, “who built this water dispenser devotedly for Allāh” (*man qad banā li-llāh bi-al-ikhlās hadhā al-sabīl al-mubārak*).¹⁷⁵ Since providing water to animals was also a highly rewarded charitable act according to the Islamic tradition, it also seems reasonable to assume

¹⁷⁰. Sabra, *Poverty and Charity*, 89–92.

¹⁷¹. Borgolte, *World history*, 70; Frenkel, “Piety and Charity,” 185–188; Hoexter, “The *Waqf* and the Public Sphere,” 122.

¹⁷². Some publications defined *awqāf* as “philanthropic”. See for instance: Timur Kuran, “The Provision of Public Goods under Islamic Law: Origins, Impact, and Limitations of the *Waqf* System,” *Law and Society Review* 35, no. 4 (2001): 877; Murat Cizakça, *A History of Philanthropic Foundations: The Islamic World From the Seventh Century to the Present* (Istanbul: Bogazici University Press, 2000). For a discussion on the difference between “charity” and “philanthropy” see: Amy Singer, *Charity in Islamic Societies* (Cambridge University Press, 2008), 6–7. Singer, however, uses “charity” and “philanthropy” as interchangeable terms.

¹⁷³. Behrens-Abouseif, “Sabil,” *El-2 English*; Lamei Mostafa, “The Cairene Sabīls,” 34.

¹⁷⁴. See *Thesaurus d’Epigraphie Islamique*, fiche 7454. On the mosque of *amīr* ‘Alī ibn al-Turkmānī see: al-Maqīzī, *Khiṭaṭ*, 4:117.

¹⁷⁵. *Thesaurus d’Epigraphie Islamique*, fiche 10145. The *sabīl* dates from 794/1393, but the inscription is a posthumous addition from 846/1442.

that charitable *sāqiyas*, which supplied water basins that could serve as watering troughs, shared the same ideological agenda as the *sabīls*.¹⁷⁶

Beyond its purpose of securing spiritual reward for the founders in the afterlife, charitable water giving held socio-political value in that it provided founders with social prestige during their mortal lives. Some Mamlūk-era sources even suggest that charitable acts and almsgiving were, to some extent, expected from people in power. For instance, in his *ḥisba* manual, Ibn al-Ukhuwwa states that when the *bayt al-māl* is empty, the injunction to rebuild the walls, restore the water-supply or repair the mosques must be addressed by the *muḥtasib* to those with power (*dhawī al-makana*) “unless the latter spontaneously undertake the duty”.¹⁷⁷ This quotation indicates that there was a certain expectation that powerful people would contribute to the “good” (*al-ma'rūf*) of the community. A similar expectation emerges in the *amīr* and *atābak* Yashbak al-Sudūnī's (d. 849/1445) obituary, in which the historian Ibn Taghrī Birdī remarks that “despite his great power” (*wa-ma' hadhā al-tamakkun al-'aẓīm*) Yashbak al-Sudūnī never performed any good deed such as founding *sabīls* and mosques, as was customary for powerful individuals (*'alā 'ādat 'uẓamā' al-mulūk*).¹⁷⁸ In addition to this impiety, Ibn Taghrī Birdī also states that Yashbak al-Sudūnī was guilty of *ẓulm* (injustice) and *ṭama'* (greediness), considered two of the most heinous moral flaws, especially in people of power.¹⁷⁹ By contrast, charity represented a value considered intrinsic to the idea of just rulership.¹⁸⁰ This view is in line with the principle at the core of Tāj al-Dīn al-Subkī's (d. 771/1370) *Mu'id al-ni'am*, the moral treatise that excoriates abusing power for personal interests as a vice that causes the loss of divine favour (*ni'ma*). According to al-Subkī, one should respond to divine favour with gratitude (*shukr*) expressed with deeds (*bi-al-af'āl*) that vary depending on the faculties and position of the person.¹⁸¹ For individuals in positions of power, for example, promoting charitable projects through *waqf* foundations might have been considered a form of *shukr bi-al-af'āl*. In this context, sponsoring water supply as a form of charity represented a demonstration of the founders' justice and righteousness.

Sultan Qāytbāy's *sabīl* at the Ṣalība Street was clearly intended to highlight the ruler's justice and political virtues. Founded in 884/1479 and considered one of the most

^{176.} Lamei Mostafa, “The Cairene Sabil,” 35.

^{177.} Ibn al-Ukhūwwa, *Ma'ālim* (ed. Levy), Arabic: 26; trans: 8; van Berkel, “Who owns and controls the water?,” 140.

^{178.} Ibn Taghrī Birdī, *Hawādith*, 131; Amin, *Izdihār*, 254; van den Bent and Isoldi, “Pleasing God, Serving the Citizens,” 215.

^{179.} Ibn Taghrī Birdī, *Hawādith*, 130.

^{180.} See Qur'an, 5:8: “Be just; that is nearer to righteousness”.

^{181.} al-Subkī, *Mu'id al-ni'am*, 37-43.

exquisite surviving water dispensers in Cairo, the building features a celebrative inscription that runs along its façade:

“Has ordered the construction of this blessed *sabīl* the Master (*mawlānā*) his noble Excellency (*al-maqām al-sharīf*) the Sultan, the sovereign (*al-mālik*), al-Malik al-Ashraf Abū al-Naṣr Qāitbāy, Sultan of Islam and the Muslims, slayer of infidels and polytheists (*qātil al-kufra wa-al-mushrikīn*), reviver of justice in the worlds (*muḥyī al-‘adl fī al-‘ālamayn*), may God prolong his reign through Muḥammad and his family and grant them salvation”.¹⁸²

The titles “slayer of infidels and polytheists” (*qātil al-kufra wa-al-mushrikīn*) and “reviver of justice in the worlds” (*muḥyī al-‘adl fī al-‘ālamayn*) present the sultan as the ideal ruler of the Islamic community, a sultan who promotes the *jihād* and restores justice. Together with the commitment to fight against the infidels (the *jihād*), which al-Subkī argued was the most important duty of a sultan, justice (*‘adl*) was the highest moral virtue of the powerful.¹⁸³ The consistent appearance of these titles, often in the same sequence, on numerous monuments founded by sultans throughout the Mamlūk period underscores their political and ideological significance.¹⁸⁴ As Yehoshua Frenkel has argued, these inscriptions, addressing the audience of the subjects, functioned as “projections of power” in the urban space.¹⁸⁵ The inscription on Qāyṭbāy’s *sabīl*, therefore, demonstrates that this monument served a purpose beyond simply dispensing water: it was a potent instrument for promoting the image of the sultan and his political power.

The use of charitable institutions, particularly *sabīls*, as vehicles for political messaging seems to have been a common practice, especially among the more visible members of the *ahl al-dawla*. Daisuke Igarashi’s analysis of Qijmās al-Iṣḥāqī’s endowment strategy revealed that, while his early endowments exclusively served his own interests and those of his family and descendants, upon his appointment as viceroy of Alexandria in 875/1471 Qijmās began financing charitable projects with a wider outreach, including a number of *sabīls*.¹⁸⁶ This shift in the type of charitable endeavours Qijmās financed implies there was a connection between political

^{182.} See *Thesaurus d’Epigraphie Islamique*, fiche 11505.

^{183.} al-Subkī, *Mu’īd al-ni’ām*, (ed. Myhrman) Ar. 27-8, trans. 48-9.

^{184.} Examples can be found on monuments such as the madrasa of Umm al-Sulṭān Sha’bān (*Thesaurus d’Epigraphie Islamique*, fiche 932), or the madrasa of Sultan al-Ashraf Barsbāy (fiche 9754), and the madrasa of Sultan al-Ashraf Ināl (fiche 9779), just to mention a few. Another inscription with similar attributes referring to a ruler is found on the façade of Sultan al-Zāhir Baybars’ Red Mosque in Safad. Luz, *The Mamluk City*, 160.

^{185.} Yehoshua Frenkel, “Public Projection of Power in Mamluk Bilād al-Shām,” *MSR* 11, no. 1 (2007): 41-42; Carine Juvin, “Mamluk Inscriptions,” in *Ubi sumus? Quo vademus?*, ed. Stephan Conermann (Bonn University Press, 2013), 214-215.

^{186.} Igarashi, “The *waqf*-endowment strategy,” 39-45.

visibility and demonstrating munificence and justice via charitable initiatives. Similar shifts in charitable outreach are evident in some of the case studies examined in this work. For instance, Mūsā al-Burhānī's 839/1436 deed, which was likely issued when his career and political influence were at their zenith, incorporated his *sabīl* in Cairo and water distribution at his *turba*. Conversely, his 830/1427 deed focused exclusively on endowing assets for his own benefit and that of his family.¹⁸⁷ Abū Bakr ibn Muzhir's 879/1474 *waqfiyya*, drafted when he was already an influential figure in the court of Sultan Qāyrbāy, mentions a *sabīl* he endowed in the al-Qashshāshīn neighbourhood in Jumādā I 859 (September/October 1455). This endowment occurred shortly before he obtained his first appointment as *nāẓir al-iṣṭabl* in Rajab (November) of the same year.¹⁸⁸ It is possible that, due to his increasing political visibility, Abū Bakr ibn Muzhir aimed to display his moral justice. Notably, in the same neighbourhood of al-Qashshāshīn, Qāyrbāy endowed a *sabīl* in 874/1470, almost two years after becoming sultan.¹⁸⁹ This marked Qāyrbāy's first charitable endowment, though he had been acquiring properties and placing them in trusts for over a decade before his enthronement.¹⁹⁰ It appears, therefore, that Qāyrbāy waited until he had reached the height of his power before making a display of his moral justice by performing charitable acts. Abū Bakr ibn Muzhir's *waqfiyya* also indicates that his 859/1455 deed financed the purchase of water for the cistern at the *turba* of his father, Badr al-Dīn Muḥammad (d. 832/1429), a figure criticized by contemporaries for his illicit wealth and tyrannical behaviour.¹⁹¹ Perhaps, Abū Bakr ibn Muzhir's early deed was intended to atone for his father's misdeeds through an act of *qurba* on behalf of the deceased. Abū Bakr ibn Muzhir's charitable almsgiving at his father's *turba* may also have aimed at restoring Badr al-Dīn Muḥammad's memory, a strategy potentially linked to the beginning of Abū Bakr ibn Muzhir's career within the sultanate administration.

The inscription on the ceiling of the *sabīl* Abū Bakr ibn Muzhir established in the Ḥārat Barjawān in 884/1479 (Fig. 10) reveals that these water dispensers served to showcase not only the moral and political virtues of their founders but also their social standing.¹⁹² Positioned on a ceiling frieze, and thus clearly visible from the street where passersby were offered water, the inscription reads:

¹⁸⁷. DW91.

¹⁸⁸. DW175. See edited excerpt in Appendix. Martel-Thoumian, *Les Civils*, 271.

¹⁸⁹. al-Malaṭī, *al-Rawḍ al-bāsim*, 4:203; and *Nayl*, 6:409; Ibn Iyās, *Badā'i*, 3:43.

¹⁹⁰. Petry, "A Geniza for Mamluk Studies?," 55.

¹⁹¹. DW175. See edited excerpt in Appendix. Martel-Thoumian, *Les Civils*, 269-70. Ota-Tsakada, "Formation of the Ideal Bureaucrat Image," 58-9.

¹⁹². This *sabīl* and the madrasa attached to it (Monument no. 49) were completed years after the *waqfiyya* of Abū Bakr ibn Muzhir analysed in this study (DW175) was written. See Meinecke, *Die Mamlukische Architektur* II, 417. The monument is still extant but in a terrible state of disarray.

“Has ordered the construction of this blessed *sabīl* the humble servant (*al-‘abd al-faqīr*), the honorable (*al-maqqarr*), the most noble (*al-ashraf*), the lofty (*al-‘ālī*), the righteous judge (*al-qāḍawī al-aṣīlī*), the highborn (*al-‘arīqī*), the superior (*al-fāḍilī*), the learned (*al-‘ālimī*), the diligent (*al-‘āmalī*), the masterful (*al-makhdūmī*), the great (*al-kabīr*), Abū Bakr Ibn Muzhir al-Anṣārī al-Shafī‘ī, controller of the noble chancery (*nāẓir dīwān al-inshā’ al-sharīf*) of al-Malik al-Ashraf, may Allah forgive him and all the Muslims. This was finished in the year 884.”¹⁹³

10. Abū Bakr ibn Muzhir *sabīl* at Ḥārat Barjawān (Angela Isoldi)



The lengthy series of honorific titles—*al-maqqarr*, *al-ashraf*, *al-‘ālī*, *al-fāḍilī*, *al-kabīr*—clearly proclaims Abū Bakr ibn Muzhir’s prestigious social standing, while other titles—*al-makhdūmī*, *nāẓir dīwān al-inshā’ al-sharīf*—denote his high political position.¹⁹⁴ By including the term *al-‘arīqī* (the highborn), the inscription also affirms the legitimacy of his family. This addition gains particular significance considering that the Banū Muzhir, originally from Damascus, lacked a power base in Cairo when Abū Bakr ibn Muzhir’s father began his political career in the sultanik administration, and their perceived status as “newcomers” had fuelled hostility towards him.¹⁹⁵

This example demonstrates how *sabīl* inscriptions could be used to communicate significant socio-political messages. However, patronage and prestige could also be conveyed through non-textual means. I would argue that the placement of certain *sabīls* and waterwheels examined

¹⁹³. *Thesaurus d’Epigraphie Islamique*, fiche 11504.

¹⁹⁴. The title *al-makhdūmī* is used to refer to the master whose services a *mamlūk* entered after being manumitted by his purchasing master (the *ustādh*). See Aharon Layish, “*Waqfs of Awlād al-Nās in Aleppo in the Late Mamlūk Period as Reflected in a Family Archive*,” *JESHO* 51, no. 2 (2008): 295.

¹⁹⁵. Ota-Tsukada, “Formation of the Ideal Bureaucrat Image,” 59.

in this chapter could also be interpreted as contributing to the endowers' socio-political statement. In the case studies examined here, charitable water facilities were consistently situated within the same neighbourhoods as other structures endowed by their respective founders. For example, the *sāqiya* and *sabīl* endowed by Faṭḥ Allāh in al-Qāhira were situated in the Suwayqat al-Mas'udī quarter, where his lavish palace was also located.¹⁹⁶ Likewise, the *sāqiya* and *ḥawq* funded by Qarājā's *waqf* was located adjacent to the residential palace he endowed at the Suwayqat al-Ṣāḥib.¹⁹⁷ Mūsā al-Burhānī's *sabīl* was integrated into a commercial and residential building located in the Ḥārat Zuwayla, where he had been acquiring and endowing properties for nearly a decade.¹⁹⁸ The mosque and *sabīl* Abū Bakr ibn Muzhir endowed in 884/1479 were situated in the Ḥārat Barjawān, where he had previously endowed his two palaces in 879/1474.¹⁹⁹ Finally, the case of Azbak min Ṭuṭukh, whose endowed charitable water facilities were concentrated in the quarter he founded at the Birka Azbakiyya, offers perhaps the most emblematic illustration of founders building charitable water installations in areas they had already equipped with residential and commercial facilities. Clearly, the placement of these charitable water installations was not primarily driven by the areas with the greatest need for water; rather, founders established these water facilities in areas where they had already invested in numerous structures. For this reason, it seems plausible that charitable water installations served as a means for founders to further assert their prestige, power, and munificence in urban spaces where their presence was already significant due to other profitable endowments, and concurrently affirm their affiliation with the *ahl al-dawla*.

Finally, the deeds of Faṭḥ Allāh, Azbak min Ṭuṭukh, and Azdamur min 'Alī Bāy also show that some of these charitable water installations were spatially associated with institutions of learning where a number of Sufis dwelled and daily sessions were held. In particular, the *sabīl*, cisterns and waterwheel Faṭḥ Allāh endowed at the cemetery were located by the *khānqāh* of Ṭughāy Tamur al-Najmī, which hosted thirty Sufis and their *shaykh*.²⁰⁰ The *sabīl* financed by Azbak min Ṭuṭukh was attached to the mosque of Azbakiyya, which hosted a community of over twenty Sufis.²⁰¹ Twenty Sufis and their *shaykh* dwelled at Azdamur min 'Alī Bāy's *turba*, where his *sabīl*, cistern, and

^{196.} DW355. See edited excerpt in Appendix.

^{197.} DW177.

^{198.} DW91. As already mentioned, the building this *sabīl* was embedded in was endowed in 839/1436, but other buildings in the same neighbourhood had already been endowed in the deed dated 830/1427.

^{199.} DW175.

^{200.} DW355. Behrens-Abouseif, *Faṭḥ Allāh and Abū Zakariyya*, 40.

^{201.} DW198. See table in Appendix.

waterwheel were endowed.²⁰² The association of charitable water installations with religious institutions such as mosques and *khānqāhs* may have held socio-political value as well. As Lenor Fernandes' work has demonstrated, these institutions played an important political role as spaces where the ties between religious authorities and *ahl al-dawla* unfolded.²⁰³ These mosques, madrasas, and *khānqāhs* supported communities of Sufis and religious scholars by providing them with salaries and shelter. For this reason, religious authorities were more inclined to defend the *awqāf* supporting these institutions when ruling authorities sought to reclaim Treasury resources that had been converted into *waqf* properties.²⁰⁴ In addition, the religious communities connected with these institutions could be effective mediators between the *ahl al-dawla* and the rest of the urban population.²⁰⁵ The mediating value of these institutions extended to their spatial dimension as well, since mosques, madrasas, and *khānqāhs* served as shared spaces frequented by both ruling authorities and ordinary Muslim visitors. The water installations in these complexes provided for the water needs of the resident religious communities, but they also benefited visitors, who, in turn, might forge social and spiritual ties with the religious institutions and—by extension—their founders, offering prayers and appreciating their munificence.

In sum, *sabīls* and other charitable water installations were characterized by an intricate set of religious, social, and political meanings which may have outweighed the significance of their water-providing role. The pre-eminence of these symbolic meanings is especially apparent in the case of *sabīls*. While Howayda al-Harithy claimed that these structures were part of “grand civic projects” with a primarily pragmatic value, I would argue that the structure and operation of certain *sabīls* discussed above reveal that water dispensers were not designed to serve as the city's main water providers.²⁰⁶ They may have contributed to the drinking water supply in specific urban areas, but they functioned primarily as monumental representations of donor-driven concepts of charity while also underscoring the political justice and social prestige of their founders. With this in mind, it becomes evident that the designation of “public fountain” frequently attributed to *sabīls* in scholarly literature is an unfitting, if not misleading, characterization of these structures.

^{202.} DW241. See edited excerpt in Appendix. Ramadan, “Minsha’āt al-amīr Azdamur min ‘Alī Bāy,” 189–202.

^{203.} Fernandes, *The Evolution of a Sufi Institution*, 102–108.

^{204.} When, in 780/1379, Barqūq wanted to dissolve a number of *awqāf* to return some of the resources to the *bayt al-māl*, the scholar Sirāj al-Dīn al-Bulqīnī, who had been asked for an opinion in this regard, stated that the *awqāf* benefitting religious scholars could not be dissolved, and that resources could be retrieved from the *awqāf* benefitting private individuals and obtained in an unlawful way. Al-Maqrīzī, *Sulūk*, 5:57; Sabra, “Public Policy or Private Charity?”, 106. See also later examples discussed at the end of the previous chapter.

^{205.} Fernandes, *The Evolution of a Sufi Institution*, 102.

^{206.} al-Harithy, “Charity and Piety,” 162.

The scholarly tendency to refer to *sabīls* as “public fountains” is likely influenced by early publications that examined different aspects of *sabīls* in Cairo. From André Raymond’s 1979 survey of “fontaines publiques” to Bosworth and Behrens-Abouseif’s entry in the *Encyclopaedia Islamica*, scholars have consistently designated *sabīls* as “public fountains”, yet without adequately exploring the political implications inherent in the term “public”.²⁰⁷ As scholarship demonstrated, the term public possesses fluid connotations across different cultural contexts,²⁰⁸ and within the context of Mamlūk-era Cairo, where *sabīls* flourished, the “public” and “private” dimensions were not clearly demarcated. The *waqf* institution itself, to which *sabīls* were associated, has been shown to constitute a domain beyond binary understandings of “public” and “private”. Miriam Hoexter has rightly emphasized that *waqf* foundations originated from the acts of individuals rather than public initiatives, while the beneficiaries were “always located in the public sphere”.²⁰⁹ Adam Sabra has pointed out that endowed properties, including those obtained from the Treasury, were transformed into the founders’ personal property before being integrated into their *waqf* foundations.²¹⁰ Furthermore, even when the *nazar* (oversight) of a *waqf* was entrusted to an office within the Sultanī administration, the endowed facilities retained their status as *waqf*. Sylvie Denoix has also argued that *waqf* properties technically belonged to neither the realm of the “private” nor the “public”.²¹¹

Despite acknowledging the unsuitability of the categories “private” and “public” in the context of *waqf* foundations, Denoix justifies defining *sabīls* as “public” on the grounds that they provided a service accessible to all, even if they were not managed by “public authorities”.²¹² Valentine Denizeau, despite her more nuanced understanding of *sabīls* as structures meant to display social prestige rather than respond to a need, still aligns with Denoix in defining them as public based on their

^{207.} Raymond, “Les fontaines publiques,” 235-291; Behrens-Abouseif, “Sabīl,” *EI-2 English*; Stillman, “Waqf and the ideology of Charity,” 369; Al-Hamzeh, “Late Mamluk Patronage,” 29; Lamei Mostafa, “The Cairene Sabīl,” 34; Blair and Bloom, “Introduction,” 16; Frenkel, “Public Projection of Power,” 41.

^{208.} Luz, *The Mamluk City*, 88 and 205. On the fluid connotation of “public”, the American philosopher John Dewey stated that “in no two ages and places is there the same public”. John Dewey, *The Public and its Problems* (Alan Swallow, 1927), 33; Amy Russell, *The Politics of Public Space in Republican Rome* (Cambridge University Press, 2016), 8-12.

^{209.} Hoexter, “The Waqf and the Public Sphere,” 121.

^{210.} See, for instance, what said in the previous chapters about the *waqf* of Khawand Ardukin (DW26), Mūsā al-Burhānī (DW91), Abū Bakr Ibn Muzhir (DW175), and Azdamur min ‘Alī Bāy (DW241). Also, the area where the Azbakiyya quarter was created, as explained in Chapter 2, was granted to Azbak by the sultan. See also: Sabra, “Public Policy or Private Charity?,” 99-100.

^{211.} Denoix, “Les notions de ‘privé’ et de ‘public’”; “Formes juridiques,” 14.

^{212.} Denoix, “Les notions de ‘privé’ et de ‘public’”.

“offering a service available to all”.²¹³ Even with this attempted explanation, however, the definition of *sabīls* as “public fountains” remains inappropriate, particularly considering the restricted access to water that these structures provided, as emerges from the *waqf* deeds. The design and operation of most Mamlūk-era *sabīls*, where drinking water was dispensed by a designated attendant from behind a screened window, hardly align with the definition of “available to everyone”. While *sabīls* typically fronted a public street, their interior remained accessible only to appointed attendants and *waqf* administrators. The definition of “public” offered by Denoix and Denizeau would imply that the basins (*aḥwād*) fed by endowed charitable waterwheels were closer to “public fountains” than the *sabīls*. This is because, according to the endowment deeds previously discussed, those basins provided freely accessible water to people. Nonetheless, these charitable water installations were not entirely distinct from *sabīls*. In addition to sharing the same legal status as structures part of *waqf* foundations, charitable waterwheels and basins stemmed from the same religious and social values that informed the construction of *sabīls*. Indeed, the degree of accessibility alone is insufficient to categorize water facilities as “public”.

It is evident that charitable water distribution systems (cisterns, *sabīls*, and waterwheels) endowed by the *ahl al-dawla* in *waqf* foundations did not represent “public” entities, but individual initiatives that were rooted in a shared cultural and religious significance attributed to giving water, and had the potential to serve the collective. Crucially, these forms of charitable water giving did not originate from a systematically institutionalized and deliberate policy designed to address “public” problems such as water scarcity. In other words, the services these charitable facilities provided did not amount to social welfare or aspire toward “addressing issues of public interest,” contrary to Yehoshua Frenkel’s assertion.²¹⁴ These charitable facilities did serve the people of Cairo in some ways, but this does not imply that the *ahl al-dawla* were establishing them for the “public good”. Indeed, as the American philosopher John Dewey posited in 1927, the “socially useful” should not be equated with the “public”, since the “private affairs” of others may influence various aspects of daily life: in Dewey’s words, “private acts may be socially valuable both by indirect

²¹³. Denizeau, “Conduire l’eau,” 439 and 450.

²¹⁴. Frenkel, “The Waqf System,” 259–60. Other publications identified *awqāf* with welfare policy. See, for instance: Oded Peri, “Waqf and Ottoman Welfare Policy. The Poor Kitchen of Hasseki Sultan in Eighteenth-Century Jerusalem,” *JESHO* 35, no. 2 (1992): 167–186. Peri however does claim that “this institution of charity emerged also as an instrument of patronage, the political objectives of which were exceeding by far what is usually implied by poor-relief and social welfare” (Peri, “Waqf and Ottoman Welfare Policy,” 186).

consequences and by direct intention”.²¹⁵ The preceding observations regarding *waqf*-sponsored charitable water structures and initiatives align with Dewey’s distinction. Water distribution, *sabils*, and waterwheels were integral to broader individual projects aimed at the founders’ personal economic, social, and spiritual gain. They were not, therefore, deliberately designed to address communal issues, but they nonetheless contributed to societal transformation through both “indirect consequences” and “direct intentions”. In terms of their “direct intentions,” they offered water as a form of almsgiving to gain spiritual reward, thereby providing a potentially valuable yet limited contribution to the urban water supply. However, it may well be that the “indirect consequences”, as discussed in the following section, were even more significant.

4.2 Beyond Charity: *Waqf*-Financed Water Provision Shaping Society Through Job Creation and the Decentralization of Water Control

The *awqāf* hired attendants to distribute water and/or maintain the charitable water installations they sponsored. Specifically, *muzammalātīs* maintained and operated *sabils* while *sawwāqs* managed the *sāqiyas* by controlling and caring for the draft animals. As for the other employees hired by the foundations, *waqf* documents stipulated the duties, employment conditions, and remuneration of these water workers. Since the employees hired by the foundations were not under the *muḥtasib*’s control, their tasks and duties are not described in *ḥisba* manuals. Even the moral treatises of al-Subkī and Ibn al-Ḥāj—precious sources of information regarding the duties of many workers in urban spaces—do not mention the *muzammalātīs* or the *sawwāqs*. Consequently, the following section builds primarily on evidence found in *waqf* documents to reconstruct the conditions and duties of these *waqf* employees.

The *waqf* documents examined in this chapter outline the tasks and requirements of *muzammalātīs* and *sawwāqs*, revealing consistent patterns, and some relevant variations, in their job descriptions. Analysing the employment conditions outlined in *waqf* documents offers significant insight into the socio-economic status and role of these *waqf* employees. This analysis also highlights that these positions were essentially generated by the charitable water structures financed by the foundations, and that the resulting employees were indispensable for the operation of these

²¹⁵. Dewey, *The Public and its Problems*, 13-14. Dewey offered the example of the breakfast table, noting that its provision results from the combined efforts of various workers (grocers, farmers, etc.) engaged in individual undertakings for private profit rather than a “public” policy.

facilities. As such, this analysis helps us consider the impact of charitable water giving from another perspective: one that moves beyond the quantitative contribution to the city's water supply and focuses, instead, on how it reflected, reinforced, or generated broader socio-political and economic dynamics within urban society.

4.2.1 The Socio-Economic Reality of the *Muzammalātī*

Faraj Ibn Barqūq's *waqf* deed stipulates that the attendant (designated as *saqqā'* in the document) of his *sabīl* endowed outside Bāb Zuwayla should be a good man (*rajulan khayran*) who is pleasant looking (*ḥasan al-khalq*), strong, trustworthy, and generous (*dhā quwwa wa-imāna wa-jūda*).²¹⁶ Such requisites raise the question of whether the employees who operated the *sabīls* and distributed water had to comply with certain moral and physical standards. Indeed, Faraj's *waqfiyya* is not the only document requiring a *sabīl* attendant with such marked moral and physical attributes. The *muzammalātī* employed at the *sabīl* in al-Ghawrī complex, for instance, was required to be a "strong, honest, and trustworthy man of good appearance, who is clean in dress, healthy, and free of defects".²¹⁷ Some of the deeds examined in this chapter also indicate religious and moral qualities—namely, piety and righteousness—as requisites of the *muzammalātī*. Faṭḥ Allah's *waqfiyya*, for example, indicates that the *muzammalātī* employed at the Suwayqat al-Mas'ūdī *sabīl* should be a pious man (*rajul yakūn min ahl al-dīn*),²¹⁸ and Mūsā al-Burhānī's *waqf* deed stipulates that a righteous man (*rajul min ahl al-khayr*) be employed as *muzammalātī* at the *sabīl* endowed in Ḥārat Zuwayla.²¹⁹

The stipulation in Faraj Ibn Barqūq's and al-Ghawrī's *waqf* deeds for the employment of a pleasant-looking man as *muzammalātī* may be part of the meticulous attention to aesthetic detail that characterizes these sultanic *sabīls*, which are particularly monumental due to their royal patronage. Moreover, as Maaïke van Berkel has suggested, the *sabīl* attendant's kindness may have been intended as an "extension of the sultan's generosity" or, more broadly, of the founders' piety.²²⁰ As such, the virtues of the *sabīl* attendants contributed to the spiritual value of the foundations themselves. It is safe to assume that the founders generally wanted to entrust their charitable endeavours to morally sound individuals. Indeed, the *waqf* documents examined here express the request to employ a righteous and pious man (*rajul min ahl al-khayr wa-al-dīn*) for other occupations as well. Azdamur min 'Alī Bāy's deed for instance, requires that men of such qualities should be employed as *imām* at his

²¹⁶. Lamei Mostafa, "The Cairene Sabil," 40.

²¹⁷. al-Hazmeh, "Late Mamluk Patronage," 161; Harithy, "Charity and Piety," 170.

²¹⁸. DW355. See edited excerpt in Appendix

²¹⁹. DW91. See edited excerpt in Appendix.

²²⁰. van Berkel, "Waqf Documents," 241.

complex's mosque, as *mu'addib* (educator) of the orphans at the *maktab*, and as reader of the *Saḥīḥ* of al-Bukharī during the months of Rajab, Sha'bān, and Ramadan.²²¹ Similarly, the Qarājā's deed requires that righteous and pious men (*min ahl al-khayr wa-al-dīn*) be employed as *mu'addib* (educator) at the *maktab* (which had yet to be built when the deed was stipulated) and as *shādd* (executor) of the foundation.²²² Finally, Mūsā's deed requires that a righteous man be entrusted with the accounting of the foundation and the collection of its revenues (*raḥul min ahl al-khayr yatawallī ḥisābat rī' al-waqf al-madhkur wa-qabḍihi min sukkānihi*).²²³

Behrens-Abouseif's reference article on *sabils* states that *waqf* documents "usually stipulate" that *muzammalātī* "should be clean, good looking, free of infirmity and healthy" and "have good manners", and Dina Bakhoun's survey of *waqf* employees emphasized that *muzammalātīs* "had to be trustworthy and loyal, good looking, cleanly dressed, healthy, strong and smart".²²⁴ Contrary to what these publications suggest, however, these moral and physical attributes were not consistently stipulated in *waqf* documents for the employment of *sabīl* attendants. In Azdamur's deed, the *nāzir* is simply requested to hire "a person" (*shakhṣ*) as *muzammalātī* of the *sabīl* attached to his funerary complex.²²⁵ The *waqf* deeds of Faṭḥ Allāh and Mūsā al-Burhānī similarly omit recommendations regarding the morality of the attendants employed at the cemetery. In these cases, the *muzammalātī*'s role merges with that of the janitor (*bawwāb*) working at the shrines of the founders. Faṭḥ Allāh's *waqfiyya* sets an annual salary for a person working as both *bawwāb* and *muzammalātī* at the shrine of the *wāqif* and its *sabīl*, but it specifies the compensation for both services and leaves it to the *nāzir*'s discretion whether to hire one or two individuals to fulfil the duties described.²²⁶ Mūsā al-Burhānī's deed stipulates that the *bawwāb* at his *turba* is responsible for drawing and distributing water (*isqā' al-mā'*) from the shrine's cistern in addition to maintaining the shrine itself.²²⁷ Likewise, Qarājā al-Jamālī's deed indicates the *bawwāb* of his shrine as the employee in charge of drawing water from the cistern and distributing it from the adjacent *sabīl*.²²⁸ In these deeds, the role of the

^{221.} DW241. See edited excerpt in Appendix

^{222.} DW177. See edited excerpt in Appendix. The *shādd* of a *waqf* foundation was responsible for the upkeep of the endowed estate and for the collection of its revenues. Al-Basha, *Funūn*, 2:610-11.

^{223.} DW91. See edited excerpts in Appendix.

^{224.} Behrens-Abouseif, "Sabīl," *EI-2 English*; Bakhoun, "The Waqf System," 186. In these studies, the physical and moral qualities of the *muzammalātī* are presented as a necessary feature, when in fact the documents analysed here set much less strict criteria for the appointment of this employee.

^{225.} DW241. See edited excerpt in Appendix.

^{226.} DW355. See edited excerpt in Appendix.

^{227.} DW91. See edited excerpt in Appendix.

^{228.} DW177. See edited excerpt in Appendix. DW184 refers to this employee as *bawwāb*, *farrāsh* and *turbī* (tomb guardian).

muzammalātī is associated with that of the *bawwāb*, which were generally considered ordinary service workers. Based on these *waqf* deeds, I would argue that *sabīl* attendants did not necessarily have to embody specific physical and moral qualities. The *muzammalātīs* working at sultanī *sabīls* may have been required to comply with high physical and moral standards, but in the other cases ordinary service workers seem to have been perfectly suitable for the job. Given that the responsibilities of the *muzammalātī* included, as outlined above, transporting drinking water from the cistern to the distribution chamber, distributing it to passersby, and cleaning the *sabīl*, it seems reasonable to assume that this position was widely accessible, as it could be filled by any unskilled worker.

4.2.1.1 Remuneration and Economic Status

Different *waqf* deeds vary in the salaries they stipulate for the *muzammalātīs*. By examining the diverse wages allocated for *sabīl* attendants, it is possible to glean insights into the economic status of these workers and enrich our understanding of their socio-economic profile. It must be said, however, that the salary data provided by the *waqf* documents do not readily lend themselves to broad generalizations regarding the economic status of *waqf* servants. To begin with, no direct comparison can be made among the various sums allocated for employees' salaries, because the case study deeds were written over a century-long timespan and reflect the different economic conditions the Sultanate experienced throughout this period.²²⁹

The use of different currencies within the *waqf* documents is indicative of the economic shifts that occurred throughout the ninth/fifteenth century. The deeds drafted in the first half of the ninth/fifteenth century, namely that of Faṭḥ Allāh (dated 810/1408) and those of Mūsā al-Burhānī (the earliest one dated 830/1427 and the second 839/1436), list the foundations' expenditures in silver *dirhams*.²³⁰ In the later deeds, however, the costs are indicated in copper *dirhams* (*dirham fulūs*). The copper *dirham* (*fals*, *fulūs*) was already used extensively when the early ninth/fifteenth-century deeds were written—al-Maqrīzī laments the dissemination of the *fals* in his economic treatise *Ighātha*, written between 808/1405 and 809/1406, where he lists the growing use of this currency among the causes of the great economic crisis affecting the Sultanate during the reign of Faraj ibn Barqūq.²³¹ Originally used only for daily, small household expenses, the *fals* became the currency with the widest circulation at the beginning of the ninth/fifteenth century, while the silver *dirham* became almost

²²⁹. The difficulties of reconstructing large-scale patterns of wages using the data provided by *waqf* documents has also been emphasized by Adam Sabra. Sabra, *Poverty and Charity*, 117–118.

²³⁰. DW355 and DW91. See edited excerpts in Appendix.

²³¹. al-Maqrīzī, *Ighātha*, 86; *Mamluk Economics*, 55.

unavailable due to a sharp decline in the supply of silver. Consequently, the value of goods and the costs of labour started being calculated in *fulūs*.²³² As soon as Rabi' I 806/1403 a judicial decree required that house and land rental contracts, and pious deeds founded by women, be calculated in *fulūs*.²³³ Other types of contracts must have complied with this decree later on, since both Faṭḥ Allāh's and Mūsā's deeds indicate costs and wages in silver *dirhams*.²³⁴ Moreover, the valuation rate of the copper *dirham* changed continuously throughout the ninth/fifteenth century, which makes understanding the status of workers and the purchasing power of their salaries very difficult.²³⁵

Faced with the same challenge of interpreting data amidst the fluctuating currencies and prices, Adam Sabra, in his 2000 monograph, organized the salaries found in *waqf* documents into five subgroups that chronologically corresponded to key phases and shifts in Mamlūk economic history.²³⁶ In contrast to the section of Eliyahu Ashtor's monograph on Mamlūk-period salaries, which mainly focuses on the compensation of religious authorities and military figures, Sabra's survey of multiple *waqf* servants' salaries provides a valid framework for comparing the data found in the case studies selected for this chapter.²³⁷ However, while Sabra's survey allows for broad comparisons, more particular observations on the *muzammalātīs*' status must be done by considering the salaries assigned to these employees in the context of each individual foundation, specifically by comparing them with the salaries of the other *waqf* employees (*arbāb al-waṣā'if*) stipulated in the same document. Therefore, the economic status of the *muzammalātī* must be considered on a case-by-case basis, both in relation to the overall economic situation of *waqf* servants as outlined in Sabra's survey and within the specific context of each foundation.

Among the selected case studies, Faṭḥ Allāh's *waqf* deed is the earliest to stipulate the regular employment of *muzammalātīs* and assign a salary to this position. The document allots a yearly salary of 1,560 silver *dirhams* to the *bawwāb/muzammalātī* at the *turba*. Of this total sum, 720 silver *dirhams* are allotted to compensate the janitor's services, while 840 silver *dirhams* are allotted for the *muzammalātī*. The deed leaves it

²³². al-Maqrīzī, *Ighātha*, 118-19; *Mamluk Economics*, 72; al-Qalqashandī, *Ṣubḥ*, 3:467-8; Boaz Shoshan, "Money Supply and Grain Prices in Fifteenth Century Egypt," *The Economic History Review* 36, no.1 (1983): 50

²³³. al-Maqrīzī, *Sulūk*, 6:102.

²³⁴. DW355 and DW91. The former simply refers to *dirham*, while the other explicitly mentions the *dirham fiḍḍa* (silver *dirham*).

²³⁵. Sabra, *Poverty and Charity*, 123; Ashtor, *Histoire Des Prix et des Salaires*, 277-8.

²³⁶. Sabra, *Poverty and Charity*, 119.

²³⁷. Ashtor, *Histoire Des Prix et des Salaires*, 372-381. Ashtor only briefly refers to the salary of the *sawwāq* and its fluctuations.

up to the *nāzir*'s discretion whether to employ one or two persons to fill these roles. For the *muzammalātī* at the Suwayqat al-Mas'ūdī, the deed stipulates a yearly salary of 600 silver *dirhams*.²³⁸ On a monthly basis, therefore, the *muzammalātīs* employed by Faṭḥ Allāh's foundation would have received 70 silver *dirhams* (or 130, if combined with the post of *bawwāb*) and 50 silver *dirhams*, respectively. Based on Sabra's calculation of an average value of 1 silver *dirham* to 13.5 *dirhams fulūs* in the early to mid-ninth/fifteenth century, the monthly salaries of these *muzammalātīs* was roughly 945 and 675 copper *dirhams*. These figures are notably high when compared to other *waqf* servant salaries Sabra surveyed for the early to mid-ninth/fifteenth century, which ranged from 20 to 830 *dirhams fulūs* per month.²³⁹ The salaries of Faṭḥ Allāh's *muzammalātīs* are also notably higher than the other wages listed in the same deed for other employees of Faṭḥ Allāh's foundation. For example, the deed allots a yearly salary of 240 silver *dirhams* for the cleaner (*farrāsh*) working at the *khānqāh* of Ṭughāy Tamur al-Najmī and at Faṭḥ Allāh's *turba*, 240 *dirhams* annually for each of the thirty Sufis dwelling at the *khānqāh* (ten of whom received an extra 300 *dirhams* per year for praying for the *wāqif* and his family), and a yearly salary of 600 *dirhams* to their *shaykh*. It is important to note, however, that while the *muzammalātīs* derived their income solely from Faṭḥ Allāh's *waqf*, according to the document these other employees may have received more funds from the foundation of Ṭughāy Tamur al-Najmī, to which the *khānqāh* originally belonged.²⁴⁰ Only a few sums listed in the same documents exceed the salaries allotted to the *muzammalātīs*: an annual allowance of 8,000 silver *dirhams* was allotted to Faṭḥ Allāh's sister Sāra, for instance, while the Shāfi'ī Qadi Walī al-Dīn Abū Zur'a Aḥmad ibn al-'Irāqī and his family received of a yearly sum of 1,200 silver *dirhams*.²⁴¹

While Faṭḥ Allāh's deed provides a particularly favourable salary for the *muzammalātī*, the *waqfiyya* of Mūsā al-Burhānī lists more modest wages for this employee. The deed drafted in 839/1436 allots a monthly salary of 15 silver *dirhams* for the *muzammalātī* in Cairo and 20 silver *dirhams* for the *bawwāb/muzammalātī* at Mūsā's *turba*.²⁴² Notably, these salaries also included the costs for the *sabils'* equipment and the oil for the lamps

²³⁸. DW355. See edited excerpt in Appendix.

²³⁹. Sabra, *Poverty and Charity*, 124-5.

²⁴⁰. DW355. Behrens-Abouseif, *Faṭḥ Allāh and Abū Zakariyya*, 40-1.

²⁴¹. DW355. Behrens-Abouseif, *Faṭḥ Allāh and Abū Zakariyya*, 42-3. Qadi Walī al-Dīn Abū Zur'a Aḥmad ibn al-'Irāqī (d. 826/1423) held the post of Shāfi'ī chief qadi of Egypt several times (the last time in 825/1422), and in 819/1416 he was appointed as the *shaykh* of the Jamāliyya Madrasa. Al-Maqīzī, *Sulūk*, 6:410 and 7:89. Therefore, he must have had various sources of income from different *awqāf*. In Faṭḥ Allāh's deed, he is also indicated as the *shaykh* of the *khānqāh* of Ṭughāy Tamur al-Najmī, thus he also received the yearly salary of 600 silver *dirhams* allocated to this position. The annual sum of 1,200 *dirhams* is, instead, indicated as a personal allowance to him and his descendants.

²⁴². DW91. See edited excerpt in Appendix.

at the *turba*. By contrast, Faṭḥ Allāh's deed listed such items as separate expenses, allotting a yearly sum of 300 silver *dirhams* for tools at his *sabīl* at the cemetery and 250 silver *dirhams* for tools at his *sabīl* in Cairo. Following Sabra's valuation, the *muzammalātīs*' monthly salaries in Mūsā's deed corresponded to 202.5 and 270 *dirhams fulūs* respectively. This salary range was so common in the documents Sabra surveyed that he identified it as the representative monthly salary for *waqf* servants during the early to mid-ninth/fifteenth century.²⁴³ Mūsā's *muzammalātīs* were not his foundation's lowest-paid employees, however, for his deed allots a monthly sum of just 7.5 silver *dirhams* for the three Qur'an reciters at his palace or *sabīl* in Cairo, and 10 *dirhams* per month for three other reciters at his shrine.²⁴⁴ However these reciters, who were required to recite a *juz'* of the Qur'an at the designated locations "at any time" (*fī ayy waqt*) each day, may have been employed by other foundations as well, making comparisons between the reciter's stipulated incomes and those of other Mūsā employees very complicated. Mūsā's deed does, however, allot a monthly salary of 15 silver *dirhams* to the foundation's accountant.²⁴⁵ Given the significant responsibilities entrusted to this employee (calculating the foundation's income), it is reasonable to assume that 15 *dirhams* represented a respectable salary within the context of Mūsā's foundation. This implies that the *muzammalātīs*' wages were also relatively high, especially since 270 *dirhams fulūs* (or 20 silver *dirhams*), according to Sabra, may have provided enough to cover the essential needs of a small family (comprising four individuals) during the first half of the ninth/fifteenth century. The *muzammalātīs* employed at larger foundations established in the same period, however, enjoyed a more substantial salary. For example, the *waqf* deed with which Sultan Barsbāy endowed his madrasa-*khānqāh* in al-Qāhira in 827/1424 allots a monthly salary of 500 *dirhams fulūs* to the *muzammalātī*.²⁴⁶ Clearly, then, the economic status of this employee was not uniform and varied depending on the size of the foundation they served.²⁴⁷

Qarājā al-Jamālī's two deeds, drafted respectively in 880/1475 and 882/1477, further demonstrate that the *muzammalātīs*' wages generally corresponded to the average salary *waqf* servants were paid. Qarājā's foundation allotted a monthly salary of

²⁴³. Sabra, *Poverty and Charity*, 125.

²⁴⁴. DW91. See edited excerpt in Appendix. It is unclear whether the indicated wages represented the total sum allocated to each group of three Qur'an reciters, or the amount paid to each reciter individually.

²⁴⁵. DW91. See edited excerpt in Appendix.

²⁴⁶. Darrag, *L'acte de Waqf de Barsbāy*, 31; Fernandes, *The Evolution of a Sufi Institution*, 84. Yet in 835/1433 the same Sultan Barsbāy assigned a monthly salary of 100 copper *dirhams* to the *muzammalātī* at his *khānqāh* at the cemetery. *Thesaurus d'Epigraphie Islamique*, fiche 9755; Monument no. 121.

²⁴⁷. This observation applies to *waqf* servants in general. Sabra, *Poverty and Charity*, 118.

150 *dirhams fulūs* to the *bawwāb/muzammalātī* employed at his *turba*. This sum was stipulated in the 880/1475 deed, and a daily bread ration of two *raṭls* (approximately one kilogram) was added in 882/1477.²⁴⁸ The addition of the bread allowance (also stipulated for other employees in Qarājā's foundation) likely helped alleviate some of the workers' living expenses by ensuring a sufficient supply of this essential staple regardless of price fluctuations.²⁴⁹ In addition, the *bawwāb/muzammalātī* was allowed to dwell at Qarājā's *turba* without paying any rent, which obviously reduced the housing expenses of this employee.²⁵⁰ The majority of salaries Sabra surveyed for the second half of the ninth/fifteenth century ranged from 150 to 300 *dirhams fulūs* per month (with 150 being the most common figure), indicating that Qarājā's *bawwāb/muzammalātī*'s salary fell within the average range of *waqf* servants at the time.²⁵¹ However, some employees in Qarājā's foundation received more substantial monthly wages. The learned *mu'addib* intended for the *maktab* Qarājā planned to build in Cairo would have received a monthly salary of 300 copper *dirhams*, in addition to a daily ration of 4 *raṭls* of bread. The administrator (*nāẓir*) and the *shādd* were assigned salaries of 500 and 400 *dirhams fulūs* per month, respectively.²⁵² Within Qarājā's foundation, therefore, the *bawwāb/muzammalātī* appears to have been the employee with the lowest salary. This suggests that the economic status of this worker could have been relatively modest compared to other *waqf* servants.

Azbak min Ṭuṭukh's and Azdamur min 'Alī Bāy's *waqf* deeds, which list a much greater number of workers than the other case studies, allow a more thorough comparison between the different economic statuses of *waqf* employees. Azbak min Ṭuṭukh's deed stipulated a monthly salary of 350 *dirhams fulūs* for the *muzammalātī* at the *sabīl* in the Azbakiyya quarter.²⁵³ Despite the fact that this sum included the costs of the *sabīl*'s water vessels, it still ranked higher than some of the other foundation employees'

²⁴⁸. DW177 and DW184. See edited excerpt in Appendix.

²⁴⁹. Sabra remarked that bread allowances figured consistently as a supplement to *waqf* servants' salaries. Sabra, *Poverty and Charity*, 117. Ashtor calculated that the cost of one *raṭl* of bread "à bon marché" amounted to 1 copper *dirham* in 875/1471, but the prices of grain doubled in 889/1484. Ashtor, *Histoire des Prix*, 292 and 309. In this situation of fluctuating prices, the daily bread ration provided by the foundations likely allowed the employees to avoid spending a large portion of their salary on purchasing bread.

²⁵⁰. DW177 and DW184. See edited excerpts in Appendix. The price of housing is difficult to calculate due to the lack of data. Adam Sabra reports a figure found in al-Maqrīzī, who writes that the rent of a residence in a *ḥawsh* (the residential complexes occupied by the poorest inhabitants of the city) amounted to 2 *dirhams* per month. This figure, however, is related to the eighth/fourteenth century. Sabra, *Poverty and Charity*, 106.

²⁵¹. Sabra, *Poverty and Charity*, 126.

²⁵². DW177 and DW184. See edited excerpts in Appendix.

²⁵³. DW198. See edited excerpt in Appendix. In addition to these wages, the deed of 899/1494 stipulated the purchase of wheat for the bread supply of the foundation's employees.

salaries. The mosque's *bawwāb*, gardener, and *mu'addib* for the orphans, for instance, were each assigned a monthly salary of 300 *dirhams fulūs*. The same monthly salary was also stipulated for some employees with administrative roles, specifically the two assistants (*shāhidān*) who validated the foundation's transactions and the agent (*jābī*) who collected the *waqf*'s revenues. Other employees with more humble tasks received lower wages: the *mu'addib*'s assistant and the four cleaners who worked at the mosque were each paid 150 *dirhams fulūs* per month, while the employee in charge of cleaning the ablution basin received 200 *dirhams fulūs* per month. A plumber (*sabbāk*) in charge of maintaining and repairing the quarter's pipes was assigned a monthly wage of 300 *dirhams fulūs*; however, only 200 *dirhams* constituted his actual salary, while the remaining 100 *dirhams* was specifically allotted for the pipes' maintenance costs. A stonemason (*murakkhkhim*) in charge of maintaining the endowed properties' marblework was assigned a monthly wage of 400 *dirhams fulūs*. Employees with religious duties were given higher salaries: the Sufi *shaykh* and the employee responsible for instructing in the proper recitation of al-Bukhārī's *Ṣaḥīḥ* each received a monthly salary of 1000 *dirhams fulūs*, while a monthly salary of 600 *dirhams fulūs* was assigned to both the *imām* and the preacher (*khaṭīb*) of the mosque. The same monthly wage of 600 *dirhams fulūs* was stipulated for the foundation's main accountant (*mubāshir*).²⁵⁴

Among these figures, the *muzammalātī*'s salary in Azbak's foundation appears to have been in the middling range, suggesting that this employee had a modest but not poor economic status. Also in this case, the *muzammalātī*'s wage falls within the average range of those Sabra surveyed for the second half of the ninth/fifteenth century. Nevertheless, this salary is considerably higher than that of Qarājā's *bawwāb*/*muzammalātī*, which reinforces the idea that employee wages tended to be higher in larger foundations. Indeed, although Azbak's was probably among the largest foundations of that era, a *muzammalātī* working at the even larger *waqf* of Qāyrbāy could earn as much as 500 *dirhams fulūs* monthly.²⁵⁵

Azdamur min 'Alī Bāy's *waqfiyya* further confirms what has been observed in the other cases. The *muzammalātī* employed at this large foundation was assigned a monthly salary of 400 *dirhams fulūs*. The same amount was also stipulated for the *turba*'s *bawwāb*, the orphan's *mu'addib*, and the mosque's cleaner (*farrāsh*) employed within Azdamur's foundation. In this case, the range of wages is narrower compared

²⁵⁴. DW198.

²⁵⁵. Abd al-Latif Ibrahim, "Silsilat al-Dirāsāt al-Wathā'iḥiqiyah 2: Wathīqat al-Sulṭān Qāyrbāy. Dirāsa wa-Taḥlīl. al-Madrasa bil-Quds wa-al-Jāmi' bi-Ghazza," *al-Mu'tamar al-Thālith lil-Āthār fī al-Bilād al-'Arabīya* (Jāmi'at al-Duwal al-'Arabīya, 1961), 526. The document refers to the salaries of the employees of the *madrasa* Qāyrbāy endowed in Jerusalem.

to other examples. A monthly salary of 300 *dirhams fulūs* was allocated to the individual in charge of cleaning the mosque's ablution basin, while the mosque's *imām* and the Sufi *shaykh* received wages of 450 and 500 *dirhams fulūs* per month, respectively. The monthly sum of 60 *dirhams fulūs* allocated to the carpenter (*najjār*) should not be interpreted as this skilled craftsman's whole income since they likely had other employers beyond this single foundation.²⁵⁶ In Azdamur's foundation as well, therefore, the *muzammalātī*'s salary was one of the more modest (but not the lowest) among those paid to the foundation's employees. This wage (400 *dirhams fulūs*) is the most consistently attested in the early-tenth/sixteenth century documents surveyed by Adam Sabra.²⁵⁷ In addition, the *muzammalātī* and other *waqf* servants employed by Azdamur min 'Alī Bāy's foundation received a cash bonus for the month of Ramadan—a common arrangement in *waqf* foundations, though one that did not fundamentally alter the economic status of their employees.²⁵⁸ Although it would seem that Azdamur's *muzammalātī* received a higher salary than those in earlier examples, in reality the economic status of this employee remained approximately equal to the previous case studies. Due to the decreasing value of the copper dirham at the beginning of the tenth/sixteenth century, a salary of 400 *dirhams fulūs* in 908/1503 had the same purchasing power as a salary of 200 *dirhams fulūs* in the second half of the ninth/fifteenth century.²⁵⁹ As in the previous examples, therefore, the *muzammalātī* in Azdamur min 'Alī Bāy's foundation held an intermediate economic status among the *arbāb al-waḡā'if* and received a monthly salary that corresponded to the average for *waqf* servants of that period. During the same period, however, a *muzammalātī* employed in a larger foundation could receive a much higher salary. The one working at the *sabīl* founded in Cairo by Sultan al-Ghawrī, for example, received a monthly salary of 2,000 *dirhams fulūs*.²⁶⁰

Despite the limited number of case studies presented here, this overview reveals a notable variety in the wages of *muzammalātīs*. Some of these differences are diachronic and reflect wage changes across the Mamlūk period. However, when compared with Sabra's wage survey, this diachronic variation appears largely

^{256.} DW241. See edited excerpt in Appendix.

^{257.} Sabra, *Poverty and Charity*, 127.

^{258.} DW241. See edited excerpt in Appendix. In this foundation, the *muzammalātī* and the *bawwāb* each received a Ramadan bonus of 300 *dirhams fulūs*, and the educator of the orphans at the *maktab* a Ramadan bonus of 1,200 *dirhams fulūs*. Azbak min Ṭuṭukh's *waqf* deed also stipulates a Ramadan bonus for some of the foundation's employees (but not for the *muzammalātī*). DW198. Sabra assumed that these bonuses were mostly consumed during the holidays. Sabra, *Poverty and Charity*, 117.

^{259.} Sabra, *Poverty and Charity*, 127-9.

^{260.} al-Hazmeh, "Late Mamluk Patronage," 161. This salary is remarkably large, but it also includes the price of the *sabīl*'s equipment, as well as the incense and rose water used in the *sabīl* (possibly to fumigate the vessels and aromatize the water).

nominal. With the exception of Faṭḥ Allāh's *muzammalātīs*, who seem to have been exceptionally well paid, the *muzammalātīs*' wages in the other case studies fall within the salary ranges Sabra discovered in his survey, revealing that their salaries were consistent with the average for *waqf* servants of each phase of the Mamlūk period. In most of the case studies, the *muzammalātī* held a medium-low economic status, typically earning more than other service workers (such as cleaners) but less than some of the religious staff. However, according to Sabra's calculations, these wages were sufficient to cover the essential living expenses of this employee and possibly a (small) family. More significant are the synchronic salary variations, which reveal that the economic status of the *muzammalātī* was contingent upon the *waqf* foundation's size and the founders' deliberate decisions regarding employee remuneration. Notably, the sultanīc *awqāf* mentioned here paid their *muzammalātīs* considerably more than other contemporary foundations. Taking all these factors into account, it is possible to conclude, based on this survey, that *muzammalātīs* generally occupied a modest position as *waqf* servants—yet the foundations did at least provide them with sufficient means to survive with dignity.

4.2.2 Wages and responsibilities of the *sawwāq*

The *sāqiya*, the second type of water structure *waqf* founders endowed for charitable water provision, also required the employment of a special attendant—the *sawwāq*. Unlike *muzammalātīs*, who were employed exclusively for charitable drinking water distribution, *sawwāqs* were also employed to operate the *sāqiyas* attached to lucrative properties such as the palaces and hammams discussed in the previous chapter. However, the *waqf* deeds only outline the responsibilities of and wages for *sawwāqs* who operated charitable waterwheels. This is because the operating costs of waterwheels providing (non-drinking) water as a form of charity were entirely financed by the foundations, whereas the obligation to employ the *sawwāq* for the waterwheels of lucrative properties fell upon the respective tenants.

The moral and physical requisites some *waqf* documents outlined for the *muzammalātī* are not applied to the *sawwāq*, whose job likely involved less direct interaction with the beneficiaries of the founder's charity. Nevertheless, the employment conditions stipulated in the *waqf* documents indicate that *sawwāqs* held significant responsibilities in operating and maintaining the waterwheels and draft animals used to power them. The deeds of Faṭḥ Allāh, Qarājā al-Jamālī, Azbak min Ṭuṭukh, and Azdamur min 'Alī Bāy all list overseeing the *sāqiya*'s daily operation as the *sawwāq*'s main task. This employee was also responsible for feeding and caring for the draft animals that powered the *sāqiya*, including tying them to the

waterwheel in the morning and bringing them to shelter at night.²⁶¹ Furthermore, these deeds indicate that *sawwāqs* were also responsible for regularly checking the *sāqiya*s' conditions, doing routine maintenance, and repairing some of the *sāqiya*s' components when necessary.²⁶² Fath Allāh's *waqf* deed stipulates that the *sawwāqs* operating the waterwheels at the cemetery and in Cairo were required to cover the costs for the *sāqiya*'s buckets, coronas, and spikes (*qawādīs wa-iklāl wa-ṭawānis*), as well as any carpenter's fees needed to repair the waterwheel, out of their wage provided by the foundation.²⁶³ Likewise, Azbak's deed requires the *sawwāq* employed in the Azbakiyya quarter to cover the *sāqiya*'s maintenance costs, and to install the *sāqiya*'s spare components (*tarkīb qawādīs al-sāqiya wa-ṭawānis-hā*), a task indicated as commonly assigned to *sawwāqs*.²⁶⁴ While Azdamur's *waqf* allocated a regular sum of 60 *dirhams fulūs* per month for a carpenter to make any waterwheel repairs, the daily maintenance of the *sāqiya* was entrusted to the *sawwāq*, whose wages had to cover any maintenance costs related to the installation.²⁶⁵

The designation of a carpenter (*najjār*) for the waterwheels' repair indicates that non-routine maintenance of these installations fell outside the *sawwāqs*' skills and available resources. Indeed, *sāqiya*s were complex mechanisms the construction and repair of which required precise professional skills.²⁶⁶ Professional craftsmen likely conducted periodic inspections of the complex water systems endowed by the foundations. The regular fee allocated to a plumber (*sabbāk*) for conduit system repairs in both Azbak's and Azdamur's *waqf* deeds indicates that maintaining some water installations required skilled workers who were likely hired from outside the foundations.²⁶⁷ However, while skilled craftsmen may have been needed occasionally, the documents clearly indicate that the day-to-day operation and maintenance of the waterwheels relied entirely on the *sawwāqs*.

^{261.} DW355, DW177 and 184, DW198, DW241. See edited excerpts in Appendix.

^{262.} DW355, DW198, DW241. See edited excerpts in Appendix.

^{263.} DW355. See edited excerpt in Appendix. For a survey of the different waterwheel pots (Ar. *qādūs*, *qawādīs*) see: Schiøler, *Roman and Islamic Water-lifting Wheels*, 97-109.

^{264.} DW198: "wa-ghayr dhalika mim mā jārat 'ādat al-sawwāqin bi-'amalihi fi mithli dhalika". See edited excerpt in Appendix.

^{265.} DW241. See edited excerpt in Appendix.

^{266.} Schiøler, *Roman and Islamic Water-lifting Wheels*, 168; Shatzmiller, *Labour*, 195.

^{267.} DW198 and DW241. See edited excerpts in Appendix. Azbak's deed, as mentioned above, allocates 300 *dirhams fulūs* per month to cover the fees of the *sabbāk*. Of this sum, only 200 *dirhams fulūs* represented the actual wage (*jāmakiyya*) of the plumber, while the rest was to cover the material costs of the repairs. Azdamur's deed allocates 150 *dirhams fulūs* per month to the *sabbāk*. These figures, as well as the 60 *dirhams fulūs* Azdamur allocated for the carpenter, do not likely represent the full income of a skilled craftsman. For this reason, it seems reasonable to assume that these workers were hired from outside the foundations.

The responsibility of covering the *sāqiyas*' routine maintenance costs, the heavy labour of operating the waterwheel throughout the day, and the tasks associated with caring for the draft animals likely explain why *sawwāqs* were consistently paid a higher salary than the *muzammalātīs* in the deeds analysed here. Both the *sawwāqs* employed by Faṭḥ Allāh's foundation received a yearly salary of 1,000 silver *dirhams*, while the two *muzammalātīs* received 840 and 600 silver *dirhams* per year, respectively.²⁶⁸ Qarājā's deed stipulates a monthly salary of 300 *dirhams fulūs* for the *sawwāq* operating the waterwheel in Cairo, while the *bawwāb/muzammalātī* employed at the same foundation received half that amount.²⁶⁹ The *sawwāq* of Azbakiyya was allocated a monthly wage of 650 *dirhams fulūs*, almost twice the wage of the *muzammalātī* working at the nearby *sabīl* (whose monthly salary amounted to 350 *dirhams fulūs*).²⁷⁰ Finally, the *sawwāq* at Azdamur's funerary complex received a monthly salary of 700 *dirhams fulūs*, while the *muzammalātī*'s monthly salary was 400 *dirhams fulūs*.²⁷¹ Although a part of these sums would have been used to cover the waterwheel's daily maintenance costs, it appears, based on the same comparisons made above for the *muzammalātīs*, that the foundations paid *sawwāqs* enough to cover their daily necessities. Waterwheel operators might have been unskilled (or low-skilled) workers handling physically demanding tasks, but their economic status within the foundations appears to have been respectable.

²⁶⁸. DW355. See edited excerpt in Appendix.

²⁶⁹. DW177 and 184. See edited excerpts in Appendix.

²⁷⁰. DW198. See edited excerpt in Appendix.

²⁷¹. DW241. See edited excerpt in Appendix.

Table 5: Overview of the sabīls' expenses

	Faṭḥ Allāh DW355	Mūsā DW91	Qarājā DW177 and 184	Azbak DW198	Azdamur DW241
Muzammalātī	Bawwāb/muzammalātī at the turba: 1,560 dirhams per year (of which 720 dirhams for the bawwāb, and 840 for the muzammalātī) Muzammalātī in Cairo 600 dirhams per year	Bawwāb/muzammalātī at the turba: 20 dirhams per month Muzammalātī at the sabīl in Cairo: 15 dirhams per month	Bawwāb/muzammalātī at the turba: 150 dirhams fulūs per month *Free accommodation at the turba *Supplement of daily ration of 2 raṭīs of bread (added in DW184)	Muzammalātī at the sabīl of Azbakiyya: 350 dirhams fulūs per month	400 dirhams fulūs per month * Ramadan bonus 300 dirhams fulūs
Tools for the sabīl and oil for the lamps	300 dirhams per year for the sabīl at the turba 250 dirhams per year for the sabīl in Cairo	Included in the salary of the muzammalātī	Not mentioned ?	Included in the salary of the muzammalātī	1,500 dirhams fulūs per year (for the whole complex)
Drinking water for the cistern	Any needed amount	Any needed amount for the purchase of 400 rāwiyas for filling the cistern at the turba Variable amount for the cistern in Cairo	Any needed amount	No purchase of water (The šahrīj is filled through a conduit from the birkā – the opening of the conduit is included in the 3,000 dirhams fulūs spent every year to open the dyke of the pond)	1,2000 dirhams fulūs per year

Table 6: Overview of the waterwheels' expenses

	Faṭḥ Allāh DW355	Qarājā DW177 and 184	Azbak DW198	Azdamur DW241
Draft animals	3 Bulls Any needed amount Any needed amount	1 Bull Any needed amount Any needed amount (?) for 4 <i>aqdālāḥ</i> of crushed <i>ḥil</i> beans per day	Multiple bulls (<i>athwār</i>) Amount decided by the <i>nāzir</i> Amount decided by the <i>nāzir</i>	Multiple draft animals (<i>dawāb</i>) Amount not mentioned 1,800 <i>dirhams fulūs</i> per month
Fodder				
Sawwāq	1,000 <i>dirhams</i> per year to the <i>sawwāq</i> at the cemetery and 1,000 <i>dirhams</i> per year to the <i>sawwāq</i> in Cairo	300 <i>dirhams fulūs</i> per month	650 <i>dirhams fulūs</i> per month	750 <i>dirhams fulūs</i> per month
Maintenance of the wheel	Price for the waterwheel components and carpenter's fee included in the salary of the <i>sawwāq</i>	Not mentioned	Price for the waterwheel components included in the salary of the <i>sawwāq</i> Plumber: 300 <i>dirhams fulūs</i> per month	Price for the waterwheel components included in the salary of the <i>sawwāq</i> Carpenter: 60 <i>dirhams fulūs</i> per month Plumber: 150 <i>dirhams fulūs</i> per month

4.2.3 “Polycentric” Water

In her discussion of the building activity promoted by *waqf* foundations in eighth/fourteenth-century Cairo, Noha Abou Khatwa has observed that the foundations “participated in the economic activity of the city by providing jobs of various sorts”.²⁷² Although the economic role of *awqāf* was not the central focus of her research, Abou Khatwa touched upon a key aspect of these foundations—the creation of multiple employment opportunities within the urban space. Abou Khatwa refers, in particular, to *waqf*-funded religious institutions providing regular stipends to students and fostering a “service industry” attending to the students’ needs.²⁷³ The analysis of the conditions stipulated in *waqf* documents regarding the employment of *sawwāqs* and *muzammalātīs*, however, allows us to expand such observations outside the boundaries of the religious educational institutions.

The *sāqiya*s and *sabīl*s the *ahl al-dawla* established to charitably provide water represented occupational opportunities for service workers employed as *sawwāqs* or *muzammalātīs*. Scholarly discussions regarding the impact of charitable water structures have primarily focused on the extent to which charitable water giving materially contributed to the city’s general water supply—a question that is inherently difficult to answer, reliant on numerous variables, and not fully discernible from textual sources. As a result, the role charitable water giving played in creating occupations and employment has remained in the background. I would propose adopting a different perspective, one that places greater emphasis on the significance of the employments associated with these structures, namely those of *sabīl* attendants and waterwheel operators, whose conditions were stipulated in detail in the *waqf* documents.

Previous analysis of the requirements stipulated in the deeds underscored that the employees of these structures included especially unskilled service workers. Although modest, the wages regularly provided through employment at *sabīl*s and waterwheels were sufficient for the livelihood of these employees. The holiday bonuses (particularly for Ramadan), daily bread rations, and accommodation stipulated for these workers in some documents may have further improved their conditions.²⁷⁴ Azbak’s *waqf* deed even stipulates that if a foundation employee (*arbāb al-wazā’if*) died leaving children, their employment within the foundation had to be transferred to the children (*intaqala mā kāna lahu min al-wazā’if bi-al-waqf al-madhkūr...*

²⁷². Abou-Khatwa, “The Word of the Beloved Prophet,” 375.

²⁷³. Abou-Khatwa, “The Word of the Beloved Prophet,” 375.

²⁷⁴. DW177; DW184; DW241.

li-awlādihī).²⁷⁵ This condition suggests that the occupational opportunities offered by some foundations extended benefits beyond individual employees to their families. Indeed, by virtue of this condition, if a foundation's *sawwāq* or *muzammalātī* died, their position would automatically be transferred to their children. Such provisions would have solved the financial hardship faced by the employee's family by ensuring that the family could continue to earn his income even after his death. While not all foundations offered this specific benefit, it seems reasonable to suggest that each structure designed for charitable water provision represented an advantageous employment opportunity for unskilled service workers.

At the same time, the tasks and responsibilities assigned to *sawwāqs* and *muzammalātīs* indicate these employees were indispensable to the operation and maintenance of charitable water structures. The *muzammalātī* was responsible for transferring drinking water from the *sabīl*'s cistern to its distribution chamber, distributing water to passersby, and cleaning both the distribution chamber and the drinking water vessels—tasks the *sabīl* depended on to function. Similarly, the *sawwāq* was responsible for maintaining and operating the *sāqiya* each day, caring for the draft animals who powered the waterwheel, and providing groundwater to the basins accessible to the people. A reciprocal relationship thus emerged between the charitable water structures and their employees: the former provided job opportunities, while their effective operation was contingent upon the latter's work. Thus, the spiritually and socially charged modes of charitable water supply funded by the *awqāf* significantly influenced the urban organization of water, notably by creating water-related employment opportunities and allocating charitable water structures to service workers who had considerable control over their daily functioning. The dialectic nature of the hydrosocial cycle outlined by Linton and Budds becomes evident in this process—water is a dynamic reality that mutually shapes and is shaped by social processes.²⁷⁶

The diverse compensation and working hours among the attendants of charitable water structures, which is particularly evident in the case of *muzammalātīs*, indicate another significant aspect of this mode of water provision: the compensation and responsibilities of these workers were determined by the stipulations of individual founders, rather than being regulated by any overarching institutions. While the numerous *sabīls* and charitable waterwheels endowed around Cairo exhibited a largely standardized layout and served similar functions, their operation was not unified under any set of codified regulations; rather, it was based on the specific

^{275.} DW198. See edited excerpt in Appendix.

^{276.} Linton and Budds, "The hydrosocial cycle," 178.

conditions individual *waqf* founders applied to their respective foundations. Each charitable *sāqiya* and *sabīl*, therefore, constituted a distinct system that functioned independently of other *sāqiyas* and *sabīls*. Moreover, the financial resources that funded these charitable structures originated from the lucrative properties endowed within their respective foundations and were managed by the administrators of those foundations in accordance with the rules established by the founders. Because multiple charitable water structures were established by different founders, therefore, the result was a constellation of independent charitable water systems, each with its own resources, administrators, regulations, and employees. The collective connotation Denoix attributed to *waqf* foundations, therefore, emerges as an internal dynamic within each foundation, in which the charitable facilities depended financially and politically on the rest of the assets within the same foundation.²⁷⁷

This fragmented configuration, which involves not only the charitable but also the lucrative water structures funded by the *awqāf*, aligns with historian Patrick Lantschner's argument that Middle Eastern medieval cities had a fundamentally "polycentric nature".²⁷⁸ In his 2015 comparative study of Medieval Damascus and Bologna, Lantschner observed that the polycentric nature of these cities stemmed from the abundance of coexisting political institutions based on "shared practices and resources" more than on "formal legal frameworks".²⁷⁹ The multitude of *waqf* foundations coexisting in Mamlūk Cairo—institutions that wielded considerable socio-political and economic influence—serves as a compelling example of Lantschner's theory of polycentrism. Each *waqf* foundation constituted an independent operational centre that relied on resources endowed by its founders and collectively shared amongst its tenants and employees. Consequently, the lucrative assets and charitable initiatives financed by these foundations were organized according to this polycentric pattern. The *awqāf*'s charitable provision of water, while rooted in broader ideas of charity and patronage expressed by more-or-less standardized structures, did not generate a unified city-wide system: instead, retained this polycentric configuration. The *sabīls* and *sāqiyas* funded by Azdamur, Azbak, Qarājā, Mūsā, and Faṭḥ Allāh, despite their structural and functional similarities and a shared ideological significance, operated independently from each other.

²⁷⁷. Denoix, "Formes juridiques," 14-16.

²⁷⁸. Patrick Lantschner, "Fragmented Cities in the Later Middle Ages: Italy and the Near East Compared," *The English Historical Review* 130, no. 544 (2015): 553.

²⁷⁹. Lantschner, "Fragmented Cities," 564-5.

A few crucial aspects of the *waqf*-funded water structures' polycentric configuration deserve emphasis. Primarily, each water facility was financially dependent on the overall condition of its founding *waqf*. In other words, each *waqf*-funded *sabīl* and waterwheel was deeply intertwined with the economic framework of its respective foundation. Charitable water structures and initiatives represented one facet of the foundation's polyhedral nature—their operation was contingent upon the economic circumstances affecting the foundation as a whole. For instance, the funding of Faṭḥ Allāh's *waqf*s for the cistern at Ṭuḡḡāy Tamur al-Najmī's *khānqāh* was contingent upon the foundation's broader economic revitalization of the Sufi lodge.²⁸⁰ The addition of new water-providing facilities (a watering trough for animals and an ablution basin or *baḥra*) to Azbak's *waqf* in Rajab 899/1494 was directly linked to the acquisition of additional income-generating properties, which in turn permitted the foundation to increase its overall expenditure.²⁸¹ This interconnectedness implies that a foundation's loss of a significant income source could potentially hinder the water distribution facilities financed by the same foundation, as well as its other charitable endeavours. The complex dynamics that characterized the circulation of lucrative assets amongst the *ahl al-dawla*, as examined in the previous chapter, therefore also affected the charitable water supply funded by *awqāf*.

The economic interdependence between charitable water structures and initiatives and the rest of the foundation's properties had significant socio-political implications, too. The *sawwāqs* and *muzammalātīs* working at the charitable waterwheels and *sabīls* derived their income from the same pool of resources that supported the *waqf*'s other employees, including administrators and religious scholars. This financial reliance on the *waqf*'s revenue-generating assets created a network where the foundation's employees were linked to the tenants of its profitable properties that ensured the foundation's revenue stream. Consequently, the water structures established by each *waqf* foundation were financially integrated within the diversified community of the foundation's staff and tenants, all of whom were sustained by the foundation's assets and income. Political events impacting one segment of a foundation's community, therefore, were likely to have repercussions throughout. For example, the protests and negotiations following al-Ghawrī's decision to seize *waqf* funds in 907/1501, discussed at the end of Chapter 3, were initiated by the tenants of endowed commercial properties, but they also likely affected the livelihoods of the employees within those same foundations. On that occasion, the tenants' political efforts aimed at reducing the amount of funds the Sultan sought to seize from the foundations, thereby preserving the foundations' revenues that, in turn, financed the salaries

^{280.} DW355.

^{281.} DW198.

of the their staff, including *sabīl* attendants and waterwheel operators. Thus, the political actions of the *waqf* tenants potentially impacted the economic status of the *waqf* servants. Each foundation, therefore, functioned as an internally interconnected economic and socio-political unit, into which both charitable and lucrative water structures and their personnel were deeply integrated.

This polycentric configuration also entailed complex socio-spatial relations. The *sāqiya*s and *sabīl*s examined in this chapter reveal consistent patterns of placement: either in proximity to the founders' burial sites (Azdamur's *sabīl* and *sāqiya*, and Qarājā's *sabīl*), or in the vicinity of their profitable endowments (Qarājā's *sāqiya*, Azbak's *sabīl* and *sāqiya*, and Ibn Muzhir's *sabīl*), or a combination of both (Fatḥ Allāh's *sāqiya*s and *sabīl*s, and Mūsā's *sabīl*s). I have already emphasized how this strategic positioning of charitable water structures near other construction projects financed by the same founder (such as urban palaces or funerary complexes) served to showcase the founder's patronage within a specific spatial context. While stemming from the political and economic motivations of the founders, such spatial connections may also have had implications regarding the social impact of the endowed water structures themselves. When Sultan Qāyṭbāy had established his first *maktab-sabīl* at the Qashshāshīn, Ibn Iyās and 'Abd al-Bāsit b. Khalīl al-Malaṭī both stated that the structure was particularly beneficial for *that* quarter.²⁸² This suggests that the benefits provided by endowed water structures tended to be contained within the neighbourhoods that founders actively influenced through their acts of patronage.

As Nimrod Luz has demonstrated in his research, however, neighbourhoods were not static spatial entities but dynamic urban elements defined by both spatial and social dimensions.²⁸³ Thus, while they were essentially integrated into the socio-economic nucleus of their respective foundations, endowed *sabīl*s, waterwheels, and cisterns simultaneously contributed to shaping the neighbourhoods in which they were spatially and socially situated. For instance, Fatḥ Allāh's *sāqiya* and *sabīl* in Cairo were endowed near his palace in the Suwayqat al-Mas'ūdī. Economically, politically, and administratively, these structures belonged to the same nucleus—namely, Fatḥ Allāh's *waqf* foundation—that included Fatḥ Allāh's shrine and other properties endowed at the cemetery. The presence of the palace and the charitable water structures, however, influenced the specific urban quarter in which they were located. Specifically, the *sāqiya* and *sabīl* increased water accessibility for the quarter's

^{282.} Ibn Iyās, *Badā'i*, 3:43: "fa-jā'a al-sabīl wa-l-maktab fawqahu fī ghāyat al-ḥasan, wa-lā siyamā fī dhalika al-khuṭṭ". Al-Malaṭī, *Nayl*, 6:409: "wa-ḥaṣala bihimā al-naḥ' fī makānihimā". See also: al-Malaṭī *al-Rawḍ al-bāsim*, 4:203. On the translation of *khuff* as quarter see: Bylinski and Bylinski, "Darb Ibn Al-Baba," 205.

^{283.} Luz, *The Mamluk City*, 101-4.

inhabitants, and the employees hired by the *waqf* to operate them became part of the neighbourhood's social fabric.

Indeed, the polycentric nature of *waqf*-funded water facilities did not imply isolation from other urban entities. Although operating autonomously as components of various *waqf* foundations, cisterns, *sabils*, and waterwheels were, in fact, interconnected with other socio-economic elements of the urban environment. The conditions stipulated in the documents regarding the purchase of drinking water from water carriers, as well as the employment of plumbers and carpenters for the repair of waterwheels and conduits, exemplify these connections. These workers were not exclusively hired by the foundations; they operated beyond the foundations' boundaries and intervened on their water structures "from outside". Similarly, the groups benefitting from the charitable water distribution could also represent distinct socio-political nuclei existing outside the foundations but intersecting with them through the water giving sponsored by the foundations. For example, the water distribution sponsored by the *awqāf* of *amīrs* Majd al-Dīn al-Hakkārī and Azdamur min 'Alī Bāy at al-Azhar connected these foundations with the scholars and students dwelling at that mosque, a community existing outside the nuclei of those foundations. Thus, *waqf* foundations created a polycentric system embedding water-giving structures and initiatives. These structures operated not as a cohesive water system but as independent entities, each reliant on the resources provided by its respective foundation. At the same time, these nuclei interacted with (and contributed to shaping) other socio-political nuclei existing in the city, such as neighbourhoods, groups of craftsmen, and religious communities.

13. Conclusions

Mamlūk-era *waqf* foundations commonly financed cisterns, *sabīls*, wells, and waterwheels to provide potable and non-potable water as a form of charity. Material remains from the period, alongside textual evidence from *waqf* documents, reveal that many charitable water facilities were disseminated throughout the urban space. The significance of these structures, however, does not lie in their material contribution to the urban water supply—indeed, charitable water-supplying systems were not intended as a comprehensive solution for providing water to everyone in the city. Water-giving as a form of almsgiving stemmed from a “donor-driven” conception of charity. An analysis of how these forms of charitable water giving operated—including their aesthetic design in the case of *sabīls*—indicates that their main aim was to secure spiritual benefits and social prestige for the founders who financed them.

This being the case, assessing the impact of *waqf*-funded charitable water provision should not focus on its contribution to water supply, particularly at the broader urban level. In fact, this information cannot be fully inferred from the surviving documents or the material remains of these structures. If anything, these sources more often suggest that the contribution of these charitable initiatives to the city’s water supply, especially for drinking water, was limited. For instance, the charitable distribution of drinking water at cemeteries and in prisons typically occurred within restricted timeframes, typically Thursday nights. Similarly, many *sabīls* only distributed drinking water for a few hours each day. Mamlūk-era chronicles offer very scarce information regarding the general usefulness of *waqf*-funded water facilities during ordinary times, and when they do, as in the case of Qāyrbāy’s *sabīl* in the Qashshāshīn quarter, they indicate that the facility’s benefits were localized to the immediate neighbourhood where the structure was located. Furthermore, in times of crisis—when the Nile level was low and prices soared—chronicles indicate that the city’s cisterns were insufficient to meet urban water demand, or that *sabīls* had to close due to the exorbitant fees charged by water carriers. As most *sabīls* relied on the services of the water carriers, they were unable to become an alternative water supply system unaffected by the *saqqā’ūn*’s fluctuating prices.

The analysis of the *waqf* documents, however, prompts a different perspective: to consider the impact of *waqf*-sponsored charitable water provision not solely based on its utility, but on how it reflected broader social dynamics and contributed to shaping urban society. The high value Islamic tradition attributes to water giving led to a proliferation of charitable initiatives providing water, and to a significant number of charitable water structures (cisterns, *sabīls*, *saqiyyas*) being added to the

urban landscape. These structures, in turn, created employment opportunities that offered unskilled workers a steady income and, in some cases, additional benefits like accommodation and food allowances. These workers were entrusted with the daily maintenance and operation of the charitable water structures, making their service indispensable for the structures' functioning. Thus, while *waqf*-sponsored water provision did not significantly increase water access for the urban population at large, it did afford ordinary service workers a certain degree of control over water facilities.

Furthermore, the proliferation of *waqf*-sponsored water structures did not lead to the creation of a unified water system, but rather created a polycentric configuration in which individual water structures depended financially and politically on their respective foundations. This polycentric configuration, however, was not composed of isolated nuclei. Rather, *waqf*-sponsored water facilities were spatially and socially integrated within their respective neighbourhoods. They showcased the munificence and prestige of nearby patrons, and they required the cooperation of workers who were not direct employees of the foundations. Moreover, these facilities benefited social groups (such as scholarly communities) that existed independently of the foundations. In concluding his analysis on the polycentric order of cities, Lantschner hypothesized that such fragmentation weakened the cohesion of larger states.²⁸⁴ It is possible that *waqf*-sponsored water provision is one reason a unified water system did not emerge in Mamlūk Cairo. However, this polycentric water configuration may have offered other advantages. As Bethany Walker's research on late-medieval Jordan suggests, the survival and prosperity of rural infrastructure under *waqf*-based collective management was due to the inherent resilience of a polycentric system.²⁸⁵ Unlike the system of sultan-controlled dams, which fell into disrepair when significant changes affected the Sultanate's central administration, the polycentric water configuration *awqāf* generated in Cairo was ultimately more resilient.

²⁸⁴. Lantschner, "Fragmented Cities," 582.

²⁸⁵. Walker, "Sowing the Seeds," 195-199.



بازار خانقاه

مصر عتیق

بور کردن مصر صریدر

شوبر

بورچنس کیه قیاسه

طوبخانه

ابوالیس

شیرین

شیرینیش

عید اندن

شاه صوری

قبه بوشکدر

بلد

Conclusions

A Multilayered Network of Waters

“At the end of that month, the Sultan suddenly descended from the Citadel, and headed towards the aqueduct he had established to inspect its construction. With him was amīr Ṭūmān Bāy the dawādār, as well as some amīrs of ten and about 500 of his mamlūks. As soon as he descended from the Citadel, the Sultan exited from the Cemetery Gate and headed towards the mausoleum of amīr Azdamur the dawādār. He dismounted from his horse and paid a visit to Azdamur’s tomb. Then he rode to Kawm al-Jāriḥ, where he visited Shaykh Abū al-Su’ūd, who was dwelling there. He finally went on to inspect the aqueduct, and washed his face with the water that was coming from the Nile.”¹

In his account of Ramadan 913/1508, Ibn Iyās records this event as al-Ghawrī’s aqueduct neared completion. The sultan’s extemporaneous inspection of this water structure turns into a courtly procession in which *amīrs* and *mamlūks* participate—the visit to the courtly water project initiated by al-Ghawrī is itself a courtly event. The sultan washes his face with the water that soon, thanks to the aqueduct, will arrive to the Citadel and the *maydān* below it—spaces connected to the court *par excellence*, and in which most of the *dawla*’s manifestations of power take place.

This royal visit is emblematic of what the aqueduct is: a courtly project meant to serve the sultan, his entourage, and their manifestations of power. As such, the aqueduct is only one of the many forms water takes in the Sultanate’s capital. At Azdamur’s shrine, where the procession stops, water is something else: it is the best form of charity distributed through the *khānqāh*’s *sabīl*, as well as the resource that irrigates its garden and fills the animals’ trough.

The juxtaposition of structures such as al-Ghawrī’s aqueduct and Azdamur’s *sabīl* and *sāqiya* is emblematic of Mamlūk-era Cairo’s multilayered network of waters. As revealed even in Ibn Iyās’s short account, water in the Sultanate’s capital had many different natures and expressions—it was simultaneously shaped by, and a shaper of, various social realities. This work approached water as an active social agent, exploring how it was organized by society and how, in turn, different forms of water supply shaped the socio-economic life of the city. The analysis of the dialectic hydrosocial cycle of Mamlūk-era Cairo reveals a complex and intricate network of environmental factors, stakeholders, social meanings, religious beliefs, political strategies, and economic forces. To synthesize these findings, this conclusion will now revisit the core arguments of each chapter.

¹ Ibn Iyās, *Badā’i*, 4:127

Courtly Resource

This dissertation began by questioning the institutional duties attached to the sultanic authority in matters of water management, which demonstrated that sultanic interventions in the irrigation system of Egypt and in the water network of Cairo were driven by different but distinctly court-oriented agendas. Chapter 1 began by examining the irrigation system, which was divided into *sulṭānī* and *baladī*—a long-lived categorization that reflected a clear-cut division of financial responsibilities. Sultans that abode by these responsibilities were considered good rulers, but the proper functioning of the irrigation system was not just a matter of good government and general prosperity: it was, first and foremost, crucial to the tax revenues constituting the main income of the *iqṭā'* holders, who served in the military. The maintenance of the irrigation system was fundamentally linked to the payment of the army. When the environmental disasters that befell Egypt throughout the second half of the eighth/fourteenth century deeply changed the revenue system of the *dawla*, it became clear that the maintenance of the irrigation system was not a matter of general welfare—village communities were mistreated and fiscally exploited, while the irrigation system fell in a state of disarray. The core conclusion of this observation is that, for the sultanic authority, the management of the provincial irrigation system was not an institutionally mandated moral duty, but a matter of resource exploitation and financial profit. In the city, the situation was not all that different.

The Nilotic rituals of the *takhliq al-miqyās* and *fath al-khalij*, which took place immediately following the annual Nile plenitude, symbolically represented the importance of the eagerly awaited *Wafā' al-Nīl* for Egypt's economic stability and for its people's prosperity. The ceremonial traditions connected to these festivals, religiously observed by the Fatimid court, had lost much of their ritualistic value by the mid-seventh/thirteenth century. While these traditions did not disappear, they were mostly neglected by the sultans of the eighth/fourteenth century, and, when resumed in the ninth/fifteenth century, they were mostly presided over by key *dawla* figures other than the sultans (such as Azbak min Ṭuṭukh). The few rulers that personally attended seem to have done so in an attempt to assert their authority with a public display of power. In these cases, water served as a symbolically exploited resource to enhance the power of the court.

The major water projects financed by Sultan al-Nāṣir Muḥammad in the early eighth/fourteenth century—namely the Khalij al-Nāṣirī, the Birka al-Nāṣiriyya, and the refurbishment of the Citadel aqueduct—were distinctly court-oriented and the result of resource exploitation. In particular, the Khalij al-Nāṣirī and the Birka al-Nāṣiriyya

were created as byproducts of two larger construction projects. The Khalīj al-Nāṣirī was a result of the development of a royal resort at Siryāqūs and its connection to the Nile for the transportation of goods; while the Birka al-Nāṣiriyya was a byproduct of the creation of a new *maydān* and *zarība* on newly emerged lands on the Nile's eastern bank, for which construction material was extracted from the vast area between al-Qāhira and Fuṣṭāṭ. The urbanization around these bodies of water stemmed both from al-Nāṣir Muḥammad's ingenious plan to convert vast suburban areas into *ḥikr* lots leased to his *dawla* network, and from the investments of the *ahl al-dawla* who financed the construction of urban hubs and water facilities. The restoration of the aqueduct was also implemented for the enhancement of court spaces, particularly of the Citadel and the nearby *maydān*, and for their water supply. When almost two centuries later Sultan al-Ghawrī modified the route of the Citadel aqueduct, financing the project with money obtained from mulcting and confiscating, the project still represented an endeavour done by the court for the court.

The construction of an embankment in Būlāq during al-Nāṣir Muḥammad's reign ostensibly appears to have been an institutionally determined intervention aimed at coping with a water crisis. In reality, however, it was a self-interested intervention aimed at protecting the investments of the *ahl al-dawla* in the urbanization of the eastern Nile shore and did not stem from a sultanic institutional duty to intervene in the water system during environmental crises. The successive attempts to deal with the Nile's westward recession appear to have fostered the perception that sultans possessed a unique prerogative in addressing urban water crises. Yet, in these projects the *dawla* was involved primarily by leveraging its social capital to mobilize labour and collect financial resources. In reality, the people benefitting from these water projects were those who bore their costs.

Multi-actor Water Networks

As Goitein highlighted in his research, the “Muslim state” akin to other historical states, prioritized the maintenance of its military. Consequently, the provision of supplementary services largely fell to alternative institutions.² Chapter 2 focused on two stakeholders apparently external to the “state” and known for their contribution to urban water supply: the *awqāf* and the water carriers. By transporting water every day from the Nile into the city, and selling it to the residences of their customers or to the religious institutions equipped with water storage facilities, water carriers

² Shlomo Dov Goitein, *A Mediterranean society: the Jewish communities of the Arab world as portrayed in the documents of Cairo Geniza, II. The Community* (University of California Press, 1999), 404.

undoubtedly played a key role in the supply of drinking water to the city. Little is known about their internal structural organization, but as it clearly emerges from *ḥisba* manuals and Ibn al-Ḥājj's moral guidelines, that of the water carriers was one of the many trades of the city, and for them transporting this commodity constituted a service to be sold at maximum profit (perhaps sometimes even cheating a bit). This means that this trade, as the other trades in the city, was subject to the inspections of the *muḥtasib* and to the fiscal pressure exerted by this official on behalf of the sultan. Thus, while not a *dawla*-organized water supply system, it was also not completely independent of the *dawla*'s control and fiscal policy.

A significant part of the analysis done in Chapter 2 was reconstructing the identities of the *wāqifūn* who acquired or created urban water facilities, and financed and managed them through their *waqf* foundations. The survey of the *wāqifūn* mentioned in the case studies selected for this thesis clearly reveals that, despite their different backgrounds and periods of activity throughout the Mamlūk era, all of them were affiliated with their contemporary political configuration at some point in their lives—most held positions within the administration or the military, or maintained household ties with the *dawla*.

The combined analysis of their endowment deeds and biographical accounts demonstrates that the *wāqifūn* fundamentally established the *awqāf* (within which they embedded urban water structures) as efficient asset management vehicles for their own benefit. These *awqāf* served to augment their capital and influence within the city, enabling them to gather and manage properties accumulated from their access to the main revenue streams of the Sultanate and the properties of the Treasury—a privilege they enjoyed as members of the *ahl al-dawla* network. The urban water facilities that *wāqifūn* endowed in the city stemmed not from a concerted effort to equip the city with necessary facilities for the “common good,” but from a broader phenomenon of *waqfization* of Treasury resources. This phenomenon, which earlier scholarship has analysed in relation to the conversion of provincial *iqṭā'* lands into *waqf* assets, also involved *ḥikr* lots in water-rich suburban areas that were distributed among and endowed by the *ahl al-dawla*.

Furthermore, the urban water facilities endowed as part of the *waqfization* phenomenon were subjected to the dynamics it triggered, which shaped the redistribution of resources within the *dawla*. This emerges particularly clearly from al-Ghawrī's decision to extort the revenues of the *awqāf* to compensate for the Treasury's depletion. This sultanīc decision temporarily limited the foundations' capacity to finance charitable services like water distribution and hindered the activities of tenants in endowed lucrative properties

like hammams. While al-Ghawrī's extortion represented an extraordinary measure, the exploitation of the *awqāf* as political and economic resources by the *dawla* was in fact systematic, as evidenced by the consistent appointment of *dawla* officials as ex officio administrators of the endowments. This practice, which emerges prominently even in the relatively limited sample of case studies analysed in this dissertation, implies that *awqāf* became a revenue-generating resource in the hands of specific *dawla* officials, and that control and exploitation of water facilities embedded within foundations administered ex officio became a political and economic prerogative of these officials.

Water as a Valuable Commodity and as a Sacred Gift

The exploitation of *awqāf* as political and economic resources by the *ahl al-dawla* underpins the dynamics explored in Chapter 3. This chapter analysed in detail the profitable water facilities endowed within these foundations—specifically, palatial water systems and hammams in which water represented a luxurious and expensive commodity. The analysis of the documentary stratification in some of the selected documents, corroborated by patterns of appropriation and reuse narrated in the chronicles, reveals that palaces and hammams endowed within foundations were frequently acquired via *istibdāl* by members of the *ahl al-dawla*—often in ways that deviated from strict legal compliance. These properties were then incorporated into their own *waqf* foundations, only to be later alienated by successive members of the *ahl al-dawla* who integrated them into their own foundations, and so on. The long trajectories of the Ḥammām al-Qaffāṣīn and of Ardukin's palace are emblematic of this dynamic economy of urban water facilities, and show that this asset market dynamics shaped the physical stratification of the urban space. In this economy, lucrative water facilities represented exploitable resources for the network in power, circulating among successive generations of *ahl al-dawla* with trajectories that could span centuries. At the same time, on a more granular level, lucrative water facilities such as hammams depended on the many tenants and workers they employed, who were responsible for the structures' everyday operation and maintenance, and for generating the revenues fuelling the foundation to which the water structures belonged. Furthermore, the management of endowed palaces and hammams intersected with actors external to the foundations: the *muḥtasib* controlled the communal hammams and collected taxes from their tenants, while endowed palaces were consistently redistributed to *dawla* officials in ways that did not necessarily correspond to the endowers' stipulations.

Even within the foundations, different ontologies of water coexisted. While the water feeding palatial hydraulic systems and hammams represented a luxurious commodity,

in the religious buildings sponsored by the *awqāf* water had another intrinsic meaning ingrained in the Islamic religious tradition, which considers water giving as “the best form of charity”. Chapter 4 reassessed the religious significance of water provision as a form of charity, examining how the foundations established by the *ahl al-dawla* sponsored the distribution of drinking water (*tasbīl*) at cemeteries, near founders’ mausolea, in the city’s prisons, or at religious edifices within the city. The *sabīls*—monumental structures specifically constructed for the distribution of potable water—embodied the socio-political significance attached to this religious understanding of water. More than simply providing an indispensable good, they attested to their founders’ abidance by religious values and represented symbolically charged acts aimed at gaining proximity to Allah (*qurba*) in the afterlife and social prestige in this life. The waterwheels and basins endowed in certain foundations—though different in function (they did not provide drinking water for people) and not characterized by the same monumentality as *sabīls*—stemmed from the same core religious value: providing a sacred gift by quenching animals’ thirst, enabling Muslims to perform ritual ablutions; and irrigating the gardens of religious buildings constructed in Cairo’s vast outskirts.³

The operational modalities of these water systems, as delineated in the *waqf* documents, reveal that charitable water provision had obvious limitations. Charitable drinking water distribution at the cemeteries or prisons was typically limited to a single day per week, while many *sabīls* provided water for only a few hours daily. Waterwheels financed as charitable installations provided water for longer periods, but they only fed basins accessible to a limited part of the urban population. Indeed, the underlying understanding of water for these structures is that of a sacred gift whose provision enhances the spiritual status of the giver, bringing them closer to Allah. For these forms of charity, water giving *per se* is not the aim; rather, the goal is to attain Allah’s mercy by showing mercy to His creatures. For this reason, the impact of charitable water giving on Mamlūk-era Cairo’s water network should not be assessed on the basis of its ability to provide water to the city, but on the way it helped shape how water was organized within the city.

Fragmented Water

The considerable number of employees necessary to maintain and operate endowed water facilities means that the proliferation of these structures created multiple employment opportunities for service workers. The *waqfiyyāt* stipulate diverse

³ The Islamic tradition also considers planting trees as a form of charity worthy of spiritual reward. Borgolte, *World History*, 70.

employment conditions for the attendants in charge of the charitable water structures, which show that these average-means *waqf* employees had a high degree of responsibility over the water installations financed by the foundations. This compelling aspect, which emerges particularly clearly from the analysis of the conditions related to the charitable water structures but that applies also for the lucrative facilities endowed in the *awqāf*, provides us with a new perspective to re-evaluate the impact of the foundations on the organization of the urban waters. Focusing on these many employees' duties and different employment conditions allows us to see that foundations were functionally and economically self-sufficient entities operating according to the conditions stipulated by their respective founders and relying on the collective efforts of their respective tenants and employees. The lucrative and charitable water installations sponsored by the *awqāf* were embedded in distinct socio-economic and administrative units: this resulted in the creation of a fragmented and resilient urban water configuration made of multiple units relying on their individual resources and operating independently, rather than as an all-encompassing system managing urban water. At the same time, the fragments making up this constellation connected to other actors, socio-economic forces and environmental factors coexisting in the city.

By approaching water as a “total social fact”, shaped by different ontologies and actively shaping society in different ways, this work demonstrates that Mamlūk-era Cairo's water was far from a monolithic reality. Rather, it was intricate and multi-layered set of networks, characterized by a confluence of diverse elements. Crucially, these elements were not isolated realities. Different water systems, each generated by specific entities and reflecting their particular interests and perspectives, constantly intersected with one other and with broader political, economic, and environmental forces. These intersections occurred both out of converging needs and conflicting interests, and it was from this dynamic interplay that new urban realities and social organizations emerged. For example, water carriers transported water as a trade, and for their trade to survive, they needed paying clients. The *sabils* and the mosques' cisterns, which distributed drinking water as a form of charity imbued with spiritual significance, relied on water carriers for their supply and on the revenues of lucrative *waqf* properties (including hammams and palaces) to pay them. In the hammams and palaces, water was a luxurious commodity provided by elaborate and costly hydraulic systems. These structures were built, endowed, or seized by the *ahl al-dawla* as profitable assets and, as such, circulated in the urban economy. However, hammams were also important communal spaces where visitors met and attendants were employed, and where the *muḥtasib* exerted his political and fiscal authority. Palaces,

in turn, were political spaces where part of the *dawla's* political activity took place and ties of patronage and clientelism were forged.

The list of these intricate connections remains long, and future scholarship will hopefully delve further into these invisible ties, uncovering more aspects of this multilayered network of waters and of the society that shaped it. This work has laid the groundwork for such inquiries by applying a nuanced and more philologically appropriate sociological framework, which revealed that the organization of urban water in Mamlūk-era Cairo was not merely a matter of practical provision or institutional control, but a complex product of ongoing negotiations and adaptations within a highly interconnected, and yet fragmented, urban society.



زاویه

ترسه



مصرع

بورگدن مصر صریدر

زابه

عیداندن
شاه صریدر

قبه بوشکدر

شوبر

بورجس کیه قیاسه
دیر

طوبخانه

ابوالیس

شهرنشین

شهرنشین

Appendix

Note to the Appendix

The appendix contains preliminary editions of excerpts from the documents analysed in this thesis. These are documents kept at the Dār al-Wathā'iq al-Qawmiyya in Cairo, namely DW7, DW26, DW355, DW91, DW125, DW175, DW177, DW184, DW198, and DW241. Due to the considerable length of the original documents and the scope of my research—which includes nine extensive case studies, for a total of ten documents—a full edition of each document was not feasible within the timeframe of this study.

These are study editions prepared for the purpose of the present work. While they are not arranged in a final, critical form, it is hoped that they will foster further research and serve as a valuable starting point. The preparation of these editions was a major undertaking, essential not only for the analysis presented in this thesis but also for future scholarship on the Mamlūk period. By bringing these previously unedited documents to the forefront, this work aims to widen the range of archival materials available to scholars researching different socio-economic aspects of the Mamlūk period and encourage deeper engagement with these sources.

Notes on Transcription

[]: lacuna in the document

< >: interlinear addition

(): word or letter missing in the document and inserted by the editor

/ /: uncertain reading

{*}: segment of text omitted from the original document

DW7: Excerpt from the *waqf* deed of Majd al-Dīn Abū Bakr ibn As‘ad ibn Yaḥiyā al-Hakkārī (Rajab 12th, 659/1260)

Stipulation on the revenues of the shops to be used for the distribution of potable water:

{*} فان هذا الواقف لم يجعل لصارم الدين محمد فيها حقاً بل جعل ريع هذه الحوانيت {**} ودار بهاء الدين خليل المذكور مصروفاً على تسبيل الماء العذب للمسلمين على ما يأتي بيانه في هذا الكتاب ووقف جميع باقي هذا الدار وجميع المواضع [] /البانية/ وجميع الحصتين المذكورتين بعد هذا الأمير بهاء الدين خليل المذكور على ولده صارم الدين محمد المذكور ينتفع ذلك أيام حياته بالسكن و [] والاستغلال عليه واستفاد منفعته ثم من بعد الأمير صارم الدين محمد المذكور على أولاد الأمير صارم الدين محمد المذكور الموجودين الآن وعلى من يخليه الله تعالى لصارم الدين محمد المذكور من الأولاد الذكور والاناث [] وبعد كل ذكر منهم على أولاده وأولاد أولاده وذريته وعقبته وفقاً على اخوات صارم الدين محمد المذكور فيه الموجودات الآن الستات الخليات الحوايين الخمس وهي الست آسية المرأة الكامل المعروفة بزوجة المجل صاحب كمال الدين بن شيخ الشيوخ رحمه الله والست كلولة المرأة الكامل المعروفة بزوجة الأمير عماد الدين بن الركني والست صفية المرأة الكامل المعروفة بزوجة الأمير شرف الدين /علكان/ والست منصوره المرأة الكامل المعروفة بزوجة الأمير سيف الدين /البواشقي/ وشقيقته الست فاطمة السباعية العمر (اللات) بنات الأمير الاجل الكبير المولاي بهاء الدين خليل بن محمد [] بالسوية الموقوف عليه أولاً وعلى من يحث الله حوالاً للأمير بهاء الدين خليل المذكور بعد هذا الوقف من الأولاد الذكور الاناث {**}

{**} واما الحانوت التي هي سفلى الدار الكامل التي برحبة الجامع الازهر المحدودة ثالثاً في هذا الكتاب المعروفة بسكن كتاب الشروط الحكيمة الآن السابق درعها في صفات هذه الدار المذكورة في هذا الكتاب التي يحيطها حدود أربعة الحد القبلي ينتهي بما يلي مسطبتها الى الحانوت المعروف بالقاضي الاجل نجم الدين بن الحلبي وبما يلي داخلها الى باقي هذه الدار الموقوفة والحد البحري بما يلي مسطبتها الى حانوت نجم الدين بن الحلبي أيضاً وبما يلي داخلها الى دهليز هذه الدار وما في حقوقها والحد الشرقي ينتهي الى الطريق (الذي) يربط مسطبتها وبابها والحد الغربي ينتهي الى باقي سفلى الدار المذكورة فان هذا الأمير مجد الدين أبا بكر أسعد بن يحيى المذكور وقفها مع ما هي منه من باقي

هذه الدار علو او سفلى / بمفرد ذلك على حده/ على الأمير الاجل بهاء الدين خليل المذكور أيام حياته ثم من بعد هذا الأمير بهاء الدين خليل المذكور افرد الحانوت المذكورة بدرعها وحدودها وحقوقها خلا علوها على تسبيل الماء العذب على المسلمين على ان الناظر في هذا الوقف يستغل /احتها/ على الوجه الشرعي وما حصل من ريعها يبدأ منه بعمارتها ومن [] ان لم يكن لعمارتها (حاجة) يصرف فيها وما فضل عن ذلك يصرف فى نقل ماء العذب الى الجامع الازهر اللذي بالقاهرة المحروسة يذخره لصهرجه ان شاء ويفرقه على المـ(سلمين) المقيمين بالجامع الازهر والواردين اليه / والمارين/ على ما يراه من مثائله /وتفصيل/ واعطا / فعمان/ فان يغذر الصرف الى هذا الجامع المذكور على هذا الوجه صرف ذلك لتسبيل الماء العذب للمسلمين حيث كانوا على ما يراه الناظر في أي مواضع شاء وعلى أي وصف أراد وعلى ما راه من مثائله وتفصيله واعطا و [] بعد صرف ذلك في تسبيل الماء صرفه على ما هو موصوف بالفقراء والمسكنة من المسلمين على ما يأتي شرحه وبيانه في هذا الكتاب واما باقي الدار التي هذه الحانوت من حقوقها فانه وقفها سفلا وعلوا بعد الأمير بهاء الدين خليل المذكور على ولده الأمير صارم الدين محمد المذكور على ما سبق شرحه وبيانه أعلاه وهي من (جملة) المواضع السبعة الكاملة (ة) الموقوفة عليه في هذا الكتاب بعد والده يجري ذلك كذلك الى ان يرث الله الأرض ومن عليها وهو خير الوارثين

Stipulation on the endowment of the two hammams in Ḥārat Qarāqūsh (text continues from the above):

واما الحمامان الكاملان اللذان بحارة قراقوش المحدودان بما في الحصة الثانية اعلاء هذا الكتاب فان الأمير الأجل مجد الدين أبا بكر بن اسعد بن يحيى المذكور وقف وحبس وسبل جميع الحمامين المذكورين في صفتهم و تحديدهما وحقوقهما المذكورة أعلا هذا الكتاب على الأمير الاجل بهاء الدين خليل بن محمد ملكشوا المذكور أيام حياته ثم من بعده على بناته الموقوفة عليه الخمس المذكورة (أعلاه) وهن الست آسية المعروفة بزوجة صاحب كمال الدين بن شيخ الشيوخ والست كلولة المعروفة بزوجة الأمير عماد الدين بن /الركني/ والست صفية المعروفة بزوجة الأمير شرف الدين بن /علكان/ والست منصوره زوجة الأمير سيف الدين /البواشي/ والست فاطمة السباعية العمر الان بنات بهاء الدين خليل بن محمد بن ملكشوا المذكور بالسوية بينهن أيام حياتهن على ان من ماتت منهن نقل استحقاقها لصرف المنافع المختصة بها من هذين الحمامين او بعد استحقاقها لذلك انتقلت حصتها الموقوفة عليها من هذين الحمامين لأخواتها بالسوية الأربع المذكورات معها فيه خاصة او لمن توجد

منهن حين ذلك {*} يجري الحال منهن كذلك واحدة بعد واحدة الى حين انقراضهن فاذا انقرض البنات الخمس المذكورات ولم توجد منهن احد كان جميع هذين الحمامين المذكورين وفقا على اخيهن الأمير الاجل صارم الدين محمد المذكور بن الأمير الاجل بهاء الدين خليلي بن محمد بن ملكشوا المذكور وعلى من يحدثه الله تعالى لوالدهن الأمير بهاء الدين خليل المذكور من الأولاد لصلبه بعد هذا الوقف من الذكور والاناث {*} فمن مات منهم انتقل حقه لولده وذريته {*} فاذا انقرضوا هؤلاء البنات الخمس المسميات أعلاه وانقرض اخوهن الأمير صارم الدين فانقرض ذريته واولاد والده المذكور وذريته من جهة الظهر ولم يوجد منهم احد من ولد ظهر كان جميع هذين الحمامين مع حقوقه [] وفقا على من هو موصوف بالفقر او بالمسكنة من المسلمين على ما يأتي شرحه وبيانه في هذا الكتاب

واما الدار المستجدة الانشاء المحدودة تاسعا من جملة المواضع الكاملة الملاصقة من جهة بحريها للدار الكرب المبدأ تحديدها فهي المحدودة بلو الحمامين المذكورين اعلاء المشتملة على قاعة /ولمس/ طباق فإن هذا الأمير مجد الدين أبا بكر بن اسعد بن يحيى الهكاري الواقف المذكور وقفها بمفردها على حديثها على هذا الأمير الاجل بهاء الدين خليل بن محمد بن ملكشوا أيام حياته ثم من بعده على الست آسية المرأة الكامل ابنة الأمير الاجل بهاء الدين خليل المذكور لصلبه المعروفة بزوجة المولا صاحب كمال الدين بن شيخ الشيوخ أيام حياتها ثم من بعدها على اخيها /لأبيها/ خاصة الأمير الاجل صارم الدين محمد بن الأمير الاجل بهاء الدين خليل المذكور وعلى من يحدثه الله تعالى لوالدها الأمير الاجل بهاء الدين خليل المذكور من الأولاد الذكور والاناث {*}

DW26: Excerpt from the *waqf* deed of Khawand Ardukin (Rabī' II 18th, 717/ 1317)

Description of the men's hammam endowed in Ḥārat Zuwayla:

{*} جميع الحمام الكامل ارضا وبناء الآتي ذكره فيه وذلك بالقاهرة المحروسة بحارة زويلة بزقاق يعرف بزقاق العرب ويعرف قديما بدرب المسمار على يمنة السالك في الزقاق المذكور من الباب المستجد من جهة بين السورين بجوار الباب الشارع منه الى الدرب استجد ليتوصل منه الى الدار المعروفة قديما بالأمر شمس الدين سنقر الألفي الجارية يومئذ في ملك الموكلة المذكورة فيه ثم /لنقطع/ ودهليزه ويعرف هذا الحمام بدخول الرجال وهو المعروف بنسبته الى الأمير شمس الدين الألفي المذكور [] [تحديد وترتيبه وصفته انه ذو ثلاثة أبواب احدها معقود خشب مربع بعتبة سفلى [] يغلق عليه زوج أبواب يدخل منه الى دهليز مسقف نقيا مفروش الأرض بالرخام الملون يتوصل منه الى باب يدخل منه الى مسلخ يشتمل على ثلاثة مقاطع احدها مسقف غشima والأخران مسقفان نقيا /وبولد/ [] الثلاثة مقاطع خشب نقيا وهذه المقاطع الثلاثة اثنان منها يغلق على كل منهما زوج أبواب و [] باب عليه وبدائر هذا المسلخ ثلاث صفاف مسقف غشima ويجاور احد المقاطع تابوت بدرابزين [] نقيا برسم جلوس الحمامي وبوسط المسلخ المذكور فسقية مثمثة مرخمة بالرخام المجرع يعلوها أربعة عمد حاملة لبساتل برسم سقوف هذا المسلخ /النفه/ في المسلخ المذكور اربع أدوار قاعات /بولد/ [] بكل منها حذر عرد ويعلو الفسقية المذكورة فيه مثمثة والسقوف المشار اليها كل منها /مد/ [] والمسلخ مفروش الأرض بالرخام الملون وبه باب معقود خشبا يغلق عليه فرد باب يدخل منها إلى د(هليز) لطيف ومقود قبوا معطا بالجامات يتوصل منه الى البيت الاول المشتمل على اطروفية¹ بصدورها جرن برسم الماء البارد ومطهرة معلقة وهو معقود قبوا مطبق بالجامات مفروش الأرض بالرخام الملون المسبل الجدر بالبياض الخافقي ثم يتوصل منه الى باب معقود خشب عليه فردة باب يدخل منه الى (البيت الحر) المشتمل على اربع احواض متقابلة معقودة /لعا/ مطبقة بالجامات ومطهرة وجرن ساقي و [] احداهن وهي الكبرى بعضها سفلى بغير غلق كل فيهن معقودة قبوا تشتمل على حوض ومطهرة (مطبقة) بالجامات مفروشة الأرض بالرخام الملون

¹ In the document: اتروفية, but the correct form is aṭrūfiyya, meaning the horizontal panel of the step up to an iwān. Amin and Ibrahim, Muṣṭalaḥāt, 15.

مسبلة الجدر بالبياض الخافقي عليها فردة باب [الأرض بالرخام مسبل الجدر بالبياض الخافقي وبيت الحرارة امام احد احواض [المعروفة بملك الموكلة المذكورة فيه

والباب الثاني [(لدخول) الدواب برسم ساقية هذا الحمام و(زلاقة) خشب يتوصل منها الى فسقية [بالطوب الاجر مضروبة بالخافقي يعلوها جمالون غرد ثم يتوصل من الزلاقة المذكورة إلى بئر ماء معين عليها وحـ [داير مكمل العدة والآلة ومرافق وحقوق

والباب الثالث مربع يدخل منه الى مرحاض من حقوقها وهذه الأبواب الثلاث شارعة على صف واحد بزقاق العرب المقدم ذكره على يمنة من سلك فيه من الباب { * } مما يلي بين السورين طالبا الدار المشار عليه فيه المعروفة قديماً بالفلك المسيري وبقية حارة زويلة وغير ذلك

ومن حقوق هذا الحمام مستوقد هو مبني في الجهة الغربية واربعة قدور رصاص ودبكونية² معقودة بالطوب الاجر والجبس ومبينة حجر كدان ومجاري الماء الطاهر ومغائص الماء الوسخ ومن حقوق ذلك سراب في تخوم الأرض مشترك بينه وبين الحمام المجاور له المعروف بحمام الفلك الميسري وعرف بالأمير شمس الدين سنقر الألفي المذكور وهو الآن يعرف بملك غيره ومن حقوق هذا الحمام شونة لطيفة هي مطرح لالة وفو [المذكور وهي بالقرب منه مساحها من قبليها الى بحريها ثلاثة اذرع وثلاث ذراع ومن شرقيها الى (غربيها) [كل ذلك ذراع للعمل /وبيان/ تحديد هذه الشونة على حدتها وتحيط هذا الحمام ويشتمل كلها خلا السلاب والشونة حدود اربع الحد القبلي ينتهي بعضه بما يلي شرقيه الى المجاز (يتوصل) منه الى باب القاعة الحريمية التي من حقوق دار الأمير شمس الدين الألفي المعروف يومئذ بملك الموكلة [وما فيه مما يلي غربيه الى بعض الدار المذكور والمسير منه الى الجهة الغربية مما يلي الدبكونية المذكورة الى [المعروف يومئذ بملك /بنت/ الأمير علم الدين طرطح المذكور فيه والحد البحري ينتهي بعضه بما يلي شرقيه الى [المبني بالطوب الاجر الحامل لبعض طبقة علوية محمولة على الساباط لم ات ذكره فيه وغيره خارجة عن هذا الوقف [معروف بسكن الحمامي وما فيه الى اسطبل الأمير علم الدين سنجر العمادي الحلبي واسطبل الأمير جمال الدين اقوش الـ [الحلبي والحد الشرقي ينتهي مما يلي الخلوة /الصعدى/ التي هي في قبلي هذا الحمام الى جدار حامل الـ [الكبرى التي من حقوق الدار المشار اليها فيه ومما يلي الخلاوة الكبرى المجاورة لها الى جدار /مبني/ حامل لبعض علو [المذكورة أيضا ومما يلي احد المقاطع الثلاثة المذكورة الى ساحة لطيفة امام باب القاعة الحريمية المذكورة في [القبلي وما في هذا الحد ينتهي الى مجاز باب القاعة الحريمية المذكورة فيه والى الزقاق المعروف بزقاق [

² The *dabakūniyya* is the part of the hammam's furnace (*mustawqad*) where the boilers are. Amin and Ibrahim, *Muṣṭalahāt*, 106.

[وفي هذا الحد باب الحمام والباب متوصل منه الى دار الدواب والساقية والفـ] [المدخول منه الى المرحاض وفيه الساباط الحامل للطبقة /المستثناة/ المذكورة والجدار في [] [والجدار في هذا الحد مما يلي الزقاق المذكور من سفله الى ان ينتهي الى الساباط من حقوق هذا الحمام وباقيه [] الطريقة المذكورة والحد الغربي ينتهي الى اسطبل الأمير جمال الدين اقوش /الحصى/ وداره والى الحمام المعروف بدخول النساء الذي كان يعرف بالفلك المسيري ثم بالأمير شمس الدين الالفى ثم عرف ببيت الأمير علم الدين طر(طح) [] [الزقاق للدرب بأوله الشونة المتقدم ذكرها فيه وفي هذا الحد باب جورة المستوقد المذكور وهي من الخلوة /المكرر/] [قبلي الحمام المذكور الى الجدارين الحاملين الطبقة الكبرى التي من حقوق الدار المذكورة كما تقدم ذكره وسفلها حامل [] [المذكورة ولحيط الشونة اللطيفة المقدم ذكر ذرعها فيه حدود اربع الحد القبلي ينتهي الى الزقاق الفاصل بينها وبين ساقية حمام النساء المذكورة والحد البحري ينتهي الى اسطبل /فصا/ والحد الشرقي ينتهي الى الشونة اللطيفة التي من حقوق حمام النساء المذكور والحد الغربي ينتهي الى الزقاق المتوصل منه الى دار /المسحودس/ وغيرها بحدود ذلك وحقوقه

Description of the women's hammam (directly follows the above):

ومنه جميع الحمام المرسوم لدخول النساء وجميع المستوقد الذي برسمه من حقوقه وجميع موضع الشونة) التي للمستوقد وجميع بناء البئر للماء المعين وأرض مدار الساقية التي من حقوق ذلك وذلك في القاهرة المحروسة في [] [بحارة زويلة بدرب الصقالبة يتوصل الى ذلك من الدرب الشارع في الرحبة المعروفة قديما /بافلسن/ ثم بابن [] [فلك الدين ابن المسيري وهو الدرب الذي فيما بين الدار الكبرى المعروفة قديما بفلك الدين وسلمه والدار المـ(عروفة) [] [الأمير جمال الدين /اعليـب منقذ/ وهذا الحمام على يمنة من سلك في الدرب المذكور وقارب اخره وصفته انه [] [المعقود خشب وعليه زوجة أبواب يدخل منه الى دهليز ثم الى مسلخ بوسطه جرن رخام كبير وبد(ايره مساطب) وتقاطع سفلية مقطع علوى وكان به مرحاض وصار مسطبة /وذات/ الصفة وهذا المسلخ مصوف الجدران مرخم الأرض وفيه باب من حقوق هذا الحمام يتوصل منه الى بيت الأول فيه حوض برسم الماء البارد يدخل من باب اخر الى وسط الحمام المذكور وباقيها المشتمل على الاحواض الثلاثة وقد زيد فيها حوض رابع والطهورات والخلوين بكل منهما حوض ومطهرة وجميع هذا الحمام مفروش بالرخام الملون معمل القبا(ب) والجامات الزجاج الملون ومجاري الماء الطاهر ومغائص الماء الوسخ والسراب المبني المتوصل منه الى الخليج المبارك بظاهر القاهرة برسم اوساخ الحمام المذكور واوساخ الدار المعروفة قديما بفلك الدين المذكور المجاورة للحمام و يشتمل المستوقد المذكور على ديكونية واربع قدور رصاص وقصبة رصاص والفساقي والمجاري والميازيب والحقوق ويحيط هذا الحمام ومستوقده

حدود اربع الحد القبلي ينتهي الى الدار الفلكية المذكورة المع(روفة بالأمير) شمس الدين سنقر الألفي ثم بوريته من بعده والجدار في هذا الحد ساير على احدى الخلوتين اللتين بالحمام المذكور الذي على يمنة من دخل من البيت الأول وعلى الدهليز الذي يتوصل اليه من مسلخ الحمام وعلى الصفة التي من حقوق المسلخ [] بعض هذا الجدار مجاري الماء الحار والبارد والخلوة والحوض المذكور ذلك فيه ودخل من حقوق /قبو/ [] المذكور وعلى الجدار حمل /لفرش/ اخشاب الصفة المذكورة فيه والحد البحري ينتهي الى المجاز المتوصل (منه) الى علو الدار الصغرى المجاورة لهذا الحمام الفاصل بين مستوقد الحمام وبين الاسطبل الذي ينتهي اليه ولهذه [] /التطرق/ من باب الدار الصغرى المذكورة ومن المجاز والدهليز والعبور الاجل تنصيف السراب المذكور وعمارة [] من احتج الى العبور والتطرق نحو شرعي والحد الشرقي ينتهي الى المجزى الذي من حقوق الدار الصغرى المذكورة وباقيه الى الدار الكبرى وهذا الجدار ساير على الحمام المذكور وعلى المسلخ وفي بعض هذا الجدار مجاري الماء الحار والبارد وعلى باقي الجدار حمل اخشاب الصفة التي من حقوق مسلخ الحمام قبالة من دخل من بابيه الذي بالزقاق المذكور والحد الغربي ينتهي الى الزقاق الذي هو فيه وفيه بابيه وباب الساباط الذي يتوصل منه الى المستوقد المذكور وموضع النار وغيره وللشونة والشونة والبئر المذكورة التي ذلك من حقوق الحمام المذكور [] الحمام المذكور على يسرة من أراد السلوك الى اخر الدرب والاسطبل المعروف بالأمير فلك الدين المذكور قديما ويتوصل الى البئر والمدار من باب عليا فردة باب ويحيط بالبئر للماء المعين والشونة الداخل جميع بنائها في هذا الوقف وارض الـ [] الذي برسم إدارة الابقار حدود اربع {**}

DW355: Excerpts from the *waqf* deed of Faṭḥ Allah ibn Mu‘taṣim ibn Nafis¹ (Ramadan 10th, 810/1408)

The cisterns and the *sāqiya* at the cemetery:

{*} فاحد الصهاريج المذكورة هو الصهريج الكائن بسوق المسعودي المشار إليه أعلاه والصهريج الثاني من الصهريجين الكبير من الصهريجين الذين هما بالخانقاه المعروفة بالمقام المرحوم السيفي طغيمتر النجمي المظفري الدوادر الصالحي الكائنة بخارج باب البرقية التي لها حدود اربع الحد القبلي ينتهي الى الطريق الفاصلة بينها وبين الجبل والحد البحري ينتهي الى الطريق التي يتوصل منها الى قبة النصر وغيرها وفيه بابها والحد الشرقي ينتهي الى الطريق الفاصل بينها وبين تربة المقر المرحوم السيفي طشتمر الساقى والحد الغربي الى الطريق والصهريج الثالث هو الصهريج المستجد بالتربة المستجدة بجوار الخانقاه المذكورة التي استجدها الواقف المذكور ولها حدود اربع الحد القبلي ينتهي الى تربة الطنبغا الابراهيمى والبحري الى الطريق السالك الفاصل بينها وبين تربة ارغون شاه والحد الشرقي الى الخانقاه المذكورة و الحد الغربي ينتهي الى تربة أم رمضان وفي كلفة ملئ الصهاريج المذكورة ما يحتاج الى صرفه من ذلك بالغا ما بلغ من النقد المتعامل به يوم ذاك كل سنة على العادة في مثل ذلك

ويعصرف من ذلك للسواق المرتب بالساقية المركبة على البئر التي من حقوق التربة السيفية طغيمتر النجمي زيادة على المقرر له بالخانقاه المذكورة على ان يتولى ادارت الساقية المذكورة بالثور المرتب لها وكلفة الثور المذكور ويقوم بأجرة النجار ان احتيج اليه بسبب الساقية المذكورة و ثمن قواديسها وطوانسها وإكلالها ودهن برسمها وسوق الماء من ذلك إلى الحوض الذي من حقوق التربة المذكورة حتى يصير مملوءا ليلا ونهارا لينتفع الناس في سقي دوابهم وغسل هدمهم على العادة في مثل ذلك ما مبلغه في كل سنة كاملة الف دراهم ونصف ذلك خمس مائة

ويعصرف من ذلك ثمن ثورين برسم الساقية المذكورة مطبقا لتكفيه ذلك بالغا ما بلغ واذا عجز الثور الأول بيع واستبدل غيره ممن يقدر على العمل الموفي لذلك وكذلك اذا نفق الثور اشترى غيره بالغا ما بلغ ثمنه {*}

¹ A partial edition of this document already appeared in: Behrens-Abouseif, *Faṭḥ Allah and Abu Zakariyya*, 39-44. The excerpt edited here includes a part which does not appear in Abouseif's edition.

ويعصرف من ذلك ثمن فول وتبن وقرط وسلب برسم الثور المذكور وما يحتاج اليه كل سنة او في كل كفايته بالغاً ما بلغه بحسب غلا ذلك ورخصه زيادة على المقرر له من ريع وقف الخانقاه المذكورة {*}

Employment conditions of the *bawwāb/muzammalātī* at Faṭḥ Allāh's turba:

ويعصرف من ذلك لبواب يقرره الناظر بالتربة المستجدة المذكورة على أن يكون بواباً مزملاتياً يتولى غلق باب التربة وفتحه وينقل الماء من الصهريج الكبير الذي بالخانقاه المذكورة ومن الصهريج المستجد بالتربة المستجدة المذكورة الى حانوت السبيل الذي من حقوق التربة المستجدة ويسبله بحانوت السبيل المذكور على الناس كافة من وقت الضحى الى وقت العصر في كل يوم من أيام الأسبوع وهو ان يصير ظل كل شيء مثله في شهر رمضان المعظم وقت المغرب الى حتى فراغ الناس من صلاة التراويح ويكون مقيماً بالتربة المذكورة ما مبلغه في كل سنة كاملة الف درهم واحد وخمس مائة وستون ما هو عن وظيفة البوابة المذكورة سبع مائة وعشرون في كل سنة كاملة وما هو عن وظيفة نقل الماء من الصهريجين المذكورين الى الحانوت وتسبيله كما ذكر فيه ثمان مائة درهم واربعون ان رضى احد ان يجمع بين الوظيفتين المذكورتين وبين معلومهما فللناظر اجابته لذلك وان إرادة الناظر ان يجعل في البوابة شخصاً وفي تسبيل الماء ونقله شخصاً فله ذلك

ويعصرف من ذلك ثمن كيزان / وفواخير / وسفنج ومقشاة وآلة استقاء وفي ثمن زيت يستضاء به في شهر رمضان ما يحتاج اليه بسبب نقل الماء المذكور وتسبيله ما بلغ في كل سنة كاملة ثلاثمائة درهم

Employment conditions for the *muzammalātī* and the *sawwāq* at the Suwayqat al-Mas'ūdī (follows directly from the above):

ويعصرف من ذلك لرجل يكون من أهل الدين مزملاتياً يتولى نقل الماء من الصهريج الذي بسوقة المسعودي بالقاهرة المحروسة إلى حانوت السبيل المجاور له وتسبيله به من وقت الظهر إلى وقت العصر في كل يوم من أيام الأسبوع وفي شهر رمضان من وقت المغرب إلى وقت فراغ الناس من صلاة التراويح من كل ليلة ويوم من كل أسبوع ما مبلغه في كل سنة كاملة ستمائة درهم

ويعصرف من ذلك في ثمن آلة استقاء وكيزان وفواخير وسفنج ومقشات وازيار وزيت الوقود في شهر رمضان وغير ذلك مما يحتاج اليه لتسبيل الماء بالسبيل الذي بالقاهرة المحروسة المذكور في كل سنة كاملة مائتا درهم وخمسون درهماً نصف ذلك مائة درهم وخمسة وعشرون درهماً

ويعصرف من ذلك لسواق يتولى مصالح دور الساقية التي /استعجلها/ الواقف المذكور على البئر التي بالمكان المقدم ذكره /أو غيره/ ودوران الساقية المذكورة وسوق الماء إلى الحوض المجاور للصهريج الذي بالقاهرة المحروسة بسويقة المسعودي المذكور أعلاه بحيث يكون الحوض المذكور مملوءاً بالماء دائماً ليلاً ونهاراً لينتفع به الناس لكلفه سقى دوابهم وغير ذلك على العادة في مثل ذلك ويقوم بثمن قواديس وإكلال وطوانس الساقية وثمان دهن يرسم دورانها وثمان نجار وغير ذلك ان يحتاج اليه حتى يصير الماء إلى الحوض كما شرح ما مبلغه في كل سنة كاملة ألف درهم []

ويعصرف من ذلك ثمن ثور (برسم) ذلك بالغا ثمن ذلك ما بلغ فان عجز بيع واستبدل به غيره وان نفق اشترى مكانه غيره ويعصرف من ذلك في ثمن فول وتبن وقرط لثور الساقية المذكورة بالغا ثمنه ما بلغ {*}

DW91: Excerpts from the *waqf* deeds of Mūsā al-Burhānī (Sha‘bān 25th, 830/ 1427 and Rajab 1st, 839/1436)

Description of the palace at the Nile bank (830/ 1427):

{*} ومن ذلك جميع البناء القائم على الأرض المحتلة [] خط [] (بالقرب من الجامع المعروف بالأسيوطي وبيت المقر الأشرف العالي للؤلؤي الزيني عبد الباسط ناظر الجيوش المنصورة عامله الله تعالى بلطفه الجميل صفته على ما دلت عليه للمشاهدة على [] انشائها الواقف المشار إليه انه يشتمل على واجهة مبنية بالحجر الفص النحيت من جهة بحر النيل المبارك وواجهة على الرقق المسلوكة مبنية بالحجر الفص النحيت والطوب الاجر بها ثلاثة أبواب مقنطرة احدها معقود بالطوب حنية والثاني والثالث معقود (بالحجر) النحيت كل منهما بعتبة سفلى صوانا عليها فردة باب مطبق بالجميز مسمر بالمسامر الكبار

فالباب الأول منها كبير يدخل منه الى دركاه [] الداخل باب مقنطر معقود بالحجر الفص يدخل منه الى مجاز بعضه كشف وبعضه مسقف نقيا به ثلاثة أبواب اثنان يأتي ذكرها والثالث وهو الذي امام الداخل كبير مقنطر معقود بالحجر بعتبة سفلى صوانا يدخل منه الى دركاه بها واجهة مبنية (بالحجر) الفص النحيت بها باب مربع بعتبتين عالية وسفلى حجرا يغلق عليه فردة باب يدخل منه الى ساحة بها على يمنة الداخل سلم معقود (بالحجر) الفص عليه خمس درج يصعد من عليه الى مقعد مفروش بالرخام الملون مسبل الجدر بالبياض مسقف نقيا مدهون سكندريا [] السقف المذكور على جدر والحجر /وعانى/ درجا ابيض بقاعدين يعلوه رفرف بوسط المقعد المذكور فسقية مربعة بميازيب نحاسا [] أيضا صفتان مرخمتان يعلوا كلا منهما معبرة خشبا مدهونا وبالساحة المذكورة اصلان بلحا وأصل واحد تامر حنا واربع (أبواب) احدها لطيف معلق مجاور للمقعد المذكور يغلق عليه زوجا باب يشرف منه على البئر الاتي ذكره بجواره حوض برسم جريان الماء منه (إلى) الأشجار النابتة بالساحة المذكورة والباب الثاني مقنطر عليه فردة باب بعتبة سفلى حجرا يعلوه شباك يدخل منه (إلى) حاصل معقود بالطوب الاجر والباب الثالث مقنطر بعتبة سفلى حجرا معقود حنية بالطوب الاجر يدخل من ذلك إلى مخزن مسقف غشيا

والباب الرابع مربع بعتبتين سفلى حجرا وعليها خشبا بلحا يغلق عليه زوجا باب يدخل منه إلى سلم معقود بالبلاط يصعد من عليه الى باب مربع عليه فردة باب خشبا سمرا يدخل منه الى طبقة مفروشة

الأرض (بالبلاط) الكدان مسقف غشما بها ثلاثة طاقات وشبكان خشبا مطلان على الساحة المذكورة وبالطبقة المذكورة خزانة /ساحه/ وطا(بق) [] الساحة المذكورة

ويتوصل من بقية السلم المذكور الى باب مربع يغلق عليه فردة باب يدخل منه الى دهليز لطيف مفروش الأرض (بالحجر) الكدان مسقف نقيا لوحا وفسقية مسبل الجدر بالبياض به على يمينه الداخل باب بغير باب عليه (يدخل منه) الى كرسي مرحاض وباب يدخل منه الى رواق لطيف يحوي إيوانين ودور قاعة مفروش ذلك بالبلاط مسبل الجدر (بالبياض) [] الإيوانين المذكورين طاقات فالإيوان القبلي طاقته شبابيك خشبا خرطا مطلات على الواجحة والطريق يعلوها ذلك شبابيك خركاه [] (والإيوان) البحري طاقته مطلات على الساحة المذكورة يعلوها ثلاثة شبابيك خركاه خشبا وبدور القاعة المذكور صفتان وبا(ب يدخل منه) الى خزانة نوم مفروشة الأرض بالبلاط مسبل الجدر البياض مسقف نقيا لوحا وفسقية وبها طابق خشبا يصعد م(نه الى) السطح العالي على ذلك بحظر محظر دابق عليه والمنافع والمرافق والحقوق

وبالجنينة المذكورة رصيف مفر(وش) الأرض بالبلاط مسقف بالخشب البقي لوحا وفسقية به باب مربع يغلق عليه زوجا باب يدخل منه الى قاعة تحوي إيوانين متقابلتين ود(ور قاعة مفروش) الأرض بالبلاط الكدان مسقف نقيا لوحا وفسقية وبالإيوان الكبير أربع شبابيك حديدا مطلات على بحر النيل المبارك و(بالإيوان) الصغير وهو الذي على يمينه الداخل شبكان حديدا مطلان على الجنينة المذكورة وبدور القاعة المذكورة أربعة أبواب يغلق على كل [] احدها باب الخول وبقبله باب يدخل منه الى كرسي مرحاض والثالث والرابع متقابلان كل منهما خرستان و(بالقاعة) المذكورة من الجهة الشرقية باب مقعود بالبحر الفص النحيت يدخل منه الى قيطون يتوصل منه الى بحر النيل المبارك به شباك (مطل على) البحر المبارك وكرسي مرحاض وباب مقنطر يغلق عليه فردة باب مطبق بالخشب الجمير يفتح الى البحر

وبباب ال [] المذكور سلم معقود بالبلاط الكدان يصعد من عليه الى رواقين مسقفين نقيا مفروشين بالبلاط احدهما مطل على ال [] (والثاني على) الجنينة المذكورة يشتمل كل منهما على إيوان ودور قاعة وذات التخانتين والاسطحة العالية على ذلك والمنافع والمرافق والحق(وق)

[] المذكورة أولا بسطة يكتفها درج من الجهتين يصعد من عليهما الى وجهة مبنية بحجر [] الماء بها باب مربع يكتفه جلتان بعتبتين سفلى صوانا وعاليا /دبابيا/ يعلوها شباك حديدا يعلوه مقرنص مع [] الماء يعلو ذلك روش مدهون سكندريا يأتي ذكره فيه يغلق على الباب المذكور زوجا باب يدخل منه

الى دركاه لطيفة مفـ(روشة) [] الكدان مسقف نقيا مدهون سكندريا مصوف بالذهب واللازورد
بصدرها مسطبة وبها بابان متقابلتان يمينه ويسرة مقنطران [] (يعلو) البابين المذكورين شباك خشبا
خرطا فالباب الذي على يسرة الداخل يغلق عليه زوجا باب يدخل منه الى سلم [] (فالباب) الذي
على يمينه الداخل يغلق عليه فردة باب يدخل منه الى مجاز مستطيل مسقف نقيا مدهونا سكندريا
كافوريا بوسطه [] الضوء على يمينه الداخل منه بيت الازيار بواجهة خشبا خرطا وبالدھليز المذكور
شباكان خشبا خرطا مطلان على الـ [] أولا

وعلى يسرة الداخل منه باب مقنطر يغلق عليه فردة باب بعتبة سفلى حجرا يدخل منه الى السلم ينزل
منه الى مطبخ مفروش (بالحجر) الكدان يشتمل على ايوان ودور قاعة /سمائية/ فأما الايوان المذكور
فانه مسقف نقيا لوحا وفسقية وبه صفتان يمينه ويسرة وبصدر [] الى مخزن معقود قبوا وبدور القاعة
المذكورة حنيتان معقودتان بالحجر الفص بأحدهما حوض حجر برسم استقرار الماء بجوار ذلك باب
مقنطر (يتوصل منه) إلى كرسي مرحاض على يمينه الداخل والى مجاز على يسرة الداخل معقود قبوا
بصدره شباك لطيف مطل على بحر النيل المبارك (يتوصل من) المجاز المذكور الى بيت ازيات
يقابله شباك خركاه لطيفة وشباكان خشبا خرطا مطل ذلك على البحر أيضا وبصدره سلم يتوصل (منه
الى) القاعة الصغرى الآتي ذكرها فيه كل ذلك مفروش الأرض بالبلاط

ويتوصل من بقية المجاز المذكور الى باب مربع يغلق عليه زوجا باب (يدخل منه) الى القاعة الكبرى
تحتوي إوانين متقابلين فيما بينهما دور قاعة بوسطها فسقية كبيرة مفروش كل ذلك بالرخام الملون واما
(الإيوان) الكبير فانه مسقف نقيا مدهونا كافوريا مصوقا بالذهب واللازورد بكريدي وبه سدتان يمينه
ويسرة مفروشة (بالرخام) الملون يعلوا كلا منهما معبرة مدهونة حريريا بكريدي لطيف بأحدهما وهي
التي على يسرة الصاعد الى الايوان المذكور باب القاعة الصغرى الآتي ذكرها فيه وبصدر الايوان
المذكور ثلاثة شبابيك حديدا بابواب مدهونة مطلات على بحر النيل المبارك وشـ [] اليه من باب
مربع راجعي عليه زوجا باب تقابله باب مربع بالصفة المذكورة يدخل منه الى خزانة لطيفة مسقفة نقيا
بها طاقة لطـ(يفة) [] البحر يعلوها شباك ويعلو الشبابيك الثلاثة المذكورة قمريات زجاجا ملونا
عدتها ستة واما الايوان الصغير وهو الـ(ذي على) [] الداخل بصدره شاذروانا مرخما يكتفه عمودان
صغيران رخاما ابيض ينحط الماء منه الى صحن رخام لطيف يجري الماء منه الى سلسال مرخم الى
الفسقية المذكورة وبجانباي الشاذروان المذكور بابان مربعان يغلق على كل منهما زوجا باب يدخل من
كل (منهما) الى شباك شببك حديد مطل على الساحة المذكورة أولا يعلو الشاذروان المذكور معبرة
خشبا مدهونا مصوقة بالذهب والـ(ايوان) الصغير المذكور مسقف نقيا بسطا مدهون حريريا مصوق

بالذهب واللازورد به صفتان متقابلتان يعلوا كل منهما معبرة وا [القاعة المذكورة فان بها سدلتين مفروش ارض كل منها بالرخام الملون مسقفة نقياً مدهونة حريريا بكريدي يعلوا كلا منهما (أغاني مفروش) ارضه بالبلاط الكدان مـ(سبل جدره) بالبياض مسقف نقياً بسطاً سادحاً بواجهة خشب خرط خركاه مطلة على دور القاعة) [] المذكورة وأربعة أبواب مربعة احدها باب الدخول والثاني يقابله خرستان لطيف والثالث يدخل منه الى سلم [] الكدان يصعد من عليه احد الاغنيين المذكورين والى باب مربع عليه فردة باب يدخل منه الى سطح كشف عالي [] ايوان خارج عن حقوق هذه القاعة وبجواره باب مربع يدخل منه الى خزانة لطيفة مفروشة بالبلاط ويتوصل من [] السلم المذكور الى باب مربع عليه فردة باب يدخل منه الى مسترقة لطيفة مفروشة الأرض بالبلاط ويتوصل من (على السلم) المذكور أيضاً الى الاسطحة العالية على ذلك والباب الرابع من الأبواب الأربعة التي بدور القاعة المذكورة يدخل منه الى دهليز مفروش الأرض بالبلاط على يسرة الداخل منه باب مربع يغلق عليه فردة باب يدخل منه الى مجاز مفروش الأرض بالبلاط مسقف نقياً يتوصل منه الى كرسي مرحاض ويقابل الداخل باب مربع ايضاً عليه فردة باب يدخل (منه) الى دهليز لطيف على يسرة الداخل باب مربع يغلق عليه فردة باب يدخل منه الى مجاز لطيف به باب مربع (قالباب) المذكور يدخل منه الى كرسي مرحاض من حقوق القاعة الصغرة الاتي ذكرها فيه وبجواره سلم ينزل منه الى المطبخ المتقدم ذكره

ثم (يتوصل من) المجاز المذكور الى سلم يأتي ذكره فيه الى جانبه باب مربع يغلق عليه زوجا باب يدخل منه (الى) القاعة الصغرى الموعود بذكرها صفتها انها تشتمل على ايوان ودور قاعة مفروش ذلك بالرخام الملون مسقفة نقياً دمساً مدهون كافوريا (بصدر) الايوان المذكور ثلاثة شبابيك نحاساً بأبواب خشب مدهونة وخزينتان كتبتان يقابلهما باب مربع عليه زوجا باب يدخل (منه) الى شباك نحاس على يمنة الصاعد اليه صفة تقابلها سدلة على يسرة الصاعد اليه مسقفة نقياً بها ثلاثة شبابيك نحاس بأبواب خشب مدهون [] القاعة المذكورة فبوسطه صحن لطيف مرخم به فوار نحاس ومغير¹ وبها صفة مرخمة يعلوها معبرة لطيفة مدهونة حريريا وخمسة (أبواب) احدها باب الدخول والثاني والثالث والرابع خرستانات يغلق على كل منها زوجا باب ببرور مدهونة بعلبكي والخامس عليه فردة باب يدخل (منه) الى مجاز مرخم به درجتان مرخمتان بالرخام الملون يصعد من عليهما الى باب

¹ Valve to control the flow of water. Sophie W. Ebeid, "Early Sabils and their standardization," (MA thesis, The American University of Cairo, 1976), 95.

الذي هو بأحدي السدلتين اللتين بالقاعة الكبرى المتقدم ذكرها اعلا كل ذلك مسبل بالبياض والوزرة
الرخام القاعة

واما السلم الموعود بذكره فانه يصعد من عليه الى باب مربع عليه فردة (باب يدخل منه) الى مجاز
لطيف مسقف نقيا به ثلاثة أبواب احدهما بغير باب عليه يدخل منه الى كرسي مرحاض والثاني على
يمنة الداخل يغلق عليه فردة باب (يدخل منه) الى مسترقة لطيفة مسقفة نقيا مفروشة بالبلاط مسبلة
بالبياض بها طاقتان مطلتان على بحر النيل المبارك والباب الثالث يغلق عليه فردة باب يدخل منه
الى مجاز مستطيل مسقف نقيا لوحًا وفسقية يتوصل منه الى مسترقة لطيفة مسقفا نقيا مدهونا حريريا
بطاقتين مطلتين (على) النيل المبارك مفروشة بالبلاط مسبلة بالبياض ويتوصل من بقيته الى بابين
مربعين يغلق على كل منهما فردة باب يدخل من احدهما الى طبقة لطيفة مفروشة الأرض بالبلاط
مسبلة بالبياض مسقفة نقيا مطلة على البحر ومن الباب الثاني الى دهليز مفروش بالبلاط مسبل
بالبياض مسقف نقيا به على يسرة الداخل مجاز مسقف نقيا يتو(صل) منه الى باب مربع يغلق عليه
فردة باب يدخل منه الى احد الأغانيين الذي بالقاعة الكبرى المتقدم ذكرها أعلاه

ويتوصل من بقية المجاز المذكور الى مجاز مفروش بالبلاط كشفا به على يسرة الداخل باب مربع
يغلق عليه زوجا باب يدخل منه الى رواق لطيف يشتمل على ايوان ودور قاعة مفروش بالبلاط مسبل
بالبياض مسقف نقيا بكريدي ساذج وبصدر الايوان المذكور شبكان حديدا بكتفهما اربع كتبيات
وبالايوان المذكور صفتان بأحدهما شبك خركاه وبدور القاعة المذكور ثلاثة صفوف وباب مربع يغلق
عليه فردة باب يدخل منه الى خزانة مسقفة نقيا بسطا ساذجا مفروشة بالبلاط مسبلة الجدر بالبياض
يعلو دور القاعة المذكورة درابزي خشبا خرطا ويجاور باب الرواق المذكور باب مربع يدخل منه الى
طبقة لطيفة مسقفة نقيا مفروشة بالبلاط مسبلة الجدر بالبياض وبها شبكان خشبا خرطا مطلان على
بحر النيل المبارك تقابل الراجعي المذكور كتيبتيان

وبالمجاز المذكور على يمنة الداخل باب مربع عليه فردة باب يدخل منه الى كرسي مرحاض ويتوصل
من المجاز المذكور الى سلم يصعد من عليه الى الاسطحة العالية على ذلك والأحظرة المحظرة على
ذلك ويتوصل من بقية المجاز المذكور الى باب مربع عليه فردة باب يدخل منه الى رواق مفروش
البلاط مسبل بالبياض مسقف نقيا يشتمل على ايوان به شبك يعلوه طاقة مطلان على الدركاه
والروشن الذي على بوابة الحجر الماء المبدئ بذكرهما وعلى يمنة الصاعد اليه خزانة لطيفة يغلق
عليها فردة باب مسقفة نقيا مسبلة بالبياض مفروشة بالبلاط الكدان بها شبك خشبا خرطا وطاقة
مطلان على الساحة التي بها الأصول البلح والأشجار وبدور القاعة المذكورة ملقف ويتوصل من بقية

المجاز المذكور الى بابين احدهما على يمينه الداخل بغير باب عليه يدخل منه الى دهليز يتوصل منه الى كرسي مرحاض والباب الثاني يدخل منه الى دهليز مسقف نقيًا لوحًا فسقية مسبل بالبياض مفروش بالبلاط الكدان به طاقتان مطلان على بحر النيل المبارك يتوصل منه الى باب مربع يغلق عليه فردة باب يتوصل منه الى سلم يأتي ذكره

فأما احد البابين الموعود بذكرهما الذين هما بالدركاه المذكورة فانه مبني بالطوب الاجر مقنطر بعتبة سفلى حجرة يغلق عليه فردة باب يدخل منه الى مخزن لطيف مسقف غشيمًا والباب الثاني من البابين المذكورين أعلاه فانه مربع عليه زوجا باب بعتبتين سفلى حجرة وعليها خشبا يدخل منه الى سلم معقود بالبلاط يصعد من عليه الى باب يدخل منه الى طبقة لطيفة دمسًا مسقفة غشيمًا مسبلًا بالبياض مفروشة بالبلاط الكدان بها طاقة واحدة مطلة على المجاز المذكور ويصعد من بقيه أيضا الى بابين مربعين على كل منهما زوجا باب احدهما يأتي ذكره والثاني يدخل منه الى مجاز مفروش بالبلاط به مرحاض وباب مربع يدخل منه الى طبقة مفروشة الأرض بالبلاط مسبلًا بالبياض مسقفة نقيًا تشتمل على ايوان به سدلة ودور قاعة وشبابيك وطاقات مطلان على الواجهة المبدئ بذكرها والطريق السلوك والباب الثاني من البابين المربعين الموعودين بذكرهما فيه يدخل منه الى دركاه كشف مفروشة بالبلاط الكدان بها درجة واحدة يصعد من عليها الى مجاز مفروش بالبلاط كشف يتوصل منه الى باب سر به اربع درجات ينزل منها الى السلم الموعود بذكره فيه

واما الباب الثاني من الأبواب الثلاثة المقنطرة التي بالواجهة المذكورة فانه يدخل منه الى مدار ساقية كاملة العدة صالحة للإدارة مركبة على فوهة بئر ماء معين وهي الموعود بذكرها أولًا بها مخزن لطيف مسقف غشيمًا وبالمدرار المذكور سلم يصعد من عليه الى مصنع كامل البناء معد لاستقرار الماء فيه والمنافع والمرافق والحقوق

واما الثالث من الأبواب المقنطرة التي بالواجهة المذكورة أولًا فانه يدخل منه الى اسطبل مقام أربعة اروس بمنافع ومرافق وحقوق ويحيط بذلك ويحصره ويشتمل عليه حدود أربعة الحد القبلي ينتهي الى الشارع السلوك وفيه الواجهة الحجر والطوب والابواب الثلاثة المقنطرة وطاقات بعض الطباق المذكورة أعلاه والحد البحري ينتهي الى شاطئ بحر النيل المبارك وفيه الواجهة الحجر المذكورة أعلاه والشبابيك الحديد والنحاس والطاقات المطلات على البحر والحد الشرقي ينتهي الى المكان المعروف قديمًا بابين /براح/ والآن بالمقر الاشرف البدري بن مزهر ناظر ديوان الانشاء الشريف والحد الغربي ينتهي الى الساقية /الممانا/ المستجدة انشا المقر المرحوم الناصري ابن البارزي يحد ذلك كله وحدوده وحقوقه وما يعرف به وينسب اليه خلا أرضه فإنها محتكرة {*}

Description of the *sabīl* endowed in Ḥārat Zuwayla (839/1436):

{*} ومن ذلك جميع المكان الكائن بالخط المذكور ملاصق لذلك المشتمل على واجهة دائرة بالحجر الفص المحيط تشتمل على حوانيت ومخزن ومطلع وصهريج من سائر جهاتها ماعدا الجهة البحرية يأتي ذكر ذلك كله معينا فيه فأما الجهة الشرقية فان بها أربع حوانيت وباب وشباك يأتي ذكره فيه اما الحوانيت الأربع المذكورة فان كل منها يشتمل على مسطبة وداخل ودراريب /ودرندات/² ورفوف لمنافع وحقوق واما الباب المذكور فانه يصار اليه من سلم شارع بالطريق حجر عدته اربع درج وهو مربع بعثبتين حجر ماء سفلى وعليه يعلو شبك حديد يدخل من الباب المذكور فيه الى دهليز مفروش بالبلاط ومسقف نقيا بسطا مدهون سكندريا به احدى فوهتي صهريج يأتي ذكره فيه ويتوصل من ذلك الى سبيل مفروش بالرخام الملون مبني على الصهريج الموعود بذكره فيه المبني في تخوم الأرض المعد لخزن الماء والسبيل المذكور مسبل الجدر بالبياض به احدى فوهتي الصهريج المذكور مركب عليها خزانة رخام ابيض مسقف ذلك نقيا كشك ولسباط مدهون كافوريا مصوق بالذهب والالزورد بصدرة حوض من الحجر الكدان وخزائن خشب وعلى يسرة الداخل شبك حديد كبير امامه قطعة حجر كدان مركبة على حرمذانات برسم وضع الكيزان عند تسيل الماء

واما الجهة القبلية فان بها حانوت واحد يحوي مسطبة وداخل ودراريب /ودرندات/ ومنافع وحقوق واما الجهة الغربية فان بها بابان احدهما مقنطر عليه فرد باب يدخل منه الى اسطبل مسقف غشما به متبن ومرحاض ومنافع وحقوق والباب الثاني يصار اليه من سلم شارع بالطريق وهو مربع عليه زوجا باب يعلو شبك خشبا يدخل منه الى دهليز مسقف نقيا لوحا وفسقية به سلم يصعد من عليه الى بابين متجاورين احدهما على يمنة الداخل يغلق عليه فردة باب يدخل منه الى دهليز مفروش بالبلاط مسقف نقيا وفسقية به كرسي مرحاض برسم الطبقة التي تذكر فيه وسلم يأتي ذكرها وباب مربع يغلق عليه فردة باب يدخل منه الى طبقة تحوي إيوانا ودور قاعة ملقف سماوي ومرتبة مبلطة وخزانة لطيفة مرتبة بطاقات على الطريق وخزانة كسوة وبدور القاعة ملقف سماوي ومرتبة مبلطة وخزانة لطيفة وطاقة مطلة على الزقاق والطبقة مسقفة نقيا لوحا وفسقية مسبل الجدر بالبياض كاملة المنافع والحقوق

². The word is spelled in this way (with diacritics) in the document but I was unable to find its meaning. It may be a variation of the preceding word (دراريب) which comes from the Persian (در بند) which refers to doors/windows leaves. Amin and Ibrahim, Muṣṭalaḥāt, 46.

ويصعد من السلم الموعود بذكره فيه الى السطح العالي على ذلك المبريق³ بطاقات على الطريق ذات تخانة ومطبخ ومنافع وحقوق والباب الثاني منهما وهو الايسر يغلق عليه فردة باب يدخل منه الى دهليز مفروش بالبلاط مسبل الجدر بالبياض مسقف نقيا لوحا وفسقية به كرسي مرحاض وسلم يأتي ذكره وباب مربع عليه فردة باب أيضا يدخل منه الى طبقة تحوي ايوانا ودورقاعة وخزانة كسوة بطاقة على الطريق كل ذلك بشرح الطبقة المذكورة أولا والسلم الموعود بذكره يصعد منه الى تخانة ومطبخ وسطح ذلك ومنافع وحقوق ويحيط جميع المكان المشتمل على الصهريج والمطعم والحوانيت الموصوف ذلك جميع فيه حدود اربع الحد الأول وهو القبلي ينتهي الى الطريق السلوك وفيه حانوت من جملة الحوانيت وبعض طاقات احدى الطبقتين والحد الثاني وهو البحري ينتهي الى المكان الموصوف الموقوف اعلاء ملاصق له والحد الثالث وهو الشرقي ينتهي الى الطريق السلوك المتوصل منه الى جامع الحسامي وفيه بعض الطاقات احدى الطبقتين والحوانيت الأربع المذكورة وباب السبل وشباكه والحد الرابع وهو الغربي ينتهي الى الطريق السلوك المتوصل منه الى درب الدهان وغيره وفيه بابا المخزن والمطعم والطبقتين وبعض طاقات /أحدا منها يحد/ ذلك كله وحدوده وحقوقه الداخلة فيه والخارجة عنه وما يعرف به ونسبت اليه شرعيا{*}

Expenses of the *waqf* (from the 839/1436 deed):

{*} وفقاً صحيحاً شرعياً وحسباً صريحاً مؤبداً دائماً مرعياً لا يباع اصل ذلك ولا يوهب ولا يرهن ولا يورث ولا يملك [قائماً على اصوله محفوظاً على شروطه مسبلاً على سبله الآتي ذكرها معينا وشرحها مفصلاً مبيناً وهو ان الناظر على هذا الوقف والمتولي عليه يستغل ريعه ساير [] الاستغالات الشرعية ويصرف منه كل شهر من شهور الالهة من الفضة المتعامل بها يومئذ بالديار المصرية وزنا /يصبح/ الدراهم ستة وستون درهماً

فيسصرف منها لثلاثة من القرائين الحافظين لكتاب الله العزيز سبعة دراهم ونصف درهم على ان يجتمعون في كل يوم من أيام الأسبوع في أي وقت يسر لهم من النهار بدليل سكن الوقف المشار اليه أعلاه ادام الله تعالى شرفه وعُلاه او بالسبيل المذكور أعلاه ويقرأون جزءاً واحداً من القرآن العظيم عن طهر قلب رافعي أصواتهم الحسنة بالقراءة ويختمون (برسول الله) النبي سيدنا محمد وعلى اله

³ Term indicating a pavement of the roof made of a mix of sand and mud. Amin and Ibrahim, *Muṣṭalaḥāt*, 98.

وأصحابه ويهدون ثواب ذلك الى حضرة سيدنا رسول الله صلى الله عليه وسلم والى الواقف المشار اليه أعلاه والى ذريته والى أرواح سائر المسلمين

ويصرف منها عشر دراهم لثلاثة من القرا المتصفين بما ذكر أعلاه يجتمعون في كل يوم بتربة الواقف المشار اليه أعلاه الكائنة ظاهر القاهرة المحروسة بالصحراء تجاه تربة كوكاي قريبا من حوش السادة الحنابلة المعروفة يومئذ بإنشائه وعمارته ولها شهرة في موضعها يغنى عن تحديدها في هذا المكتوب ويقرأون ما شرطت قراته على القرا المذكورين أعلا ويهدون ثواب ذلك لمن ذكر اعلا

ويصرف منها لبواب التربة المذكورة عشرون درهما ويصرف منها لما يحتاج اليه التربة المذكورة من ثمن زيت للوقود وثمان قناديل وآلة للقيام بمصالحها والباقي بعد المصارف المذكورة يأخذه لنفسه على ان يتولى كنسها وفرش ما بها من /الحصر/ والبسط عند الاحتياج لذلك وغلقها وفتحها واسقاء الماء وحفظ ما بالتربة من الامتعة وغير ذلك مما جرت عادة القومة بالترب بفعله

ويصرف منها خمسة عشرة درهما لرجل من اهل الخير يتولى فتح السبيل الذي بالقاهرة المحروسة وغلقه وتسبيل الماء الذي به في كل يوم في الأوقات المعتادة ويحفظ ما به من الكزان وآلة الاستقاء ويشترى من ذلك السلبة والكيزان والمسح

ويصرف باقى ذلك وهو خمسة عشر درهما أيضا لرجل من اهل الخير يتولى حسابة ريع الوقف المذكور وقبضه من مكانه

ويصرف من ريع الوقف المذكور في كل سنة من السنين العربية عشرة دراهم من الفضة الموصوفة اعلا بوسعة لقراء التربة في العيدين

{ويصرف أيضا} ثمن أربعة مائة راوية بالغا ذلك ما بلغ ينتقل الى صهريج التربة المذكورة في أيام زيادة النيل المبارك وجريانه في الخلجان وكذلك يصرف أيضا ثمن ماء عذب ينقل الى صهريج السبيل الذي بالقاهرة المحروسة في زمن زيادة النيل كما ذكر فيه ملئ الصهريج المذكور بالغا ما بلغ

ومهما فضل بعد ذلك يتناوله الواقف المشار اليه أعلا لنفسه الكريم أيام حياته من غير معارض له في ذلك ولا منازح ثمة من بعده الثمن سهم واحد من ثمانية اسهم لمستولداته الموجودات عند وفاة الواقف المشار اليه منهن بالسوية ولو كانت واحدة انفردت بذلك ومن بعدهن لأولادهن من الواقف وعند انقراضهن عن غير أولاد منه لمن يوجد من ذرية الواقف او ذرية أخيه شقيقه الجنب الشمسي محمد

المشار اليه باعاليه كل ذلك على الشرط والترتيب المشروح في كتاب الوقف المسطر باعليه في حقهن
وحق ذريتهن

واما باقي ربع ذلك وهو سبع أثمانه فيصرف لمن يوجد اذ ذاك من ذرية الواقف المشار إليه أعلا ونسله
وعقبه على الشرط والترتيب المشروح كل باعليه وعند انقراضهم يصرّف ذلك لاخوة الواقف المشار اليه
اعلا ولخواته المذكورين اعلاه ولأولاد أخيه شقيقه الجنب الشمسي محمد المشار اليه اعلا على الشرط
والترتيب في حقهم اجمعين المشروح ذلك باعليه وعند انقراض ذلك جميعه يكون حصة المستولدات
المذكورات فيه لمن يوجد اذ ذاك من عتقاء الواقف المشار اليه أعلاه من ساير الاجناس ذكورا واناثا
فحولاً وخصيباً ومن بعدهم لأولادهم خاصة وعند انقراض أولاد عتقاء الواقف المشار اليه فيه خاصة
يصرّف الثمن المذكور فما يصرّف فيه ربع بقية الوقف المذكور ويكون حصة ذرية الواقف المشار اليه
فيه عند انقراضها وعند انقراض اخوة الواقف المذكورين باعليه وعند انقراض ذرية شقيقه الجنب
الشمسي محمد المشار اليه باعليه خاصة /1/ [الله تعالى مصروفة للحرم الأربعة المذكورين باعليه
<هم حرم مكة المشرفة وحرم المدينة {*}> يصرّف ذلك في مصالحها بالسوية على ما يراه الناظر
ويؤدي اليه اجتهاده فان تعذر الصرف احدها صرف الذي يخصه للفقراء والمساكين مطلقاً مدة التعذر
{*} وان تعذر والعياذ بالله الصرف إلى جهات الحرم الأربعة المذكورين فيه صرف ذلك الى الفقراء
والمساكين من المسلمين مطلقاً أينما كانوا وحيث ما وجدوا على الوجه الذي يراه الناظر من اطعام
الطعام وتسبيل الماء وصدقة وكسوة {*}

DW125: Excerpt from the *istibdāl* of ‘Anbar Ibn ‘Abd Allāh (Dhū al-Ḥijja 27th, 864/1460)

Beginning of the document and description of the exchanged hammam:

باسم الله الرحمن الرحيم الحمد لله وحده. وصلوه و سلام علي سيدنا محمد واله وصحبه والتابعين

هذا مكتوب استبدال صحيح شرعي معتبر لأمر مجرد مرعي مضمونه ان سيد العبد الفقير إلى الله تعالى الشيخ معز الدين [] العلماء أوجد الفضلاء مفتي المسلمين [] سيدنا العبد الفقير إلى الله تعالى الشيخ تاج الدين شرف العلماء أوجد الفضلاء مفتي المسلمين ابن الـ [] عبد الرحيم سيدنا ومولانا العبد الفقير الى الله تعالى الشيخ الامام العالم العامل قاضي القضاة شمس الدين قاضي المسلمين خالصة المؤمنين ابي عبد الله محمد بن الطرابلسي الحنفي خليفة الحكم العزيز بالديار المصرية ابد الله أحكامه واحواله اذن للسادة النظار الشرع(يين) على وقف والدهم رحمه الله تعالى الآتي ذكره فيه استبدال ما يذكره فيه لمن يذكر اسمه فيه بالمبلغ الذي سعر فيه على الحكم الذي شرح فيه وفي التسلم والتسليم والمكاتبة على ذلك والإشهاد على الرسم المعتاد اذنا شرعيا بشهادة مشهودة لوجود المسوغ الشرعي المقتضي لذلك عنده المشرح [] /تورخ/ فيه الثابت ذلك /لي/ سيدنا الحاكم المشار اليه ابد الله تعالى احكامه واحواله الثبوت الشرعي البينية الشرعية بقبضية ذلك وحكم(مه)

استبدل الجنب العالي الأميري الكبير المقي الأعرزي الاخصي المومني الزيني عنبر بن عبد الله النوري نائب مقدم الممالك الشريفة الـ[] [] الملكي الأشرفي عظم الله شأنه واحواله بما له لنفسه من الجنابين العاليين هم الشرفي يحيى والبدري محمد والنوري على ومن اختهم المصونة الكبرى المحجبة الست زينب المرأة الكامل جهة المقر المرحوم السيفي باباي كانت رحمه الله وصانها وهم أولاد الجنب العالي المرحوم النوري علي بن الجنب المرحوم الجلالي محمد بن المرحوم العمادي عبد الرحمن الشهير والدهم بالطنبدي رحمه الله وأعزهم ومن العبد الفقير الى الله تعالى الجنب العالي [] الجنب العالي المرحوم الجلالي محمد بن الجنب النوري علي الشهير بابن الطنبدي المشار اليه أعلاه اعزه الله تعالى وهم النظار الشرعية على وقف والدهم(دهم) [] الأولاد المذكورين وجد الزيني ابي بكر المذكور فيه على الوقف الذي شرع بعد الموعود بذكره أعلاه وذلك جميع بناء الحمام الآتي ذكره ووصفه وتحديده في /على ما/ هو عليه الآن الكائن ذلك بالقاهرة المحروسة بخط القفاصين بالقرب من حارة ديلم والكعكين المعروف ذلك بحمام الحلاوين الجارية ذلك في وقف المرحوم النوري على

الطنبدي رحمه الله تعالى وتحت نظر المشار اليهم المأذون لهم بأعاليه بدلالة فصل الجريان المسطر بحاشية محضر الكشف الموعد بذكره أعلاه

والمشتمل بناء الحمام المذكور فيه على واجهتين احدهما بخط الحلوانيين والثانية قصيرة لطيفة يأتي ذكرها فيه بأحدي الوجهتي(ن) وهي الكبرى باب مقنطر عليه فردة باب يدخل منه الى دهليز لطيف مفروش ارضه بالبلاط الكدان يتواصل منه الى مسلخ الحمام الآتي (ذكره فيه) ويشتمل المسلخ المذكور على مساطب دائرة وإيوانين ومقاطع وفسقية بأربع عمد رخام يعلوها أربعة اكتاف وأوتار وسقف نقي معيب وأنوار مخرقة /ودوارقيع/ معيبة وبه بابان احدهما سرّ يتواصل منه إلى حارة ديلم وغيرها وباب السر المذكور فيه يتوصل منه إلى المستوقد والدبكونيه ومدار الساقية وحاصل الماء والبئر الماء المعين المركب على فوهتها ساقية خشب كاملة العدة والآلة والباب الثاني الذي هو بالمسلخ المذكور فيه يتوصل منه إلى دهليز مستطيل مفروش الأرض بالرخام الملون التقشوم والبلاط المكسور ثم يتوصل منه إلى بيت أول به ايوان واحد بصدرة حوض علو ذلك مقلاة معقودة ثم يتوصل ذلك الى باب معقود يدخل منه الى الحرارة المشتملة على اربع /إيوانين/ وختوتين بأحدهما مغطس وظهر وجرن وأربعة احواض متقابلة ومقلاة معقودة مغطاة بالزجاج الملون بجوارها أربع نعوش /مبن(يتا)/ بالطوب الأحمر المعيب من سفله في الأربع جهات وذات المنافع والميازيب ودائر الرنك والدولب والمنافع والمرافق والحقوق ويحيط بذلك ويحصره ويشمل عليه وعلى سائر حقوقها ومعاله ورسومه حدود أربعة

الحد القبلي ينتهي إلى آدر هناك جارية في ملك الغير وإلى الزقاق بحارة ديلم والحد البحري ينتهي إلى الطريق المسلوک المتوصل منها إلى حارة الديلم والكعكين وغير ذلك والحد الشرقي ينتهي الى قاعة حلاوة هناك سكناً لمن بها وفي هذا الحد الواجهة والباب والحد الغربي ينتهي الى مكان يعرف بوقف السادة الحنابلة اعزهم الله تعالى وإلى غير ذلك وفي هذا الحد باب السر المذكور فيه وما هو خاص به من منافع ذلك

Conditions of the exchange (follows directly from the above):

يجد ذلك كله وحدوده وحقوقه وما يعرف به وينسب اليه المعلوم ذلك عند المستبدلين المذكورين أعلاه العلم الشرعي المنافي /الجهة له/ الجاري ذلك في وقف المرحوم النوري علي الطنبدي الواقف المشار اليه رحمه الله تعالى وتحت نظر المأذون لهم المستبدلين المشار اليهم بأعلاه بدلالة فصل الجريان

المسطر ذلك بحاشية محضر الكشف الموعود بذكره أعلاه الثابت ذلك /لئى/ سيدنا الحاكم المعيني المشار اليه بأعاليه ابدأ الله تعالى (أحكامه) وأحواله الثبوت الشرعي بالبينية الشرعية استبدالاً صحيحاً شرعياً صدرين المستبدلين المذكورين أعلاه بإيجاب وتسلم وتسليم شرعي ومعرفة شرعية /نافين للجهة له/ بجميع المبلغ الذي قام به الجنب العالي الزيني عنبر ابن عبد الله المستبدل المذكور أعلاه من ماله وصلب حاله بجهة الوقف المذكور أعلاه وجملته من الذهب الأشرفي الطيب الوزن السالم من عيب مثله معاملة تاريخه بالديار المصرية حرسها الله تعالى وحماها ألف دينار ذهباً النصف من ذلك بتحقيق الأصل وضبط الجملة ألف ديناراً ذهباً ما هو القيمة الثابت ذلك /لئى/ سيدنا الحاكم المشار اليه لخير الله تعالى له ألف دينار وتسعمائة دينار وخمسون ديناراً ذهباً وبقية ذلك وهو خمسون ديناراً غبطة واستظهاراً لجهة الوقف المذكور أعلاه الجميع على حكم الحلول مقبوض ذلك جميعه مجوز بأيدي المأذون لهم أعلاه المستبدلين منهم ليخرجوا من عمدة ذلك وتبعته لجهة الوقف المذكور أعلاه في شراء عقار او حصة من عقار ويوقفوا ذلك على حكم شرط وقف والدهم المشار اليه أعلاه في الحال والمال والتعذر والامكان والاستحقاق والنظر والشرط والترتيب على الوجه الشرعي /واعترف/ الجنب العالي الزيني عنبر بن عبد الله المستبدل المشار اليه احسن الله تعالى له بتسليم العين المستبدلة وما هو من حقوقها الموصوف كاملها المحدود أعلاه تسليماً شرعياً وذلك بعد النظر والمعرفة والمعاقبة الشرعية والاحاطة بذلك علماً وخبراً في الجهة له ولمن يتوله في جميع المبلغ المقبوض أعلاه المجوز أعلاه لجهة الوقف المذكور أعلاه ملك ولا شبه ملك ولا منفعة ولا استحقاق منفعة بوجه من الوجوه ولا بسبب من الأسباب بل صار ذلك بكامله بمقتضي هذا الاستبدال مستحقاً مختصاً لجهة الوقف المذكور أعلاه بصرفه في مصرفه الشرعي المأذون في صرفه أعلاه على وجه الشرعي

ولم يبق لجهة الوقف ولا لمستحقي ريعه شرعاً في جميع بناء الحمام المذكور أعلاه وما هو من حقوقها الموصوف كامل ذلك المحدود أعلاه منفعة ولا استحقاق منفعة بوجه من الوجوه ولا بسبب من الأسباب بل صار ذلك بكامله وما هو من حقوقه بمقتضي هذا الاستبدال المشروح أعلاه ملكاً طلقاً من أملاك الجنب العالي الزيني عنبر بن عبد الله النوري المستبدل المذكور فيه احسن الله تعالى له وحقاً من حقوقه ومالاً من جملة أمواله /وواجبا من واجباته/ يتصرف في ذلك وفيما شاء منه لساير أنواع التصرفات الملكية على الوجه الشرعي {*}

DW175: Excerpts from the *waqf* deed of al-Zaynī Abū Bakr ibn Muzhir (Ṣafar 8th, 879/1474)

Description of the residential palace endowed in Ḥārat Amīr Juwḥān:

{*} جميع المكان الكائن بالقاهرة المحروسة بخط حارة امير جوان المذكورة المعروف بإنشاء الواقف المشار اليه أعلاه وعمارته بالقرب من الدار المذكورة باعليه وهو سكنه أيضا المشتمل بدلاله فصل الوقف الاتي ذكره فيه على واجهة دائرة مبنية بالحجر الفص النحيت بالجهة الشرقية منها بابان مقنطران احدهما كبير يغلق عليه فردة باب يدخل منه الى دركاه مسقف نقيا بصدرها مسطبة سفها خزانة بفردة باب عليها يعلوا المسطبة المذكورة كتيبتيان متقابلتان وبالدركاه المذكورة ثلاثة أبواب احدها يدخل منه الى كرسي مرحاض والتاني يدخل منه الى سلم يتوصل منه الى علو الدركاه المذكورة والباب الثالث مقنطر على يمنه الداخل يغلق عليه فردة باب يدخل منه الى دوار به تجاه الداخل فسقية وبه باب مقنطر يغلق عليه فردة باب يدخل منه الى سلم ينزل منه الى جنيئة بها أثاث نارنج ولمون وسدر وتوت وياسمين ومرسين وبها باب مقنطر مطل على بئر الساقية الآتي ذكرها فيه بصدر الدوار المذكور سلم مبني بالحجر سفله بئر ماء معين يصعد من السلم المذكور الى باب مربع عليه فردة باب يدخل منه الى دهليز به على اليمنى الداخل سلم يصعد من عليه الى سطح ويتوصل من الدهليز المذكور الى باب مربع يغلق عليه فردة باب يدخل منه الى مقعد به عمودان من الرخام الأبيض مسقف نقيا مدهون بأنواع الدهان والذهب واللازورد به درابزين خشب ومرتب به خزانتيان وباب يغلق عليه زوجا باب يدخل منه الى سلم يتوصل منه الى مبيت بها كتيبتيان وشباك حديد مطل على الدوار المذكور مسقف المبيت المذكور نقيا مدهون باللازورد والذهب مفروش ببلاط وبالمقعد المذكور رفرف مدهون وهو مفروش بالبلاط مسبل بالبياض وسفل المقعد المذكور بابان مقنطران يغلق على كل منهما فردة باب يدخل من احدهما الى شراب خاناه ومن الثاني الى طشتخاناه مفروش أرض كل منهما بالبلاط الكدان به شباك حديد وبالدوار المذكور بجوار المقعد المذكور باب مقنطر سفل المبيت المذكور يغلق عليه فردة باب يدخل منه الى مجاز يعلوه عقد يتوصل منه الى رحاب به واجهة القاعة الآتي ذكرها فيه بالمجاز المذكور على يسرة الداخل سبعة أبواب احدها مقنطر عليها فردة باب يدخل منه الى المجاز يتوصل منه الى درجتين ينزل منها الى مجاز به مسطبة لطيفة مفروشة بالرخام الملون بها باب مربع عليه فردة باب يدخل منه الى مقعد لطيف مفروش بالرخام الملون بوزرة دائرة تشتمل على فسقية لطيفة مربع بوسطها فوار يعلوها شانزوان سلسال وصدر رخام يعلو صدر مدهون

بالذهب واللازورد وبالمقعد المذكور اربع كتبيات ودرابزين خشب مطل على الجنية المذكورة وبه باب مربع يدخل منه الى خزانة لطيفة وبالمجاز الثاني المذكور كرسي مرحاض مفروش بالرخام الملون بوزرة رخام والباب الثاني مقنطر يغلق عليه فردة باب يدخل منه الى حاصل والباب الثالث مربع عليه زوجا باب يدخل منه الى سلم يتوصل منه الى المبيت المذكور والباب الرابع مربع عليه زوجا باب يدخل منه الى دهليز لطيف يتوصل منه بدرجتين الى مجاز مستطيل به على يسرة الداخل دهليز به مزملة بخركاه بجوارها باب مقنطر عليه فردة باب يدخل منه الى مقعد هو مسلخ الحمام الآتي ذكره فيه يشتمل على ايوان ودور قاعة يعلوا ذلك عقد بالحجر الفص النحيت بالايوان المذكور كتبتان وشباكان متقابلان احدهما مطل على الجنية المذكورة والثاني مطل على الدهليز المذكور وبدور القاعة المذكور فسقية مرتفعة مرخمة وشباكان مطلق على الجنية المذكورة واربع أبواب احدها باب الدخول والثاني مقنطر عليه فردة باب يدخل منه الى حاصل سقفه معقود والباب الثالث مقنطر يدخل منه الى دهليز الحمام الموعود بذكره فيه يعلوا الدهليز المذكور عقد مخرم يتوصل منه الى كرسي مرحاض وباب مقنطر عليه فردة باب يدخل منه الى بيت اول يشتمل على ايوان به حوضان متقابلان يعلوه عقد مخرم مطبق بالجامات الزجاج الملون ثم يتواصل من ذلك الى باب يدخل منه الى بيت الحرارة المشتمل على اربع احواض وخلوة بها حوض وبه ظهور به حوض معلق مفروش ارض ذلك بالرخام الملون مسبل الجدر بالبياض وذات العقود المكملة بالجامات الزجاج الملون والباب الرابع الذي بالمسلخ المذكور يغلق على كتبتين متطابقتين والباب الخامس من الأبواب التي بالمجاز المذكور أولا مقنطر يدخل منه الى كرسي مرحاض والباب السادس مربع عليه فردة باب يدخل منه الى حاصل مسقف عقدا والباب سابع مقنطر عليه فردة باب يدخل منه الى حاصل لطيف مسقف عقدا وبالرحاب المذكور باب ثامن مقنطر يدخل منه الى حاصل به كرسي مرحاض وبصدر الرحاب المذكور سلم مدور مبني بالحجر النحيت يصعد من عليه الى باب مربع بكتفه مسطبتان سفله عتبة صوان وعلوه عتبة حجر مآ بواجهة علو ذلك مبنية بالحجر المقرنص يعلوا الباب المذكور شباك حديد يدخل من الباب المذكور الى دركاه بصدرها مسطبة مفروش ذلك بالرخام الملون بوزرة على المسطبة المذكورة وبالدركاه المذكورة بابان مقنطران متقابلان احدهما يدخل منه الى حاصل لطيف والثاني يدخل منه الى دهليز مفروش بالرخام بصدرة باب يدخل منه الى خزانة لطيفة بجوارها سلم مخرم يصعد من عليه الى مجاز مستطيل مفروش بالرخام الملون به على يمنية الداخل مزملة مسقف المجاز المذكور بسطا مدهون بأنواع الدهان يتوصل منه الى باب مربع يغلق عليه زوجا باب يدخل منه الى قاعة كبرى تشتمل على ايوانين متقابلين مرتبتين متقابلتين بالإيوان الكبير منهما ثلاثة مراتب احدها بصدرة يعلوها باداهنج وبها وزرتين من الرخام الملون السماقي والزرزوري والاصفر والاخضر والصعيدي وغير ذلك

وبالمرتبة المذكورة بابان متقابلان احدها خرستان¹ والثاني يدخل منه الى سلم يصعد من عليه الى دهليز يتوصل منه الى مبيت يعلوه قبة مخزومة بالمبيت المذكور كتيبات وخزانة لطيفة وشباك مطلى على بوابة القاعة المذكورة وبدهليز كرسي مرحاض والاىوان الثاني به مرتبتان متقابلتان بأحدهما شباك مطلى على الجنيئة المذكورة وباب يدخل منه الى مبيت به شباك مطلى على الجنيئة المذكورة مسقف نقيا مدهون باللزورد والذهب وبالاىوان المذكور شاذروان بكتفه عمودان سلسال يعلوا ذلك صدر رخام وصدر مقرنص مذهب وسفل الشاذروان المذكور فسقية لطيفة بوسطها فوار مرخمة بمجرة مرخمة يصل منه الماء الى البحرة الآتي ذكرها فيه مسقف الاىوان المذكور بسطا بثومة مقرنص مدهون ذلك بالذهب واللزورد به كريدي مقرنص مدهون بالذهب واللزورد والمرتبة الثانية بها باب يدخل منه الى مجاز لطيف يتوصل منه الى مبيت لطيف بشباك مطلى على الجنيئة المذكورة وبصدره خزانة لطيفة وبوسط دور القاعة المذكورة بحرة كبرى مستطيلة وهي الموعود بذكرها أعلاه بها اربع زوايا وثمانية رش وعشرة فواوير والمرتبتان المذكورتان أعلاه يعلوا كلا منهما أغاني بوجهة خركاه وهما بدور القاعة المذكورة أعلاه والاىوان الكبير مسقف سهما وقنطاريات وباقي ذلك مسقف بسطا بكريدان مدهون ذلك بالذهب واللزورد وارض القاعة المذكورة جميعها مفروش بالرخام الملون وبدور القاعة المذكورة اربع أبواب احدها باب الدخول والثاني تقابله يدخل منه الى دهليز مستطيل معقود بالطوب المخرم يتوصل منه الى كرسي مرحاض مفروش بالرخام الملون بوزرة دائرة بذلك والباب الثالث يدخل منه الى دهليز به على يسرة الداخل مزلة يتوصل من الدهليز المذكور الى باب يدخل منه الى كرسي مرحاض ويجا(ور) ذلك باب يتوصل منه الى سلم يأتي ذكره فيه وبصدر المجاز المذكور باب مربع يدخل منه الى قاعة حرميه ذات اىوانين متقابلين فيما بينهما دور قاعة مسقف نقيا مدهون بأنواع الدهان وذات الكتيبات والخرستانات والسلم الموعود بذكره ينزل منه الى المجاز الذي به الحمام المذكور وبه باب مربع يدخل منه الى المجاز المذكور وبه بيت ازيار وحوض ويتوصل من المجاز المذكور الى مطبخ كبير معقود به اىوان ونصبة كوانين وساحة لطيفة بها بئر ماء معين وكرسي مرحاض والباب الرابع الذي بدور القاعة المذكور يغلق عليه زوجا باب يدخل منه الى سلم معقود بالبلاط يصعد من عليه الى رواق علو المبيت الذي بالمقعد المذكور يشتمل على اىوان ودور قاعة مطلى على الدوار المذكور به خزانة وباب يدخل منه الى كرسي مرحاض ويتوصل من بقية السلم المذكور الى الاسطحة العالية على ذلك والباب الثاني الذي بالواجهة المبدأ بذكره أعلاه مقنطر /قديم/ يغلق عليه فردة باب يدخل منه الى دهليز مستطيل به على يمينة الداخل باب مقنطر يدخل منه الى سلم مستطيل مدرج برسم طلوع

1. (see below), *khuristān(āt)* loanword from Persian which indicates a cabinet or a small room for storing prepared food. See Amin and Ibrahim, *Muṣṭalahāt*, 44.

الثور الى الساقية يصعد من عليه الى مكان برسم الثور ثم يصعد من بقية السلم المذكور الى مدار الساقية المشتمل على مدار به ساقية كاملة صالحة للإدارة وبه سلم لطيف يتوصل منه الى البئر الماء المعين المركب على فوهتها ساقية خشب كاملة العدة والالة ثم يتوصل من علو البئر الى حاصل برسم الماء ثم يتوصل من المجار المذكور الى باب يدخل منه الى حاصل برسم وقود الحمام ثم يتوصل من بقية المجاز المذكور الى مستودع الحمام المذكور وبكونيته العالية عليها قدرة كبرى نحاساً وذات الاقصاب الرصاص المتوصل منها الماء والاقصاب الفني الخالصة لذلك والاسطحة العالية على ذلك والمناقع والمرافق والحقوق المحصور ذلك بحدود اربع الحد القبلي ينتهي بعضه الى مستودع حمام الرومي وباقيه الى المكان المعروف بإنشاء ابن /دوس العلوي/ والحد البحري ينتهي الى الرقاق المتوصل منه الى باب سر بيت المقر الاشرف المرحوم الزيني عبد الباسط تغمده الله تعالى برحمته والحد الشرقي ينتهي الى الرقاق المتوصل (ل منه الى) سكن مولانا المقر الاشرف الزيني الواقف المشار اليه أعلاه والى غير ذلك وفيه البابان المذكوران والحد الغربي ينتهي بعضه الى مدار ساقية حمام الرومي وباقيه الى المكان المعروف بوقف /القاصح/ قديماً يحده ذلك وحدوده وحقوقه وما يعرف به وينسب اليه الشاهد باتفاق المكان المذكور فصل الوقف /المنبه/ عليه اعلاه المؤرخ بالسّادس وعشرين من شوال سنة احدى وستين وثمانمائة الثابت مضمونه في الشرع الشريف المحكوم فيه بموجب ذلك /وان فقر/ الوقف المذكور ونفوذ من مجلس الحكم العزيز القضائي الشيعي الامامي العالمي الحاكمي الافضلي افضل الدين شرف العلماء اوحد الفضلاء مفتي المسلمين ابي فضل محمود القرمي الحنفي خليفة الحكم العزيز بالديار المصرية كان تغمده الله تعالى بالرحمة والرضوان [] اسجال المكتوب بظاهر مكتوب الوقف المنسوب لمولانا الواقف المشار اليه أعلاه المسطر بها /مشر/ ظاهره فصل الوقف المذكور أعلاه المؤرخ الاسجال المذكور بالثامن عشر من شوال المذكور أعلاه {*}

Conditions (*shurūṭ*) and mention of the earlier deeds:

{*} الشاهد باتفاقه المكتوب المنبه عليه اعلاه المؤرخ بالثامن والعشرين من شهر الله المحرم الحرام سنة ثلاثة وخمسين وثمانمائة الثابت مضمونه في الشرع الشريف المحكوم فيه باقامة [] ولزوم الوقف المذكور بفوذه من مجلس الحكم العزيز المرحوم الشيعي القضائي الحاكمي النوري شرف العلماء اوحد الفضلاء مفتي المسلمين ابي حسن علي البرقي المخزومي الحنفي خليفة الحكم العزيز بالديار المصرية كان تغمده الله تعالى برحمته بمقتضي إسجاله المسطر بظاهر المكتوب المذكور المؤرخ بيوم الأربعاء الأول من صفر عام ثلاثة وخمسين وثمانمائة الذي جعل

مولانا المقر الاشرف الواقف المشار اليه أعلاه يقبل الله تعالى منه وزاد في علاه لنفسه الكريمة مما وقفه مما غير أعلاه بمقتضي مكاتيب الأوقاف الأربعة المذكورة أعلاه وفصل الوقف المسطر بظاهر احدها المنبه عليه أعلاه ان يزيد في <مصارف> ذلك ما يرى زيادته وينقص ما يرى تنقصه ويغير ما يرى تغييره ويدخل فيه ما شاء ويخرج منه ما أراد حوجعل لنفسه في ثلاثة منها زيادة على ذلك< ان شرط ما يرى اشتراطه من الشروط المخالفة لما شرطه فيها ففعل ذلك كلما بدالة ذلك واختاره خلا ما استثنى بأحد المكاتيب المذكورة أعلاه المؤرخ بالخامس والعشرين من جمادي الأول سنة تسعة وخمسين وثمانمائة ما هو معين بالمكتوب المذكور الصادر ذلك من الواقف المشار اليه بأعاليه وهو قرأه احد الكتب السنة بحرم مكة المشرفة وقراءة كتاب الشفا بالحرم الشريف النبوي على الحال به افضل الصلاة والسلام والماء الذي يحمل لصهرج تربة والد الواقف المشار اليه والرأس البقر التي تذبح بها في عيد النحر والصهرج والسبيل والمكتب الكائن ذلك بالقشاشين والايام المقرين بالمكتب المذكور وما هو مشروط لذلك المعين ذلك بمكتوب الوقف المذكور فان حكم ذلك يبقي من غير تغير له ولا لشيء منه

وصدر من مولانا الواقف المشار اليه اشهاد على نفسه الكريمة في تاريخه شهادة شهيد به انه رجع عن جميع ما نسب اليه مما هو معين بفصل الوقف المعين أعلاه ومكاتيب الأوقاف الأربعة المذكورة فيه والفصل المسطر بها مشر باطن مكتوب وقف البنا الكائن ببولاق المذكور أعلاه المؤرخ الفصل المذكور بالخامس والعشرين من صفر سنة ثلاثة وخمسين وثمانمائة من المصارف والشروط المشروحة في ذلك وغير حكم ذلك رجوعا وتغيرا شرعي خلا المستثنى المعين أعلاه على حكم المشروح بأعاليه فان حكم ذلك باق كما هو معين بمكتوبه المذكور وكما هو منبه عليه في مكتوب الوقف الصادر من الواقف المشار اليه أعلاه الموافق لتاريخه وشهيد به وخلا ما جعله الواقف المشار اليه أعلاه لنفسه الكريمة فيما وقفه بمقتضي فصل الوقف والمكاتيب الأربعة المعين ذلك أعلاه من الزيادة والتنقيص والإخراج والإدخال والتغير والرجوع وغير ذلك مما شرح بها فان حكم ذلك يبقي لذلك

وجعل مولانا المقر الأشرف الزيني الواقف المشار اليه ادامة الله تعالى نعمته عليه لنفسه الكريمة استحقاق ريع الموقوف المذكور أعلاه والمضموم اليه المعين لذلك بأعاليه بمفرده مدة حياته احياء الله تعالى حياة طيبة يتصرف في ذلك لنفسه من غير مشارك له فيه او ينفع بما شاء من الموقوف المعين أعلاه كيف شاء أبدا ما عاش ودائما ما بقى ثم من بعده ينتقل من كان يستحقه من ذلك بكماله لأولاده الموجودين الآن هم مولانا المقر الاشرف الكريم العاليي المولوي القاضوي العضدي /الدهري الملحاي/ الأوحدي السيدي البدي بدر الدين خالصة الملوك والسلطين سليك

العلماء العاملين أبي المحاسن محمد ناظر الخواص الشريفة بالمملكة الشريفة الإسلامية الملكي الأشرفي عظم الله تعالى شأنه وعامله هو ووالده بلطفه الحفي والجناب الكريم العالي القاضي الأصلي العريقي الأوحدي السيدي البرهاني أبو السعادات إبراهيم ادام الله تعالى رفعتة وحسن اليه والنجل السعيد الشرفي يحيى الفطيم والسيدة عائشة والسيدة سارة /الراستنان/ ولمن سيحدثه الله تعالى للواقف المشار اليه من الأولاد الذكور والإناث ولأولاد أولاده من أولاد الظهور ومن الأولاد البطون وذريته ونسله وعقبته وان سفلوا من أولاد الظهور وأولاد البطون يستقل به الواحد من أولاد الواقف المشار اليه وأولاد أولاده وذريته ونسله وعقبته { * } فاذا انقرضوا { * } صرف الربع المعين أعلاه بتمامه وكماله للفقراء والمساكين بمكة المشرفة { * }

{ * } وشرط مولانا المقر الأشرف الزيني الواقف المشار إليه ادام الله تعالى نعمته عليه في وقفه هذا شروطا منها ان يبدأ من ربع الموقوف والمضمون اليه المعين ذلك أعلاه بعمارة ما يحتاج الى العمارة مما ذكر أعلاه ومرمته وباقيه بقاء عينه ودوام منفعتة ولو صرف في ذلك جميع غل(ة) ما عين أعلاه

ومنها ان جعل النظر في ذلك والولاية عليه لنفسه الكريمة أيام حياته ثم من بعده يكون النظر على ذلك للأرشد فالأرشد من أولاده وأولاد أولاده وذريته ونسله وعقبته المستحقين بالوقف المذكور فان استوى اثنان منهم في الرشد قدم الاسن فان استوى منهم عدد في الرشد والسن أقرع بينهم فمن خرجت له القرعة استحق النظر على ذلك

فان لم يكن فيهم رشيد او كان وانقرض كان النظر في ذلك لحاكم المسلمين الشافعي بالديار المصرية ولأمير أخور كبير بها ثم من بعدهما لمن يحل محلهما في وظيفتهما المذكورتين أعلاه في كل زمان وأوان

ومنها ان جعل لنفسه الكريمة في وقفه هذا ان يزداد ما يرى زيادته وينقص ما يرى تنقيصه ويغير ما يرى تغييره ويبدل ما يرى تبديله ويدخل فيه ما شاء ويخرج منه ما أراد ويرجع عنما اشترطه مما عين أعلاه ويشترط من الشروط المخالفة لما اشترط ما يرى اشترطه يفعل ذلك كلما أحب واختار مع بقاء اصل الوقف المذكور حكمه وليس لغيره فعل شيء من ذلك

ومنها ان جميع ما ينشئه الواقف المشار اليه ويعمره بالعقارات الموقوفة المعينة أعلاه من بناء وبلاط وسقف وغير ذلك يكون حكمه حكم الوقف المذكور فيه

ومنها ان لا يستبدل بالموقوف المعين أعلاه ولو كان البديل خير من المبدل { * }

DW177 and DW184: Excerpts from the *waqf* deeds of Qarājā al-Jamālī al-Khāṣṣakī (26th Šafar 880/1475, and 8th Muḥarram 882/1477)

Description of Qarājā's *turba* (with cistern and *sabīl*) outside Bāb al-Naṣr (880/1475):

{*} جميع المكان التربة الكامل البناء ظاهر القاهرة خارج باب النصر بالصحراء بجوار تربة المقر الجمالي ناظر الخواص الشريفة المشتمل على واجهة مبنية بالحجر الفص النحيت به باب مربع بكتفه مسطبتان يمنة ويسرة متقابلتان وشباك يدخل من الباب المذكور الى دركاه لطيفة بصدرها مسطبة وكتبتان متقابلتان وثلاثة أبواب منها اثنان على يمنة الداخل والثالث على يسرته يتوصل منه الى مكان معد لتسييل الماء وبه الشباك المذكور وصهريج مبني في تخوم الأرض وشباك اخر مقابل الشباك المذكور وكتيبة وصفة لطيفة يدخل من احد البابين الى رواق ومن الاخر الى حوش كبير دائره مبني بالحجر الفص النحيت به على يسرة من دخل بيت ازيار بجواره كرسي خلاه يتوصل من الحوش المذكور الى ايوان بصدره محراب وكتبتان والى باب اخر مجاور للباين المذكورين يدخل منه الى قاعة لطيفة مشتمل على ايوان ودور قاعة وكرسي خلاه والى مقعد قمري تجاوزه ثلاثة درج يصعد منها الى باب مربع بعتبة سفلى من الحجر وعليها من الحجر المرخم بكتفه مسطبتان متقابلتان عليه زوج باب مصفح بالبحاس يدخل منه الى قبة مفروشة بالبلاط بها شباك مطل على الحوش المذكور بصدرها محراب وبها فسقتان ادهما أدنى المحراب معداه لدفن الرجال فيها ممن يختاره الواقف المشار اليه على ما يتبين فيه والأخرى للنساء على ما يذكره فيه سقفا نقي منصوري بدهان كافوري ملمع بالذهب بها ثلاثة شبابيك خركاه علو المحراب المذكور ثلاثة مناوور ادها مدور بخركاه خشب وبها كتبتان متقابلان المحصور ذلك بحدود أربعة القبلي الى الطريق والبحري الى ساحة بها قبور يعرف بوقف المقر الجمالي مجاورة للحوش المذكور والشرقي الى الطريق وفيه الواجهة وباب ذلك والشباك المبدئ به والغربي الى /تربة قائم مجاورة للفضاء/ وبالواجهة المذكورة باب مطبق بالجميز مسمر بالمسمار يدخل منه الى التربة المذكورة وسقف السبيل المذكور نقي بدهان اسكندري على ثلاث مربعات وسقف القاعة المذكورة نقي بدهان منصوري صفه لوح وفسقية {*}

Shurūt (880/1475):

{*} انشاء الواقف المشار إليه أعلاه وقفه هذا جميع المكتوب أعلاه على نفسه أيام حيوته ينتفع بذلك وبما شاء منه سكنا واسكانا بانفراده وبمن يختاره من معارفه وحدته مده عمره من غير مشارك له في ذلك ولا في شيء منه متى شاء ابدا ما عاش ودائما ما بقى ثم من بعده على ما يأتي ذكره مبينا وشرحه مفصلا معنا

فأما المكان بالترتبة المذكورة أعلاه فان الواقف المذكور وقفه على ما يفصل فيه فالقبة المذكورة والفسقتان اللتان بها وقفها الواقف كما شرح أعلاه وجعل الفسقية التي ادنى المحراب المذكور مدفنا له ولأولاده الذكور ولأولادهم وذريتهم ونسلهم وعقبته من الذكور خاصة والفسقية الأخرى مدفنا للإناث من أولاده وأولادهن وذريتهن ونسلهن وعقبتهن ولمن وجدت من مستولداته

والصهريج المذكور فانه جعله معدا لخزن الماء العذب المشروط مسبله على ما يذكر فيه واما المكان الذي به الشباكان والصهريج فانه جعله معدا لتسبيل الماء المنقول اليه من الصهريج المذكور ولوضع آلة الاستقاء والفاخورة والازيار والماعون المحتاج اليه في تسبيل الماء من كزان وغيرها واما الشباك الذي بالواجهة المذكورة أولا فانه جعله معدا لوضع الكيزان التي يسبل فيها الماء المذكور واما الايوان الذي بصدرة المحراب فانه جعله معدا للصلاة

وباقى العين الموقوفة أعلاه فان الواقف المشار اليه وقفه على نفسه كما شرح أعلاه مدة حيوته وبعده على ما يذكر فيه وهو ان الناظر في ذلك والمتولي عليه يؤجر الحصة المذكورة لمن يرغب في استجارها لمدة ثلاثة سنين /متواليه فيما دونها تأجره الميل/ فما فوقها ويؤجر الأبنية المذكورة وما شاء منها /حماعدا التربة/ لمن يرغب في استجارها او في شيء منها لمدة سنة /واحد فما دونها تاجرها الميل/ فما فوقها ولا يدخل عقدا على عقد حتى ينقضي مدة العقد الأول الا ان دعت الضرورة الشرعية

ويبدأ من ذلك بعمارة الموقوف المذكور وترميمه وإصلاح ارض الحصة المذكورة وما في البقا لعين الموقوف المذكور وصرفه في مصارفه وما فضل بعد ذلك على ما يبين فيه يصرفه الناظر والمتولي عليه على ما يشرح فيه

فيصرف منه الناظر على الوقف المذكور بحيث ما يراه ويؤدي اليه اجتهاده في كلفة ملئ الحوض المذكور الكائن ظاهر البناء المذكور الشارع بالطريق المسلوكة انشاء الواقف المذكور أعلاه ماء من البئر المذكورة أعلاه الكائنة بالدوار المذكور على الدوام والاستمرار بحيث لا ينقطع الماء عنه ساعة واحدة من طلوع الشمس إلى غروبها في كل يوم من أيام الأسبوع على الدوام والاستمرار وفي ثمن ثور لإدارة الساقية المركبة على فوهة البئر المذكورة أعلاه بالدوار المذكور أعلاه وايصال الماء الى الحوض المذكور على الحكم المذكور

ولرجل يقرره الناظر المذكور سواقا يتولى علوفة الثور المذكور وسقيه وربطه بالساقية المذكورة وادارتها واجرا الماء من البئر المذكورة الى الحوض المذكور على الدوام والاستمرار في كل يوم من أيام الأسبوع من طلوع الشمس الى غروبها كما شرح أعلاه بحيث لا ينقطع الماء عنه ساعة واحدة وفي علوفة الثور كل يوم اربعة اقداح من الفول المدشوش

وفي عمارة مكتب علو الحوض المذكور نقفه الله تعالى ان لن يكن الواقف المذكور انشاء في حيوته ويرتب الناظر على الوقف المذكور في المكتب المذكور عشرة ايتام من الصبيان المسلمين الفقراء الذين لم بلغوا الحلم ويرتب معهم مؤدبا لهم من أهل الخير والدين حافظا لكتاب الله العزيز عارفا محسنا لكتابة الخط العربي على ان الصبيان والمؤدب المذكور فيه يجلسون بالمكتب المذكور ويعلم المعلم المذكور الصبيان الايتام المذكورين ما /تسر/ لهم تعلمه وما يطبقون قرأته من القرآن العظيم وما يطبقون تعلمه من الخط العربي واستخراجه ماعدا أيام الجمع والاعياد والمواسم والأيام والاقوات التي جرت عادة صبيان المكتب بالبطالة فيها فانهم سامحوا بترك الجلوس والاشغال في ذلك ويصرف لكل يتيم منهم في كل يوم رطلا واحدا ونصف رطل بالمصري من الخبز البر ولمؤدبهم كذلك وفي كل سنة هلالية قميصا خاما من الكتان الغزل او غيره وبلوطة من القماش البعلكي /مبطنية/ وشدا [] غزلا وطاقيه من الصوف وقبقابا لكل يتيم منهم ولمؤدبهم كذلك حومن بلغ الحلم من الايتام المذكورين قطعه الناظر ونزل غيره مكانه > ويصرف لهم ذلك من ريع الحصة /الشايعة/ النصف سبع من ناحية منية يزيد خاصة دون ريع باقي الوقف المذكور ماعدا ما عين صرفه أعلاه لكلفة ملئ الحوض المذكور اعلاء فانه يكون من ريع جميع الموقوف المذكور أعلاه

ويصرف أيضا من بقية ريع الحصة المذكورة ومن باقي ريع بقية الموقوف المذكور في كلفة ملئ الصهريج المذكور أعلاه بالتربة المعينة أعلاه ماء عذبا ما ماء النيل المبارك في زمن جريان ماء النيل في الخلجان في كل سنة كاملة ما يحتاج الى صرفه من النقد المعاملة به يوم ذلك

ولمن يكون بوابا بالتربة المذكورة كل شهر من الشهور الالهة مائة درهم واحده وخمسين درهم فلوسا او ما يقوم مقام ذلك من النقود على ان يتولى فتح المكان التربة الذكورة أعلاه والصهريج المذكور وغلفهما وكنسهما ونقل الماء من الصهريج المذكور ووضعه في ماعون [] ويضعه في السبيل المذكور ويسبله على الواردين عليه من الناس في كل يوم من أيام الأسبوع في أي وقت /يتسدد/ ويعين له مواضعا سكن فيه بالتربة المذكورة من غير اجرة عليه في ذلك بحيث ما يرى الناظر ويؤدي اليه رائه

وما فضل بعد ذلك من ريع جميع الموقوف المذكور المشروط اجارته أعلاه يصرف لزوجة الواقف المشار اليه أعلاه المسماة بزهور المرأة الكامل [] مدة حيوتها ولأولاد الواقف المشار اليه أعلاه الموجودين الآن منها الست فاطمة وشقيقها سيدي يونس والحادثين له منها ومن غيرها الذكور والاناث

بالسوية بينهم ثم على أولاد أولاد الواقف المشار اليه بذلك ثم على أولادهم [] ثم على ذريتهم ونسلهم وعقبته من أولاد الظهر أو البطن طبقة بعد طبقة {*}

{*} فإذا انقضوا ولم يبق منهم أحداً أو توفي الواقف المذكور عن غير زوجته المذكورة وعن غير ولد ولا ولد ولد ولا نسل له كان ذلك وقفاً مصروفاً ريعه على ما يذكر فيه فرتب الناظر على هذا الوقف ثلاثة من القراء الحافظان لكتاب الله العزيز يقرؤون في كل يوم من أيام الأسبوع بعد صلاة الصبح بالترتبة المذكورة أعلاه جزئين كاملين من تجزيه ستين جزءاً من القرآن العظيم ويصلون على النبي محمد صلى الله عليه وسلم / ويهدون مثل بواب / قرأتهم للواقف المذكور أعلاه ويسمون به باسمه ولمن مضى له من أولاده وذريته وللمسلمين ويصرف لهم في كل شهر من الشهور الأهلة مائة درهم واحد وخمسون درهماً فلو ساء أو بدلها من النقود بينهم الثلاثة وما فضل بعد ذلك يصرفه الناظر على ذلك في وجوه البر والقربات والصدقات على الفقراء أرباب الصنائع المحتاجين وفي إطعام طعام حلو يطبخ في ليالي الجمع من كل شهر من الشهور الأهلة ولتسبيل ماء عذب في ليالي الجمع أيضاً من كل شهر ويفرق خبز بر في ليالي المذكورة من كل شهر ويحمل ذلك إلى المسجونين بسجن الديلم والرحبة والمقشرة بالقاهرة المحروسة / حجرتي النساء / ويفرق عليهم ويسألهم الدعاء للواقف وذريته وعند انفراد الزوجة المذكورة أعلاه في الوقف المذكور أعلاه على الحكم المشروط في حقها أعلاه يصرف ما هو مشروط لها أعلاه وما فضل بعد ذلك من ريع الموقوف المذكور يصرف فيما عين صرفه أعلاه للفقراء أو في وجوه البر كما شرح أعلاه ومتى يعذر الصرف في جهة من الجهات المعينة أعلاه بوجه شرعي صرف ما يعذر الصرف إليه في باقي المصارف المعينة أعلاه فإن يعذر الصرف للجهات المعينة أعلاه جميعها كان هذا الوقف المذكور وقفاً مصروفاً ريعه للفقراء والمساكين المسلمين أرباب الحرف والصنائع حيث ما كانوا واینما وجدوا {*}

Second stipulation of the *shurūt* (882/1477):

{*} إنشاء الواقف المذكور ضاعف الله تعالى له الأجور وقفه هذا على نفسه أيام حياته حياه الله تعالى حياة طيبة ينتفع بذلك وبما شاء منه مغلاً واستغلاً وسائر وجوه الانتفاع الشرعية الوقفية الحسبية بمفرده من غير شريك له في ذلك ولا معارض ولا منازع ولا مرافع ليده عن ذلك ولا عن شيء منه أبداً ما عاش ودائماً ما بقي ثم بعد وفاته إلى رحمة الله تعالى رزقه الله تعالى أطول الأعمار على ما يأتي ذكره مفصلاً مبيناً شرح معينا وهو إن الناظر على هذا الوقف المذكور حين ذاك والمتولي عليه يضم ريع ذلك إلى ريع وقف السابق على تاريخ العين ذلك بكتاب وقفه الورق الحموي الأصفر المؤرخ باطنه في اليوم المبارك السادس وعشرين من صفر عام ثمانين وثمانمائة الباب المحكوم بموجبه

وبصحة الوقف المذكور فيه الحكم الشرعي المستوفي الشرائط الشرعية مع العلم بالخلاف في بيت من قبل سيدنا العبد الفقير الى الله تعالى الشيخ سعد الدين عالم المسلمين ابي /السعادات/ إبراهيم /الكافي/ الحنفي خليفة الحكم العزيز بالديار المصرية أبد الله تعالى احكامه /ولأخرى/ بدلالة إسماله المسطر بظاهر المكتوب المذكور المؤرخ بخطه الكريم بين اسطره يوم السبت السادس والعشرين من شهر صفر الخير ويخط /به من سجله/ سنة ثمانين وثمانمائة المذيل الأشهاد على العادة المنفذ على [] ذوي المذاهب الأربع أجلهم الله تعالى الشاهد كتاب الوقف المذكور أعلاه بجميع البناء الكائن بخط قنطرة المسكي بحكر يكتم داخل زقاق غير نافذ القائم على الأرض المحكرة على يسرة من سلك الى سوقية صاحب وجميع المكان الكامل أرضا وبناء داخل باب الخوخة قريبا من سوقية صاحب بدرب /الردى/ وجميع البناء الكائن بدرب خط الكافوري بحكر الخانقاه الركنية ببيرس بزقاق يعرف بسوري وجميع بناء التربة الكاملة البناء الكائنة بظاهر القاهرة المحروسة خارج باب النصر والصحراء تجوله تربة المقر الجمالي ناظر الخواص الشريفة وجميع الحصة الشايعة وقدرها نصف سبع من سبعة سباع من جميع أراضي ناحية منية يزيد بالشرقية الموصوف ذلك جميعه بكتاب الوقف المحكوم بأعليه المستعين بوصوف ذلك وتحديده على العادة هنا

وان يكون ذلك وفقا واحدا منظوما في سلك واحد واقتضى رأي الواقف المبارك المشار اليه أعلاه يقبل الله تعالى منه عمله وزاد في على ان يصرف ذلك تمامه وكمالها في المصارف الآتي ذكرها فيه لما له فعل ذلك بالطريق الشرعي في كتاب وقفه السابق المعين بأعليه من الزيادة والاقتصار والاخراج والتغير والتبديل وان يدخل فيه من شاء ويخرج من أراد ويرجع فيما شاء ويبتل ما يرى ابطاله ويشترط لنفسه من الشروط المخالفة لذلك ما يرى اشتراطه فيه على النص المحكمي بكتاب الوقف السابق المعين فيه ولما علم لنفسه في ذلك وجهة وقفه المعين فيه من الخط والمصلحة والغبطة الظاهرة وهو ان الناظر على هذا الوقف المذكور والمتولي عليه يؤجر الحصة المذكورة وباقي الموقوف المعين أعلاه لمن يرغب في استجار ذلك لمدة ثلاثة سنوات /متواليه/ فيما دونها باجر المثل فما فوقها ولا يدخل عقدا على عقد حتى [] الا اذا دعت الضرورة الى ذلك فيؤجر اذ ذاك مدة []

ويستغل ربع ذلك لوجه الاستغلال الشرعي ويبدأ من ذلك بعمارة الوقف المذكور وإصلاح ارض ذلك وما فيه البقاء لعين الوقف المذكور والدوام لمنفعته ولو انفق ذلك جميع عليه واخره من يتولى الوقف المذكور والاستخراج ذلك وصرفه في مصارفه الآتي ذكرها فيه

وما فضل بعد ذلك يصرف منه الناظر والمتولي عليه بحيث ما يراه الناظر ويؤدي اليه اجتهاده في كلفة ملئ الحوض الكائن بظاهر البناء الذي بخط قنطرة المسكي بحكر يكتم داخل زقاق غير نافذ المعين أعلاه انشاء الواقف المشار اليه أعلاه الشارع بالطريق المسلوك بماء من البئر الكائنة بالدوار

بالبناء المذكور أعلاه على الدوام والاستمرار بحيث لا ينقطع عنه الماء ساعة واحدة من طلوع الشمس إلى غروبها في كل يوم من أيام الأسبوع على الدوام والاستمرار
وفي ثمن ثور لإدارة الساقية المركبة على فوهة البئر المذكورة أعلاه بالدوار المذكور أعلاه وإيصال الماء إلى الحوض المذكور على الحكم المذكور
ولرجل يقرره الناظر سواقا يتولى علوفة الثور المذكور وسقيه وربطه بالساقية المذكورة وإدارتها وإجراء الماء من البئر المذكورة إلى الحوض المذكور على الدوام والاستمرار في كل يوم من أيام الأسبوع من طلوع الشمس إلى غروبها كما شرح أعلاه بحيث لا ينقطع الماء عنه ساعة واحدة ثلاثمائة درهم فلوسا حدد انصافها مائة درهم وخمسون درهما أو ما يقوم مقامها من النقود ومن الخبز القرصة رطلان /المستحق/ من البر

ويصرف لعلوفة الثور كل يوم أربعة اقداح من الفول المجروش
ويصرف في عمارة مكتب ينشئه الناظر على الوقف المذكور علو الحوض المذكور ان لن يكن انشاه الواقف المذكور في حال حياته بالغاً من بلغ و يرتب الناظر على هذا الوقف المذكور في ذلك عشرة ايتام من الصبيان المسلمين الفقراء الذي لم يبلغ الحلم ويرتب معهم مؤدبا لهم في أهل الخير والدين حافظا لكتاب الله العزيز عارفا محسنا بكتابة الخط العربي على ان الصبيان والمؤدب المذكورين فيه يجلسون بالمكتب المذكور ويعلم المؤدب المذكور الصبيان الايتام المذكورين ما يتسر لهم بعلمه وما يطبقون قراءته من القرآن العظيم وما يطبقون بعلمه من الخط العربي واستخراجه ماعدا أيام الجمع والاعياد والمواسم والاوقات التي جرت عادة صبيان المكاتب بالبطالة فيها فانهم يسمحوها بترك الجلوس والاشتغال في ذلك

ويصرف لكل يتيم منهم من الخبز القرصة البر رطلان بالمصري في كل يوم ويصرف لكل يتيم منهم في كل شهر من الشهور الالهة من الفلوس الموصوفة خمسون درهما أو ما يقوم مقامها من النقود وفي كل سنة هلالية لكل يتيم منهم قميصا خاما بالكتان الغزلي أو غيره وبلوطة من القماش البعلبكي /مبطنه/ وشدا غزلا وطاقيه من الصوف وقبقابا

ويصرف لمؤدبهم في كل يوم من الخبز القرصة البر أربعة اربال بالمصري وفي كل شهر من الشهور الالهة من الفلوس الموصوفة ستمائة درهم نسفها ثلاثمائة درهم أو ما يقوم مقام ذلك من النقود ويصرف له في كل سنة هلالية قميصا خاما من الكتان الغزل وبلوطة بعلبكي /مبطنه/ وشدا غزلا وطاقيه من الصوف وقبقاب

ويصرف لمن يكون تربيا بوابا فراشا بتربية الواقف المشار اليه مسبلا لماء الصهرج الكائن بالتربية المذكورة في كل يوم من الخبز القرصة البر رطلان بالمصري ويصرف له في كل شهر من الشهور الالهة من الفلوس الموصوفة مائة درهم واحده وخمسون درهما او ما يقوم بمقام ذلك من النقود وما فضل بعد ذلك من ريع جميع الموقوف المعين فيه يصرف بجملته لزوجة الواقف المشار اليه أعلاه هي المصونة زهور المرأة الكامل المذكورة بكتاب وقفه السابق المعين أعلاه ما دامت عزبا مدة حياتها ولأولاد الواقف المشار اليه منها الموجودين الآن الست فاطمة وشقيقها سيدي يونس ولأولاده الحادئين له منها ومن غيرها الذكور والاناث بالسوية بينهم ثم على ذريتهم ونسلهم وعقبته من ولد الظهر وولد البطن بالسوية طبقة بعد طبقة ونسلا بعد نسل {*}

{*} ويصرف لمن يكون ناظرا على هذا الوقف المذكور ووقفه السابق في كل شهر من الفلوس الموصوفة خمسمائة درهم أو ما يقوم مقامها من النقود ويقرر الناظر رجلا من أهل الخير والدين شادا لوقف المذكور {*} ويصرف له في كل شهر من الفلوس الموصوفة أربعمائة درهم أو ما يقوم مقامها من النقود ومن الخبز القرصة في كل يوم رطلا وما فضل بعد ذلك يقسم على أربعة ربايع فالربيع الأول من ذلك يصرف لفقراء الحرم الشريف المكي والربع الثاني يصرف لفقراء الحرم الشريف النبوي {*} والربع الثالث يصرف لمستحقين الوقف المذكور بحيث جومكهم زيادة عن عاين لهم صرفه أعلاه فالربع الرابع يصرفه الناظر على الوقفين المذكورين فيه في وجوه البر والقربات والاجر والمثوبات على الفقراء ارباب الصنائع المحتاجين وفي اطعام طعام حلو يطبخ في ليالي الجمع في كل شهر من الشهور الالهة ويحمل ذلك الى مسجونين بسجن الديلم والرحبة والمقشرة ويفرق عليهم ويسألهم الدعاء للواقف وذريته وفي تسبيل ماء عذب في ليالي الجمع أيضا ومهما تقدم الصرف اليه من الجهات المعينة أعلاه {*}

{*} شرط الواقف {*} ومنها انه جعل النظر في ذلك والولاية عليه لنفسه أيام حياته وله ان يسنده ويفوضه ويوصي به لمن شاء فان مات عن غير وصية ولا اسناد ولا تقويض او كان وتعذر كان النظر في ذلك للأرشد فالأرشد من أولاده وذريته ونسله وعقبته ولزوجة المسماة أعلاه فان لم يكن فيهم رشيدا او كان وتعذر كان النظر في ذلك لمن يكون ناظرا مدرسة المقر الجمالي ناظر الخواص الشريفة الكائنة بسوقية صاحب بالقاهرة المحروسة مع زوجة الواقف المذكورة {*}

DW198: Excerpts from the *waqf* deed of Azbak min Tūṭukh (Ramadan 21st, 890/1485)

Description of the residential palace endowed at the Azbakiyya quarter and indication of the adjacent buildings (northern section of the quarter):

{*} واما دور القاعة فيه سدتان متقابلتان بأحدهما شبكان نحاساً بطوايق من خشب نقي مدهون حريراً بخركاوات شيل وحط مطل ذلك إلى البركة الأزيكية يعلو ذلك قمرتان مسدودان بالزجاج الملون سفله تاريخ وعلوها معبرة شقة كشك واسباط مسقفة هذه السدلة نقياً شقة بسط مدهون ملمع بالذهب واللازورد بفوحتها كبردي بذيّل مقرنص بتاج وبدلاوات مغرق بالذهب واللازورد بوسط دور القاعة المذكورة فسقية مثمّنة مضروبة بالخافقي مرخمة العلو بعشرة فواوير ومغير يجري الماء إلى الجنينة مستدير دور القاعة المذكور بأربعة أبواب بأعتاب رخاماً أحدها باب الدخول إلى ذلك والثاني تجاهه يدخل منه إلى نقل مرخم مسقف نقياً مدهون كافورياً على يسار داخله ثلاثة شبابيك حديداً مصفراً بطوايق خشباً نقياً مدهون حريراً بخركاوات شيل وحط مطلة على البركة الأزيكية بجلسات يعلوها معابر وقمرات زجاجاً ملوناً بأخر هذا النقل باب سُر القيطون الكبير المرخم المقدم ذكره بمعبرة كافوري ملمع بالذهب واللازورد

والباب الثالث من أبواب دور القاعة المذكور مربع عليه زوجا باب موشق بعلبكي بفضة يدخل منه إلى دهليز مرخم به على يسرة الداخل باب يأتي ذكره مسقف غالب هذا الدهليز (نقياً مدهون) كافورياً يعلوه منور سماوي يتوصل منه إلى كرسي راحة بمنجنيق مرخم الأرض بـ [دائرة عليه يعلوها شرفة رخاماً نقش بعلوه خشخشة والباب الموعود بذكره مربع عليه فرد باب موشق بدهون حريراً يدخل منه إلى بيت ميازيب يتوصل منها الماء إلى الفسقية وسلم مبلط يتوصل منه إلى باب مربع بغير باب عليه يدخل منه إلى دهليز مبلط مسقف نقياً لوحاً وفسقية به باب مربع عليه زوجا باب موشق حريري يدخل منه إلى مبيت مبلط مسقف نقياً على مربعات مدهون كافورياً على ازار ملمع بالذهب واللازورد صدره شبك خشباً مخزراً مدهون اخضر بطابق مدهون حريري مطل على الجنينة {*

{*} والباب الرابع من أبواب الدوار الكبير هو باب المقعد الآتي ذكره يتوصل إليه من سلم فرحتين مبني بالحجر الأحمر يجمعهما بسطة بها الباب المذكور وهو مربع بعبتين سفلى وعليا من حجر

احمر بكتفه جلستان من حجر احمر يعلوهما تاريخ مذهب ويعلو العتبة العليا قوس متداخل يعلوه شباك حديداً مصفراً يعلوه مقررص {*}

{*} يصدر هذا المقعد باب مربع عليه زوجا باب يدخل منه إلى دهليز مبلط به باب السر النافذ إلى القصر المقدم ذكره وغيره وبه على يمنة الداخل باب مربع عليه فردة باب موشق يدخل منه إلى سلم صعود وهبوط فالذي للهبوط يهبط منه إلى الطشتخانة الآتي ذكرها والذي للصعود يصعد منه إلى سطح المقعد المذكور والبيت الآتي ذكره ثم يتوصل من بقية الدهليز المذكور إلى باب مربع عليه فردة باب موشق يعلوه شباك خرطاً مامونياً يدخل إلى دهليز مبلط مسقف كافورياً يتوصل منه إلى كرسي راحة بمنجنيق وصحن مرخم يعلوه خشخاشة بآخر هذا الدهليز باب مربع عليه فردة باب موشق بمعبرة كافوري يدخل منه إلى مبيت المقعد المذكور وهو يشتمل على ثلاثة شبابيك حديداً مصفراً مطلة على الدوار بطوابق خشباً موشقاً يعلوها بيوت قمريات بغير زجاج مسدودات بشريط نحاساً وبه شباك مطل على الطريق الفاصل بين هذا المكان والجامع المذكور أعلاه يغلق على هذا الشباك زوجا باب من خشب نقي مدهون حريريا يعلوه ثلاث قمريات زجاجاً ملوناً بمعبرة كافوري وبه كتيبة بها خزانتان متطابقتان يغلق على كل منها زوج باب موشق مفروش ارض ذلك بالبلاط مسقف نقيا مدهون سكندرياً بالذهب واللآزورد وغيرهما

والباب الخامس من أبواب الدوار المذكورة مقنطر عليه فردة باب مدهون احمر يدخل منه إلى دهليز يعلوه عقد باخره باب مقنطر عليه فردة باب يدخل منه إلى دركاه أرضية بصدرها بسطة يعليها عقد بها باب مقنطر يدخل منه إلى دهليز على يمنى داخله باب مقنطر عليه فردة باب يدخل منه إلى مطبخ مبلط مسقف جملوناً بممرق دخان به نصية كوانين ومسطبة وحوض يجري إليه الماء من ساقية هذا المكان

ثم يتوصل من هذا الدهليز إلى اسطبل به طوالة مقام تسعة أروس خيلا كاملة المجاديل والأواخي مسقف غالب ذلك غشيماً وبعضه يعلوه عقد باخر الطوالة باب نافذ لبئر الساقية وهو مقنطر وبهذا الاسطبل مغسل خيل كامل المجاديل بحوضين متلاصقين كدائناً تجاه المغسل باب مقنطر يدخل منه إلى دهليز به كرسي راحة وبيت طوش وباب خوخة يتوصل منه إلى مطبخ قاعة الحريم الكبرى وبهذا الدهليز بيت ثور الساقية وسلم حدره يتوصل منه إلى مدار ساقية وبئر ماء معين بوجه واحد يعلوها ساقية خشباً كاملة العدة والآلة يجاورها حاصل الماء مضروب بالخافقي بمغير نحاساً مسقف جملوناً وبالإسطبل المذكور ركاب خاناه يغلق عليها فردة باب وهي مبلطة مسقفة غشيماً

والباب السادس من أبواب الدوار <المذكور> مقنطر عليه فردة باب مدهون احمر يدخل منه إلى شراب خاناه مبلطة مسقفة عقداً

والباب السابع من أبواب الدوار مقنطر عليه فردة باب مدهون احمر يدخل منه إلى فراش خاناه مبلط والباب الثامن من أبواب الدوار مقنطر عليه فردة باب مدهون أحمر يدخل منه إلى طشتخاناه مبلطة برفوف خشباً مسقفة نقياً لوحاً وفسقيةً على مربعات وبكل من هذه البيوت ثلاثة شباك منور حديداً إلا الطشتخاناه فإنها بشباكين حديداً

والباب التاسع من أبواب الدوار مربع عليه فردة باب مدهون أحمر يدخل منه إلى سلم سفله حنيئة يصعد من السلم المذكور إلى باب مربع عليه فردة باب يدخل منه إلى دهليز به بيت ازيار وكرسي راحة ومناور مسقف نقياً لوحاً وفسقيةً بآخر هذا الدهليز باب مربع عليه فردة باب يدخل منه إلى رواق تركي مبلط مسقف نقياً لوحاً وفسقيةً به أربعة شبايك حديداً بطوابق مدهونة {*} {*} الحد القبلي ينتهي إلى الطريق المسلوك وفيه واجهة هذا المكان وبابه الأصلي ومطل الشباك الذي بمبيت المقعد المذكور

والحد البحري ينتهي إلى البركة الأزبكية وفيه واجهة القيطون والقاعتين والقصر والمقدين ومطل ذلك على البركة الأزبكية

والحد الشرقي ينتهي إلى مكان يعرف بإنشاء الجنب الزيني سالم عزه الله تعالى والحد الغربي ينتهي بعضه إلى الربع المعروف بإنشاء الواقف المشار إليه أعلاه وباقيه إلى الرواق والإسطبل المعروفين بإنشاء الواقف المشار إليه أعلاه وسكن الجنب السيفي اينال شاد العمائر بخدمة الواقف المشار إليه

{*} ومن ذلك أي من العمائر المحرمة المذكورة أعلاه جميع المكان الثاني الملاصق للمكان الأول المحدود الموقوف أعلاه من جهته الغربية ووصفه على ما هو عليه الآن ان سفله يشتمل على عشر حوانيت (في) صف واحد كل حانوت منها يشتمل على مسطبة ودراريب وداخل ومنافع وحقوق ويشتمل علوه على ربع يتوصل إلى بابه من استطراق مشترك بين الربع المذكور وبين المكان الثالث الآتي وصفته فيه المعروف بسكن السيفي اينال شاد العمائر المشار إليه أعلاه وهو أي باب الربع المذكور مربع عليه فردة باب {*}

{*} ومن ذلك أي من العمارة التجارية المذكورة أعلاه جميع المكان الثالث الملاصق للمكان الثاني المذكور أعلاه من الجهة الغربية وهو المكان المعروف بسكن السيفي اينال الشاد المذكور أعلاه

وصفته على ما هو عليه الآن انه يشتمل واجهة مبنية بالحجر الفص النحيت الكدان تجاه الباب البحري من أبواب الجامع المذكور أعلاه يفصل بينهما الشارع السلوك بهذه الواجهة باب مقنطر يغلق عليه فردة باب يدخل منه إلى الاستطراق المشترك المذكور أعلاه يعلوه عقودات بصدر هذا الاستطراق بابان احدهما مربع يأتي ذكره وهو باب الرواقين الآتي صفتها فيه والباب الآخر مقنطر يغلق عليه فردة باب يدخل منه إلى اسطبل مقام ستة أروس خيلا به مسطبة كبرى بركاب خاناه وكرسي راحة ومغسل وحوض وجمون يتوصل منه الماء إلى صهريج الجامع المذكور بآخر هذا الاسطبل باب مقنطر نافذ للبركة الازبكية يجاوره /صفة/ يعلوها مخرز يعلو هذا الاسطبل عقودات والباب الثاني وهو باب الرواقين الموعود بذكره أعلاه عليه فردة باب يدخل منه إلى دركاه مبلطة بصدرها مسطبة يجاورها باب مربع عليه فردة باب يدخل منه إلى سلم سفله حنية يصعد منه إلى باب مربع عليه فردة باب يتوصل منه إلى رحبة بها بابان متقابلتان مربعان للرواقين المذكورين فاحدهما مطل على البركة والآخر مطل على الطريق فأما باب الرواق المطل على الطريق فهو على يمينه الداخل وهو مربع يغلق عليه فردة باب يدخل منه إلى دهليز مبلط مسقف نقيا مدهون كافورياً به على يسرة الداخل باب خوخة يتوصل منه إلى /نقل/ [] يليه باب مربع عليه فردة باب يدخل منه إلى دهليز مبلط يتوصل منه إلى مطبخ به نصبة كوانين وسلم مبلط يتوصل منه إلى ثلاثة طباق صغار { }

Description of the commercial/residential building which includes the two hammams and the *sāqiya* (southern section of the quarter):

{*} فأما العمارة القبلية التي (هي) الجامع المعمور بذكر الله تعالى المذكور أعلاه التي أماكنها متجاورة متلاصقة صف واحد /ودال/ يفصل بينها وبين العمارة البحرية الشارع السلوك فتشتمل على أماكن متعددة يأتي وصفها فيه فأول أبواب ذلك مقنطر معقود حنية عليه فردة باب يعلوه شبك خشباً مخرزاً يدخل منه إلى دهليز أرضي يعلوه عقد حجراً يتوصل منه إلى فرن وهو أول أماكن العمارة القبلية المذكورة أعلاه يشتمل على قاعتين للعجين متداخلتين /من بينهما/ باب مربع عليه فردة باب يدخل منه إلى القاعة الأولى منهما وهي الكبرى تشتمل على أربع معاجن ومسطبة وباب مناول وثلاثة مناوور خشباً مسقفة غشياً على عيدان نموري بها باب القاعة الثانية وهو مقنطر يعلو عليه فردة باب يدخل منها إلى قاعة عجين صغرى تشتمل على معجين وبيتي عجين يعلو كل منهما منور من خشب مخرز وبهذا الفرن زلاقة

وبيت نار يعلوه قبة يجاوره باب مربع عليه فردة باب يدخل منه إلى شونة وقود تجاه الزلاقة مطوح رماد يعلو عقد يعلوه سلم مبني بالحجر يصعد منه إلى سطح الفرن المذكور

والباب الثاني من أبواب هذه العمارة القبلية مقنطر عليه فردة باب يدخل منه إلى حاصل أرضي يعلوه عقد حجراً كدناً يعلو بابه شباك خشباً مخزراً

والباب الثالث من أبواب العمارة القبلية المذكورة هو باب حانوت يشتمل على مسطبة مبنية بالحجر وداخل ودراريب وواجهة علوية من خشب نقي بثلاثة مناور من خشب خرط ماموني

والباب الرابع من أبواب العمارة القبلية باب طاحون وهو مربع بواجهة مبنية بالحجر المشهر يعلوها شباك مخرز يكتفه تربيعتان نقش دهان تجاه باب الطاحون من ظاهره زلاقة مبنية بالحجر يغلق على هذا الباب زوجا باب يدخل منه إلى دهليز مستطيل مفروش أرضه بالحجر الكدان يعلو غالبه عقود مبنية بالطوب المبيض وباقيه مسقف غشياً بهذا الدهليز مسطبتان متقابلتان وبيتا أزيار ومسطاح وتابوت به خزانتان متقابلتان وبيت الدقيق وبيت النخال /وميهة/ وجرن وباب مقنطر معقود حنية يدخل منه إلى مدار به حجران كل منهما نجدى بقاعدة /عدسي/ وعمود /وفاس/ ومرميس/ وتابوت وطارة كامل العدة والآلة التي لا يمكن إدارته إلا بها مسقف ذلك غشياً تجاه الداخل باب مقنطر يدخل منه إلى مراغة مفروش أرضها بالمجاديل الحجر الكدان بها كرسي راحة وطواله وحاصل النحال ومتين وسلم يصعد منه إلى السطح العالي على ذلك به مضربان كاملتان مسقف بعض الطاحون غشياً وباقيه عقود

الباب الخامس والباب السادس من أبواب العمارة القبلية المذكورة أعلاه بابا حانوتين كل منهما بصفة حانوت الأول المقدم ذكره أعلاه

والباب السابع من أبواب هذه العمارة باب حمام معد للنساء وهو يشتمل على واجهة مبنية بالحجر المشهر الأبيض والأحمر يعلوها تاريخ يعلوه مقرنص يعلوه روشن الربع الآتي ذكره يغلق على هذه الباب فردة باب يدخل منه إلى دركاه لطيفة مبلطة بالحجر الأحمر بصدرها مسطبة يعلوها عقد على يمين داخلها باب مقنطر بغير باب عليه يدخل منه إلى دهليز مستطيل مبلط بالحجر الأحمر بعضه كشف ويعلو باقيه عقود يدخل منه إلى باب المسلخ وهو مقنطر بواجهة رخاماً من داخله يدخل منه إلى مسلخ يشتمل على أربع أواوين مفروش أرضها بالحجر الأحمر مستديرة بستة مقاطع بوسط ذلك فسقية مربع العلو مثمثة السفلى مبنية بالحجر الأحمر بوسطها فو(ارة) مضروبة بالخافقي مستديرة أواوينها بورزة من حجر كدان مدهونة بالوان الرخام سماقي وزرزوري وياسميني وغرابي يشرفه كل ذلك دهان مفروش أرض هذا المسلخ بالرخام الملون وبه خزن حجراً مسقف ذلك نقياً مدهون كافورياً يعلو ذلك دور قاعة مثنى خرط ماموني وعرائش وبأحد المقاطع سلم يتوصل منه إلى باب مربع عليه فردة

باب يتوصل منه إلى السطح العالي على ذلك ثم إلى القاسم والقابض والمنسج /والوئبه/ ومجاري الماء المتوصلة إلى الحمام المذكور بأقصاب رصاصاً مبنية في الجدر وبالسطح المذكور أعلاه المقلاة الآتي ذكرها فيه المطبقة بالجامات الزجاج ثم إلى بيت القدر الرصاص وهي أربعة وبالمسلخ المذكور باب مقنطر عليه فردة باب يدخل منه إلى دهليز مرخم يعلوه نعوش مطبقة بالجامات الزجاج به ثلاثة أبواب مقنطرة أحدها على يمين الداخل يدخل منه إلى بيت /الدوآ/ مطبق بالجامات الزجاج به حوض واحد يليه الباب الثاني الذي يدخل منه إلى كرسي هو وبيت /الدوآ/ مبلطان والباب الثالث على يسار الداخل عليه (فردة) باب يدخل منه إلى بيت أول به ايوان واحد مرخم به ثلاثة احواض احدها صدر موجه برخام واثنان حنيتان من حجر أحمر يعلوه مقلاة مطبقة بالجامات الزجاج بأخر هذا الدهليز باب مقنطر عليه فردة باب يدخل منه إلى بيت الحرارة وكله مرخم يعلوه مقلاة وأربعة نعوش مطبقة بالجامات الزجاج تشتمل على أربعة اوابين بكل منها حوض وعلى جرن وعلى ثلاثة خلوي مرخمة وطهر سكندري مرخم ومنافع وحقوق

الباب الثامن والباب التاسع والباب العاشر والباب الحادي عشر من أبواب العمارة القبلية أبواب حوانيت أربعة نظير الحوانيت المقدم ذكرها

الباب الثاني عشر من أبواب العمارة القبلية المذكورة باب الحمام المعد لدخول الرجال وهو يشتمل واجهة نظير واجهة حمام النساء بها باب يدخل منه إلى حمام الرجال وهو نظير حمام النساء المذكور أعلاه إلا أنه يمتاز (عنه) بأن باحد اوابينه التي بالمسلخ على يسار داخله شباك حديداً مطل على المجاز المتوصل منه إلى الميضأة ويمتاز بيت حرارته أيضاً عن الحمام الأول بزيادة مغطس وطهر الباب الثالث عشر والباب الرابع عشر والباب الخامس عشر من أبواب العمارة القبلية أبواب حوانيت نظير الحوانيت المقدمة ذكرها

الباب السادس عشر من أبواب العمارة القبلية المذكورة مقنطر كبير يغلق عليه فردة باب يدخل منه إلى مجاز كبير متسع ارضي مشترك الاستطراق بين الجا(مع) المذكور أعلاه وبين مقام سيدي عنتر يفع الله بركته وبين الميضأة وبين منافع متعلقة بالحمامين في المنافع الآتي ذكرها على يمين داخل هذا المجاز باب مربع عليه فردة باب يدخل منه إلى سلم يجاور حنيتاً يصعد منه إلى فرختي سلم أحدهما على يسار الصاعد يتوصل منها إلى طبقتين متجاورتين مطلتي(ين على) الشارع المسلوك والفرخة الثانية يتوصل منها إلى دهليز مبلط مسقف لوحاً وفسق(ية) به ربع ستة عشر طبقةً أحدها حبيس برسم /الرعي/ بغير كرسي والخمسة عشر الباقية صف واحد تشتمل كل منها ومن الطبقتين الأولتين على باب مربع يغلق عليه فردة باب يدخل منه إلى دهليز (يز و) بيت ازيار وكرسي راحة وسلم يتوصل منه إلى مسترقة بها مطبخ معلق ثم إلى السطح العالي على (ذلك) المحظر بعضه بالبناء

وباقية بالغرود وكل الاسطحة كاملة البريقة ويتوصل من دهليز كل من الطباق المذكورة إلى باب مربع عليه فردة باب يدخل منه إلى طبقة بابوان واحد ودور قاعة وواجهة بها ست طاقات متطابقات متجاورات مطلات على الشارع المسلوک مسقف ذلك نقيا لوحاً فسق(ية) مفروش أرض ذلك بالبلاط مسبل جدره بالبياض ويمتاز كل من طباق ثلاث متجاورة وهي آخر الطباق الممتازة عن اخواتها بخزانة بها طاقة مطلة على الشارع هذا آخر وصف الربع المذكور

وعلى يسار الد(اخل) من هذا المجاز الكبير المشترك الاستطرق المذكور خمسة حواصل بأبواب مقنطرة يغلق على كل منها فردة (باب) ثلاثة منها صف واحد تحت ثلاثة شبابيك من شبابيك الجامع المذكور والرابع تحت سلم باب الجامع الغربي والخامس بين هذا السلم وبين شباك مقام سيدي عنتر ثم يتوصل من هذا المجاز المذكور المشترك الاستط(راق) إلى ميضأة الجامع وسياتي وصفها قريب منها على يسار الداخل باب قاعة برسم خطيب الجامع المذكور وهي من تعلق الجامع الآتي وصفه يليه باب مقنطر عليه فردة باب يدخل منه إلى مجاز مستطيل مقام سيدي عبد القادر الصابر نفع الله المسلمين بركته ليس داخلاً في شيء من هذا الوقف يجاوره حاصلان تحت شبابيك الجامع التي في الجهة القبليّة من حقوق هذا الوقف

وعلى يمين الداخل بآخر هذا المجاز باب مقنطر يغلق عليه فردة باب يدخل منه إلى سلم مبلط تحته حنية يتوصل من السلم المذكور إلى باب مربع عليه فردة باب يدخل منه إلى رحبة مبلطة مسقفة نقيا لوحاً وفسقسية بآخر الرحبة باب مربع عليه فردة باب يدخل منه إلى دهليز الرواق الآتي ذكره وهو مبلط مسقف نقياً لوحاً وفسقية به رحبة وكروسي وسلمان يتوصل من أحدهما إلى طبقتين مجاورتين مبلطين مسقفتين غشياً ومن السلم الثاني إلى السطح العالي على ذلك

وبآخر هذه الرحبة باب الرواق المذكور وهو مربع عليه فردة باب يدخل منه إلى رواق تركي يشتمل على ايوانين متقابلتين بينهما دور قاعة به ثلاثة شبابيك مطلة على الرحبة التي تجاه سيدي عنتر نفع الله بركته وبايوانه الصغير خزانة نومية يغلق عليها زوجا باب مسقف ذلك نقيا وفسقية مفروش أرض ذلك بالبلاط مسبل جدره بالبياض وبايوان الكبير خرگاه كبرى مقنطرة مطلع على الجامع المذكور وشباك مطل على الجنينة

يلي باب سلم هذا الرواق باب مقنطر بغير باب عليه بعتبة سفلى صواناً يتوصل منه إلى رحاب متسع كشف به على يسرة الداخل باب مقنطر عليه فردة باب يدخل منه إلى جنينة الجامع التي تجاهه من الجهة القبليّة وعلى يمين داخل هذا الرحاب المذكور حوض حجراً يتساقط الماء من الساقية الآتي ذكرها إلى جنينة الجامع المذكور

ثم يتوصل من الرحاب المذكور من باب كبير مقنطر باخره يغلق عليه فردة باب يدخل منه إلى الساقية الآتي ذكرها ومنافعها فعلى يسار الداخل تجاه باب الدخول حاصل بابه مقنطر يغلق عليه فردة باب وهو أرضي يعلوه عقد عنق زراف يتوصل منه إلى شونة تبين برسم دواب الساقية يلي هذا الباب باب ثانٍ مقنطر بغير باب عليه يدخل منه إلى سلم حدة يتوصل منه إلى باب مربع بغير باب عليه يدخل منه إلى سلم زلاقة يتوصل منه إلى دار البقر بدعائم مبنية بالطوب يعلوها بسائل من خشب بلح بسقيفة من قصب تظل ابقار الساقية وبدار البقر سلم ثاني زلاقة يتوصل منه إلى بئر الساقية وهو بئر ماء معين بثلاثة وجوه اثنين منها مركب عليهما ساقيتان خشباً كاملتان العدة والآلة فالوجه الثالث بغير ساقية وثلاث مدارات وطبقة السواق وحاصل الماء وهو كبير مسقف جملوناً مضروب بالخاقي يتوصل منه الماء المحمول إليه من بئر الساقية المذكورة إلى ميضأة الجامع ومستحمها واحواض كراسي اخليتها وإلى جنيئة الجامع وإلى الحمامين المذكورين وإلى الطاحون والفرن المذكور ذلك بأعليه وهذه الساقية برسم تكفيه ذلك بالماء يلي باب سلم الساقية المذكور باب مقنطر عليه فردة باب يدخل منه إلى حاصل أرضي يعلوه عقود مبنية بالحجر والطوب الاجر تحت مدارات الساقية ثم يتوصل من ذلك إلى رحاب متسع أرضي مسقف عقود تحت مدارات الساقية به حاصلان ببايين مقنطرين على كل منهما فردة باب يعلوها عقد تحت حاصل ماء الساقية وبه /نيارة/ نافذة لبئر الساقية وبه مستوقدان متجاوران للحمامين المذكورين ودبكونيتان يعلوها بيت للقدور التي لحمامي الرجال والنساء عدها ثمان قدور والباب السابع عشر والباب الثامن عشر هي تحت الجامع المذكور وغيره والأروقة والمساكن والأراضي التي منها البركة الأزيكية وغيرها المعين وقفها بأعليه وغير ذلك مما وُصف بأعليه المعد للأجرة والاستغلال لا الأماكن التي عيّن الانتفاع بها في جهات القرب المبيّنة أعلاه

Stipulation of the foundation's expenses and salaries of the employees (follows from the above):

فإنّ الواقف المشار إليه أعلاه تقبل الله تعالى بره وصدقته وبلغه في دارين أمنيته شرط أن يبدأ من ريع ذلك بعمارته وعمارة جميع ما شمله الوقف المذكور أعلاه ومريّة ذلك وما فيه بقاء عينه دوام منفعته وما فضل بعد ذلك من ريع الوقف المذكور يصرف فيما يذكر فيه على ما يفصل فيه {*}

{*} وعلى الايتام المذكورين الحضور كل يوم بمكتب السبيل المذكور للقراءة والتعليم والتأديب كما عين أعلاه وعلى ان الايتام المذكورين يكون زمن حضورهم في كل يوم بالمكتب المذكور من طلوع

الشمس إلى العصر فينصرفون حينئذ وقبل انصرفهم يقرؤون سورة الإخلاص والمعوذتين وفتاحة الكتاب والصلاة على النبي صلى الله عليه وسلم ويدعون كالدعاء المذكور أعلاه ماعدا يوم الخميس من كل جمعة فانهم يستمرون بالمكتب إلى الظهر ويوم الجمعة بطالتهم وكذلك أيام العياد والمواسم والاعذار الشرعية على العادة في ذلك وعلى ان من بلغ من الايتام التسعة المذكورين اخرج من المكتب المذكور وأقيم بدله يتيم قاصر عن درجة البلوغ إلا ان يكون قريباً من ختم القرآن العظيم فيمهل إلى أن ختم القرآن العظيم ويُصرف بعد ذلك ويقام يتيم غيره مقامه مما كان له من المعلوم وأما العريف المذكور فيتم ولو كان بالغاً وعلى ان للناظر على ذلك أن ينزل في مكتب السبيل المذكور من يكون صغيراً من أولاد الفقراء ولو كان أبوه حياً ويجرى عليه المعلوم المذكور إلى أن يبلغ فيصرف ويكون الحكم في صرفه كما ذكر في صرف الايتام المذكورين أعلاه بحيث لا يزداد على عدد التسعة المذكورين أعلاه ويصرف كل سنة في العشر الأخير من شهر رمضان منها للأيتام وعريفهم ومؤدبهم من الفلوس الموصوفة أعلاه خمس آلاف درهم وخمس مائة درهم نصفها ألفا درهم وسبعمائة درهم وخمسون درهما برسم كسوة الأيتام ومؤدبهم وعريفهم في عيد الفطر بالسوية بينهم لكل واحد منهم خمس مائة درهم فلوساً أو ما يقوم مقام ذلك من النقود عند الصرف

ويصرف للبواب بالجامع المذكور في كل شهر يمضي من شهور الأهلة من الفلوس الموصوفة أعلاه ثلاثمائة درهم نصفها مائة درهم وخمسون درهما أو ما يقوم مقام ذلك من النقود عند الصرف على أن يتولى ملازمة أبواب الجامع المذكور وفتحها عند لاحتياج إليها وغلقها عند الاستغناء عنها ومنع من يتطرق منها إلى الجامع المذكور بما يؤذيه وحفظ الجامع المذكور مما يتأذى منه على العادة في ذلك اسوة بوابين الجوامع

ويصرف لمن يكون زملاًتياً بسبيل الماء العذب المذكور أعلاه الذي تحت كُتَاب السبيل كل شهر يمضي من شهور الأهلة من الفلوس الموصوفة أعلاه ثلاثمائة درهم وخمسون درهما نصفها مائة وخمسة وسبعون درهما أو ما يقوم مقام ذلك من النقود عند الصرف جامكية له وثمان ما يحتاج إليه من آلات السبيل المذكور من ثمن كيزان وسلب وادلية وغير ذلك من آلات السقاية على ان المزملائي المذكور يسبل الماء العذب الذي يُنْقَل من صهريجه المذكور أعلاه بالسبيل المذكور للمارين على ذلك والمترددین إليه والمقيمين بالجامع المذكور كل يوم من الظهر إلى العصر إلا في شهر رمضان فانه يكون من المغرب إلى بعد صلاة التراويح وينظف السبيل المذكور وأوانيه واحرازها وغير ذلك مما جرت عادة المزملائية بعمله في مثل ذلك

ويصرف لأربع رجال فراشين بالجامع المذكور فيه كل شهر يمضي من شهور الأهلة من الفلوس الموصوف أعلاه ستمائة درهم نصفها ثلاثمائة درهم أو ما يقوم مقام ذلك من النقود عند الصرف لكل

نفر منهم الربع من ذلك مائة درهم وخمسون درهماً على أن كلا منهم يتولى كنس الجامع المذكور وتنظيفه وغير ذلك مما جرت عادة الفراشين بعمله في مثل ذلك

ويصرف لفراش ميضأة الجامع المذكور أعلاه كل شهر يمضي من شهور الأهلة من الفلوس الموصوف أعلاه مائتا درهم نصفها مائة درهم أو ما يقوم مقام ذلك من النقود عند الصرف على أن يتولى كل يوم كنس الميضأة المذكورة وتنظيفها وتنظيف كراسي اخليتها وتعد ذلك طيلة النهار وغير ذلك مما جرت العادة به في مثل ذلك

ويصرف لرجلين وقادين بالجامع المذكور كل شهر يمضي من شهور الأهلة من الفلوس الموصوفة أعلاه اربعمائة درهم لكل نفر منهما نصف ذلك مائتا درهم أو ما يقوم مقام ذلك من النقود عند الصرف على أن يتوليا كل ليلة وقود مصابيح الجامع المذكور ظاهراً وباطناً ومنافعه المتعلقة به والميضأة المذكورة باطناً وظاهراً وغسل قناديل ذلك ومسحها وطفئها عند الاستغناء عنها وعمل مصالحها على ما جرت عادة الوقادين به في مثل ذلك

ويصرف كل شهر يمضي من شهور الأهلة من الفلوس الموصوفة أعلاه الف درهم وخمسون درهماً نصفها خمس مائة درهم وخمسة وعشرون درهماً أو ما يقوم مقام ذلك من النقود عند الصرف في ثمن زيت طيب من زيت الزيتون أو ما يقوم مقام ذلك من الأدهان عند فقده يستصبح به في قناديل الجامع المذكور والميضأة باطناً وظاهراً يوزع ذلك في ليالي السهر تلميعاً وصباحاً على عادتهم في ذلك ويصرف للسواق بالساقية المذكورة أعلاه التي بقرب ميضأة الجامع المذكور كل شهر يمضي من شهور الأهلة من الفلوس الموصوفة أعلاه ستمائة درهم وخمسون درهماً نصفها ثلاثمائة درهم وخمسة وعشرون درهماً أو ما يقوم مقام ذلك من النقود عند الصرف على أن يتولى السواق المذكور إدارة الساقية المذكورة أعلاه المجاورة لميضأة الجامع المذكور أعلاه وسوق الماء من بئرها إلى حاصل مائها ومن الحاصل إلى فسقية الميضأة والمستحم وحوض الحنفية واحواض الكراسي والحمامين والطاحون والفرن والجنيبة التي تجاه الجامع المذكور أعلاه وتوابع ذلك مما اعتيد اجراء الماء إليه وتكفيه ذلك بالماء ليلاً ونهاراً للانتفاع بذلك في كل شيء بحسبه على العادة في مثل ذلك ويتولى تقديم علف دواب الساقية المعدة لإدارتها إليها وسقها وحفظها وإحراقها في دار الدواب المذكورة أعلاه وإدارتها لنقل الماء من البئر المذكورة إلى الأماكن المعينة أعلاه وتركيب قواديس الساقية وطو(ا)نسها وغير ذلك مما جرت عادة السواقين بعمله في مثل ذلك بما في القدر المعين صرفه للسواق المذكور من ثمن ما يحتاج إليه الساقية المذكورة من قواديس وطو(ا)نس واكليل و/باسوس/ على العادة في مثل ذلك ويصرف كل شهر يمضي من شهور الاهلة لمن يكون مرخماً بالوقف المذكور من الفلوس الموصوفة أعلاه اربعمائة درهم نصفها مائتا درهم أو ما يقوم مقام ذلك من النقود عند الصرف على أن المرخم

المذكور يتفقد كل قليل رخام الجامع والحمامين وبقية الوقف المذكور أعلاه بالترميم والإصلاح عند الاحتياج إلى ذلك على العادة في مثل ذلك

ويصرف كل شهر يمضي من شهور الالهة من الفلوس الموصوفة أعلاه ثلاثمائة درهم نصفها مائة درهم وخمسون درهماً أو ما يقوم مقام ذلك من النقود عند الصرف لمن يكون سباكاً بالوقف المذكور أعلاه ما هو جامكية له مائتا درهم وما يستعين به في ثمن مون السبك مائة درهم على أن السباك المذكور يتفقد كل قليل اقصاب مجاري الماء المذكور أعلاه الذي يجري من الساقية المذكورة إلى الحمامين والميضأة وغير ذلك مما عُيّن بأعليه وإصلاح ذلك كلما فسد منه شيء بحيث يتم إجراء الماء في ذلك ليلاً ونهاراً وغير ذلك مما جرت عادة السباكين بعمله في مثل ذلك

ويصرف لخولى الجنينات المذكورة أعلاه التي بالوقف المذكور أعلاه في كل شهر يمضي من شهور الألهة من الفلوس الموصوفة أعلاه ثلاثمائة درهم نصفها مائة درهم وخمسون درهماً أو ما يقوم مقام ذلك من النقود عند الصرف على أن يتولى سقي أشجار الجنينات المذكورة وتقليم اشجارها عند الاحتياج إلى ذلك وإصلاح أجابن ذلك وغير ذلك مما جرت عادة خولة الجنينات بعمله في مثل ذلك

ويصرف لمن يكون مباشراً بالوقف المذكور أعلاه كل شهر يمضي من شهور الالهة من الفلوس الموصوفة أعلاه ستمائة درهم نصفها ثلاثمائة درهم أو ما يقوم مقام ذلك من النقود عند الصرف على أن يتولى المباشر المذكور نظم حساب ريع الأوقاف المذكورة وترتيبه وكتابة متحصله ومصروفه كل سنة وغير ذلك مما جرت عادة مباشري الأوقاف بعمله في مثل ذلك {*}

The document lists more expenses and salaries (summarized in the table below), including the opening of the pond's inlet:

{*} ويصرف كل سنة من سني الالهة من الفلوس الموصوف أعلاه خمسة الاف درهم وسبعماية درهم نصفها الفا درهم وثمانماية درهم وخمسون درهماً او ما (يقدم) مقام ذلك من النقود عند الصرف في ثمن زيت طيب من زيت الزيتون او ما يقوم مقامه من الادهان عند فقده يستصبح به في ليلة النصف من شعبان وليالي شهر رمضان بوسعة زيادة على ما رتب لثمن زيت الوقود المعين أعلاه في وقود مصابيح الجامع المذكور وادوار المئذنة المذكورة أعلاه تفصيل ذلك ما يصرف في ثمن الزيت الذي يتوسع به في ذلك بالجامع والمئذنة المذكورين أعلاه في ليلة نصف من شعبان سبعمائة درهم وبقية ذلك توسعة في الزيت لمصابيح الجامع المئذنة المذكورين في ليالي شهر رمضان في كل سنة

ويصرف كل سنة من سني الأهلة توسعة في شهر رمضان منها للمؤذنين ورؤسائهم والفراشين والوقادين بالجامع المذكور أعلاه من الفلوس الموصوفة أعلاه ألف درهم وثمانمائة درهم أو ما يقوم مقام ذلك من النقود عند الصرف ما هو للمؤذنين ورؤسائهم بالجامع ستمائة درهم وما هو للفراشين بالجامع ستمائة درهم وما هو للوقادين بالجامع ستمائة درهم

ويصرف كل سنة من سني الأهلة في جرف الخليج الذي يتوصل منه الماء إلى البركة الأربكية وكسح البجمون بجوارها وتنظيف ذلك وإجراء الماء من البجمون المذكور في أيام النيل إلى الصهريج المذكور بحيث يملأ الصهريج من ذلك ليسبل مأه المذكور بالسبيل المذكور أعلاه على ما شرح أعلاه من الفلوس الموصوفة أعلاه ثلاث الاف درهم نصفها ألف درهم وخمسمائة درهم أو ما يقوم مقام ذلك من النقود عند الصرف

ويصرف من ريع الوقف المذكور ما يحتاج إليه الجامع المذكور من قناديل وفرش وحصر وما يحتاج إليه للميضاة من القناديل بحسب الكفاية على العادة في ذلك

ويصرف أيضا ما يحتاج إليه الساقية المذكورة أعلاه من ثمن اثوار عوامل نافعة قادرة على العمل لإدارة الساقية التي بقرب الميضاة المذكورة وتكفية ذلك بالعلف والتبن والربيع على ما يراه الناظر ويودي اليه اجتهاده وكلما عجز واحد من الاثوار عن العمل باعه الناظر وقبض ثمنه واستخلف به وبما يحتاج إلي ضمه اليه من ريع الوقف المذكور ثورا نافعا للعمل المذكور كل ذلك موكول إلي رأي الناظر واجتهاده فان تعذر صرف شيء من مصارف الجهات المعنية أعلاه إليها صرف لباقيها فان تعذر الصرف إليها جميعا صرف ذلك للفقراء والمساكين أينما كانوا وحيثما وجدوا على ما يراه الناظر في ذلك ويودي إليه اجتهاده وكلما عاد امكان الصرف إلي ما تعذر اليه الصرف عاد إليه الصرف وقدم على غيره.

ويصرف أيضا من ريع الوقف المذكور ما يعين فيه من جامكية النظر على ما يفصل فيه

وما فضل بعد ذلك من ريع الوقف المذكور يرصده الناظر تحت يده لما يتوقع الاحتياج إلى صرفه في المصارف المعنية أعلاه عند تعطل شيء من الوقف المذكور أو عجزه عن الوفا بالمصارف المعنية أعلاه فإن مضى على ذلك خمس سنين والوقف مستغني عن ذلك اشترى به عقار أو حصة من عقار ووُقف ذلك على حكم شرط الوقف المعين أعلاه في الإمكان المعدة للأجرة والاستغلال على ما نُصّ وشرح أعلاه في الحال والمال والتعذر والامكان والاستحقاق والنظر والشروط بحيث لا يخرج عن حكم ذلك ولا يعدل عن رسمه

فان ضاق ريع الوقف المذكور عن الوفا بالمصارف المذكورة أعلاه وزع على المصارف المعينة أعلاه بالمحاصة الشرعية كل مصرف بحسبة قلة او كثرة وكلما عاد امكان كمال الصرف إلى جهات المذكورة عادة اليها كمال الصرف كما كان اولاً قبل العجز يجري الحال في ذلك كذلك وجوداً وعدمًا وتعذرًا وامكاناً الى ان يرث الله الأرض ومن عليها وهو خير الوارثين

Conditions regarding the appointment of the *nāzir* (follows directly from the above)

وشرط الواقف المشار إليه أعلاه النظر في وقفه و التولية عليه لنفسه أيام حياته وله ان يسنده ويفوضه ويوصى به لمن يختاره فان لم يفعل ذلك او فعل ذلك وتعذر من جعل له ذلك بوجه من وجوه التعذرات الشرعية كان النظر على ذلك لمولانا المقام الشريف الامام الأعظم ظل الله في العالم السلطان المالك الملك الأشرف أبي النصر قايتباي بخصوصه دون غيره من الملوك والسلطين نصره الله تعالى نصراً عزيزاً وفتح له فتحاً مبيناً ينظر في ذلك بنفسه وبمن يستنيبه في ذلك عنه من أمنائه ممن يراه اهلاً لذلك ثم من بعده نصره الله تعالى للأرشد فالأرشد من أولاد الواقف المشار إليه أعلاه وأولاد أولاده وذريته ونسله وعقبه بمشاركة من يكون دواًراً ثانياً بالديار المصرية بالمملكة الشريفة الإسلامية للأرشد منهم في النظر على ذلك فان لم يكن فيهم رشيداً او كان وتعذر او انقضوا استقل الدواًر (الثاني) بالنظر على ذلك ثم من بعده لمن يكون بعده في وظيفته وهلم جرا وكلما عاد امكان النظر الى من تعذر اليه النظر عاد اليه النظر ومعلومة على ما يُشرَحُ فيه يجري الحال في ذلك كذلك وجوداً وعدمًا وتعذرًا وامكاناً الى ان يرث الله الأرض ومن عليها وهو خير الوارثين

وشرط الواقف المشار اليه أعلاه ان يصرف من ريع الوقف المذكور لمن يكون ناظر على الوقف المذكور من أولاده او أولاد أولاده وذريته ونسله وعقبته في كل شهر يمضي من الشهور الالهة من الفلوس الموصوفة أعلاه خمسمائة درهم نصفها مائتا درهم وخمسون درهما او ما يقوم مقام ذلك من النقود عند الصرف عن سده وظيفة النظر المشروط له المعين أعلاه وانه اذا آلي النظر على الوقف المذكور لمن يكون الدواًر الثاني بالديار المصرية على أي وجه كان أما مشاركة او استقلالاً يصرف له من ريع الوقف المذكور عن سده وظيفة النظر المذكور في كل شهر يمضي من الشهور الألهة من الفلوس الموصوفة أعلاه الف درهم نصفها خمسمائة درهم او ما يقوم مقام ذلك من النقود عند الصرف من غير زيادة على ذلك وهلم جرا يستمر الحال في ذلك كذلك على الدوام والاستمرار على ما شرح أعلاه

وشرط الواقف المشار إليه أعلاه لنفسه ان يزيد في وقفه المعين أعلاه ما يراه زيادته وينقص ما يرى تنقيصه ويغير ما يرى تغييره ويرتب ما يرى ترتيبه ويدخل من شاء فيه ويخرج من شاء منه وشرط من الشروط المخالفة لذلك ما يرى اشتراطه يفعل ذلك كلما بداله مع بقاء أصل الوقف على حكمه وليس لغيره ان يفعل كفعله

وشرط الواقف المشار إليه أعلاه أن من نزل من أرباب الوظائف المذكورة أعلاه عن وظيفته لغيره أخرجها الناظر عن النازل والمنزول له لغير ممن يكون أهلاً لها وان لا يجمع احد بين وظيفتين بوقفه المذكور أعلاه إلا أن يكون ذلك بتنزيل الواقف المشار إليه فله بخصوصه ان ينزل الواحد في وظيفتين وأكثر بوقفه المذكور على ما يراه ويؤدى اليه اجتهاده وليس لغير من الناظر شي من ذلك واذا توفي الواقف المشار اليه أعلاه استقر الوقف ومصارفه وارباب وظائفه على ما كان عليه ذلك حال وفاته

وشرط الواقف المشار إليه أن من مات من أرباب الوظائف بوقفه المذكور فيه وله أولاد ذكور انتقل ما كان له من الوظائف بالوقف المذكور فيه على أي وجه كان لأولاده الذكور واحداً كان او اكثر يستقل به الواحد اذا انفرد ويشترك فيه الاثنان فصاعداً عند الاجتماع بالسوية بينهم ولو كانوا صغاراً ويستتاب عن القاصر منهم إلى ان يصلح المباشرة وظيفته فيباشرها بنفسه يجري الحال في ذلك كذلك الى ان يرث الله جل جلاله الأرض ومن عليها وهو خير الوارثين

فقد ختم هذا الوقف وتم {*}

Summary of the foundation's employees 890/1485:

*Expenses are listed in copper dirhams (d.f.)

**Some of these employees and their employment conditions have been omitted in the edited excerpt above

Employee(s)	Tasks and duties	Payment
امام الجامع (Imam)	Leading the five daily prayers and the <i>tarāwīḥ</i> during Ramadan in the endowed mosque	600 d.f. per month
الخطيب (Khaṭīb)	Doing the Friday <i>khuṭba</i> (and the <i>khuṭba</i> for the festivities) at the endowed mosque	600 d.f. per month
مراقي الخطيب (Assistant)	Assistant of the <i>khaṭīb</i> who escorts him from his house to the minbar, announces the <i>khuṭba</i> to people, and recites a <i>ḥadīth</i>	300 d.f. per month
تسعة مؤذنين (Nine muezzins)	The muezzins work in turns of one day and one night, and in every turn three of them work. They must recite daily the five <i>adhāns</i> , the <i>ishār</i> for Ramadhan, then they must recite the <i>tasbīḥ</i> for the Prophet, for Sultan Jaqmaq, for the <i>wāqif</i> (Azbak) and his family, for the <i>amīr</i> Ināl al-Ashqar, and for all the Muslims.	1800 d.f. per month in total (200 d.f. per month each)
ثلاثة رجال بالمواقيت (Three <i>muwāqīt</i>)	Each one works a turn of one day and one night. They must set the correct timing for the prayers.	600 d.f. per month in total (200 d.f. per month each)
قارئ من قراء كتاب الله العزيز (Qur'an reciter)	Reciting half <i>ḥizb</i> of the Qur'an and some specific suras (<i>fātiḥa</i> and <i>ikhhlās</i>) from the <i>muṣḥaf</i> of the endowed mosque every day between the morning prayer and sunrise. In addition he must pray for the Prophet, for Sultan Jaqmaq, for the <i>wāqif</i> (Azbak) and his family, for the <i>amīr</i> Ināl al-Ashqar, and for all the Muslims.	300 d.f. per month
رجل (...) يقرأ صحيح البخاري (Hadīth reader)	Reading the <i>Saḥīḥ</i> of al-Bukhārī after sunrise during the months of Rajab, Sha'bān and for 17 days during Ramadan in the endowed mosque—after which he also has to pray for the people indicated above.	300 d.f. per month (still every month)
شيخ قراء صحيح البخاري (Expert of the <i>Saḥīḥ</i> of al-Bukhārī)	Explaining the correct reading of the <i>Saḥīḥ</i> of al-Bukhārī, (with the correct words and names etc.) for assisting and correcting the reader mentioned above	1000 d.f. per month

Employee(s)	Tasks and duties	Payment
شيخ للصوفية (Sufi shaykh)	The Sufi <i>shaykh</i> must be present in the mosque every day after the afternoon (' <i>aṣr</i>) prayer, together with twenty Sufis (see below) and sit among the Sufis to read from the endowed <i>muṣḥaf</i> , moreover they should recite some verses as <i>madḥ</i> for the Prophet and pray for Sultan Jaqmaq, for the <i>wāqif</i> (Azbak) and his family, for the <i>amīr</i> Ināl al-Ashqar and for all the Muslims.	1000 d.f. per month
عشرين صوفية (Twenty Sufis)	For the <i>ḥuḍūr</i> in the mosque together with the Shaykh	4000 d.f. per month in total (200 d.f. per month each)
قراء الصفة الستة (Six Sufi readers)	Reading from the <i>muṣḥaf</i> as described above	600 d.f. per month (100 d.f. per month each)
مادح (Mādih)	For reciting praising verses (mentioned above)	200 d.f. per month
خادم المصحف (Muṣḥaf attendant)	Services related to the <i>muṣḥaf</i> , such as preparing the <i>muṣḥaf</i> for the Sufi sessions	300 d.f. per month
كاتب الغيبة (Absence keeper)	Registering the Sufis that are attending or not to the daily <i>ḥuḍūr</i> (and deducting the absence days from the salary of the absentee—every one of the Sufi employees mentioned has the right to 3 days a month of absence plus the feasts days and sick leave)	300 d.f. per month
خمس عشرة نفرأ قراء كتاب الله (Fifteen Qur'an reciters)	Alternating 5 turns (one after each of the five prayers) of 3 person each, for reading the Qur'an on the east side of the mosque (the entrance side), and at the end of the reading they shall pray as indicated above	2400 d.f. per month, of which: 1200 for the morning turn (400 d.f. per person) 1200 dirham for the remaining 4 turns (100 d.f. per person)
ثلاثة من قراء كتاب الله (Three Qur'an reciters)	For reading specific suras of the Qur'an on Fridays, and praying as indicated above	200 d.f. per month (in total)
خازن الكتب (Book keeper)	For taking care of the books endowed together with the mosque (and kept in its bookshelves)	300 d.f. per month
مؤدب الايتام بمكتب السبيل (Educator)	Educator of the nine orphans at the <i>maktab al-sabil</i>	300 d.f. per month
عريف (Assistant)	Assisting the educator at the <i>maktab al-sabil</i>	150 d.f. per month

Employee(s)	Tasks and duties	Payment
الايتام التسعة بمكتب السبيل (Nine orphans)	Orphans receiving their education at the <i>maktab al-sabil</i> . The orphans should attend the school every day (from sunrise till the 'aṣr and to noon on Thursday, while Friday is free) to learn the Qur'an and the Arabic script– they should also recite two suras before leaving the maktab and pray as indicated above	900 d.f. per month (100 d.f. per month each) <i>The waqf also provides for the clothing of the orphans, the assistant and the educator (5500 dirham every Ramadhan- to all the same amount of 500 dirham)</i>
بواب الجامع (Doorkeeper)	Opening and closing the doors of the mosque when necessary	300 d.f. per month
مزملائي (Muzammalātī)	Distributing water at the <i>sabil</i> and cleaning the <i>sabil</i> and its tools	350 d.f. per month (includes salary and tools for the <i>sabil</i>)
أربعة فراشين (Four cleaners)	Cleaning the mosque	600 d.f. per month (150 d.f. per month each)
فراش ميضأة الجامع (Cleaner of the ablution basin)	Daily cleaning the ablution basin and of the attached toilets	200 d.f. per month
رجلين وقادين بالجامع (Two lamps workers)	Lighting, maintenance and repair of the mosque lamps	400 d.f. per month (200 per month each) <i>The waqf also provides 1050 dirhams per month for the purchase of good oil (like olive oil and such) for the lamps of the mosque (inside and outside) and for the ablution facilities (also inside and outside). An additional amount of 5700 d.f. per year is allotted for the purchase of good lamps oil to be used during the night of Mid Shaaban (700 dirham) and for the nights of Ramadan</i>
سواق بالساقية (Waterwheel operator)	Operating the waterwheel when necessary (day and night), caring of the bulls rotating the wheel, maintenance of the waterwheel components	650 d.f. per month (includes expenses for the maintenance of the waterwheel)
مرخم (Marble artisan)	Inspection, maintenance and repair of the marbles in the mosque and in the two hammams (and the rest of the endowed properties)	400 d.f. per month
سباك (Plumber)	Inspection, maintenance and repair of the pipes connecting the waterwheel to the various facilities	300 d.f. per month (of which 200 as salary and 100 for material expenses)
خولى الجنيات (Irrigation expert/ gardener)	Watering the gardens endowed in the <i>waqf</i> and care of the trees	300 d.f. per month

Employee(s)	Tasks and duties	Payment
مباشر (Accountant of the waqf)	Keeping the registers of the revenues and managing the salaries of the waqf employees	600 d.f. per month
شاهدان بالوقف (Two accountant's assistants)	Assistance in the transactions pertaining the waqf	600 d.f. per month (i.e. 300 d.f. per month each)
عامل (Assistant accountant)	Assisting the necessary transaction and the management of the waqf revenues	300 d.f. per month
شاد (Shādd/employees supervisor)	Supervision of the mosque and sāqiya, supervision the employees/artisans working for the waqf foundation, inspection of the endowed properties (to see if they need maintenance)	500 d.f. per month
جابي لريع الوقف (Revenues collector)	Collecting revenues from the income-generating properties endowed in the waqf	300 d.f. per month
ناظر (Administrator of the foundation)	Supervision of the foundation	500 d.f. per month (if descendant of Azbak) 1000 d.f. per month (if Dawādār)
Ramadan bonus		600 d.f. per year for each of the nine muezzins 600 d.f. per year to each of the four cleaners and 600 d.f. per year to each of the two lamp
Opening of the Birka Azbakiyya inlet		3000 d.f. per year
Lamps and carpets for the mosque		Yearly necessary amount (unspecified)
Bulls operating the sāqiya		Yearly necessary amount (unspecified)

DW241: Excerpts from the *waqf* deed of Azdamur min ‘Alī Bāy (Shawwāl 19th, 908/ 1503)

Description of the palace endowed in Ḥārat Zuwayla (and previously known as Abū al-Khayr al-Naḥḥās’s palace):

{*} ومن ذلك جميع المكان الذي هو دار الكائن بالقاهرة المحروسة بخط بين السورين وحارة زويلة المعروف قديما ببית ابي الخير النحاس الآتي وصفه وتحديده فيه المشتمل بدلالة مكتوب اصله الآتي ذكره فيه على صفات قديمة ومستجدة والصفات القديمة انه يشتمل على باب مقنطر معقود بالحجر الفص النحيت بعتبة سفلى صوا(ن) يعلوه شرفات يغلق عليه فردة باب بخوخة يدخل منه الى دهليز لطيف به على يسرة من دخل فيه معالم حوض يتوصل من الدهليز المذكور الى رحبة كبرى كشف على يسرة الداخل بها باب مقنطر بعتبة سفلة كدانا يغلق عليه باب سر يدخل منه الى جنينة كانت هناك يعلو على الباب المذكور مدار سلم يتوصل منه الى بئر ماء معين بساقية خشب مركبة على فوهتها بأقصى الرحبة المذكورة باب مربع على يسرة الداخل في الرحبة المذكورة يغلق عليها فردة باب يتوصل منه الى مكان به قاعة صغرى مشتمل على ايوان ودور قاعة ومنافع ومرافق وحقوق وبصدر الرحبة المذكورة حوض برسم الماء يعلوه شباك حديد يجاوره باب مقنطر عليه فردة باب يتوصل منه الى دهليز مستطيل به على يسرة الداخل فيه باب مقنطر عليه فردة باب يدخل منه الى حاصل بمنافع وحقوقه يجاوره باب مقنطر بعتبة سفلى صونا داخله سلم يتوصل منه الى بئر ماء معين مركب على فوهتها ساقية خشب مكمل بالعدة والآلة ومصنع برسم الماء ويتوصل من السلم المذكور فيه الى ثلاثة طباق مطلان على الرحبة المذكورة كل منها ومرافق وحقوق ويجاور باب السلم المذكور مرحاض وبابان يتوصل من كل منهما الى حاصل بمنافع وحقوق وبصدر الدهليز المذكور باب مقنطر عليه فردة باب يدخل منه الى دهليز به على يسرة الداخل فيه اسطبل به بوابك ومتبن ومطبخ وركاب خاناه ومرافق وحقوق وبصدر الدهليز المذكور باب مربع يتوصل منه الى حارة زويلة ويجاور الباب المقنطر الذي يجاور الحوض الماء المذكور أعلاه باب مقنطر عليه فردة باب يدخل منه الى حاصل سفلى الطباق المذكورة فيه وبين الطباق المذكورة مقعد مطل على الرحبة المذكورة وعلى يسرة الداخل الى الرحبة المذكورة سلم يصعد من عليه الى مقعد كبير مسقف نقياً مدهون مذهباً برفرف محمول سقفه على كتف حجر نحيت واعمدة رخام كاملة القواعد بدرابزي خشب مفروش ارضه بالبلاط مسبل جدره بالبياض به خزانين كتبتياب وباب ضرب خيط يدخل منه الى مبيت والى سلم يتوصل منه الى طبقة

علو المبيت المذكور فيه والى علو المقعد المذكور بسفل المقعد ثلاثة أبواب مقنطرة يغلق على كل
 منهما فردة باب يدخل منه الى حاصل بصدر الرحبة المذكورة باب مجاور للمقعد المذكور ومربع يغلق
 عليه زوج أبواب يدخل منه الى طشتخاناه مسقفة نقيا مفروش ارضها بالبلاط مسبل الجدر بالبياض
 بيها منافق ومرافق وحقوق وسلم يصعد من عليه الى مجاز ثم الى قاعة لطيفة مسقفة نقيا مدهون
 سقفها مذهباً مفروشة الأرض بالرخام الملون بوزرة رخام دائرة وشباك نحاس مطل على الرحبة المذكورة
 وذات منافع ومرافق والحقوق ويجاور باب الطشتخاناه في الجهة القبليّة باب مقنطر بعتبة سفلى صوانا
 يعلوها شرفات يغلق عليه فردة باب بخوخة يدخل منه الى دركاه مسقفة نقيا مدهون مذهباً بصدرها
 باب مربع بعتبة سفلى صوان وعليها حجرا بكتفيه مسطبتان يغلق عليه زوج أبواب مكبر يدخل منه الى
 دركاه ثانية بصدرها مسطبة سفلها خزانة بالدركاه المذكورة بابان يمنية ويسرة احدهما مقنطر على يسرة
 الداخل في الدركاه المذكورة يدخل منه الى مطبخ والى سلم يصعد من عليه الى قاعة المبيت المذكورة
 والباب الثاني بالدركاه المذكورة مقنطر يغلق عليه فردة باب يدخل منه الى دهليز مستطيل وبه على
 يمنية الداخل فيه باب مقنطر عليه فردة باب يتوصل منه الى دهليز ثاني به على يمنية الداخل فيه باب
 مقنطر يغلق عليه فردة باب يدخل منه الى قاعة لطيفة بإيوان ودور قاعة وبدور قاعاتها باب يتوصل
 منه الى مطبخ والى باب سر يأتي ذكره فيه مسقفة نقيا مسبل الجدر بالبياض بقمريرات بها خزانة كسوة
 وشباك مطل على الدركاه المبدأ بذكره فيه وعلى الرحبة ثم الى باب يتوصل منه الى قاعة تحوي
 ايوانين متقابلتين مسقفين نقيا مدهون حريريا بأحدهما وهو الغربي صفتان متقابلتان وبصدره صفة
 يعلوها باداهنج مدهون مذهباً مقرنصاً وبالصفة المذكورة بابان على كل منهما زوج أبواب مطعم يدخل
 من احدهما الى سلم معقود بالبلاط الكدان يصعد من عليه الى القبة المذكورة والى منافع ومرافق
 وحقوق وبالإيوان الثاني وهو الشرقي صفتان احدهما بخزانة كسوة يعلوها باداهنج كاملة المنافع
 والمرافق والحقوق والثانية بها باب مربع عليه زوجا باب مطعم يدخل منه الى قبة بها اربع شبابيك
 نحاس مطل على الجنيبة المذكورة التي هي من حقوق ذلك مما بين الايوانين المذكورين فيه دور قاعة
 يعلوها درابزي خشب مدهون مذهباً وبها صفتان متقابلتان بكل منهما شاذروان مرخم بكتف كل منهما
 عمودان رخاما وبدور القاعة المذكورة بحرة مسبل جدر ذلك بالبياض مفروش ارض الايوان والدور
 القاعة بالرخام الملون وبدور القاعة المذكورة أربعة أبواب احدها باب الدخول والثاني والثالث خرستانان
 والرابع يدخل منه الى دهليز يتوصل منه الى بيت ازيار ثم الى مرحاض ثم الى باب يتوصل منه الى
 المطبخ المذكور وذات اقصاب المياه الخالصة لذلك والأسطحة المحطرة العالية على ذلك والمنافع
 والمرافق والحقوق ويحيط ذلك ويحصره حدود اربع الحد القبلي ينتهي الى الطريق السالكة لحارة زويلة
 والى درب الجنب الشمسي الموقع وغيره وفيه باب السر والحد البحري الى دار يعرف بابن ابي شاعر

ويعرف بسكنه وبه قطعة ارض محتكرة خارجا عن هذا الوقف يأتي ذكرها فيه والحد الشرقي ينتهي الى حارة الفرانين /والسمده/ بحارة زويلة وفي الاسطبل وباب السر والحد الغربي الى دار يعرف بمهنا وعزة والى دار يعرف /بحود/ وفيه الباب بحد ذلك وحقوقه وما هو معروف به ومنسوب اليه خلا القطعة الأرض الموعود بذكرها أعلاه ونزرها بدلالة المكتوب الموعود بذكره فيه من قبلها الى بحرهما ثلاثة وعشرون ذراعا ومن شرقيها الى غربيها اثنان وثلاثون ذراعا كل ذلك بزرع العمل ولها حدود أربعة القبلي الى الرحبة المذكورة والبحري الى بيت أبي شاعر والشرقي الى بقية الدار المذكورة والغربي الى الرحبة المذكورة وداخل في هذا الوقف ما كان قديما مضافا الى الدار المذكورة وحقوقها {*}

Endowment of the funerary complex⁸:

{*} وشهد له بإنشائه وعمارته /من حالة وصلت حالة/ لجميع بناء التربة وما هو من حقوقها والساقية وحقوقها وحوض السبيل وما هو من معالمه ورسومه الموصوف ذلك جميعه المحدود أعلاه على أراضي ملك منفعتها بالطريق الشرعي يجريان ذلك جميعه فيما ذكر أعلاه أيضا من أراضي والابنية الموصوف كل من ذلك المحدود أعلاه بيد مولانا الواقف المشار اليه أعلاه حاله الوقف المسطر أعلاه من توضع اسمه اخر الفصل الذي مسطر في محله وقفا صحيحا شرعيا وحسبا صريحا مرعيا وقربة دائمة مؤبدة قائمة على أصولها مؤكدة وصدقة جارية على دوام مستمرة على ممر الدهور والليالي والأيام وتسبيلا دائما ابدا مددا لا ينقطع /معروفه/ ابدا محرما تحريات الله العظيم محفوظا /تجاه كعب/ الكريم لا يباع ذلك ولا شيء منه ولا يملك ولا يرهن ولا يوهن ولا يستهلك ولا يحل عقد من عقوده ولا شيء من منافعه ومراقفه وحدوده ولا يناقل به ولا ببعضه ولا ينطرق الى ابطاله /وبعضه/ قائما على اصوله التي هي فيه معينة مسبلا على سبيله محفوظا على شروطه الآتية المبينة لا بوهبة يقام دهر /ولا يبطله لحيان/ عصر كلما مر عليه زمان أكده وكلما أتى عليه أو /ان يكتبه ويسنده/ ابد الابدين ودهر /الداهرين/ الى ان يرث الله الأرض ومن عليها وهو خير الوارثين

انشأ مولانا الواقف المشار اليه أعلاه بلغه الله تعالى مناه وقفه هذا على ما يأتي ذكره موصلاً وبيناه مفصلاً اما بنا التربة المذكورة أعلاه فانه شرط ان ينتفع بكاملها على ما يذكر فيه اما السبيل الذي به الشباكان المطان على الطريق وهو المزملة وما هو من حقوق ذلك فانه وقف ذلك لينتفع به المقيمون بالتربة المذكورة والمترددون لها والواردون عليها من ارباب الوظائف وغيرهم في شرب الماء المحضر

¹. Fragments from the following description were reported also in: Ramadan, "Minsha'at Azdamur," 187-211.

لذلك من الصهرج الآتي ذكره فيه ولحفظ الأزيار وألات الاستقاء على العادة في مثل ذلك واما الصهرج فانه اعد ذلك لاستقرار الماء العذب المعمول من النيل المبارك لينتفع به في طول السنة استعمالا وشربا و غير ذلك على الوجوه الشرعي واما الباب الثالث وهو الذي به المحراب والفسيقتان والقبّة التي بداخله فانه جعل الجانب الأيمن منه من ابتدأ كتف الباب الذي على يمنة الداخل وإلى مقابل ذلك من الجدار الذي به البابان المتوصل منها الى القبّة المذكورة وما بالجانب المذكور من المحراب المجوف وما هو من حقوق ذلك من الشبابيك والخريستانات وغير ذلك مسجد الله تقام فيه الصلوات ويصلى فيه الجماعات يتلى فيه كتاب الله العظيم ويذكر فيه اسمه الكريم ويقرأ فيه حديث نبيه الرؤف الرحيم عليه افضل الصلاة والتسليم ويشغل فيه بالعلم الشريف وافادته واجبا ذكره وشرحه وإعادته وأذن المسلمين بالدخول فيه والصلاة وإقامة شعائر الإسلام على ممر الدهور والليالي والأيام وجعل حكمه حكم المساجد التي هي مختصة بالمسلمين الراكع منهم والساجد

واما الجانب الآخر وما هو من حقوقه من الفسقيتين المتقابلتين اللتين به وغير ذلك فانه أعد الفسقيتين المذكورتين لمن يتوفاه الله تعالى من أقاربه الذكور والاناث ولأولادهم وذريتهم ونسلهم وعقبهم فان تعذر ذلك فلمن يختاره ولينتفع بباقي الجانب المذكور المقيمون بالترتبة المذكورة والمترددون لها والواردون عليها من ارباب الوظائف وغيرهم جلوسا واستراحة واكلًا ونوما وغير ذلك مما يباح للجانب وغيره بمعنى انه لم يكن مسجدا وليس له حكم المساجد واما الفسقيتان اللتان بالقبّة المذكورة فيه فانه اعد احدهما لنفسه ان امكن فان يعذر فلمن يتوفاه الله تعالى من أولاده واولاد أولاده وذريته واعد الفسقية الثانية للجانب العالي المولوي السيفي نوروزي عبد الله الشرفي ولأولاده وذريته ونسله وعقبته فيدفن المقر المشار اليه في الفسقية التي هي (في الجهة) الغربية ومن يتوفاه الله تعالى من أولاده وذريته ونسله وعقبته ويدفن في الفسقية التي هي في الجانب الاخر الجانب العالي السيفي نوروزي (ي) أحد الأمراء الأربعينان المشار اليه وذريته ونسله وعقبته

واما المنار المذكور أعلاه فانه وقف ذلك ليعلم فيه بالأذان في أوقات الصلوات والتكبير والاسحار وغير ذلك على ما جرت به العادات

واما الفسقية المثمنة والكرسيان المقابلان لها المذكوران أعلاه فانه وقف ذلك لينتفع به المقيمون بالترتبة المذكورة والمترددون عليها في الاستعمال وإزالة الأذى وغير ذلك مما جرت العادة في مثل ذلك وضوء وغيره

واما المطبخ المذكور أعلاه فانه وقف ذلك لينتفع به في الطبخ على العادة في مثل ذلك واما الرواقان المذكوران أعلاه فان الواقف المشار اليه أعلاه وقف ذلك على نفسه أيام حياته ينتفع بذلك في السكن والإسكان وسائر وجوه الانتفاعات الشرعية ابدا ما عاش ودائما ما بقي من غير مشارك له في ذلك ولا معاند ولا معارض ولا رافع ليده ولا منادل عليه بوجه من الوجوه ولا سبب من الأسباب ثم من بعده على من يوجد من أولاده وأولاد أولاده وذريته ونسله وعقبته

واما الطابق الأربعة المذكورة أعلاه والطبقة الحبس التي بالسلم المجاور لسلم المطبخ المذكور أيضا أعلاه فانه وقف ذلك على سيدنا العبد الفقير الى الله تعالى الشيخ الامام العالم العلامة شرف الدين شرف العلماء اوجد القضاء مفتي المسلمين أبو السعادات محمد بن سيدنا العبد الفقير الى الله تعالى شيخ الامام العالم العلامة المحقق الملك العمدة ناصر الدين مربي المريدين وقدة المساكين أبي عبد الله محمد الجويني⁹ المالكي خليفة الحكم العزيز بالديار المصرية أيد الله تعالى أحكامه وأحسن اليه نفع ببركة سلفه الكريم مدة حياته ثم من بعد وفاته الى رحمة الله تعالى على من يوجد من أولاده وأولاد أولاده وذريته ونسله وعقبته وينتفع أيضا من ذرية سيدنا الشيخ شرف الدين الجويني المشار اليه أعلاه بعد انقراض ذرية الواقف المشار اليه بالرواقين المذكورين أعلاه على الحكم المشروح في الطابق المذكور أعلاه مدة حياتهم ثم من بعد من يوجد منهم على من يوجد من أولاده وأولاد أولاده وذريته ونسله وعقبته

واما المكتب المذكور أعلاه فانه وقف ذلك للا(نتفاع) به في جلوس الايتام ومؤدبهم الآتي ذكرهم فيه انتفاع امثالهم في مثل ذلك واما الاسطبل المذكور أعلاه فان وقف ذلك لينتفع به ارباب الوظائف الآتي ذكرهم فيه بالتربة المذكورة على العادة في مثل ذلك

واما ما بقي في حقوق التربة المذكورة أعلاه فان الواقف المشار اليه أعلاه وقف ذلك على نفسه أيام حياته ثم من بعده ينتفع بذلك ارباب الوظائف المقيمون بالتربة المذكورة والواردون عليها انتفاع امثالهم في مثل ذلك بالطريق الشرعي

². Sharaf al-Dīn al-Juwaynī was the administrator (*mubāshir*) of Azdamur's own *dīwān*. He died on the 21st of Rabi II 926 (April 10th, 1520). Ibn Iyās, *Badā'ir*, 5:331.

واما البناء المستجدة الانشاء الذي به المحراب والبحرة وحوض السبيل فانه وقف ذلك على ما يأتي ذكره فيه اما الايوان الذي يصدر ذلك وما به من المحراب والشبابيك فانه وقف ذلك مسجدا لله تعالى حكمه حكم المسجد المذكور أعلاه

واما البحرة وحوض السبيل فانه وقف ذلك لينتفع بذلك المقيمون بالتربة المذكورة وغيرهم من الواردين والمترددن في سقى دوابهم واستغالهم وغير ذلك من حرف من العادة في ذلك على الوجه الشرعي

واما البئر الماء المعين والساقية الخشب المركبة على فوهتها وما هو من حقوق ذلك الموصوف المحدود أعلاه فانه وقف ذلك لينتفع به في نقل الماء من البئر المذكورة الى ظاهرها وإجرائه الى التربة المذكورة أعلاه والفسقية والجنينان وغير ذلك والى حوض السبيل والبحرة المذكور كل من ذلك أعلاه بحيث يمتلئ الحوض والبحرة المذكوران كل يوم طول النهار لينتفع بذلك المارون به والمترددون عليه وغيرهم والمقيمون بالتربة المذكورة في سقى دوابهم ووضوئهم وغسلهم واستعمالهم وغير ذلك على الوجه الشرعي

واما الجنينات المذكورات أعلاه فانه وقف ذلك لينتفع به أيام حياته ثم من بعده ينتفع بذلك ارباب الوظائف المقيمون بالتربة المذكورة اعلاء انتفاع امثالهم في مثل ذلك على الوجه الشرعي

Expenses of the foundation and salaries of its employees (follows directly from the above):

واما باقي العين الموقوفة أعلاه من الأراضي والابنية والأماكن المعينة أعلاه عده شرح أعلاه فان الواقف المشار اليه أعلاه وقف ذلك على ما يأتي ذكره معينا وشرحه مبينا وهو ان يبدأ من ربع ذلك بما يحتاج اليه من إصلاح الأراضي وعمارة الأبنية المذكورة وممرتها وما فيه بقا عين ذلك ودوام منفعته ولو انفق في ذلك جميع غلته وفي شراء ما يحتاج اليه من الايقار كلما اصلح الامر الى ذلك وما فضل بعد ذلك يصرف منه لرجل من اهل الخير والدين يومئ المسلمين بالمحراب الذي بالمسجد المذكور أعلاه في الصلوات الخمس المفروضات وقيام شهر رمضان والاقوات بالمشروع لها الجماعات في كل شهر من الفلوس معاملة تأريخه اربع مائة درهم وخمسون درهما او ما يقوم مقام ذلك من النقود

ويصرف لثلاثة انفار حسان الأصوات يعلون بالأذان على المنار والتسييح والاذكار في أوقات الاسحار وإقامة الصلاة ويتابع التكبير خلف الإمام وغير ذلك مما جرت به العادة بالتناوب بينهم في ذلك على ما جرت به العادة في كل شهر من الفلوس معاملة تاريخه ستمائة درهم نصفها ثلاثمائة درهم او ما يقوم مقام ذلك من النقود

ويصرف لشخص يكون كناسا ليتولى خدمة الميضأة والحوض والرش امام باب المدرسة وغير ذلك مما جرت به العادة في مثل ذلك في كل شهر من الفلوس معاملة تأريخه ثلاث مائة درهم او ما يقوم مقامها من النقود

ويصرف لشخص يكون فراشا يقوم بمصالح المسجد المذكور أعلاه وغيره مما جرت به العادة في مثل ذلك في كل شهر من الفلوس معاملة تاريخه ثلاثة مائة درهم او ما يقوم مقام ذلك من النقود

ويصرف لشخص يكون وقادا ليتولى غسل ما بهذه التربة من القناديل والسلاسل ومسحها وتعمير القناديل ووقودها وطفها وتعمير قناديل المنارة في شهر رمضان من كل سنة وليلة النصف من شعبان في كل سنة أيضا وصبة عيد الفطر وغير ذلك مما جرت به العادة في كل شهر من الفلوس معاملة تاريخه ثلاثمائة درهم او ما يقوم مقامها من النقود

ويصرف لشخص يكون مزملاتيا بالسبيل المذكور أعلاه ليتولى غسل الازيار والاواني ونقل الماء من الصهريج المذكور أعلاه الى ظاهره وتسبيله بالسبيل المذكور المطل على الشارع للمارين والمتريدين وغيرهم والقيام بمصالح ذلك في كل شهر من الفلوس معاملة تأريخه اربع مائة درهم او ما يقوم مقامها من النقود

ويصرف لرجل يكون سباكا يتولى عمل ما يحتاج اليه مجاري الماء والاقصاب الرصاص ومزاريب الوضوء وغير ذلك في كل شهر من الفلوس معاملة تاريخه مائة درهم وخمسون درهما او ما يقوم مقام ذلك من النقود

ويصرف لرجل يكون نجارا يتولى اصلاح ما يحتاج اليه الساقية المذكورة فيه برسم الاخشاب وغير ذلك مما يتوقف إدارة الساقية عليه على العادة في كل شهر من الفلوس معاملة تاريخه ستون درهم او ما يقوم بمقام ذلك من النقود

ويصرف لمن يكون بوابا بالتربة المذكورة على ان يتولى فتح أبوابها وغلقها ومنع ارباب الهم والفساد من الدخول اليها وغير ذلك اسوة امثاله في كل شهر من الفلوس معاملة تاريخه اربع مائة درهم او ما يقوم بمقامها من النقود

ويصرف في ثمن زيت طيب مستخرج من زيت الزيتون يستضاء به بالقناديل المعلقة بالتربة المذكورة في كل شهر من الفلوس معاملة تاريخه خمسة مائة درهم او ما يقوم مقامها من النقود

ويصرف من الفلوس أيضا معاملة تاريخه مائتا درهم واربعون درهما في ثمن زيت طيب يستضاء به في الطباق المعينة باسم سيدنا الشيخ شرف الدين الجويني المشار اليه أعلاه وذريته مدة حياتهم

ويصرف لمن يكون سواقا بالساقية المذكورة أعلاه ليتولى حفظ دواب الساقية وعلفها وإدارة الساقية المذكورة ونقل الماء من البئر الى ظاهرها واجرائها الى الجنينات والفسقية والكراسي والبحرة وحوض السبيل وغير ذلك مما هو مذكور أعلاه بحيث يملأ الحوض والبحرة كل يوم ويحصل الانتفاع بذلك للتربة المذكورة والمقيمين بها والواردين عليها على العادة ويعهد الساقية المذكورة وعمل مصالحها من الطوانس والقواديس والاكيل وغير ذلك اسوة امثاله ولما يحتاج اليه الساقية المذكورة من الطوانس والاكيل والقواديس وغير ذلك كما جرت به العادة في كل شهر من الفلوس معاملة تاريخه سبع مائة درهم وخمسون درهما او ما يقوم مقام ذلك من النقود ويصرف لما يحتاج اليه دواب الساقية المذكورة أعلاه من العلف في كل شهر من الفلوس معاملة تاريخه الف درهم وثمانمائة درهم او ما يقوم مقامها من النقود

ويصرف لكل نفر من الصوفية العشرين الذين يقرهم الواقف المشار اليه أعلاه على ان يحضروا مع شيخهم الذي يقره الواقف المشار اليه أعلاه كل يوم عقب صلاة العصر في المسجد الذي بالتربة المذكورة أعلاه ويجلس الشيخ في المحراب المذكور وتجلس الصوفية عن يمينه ويساره على هيئة حضور الصوفية بالخوانق ويتعاطا أحدهم حمل المصحف الشريف الذي وقفه الواقف المشار اليه أعلاه بالتربة المذكورة ووضع بين يدي شيخ الصوفية وحمل الربعة الشريفة التي وقفها الواقف المشار اليه أعلاه بالتربة المذكورة أيضا ووضعها وسط حلقة الصوفية المذكورين ويفرق على كل نفر منهم جزءا من الربعة الشريفة ويتناول الآخر جزءا يقرأ فيه الشيخ في المصحف الشريف وتقرأ الصوفية في أجزاء الربعة ما تيسرت قرأته من كتاب الله العزيز وبعد انتهاء قرأتهم تفتتح ستة انفار من الصوفية المذكورين الذين يقرهم الواقف المشار اليه أعلاه قرأ صفة فيقرأون سورة الإخلاص ثلاثا والمعوذتين وفاتحة الكتاب وفاتحة سورة البقرة ويهللون ويكبرون ويحمدون لله تعالى ويصلون على سيدنا رسول الله

صلى الله عليه وسلم على عادة قراء الصفة بالخوانق وينتصب واحد من الصوفية المذكورين أعلاه على قدميه يقرره الواقف المشار اليه منشدا ينشد ما ينشر له انشاده من مدح سيدنا رسول الله صلى الله عليه وسلم او كلام الصلحاء او الصوفية على العادة ثم يجلس فيدعو احد قراء الصفة بعد ذلك لسيدنا رسول الله صلى الله عليه وسلم ولآبائه واخوانه من الأنبياء والمرسلين وآله وصحابه اجمعين ثم للواقف المشار اليه أعلاه ولذريته واخوانه واخوان المسلمين في كل شهر من الفلوس معاملة تاريخه مائتا درهم او ما يقوم مقامها من النقود ويزاد لكل نفر من قراء الصفة الستة المذكورين في كل شهر من الفلوس معاملة تاريخه عشرون درهما ليكمل له بذلك في كل شهر مائتا درهم وعشرون درهما او ما يقوم مقامها من النقود ويزاد لواضع المصحف بين يدي الشيخ ويفرق أجزاء الربع الشريفة المذكورة أعلاه في كل شهر من الفلوس معاملة تاريخه أربعون درهما ليكمل له في كل شهر من الفلوس مائتا درهم وأربعون درهما او ما يقوم مقامها من النقود على ان يجمع أجزاء الربعة الشريفة المذكورة أعلاه ويضعها في بيوتها وينقلها هي والمصحف الشريف المذكور أعلاه بعد الدعاء الى خزنتهما على العادة في مثل ذلك ويزاد لنفر من الصوفية المذكورين على ان يكون كاتب غيبة على الصوفية المذكورين على ان من غاب بينهم عن الحضور في الوقت المشروط عليه الحضور فيه قطع معلومه يوم غيبته الا اذا غاب لضرورة شرعية فلا يقطع له بمعلوم في كل شهر من الفلوس معاملة تاريخه ثلاثون درهما ليكمل له بذلك من الفلوس معاملة تاريخه مائتا درهم وثلاثون درهما او ما يقوم مقامها من النقود

ويصرف لشيخ الصوفية في كل شهر من الفلوس معاملة تاريخه خمس مائة درهم او ما يقوم مقامها من النقود

ويصرف لثلاثة انفار من حفاظ كتاب الله العزيز حسان الأصوات على ان يقرأوا مجمعين جوقة قريبا من احد الشبائب التي بالمسجد المذكور أعلاه كل يوم في وقت الصبح وفي وقت الظهر وفي وقت المغرب ما تيسرت قرأته من القرآن العظيم قراءة حسنة مرتلة يرفعون بها أصواتهم ثم يختمون قرأتهم بالصلاة والتسليم والدعاء المنبه عليه أعلاه كما شرح أعلاه في كل شهر من الفلوس معاملة تاريخه تسع مائة درهم لكل نفر منهم ثلاثمائة درهم او ما يقوم مقامها من النقود

ويصرف لنفرين من جملة كتاب الله العزيز على ان يقرأ احدهما كل يوم قبل الظهر والآخر كل يوم قبل العصر في المصحف الشريف الذي وقفه الواقف المشار اليه أعلاه ما تيسرت قرأته من كتاب الله العزيز ويختتم قرأته ويدعو كما شرح أعلاه في كل شهر من الفلوس معاملة تاريخه ثلاثمائة درهم لكل نفر منهما مائة درهم وخمسون درهما او ما يقوم مقام ذلك من النقود

ويصرف لعشرة ايتام من ايتام المسلمين لا يبلغوا الحلم ولرجل من اهل الخير والدين حافظ لكتاب الله العزيز عارف بالخط العربي على ان يجلس بهم مؤدبهم في المكتب المذكور أعلاه كل يوم من طلوع الشمس الى اذان العصر ما عدا يوم الجمعة والعيدين وما جرت العادة بالبطالة فيه تعلمهم ما يطبقون تعلمه من كتاب الله تعالى والخط العربي وهجاه ثم يقرأون عند انصرافهم كل يوم ما تيسرت قرأته من القرآن العظيم ويختمون قرأتهم بالصلاة والتسليم والدعاء المشروح أعلاه لكل يتيم منهم في كل (شهر) من الفلوس معاملة تاريخه مائة درهم ولمؤدبهم من الفلوس معاملة تاريخه أربعة مائة درهم او ما يقوم مقام ذلك من النقود

ويصرف لشخص يقرره الواقف المشار اليه أعلاه على ان يكون خازنا للكتب التي يوقفها بالتربة المذكورة يفعل في ذلك اسوة امثاله في ذلك في كل شهر من الفلوس معاملة تاريخه مائة درهم وخمسون درهما او ما يقوم مقام ذلك من النقود

ويصرف في ثمن خبز قرصة يعمل من خالص النُّر يفرق في ليالي يوم الجمع بالتربة المذكورة على ارباب الوظائف وغيرهم من الفقراء والمساكين في كل شهر من الفلوس معاملة تاريخه الف درهم ومائتا درهم وخمسون درهم او ما يقوم مقام ذلك من النقود ويصرف في ثمن لحم وما يحتاج اليه من توابل ذلك يطبخ في ليالي الجمع ويفرق على ارباب الوظائف بالتربة المذكورة وغيرهم من الفقراء والمساكين في كل شهر من الفلوس معاملة تاريخه الف درهم ومائتا درهم وخمسون درهما او ما يقوم مقامها من النقود

ويصرف لمن يكون طبخا على ان يتولى طبخ اللحم المذكور أعلاه ويفعل في ذلك فعل امثاله في كل شهر من الفلوس معاملة تاريخه مائة درهم او ما يقوم مقامها من النقود

ويصرف لمن يكون مشرفا بالتربة المذكورة على ان يفعل ما يفعله مثله في ذلك في كل شهر من الفلوس معاملة تاريخه مائة درهم او ما يقوم مقامها من النقود

ويصرف في ثمن ربحان يوضع على الفساقى المذكورة أعلاه على العادة في كل شهر من الفلوس معاملة تاريخه مائة درهم او ما يقوم مقامها من النقود

ويصرف لمن يكون خفيرا بالتربة المذكورة ليفعل في ذلك ما يفعله امثاله في كل شهر من الفلوس معاملة تاريخه مائتا درهم او ما يقوم مقامها من النقود

ويعصرف في شهر رمضان من كل سنة بوسعة على من يذكر فيه من الفلوس معاملة تاريخه او ما يقوم مقامها من النقود ما هو للأيتام اربع مائة درهم وما هو للمؤدب الف درهم ومائتا درهم وما هو للباب بالتربة المذكورة ثلاثمائة درهم وما هو للمزملاتي ثلاثمائة درهم وما هو ثمن شمع ثلاثمائة درهم وما هو ثمن زيت طيب ليصبح به في شهر رمضان وفي ليلة النصف شعبان في كل منه من الفلوس معاملة تاريخه ستة الاف درهم نصفها ثلاثة الاف درهم او ما يقوم مقامها من النقود

ويعصرف لرجل من اهل الخير والدين على ان يقرأ في شهر رجب وشعبان ورمضان من كل سنة صحيح الامام البخاري رضى الله عنه بالتربة المذكورة أعلاه من الفلوس الجدد معاملة تاريخه الف درهم وخمسمائة درهم او ما يقوم مقامها من النقود

ويعصرف في عمل مولد شريف يعمل في ليلة النصف من ش(عبان) من كل سنة من قراءة قرآن شريف وثمان لحم واحتياج طعام وفي ثمن خبز قرصة وغير ذلك مما جرت العادة به من الفلوس معاملة تاريخه ستة الاف درهم نصفها ثلاثة الاف درهم او ما يقوم مقامها من النقود

ويعصرف في ثلاثة بقرات تذبح في عيد الأضحى من كل سنة ويفرق على ارباب الوظائف بالتربة المذكورة وغيرهم في كل سنة من الفلوس معاملة تاريخه ستة الاف درهم او ما يقوم مقامها من النقود

ويعصرف في ثمن ما يحتاج اليه من الزجاج والسلاسل والسلب والبكر والسفنج وآلة الكنس وغير ذلك مما جرت به العادة في كل سنة من الفلوس معاملة تاريخه الف درهم وخمس مائة درهم

ويعصرف في ثمن ماء عذب يحمل من ماء النيل المبارك يصب بالصهرج الكائن بالتربة المذكورة أعلاه في كل سنة من الفلوس معاملة تاريخه اثنا عشر الف درهم او ما يقوم مقامها من النقود

ويعصرف في ثمن خصر يعمل من السميد الطيب في كل سنة من الفلوس معاملة تاريخه الف درهم ومائتا درهم او ما يقوم مقامها من النقود

ويعصرف في ثمن ماء عذب يسبل في دوارق بالحرم الشريف المكي في كل سنة من الفلوس معاملة تاريخه الف درهم وثمانمائة درهم او ما يقوم بمقامها من النقود ويعصرف في ثمن ماء عذب يسبل بالحرم الشريف النبوي على الحال بها وافضل الصلاة والتسليم في دوارق في كل سنة من الفلوس معاملة تاريخه الف درهم وثمانمائة درهم او ما يقوم مقامها من النقود

ويعصرف لشخص من جملة كتاب الله العزيز على ان يقرأ كل يوم في المصحف الشريف الذي وقفه الواقف المشار اليه أعلاه مما تيسرت قرأته بالحرم الشريف المكي ويختم قرأته بالصلاة والتسليم والدعاء

المشروح أعلاه في كل سنة من الفلوس معاملة تأريخه الف درهم وثمانمائة درهم او ما يقوم مقامها من النقود ويصرف لشخص من جملة كتاب الله العزيز تعالى على ان يقرأ كل يوم بالمصحف الشريف الذي وقفه الواقف بالمدينة الشريفة على الحال بها افضل الصلاة والتسليم ما تيسرت قرأته ويختم ويدعو بالدعاء المنبه عليه أعلاه في كل سنة من الفلوس معاملة تاريخه الف درهم وثمانمائة درهم او ما يقوم مقامها من النقود ويصرف من شخص من جملة كتاب الله تعالى على ان يقرأ كل يوم بالمصحف الشريف الكائن بجامع الأقصى بالقدس الشريف ما تيسرت قرأته من كتاب الله تعالى ويختم قرأته بالصلاة والتسليم والدعاء المشروح أعلاه في كل سنة من الفلوس معاملة تاريخه الف درهم وثمانمائة درهم او ما يقوم مقامها من النقود

ويصرف في ثمن ماء عذب يحمل من ماء النيل المبارك يصب بالصهرج الكائن بالجامع الازهر بالديار المصرية وله شهرة في موضعه تغني عن وصفه وتحديده في كل سنة من الفلوس معاملة تاريخه ثلاثة الاف درهم او ما يقوم مقامها من النقود

ويصرف لمن يكون مباشرا بالوقف المذكور أعلاه عارفا بالحساب يضبط متحصله مصرفه وعمل حسابه وما جرت العادة بفعله في مثل ذلك في كل شهر من الفلوس معاملة تاريخه خمسمائة درهم او ما يقوم مقامها من النقود

ويصرف لمن يكون شاهدا بالوقف المذكور يفعل فيه ما يفعله امثاله في مثل ذلك في كل شهر من الفلوس معاملة تاريخه مائتا درهم او ما يقوم مقامها من النقود

ويصرف لمن يكون جابيا بالوقف المذكور يتولى تحصيل ريع ذلك ويفعل ما يفعله امثاله في مثل ذلك من الفلوس معاملة تاريخه سبع مائة درهم او ما يقوم مقامها من النقود

ويصرف لمن يكون صيرفيا بالوقف المذكور يفعل في ذلك كأمثاله من الفلوس معاملة تاريخه ثلاثمائة درهم او ما يقوم مقامها من النقود

ويصرف في كلفة إيصال كتاب الوقف المسطر وثبوتيه وإيصاله وتنفيذه بحيث لا يقطع إيصال ذلك ولا شي منه في كل شهر من الفلوس معاملة تاريخه مائة درهم او ما يقوم مقامها من النقود

ويصرف لمن يكون ناظرا على هذا الوقف على ان يفعل فيه ما يذكر من امثاله في كل شهر من الفلوس معاملة تاريخه الف درهم او ما يقوم مقامها من النقود {*}

Conditions for the management of the foundation and its employees:

{*} وشرط الواقف المشار اليه أعلاه في وقفه هذا شروطا اكد عليها والزم العمل بها منها ان النظر عليه لنفسه أيام حياته وله ان يسنده ويفوضه ويوصى به لمن شاء فان توفاه الله تعالى عن غير وصية ولا تقويض ولا اسناد او فعل ذلك او شيئا منه وتعذر بوجه من وجوه المعذرات الشرعية كان النظر في ذلك للأرشد فلأرشد من أولاده وذريته ونسله وعقبته بمشاركة من يكون دواذرا كبيرا بالديار المصرية ومنها ان يزيد في وقفه هذا ما يرى زيادته وينقص ما يرى تنقيصه ويغير بما يرى تغييره ويبدل ما يرى تبدله ويدخل فيه من شاء ويخرج منه من أراد ويشترط لنفسه من الشروط المخالفة لذلك ما يرى اشتراط(ه) كلما بدا له فعل ذلك مع بقا أصل الوقف على حكمه

ومنها ان يستبدل من ذلك ما يسوغ له استبداله شرعيا بما يختار من عقار او حصة من عقار او ارض طيبة او بمبلغ يشتري به ما هو أنفع لجهة الوقف المذكور ويوقف على حكمه يفعل ذلك جميعه المرة بعد الأخرى كلما بدا له فعل ذلك وليس لغيره من بعده فعل ذلك ولا شيء منه ومنها ان مهما عمره وجدده وانشاه في العين الموقوف أعلاه يكون حكمه حكم الوقف المشروح أعلاه

ومنها ان من مات من ارباب الوظائف المذكورة وله ولد ذكر فان كان بالغاً صالحاً للقيام بوظيفة والده قرره الناظر فيها واجرى عليه معلومه وان كان غير بالغ يقرر في وظيفة والده واستغنى عنه الى بلوغه فان بلغ صالحاً للقيام بها ليستمر والا قرر الناظر غيره واجرى عليه معلومه

ومنها انه ان قام الناظر على هذا الوقف او احد من مستحقه او متصرف من الشرع الشريف في استبدال شيء من الوقف المذكور واستبدل كان الناظر /معزول/ لأمر النظر والمستحق مخرجا من وظيفته

ومنها انه ان سامح قرا الشباكة الثلاثة وقارئ المصحف والصوفة وشيخهم المذكورين أعلاه في ترك الحضور لوظائفهم المذكورة أعلاه في يوم /بأسبوع/ ويوم عاشورا وفي ثلاث أيام من آخر شعبان وفي يومين قبل عيد الفطر وثلاثة أيام بعده وفي ثلاثة أيام قبل عيد الأضحى وثلاثة أيام بعده وفي زمن خروج الحاج وزمن دخوله كل هذه الأيام من كل سنة وفي زمن /المطر/ وزمن /الخوف/

فقد لزم هذا الوقف وتم {*}



زاویه

ترسه



بن

مصر عتیق

بور کردن مصر صریدر

نابا

عید اندن
شاه سوردر

بورچنس کیه قیاسه
دیر

شوبر

قبه بوشکدر

ابوالیس

شهر نشین

شهر نشین



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زاویه

ترسه



مصر عتیق

بور کردن مصر صریدر

زبابه

عید اندن
شاه سوردر

قبه بوشکدر

ابوالیس

سکین

شیرضایش

بورجنس کیه قیاسه
دیر

طوبخانه

Summaries

Samenvatting van het proefschrift

Dit werk herkadert de geschiedenis van Caïro in het tijdperk van de Mammelukken door de kritische lens van waterbeheer, waarbij het complexe samenspel tussen omgevingsfactoren en sociaal-economische realiteiten wordt onderzocht. Het doel van dit proefschrift is om te begrijpen welke sociale, politieke en economische entiteiten en dynamieken betrokken waren bij de watervoorziening en het beheer van waterfaciliteiten in de groeiende stad, wat hun respectievelijke rollen waren, en hoe zij met elkaar interacteerden en elkaar aanvulden.

Om een genuanceerd begrip van hun rollen te krijgen hanteert dit werk een benadering uit meerdere invalshoeken, die de inherente complexiteit van de stedelijke watervoorziening blootlegt. Dit benadrukt dat voor een omvattend begrip rekening moet worden gehouden met de meerzijdige betekenis van water in de samenleving —of het nu gezien wordt als grondstof, een gevaar, een goddelijke gave of handelswaar. Elke interpretatie vormt de sociale dynamieken en instituties, die op hun beurt bijdragen aan de vorming van de samenleving zelf.

Binnen deze analyse wordt bijzondere aandacht besteed aan de rol van Islamitische stichtingen (Arabisch: *waqf*, meervoud *awqāf*). Deze instituties werden tijdens de onderzochte periode wijdverbreid en beheersten talrijke stedelijke bezittingen, waaronder waterfaciliteiten. Het grootste deel van dit proefschrift is gebaseerd op negen *casestudies*, afkomstig uit *waqf*-en *waqf*-gerelateerde documenten bewaard in het Nationaal Archief van Caïro (*Dār al-Wathā'iq*). Deze hebben betrekking op stichtingen die zowel op winst gerichte waterstructuren als charitatieve watervoorzieningen in de stad oprichtten en onderhielden.

Dit proefschrift bestaat uit vier hoofdstukken, elk met een eigen invalshoek en focus. Gezamenlijk belichten ze de complexiteit van de watervoorziening in het Caïro van de Mammelukken. Hoofdstuk 1 onderzoekt de rol van de institutie van de Sultan bij het beheer van water—zowel als een natuurlijke hulpbron als een natuurlijk gevaar—door middel van de bouw en het onderhoud van Caïro's belangrijkste waterwerken. Hoofdstuk 2 verschuift de focus naar een breder netwerk van belanghebbenden betrokken bij de watervoorziening van Caïro. Het eerste, en meest uitgebreide, gedeelte van dit hoofdstuk analyseert de negen uitgekozen *casestudies* en identificeert de hoofdrolspelers daarin; terwijl het tweede deel de vitale rol van waterdragers in de drinkwatervoorziening van Caïro onderzoekt.

Hoofdstukken 3 en 4 onderzoeken aan water gerelateerde structuren en praktijken zoals gedocumenteerd in de geselecteerde *waqf*-akten. De analyse in deze hoofdstukken belicht bredere sociaaleconomische dynamieken, waaruit blijkt hoe zij zowel de trajecten van aan water gerelateerde infrastructuur beïnvloedden als werden gevormd door specifieke watergerelateerde praktijken. Hoofdstuk 3 richt zich op commerciële waterstructuren waarin water een waardevolle voorziening was, vooral gemeenschappelijke *hammams* (baden) en hydraulische systemen binnen de weelderige residentiële paleizen van Caïro. Dit toont aan dat de commerciële waterfaciliteiten die onderdeel waren van de *waqf*-stichtingen niet alleen reageerden op dynamieken eigen aan de stichtingen zelf, maar ook op bredere economische en politieke krachten. Hoofdstuk 4 onderzoekt faciliteiten en praktijken gefinancierd door *awqāf* als liefdadige initiatieven, waarbij water als een symbolisch pregnante gift aan de gemeenschap werd verstrekt. Het hoofdstuk benadrukt hoe deze faciliteiten hebben bijgedragen aan de vorming van de samenleving door het scheppen van werkgelegenheid voor banen met specifieke verantwoordelijkheden over de charitatieve waterstructuren.

Samenvattend onderstreept, dit werk dat de watervoorziening van de stad verre van monolithisch was. Eerder bestond het uit een gelaagde werkelijkheid afhankelijk van een breed scala aan actoren. Verschillende watersystemen, elk afkomstig vanspecifieke entiteiten, weerspiegelen hun bijzondere belangen, en doorkruisten voortdurend met elkaar en met bredere krachten uit de politiek, de economische en het milieu. Deze kruisingen vonden plaats zowel vanuit convergerende behoeften als conflicterende belangen. Ook kwamen uit dit dynamische samenspel nieuwe stedelijke realiteiten en sociale organisaties voort. Toekomstig onderzoek zal hopelijk dieper ingaan op deze dynamische relaties, waardoor meer aspecten aan het licht komen van dit gelaagde netwerk van water en de samenleving die het vormde. Dit proefschrift heeft de basis gelegd voor dergelijk onderzoek door de toepassing van een genuanceerd en filologisch passend sociologisch kader. Dit heeft blootgelegd dat de organisatie van stedelijk water in het Caïro ten tijde van de Mammelukken niet slechts een kwestie was van praktische voorziening of institutionele controle, maar een complex product van voortdurende onderhandelingen en aanpassingen binnen een sterk verbonden, maar gefragmenteerde, stedelijke samenleving.

Summary of the dissertation

This work reframes the history of Mamlūk-era Cairo through the critical lens of water management, examining the complex interplay between environmental factors and socio-economic realities. The aim of this dissertation is to understand which social, political and economic entities and dynamics were involved in the provision of water and in the management of water facilities in the growing city, what their respective roles were, and how they interacted and complemented each other.

To gain a nuanced understanding of their roles, this work adopts a multi-angled approach, revealing urban water supply's inherent complexities. This highlights that a comprehensive understanding of water in society must account for its multifaceted significance—whether viewed as a resource, a hazard, a divine gift, or a commodity. Each interpretation shapes social dynamics and institutions, which, in turn, contribute to shaping society itself.

Within this analysis, particular attention is given to the role of Islamic endowments (Ar. *waqf*, pl. *awqāf*), institutions which proliferated during the period in question and that controlled multiple urban assets, including water facilities. The bulk of this dissertation is based on nine case studies drawn from *waqf* and *waqf*-related documents kept at the National Archive of Cairo (Dār al-Wathā'iq), which are related to foundations that established and maintained both profitable water structures and charitable water facilities across the city.

This thesis comprises four chapters, each delving into a distinct angle and focus that collectively illuminate the complexities of water supply in Mamlūk Cairo. Chapter 1 explores the role of the sultanate institution in managing water, both as a natural resource and a natural hazard, through the construction and maintenance of Cairo's major waterworks. Chapter 2 shifts the focus to a broader network of stakeholders involved in Cairo's water provision. The first, and more extensive, section of this chapter analyses the nine case studies chosen for this work, identifying the key protagonists; while the second part of this chapter examines the vital role of water carriers in Cairo's drinking water supply.

Chapters 3 and 4 investigate water-related structures and practices as documented in the selected *waqf* deeds. The analysis within these chapters illuminates broader socio-economic dynamics, showing how they both influenced the trajectory of water-related infrastructure and were shaped by specific water practices. Chapter 3 centres on lucrative water structures in which water represented a valuable amenity,

specifically communal hammams and hydraulic systems within lavish residential palaces, showing that the lucrative water facilities embedded in the foundations responded not only to dynamics proper to the foundations themselves, but also to broader economic and political forces.

Chapter 4 examines facilities and practices funded by *awqāf* as charitable initiatives, through which water was provided as a symbolically imbued gift to the community, and emphasizes how these facilities contributed to shaping society through the creation of multiple employment posts with specific responsibilities over the charitable water structures.

In sum, this work underscores that the water supply of the city was far from a monolithic reality; it was, rather, a multilayered reality depending on a wide range of actors. Different water systems, each generated by specific entities and reflecting their particular interests and perspectives, constantly intersected with one other and with broader political, economic, and environmental forces. These intersections occurred both out of converging needs and conflicting interests, and it was from this dynamic interplay that new urban realities and social organizations emerged. Future scholarship will hopefully delve further into these dynamic ties, uncovering more aspects of this multilayered network of waters and of the society that shaped it. This work has laid the groundwork for such inquiries by applying a nuanced and more philologically appropriate sociological framework, which revealed that the organization of urban water in Mamlūk-era Cairo was not merely a matter of practical provision or institutional control, but a complex product of ongoing negotiations and adaptations within a highly interconnected, and yet fragmented, urban society.



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ترسه



مصرع

بورگدن مصر صریدر

زایه

عیداندن
شاه صریدر

بورجس کیه قیاسه
دیر

شوبر

قبه بوشکدر



طوبخانه

ابوالیس

شهرنشین

شهرنشین

Curriculum vitae

Born in Florence on January 29, 1994, Angela Isoldi developed an early academic passion for the study of language and classical texts while attending the Liceo Classico. This foundational interest in philology led her to specialize in Arabic and Persian Languages and Literatures at the Università degli Studi di Napoli “L’Orientale”. During her Bachelor’s studies, Angela spent extensive periods abroad on scholarships, including Erasmus exchanges in Granada, Spain, and Fes, Morocco, underscoring her commitment to international mobility and enriching her education through direct cultural experience.

In 2018, Angela moved to the Netherlands to pursue advanced studies, enrolling in the Research Master’s programme in Middle Eastern Studies at Leiden University. Here, she specialized in the intensive study of medieval Arabic manuscript sources. Her Master’s research included a six-month fieldwork in Cairo to work directly with manuscript sources at the National Library (*Dār al-Kutub*). During this period, Angela also gained valuable professional experience working with Brill Academic Publishers. She successfully completed the Master’s programme and graduated *cum laude* in 2020.

Later that same year, Angela commenced doctoral research at Radboud University, focusing on the history of water management in Mamlūk-era Cairo. This interdisciplinary PhD project reframes urban history through environmental and socio-economic lenses. As part of this extensive research, Angela conducted significant archival work, analysing essential primary sources within the National Archive of Cairo (*Dār al-Wathā’iq*). Angela’s expertise is rooted in the study of the medieval Middle East, combining the rigorous analysis of Arabic documents with complex urban and environmental history.



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Egyptian historian Ahmad Amin started his memoir with the statement “I am nothing else but the result of what happened to me and my forefathers: the matter does not vanish and neither do meanings”. Upon finishing this dissertation, I recognise that this is nothing but the product of a long and composite process made of many events and involving multiple actors whose contributions I would now like to acknowledge. First and foremost, I express my immense gratitude to my supervisors: Prof. Maaïke van Berkel, Prof. Jo Van Steenberghe, and Dr. Josephine van den Bent. In the last five years, their guidance has been crucial throughout every single step of my journey. In particular, I would like to thank Prof. Maaïke van Berkel for her endless patience, kindness, and generosity; Prof. Jo Van Steenberghe for being a constant source of inspiration to seek new perspectives; and Dr. Josephine van den Bent for her painstaking attention to detail. If writing this dissertation was a significant human experience, I owe it to them above anyone else.

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This work reframes the history of Mamlūk-era Cairo through the critical lens of water management, examining the complex interplay between environmental factors and socio-economic realities. Rather than viewing water disposition as a static constraint, this study reveals the multiple, adaptive ways in which urban society lived with and was fundamentally shaped by the city's hydraulic environment.

The research illuminates the vast network of stakeholders involved in supplying Cairo with water, ranging from the sultans and their administration to humble water carriers. Based on nine detailed case studies, largely developed from previously unedited documents housed in the Cairo National Archive, this dissertation moves beyond the idea of a single, centralised system. Instead, it uncovers a set of intertwined and sometimes competing water management networks, revealing the dynamic interactions and lived experiences of water in the medieval city.



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