HOWAYDA AL-HARITHY

THE CONCEPT OF SPACE IN MAMLUK ARCHITECTURE

An initial reading of Mamluk architecture reveals spatial qualities that are in their nature neither Euclidean—that is, governed by geometric patterns—nor perspectivist—that is, governed by fixed vanishing points and axes. It has instead qualities governed by urban, social, and political factors, and, as a result, Mamluk monuments cannot simply be read as containers of spaces or objects in space, but rather as complex mediators between interior architectural spaces and exterior urban spaces. Because of the way Mamluk architecture developed over time, it becomes clear that the concept of space expressed in it is not manifested in isolated buildings but in urban infills or complexes set in the midst of existing structures and built for public use. Individually, Mamluk monuments were more responsive to their context than they were initiators or dictators of new ones. It was from their collective power that a new concept of space emerges. This is a case of space appropriated through events and produced over time rather than one driven by a single idea and conceived in a single moment.

The reading of space in Mamluk architecture cannot, therefore, be derived from a formal analysis of systems of geometric planning, scale, and proportion; it must be extracted from the way the space was produced. Henri Lefebvre[1] offers a prescription for reading space in Mamluk architecture when he says that every society produces its own space, which it bases on the space of the preceding period and preserves as a substratum and a prop for its symbols.[2] Building on Lefebvre's statement, I tried looking at Mamluk space, particularly urban space, as a "product" developed over time and not a "work" created in a single moment or by a single idea. It is a social urban space that stands not as an independent formal entity, but as a dynamic fluid product that is constantly reproduced through the actions of both the individual and the collective. Lefebvre states that "it is not the work of a moment for a society to generate (produce) an appropriated social space in which it can achieve a form by means of self-presentation and self-representation—a social space to which that society is not identical, and which indeed is its tomb as well as its cradle. This act of creation is, in fact, a *process*. For it to occur, it is necessary (and this necessity is precisely what has to be explained) for the society's practical capabilities and sovereign powers to have at their disposal special places: religious and political sites."[3] The Mamluks did inherit the space of their predecessors, the Fatimids and Ayyubids, and most certainly had at their disposal special places. But "if space is produced, if there is a productive process, then we are first dealing with *history*"[4] incorporating a sequence of events and forces of production, so it is to history that we must turn.

By the time the Mamluks rose to power in Egypt, their predecessors had already changed the city of Cairo in major ways. During the Fatimid period, it had been divided between the princely al-Qahira, residence of the Fatimid elite, and the overpopulated Fustat where the ordinary people lived. In building a new imperial capital, the Fatimids continued a long-established tradition; ever since the Muslims conquered Egypt, each succeeding dynasty had dissociated itself from the previous capital and founded its own city (fig. 1). Fustat, the first capital city founded in 641 when Egypt fell to Muslim rule under the leadership of ʿAmr ibn al-ʿAs, grew up around the mosque he constructed. It remained the capital during the Umayyad caliphate until 750, when the Abbasid governor Salih ibn ʿAli founded the city of al-ʿAskar to its northeast. A third city, al-Qata'iʿ, was founded by Ahmad ibn Tulun in 870, after he had won his independence from the Abbasids. It was again set apart from its predecessors, which as a group came to be referred to by the name Misr.[5]

Al-Qahira was founded by al-Muʿizz in 969, and completed in 974. In its original conception, it was a royal residence for the caliph and his entourage, and

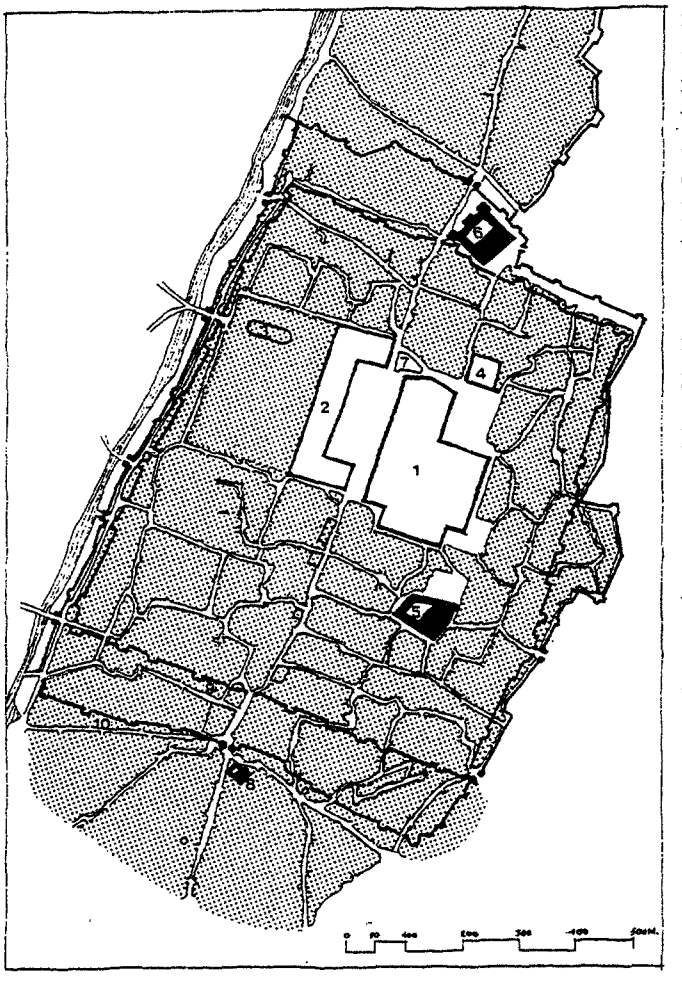

Fig. 1. Map of the historical development of Cairo. (Map: from Nezar Alsayyad, *Cities and Caliphs* [New York, 1991], fig. 5.11)

its spatial organization represented the strict social hierarchy of its inhabitants, dominated by a caliph who was both the administrative and religious leader of the community. The city was planned as a walled rectangle, 1,000 m x 1,150 m, with two gates on each of its four sides; it was organized along a major spine, al-Muʿizz street, which ran north-south and was dominated at the center by the caliphal palace and an open ceremonial space (fig. 2).[6] "The Palace of the Caliph," wrote Nasir-i Khusraw, a Persian traveler who visited Cairo in 1049, "was located in the heart of al-Qahira; it was free-standing on all sides, was not connected to any building, and was surrounded by an open space. . . . From the outskirts of the city the Qasr seems like a mountain due to the number of high structures in it. . . . The city had no citadel, but its buildings were stronger and higher than a citadel. Each palace was fortified and most buildings were five or six stories high."[7] The principal urban space was further defined by the later building of the western palace, and came to be known as the Bayn al-Qasrayn (lit., between the two palaces). It was the largest of a number of open public spaces associated with major monuments, capable of accommodating ten thousand people; it was used for ceremonial and military parades. The rest of the city was divided into residential quarters, each named after the military group occupying it. Major markets and other commercial activities were relegated to the older town of Fustat. The physician Abu al-Hasan ibn Radwan wrote: "The height of its buildings was much less than those of Fustat, its streets and alleys, when compared to the ones in Fustat, are cleaner. . . . If we thought of the conditions of al-Qahira in relation to Fustat, it was superior, had better air quality, and more suitable conditions."[8]

Al-Qahira was conceived as a private domain with limited public access. It was planned with an axial avenue and a central ceremonial space, which is clearly defined and closely connected to the major architectural component in the city, the palace of the Fatimid caliph, the imam. But the city underwent major alterations that disrupted its spatial structure, the most significant of which took place during the Ayyubid period.

By the time the Ayyubids came to power in 1171, al-Qahira had expanded beyond the limits of its walls, particularly in the south and southwest, where it ran into Fustat. Fustat itself had been attacked by a series of famines and fires.[9] In 1168, faced with the threat of invasion by Crusaders, Fustat was evacuated and set on fire by the Fatimid vizier Shawr, the fire lasted for 54 days. The population sought refuge in al-Qahira where they lived in mosques, hammams, and on the streets. Al-Qahira was besieged by Crusaders, but the siege was raised by an army sent by Nur al-Din Zangi and led by Shirkuh and his nephew Salah al-Din al-Ayyubi.

In the process of repairing these catastrophes and establishing their rule, the Ayyubids initiated an urban program for the rebuilding of Fustat and the integration of the greater city. Salah al-Din's political and ideological stand called for a defense system for the fragmented city and the establishment of a base for the orthodox Sunni revival that was his cause. He began by building the citadel and refortifying the

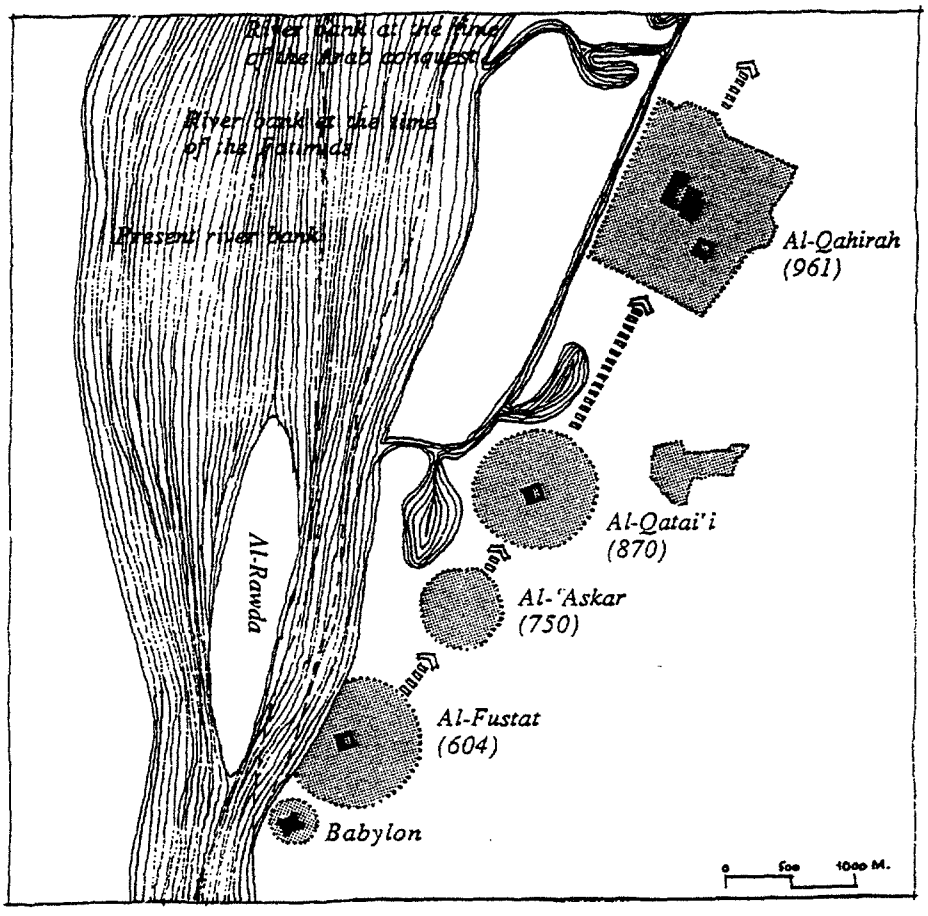

Fig. 2. The Fatimid City of al-Qahira. (Map: from Nezar Alsayyad, *Cities and Caliphs*, fig. 5.19)

greater city. The older walls of Jawhar and Badr al-Jamali[10] were replaced by more massive fortifications surrounding both Misr and al-Qahira, and the royal citadel. His Sunni revival program was essentially an anti-Fatimid anti-Shi'i campaign which resulted in opening the Fatimid city of al-Qahira up to the masses and encouraging the occupation of Fatimid palaces and the building of madrasas for Sunni instruction.

During their eighty-three years of rule, the Ayyubids reshaped the city of al-Qahira; it was no longer a princely residence inhabited by the elite in power. Salah al-Din opened up the city, disrupting its hierarchical social structure and allowing the overflow of population from Fustat to settle there.[11] In the process, boundaries, junctions, and other spatial elements were disturbed. They were further altered when he had parts of the caliph's palace demolished, and converted other parts into hospitals, hospices, and houses for ordinary people. In a continuous effort to erase all traces of the Fatimids, the area south of Bab Zuwayla, in which the barracks of the Sudanese army of the Fatimids were located, he had burned down and replaced by gardens.[12] Al-Maqrizi acknowledges the changed image of the city and ends his description of Fatimid Cairo with the following comment: "These sites [in the heart of al-Qahira] were rebuilt one after the other. Al-Qahira was no longer a *dār* for the caliphate, a house of power, or a stronghold in battles lived in only by the caliph, his army and the private entourage honored to be in his company."[13]

Ayyubid urban policy resulted in the appropriation of Fatimid space, and paved the way for the production of space during the succeeding Mamluk period, a process which was fueled by social, political, and economic factors. By the middle of the thirteenth

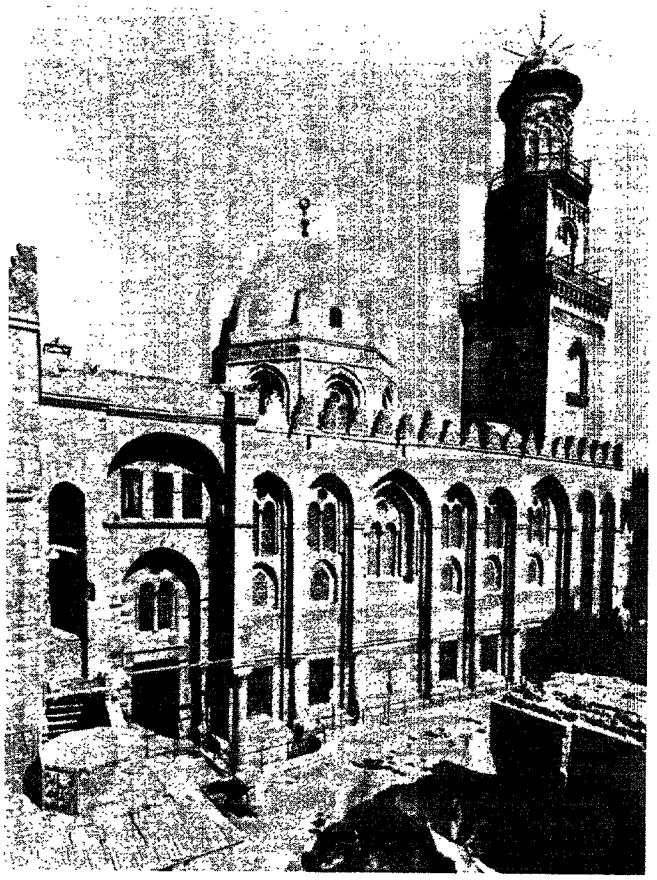

Fig. 3. View of the complex of Sultan Qalawun. (Photo: K. A. C. Creswell, *Muslim Architecture of Egypt,* vol. 2, pl. 65a)

century, when the Mamluks rose to power, the city had been claimed by the public and the institutions that served them. It had begun to acquire the characteristics of a metropolis. Cairo became a political, commercial, and intellectual capital, described by Ibn Khaldun as "the metropolis of the universe, the garden of the world, the ant-hill of the human species, the portico of Islam, the throne of royalty, a city embellished with castles and palaces, decorated with dervish monasteries and with schools, and lighted by the moons and stars of erudition. . . ."[14] Thousands came from all over the Muslim world to find refuge or seek education in this safe haven. Cairo became a melting pot of people from various backgrounds ruled by military lords who were former slaves and also from many places. The new social order called for the production of a new space for social interaction and political propaganda.

The building of the complex of Sultan al-Mansur Qalawun constitutes a turning point in the development of Mamluk architecture. The building both consolidated the tradition of its predecessors and initiated new approaches to architectural and urban design. It established a precedent for the buildings that followed, so it embodies many of the urban spatial notions that were later to become typical of Mamluk Cairene architecture.

Located in the heart of the Fatimid city along al-Mu'izz street, its principal avenue, this ambitious architectural undertaking was ordered by Sultan al-Mansur Qalawun (r. 1279–90) and constructed under the direction of Amir 'Alam al-Din Sanjar al-Shuja'i in 1284–85 (fig. 3).[15] It was erected on a site that incorporated part of the western Fatimid palace, the *qa'a* of Sitt al-Mulk[16] and part of the Bayn al-Qasrayn maydan. It was composed as a collection of distinct structures, a bimaristan, a mausoleum, and a madrasa organized along a corridor that ran through the complex, with the madrasa and the mausoleum on either side of it and the bimaristan at its end (fig. 4).

At the far end of the complex lies the bimaristan or hospital (a charitable foundation for the medical care of the poor and an institution for teaching and practicing medicine). Al-Maqrizi relates the story behind its construction: "When al-Malik al-Mansur was on his way to fight the Rum as an amir during the reign of al-Zahir Baybars in the year 675 [1276] he fell ill in Damascus. Doctors treated him with medicines that were brought for him from the maristan of Nur al-Din al-Shahid. He was cured and rode to visit the maristan. He admired it and vowed to build a maristan if God were to award him kingship."[17] Ibn Iyas informs us of the more immediate events that led to its construction. Citing Al-Maqrizi, he writes:

> It is said that the motive behind the building of the bimaristan, which is commonly known, and the great edifice founded by Qalawun, is that he [the sultan] issued an order, of which he had a choice. A group of common people (*al-a'wām*) went against the wishes of the sultan and stoned his mamluks. The sultan was angry with them. He ordered the mamluks to kill every one of them who could be found. The sword was at work for three days and an enormous number of these people, as well as others, were killed; the good went with the bad. When the situation got out of hand, the qadis and shaykhs went to the sultan and asked him to forgive them; the sultan then ordered an end to the killing, which took the lives of many people. After it happened, the sultan regretted his action. A group of ulama ad-

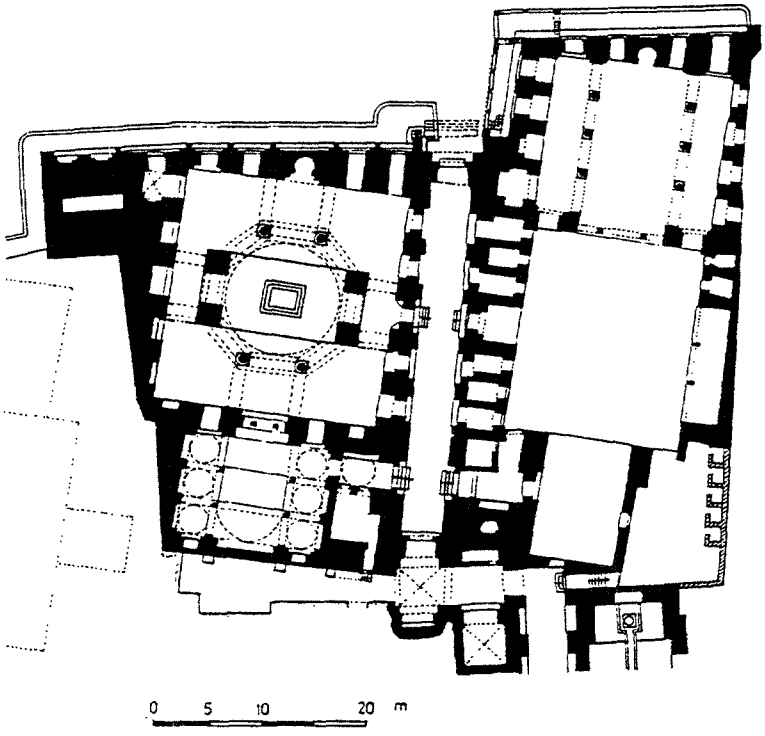

Fig. 4. Plan of the complex of Qalawun. (Plan: K. A. C. Creswell, *Muslim Architecture of Egypt*, vol. 2, fig. 108)

> vised him to engage in virtuous deeds to seek forgiveness for his conduct, so he started the building of this bimaristan. . . .[18]

The story illustrates the usefulness of sponsoring charitable foundations during the Mamluk period not only as a means of self-representation but as a way of communicating in the social discourse between ruler and ruled.

According to al-Maqrizi a long time passed before the shaykhs would agree to pray or resume their teaching in this complex because of the unjust act of expropriation, the extraction of building material, especially the fine marble pulled from the citadel of al-Rawda, and the forced labor involved in its construction.[19] The accounts illustrate some of the contributing currents—group actions, mediators, and even ideologies—that are constantly at work in the production of "social space."[20]

Almost nothing of the original bimaristan remains as documented by Coste between 1813 and 1825. As reconstructed by Herz of the Comité de Conservation des Monuments de l'Art Arabe, it had a cross-axial four-iwan plan organized around an open courtyard (fig. 5). The largest of the iwans on the southwestern side appears to have been part of the Fatimid palace.[21] An L-shaped passageway linked the courtyard to the great corridor that recalls the one in the complex of al-Salih Najm al-Din (fig. 12), which originally separated its two madrasas (only one remains today).[22] Windows and doorways ran the length of the corridor in the complex of Qalawun, providing visual and physical access to all three buildings. The symmetrical arrangement of the corridor, with the windows and doorways on the mausoleum side corresponding to those on the madrasa side, reinforced its role as a spatial unifying element and as an extension of the streetscape (figs. 6–7).

In the mausoleum an arcaded courtyard precedes the domed chamber and acts as a transitional zone between it and the corridor, reorienting the visitor toward the mihrab as he enters the tomb chamber (see fig. 4).[23] The fenestration in the qibla wall provides a visual link and a reference back to the street. The madrasa has been given similar treatment, but it is not preserved in its original form; parts of it were damaged, and others were altered during a restora-

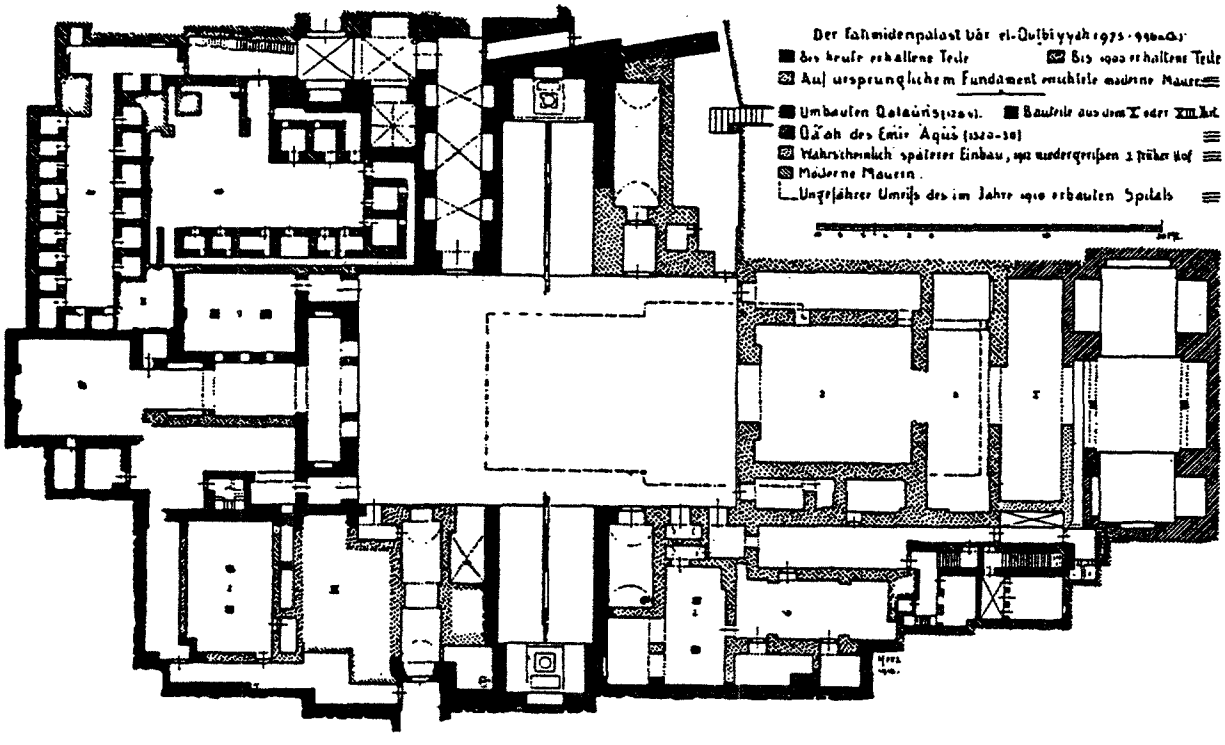

Fig. 5. Plan of the bimaristan of Qalawun by Herz. (Plan: from K. A. C. Creswell, *Muslim Architecture of Egypt*, vol. 2, fig. 124)

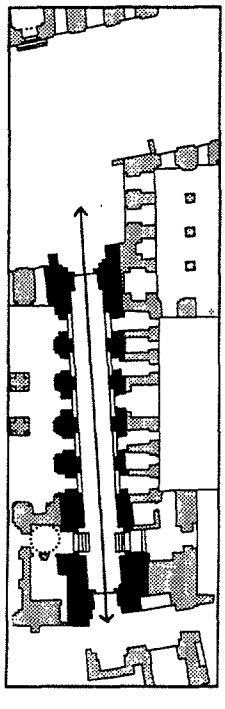

Fig. 6. Diagram of the great corridor in the complex of Sultan Qalawun.

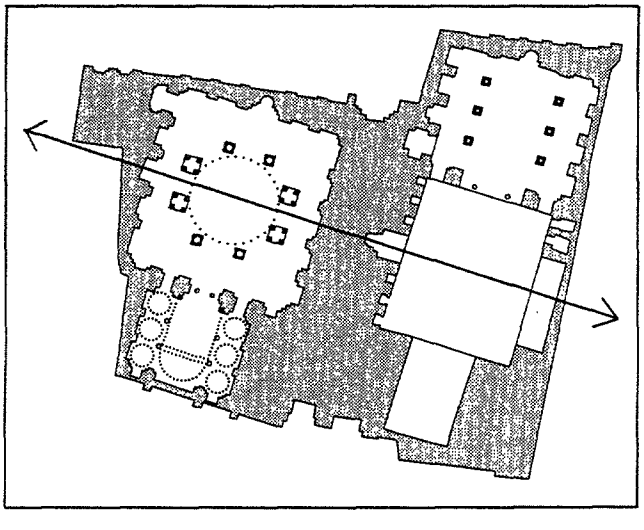

Fig. 7. Diagram showing the arrangement of the madrasa and mausoleum around the great corridor.

Fig. 8. View of the façade of the qibla iwan of the madrasa of Qalawun. (Photo: K. A. C. Creswell, *Muslim Architecture of Egypt*, vol. 2, pl. 74a)

tion carried out in the eighteenth century by ʿAbd al-Rahman Katkhuda.[24] It has a cruciform plan with four halls of unequal size. On the qibla side of the principle axis lies the mosque behind a triple-arched façade in two tiers (fig. 8). On the opposite side lies the great iwan, where the four Sunni rites were taught.[25] Additional teaching sessions—one on Qur'anic reading and fiqh and another on the hadith—were given in the mausoleum.The great corridor opens onto the street through an elaborate portal that rises to the height of the complex (fig. 9).

The façade on al-Muʿizz street unites the complex and presents it as a whole. It is articulated by arched recessed panels, which run the height of the building, framing three tiers of windows, each a distinct type.[26] On the stretch that corresponds to the mausoleum, the recessed panels rest on engaged columns with Corinthian capitals. Each panel frames three windows, except for the panel behind which lies the mihrab; it frames only one upper window and the two blind panels on the base of the minaret. To accommodate the mihrab, the bay that corresponds to it was made wider. The axis of the mausoleum has a larger window with a more elaborate frame (fig. 10). The treatment of the façade as a whole keeps this differently proportioned panel from violating the larger order. The dimensions of this panel were duplicated in a second panel to play down the inconsistency and to create a rhythmic repetition. The stretch of the façade that corresponds to the madrasa is divided into five panels treated like those on the mausoleum, except that there are no engaged columns

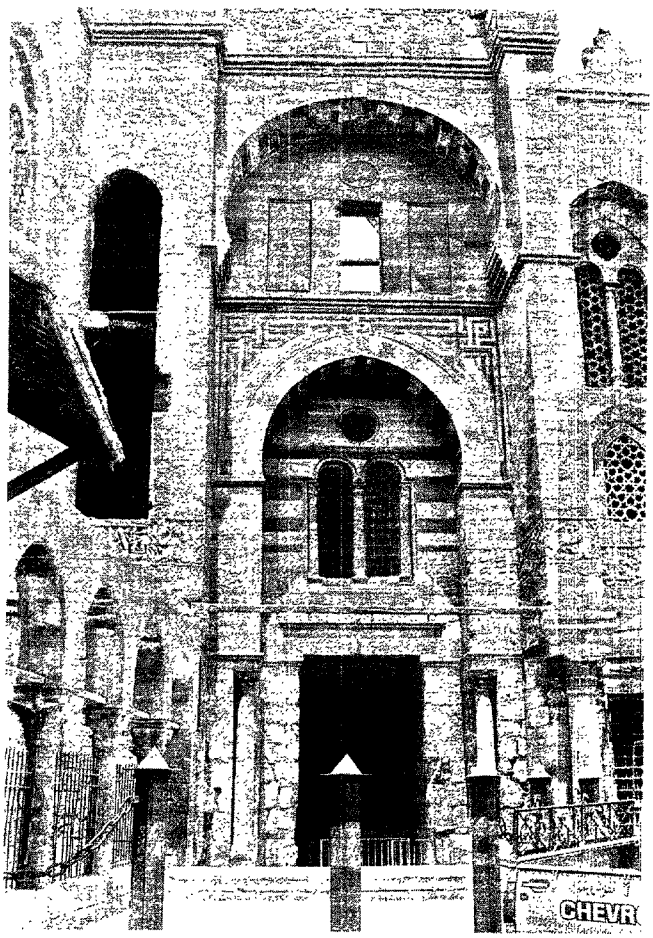

Fig. 9. The portal of the complex of Sultan Qalawun.

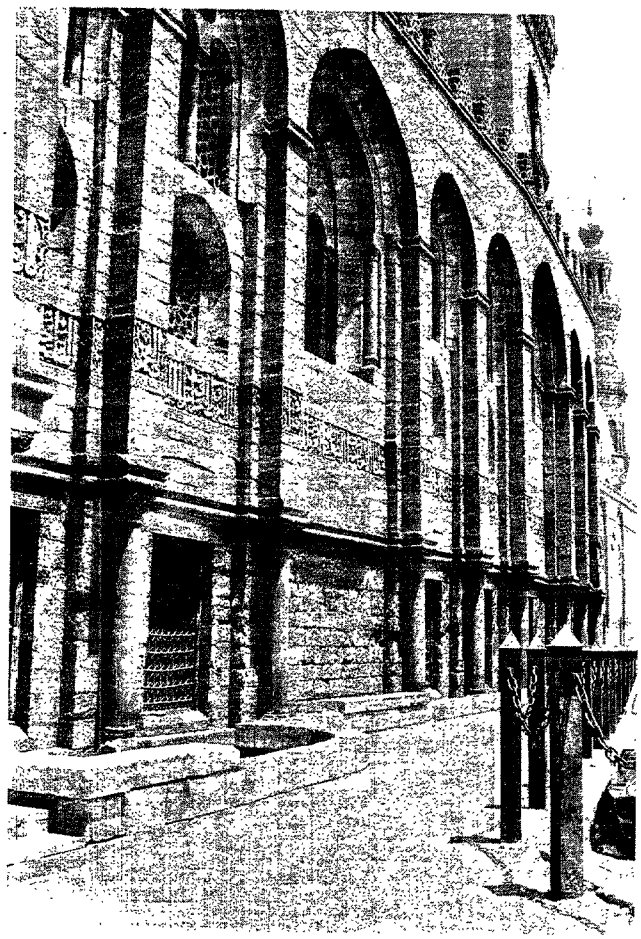

Fig. 10. The façade of the complex of Sultan Qalawun. The mausoleum section.

and the three central recesses only frame two of the three tiers of windows (fig. 11). The middle recess, behind which lies the mihrab, is blind. Above the lower tier of windows a *tiraz* band carved in stone runs the whole length of the façade. It contains the second foundation inscription with the name and title of the founder and the date of the building's completion.[27] Crowning the entire façade is a stepped crenellation decorated with a geometric pattern. The division into recessed panels was enhanced by multiple tiers of windows and accentuated by the dome with a high drum and the minaret with its three diminishing levels. This lends the facade a striking sense of verticality, a novel quality that was adopted in later buildings and eventually became typical of Mamluk façades.

After recessed panels made their first appearance on the façade of the mosque of al-Salih Tala'i' (1160),[28] the last of the Fatimid mosques to be built, they became popular features in later architectural development. Various adaptations of these panels are found in the madrasa of al-Salih Najm al-Din (1243) situated opposite the complex of Qalawun. It uses rectangular recessed panels through the entire length of the façade (fig. 12), each framing a single window, while the facade of the mausoleum of al-Salih (1250) employs keel-arched recesses.[29] The madrasa of al-Zahir Baybars (1262–63), also opposite the complex of Qalawun, has the earliest examples of stalactite recessed panels. By using the same treatment as the two façades across the street, the façade of Qalawun lends visual continuity and spatial definition to the space between them, a space that is further anchored by the minaret located at the northern end of the façade of Qalawun's complex.[30]

The portal of the complex is framed by projecting

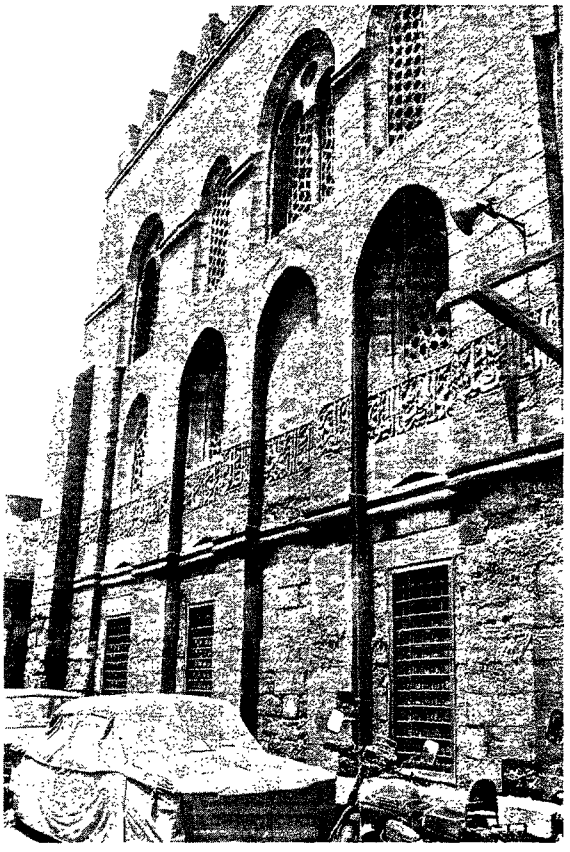

Fig. 11. The façade of the complex of Sultan Qalawun. The madrasa section.

pilasters and is set back in three layers (see fig. 9). The first contains a horseshoe arch at the upper level; the second contains a pointed arch with joggled *ablaq* voussoirs resting on two engaged columns; the third and innermost layer has a rectangular doorway above which lie two arched windows framed by three columns and surmounted by an oculus. The treatment of the portal as a succession of recessed layers achieves two effects. First, it breaks down the scale of the portal as it rises to the height of the building; second, it is an inviting gesture, generating inward visual movement and strengthening the continuity between the street and the great corridor. The entrance to the complex, instead of being the center of a symmetrical composition, is placed at the southern end of the façade of the mausoleum and emphasizes the relationship both between the masses of the complex and between it and the neighboring structures (fig. 13). The entrance portal is placed where it can form a transition between the recessed and the projected sections of the building. Recessing the entrance bay makes such a transition smoother by minimizing the sharpness of the corner angle thus generating a more dynamic movement. It was also placed opposite the entrance to the mausoleum of al-Salih to generate a zone of movement across the main avenue (fig. 14).

In the complex of Qalawun a number of signifi-

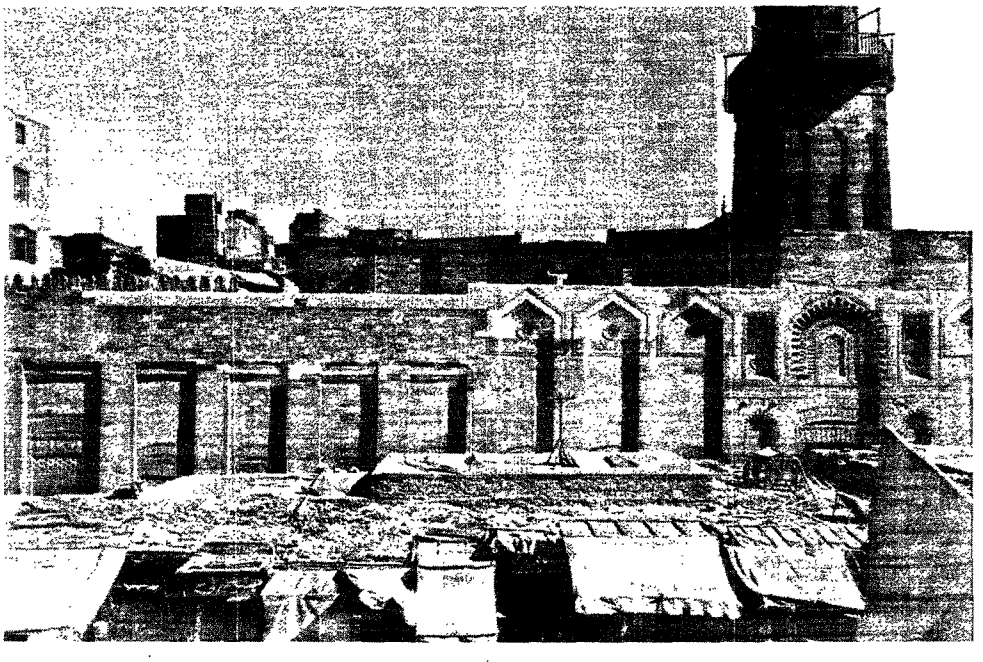

Fig. 12. The façade of the madrasa of al-Salih Najm al-Din. (Photo: K. A. C. Creswell, *Muslim Architecture of Egypt*, vol. 2, pl. 33a)

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Fig. 13. The complex of Qalawun and neighboring buildings.

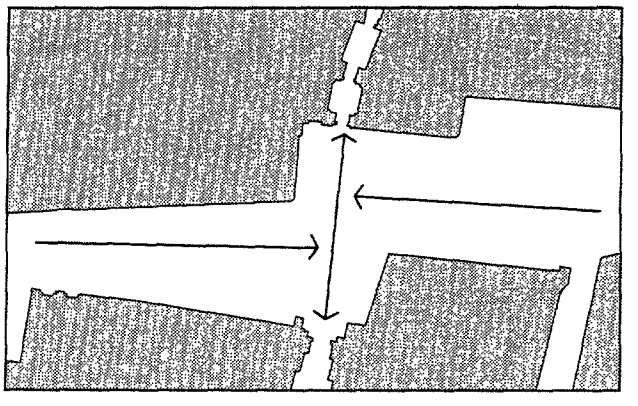

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Fig. 14. Diagram with entry points to the complex of Qalawun and the mausoleum of al-Salih Najm al-Din.

cant architectural notions, both programmatic and formal, prevail. They are key factors in the process of space production. The first is the multifunctional public urban complex, a series of which were erected by the Bahri Mamluks, beginning with that of Sultan Qalawun. Unlike their predecessors, the Mamluks did not build whole new cities, grand palaces, or great mosques[31] devoted to a single cause, military, domestic, or religious; instead they concentrated on public structures with a more complicated agenda. In the complex of Qalawun an attempt is made to integrate the madrasa with other structures, serving both the ruler and the ruled. A new orientation in public service called for a program encompassing devotional, civil, and memorial elements.[32] Along with the program of the madrasa, the bimaristan rendered public charitable services, and the mausoleum of the founder was incorporated to provide commemorative and ceremonial functions. Official ceremonies, such as taking the oath of loyalty to the reigning sultan by mamluks who were emancipated or promoted, were transferred by al-Ashraf Khalil, the son and successor of Qalawun, from the mausoleum of al-Salih Najm al-Din to that of Qalawun[33] immediately after the death of his father.[34]

By the middle of the fourteenth century, buildings evolved to integrate mausoleums, madrasas, and khanqahs, such as the madrasa-khanqah of Ahmad al-Mihmandar (1324–25).[35] Mausoleums were also attached to congregational mosques, such as the jami' of Shaykhu (1349),[36] and in the most outstanding of the multifunctional structures, the complex of Sultan Hasan (1356–61), no less than four madrasas are combined with a *sabil-kuttab*, a hospital, a mausoleum, and a congregational mosque.[37] In the complex of Qalawun, formal integration relied on the great corridor as the spatial organizing element. In later developments, however, the various architectural components were integrated into a single edifice, as in the complex of Sultan Hasan.

The urban mausolum was the second architectural type that played a part in the production of space. To restore the importance of the mausoleum, which had lost its significance and "became a symbol of conspicuous consumption,"[38] the Mamluks built them inside the city and attached them to prestigious institutions, a practice well established in Syria but new to Egypt.[39] It became a sign of respect to bury sultans in the city rather than in the cemetery. The mausoleums multiplied in number as sultans and amirs built their future burial chambers and attached them to madrasas, khanqahs and even mosques.

The first funerary structure to be introduced into the fabric of the city along its main spine had been the mausoleum of al-Salih Najm al-Din, built for him by his widow Shajar al-Durr in 1250 and attached to his madrasa (fig. 14).[40] Though it established a precedent for the inner-city mausoleum, it offered very little in the way of urban adaptation. Exposed on three sides, it was a mere transplant of the architectural type found in the cemetery. Aside from the adjustment made between the street edges and the qibla orientation, the building took little account of its setting.

During the Mamluk period the new practice became the custom. The Mamluks built burial chambers, erected them on prominent sites, and affiliated them with public institutions. By connecting the memorial for the patron with the functional program of a socioreligious institution, the orthodox practice of Islam that prohibited the building of mausoleums was to some extent circumvented. Furthermore, the mausoleum was endowed for the teaching of Islamic law and religion and the reading of the Qur'an. In form, with few modifications, the early *qubba* type developed under the Fatimids and the Ayyubids, a tomb chamber with a square plan covered by a dome raised on an octagonal drum, was still used. The dome, however, was made higher by increasing the height of the drum and using stepped squinches so as to make it more visible, given the growing density of the urban fabric. The mausoleum of Qalawun does not follow this formal typology—instead it makes a reference to the plan of the Dome of the Rock[41]—but it is highly responsive to its urban setting.

In general, tombs attached to complexes in the Mamluk period were given maximum exposure from the street by projecting the mausoleum into the surrounding space and by endowing the façade with a degree of transparency. Gaining visual dominance by projecting the mausoleum into public urban space was an idea that had been introduced when the first of the mausoleums, that of al-Salih Najm al-Din, was built. In a later example, the khanqah of Baybars al-Jashankir (1308), only the vestibule attached to the tomb chamber was projected outwards because its façade contained an element that was symbolically charged—the window brought from the Abbasid palace in Baghdad (fig. 15).[42]

The later mausoleum of al-Nasir Hasan (1356–61)

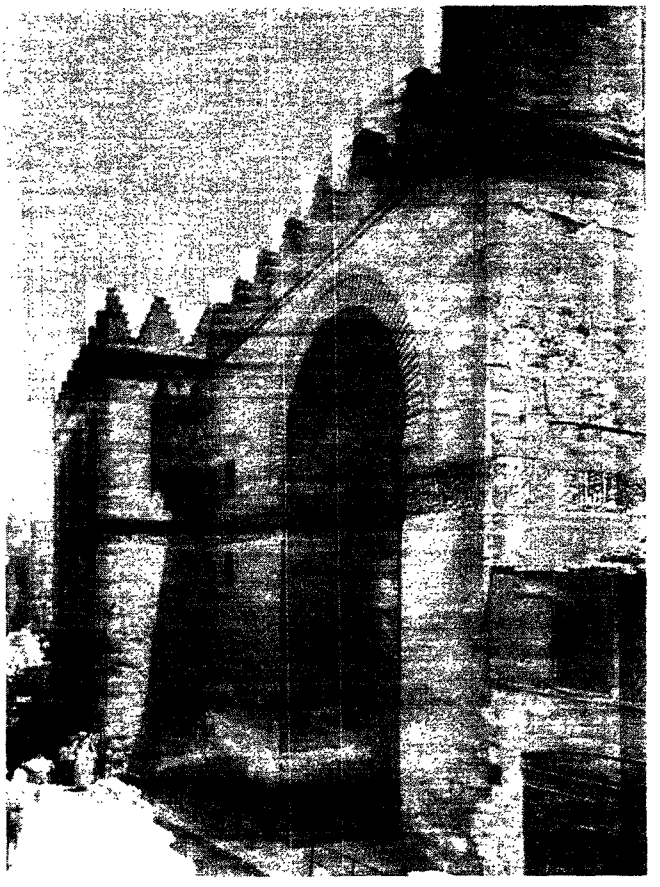

Fig. 15. View of the khanqah of Baybars al-Jashankir. (Photo: K. A. C. Creswell, *Muslim Architecture of Egypt*, vol. 2, pl. 95a)

is the boldest example. The mausoleum, behind the qibla wall, protrudes into the maydan of al-Rumaila, placing itself in visual opposition to the Citadel (fig. 16).[43] In the case of the complex of Qalawun, the volumetric dispositioning took command of the urban setting and satisfied the need for visual exposure without necessarily projecting the mausoleum outward. As a volume, the mausoleum of Qalawun was framed by the portal and the minaret, crowned by the dome, built in monumental scale, and adjusted to the direction of the street and the buildings across it.

Both of these programmatic notions—the multifunctional complex and the inner-city mausoleum—provide us with a scenario for "spatial practice," one of the three elements—the other two are "representations of space" and "representational space"—in Lefebvre's conceptual triad of determining factors, which are in a dialectical relationship in the production of space.[44] Given the location and many functions of Mamluk urban complexes, they were places of intense social interaction, both of encounter and assembly, among various social groups—students and ulama, beggars and merchants, and members of the Mamluk military elite.

"Spatial practice" leads us to understand how space was represented. The multifunctional nature of the complex made it an extension of public life on the street, while the commemorative component of the mausoleum was extended to the outside for maximum exposure. This functional and visual interaction between inside and outside rendered the buildings and their setting spatially interdependent. In turn, a number of spatial devices instrumental in the "representation of space" prevailed.[45]

The first device will be referred to as the "urban pocket"; it is a spatial pause along major spines or paths. The purpose of such an expansion was to reorient the observer, to acknowledge an entry into a building, or to generate a place of social interaction. The siting of the complex of Qalawun, the placement of significant architectural elements, and the treatment of the façade define both the form and character of this open space, or pocket, a space without boundaries of its own. The projection of the madrasa section of the complex of Qalawun into al-Muʿizz street complements the mausoleum of al-Salih and gives the space between the two complexes a sense of enclosure (fig. 14). Through contraction and expansion the building makes a clear distinction between the street and the urban pocket, but does not obstruct the flow along the path. The complementary relationship the complex establishes with the two institutions across this space is reinforced by the similar treatment of their façades, which lends the space further definition.

Efforts formally to define open spaces immediately outside buildings in order to make them urban pockets are found throughout Mamluk architecture. A good example is the jamiʿ of al-Tunbugha al-Maridani (1337–39), a mosque located on al-Tabbanah street, at a bend in the road (fig. 17).[46] It takes complete command of its urban setting. The configuration of the mosque's edge takes full advantage of the streetscape: the jagged corner of the building and the volumetric position of the portal allow the street to expand to form an urban pocket in front of the entrance. The main northeastern façade features the portal, the minaret, and the dome, which are visual-

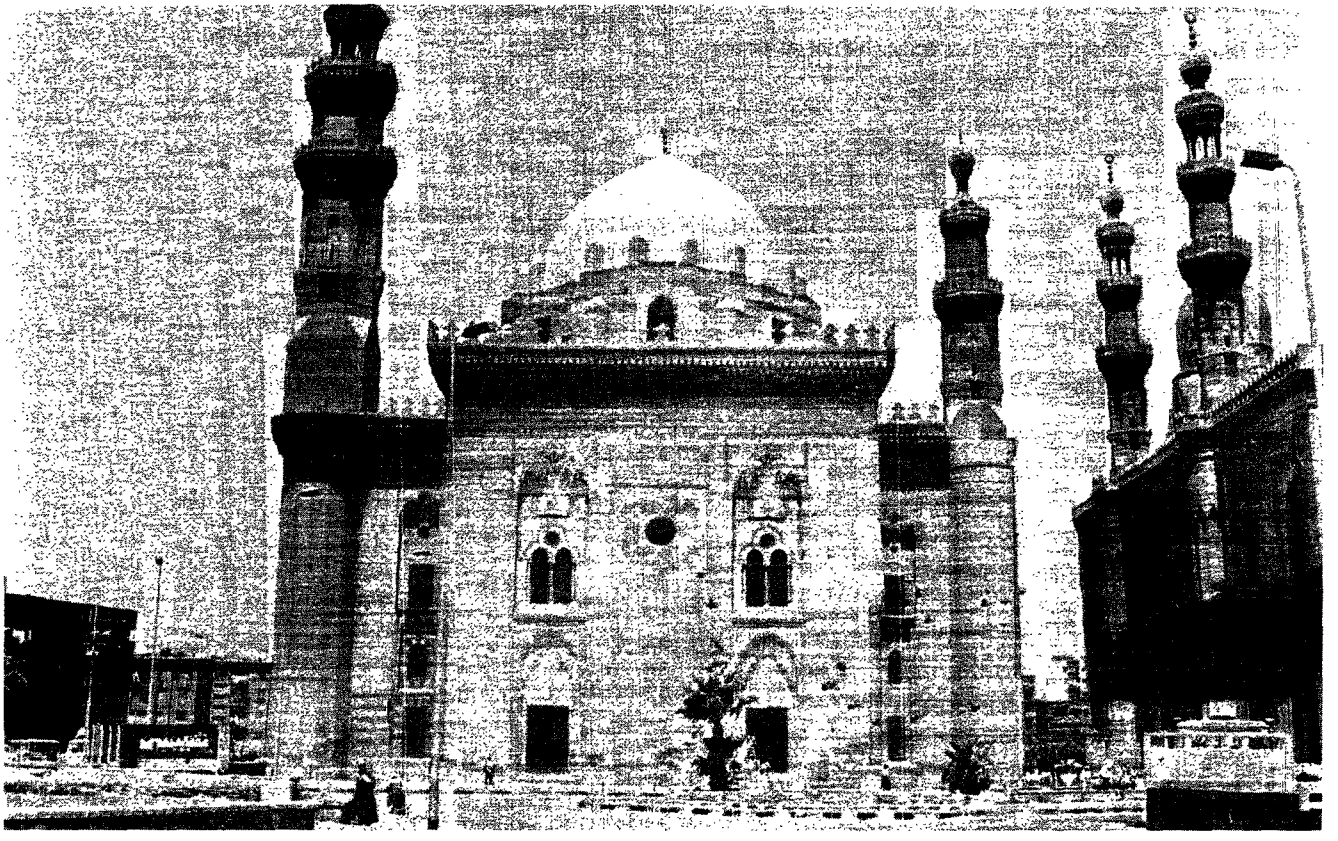

Fig. 16. The projected mausoleum of the complex of Sultan Hasan.

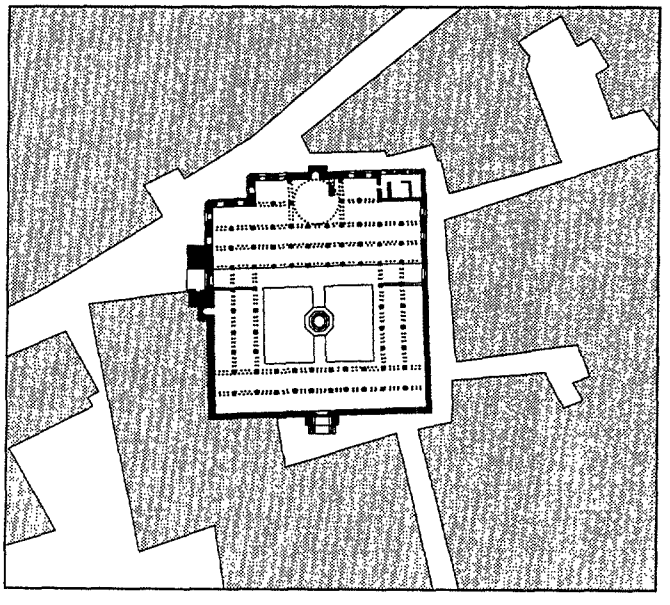

Fig. 17. The plan of the mosque of al-Maridani in context.

ly joined as one approaches the mosque to emphasize the space further. Another example is furnished by the complex of Shaykhu (1349). Its two buildings, a mosque and a khanqah, were placed opposite each other and define the edges of the street as it passes between them. The identical compositions of their façades impose a dialogue across the street, thus bringing it to a pause and generating a field of energy lateral to its own.

A second device involves the notion of transitional space. Because of the growing interdependence between interior architectural space and exterior urban space, the element of transition between the outside and the inside of a building required special attention. The degree of fluidity of the space was controlled by the transitional space, which became the single element responsible for resolving the conflict between the newly initiated urban dialogue and the privacy needed for part of the complex, in addition to its primary function of uniting the various elements of the complex.

The introverted nature of the domestic and military architecture that preceded Mamluk buildings offered a spatial experience that revealed little about the interior of the building from the outside. A building only unfolded after one reached its center. Mamluk architecture had to resolve the problem of maintaining spatial and visual continuity between the interior and the exterior essential to its multi-use urban structures, on the one hand, while, on the other, sustaining the element of surprise in the experience of the building inherent in the collective memory of the users. This task assigned a new importance to the design of transitional spaces and gave rise to a new spatial sequence composed of entries, vestibules, and corridors. Long, bent, and dark corridors were transitional devices that controlled the experience one had inside the building. At times they could be quite theatrical as they moved the visitor from one spatial realm to another. This tension may not have been fully resolved in the complex of Qalawun, but the challenge was certainly met by its successors.

Though the direct entrance into the building which was customary in Fatimid architecture was continued in such buildings as the mosque of al-Zahir (1266–69), the mausoleum of Badr al-Qarafi (1300–10),[47] the mosque of al-Nasir Muhammad at the Citadel (1335),[48] and the mosque of Ulmas (1329–30),[49] the Mamluks also developed an indirect entrance as part of the transitional space. It was either bent, as in the residential architecture of Fustat, which continued to be used in Tulunid and Fatimid houses and palaces until the Mamluk period, when it was adopted for use in socioreligious complexes, or with a transitional sequence of spaces using *durqa'as* and straight or bent corridors. The indirect type is introduced in the complex of Qalawun, where a wide corridor provides the transition from the main entrance to the entrances to the individual buildings. This option seemed appropriate, since it allowed the three components of the complex to retain their distinction. It was also used in the madrasa of al-Nasir Muhammad, which was adjacent to the complex of Qalawun.

As buildings began to integrate their various functional requirements into a single form the transitional area acquired a new role. Instead of acting as a meeting ground for the various components, its role was better defined as a transition between the street and the building, the space through which the approach of the building was controlled, noise reduced, and privacy ensured. To correspond with the multi-functionality of the building programs that included religious, civic, and domestic elements the Mamluks borrowed from military, religious, and domestic architecture, and various combinations of portal, *durqa'a* (vestibule) and *dihlīz* (corridor) were employed. The emphasis placed on portals and transitional zones may also have had a defensive purpose. These buildings were often used for refuge and protection: designed as security gates they could be reinforced by a gatekeeper around the clock.

The Mamluk entrance bay had its roots in Fatimid architecture, which emphasized the entry point and was often very elaborate. Examples are the portals of al-Azhar, al-Hakim, al-Aqmar, and al-Salih Tala'i'. During the Fatimid period the portals were placed in the center of the façade, opposite the qibla wall, on an axis with the mihrab. Before the Fatimids, entrances to mosques, such as the mosque of Ibn Tulun, were placed along the side walls and were equally treated; the entrances on the side opposite the qibla *riwāq* received no special treatment. In Fatimid architecture, the axial entrance placed on the northwestern façade and opened to the *riwāq* facing that of the qibla was made to align with the street by modifying the depth of the wall.[50] In Mamluk architecture this became both more difficult and impractical because of growing urban constraints and because of the nature of the cruciform four-iwan plan and the complexity of the functional program of the buildings.

The portal of Qalawun's complex remains unique. Though it constituted an important step in the development of the portal as a spatial unit with a role to play in the sequential transition between exterior and interior space, its formal composition was never taken up as a prototype for subsequent development. In this early period, various types were tried: one was the round-arched portal with cushion voussoirs, represented by the portal for the khanqah of Baybars al-Jashankir; another was the rectangular deep recess with dripping muqarnas used in the mosque of Ulmas. It was not until the mid-fourteenth century, that the deeply recessed portal composed of a half dome adorned by stalactites most closely identified with the Mamluks became widely adapted.

Elaborate combinations of deeply recessed portal, *durqa'a*, and *dihlīz* are found in buildings such as the khanqah of Baybars al-Jashankir and the madrasa of Sultan Hasan. What combination was used and the degree of elaboration depended on the scale of the

building and the amount of privacy its functions demanded. In the khanqah of Baybars al-Jashankir, only the vestibule preceding the mausoleum communicates directly with the street (fig. 18). The khanqah, which was an exclusive institution, maintained its distance and privacy. The transition zone begins with the urban pocket formed outside the building by the projection of the vestibule attached to the mausoleum. The spatial sequence is then picked up by the double recess of the entry portal, an inviting gesture, leading into the *durqa'a*, which is a small room symmetrically composed around its longitudinal axis. In contrast to the entry portal, it is a space for one to stop and reorient oneself. From there four doors lead to a staircase, to a small antichamber, the bent corridor of the mausoleum, and the long, dark, tunnel-vaulted corridor leading to the khanqah, lending it a sense of distance and privacy.

By contrast, the transition space of the jami' of al-Maridani is compact. Recognizing the very public nature of the congregational mosque, the need for both a direct entrance and a transitional space is masterfully resolved. A projection in the main northeastern façade contains the portal and the base of the minaret presented as a continuation of the jagged corner of the building, which is cut at an angle following the change in direction of the street. The entry portal is projected and made deep enough to create a spatial unit that allows for the transition from the street to the interior without intruding on either the internal order of the *riwāq* or the urban open space (fig. 17).

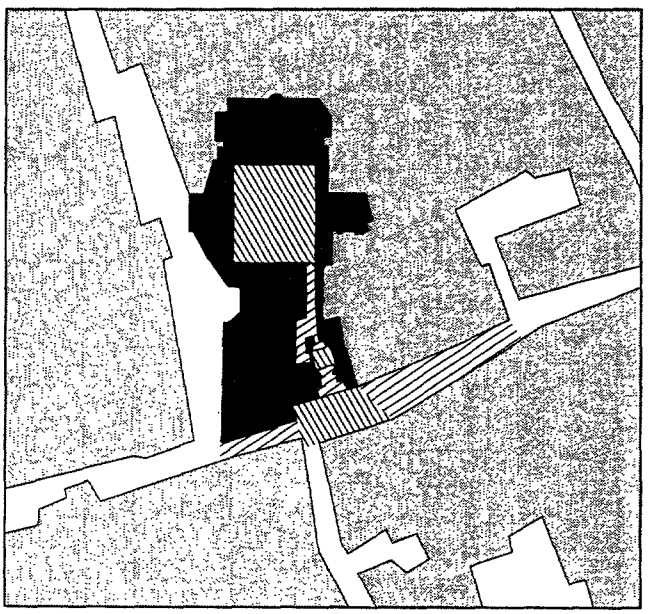

Fig. 18. Diagram of the transitional zone in the khanqah of Baybars al-Jashankir.

The most elaborate sequence is found in the complex of Sultan Hasan (fig. 19). Dark and brightly lit corridors, static and dynamic spatial units alternate to act as psychological displacements, detaching the visitor from the outside world at one moment and referring him to it in the next. This linear progression does not stop upon arriving at the great court in the heart of the building, but continues into the mausoleum to end at the qibla wall punctuated with windows that form a final visual link with the urban space beyond.

The high public profile inherent in the program of the buildings sponsored by the Mamluks and the lively public life on the streets of Cairo placed an undeniable pressure on the designer to have the building in general and its façade in particular address this relationship. The result was the third and most significant spatial device developed, the public urban façade. It was more than just the front of the building; it was an architectural element closely associated with public open spaces, such as streets and squares, that does not merely represent the physical character of the building but is also expressive and symbolic. Entry, orientation, and embellishment are its essential components. The façade is more than a device that separates inside from outside and public from private; it imparts meaning and initiates a dialogue with its immediate surroundings and with the viewer.

In Mamluk architectural development, façades evolved into a sophisticated means for addressing the urban environment and its dwellers. The idea of locating their buildings along the major arteries of the city to gain maximum exposure also emerged to reinforce the dialogue between ruler and ruled through architecture. The new urban façade was designed to increase the level of communication not only between the building and its users but also between the building and its physical environment. The building came to address the street, the neighboring buildings, and the image of the city as a whole. Though respecting and responding to most challenging urban conditions, these façades also retained their aesthetic and symbolic value.

Planning façades proved to be a challenging de-

sign task in part because of the restrictions imposed by the urban setting itself—the orientation of the street, alignment with the edges, the nature of the surrounding buildings, the direction of the qibla, and so on. These buildings were not freestanding in a generous spatial setting, but rather infills in densely built up areas; in most cases they had only a single façade. The skilled designers who took on the assignment were able to meet all its challenges and achieve a well-balanced and a well-proportioned composition. Vertical recesses punctuated by windows in many tiers were accentuated by vertical elements such as the portal, the minaret and the dome. This sense of verticality was balanced by the horizontal ablaq and inscription bands.

In the process of development, Mamluk urban façades acquired a degree of transparency that is both literal and phenomenal. It is literal in that it has a physical quality that allows for visual communication: the content of the interior of a building is partially revealed through the use of windows at street level. In contrast to the blank walls of palaces and military structures and the monumental façades articulated by blind-arched recesses that lined the streets of Cairo, Mamluk façades allowed for visual dialogue between the inner and outer space, while taking nothing away from the experience of venturing into the heart of the building. Deep window recesses were designed to accommodate the Qur'an readers assigned to recite the holy book throughout the day, and sometimes at night, which reinforced the notion of transparency and further engaged the observer in the street. The transparency here is more a phenomenal one that is a spatial quality of organization. The small spaces assigned to the readers of the Qur'an can be read either as a projection of the interior space of the mausoleum into the street or as an extension of the street into the building. This is also the case of the transitional corridors, as they belong to both spatial orders and their reading varies according to approach and experience.[51]

The façade of Qalawun exemplifies this notion of urban façade and initiates a dialogue with its urban surroundings on various levels. At one level, the composition forms a visual continuity with the façades of the madrasa of al-Salih Najm al-Din and the madrasa of al-Zahir Baybars on the other side of the street. Through the use of recessed paneling and ablaq, the urban space contained by the three buildings acquires visual coherence. In addition, the positioning of the dome of Qalawun, as far as possible from the dome of the mausoleum of al-Salih, provides the appropri-

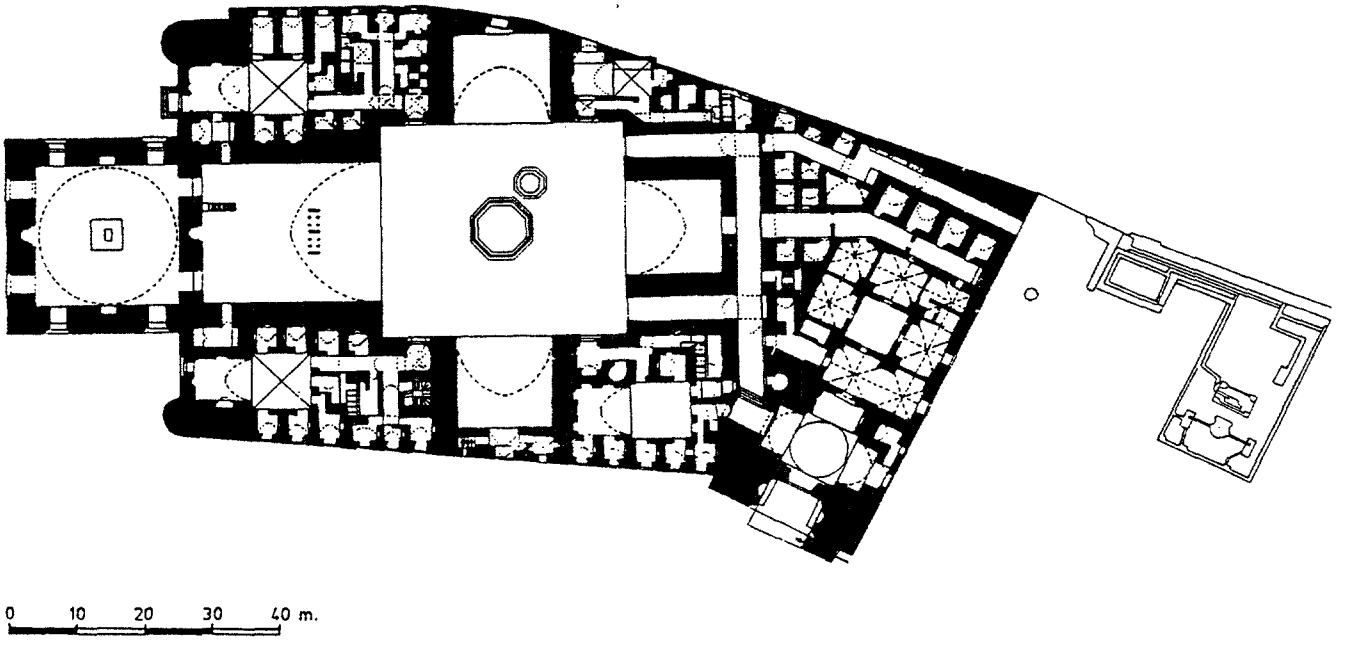

Fig. 19. Plan of the complex of Sultan Hasan. (Plan: courtesy Department of Antiquities, Egypt)

ate distance between them and diminishes any possibility for the two to clash. The diagonal placement across the open space produces a more effective visual field (fig. 20).

At another level, the layout of the façade responds to the viewing corridors as one approaches the building from different directions. Though the minaret seems not to be completely integrated with the body of the complex in the plan, its placement at the northern corner of the building is in fact well calculated (fig. 21). It is visually coupled with the dome, giving the building maximum exposure from a distance, and enhancing its presence on the street. If one approaches it from al-Muʿizz street moving northward, one sees the minaret at the farthest end of the complex. This minimizes any visual blocking that might result at the street level from the bottleneck formed by the madrasa of al-Salih and the projecting madrasa section of the complex, and places the minaret within the view framed by the two structures. Approaching from the other direction positions the minaret at the northern corner and acknowledges one of the sudden vistas generated by the irregularity of the streets and acts as a visual node.

The third level of dialogue with the surroundings is achieved through the colonnaded base of the façade where arcaded shops line the street, recognizing the functional nature of al-Muʿizz street and more spe-

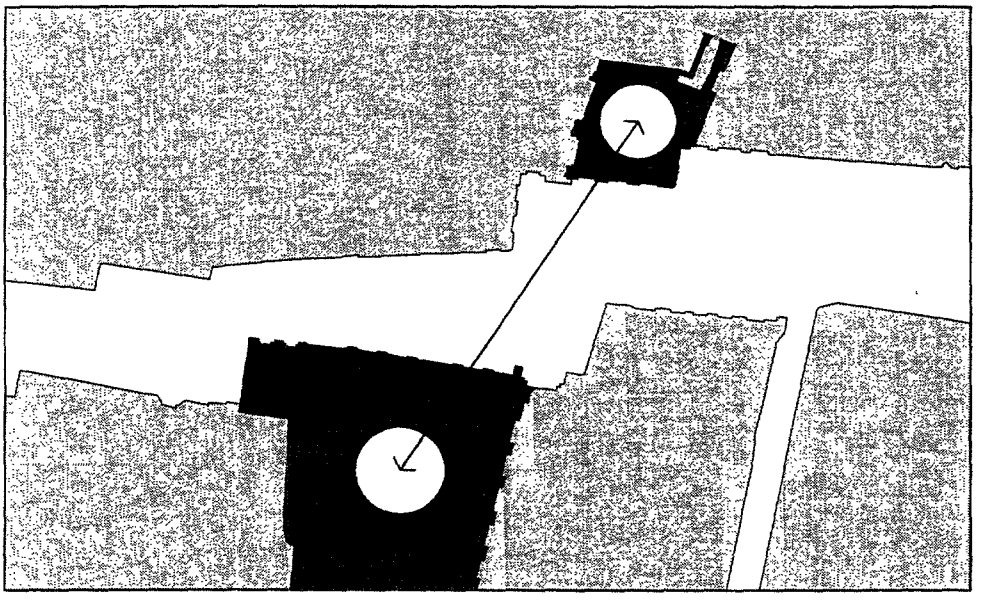

Fig. 20. Diagram of the dome of Qalawun in relation to the dome of al-Salih Najm al-Din.

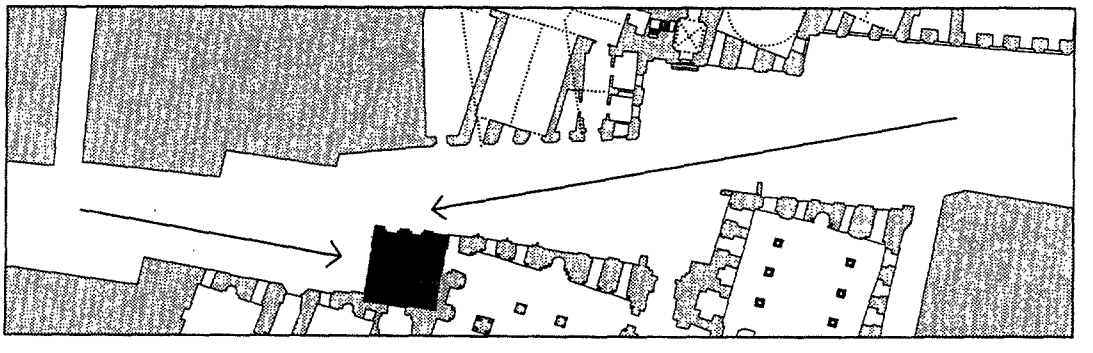

Fig. 21. Diagram of the placement of the minaret of the complex of Qalawun.

cifically the Suq al-Nahhasin in the immediate context . The façade established formal communication with both institutional and commercial structures to bridge the gap in form and scale and further to reinforce the desired continuity.

When read against the façades of earlier architecture, the façade of Qalawun's complex stands in complete contrast to Fatimid religious monuments with their self-contained formal compositions and their highly personalized symbolic content, but finds precedent in the façades of Ayyubid institutions. Unlike Fatimid monumental façades, the Mamluk façade was not regulated by axial relationships. For example, the façade of the mosque of al-Aqmar, built by the Fatimid vizier Ma'mun al-Bata'ihi in 1125, has a symmetrical[52] tripartite composition with a projecting portal at the center (fig. 22).[53] Its entrance is in a keel-arched niche decorated with a sunrise motif and flanked by two tiers of blind niches, the lower framed by stalactite recesses, the first known appearance of stalactites on Cairene façades. A blind keel-arched niche with the same sunrise motif dominates the northern section of the façade. Two bands of inscription in floriated Kufic script unite the two. The motifs and inscriptions refer to the Prophet Muhammad, Imam 'Ali, and his two sons, al-Hasan and al-Husayn, the divine light, and the legitimacy of the Imam al-Amir. It was interpreted by Caroline Williams as a statement on the legitimacy of the divinely inspired 'Alid imams.[54] In contrast, Mamluk façades ceased to be ends in themselves and began to be given a role in urban life by relating them to their surroundings. This message is not literal or direct, but implied as part of the general Mamluk social discourse and practice.

Formally, the static symmetrical façades of the Fatimid period were replaced by dynamic façades in the Mamluk city. The individual monumental façades were replaced by street façades, and the emphasis on axial symmetry gave way to an emphasis on continuity. The composition of the façade suggested continuity by off-centering portals and by the rhythmic repetition of recessed panels and other devices. This is exemplified in the façade of Qalawun when it was

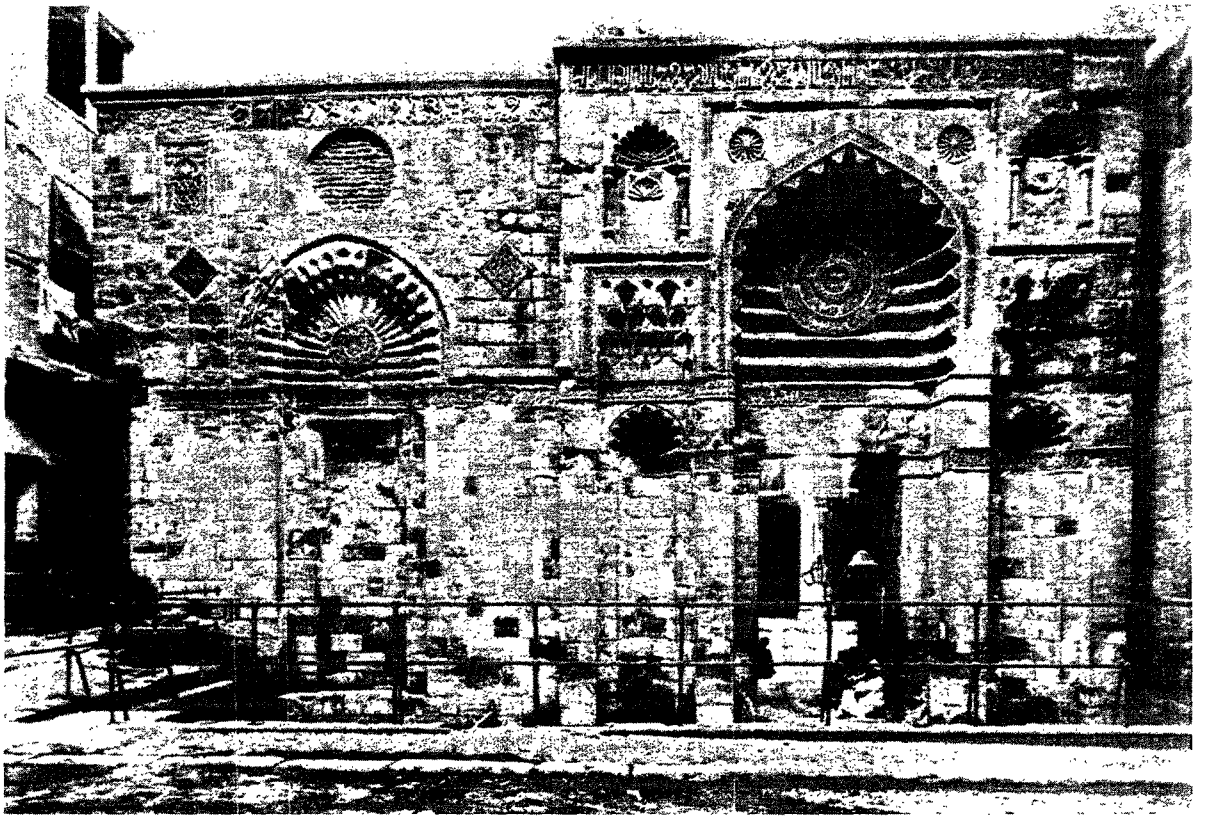

Fig. 22. The façade of al-Aqmar Mosque. (Photo: K. A. C. Creswell, *Muslim Architecture of Egypt*, vol. 1, pl. 82c)

actually carried farther by the later building of the madrasa of al-Nasir Muhammad (1295–1304) and the mosque of Sultan Barquq (1384–86) (fig. 23). The irregularities of street edges did not contradict the continuity of the façade once the concept of space was understood as fluid and activated by movement, marked by orientation pauses, and social urban pockets.

To sum up, nowhere is the concept of space in Mamluk architecture and the process of its production better detected than in Bayn al-Qasrayn in the heart of Cairo. During the Fatimid period the maydan of Bayn al-Qasrayn had been an open ceremonial space, closely identified with the two Fatimid palaces and contained by their high walls. It was a private domain, a royal space with a sacred aura. By the time construction of the complex of Qalawun was completed, it had undergone dramatic transformation. Its configuration and function had already been changed during the Ayyubid building boom and the construction of commercial and public buildings that followed. Institutions such as the madrasa of Sultan al-Kamil (1225),[55] the madrasa of al-Salih Najm al-Din (1243), the mausoleum of al-Salih (1250), and the madrasa of al-Zahir Baybars (1262–63) were built on sites that had been part of the maydan and the two palaces. These madrasas needed a prominent site to allow them to deliver the message of the new patrons—the revival of Sunni Islam—and to celebrate the defeat of the Shiʿites. Occupying open areas of the maydan or parts of the palaces, these buildings appropriated the open space, violated its sacredness, and altered its physical definition, but stopped short of dealing with the spatial repercussions, which were dealt with more fully in the building of the complex of Qalawun.

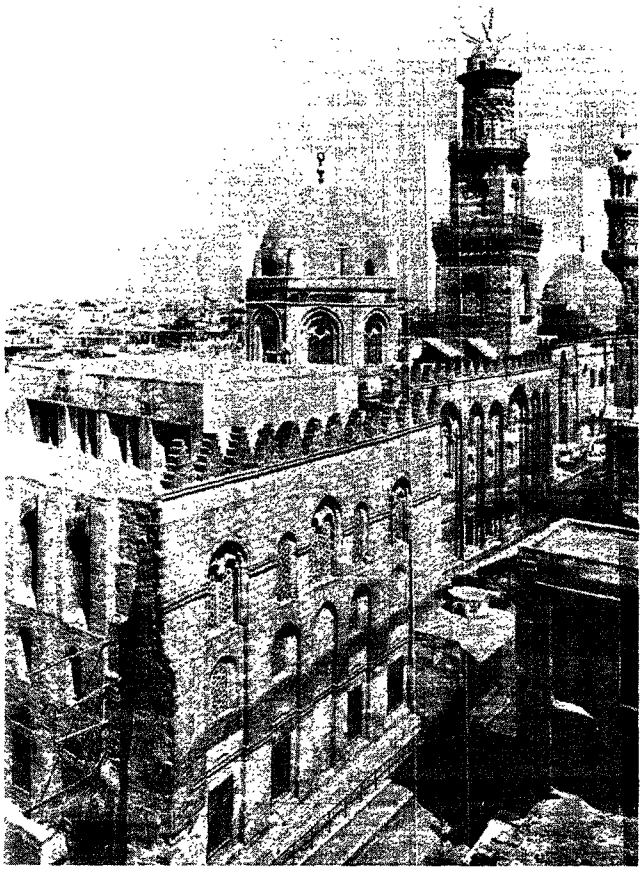

Fig. 23. The street façade of al-Muʿizz. (Photo: K. A. C. Creswell, *Muslim Architecture of Egypt*, vol. 2, pl. 64)

In the complex of Qalawun and the buildings that followed, the final product was no longer a self-contained structure that achieved monumentality by setting itself apart in a grand manner, but rather a social space in which each building was an active participant. If buildings were to gain prominence, it would be through their participation in forming the image of the city, as measured by their impact on the urban quality of their immediate context. The complex of Qalawun represented a moment in the production of a space that was urban in quality, social in function, and dynamic in nature. Spatial architectonics such as boundaries, edges, and junctions were dissolved in favor of continuity and fluidity. Mamluk space was not an entity but a set of relations between things. Thus it continued to be reproduced as more structures were built.

This brings us to the third and last element in Lefebvre's conceptual triad, "representational space,"[56] the lived space experienced through a set of associated images and symbols. The concept of social urban space was certainly most appropriate for the self-representation of the Mamluk military rulers, who were the principal patrons of these urban artifacts. The Mamluks were not members of an aristocratic social class as the Fatimids had been, nor were they dynastic military lords like their masters the Ayyubids, who had gained legitimacy by carrying the banner of Sunni Islam. Their patronage was therefore different from that of their predecessors; they did not build monuments around which a city could grow or monuments to express their legitimate rule. One looks in vain for a ceremonial space dedicated to a ruler, or a sa-

cred space dominated by a religious monument. Their slave status and their illegal succession to the throne meant that they could not present or represent themselves directly. Their political message was therefore woven into a grand scheme of public service, in which ceremonial space was combined with social space, memorial elements were placed in socioreligious complexes, and the message of the individual was turned into an elaborate social dialogue.

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NOTES

1. Henri Lefebvre, *The Production of Space*, trans. D. Nicholson-Smith (Oxford, 1991).
2. Ibid., p. 53.
3. Ibid., p. 34.
4. Ibid., p. 46.
5. For more details on the names of Cairo, see Doris Behrens-Abouseif, *Islamic Architecture in Cairo: An Introduction* (Cairo, 1989), p. 8.
6. For a more detailed description and history, see Nezar al-Sayyad, *Cities and Caliphs. On the Genesis of Arab Muslim Urbanism* (Westport, Conn., 1991), pp. 133–51.
7. From Ḥasan ʿAbd al-Wahhāb, "Takhṭīṭ al-Qāhirah wa-Tanẓīmuhā mundhu Nashʾatihā," *Majallat al-Majmaʿ al-ʿIlmī al-ʿArabī* 37 (1954–55): 2–3.
8. Al-Maqrīzī, *al-Mawāʿiẓ waʾl-Iʿtibār fī-Dhikr al-Khiṭat waʾl-Āthār*, 2 vols. (Cairo, 1853–54), 1: 365–66.
9. For more details, see al-Maqrīzī, *Khiṭat*, 1: 335–39; Władysław Kubiak, "The Burning of Miṣr al-Fusṭaṭ," *Africana Bulletin* 25 (1976): 51–64.
10. The original walls of al-Qahira, which were built by Jawhar al-Ṣiqilli, were restored by Badr al-Jamali, governor of Acre, who extended the enclosure to the south and the north and rebuilt the gates of Bab Zuwayla, Bab al-Nasr, and Bab al-Futuh in 1087-92. See al-Maqrīzī, *Khiṭat*, 1: 377–80.
11. Janet L. Abu-Lughod, *Cairo: 1001 Years of the City Victorious* (Princeton, N. J., 1971), pp. 27–36.
12. Al-Maqrīzī, *Khiṭat*, 2: 110.
13. Ibid., 1: 363.
14. Quoted by Gaston Wiet in *Cairo: City of Art and Commerce* (Norman: University of Oklahoma Press, 1964), p. 63.
15. K. A. C. Creswell, *The Muslim Architecture of Egypt* (henceforth *MAE*), 2 vols. (Oxford, 1952–59), 2: 190–212.
16. This was the *qāʿa* of Sitt al-Mulk bint al-ʿAziz Billah, the sister of the Fatimid Caliph al-Hakim bi Amr-illah, which was later owned by the Ayyubid prince Qutb al-Din Ahmad ibn al-Malik al-ʿAdil and was named al-Dar al-Qutbiyah. It remained in the family until it was inherited by Princess Muʾnisah al-Qutbiyah. The *qāʿa* was taken from Muʾnisah Khatun by al-Mansur Qalawun who was given Qaṣr al-Zumurrud in compensation in Rabīʿ al-Awwal 683 (see al-Maqrīzī, *Kitāb al-Sulūk li-Maʿrifat Duwal al-Mulūk* [Cairo, 1934–71], 1, 3: 716; al-Nuwarī, *Nihāyat al-ʿArab fī Funūn al-Adab*, 31 vols. (Cairo, 1924–90), 29: 283; Ibn al-Furāt, *Tārīkh al-Duwal waʾl-Mulūk* (Beirut, 1939–86), 7: 278.
17. Al-Maqrīzī, *Khiṭat* 2: 406.
18. Ibn Iyās, *Badāʾiʿ al-Ẓuhūr fī Waqāʾiʿ al-Duhūr*, 3 vols. (Cairo, 1982–84), 1, 1: 354.
19. Al-Maqrīzī, *Khiṭat*, 2: 406.
20. For a detailed discussion of the concept of social space, see Lefebvre, *Production of Space*, pp. 68–168.
21. See Creswell, *MAE* 2: 209.
22. See Creswell's reconstruction of the complex in ibid., 2: 98.
23. Amal al-ʿUmari reconstructed the original form of this area prior to the alterations by ʿAbd al-Rahman Katkhuda. Relying on the descriptions of the original form by al-Maqrīzī and al-Jabarti, she concluded that the space was designed in a fashion similar to that of the mausoleum and that the four columns that remain today once supported a dome, which was demolished, together with that of the mausoleum by ʿAbd al-Rahman Katkhuda, in 1760. See A. al-ʿUmarī, "Dirāsah Jadīdah ʿalā Dharīḥ al-Manṣūr Qalāʾūn bil-Naḥḥāsin," *Dirāsāt al-Āthārīyah al-Islāmīyah*, 3 (1988): 48–61.
24. Ḥasan ʿAbd al-Wahhab, "ʿAṣr al-Mamālik al-Baḥriyyah: al-Manṣūr Qalawun," *al-ʿImārah* 3, no. 2 (1941): 89.
25. Al-Maqrīzī, *Khiṭat* 2: 380.
26. Creswell traces this arrangement to Sicilian palaces of the Norman kings through North Africa into Egypt. *MAE* 2: 198–201.
27. The first foundation inscription is the one located above the entrance. The inscription was recorded by Max Herz; see Herz-Pasha, "Die Baugruppe des Sultans Qalaun in Kairo," *Abhandungen des Hamburgischen Kolonialinstituts* 42 (1919): 47–50.
28. Creswell, *MAE* 1: 283.
29. For a detailed description of the façade of the madrasa of al-Salih Najm al-Din, see Creswell, *MAE*, 2: 94–96, and Behrens-Abouseif, *Islamic Architecture in Cairo*, pp. 89–90.
30. The minaret was rebuilt by al-Nasir Muhammad in 1303 after the upper portion fell in an earthquake; see Creswell, *MAE*, 2: 194–95.
31. In Cairo, for a period of a century and a half (1160–1311), only one great mosque was built, and that was the Great Mosque of al-Zahir Baybars north of the walled city of al-Qahira in 1266–69. In contrast, during the second reign of al-Nasir Muhammad, over thirty of them were built. For a discussion of this shift in patronage, see Howayda Al-Harithy, "The Patronage of al-Nāṣir Muḥammad ibn Qalawun, 1310–1341," *Mamluk Studies Review* 4 (2000): 219–44.
32. Categories proposed by Ruskin in *The Seven Lamps of Architecture* (New York, 1852), p. 16.
33. Robert Irwin, *The Middle East in the Middle Ages: The Early Mamluk Sultanate 1250–1382* (London, 1986), pp. 44 and 105.
34. Al-ʿAynī, *ʿAqd al-Jumān*, Dār al-Kutub: ms. no. 1584, *Tārīkh*, vol. 21.
35. Creswell, *MAE*, 2: 273–74.
36. Behrens-Abouseif, *Islamic Architecture in Cairo*, pp. 116–19.
37. Max Herz, *La Mosquée du Sultan Hasan au Caire* (Cairo, 1899).
38. Oleg Grabar, "The Earliest Islamic Commemorative Structures," *Ars Orientalis* 6 (1966): 41.
39. According to Christel Kessler, seventeen madrasa-mausoleum complexes dating before 1250 remain standing in Damascus and Aleppo. See Christel Kessler, "Funerary Architecture of

the City," *Colloque International sur l'histoire du Caire, 27 mars–5 avr. 1969* (Cairo, 1972), p. 259.

40. Though the Fatimids buried their dead inside the city, the tomb chambers remained part of the private domain of the palace. Major commemorative structures were built in the Qarāfa; see Caroline Williams, "The Cult of ʿAlid Saints in the Fatimid Monuments of Cairo, Part II: The Mausolea," *Muqarnas* 3 (1985): 38–60.
41. R. Stephen Humphreys, "The Expressive Intent of the Mamluk Architecture of Cairo: A Preliminary Essay," *Studia Islamica* 35 (1972): 117; and Michael Meinecke, "Mamluk Architecture: Regional Artistic Traditions: Evolution and Interrelations," *Damaszener Mitteilungen* 2 (1985): 169–70.
42. Maqrīzī, *Khiṭaṭ,* 2:416; Creswell, *MAE* 2: 251. For a more detailed discussion of the Abbasid window, see Leonor Fernandes, "The Foundation of Baybars al-Jashankir: Its Waqf, History, and Architecture," *Muqarnas* 4 (1987): 22–23.
43. For further analysis and interpretation, see Howayda Al-Harithy, "The Complex of Sultan Hasan in Cairo: Reading between the Lines," *Muqarnas* 13 (1996): 68–79.
44. Lefebvre *Production of Space,* 33, 38–39, and 245–46.
45. It is perhaps useful to clarify here that Lefebvre's notion of representation of space is about how space is conceived by scientists, urbanists, and planners, for which he acknowledges exceptions. The use of this notion in the context of Mamluk architecture assumes a master thinking instead of a master plan, a quite conscious set of roles and signs that are inherent in the architectural practice and system of patronage.
46. Behrens-Abouseif, *Islamic Architecture in Cairo,* pp. 113–15.
47. Creswell, *MAE* 2:265–66.
48. Behrens-Abouseif, *Islamic Architecture in Cairo,* pp. 108–10.
49. K. A. C. Creswell, "A Brief Chronology of the Muhammadan Monuments of Egypt to A.D. 1517," *Bulletin de l'Institut français d'archéologie orientale* 16 (1919): 95.
50. Kessler, "Funerary Architecture within the City," p. 263.
51. The concept of phenomenal transparency was developed by Rowe and Slutzky in their analysis of LeCorbusier's villas, see Colin Rowe and Robert Slutzky, *Transparency* (Boston, 1997).
52. Later building has hidden the part of the façade to the right of the portal. In the original plan the portal was centered, and there was no minaret. The existing minaret is a result of later restorations.
53. Behrens-Abouseif, *Islamic Architecture in Cairo,* pp. 72–74.
54. Caroline Williams, "The Cult of ʿAlid Saints in the Fatimid Monuments of Cairo. Part I: The Mosque of al-Aqmar," *Muqarnas* 1 (1983): 37–52.
55. Built by al-Malik al-Kamil Muhammad ibn al-Malik al-ʿAdil Abi-Bakr, the fifth Ayyubid sultan to rule Egypt, between 1218 and 1238. Its endowment was devoted to the teaching of the hadith. It ceased to function as a madrasa in 1403 but continued to function as a jamiʿ. See Ibn Iyās, *Badāʾiʿ al-Ẓuhūr,* 1,1: 264; al-Maqrīzī, *Khiṭaṭ,* 2:375; ʿAlī Mubarak Bāshā, *al-Khiṭaṭ al-Tawfīqīyah li-Miṣr al-Qāhirah wa Mudunihā wa Bilādiha al-Shāhirah,* 7 vols. (Cairo, 1888), 5: 201.
56. I use the term "representational space" with the full awareness that Lefebvre used it only in a modern context, in which planning agencies operate as the decision-making agents with a long-term planning agenda. Here I interpret the notion to be equally applicable in the context of the Mamluks as patrons of large-scale public projects with commitment to an urban plan that served their political agenda.