

UPGRADING OF THE  
GAMALIYA QUARTER  
CAIRO, EGYPT

ARCHITECTURAL ASPECTS

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DR. YEHIA M. ELZEINI

NOVEMBER, 1983



THE ARAB BUREAU FOR DESIGN  
AND TECHNICAL CONSULTATIONS

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## INTRODUCTION

The historic city of Cairo covers an area of approximately 8 by 4 kms. situated on the eastern bank of the Nile, surrounded by the vast modern extensions of the residential and commercial quarters of Greater Cairo. Within the historic city, the Fatimid AL-KAHIRA intramural represents a nucleus of a unique urban entity highly marked by both the quantity and quality of its monuments. Most of the registered historical monuments dating from the foundation of AL-KAHIRA in 969 to the mid-19th century are located within this area. They were for the last time registered in 1951 in the "Index to Mohammadan Monuments in Cairo, 1951" and it is high time to update this register to bring out the real picture of the actual (rather) deplorable situation.

Nevertheless, the architectural wealth of medieval Cairo is still a living reality due to the existence of important areas of the original urban fabric that has shaped its physical environment. Moreover, the functions of many of the historic buildings, especially the religious ones, are respected. In a remarkable unbroken sequence, nearly all periods of architectural development can be traced. The Fatimid nucleus of AL-KAHIRA embraces the biggest cluster of medieval monuments to be found in one city throughout the Islamic World. Its historic urban fabric stood undisturbed, to a remarkable extent, by the changes of the modern city extensions, and has retained much of its medieval character due to a consistent architectural style and an urban planning of great refinement.

Throughout the Middle Ages AL-KAHIRA has always been a leading political, cultural and commercial centre. Due to the ambitious architectural projects of its aristocratic patrons, it has always attracted masterbuilders, artists and craftsmen of other Islamic countries. Decorative styles and building techniques of other regions were adapted to the local taste and assimilated into the highly developed Cairene architectural tradition and thus adding to its aesthetical perfection.

To mention only two significant features of the medieval Cairene monuments, one can cite firstly the advanced technique of stone architecture with its beautiful decorative elements, represented in elaborate facades of religious or secular buildings and especially the sophisticated domes, minarets and monumental entrances. Secondly, the variety and richness of the inner architectural arrangements and the high quality of interior design represented by stucco decorative elements, lavishly applied marble incrustations, veneered or gilded woodwork, etc.

It must be noted that the interest and the importance of the medieval Cairene architecture stems out of the fact that every single monument has to be appreciated both for its outstanding value as a solid piece of art and for its role and significance within the urban context.

1. CONSTANCY, TRANSPOSITION AND CHANGE IN CAIRENE HISTORICAL ARCHITECTURE

There has always been a sense of continuity in the Medieval Cairo layout and respect for the existing urban fabric. Throughout the successive centuries, even with changing dynasties and rulers, Medieval Cairo has only known subtle developments which took great care to preserve its character, to add to its architectural values and respect its design principles. The constancy of Medieval Cairene architecture was thus retained, even during Napoleon's campaign to Egypt in 1798 bringing the country into sudden contact with European cultural forms and patterns.

No change or significant effect had taken place on the mighty old city. On the contrary, the works of the campaign's French scholars, including field surveys, registration, description and analysis, all handled with great care, revealed the admiration of the invaders for the quality and authenticity of the cultural forms and patterns of Medieval Cairo.

It is only with the advent of the 19th century, during the reign of Mohammed Ali and his followers, that Medieval Cairo had to undergo the operations of transposition and change up to this date.

For some time, Cairo was granted and embellished by more constructions. The new buildings followed traditional types in plans and layouts, but in some cases European decorative elements of baroque and rococo styles were introduced in the facades. Although these motifs were alien to the traditional practice, some European archaeologists find that they added a sort of picturesque touch to the subtle aspect of the roads.

It is only in the time of Khedive Ismail (1863-1870) that many drastic measures were introduced. The projects of controlling the Nile River, started by Mohamed Ali's delta-barrage, continued and many others were constructed, together with canals for irrigation to enlarge the cultivated land. Consequently, the ponds and marshland that hitherto hindered the growth of the city towards the west were reclaimed and developed. Since some of these ponds and marshes happened to lie in the adjacent areas of Medieval Cairo, their reclamation produced land for the construction of new quarters and it became necessary to connect the new extensions with the old nucleus. This was the beginning of the deplorable problems of transposition.

One of the first important operations of breaking-through was the execution of Al-Muski street, which by cutting a straight line from west to east up to the marketplace near Al-Azhar mosque, reduced the former main spine Al Muizz Li-Din Allah to a secondary road.

After creating a new centre for Cairo's extensions on a vast area reclaimed on the previous pond of Azbakia, Khedive Ismail built his famous opera house with the beautiful

Azbakia gardens adjacent to it. He wanted to create a connection between Saladin's citadel where Mohamed Ali raised his impressive mosque and the new Opera Square. An important wide artery with straight axe, arcaded platform like the Parisian Rue de Rivoli-Haussman style, was laid out and executed.

This transposition of European street planning caused the destruction of many historic buildings and deplorable change in the Medieval Cairene urban fabric. Consequently, many traditional cul-de-sac were pierced through to connect the lanes to the adjacent main roads which caused the reversion of the situation and layouts of the 14th to the 18th centuries.

In the late 1920's, Al-Azhar Street was laid out cutting through a part of the historic urban fabric giving place for (modern) housing and commercial buildings to be built along its sides. Bringing an infernal heavy motor traffic to the historic Medieval Cairo, this new street cuts the historic nucleus in half and the famous spine of Al Muizz Li-Din Allah is no more a dominant artery.

The change caused by the continuous loss of the historic urban fabric, is underlined by the area clearing measures connected with the execution of Al-Azhar Street that ended by the creation of Al-Azhar Square in the fifties. This spacious and rather out of scale square is actually bordered by buildings in a pseudo-Islamic style and serves partly as a parking lot for the adjacent market.

The loss of the historic urban fabric is also regretfully illustrated by the destruction of the Hush-Utay, formerly a spacious multi-purpose complex combining commerce and residence which gave way under an operation of transportation of a (modern) housing scheme alien to the historic quarter. Also the need for schools for the new settlers was solved on the account of two historical buildings which were not well preserved. Two purely functional school buildings without any architectural value were built in place of the former ruins of Wakalat Qusun (1341) and Wakalat Abbas Aga in the sixties.

The changes to the physical aspects and conditions of the Medieval Cairene urban fabric and architecture were also a logical result of socio-economic and socio-cultural alterations in the quarter's population. As a matter of fact, the Fatimid nucleus of Cairo had undergone successive phases of modern decline.

A period of depopulation and decay started with the advent of the 19th century. When the City of Cairo started to extend to the west and north and many newly erected centres, the aristocratic patrons of the Old City began to move away. Their immigration to the new quarters was followed by the degeneration of the housing stock, many of which were pulled down, only to spare commercial premises at the street level.

Once the palaces and large family houses disappeared, a new wave of overpopulation came by the first decade of the 20th century. However, the original old city plan has been somewhat preserved by the system of Waqfs which does not allow for property to be sold or transacted. Recently, though, this system has been abolished in many areas, and the ownership of these large buildings is now divided among numerous beneficiaries, the share of each one, being in most cases too small to build a courtyard house in traditional style, has caused the successors to now build instead (modern) extrovert apartment houses in accordance with actual municipal bylaws and regulations, thereby disfiguring the historic nucleus of Cairo. In this deplorable state of things, the already low social level declined more and more. The extra loads and consumption of the decayed public utilities and services affected not only the state of the historic urban fabric, but also that of the preservation of the surviving monuments.

As every historical building, religious or secular, was originally conceived and erected to serve the various needs of the Medieval Cairo population and to fit functionally and physically in the urban context, all those changes enforced by the advent of modern times, as previously outlined, affected badly the state of the whole historic Medieval Cairo.

## 2. PRESENT CONDITIONS

If the area of Medieval Cairo is taken into consideration as an entity, the physical survey shows that about 80% of the built fabric could actually be considered slum areas, 14% of low-medium condition and 6% of medium condition built along Al-Azhar Street and Helmia Elguidida Quarter. Concerning the building heights, they are classified as follows:

- About 23% one floor high
- " 15% two floors high
- " 22% three " "
- " 23% four " "
- " 9% five " "
- " 5% more than five floors high

Buildings of this later group are generally clustered along the main streets surrounding the historic quarter and the main squares.

The public buildings cover about 7% of the built area (nearly 45 feddans). These include central buildings serving Cairo as a whole, namely the Central Security Department, Cairo High Court, Al-Azhar Central Administration Building, a part of the new Al-Azhar campus. In addition to these, there are some schools, medical and social services and food co-operative outlets.

Concerning the study area in the northern part of the Fatimid nucleus of Cairo within the Gamalia quarter, the sample survey conducted by the Arab Bureau points out the following results:

- 23.2% of the buildings are in good condition, 34% in medium condition and 42.8% in bad condition. It was also observed that about 0.3% of the buildings were abandoned while more than 5.5% were not completed.

Concerning the building heights, they are classified as follows:

- About 52.2% - one to two floors high
- " 35.2% - three to four floors high
- " 12.6% - five floors or more.

The results of the sample survey for the use of the buildings points out that:

- About 36% are residential
- " 30% are commercial
- " 13% are industrial or for crafts
- " 11% are residential/commercial
- " 7% are commercial/industrial
- " 3% are industrial/residential



About 0.5% of the buildings are used for administration, and about 1.5% are not used.

This partial area of Gamalia Quarter is granted with more than ten historic buildings:

- Bab Al Futuh (1087)
- Bab Al Nasr (1087)
- A part of the Fatimid wall (1084)
- Al Hakim Mosque (1013)
- Wakalat Ashraf Quaitbay (1481)
- Wakalat Qusun (1341)
- Kuttab of the Waqf of Auda Pasha (1673)
- Al Seheimy House (1648-1796)
- Monastery of Baybars Al-Gashankir (1310)
- School of Qara-Sunqur (1300)
- School of Kadi Abd el Bassit
- House and Sabil/Kuttab of Suliman Aga (1839)

All these historic monuments are actually in variable states of preservation. There are practically no more historical palaces or houses or other secular buildings than those mentioned in the defined study area. The rest of the old ruins were transferred into warehouses or workshops to satisfy the changing needs of the quarter's population, even if some still preserve parts of their original facades.

The description and detailed analysis of the above-mentioned historic monuments are being treated in another section of this general report.

### 3. VALUES AND DESIGN PRINCIPLES IN ARCHITECTURE OF MEDIEVAL CAIRO

Whatever may be the evaluation of the actual state of the major part of the built fabric of this part of Gamalia quarter, especially from the architectural point of view, it is still very clear to identify the basic design concepts, both in town planning and in historic buildings. The thorough survey, study and analysis are of great help and are applicable to any eventual rehabilitation or development projects. The value of these design concepts stems out of their authenticity and truth, reflecting climatic conditions, social traditions, cultural heritage and the quality of life.

The architectural elements or the vocabulary of the architectural composition are the logical produce of those basic design concepts. The interaction between all these factors and elements insures the continuity of this good architecture and the preservation of the historic identity of Medieval Cairo.

It is encouraging to remark that the revival of the values and design principles in the Islamic architectural heritage is actually a favorite topic for research and discussion among interested specialists and multi-disciplinary groups connected to human heritage studies.

All those concerned by conservation issues and problems ask for continuity, and not for isolated well-preserved monuments or "islands of tradition" deprived of any social context.

The respect of human scale for domestic buildings and monumental scale for public buildings, and the spatial hierarchy within the historic urban fabric are basic rules. The winding street pattern with closed vistas leading to cul-de-sacs or open spaces ensures not only temperature regulation but also enforces the traditional patterns of social communication.

The hierarchy of spaces imposes the scale of the individual buildings, ranging from two to five floors, according to every specific site and extent of the plot.

Planning of the access to buildings, the ratio of openings to solid surfaces of facades, the inner courtyard as a basic design element for private or public buildings, the exterior finishing materials and tones of color schemes, all such detailed studies are required to ensure the harmony of new designs, when implemented, with the particular spatial quantities of the action area.

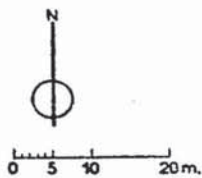
No doubt that this subject needs to be treated in a more elaborate and comprehensive way, which is not the case in this preliminary report. Nevertheless, we find it useful to mention some of the well-known values and design principles in the original architecture of the Fatimid nucleus of Medieval Cairo. They are briefly outlined and sketched hereafter to highlight their points of interest.

4. DRAWINGS, SKETCHES AND ANALYSIS

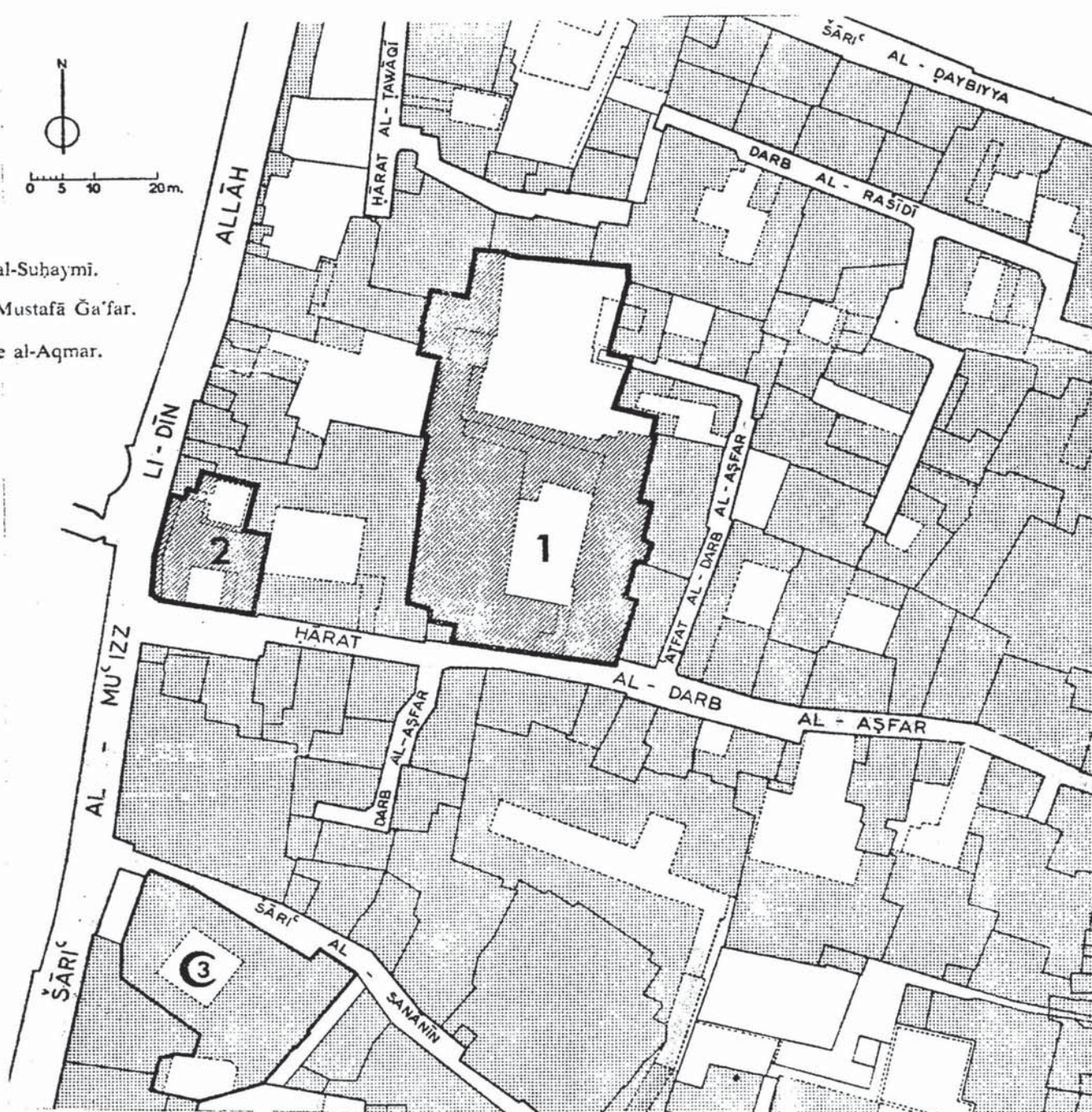
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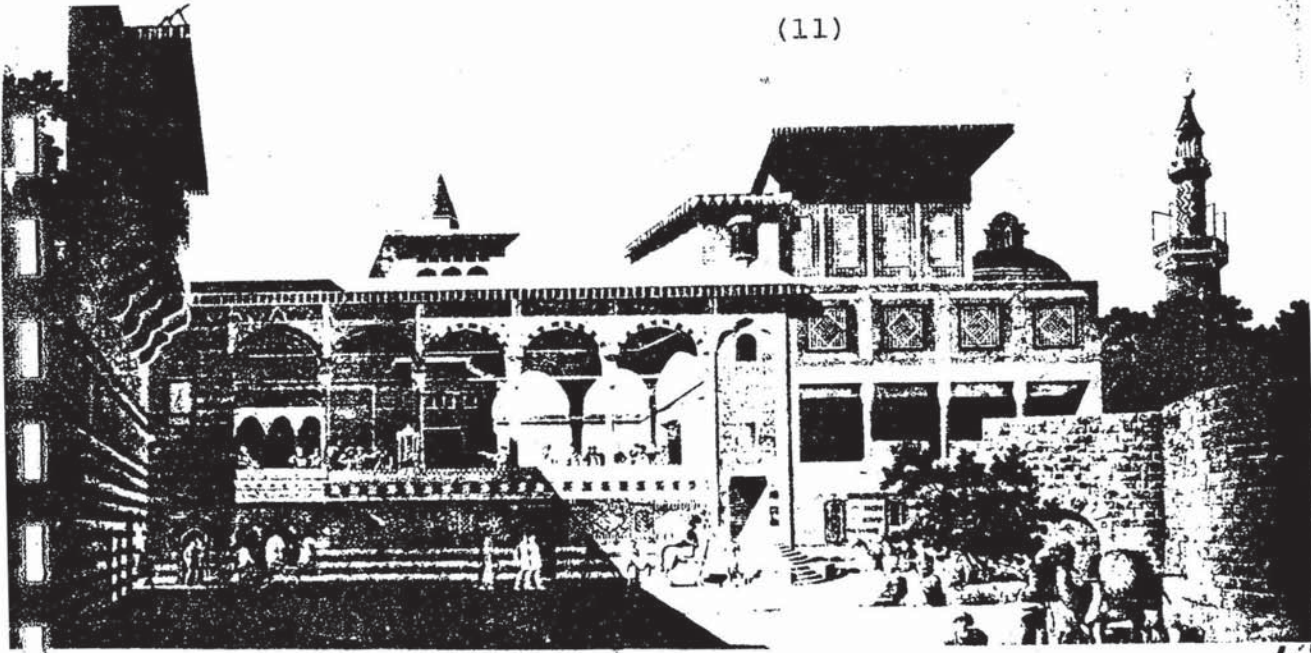
The general plan of Medieval Cairo, though it appears to have developed haphazardly owing to its spontaneous physical character, yet it has very basic design and planning determinants. The determinant of order in the urban fabric is the inner courtyard whether as small as the intimate patio of a house or large such as the impressive sahn of a great mosque. It is also marked by the spatial hierarchy and the logic and beautiful use of spaces whether public, semi-public or private; open, semi-covered or covered; and surrounding man in a zuqaq (impass), hara (lana), sharie (street), rahba or midan (square), etc. Inner courtyard basic design principle in different types of buildings, although not present in most recent constructions, can still be valid for rehabilitation and development projects.



1. Manzil al-Suḥaymī.
2. Manzil Mustafā Ġa'far.
3. Mosquée al-Aqmar.



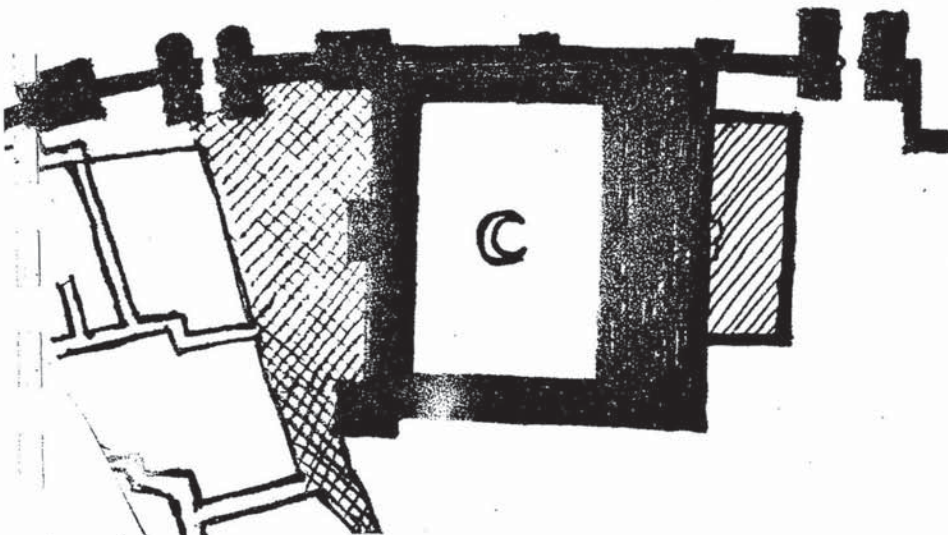
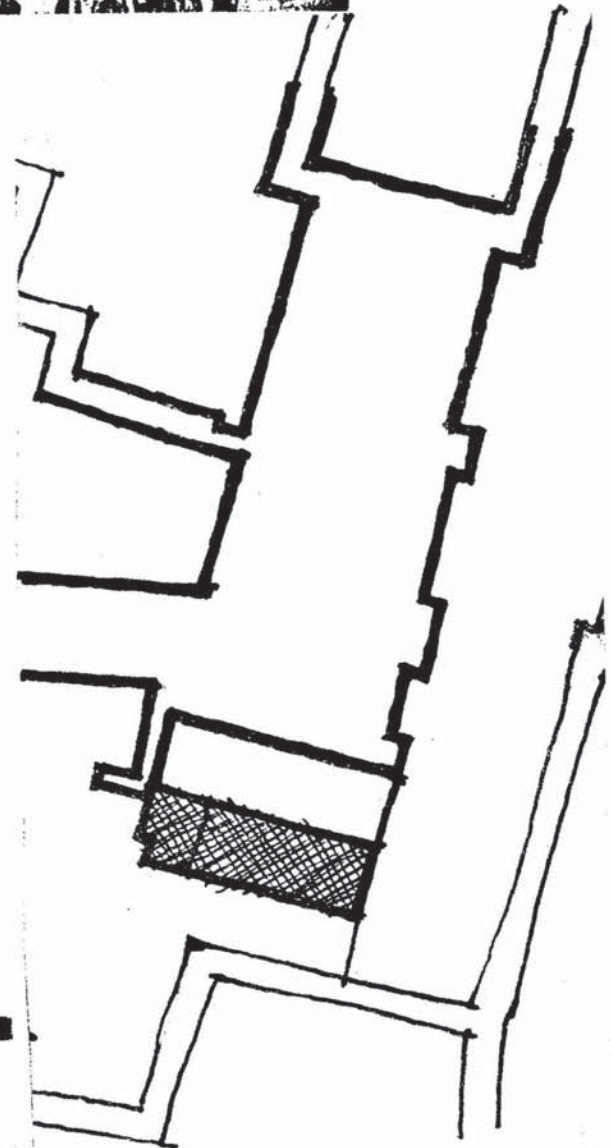
The street system of Medieval Cairo was a result of the patterning of buildings but not the mastering factor as in (modern) planning. This design concept proved to have certain distinct advantages. The narrow and winding dead-end streets or looped local roads have the same function as a courtyard in a house, namely being the temperature regulator. They are evidently conceived to fit the scale of man and not that of the car. Their irregular layouts create interest and stimulate creativity and ingenuity of design. The closed vistas are generally composed with the location of important and beautiful buildings such as mosques, sebil-kuttabs, palaces, etc., all in a harmonious entity, even if they represent an interesting surprise for the beholder. Dead-end streets detect a genuine appreciation of the private space and love for identity and solidarity within the neighbourhood. Today the urban fabric of Gamallia is deteriorating, yet most of the street alignments remain intact in their historical pattern. It is to be hoped that these characteristics should be maintained in the rehabilitation plans.

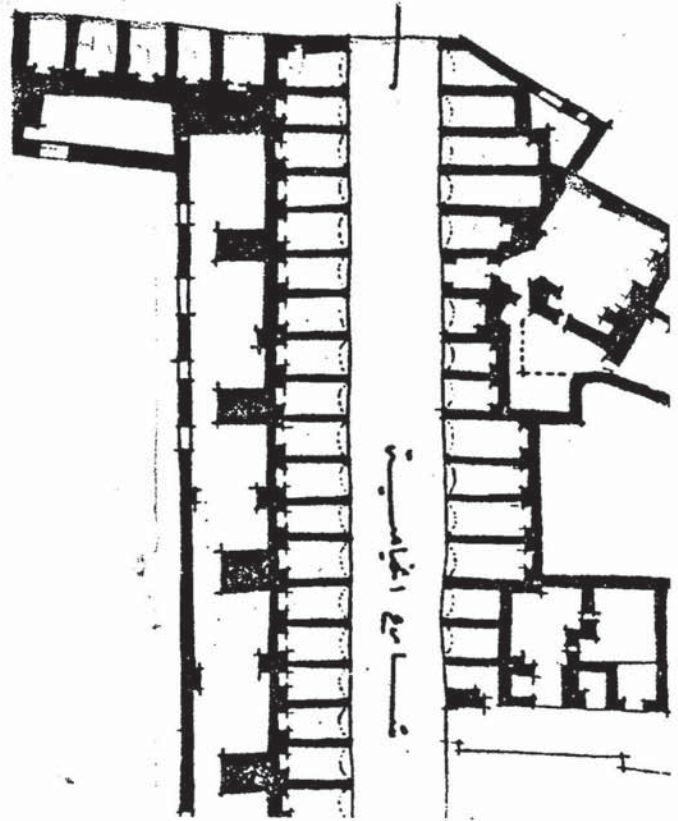
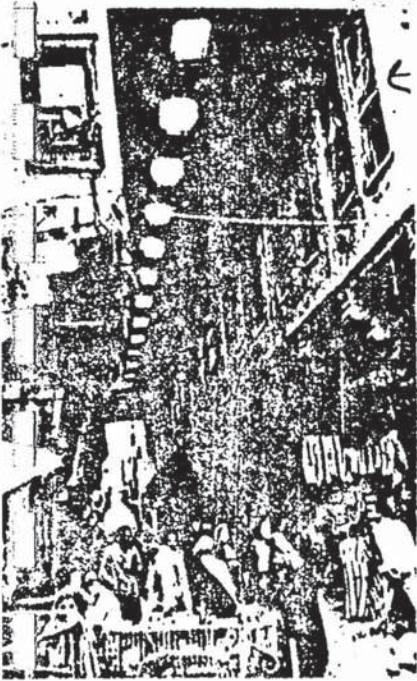
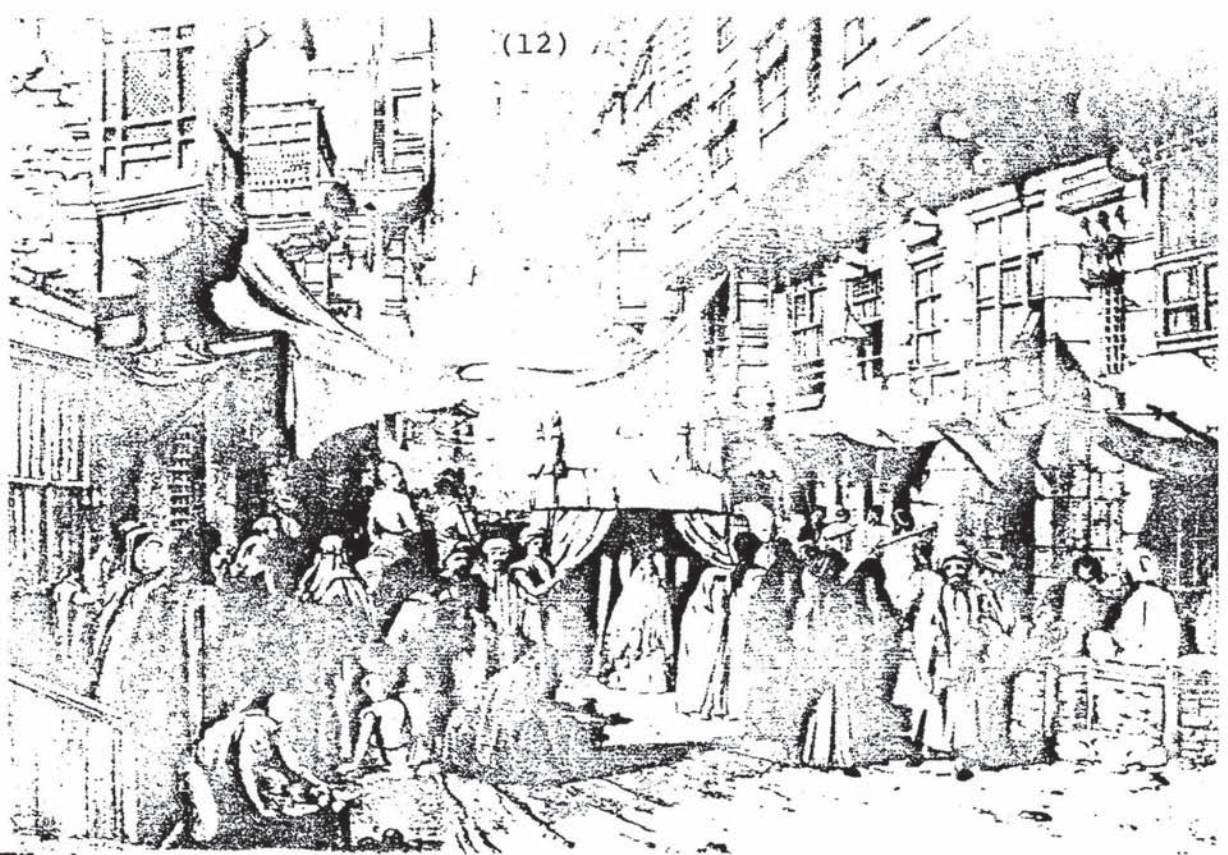


Public open spaces in Medieval Cairo were formed of small plazas or rehabs scattered throughout the urban fabric, and modulating the main streets. These spaces were setting for public and social activities. The hierarchy of activities in the old city were provided by the transition of spaces from private to public and vice-versa, through different types of passages, bent entrances, gates and entrance halls, etc.

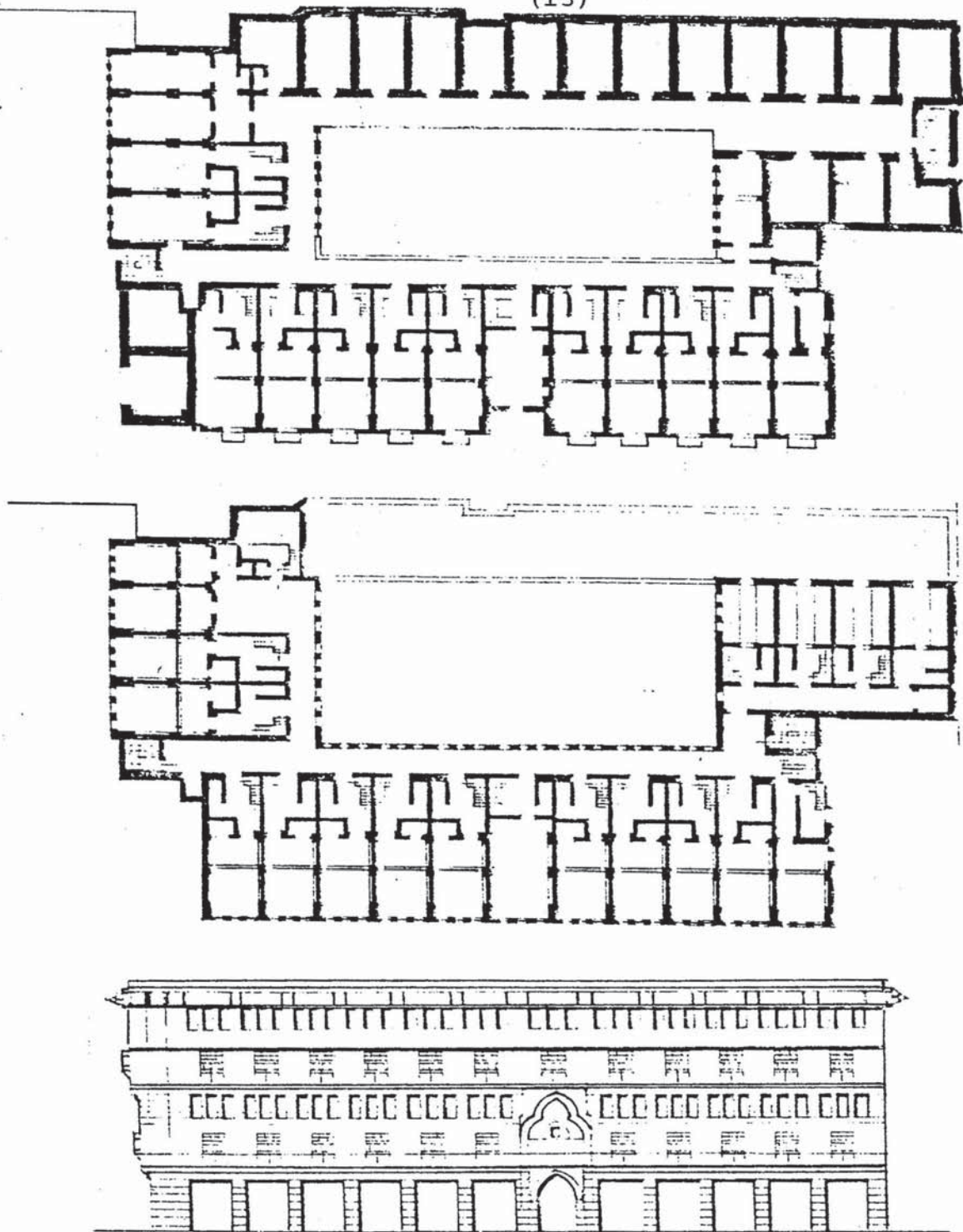
Left: Open space in front of Al-Hakim Mosque

Right: Bayt El-Kadi Square



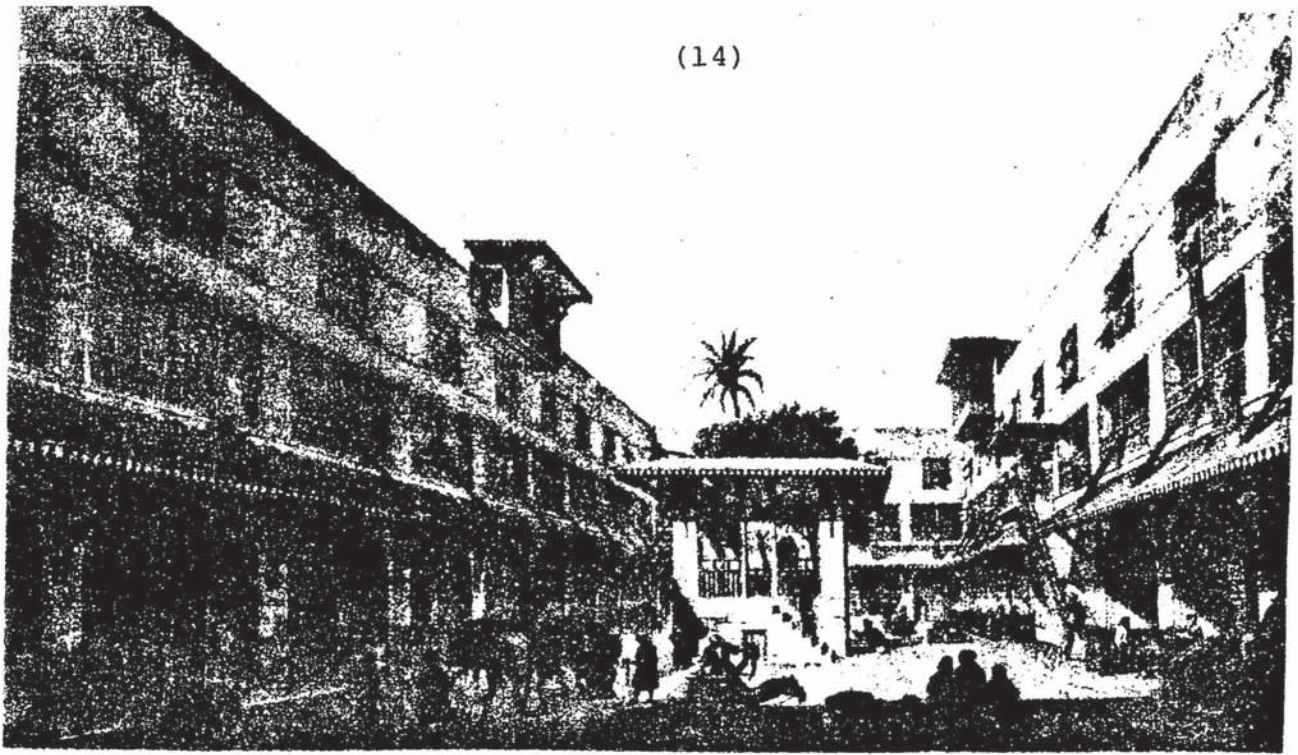


Medieval Cairo was famous for its commercial activities, being one of the most important trade centres in the Middle East. Busy markets ranged from the big wholesale bazaars down to the small retail street shops or (souk) covered or uncovered. These types of buildings were classified or grouped to serve specialized sorts of items. They always create their special atmosphere, being noisy, very crowded and mostly arranged along the main roads in the central area and adjacent to the great mosque. As building types, they have their distinct architectural character which ought to be preserved in the rehabilitation projects.



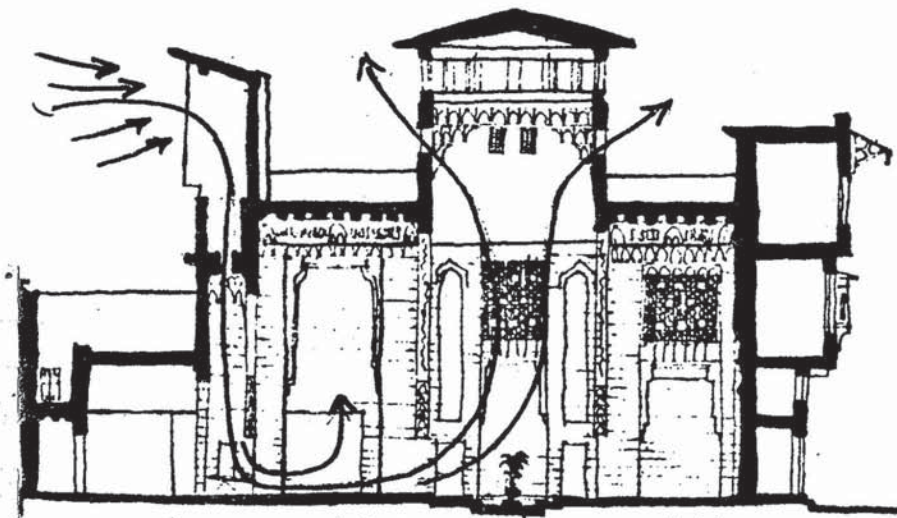
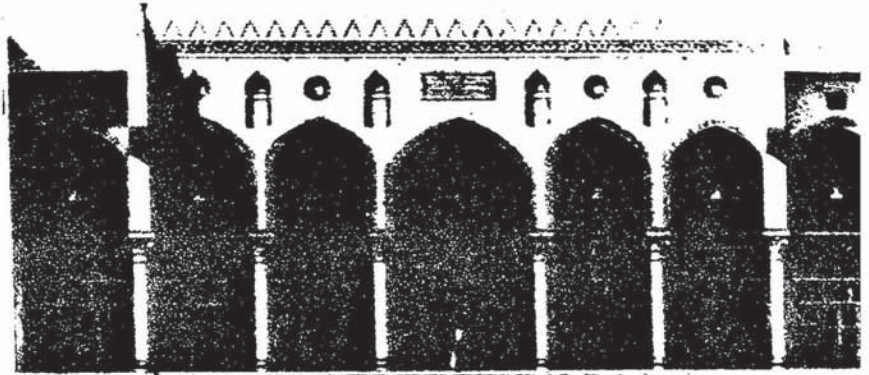
Housing solutions provided in the traditional types such as wekalat, khan, caravanserail, rabea, can be a valid base for the conception and planning of housing needs in Gammalia quarter today. Duplexes and triplexes can be found in Wekalat Ashraf Quaitbay in the study area and in many others throughout Medieval Cairo. This good and (modern) design concept can inspire contemporary solutions for the design of collective housing projects in the area.



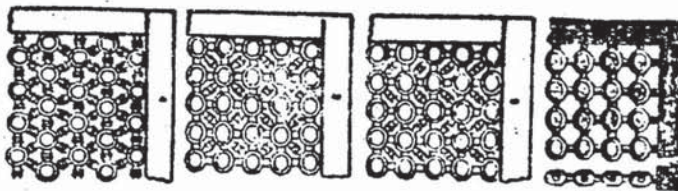
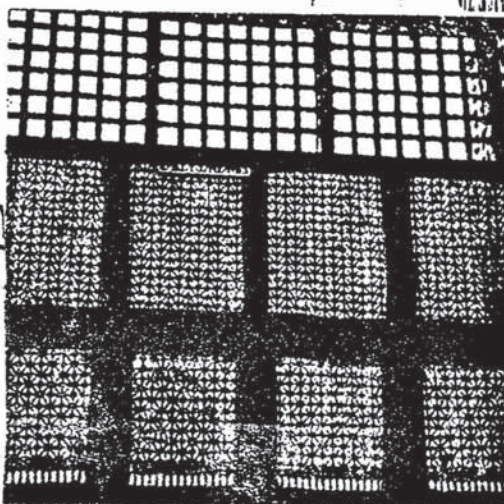
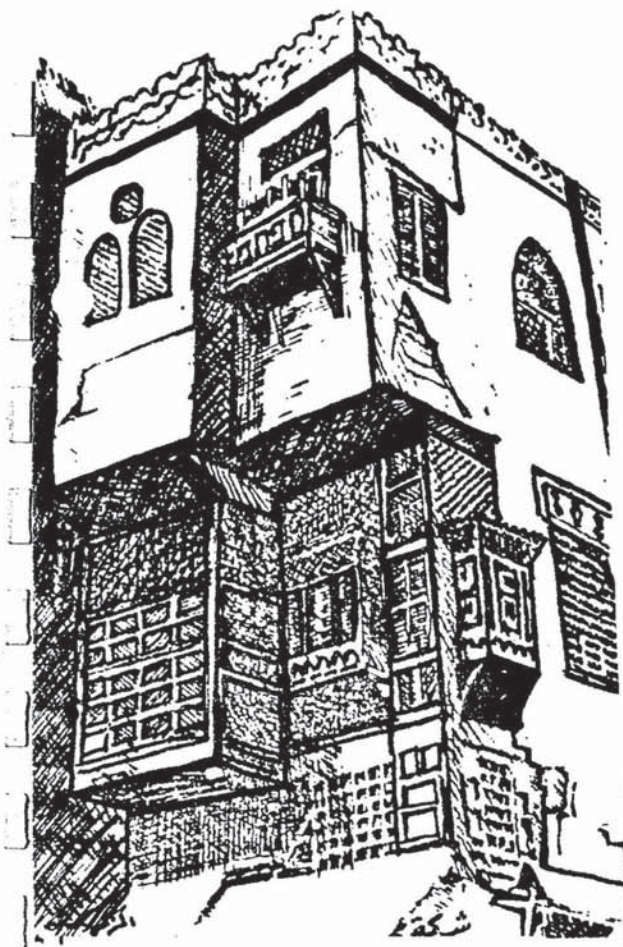


### Arcades

One of the important features of the public building in Medieval Cairo are the arcades. Incorporated in buildings around the inner courtyards or introduced along the facades, the arcades produce shade and shelter for the pedestrians and they introduce a unified character and harmony to the urban fabric.



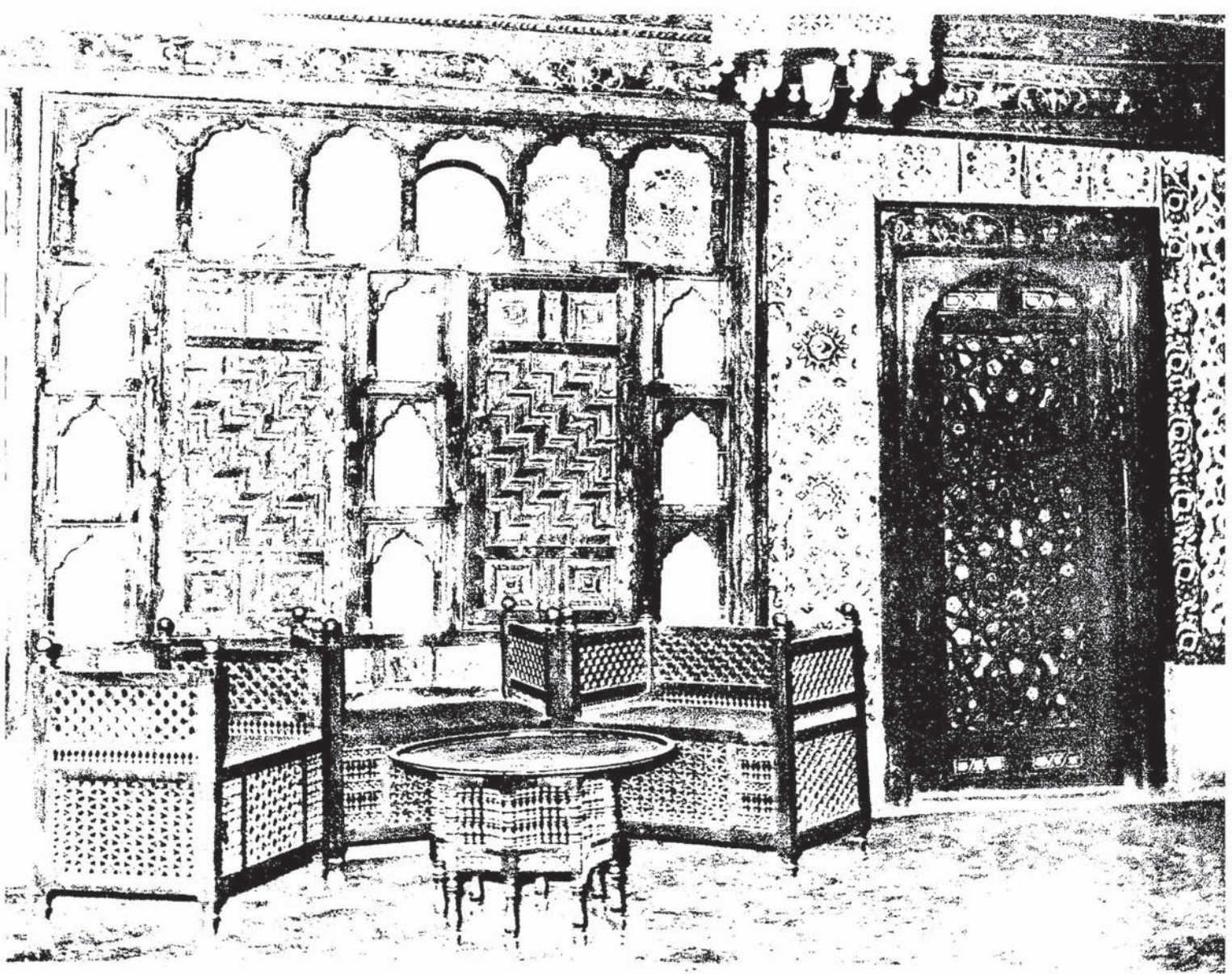
The wind-catcher is a well-known element in the traditional housing architecture functions to catch high level air stream. Its opening is directed to the wind with means to protect from dust and sandstorms. The wind catcher only lets cooler air into the interior. The principle of wind catching can be applied today in the design and arrangement of housing in Gammalia upgrading project.



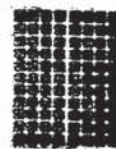
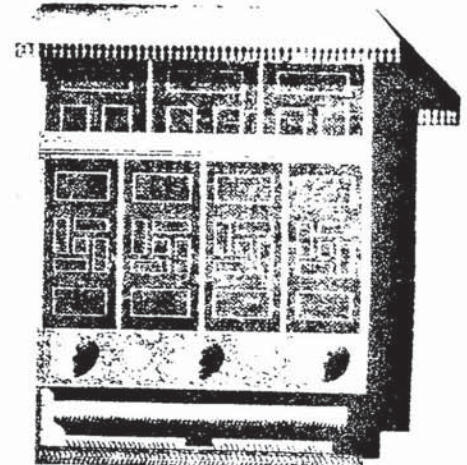
Sun Shades and Mashrabia

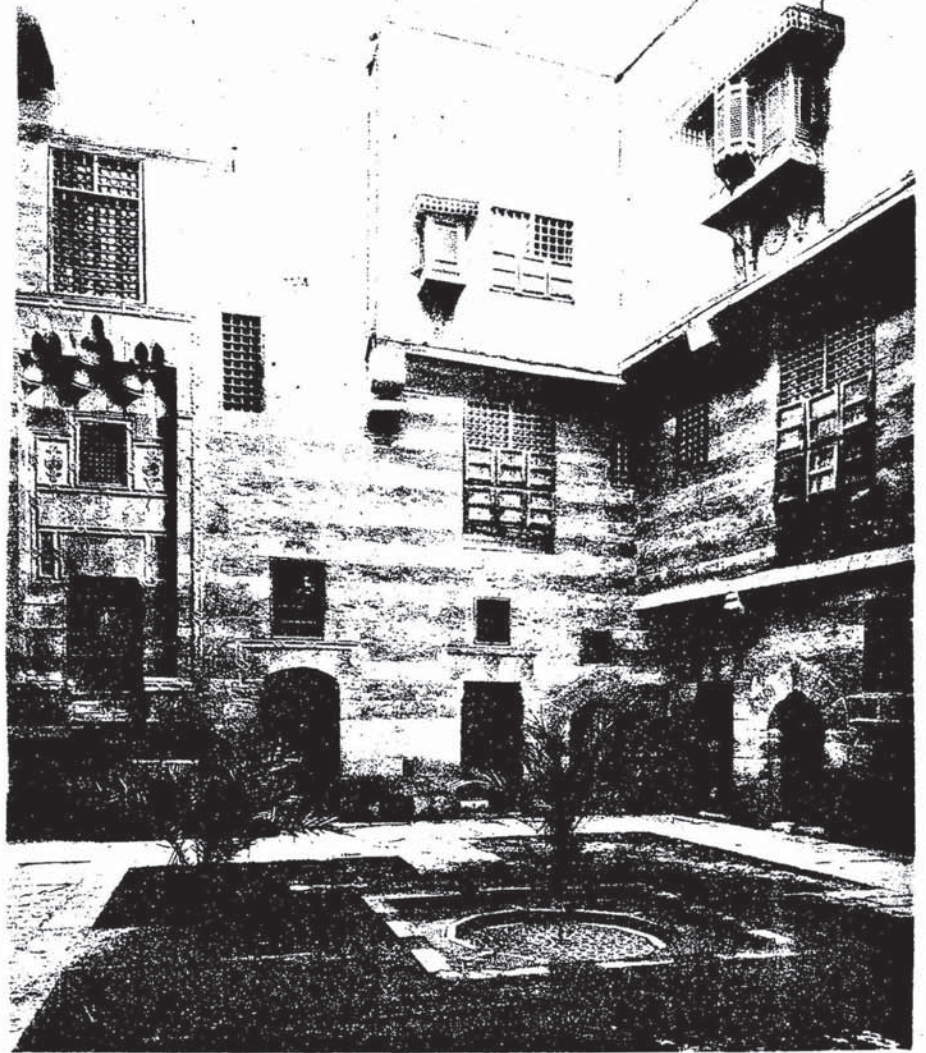
Treatments of external walls and openings in the traditional buildings of Medieval Cairo show a great degree of efficiency and sophistication. Wood lattice work, mashrabia and different types of sun breakers answer both the climatic and the social requirements of the area. Mashrabia allow gentle light to come in without preventing the view from outside.

Traditional crafts and skilled labour in the production of such elements still exist in Gammalia quarter and can be re-generated and recruited to work for the rehabilitation projects.



Traditional building and decorating materials such as stone, marble, brick, wood and tiles are employed in different types of buildings throughout Medieval Cairo. All were used with sensibility, balance and refinement. The expression of these traditions either on the facades or in the interior is fascinating. It is recommended to use these materials not only in all works of restoration and conservation of monuments, but also in new construction. It is important to avoid the introduction of alien building techniques, finishing materials and decorative elements to the historic built fabric.





Contrary to what one might have thought when seeing the actual arid state of open spaces and vacant areas, the Gammalia quarter has always been embellished by greenery and gardens, private or public. Small houses or big palaces were provided with gardens in their inner courtyards or patios. One is impressed by the beauty of still existing examples in the study area such as Suheimy house and Musaferkhane Palace.

Water also was used in different forms to create an agreeable micro-climate. Throughout the houses in Gammalia, fountains were used in gardens, courtyards, patios and even in the reception areas (the kaa's) inside the houses, as an additional air cooler, where evaporative cooling is increased as a result of passage of water over the textured surfaces of marble slates or cladding. These principles should be studied and adopted to use in new housing projects.

## 5. APPROACH TO A REHABILITATION PLAN

The historic City of Cairo was registered on the World Heritage List in 1979. That enforces a mutual commitment, under the World Heritage Convention, of both the Egyptian Antiquities Organization and Unesco to the safeguarding of the historic city center and its monuments.

Already funds have been allocated for minor rescue operations in the frame of bilateral agreements between the Egyptian Antiquities Organization (EAO) and some friendly foreign organizations and institutes. These bilateral rescue operations are principally directed to architectural conservation and to feasibility studies and field investigations.

It is now an established fact that the problem of safeguarding historic Cairo must be approached in its entity taking into consideration the following objectives:

- the improvement of socio-economic conditions and the quality of life of the inhabitants;
- the up-grading of the historic urban fabric with its infrastructure;
- the restoration and conservation of the historic monuments.

None of these elements alone can ensure by itself the conservation of the historic city of Cairo. Until real and effective preservation measures get started, some steps must be seriously considered and implemented in the following sequence:

### Area Preservation

The Fatimid nucleus of Medieval Cairo should be defined and registered as a preservation area. All new construction should be banned for five years or at least until the guidelines for a rehabilitation plan and an appropriate architectural treatment for the area have been defined. The typical architecture needed is not supposed to be dictated by the actual municipal building laws and regulations based on the assumption that all buildings are extroverted.

### Legislative Measures

The banning of further private building projects would also prevent land speculation and profiteering of actual state of current decay.

### Updating List

Updating the list of classified monuments which was last established some 32 years ago to include newly identified historic buildings, or to omit those which have already disappeared.

Task Force

Immediate rescue operations to currently collapsing monuments and houses is essential with an adequate independent budget and a highly qualified task force to ensure effective and non-bureaucratic achievements.

Priorities

In this state of things, it is difficult to recommend priority for a single specific measure at a time. It is quite evident that the deplorable housing condition constitutes the main factor for the delapidation and decay of the historic buildings together with the poor infrastructure. The up-grading and rehabilitation of those two elements should be tackled simultaneously. Some important observations should be considered when implementing an overall rehabilitation plan for housing and historic monuments.

Housing

Though it is not the most densely populated area of Medieval Cairo, this quarter's deplorable housing conditions constitute the main factor for its social decline. The inferior quality of living stems from the fact that much of the built fabric of the quarter is in ruins and unused. Implementing new housing projects to provide additional habitat for the quarter's inhabitants by filling in vacant spaces is a pressing necessity. This aspect of the problem has to be discussed and settled between the parties: The Governorate of Cairo, the Waqfs and the private owners, because they are all connected to these vacant areas either by ownership or by supervision.

Within an overall rehabilitation plan, the Governorate must assume the responsibility of slum clearance, implementation of new housing projects and upgrading what is worth from the existing housing stock. For the Ministry of Waqfs, the reconstruction of the ruined Wakalat and Khans, and the upgrading of the existing ones could provide a good number of traditional housing units that help to relieve the existing crisis. The private owners, too, under the control of the Development Agency, encouraged by the action of reconstruction and preservation, will reveal an authentic spirit of collaboration. However, new housing projects should be carefully handled.

To preserve the historic identity of the quarter, it is important that new buildings be in harmony with those dating from the turn of the century as well as the historic monuments. To ensure this rigorous regulation, the guidelines should be legally enforced. There are sad examples of uncontrolled housing achievements mostly dating from the 1960's to 1970's. They are generally characterized by their commercial and primitive functionalism. Executed in concrete skeleton and brick filling, they are distinctly alien to the environment and will complicate the process of rehabilitation.

Thorough study for each case should be undertaken by the Development Agency to decide whether a specific house could be externally improved and brought in harmony with the neighbouring built fabric and at a reasonably cost, or should it be pulled down.

An outstanding example of this outrage is illustrated by the school building replacing the Wakalat Qusun as was previously mentioned.

In all rehabilitation processes, all sorts of alien elements in houses such as divisions of units, additional shanty constructions on rooftops, in corridors and in courtyards should be removed.

If the historic Wakalats are restored and their flats inhabited, and the vacant ruined spaces rebuilt and used, the amount of dwelling units can easily be doubled.

In upgrading old houses (not listed), an adequate fixed budget should be allocated for repairs per unit. In case the state of the structure indicates that demolition is preferable, only another in harmony with the built fabric should be considered.

The cost of a new housing project and upgrading the existing housing stock for the defined quarter cannot be adequately estimated unless a detailed street-to-street and house-to-house survey is conducted. An approximative cost estimate for the rehabilitation of the quarter is treated and presented in another section of the general report, based upon a sample study.

#### Historic Monuments

They should be given the major share in the rehabilitation plan, not only for their historic value, but also for their eventual reintegration in the everyday life and activities of the quarter. As they were originally conceived and erected to serve the needs of the society, they should be given a fresh lease of life to assume their functions or to be reattributed new ones if necessary. It is understood that any (modern) new functions connected with the tourism industry should be chosen with great care, in order to be in harmony with the religious, social traditions and historical character of the area.

#### Traditional Building Techniques

In all works of restoration or conservation of monuments, the general rule should be that the traditional materials and building techniques, still in practice to some extent in the area, should be re-employed. It is important to promote and revive the traditional arts and crafts, firstly to avoid the introduction of alien building techniques, finishing materials and decorative elements to the historic built fabric; secondly to revitalise and benefit the economic conditions of the quarter; and thirdly to recruit and reconstitute groups of specialized traditional

builders and craftsmen who will not only serve the ambitious programmes of rehabilitation in Egypt, but also in such operations in other Islamic countries.

### Conclusion

In any event one cannot expect a rehabilitation project of this scope to be studied and defined in its minute details within such a short time. The rehabilitation of an historic city centre like the Fatimid Nucleus of Cairo can only be achieved through a long-term programme under the guidance of a highly qualified independent development agency. The architectural conservation works should be accompanied by other operations like reconstruction, upgrading, urban development and infrastructure. All these together will bring upheaval to the socio-economic conditions and the quality of life in the area, and thus ensure the continuity of the preservation of the Fatimid Medieval nucleus of Cairo.