

Kamel, Hassan Mohamed Hassan (1986) *The application of perception theory in architecture and urban design with particular reference to Liberation Square in Cairo*. PhD thesis.

Volume 2

<http://theses.gla.ac.uk/30640/>

Copyright and moral rights for this thesis are retained by the author

A copy can be downloaded for personal non-commercial research or study, without prior permission or charge

This thesis cannot be reproduced or quoted extensively from without first obtaining permission in writing from the Author

The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the Author

When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given

THE APPLICATION OF PERCEPTION  
THEORY IN ARCHITECTURE & URBAN DESIGN

WITH PARTICULAR REFERENCE TO  
LIBERATION SQUARE IN CAIRO

VOL. II

PH.D. Thesis submitted October 1986 to Mackintosh  
School of Architecture - Glasgow University by  
Hassan Mohamed Hassan Kamel



PART 4

THE SQUARE AND THE CITY

## INTRODUCTION

This part comprises two related chapters. On the one hand the first of these describes the evolution story of the square concept all over the world, since its early appearance in the Greek civilisation. On the other hand this chapter also gives a particular account of the appearance of this concept in Egypt from the medieval ages to the twentieth century.

As for the second chapter, one can say that it comprises and deals with varied and related seven points. These points as follow are:

- (i) The definition of space
- (ii) The biological and the psychological importance of squares
- (iii) The square; its function and its importance in the city.
- (iv) The traffic in the city and its impact on the function of the square
- (v) The conservation policy in the square
- (vi) The location of squares within the organism of the city
- (vii) The confining elements of the square

7.1 THE STORY OF THE SQUARE'S EVOLUTION

We start here with an historical account showing examples of the old squares in ancient cities all over the world before coming to the modern era and its examples. Therefore it is necessary to mention that such illustrations of these old examples are intended to benefit our present and future from those successful lessons which mark our past. According to Zucker (1959, p.2):

Our Analysis of typical examples of the past need not remain a mere historical discussion, but should also stimulate some thoughts for town planning today. While technical and socioeconomic conditions have changed completely since the Industrial Revolution, this should not deter us from applying lessons from the past. <sup>1</sup>

The history of the square as an important urban and public space is so long, that it is a fundamental part of each town's evolutionary history. The square concept as a spatial closure, in which the city's inhabitants can meet and can achieve some of their social and their economical daily needs is very old. Such a concept, as in Zucker (1959, p.35) goes back to the Greek period, where the basic form of the square which is called the Agora was established. According to Bacon such a spatial element gained a certain public importance, where it was considered the civic center and the nucleus of the early Greek town. Such importance arises from the fact that the Agora was surrounded by most of the public buildings in the town such as the temple, the council house and the other commercial buildings and also because it was considered the main market and meeting place in the town.<sup>2</sup>

An example of such elements can be seen in Athens's Agora.<sup>3</sup>

The appearance and the elementary evolution of the Agora in the Greek times was as in Zucker (1959, p.22-30) a reflection of the spread of democracy, which characterised the life of that society. Such a sociological factor was the reason for the square concept as public urban space not appearing in the early Egyptian, Mesopotamian and the Indian civilisations. According to Zucker: "The Indian, Mesopotamian and Egyptian civilisation did not provide the political, governmental, social and most important psychological conditions which would create the need for a gathering place".<sup>4</sup>

As we move from Greek times to Roman times, we find that the Agora was replaced by the Forum which for the Roman was the modified and the regularised form of the Agora. As a contribution of the Romans in the creation of new spatial and public ideas, the basilica was contrived. Such a structure as in Zucker (1954, p.53), has served as an administrative building, as a court, as a market hall and finally as a meeting place and as a public promenade.<sup>5</sup>

When we reach the medieval period we find that the square concept did not provoke any interest. Even the existing open spaces and squares were not cared for and indeed in some cases they were destroyed. As in Zucker:

Medieval churches, new street markets, all kinds of changed local conditions have destroyed the outline and often even the location of the ancient square, for whose original function the medieval town had no longer use. Sometimes whole blocks were erected over the formerly open area of the ancient forum.<sup>6</sup>

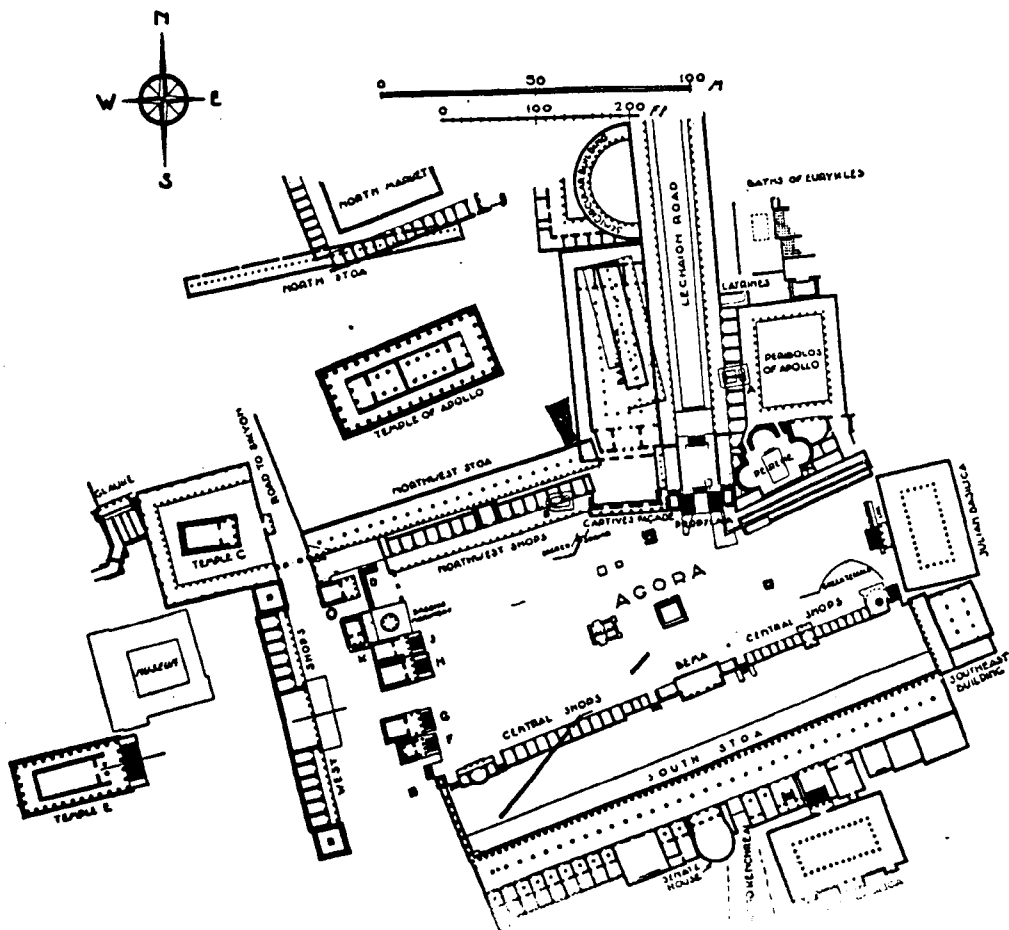


Fig. (7.1 ). The Hellenistic Agora in Corinth, Athens.  
(Source: Zucker, 1959, p.40)

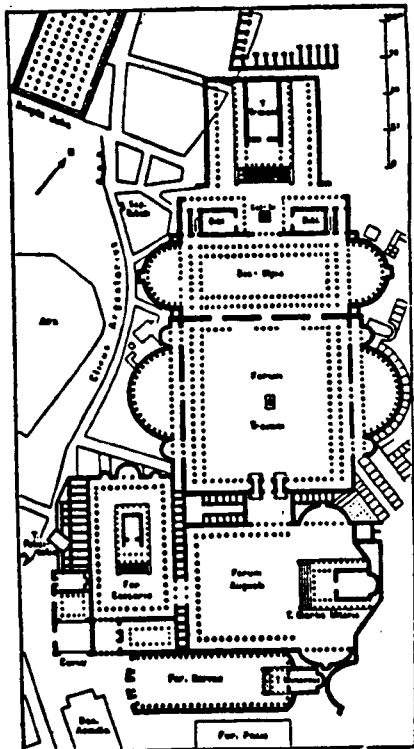


Fig. ( 7.2 ). Plan of the Roman Imperial fora.  
(Source: Zucker, 1959, p.57)

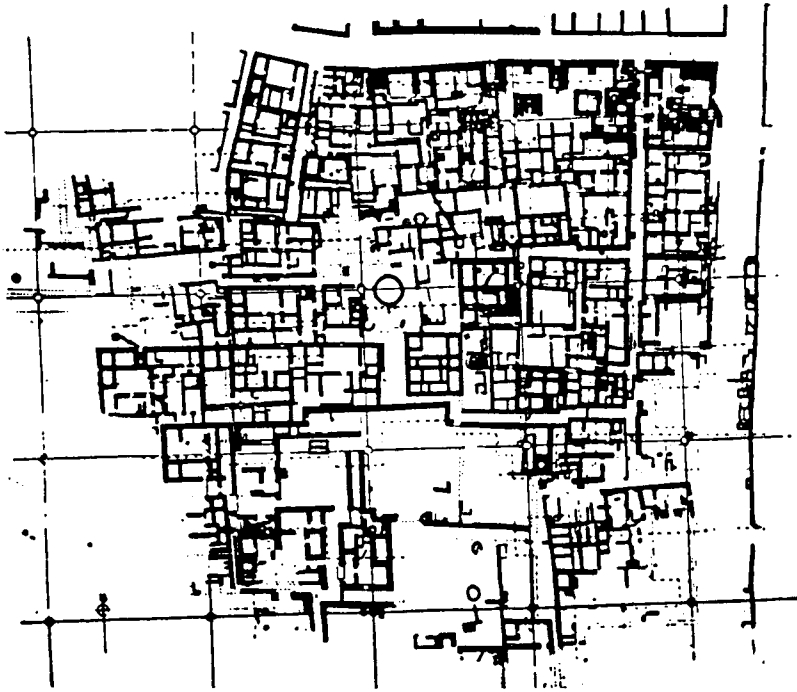


Fig. ( 7.3 ). The Town of Mohenjo-Daro, 1600 B.C., India. It is an example of those Indian towns which have grown up during that time without showing any sense of realisation to the square concept.

(Source: Zucker, 1959, p.21)

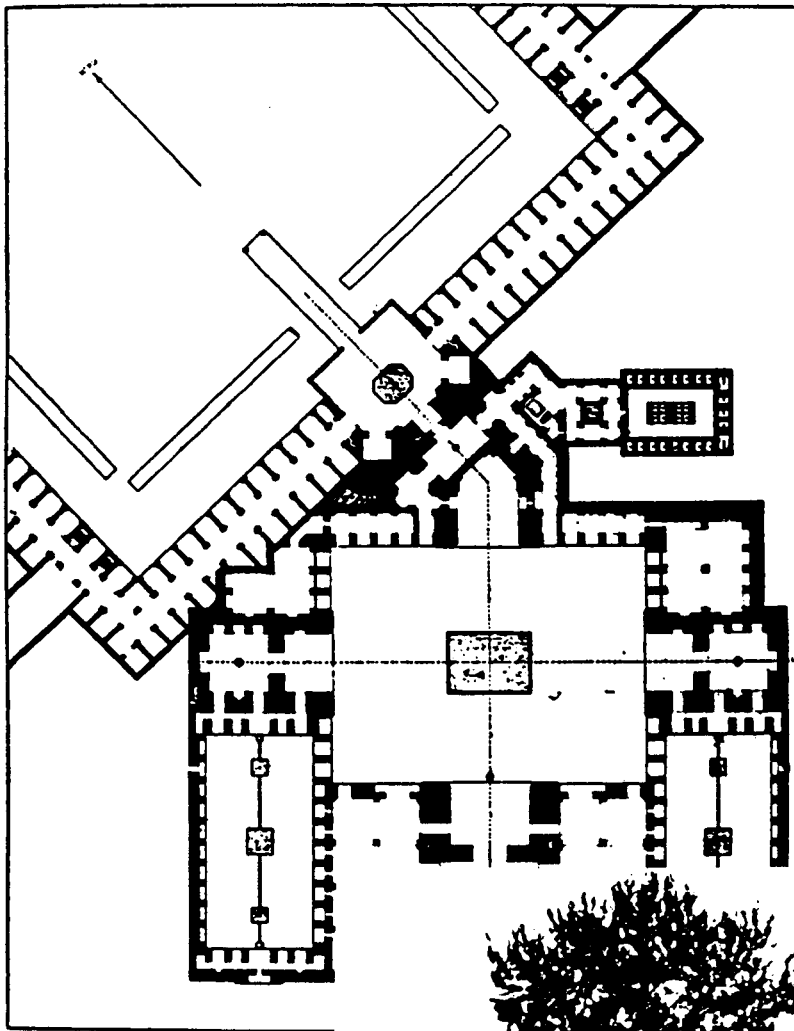


Fig. ( 7.4 ).  
Maidan-I-Shah, Isfahan,  
Iran. It is an example  
of a dominated square,  
which lies between the  
palace and the mosque,  
'The Masjed'.

(Source: Zucker, 1959,  
P.94.)



Fig. ( 7.5 ). View of Maidan-I-Shah towards the Masjed.  
It is a rare example of a dominated square which has been  
built during the medieval age in Isfahan, according to  
the Islamic Technique of Town Planning.

(Source: Islamic Architecture & Urbanism, 1983.)

Such chaos which squares had to suffer during the medieval ages was treated during the Renaissance time. As Argan says, "The transformation of medieval cities usually occurred in one of the following ways: 1) Revision of the old city layout by opening up new streets and wide, regular squares."<sup>7</sup>

As the church during the medieval times dominated the whole city as the central theme, consequently its building was usually surrounded by two squares.

One of these squares was located before its building to be used as a congregational frontal parvis. The other was a certain distance away to be used as the city market place. As in Simonds (1961, pp.182-3), most of the ancient squares, which were built during the medieval times, were asymmetrical. According to him "These public places were never geometrical nor were they entered by wide axial streets that would have destroyed their essential attribute of enclosure. Rather they were asymmetrical; they were entered by narrow winding streets that penetrated at or near the corners."<sup>2</sup> During the medieval age, squares had many different forms. According to Zucker (1959, p.75), the principal types of the medieval squares are:

- i. The market square as a broadening of the main thoroughfare.
- ii. The market square as a lateral expansion of main thoroughfare.
- iii. The square at the town gate.
- iv. The square as the center of the town.
- v. The parvis.
- vi. The grouped squares.



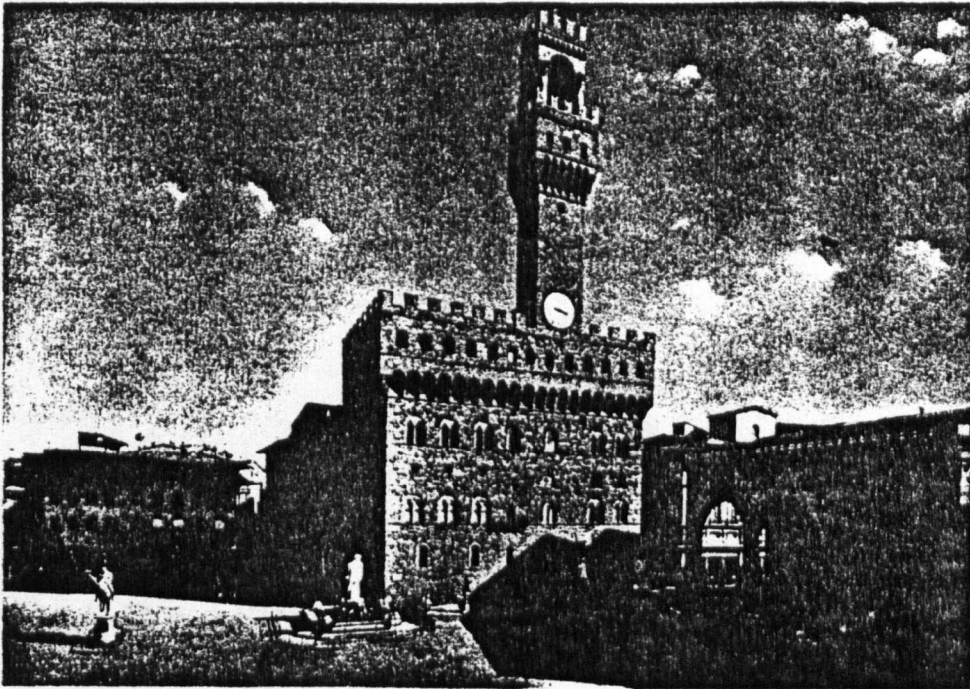


Fig. (7.6) Piazza Della Signoria

(Source: Zucker, 1959, p.125.)



Fig. ( 7.7 ). Todi Square.  
(Source: Bacon, 1967, p.83.)

In contrast to the Renaissance squares, Medieval squares gained their final and formal structure, throughout the continuous addition of buildings around their boundaries. Such squares were not built according to a definite plan nor was the city itself.

The rectangular open space within the complex of a mosque or Madrasa from Cairo and Constantinople to Baghdad is comparable, as in Zucker, with the inner courtyard of a medieval castle or cloister rather than with squares in Europe. This interpretation can be understood from the following quotation from Zucker himself who says:

Any seeming similarity(between the oriental inner space of a mosque or medrasa) to European closed squares is misleading since they resemble each other only in their two dimensional projection but not so far as the third dimension is concerned. In the Orient, the width and length of the void are usually so large that the surrounding one - or two - storied arcades with their shops represent merely a decorative frame around a wide expanse, but never a spatial configuration. 9

As examples of the medieval period squares, there are the Piazza Del Campo in Siena; the Piazza Sordello in Mantua, the Piazza Maggiore, the Piazza della Signoria in Florence, Todi Square, etc.

As we approach the Renaissance age, we find that squares acquired a special interest as the techniques of city planning were developed. Squares during that age were characterised by the following features, as Zucker says:

- i. The desire for spatial unity, to which all other architectural tendencies are subordinated.
- ii. The frequent employment of arcades as a connecting architectural element in order to increase the unity of

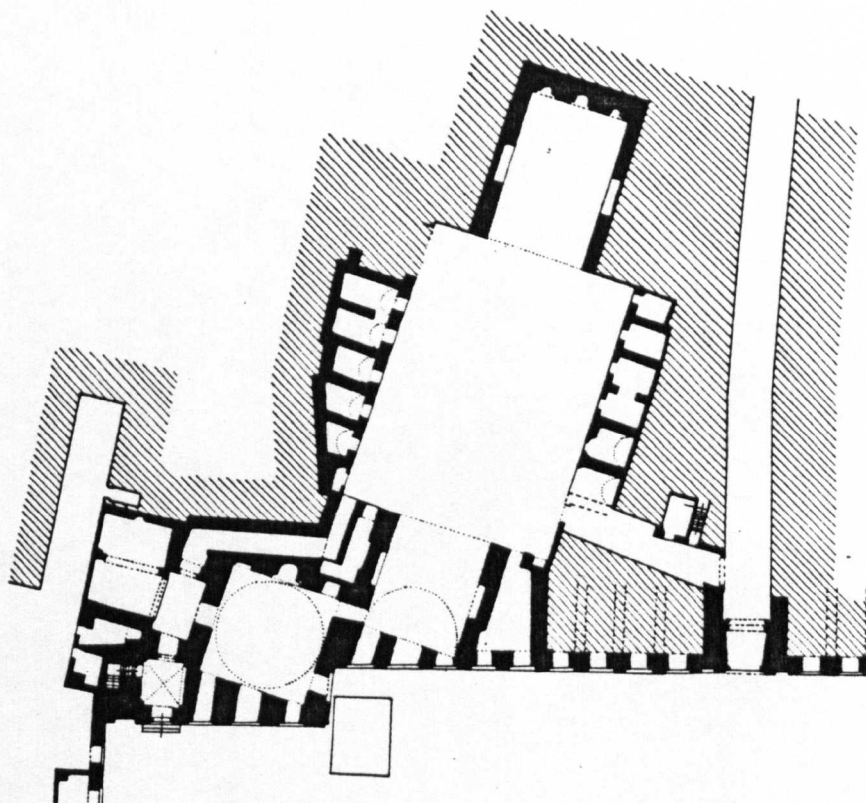


Fig. (7.8). Madrasa Salih Negm  
(Source: Hoag, 1977, p.154.)



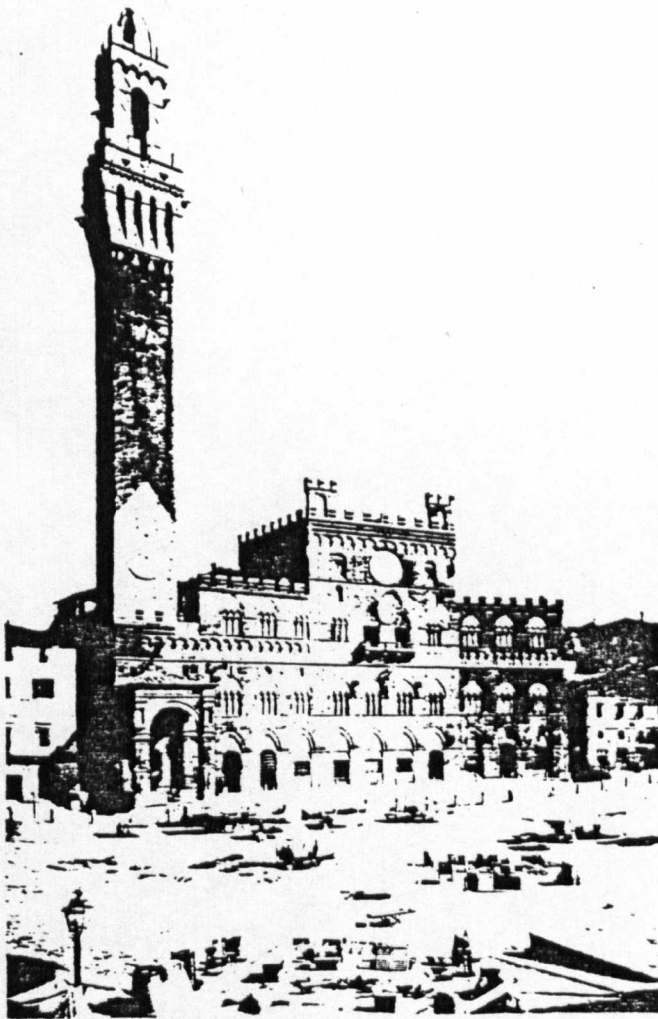


Fig. (7.9 ). Palazzo Pubblico from the Piazza del Campo, Siena, Italy. Here we have an example of monumental dominating public building 'The Palazzo Publice' which dominates two public squares at one time: Piazza del Campo in the front and Piazza del Mercato at the back. Recently this building as the main townhall in Siena was prepared to accommodate an exhibition center in its basement.

(Source: The Architectural Review, 1979, Vol. CLXV, No. 986, p.215

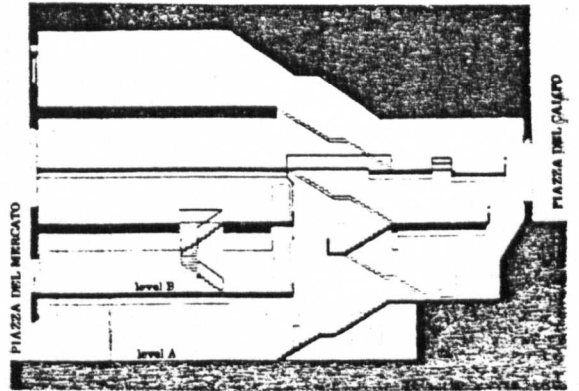


Fig. (7.10 ). Cross section through the exhibition space at the bottom of Palazzo Pubblico which as a huge building, houses conveniently a great number of different activities, containing council chambers, offices for the council, administration and museum, a charming late eighteenth century theatre, stores, workshops and garages.

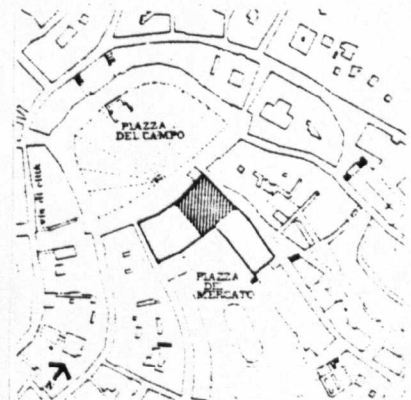


Fig. ( 7.11 ). Site Plan. Hatched area refers to the newly prepared exhibition space under Palazzo Pubblico.

the facades surrounding the square.

- iii. The use of monuments, foundations flagpoles etc. for organising the space of the square, whether it be closed, dominated, or nuclear.<sup>10</sup>

Leonardo Da Vinci was unlike his colleagues in that age did not give much interest to the square problem and its spatial appearance. An important factor behind the culmination of the square concept as a three dimensional and spatial configuration in that age, was the great invention of perspective.<sup>11</sup> During the Renaissance a lot of magnificent squares were built throughout Europe, especially in Italy. Examples of these squares include the Piazza Diss Annunziata, Piazza Della Signoria and the great square of St. Marco. As a symbol of Venice and its dominant feature, the Piazza of St. Marco as in Bacon (1967, p.101), plays an important part in directing the people inside the city, through the established relationship between its dominant center and the other subordinate centers around the city.

As we arrive at the Baroque age we find that the newly used technique of using the obelisk as a vertical element to mark the space, and to establish an intended pre-required spatial tension, provided the squares of this period with a sense of the dynamic, as considered for the departure and the arrival stations of the city's citizens. According to Bacon (1967, pp. 134, 155) Piazza Del Popolo and San Peter's Square in Rome are the best examples that can be quoted of that age. According to Zucker (1959, p.150), both of these Piazzas can be categorised as 'dominated square'. The

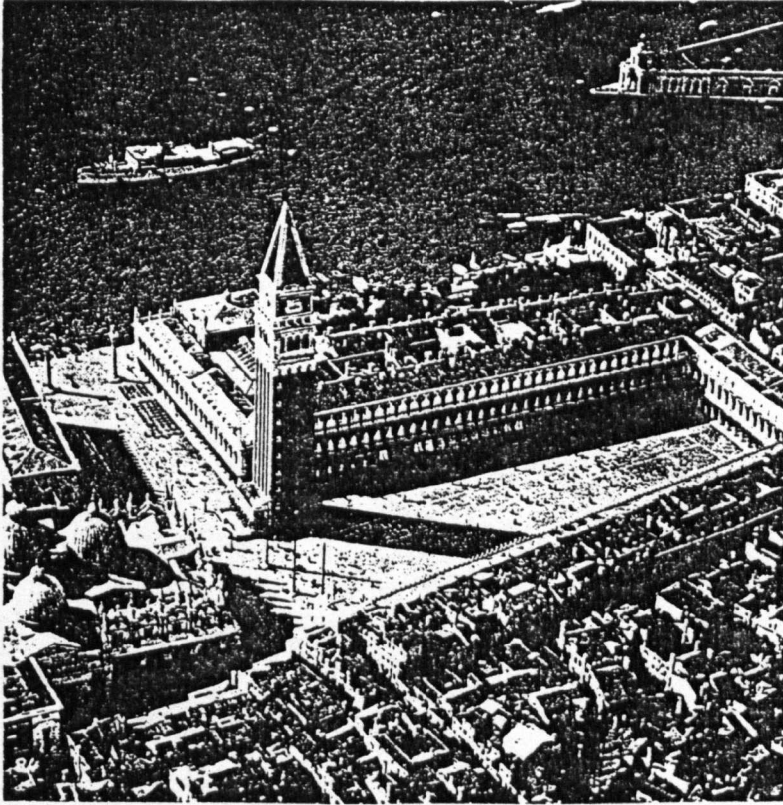


Fig. (7.12). San Marco's Piazza

(Source: Zucker, 1959, p.124)

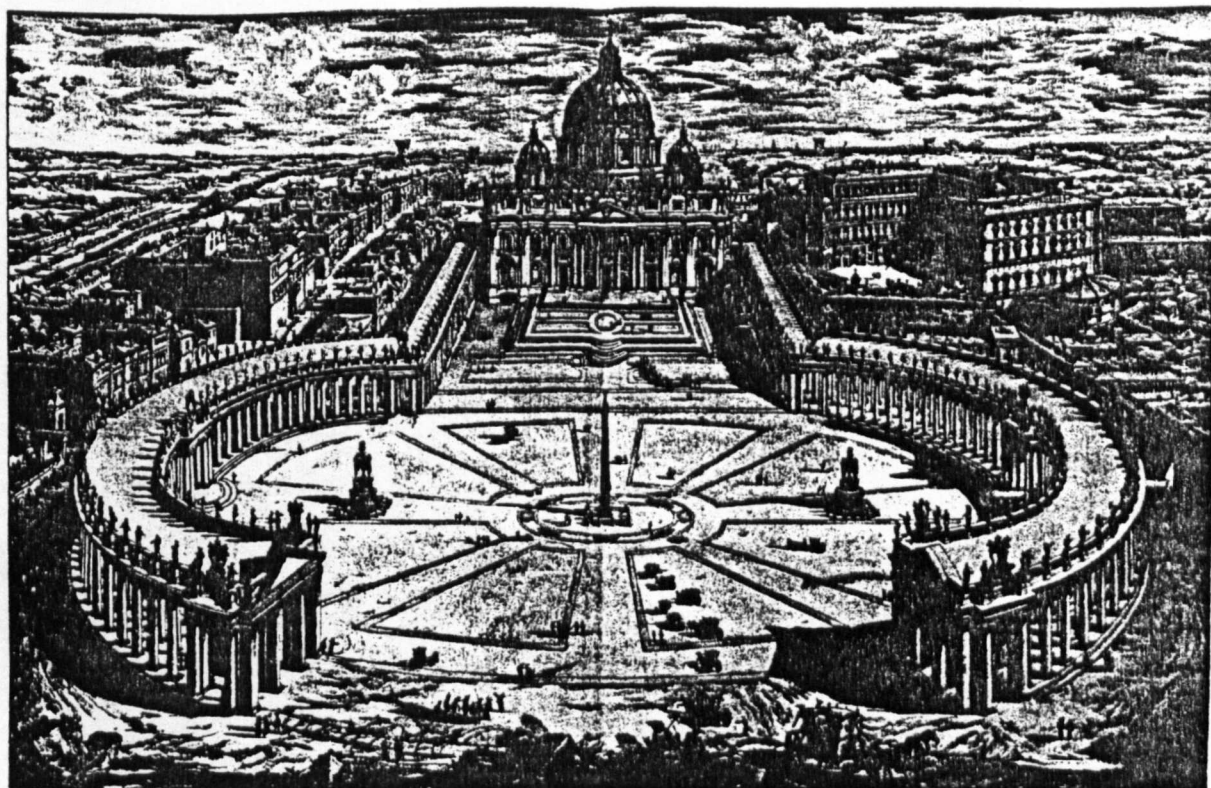


Fig. ( 7.13 ). St. Peter's Square in Rome.

(Source: Zucker, 1959, p.153)





Fig. ( 7.14). Piazza del Popolo, Rome.  
(Source: Bacon, 1967, p.141)

reason for such classification can be related to the feeling of dominance caused by the existence of the monumental construction of the church that overlooks the closure of the square in both instances.

When we move from the baroque period to the beginning of the seventeenth century, we find that the main features which characterised the squares, starting from the latter date up to the end of the eighteenth century can be summarised as follows: During the latter period the new technique of city planning which originated in France, contributed immensely to the prevalence and the growth of squares in that country. Such a technique which is characterised by the formality is in Zucker's opinion (1959, p.165) an attitude of rigid formality and a heroic monumentality. It is also a technique in which the power of the axis and the vista were as important as the three dimensional spatial organisation in the design of squares. An important feature of the French Squares in the seventeenth and the eighteenth century is their beautifully designed landscapes.

Examples of squares which have been built in this period include the Place des Vosges, Place Vendôme, Place de la Concorde, Place Royale, Place de la Carrière and finally Place de l'Etoile. In Paris, the Place de la Concorde, as in Zucker, is the square which symbolises its spirit and its unique grandeur and monumentality. For the French people 'The Place de la Concorde became the representative stage on which France celebrated her festive events and celebrations'.<sup>12</sup> As in Zucker, (1959, p.193), and as in

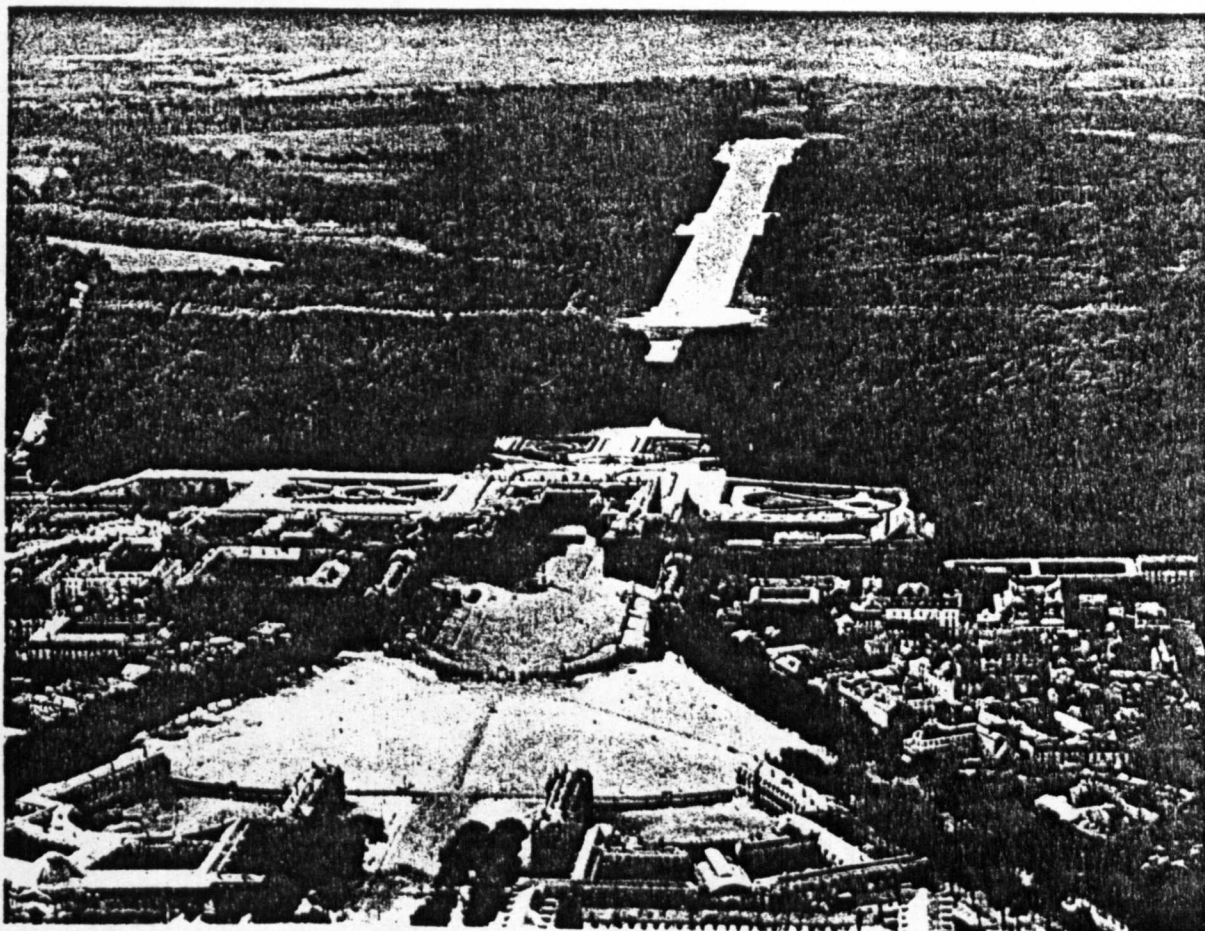


Fig. (7.15). Versailles.

(Source: Zucker, 1959, p.183).

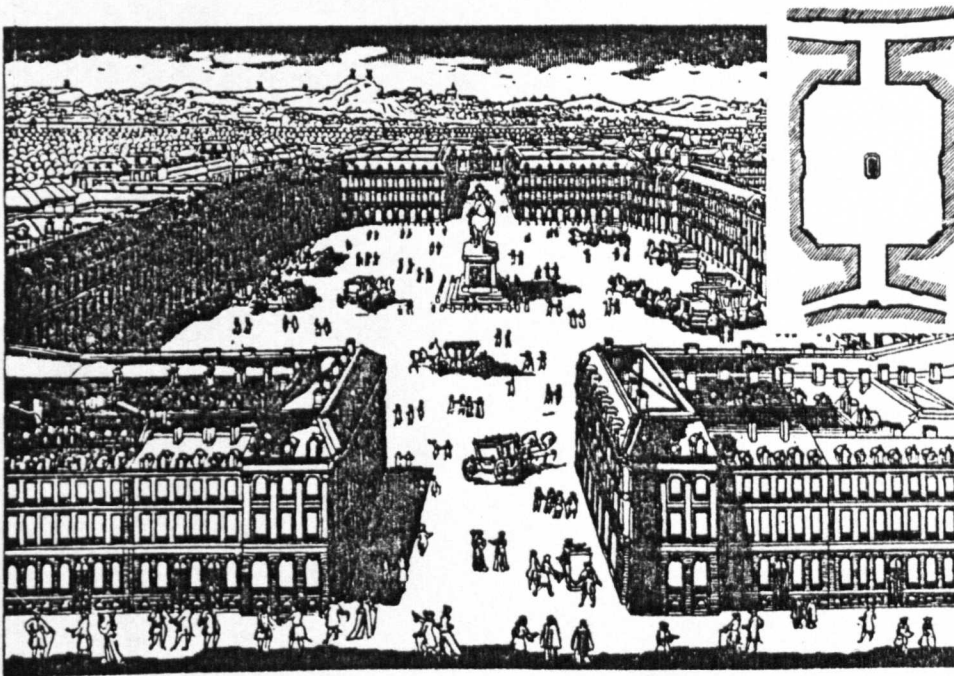


Fig. ( 7.16 ). Place Vendome, Paris  
 (Source: Zucker, 1959, p.186.)

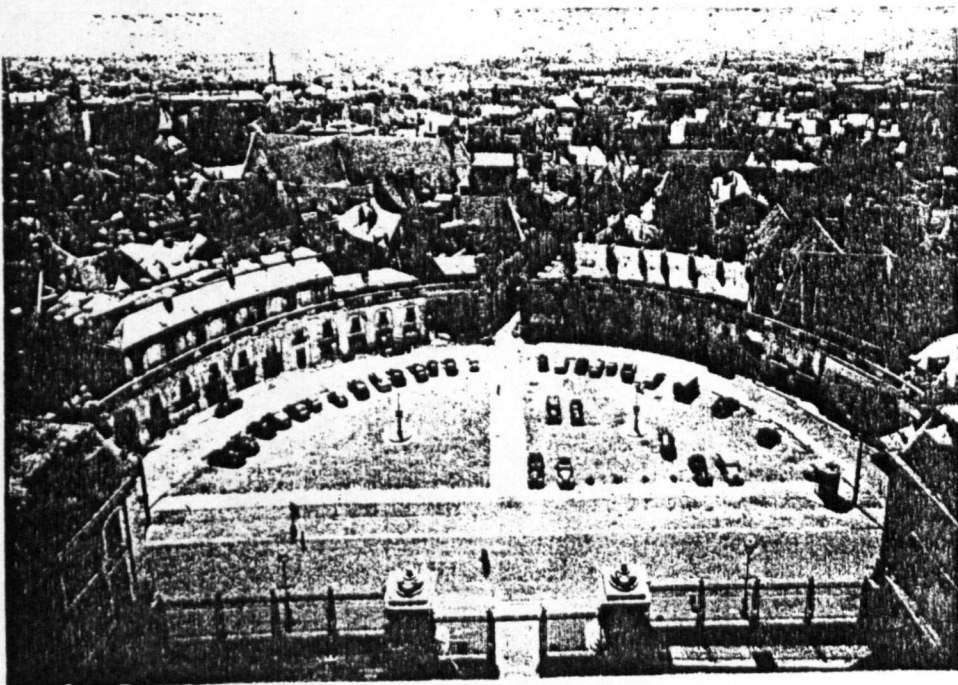


Fig. ( 7.17 ). Place de la Liberation.  
 (Source: Zucker, 1959, p.186.)



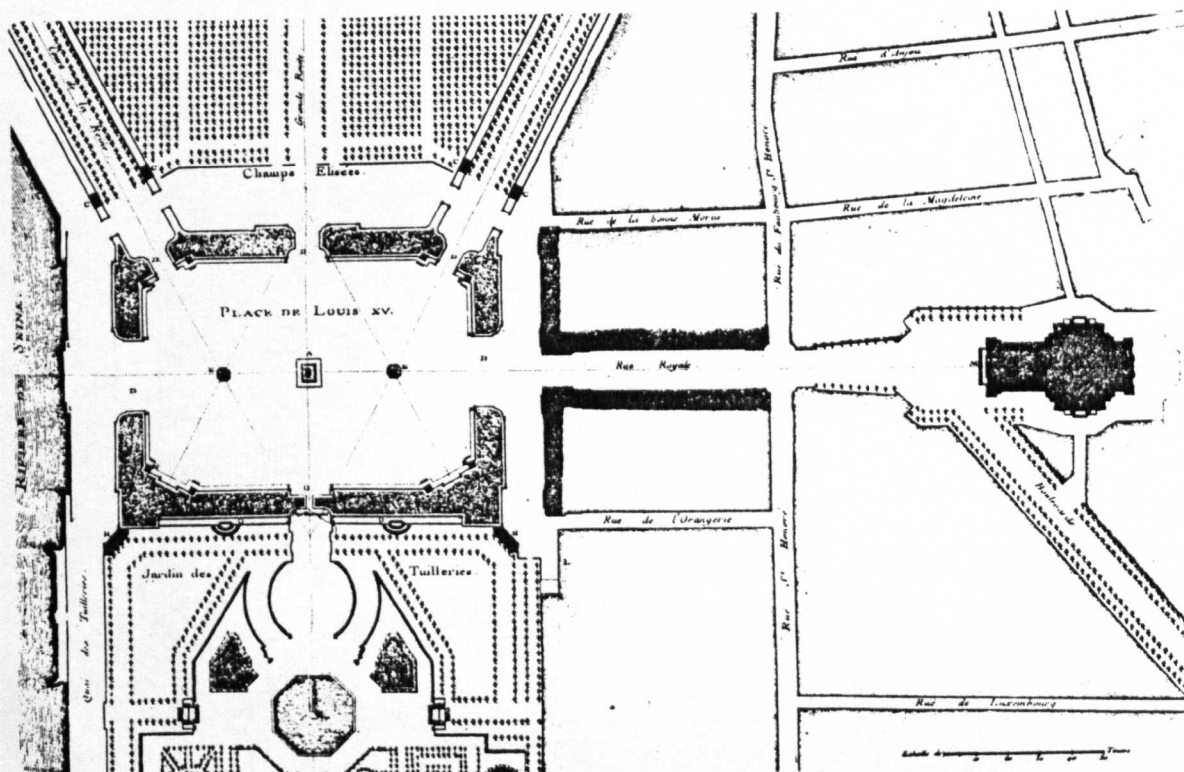


Fig. ( 7.18 ). Place de la Concorde, Paris.  
 (Source: Zucker, 1959, p.189.)

Simonds(1961, p.125). Also, the Place de l'Etoile cannot be categorised as a square, conversely it can be classified as an extravagant wide traffic circle. According to the above, we can understand that France, during the period under discussion, had many squares to be proud of. However, this is not to say that France was the only European country which had such squares, for a lot of other European countries had their beautiful squares, especially Germany and England. London's plan by Wren (1666) was, as Zucker says, based essentially on a unified and coherent system of star squares, cut by extended axes. As public entertainment places, London Squares, as most of the French squares in the seventeenth and eighteenth century were protected from traffic intrusion, where privacy was concerned. As in Zucker:

In London the aim was privacy, the privacy of the pedestrians, residential comfort and seclusion from the life of the surrounding neighbourhood. There can be no doubt that architecturally and also emotionally, the basic concept of these squares was rooted in the collegiate squares of the middle ages.<sup>13</sup>

At the end of the eighteenth and in the beginning of the nineteenth century a new type of square appeared in London in which a new creative balanced relationship between architecture and landscape was established.

If we move now to the United States to describe its heritage of squares, unfortunately we find nothing similar to those Italian Piazzas. According to Zucker (1959, p.225) although squares in the United States cannot compete with their European counterparts of the same period, however

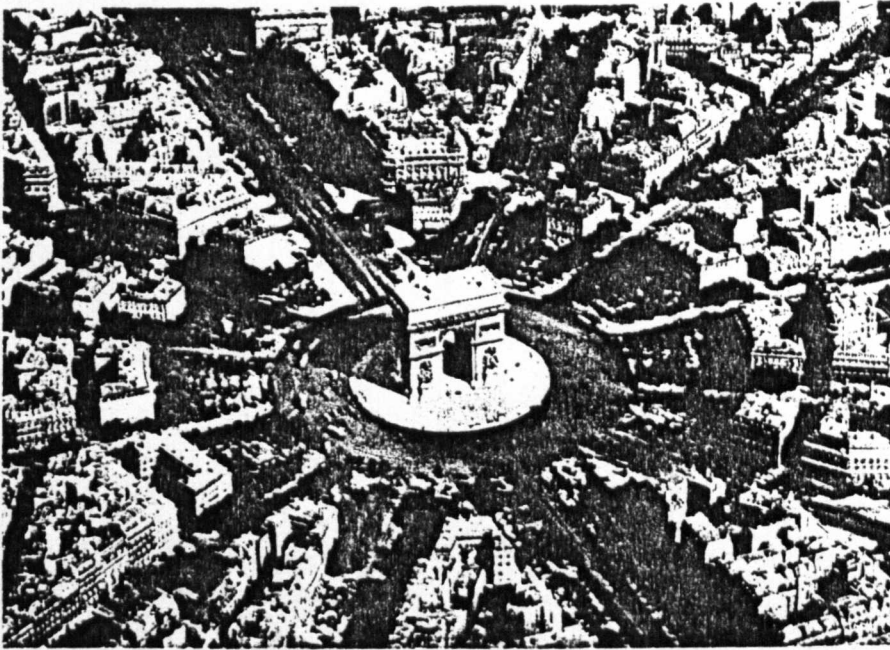
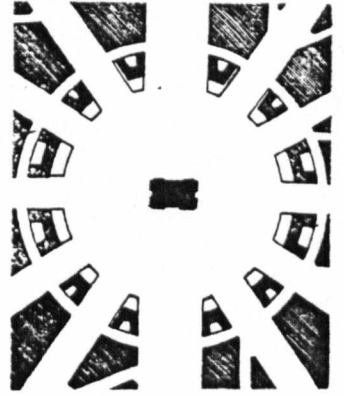


Fig. (7.19 ). Place de l'Etoile, Paris.  
(Source: Zucker, 1959, p.194)

they constitute an individual expression and a manifestation of the civic arts, by which American Cities have acquired a special aesthetical dimension.

When we approach the nineteenth century, we find unfortunately that the amount of care which was given to squares during the period which preceded that century; no longer occurs. As in Zucker (1959, p.5), squares in the nineteenth century were no longer regarded as three-dimensional units, conversely it was an attempt to transplant the charm of the English park into the center of the city. Squares in that century, as Zucker says, were regarded only as opportunities for placing statues and relief places, for planting bushes and flowers without any spatial connection with the rest of the city. However, such negligence, as Zucker says, did not continue for ever, for the twentieth century was regarded as a new start in realising the three dimensional constitution's value.

As a feature of the modern era, we find that squares of the new century are characterised with some new features as a consequence of the new art movement in this modern century. According to my analysis of some examples which were designed in this century, sometimes after 1930, it was discovered that:

- i. Most of the squares of this century in contrast to those which were designed in the previous centuries are asymmetrical and comparatively more informal in their design.
- ii. Most of these squares were achieved by the continuous addition during the consecutive decades, so the aim of



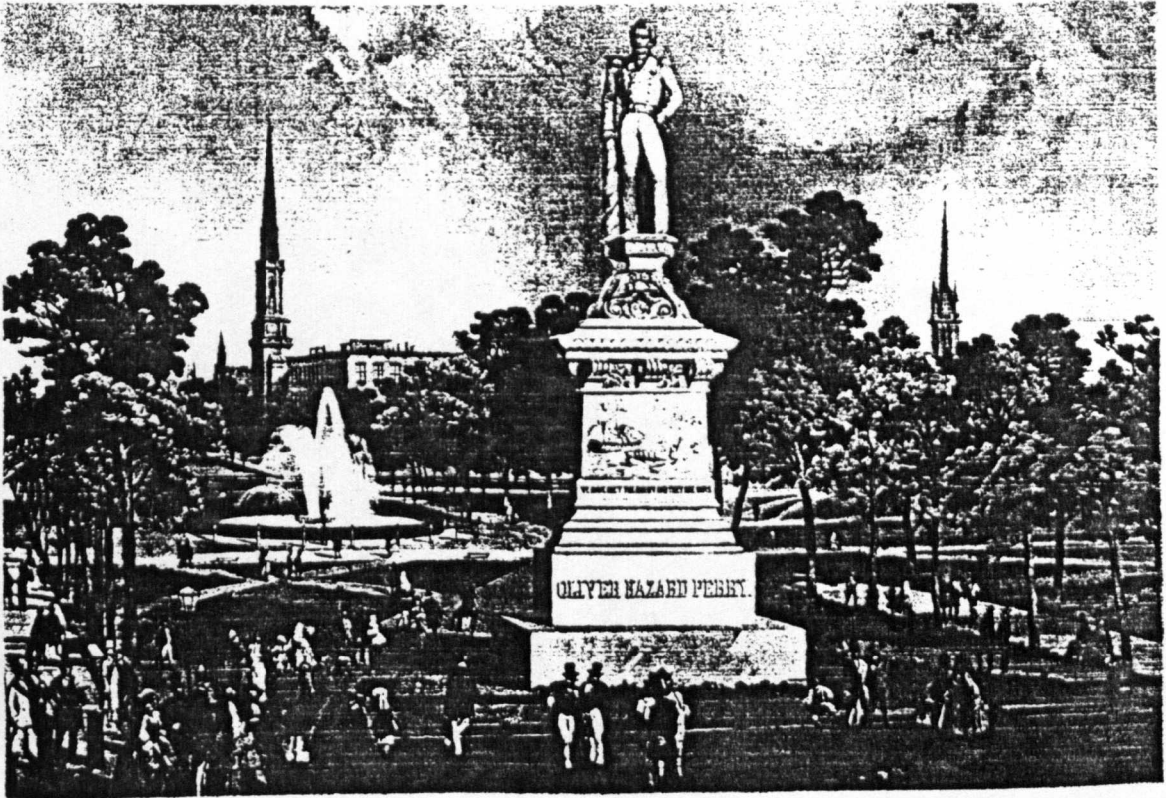


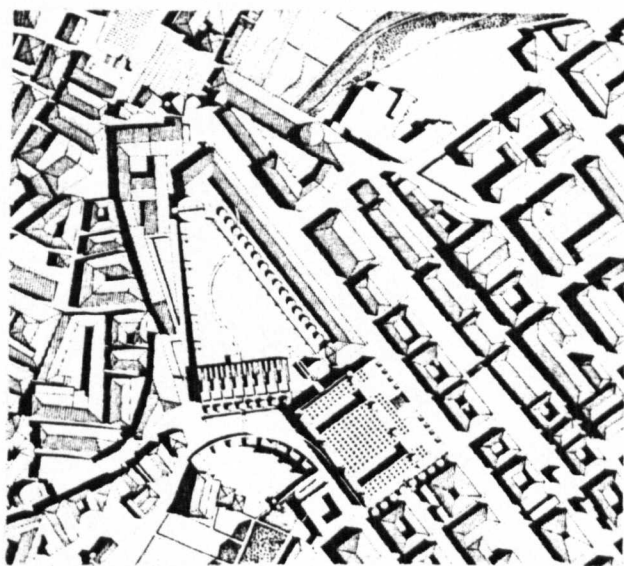
Fig. ( 7.20 ). The Square of Cleveland, Ohio, 1859, U.S.A.  
(Source: Zucker, 1959, p.346)

attaining a complete three dimensional constitution such as the Piazza of San Marco or San Peter's Square, is hardly achieved.

- iii. Squares of this century, contrary to their equivalents in the earlier centuries, are not exclusively dominated by the church or the palace, conversely such a dominance can be seen to be achieved by siting any other public building.
- iv. As a result of such dominance by those public buildings, one might say that squares of this century, unlike previously established squares in earlier centuries are more human, less formal and consequently more intimate to the public.
- v. In contrast to the previously constructed squares in the last centuries, squares of this century lack the sense of monumentality and the sense of formality as a result of the newly used trend in modern architecture, which tends to simplicity rather than complexity and the use of a rich composite form.
- vi. As a result of increasing the impact of the traffic inside the city, squares of this century no longer escape its destructive effect, in that cars were allowed in many cases to run inside it; consequently many tricks were employed, such as lifting its main floor above the level of the surrounding streets, or by constructing a fence of protective low wall or trees around its perimeter, in an attempt to reduce the impact of the traffice to the minimum.

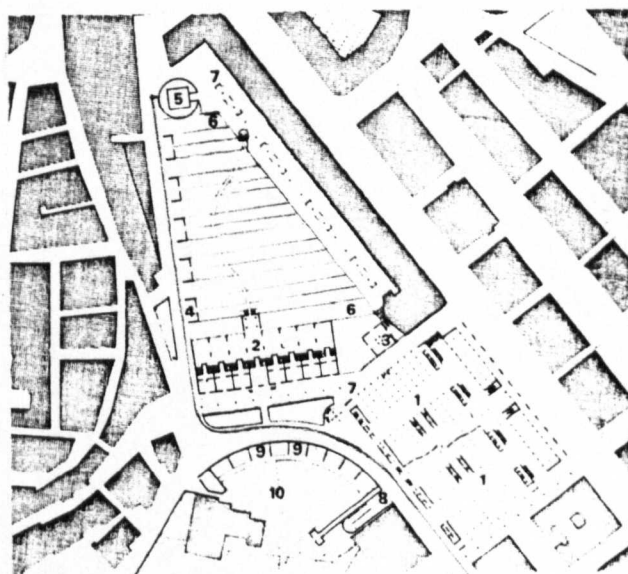
Fig. ( 7.21) Piazza in the city center of Lanciano, designed by Franco Purini. It is an example of a central piazza located in the hub of the city center, the thing which provided the chance of surrounding this piazza with most of the commercial and the administrative buildings in this center.

(Source: The Architectural Review, Vol CL XXII No. 1028)



### Key

- 1 Interior courts of shops and public offices
- 2 Workshops
- 3 Tower houses
- 4 Shops
- 5 Museum of Lanciano's urban history
- 6 Pedestrian piazza for markets and festivals
- 7 Tree lined avenue
- 8 Road to valley park
- 9 Pedestrian ramp to valley park
- 10 Water cascades



The piazza and the center of the city

(Source: The Architectural Review, 1978, Vol CLXII No. 979, p.163)

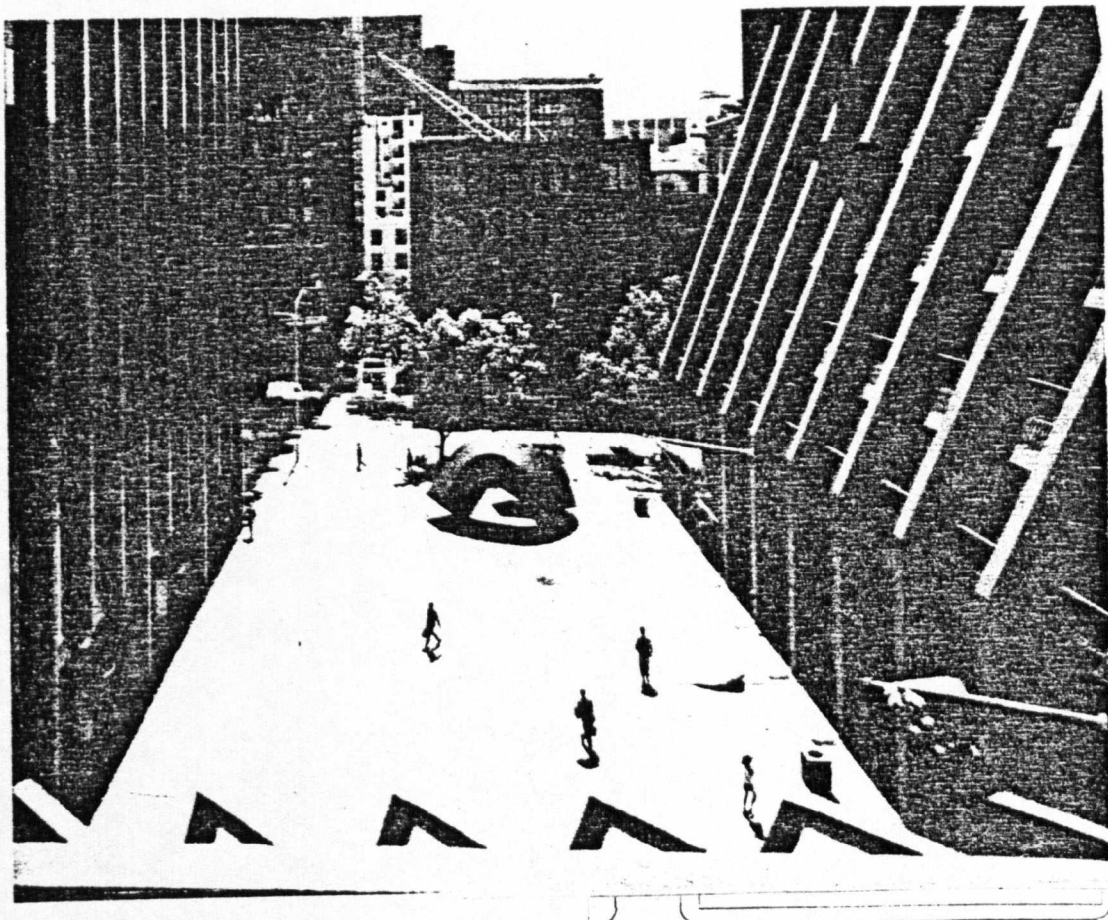
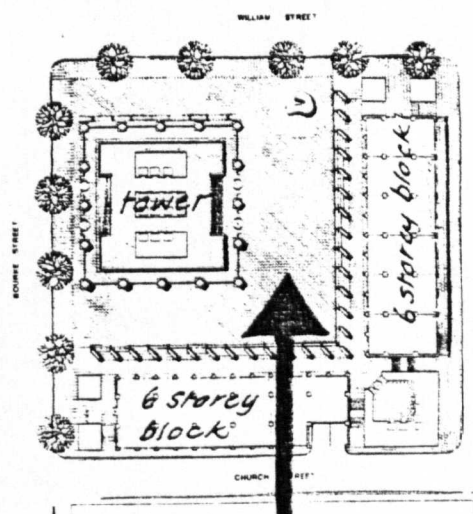


Fig. ( 7.22 ). AMP square  
Architects: Bates, Smart and  
McCutcheon in association  
with Skidmore, Owings &  
Merrill

An example of a dominated square, in which such a dominance has arisen by establishing the gigantic L shaped office tower, sloping the facade of this building is a successful treatment by which light was allowed to penetrate into the square.



(Source: The Architectural Review, 1978, Vol. CLXII, No. 979, p.163)



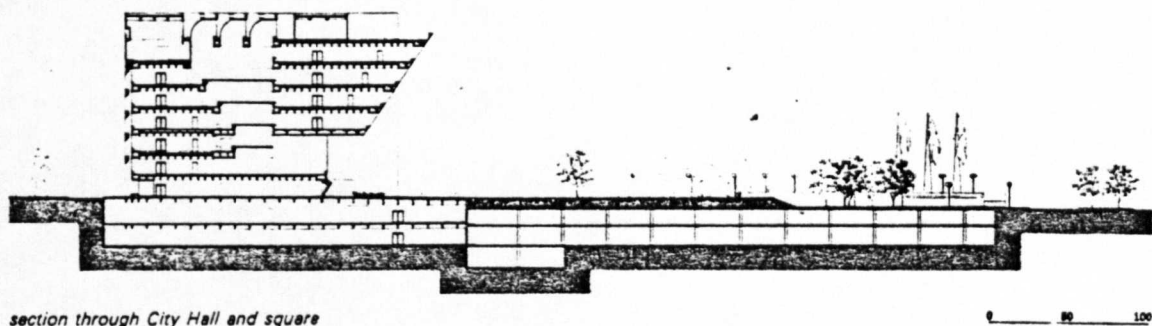
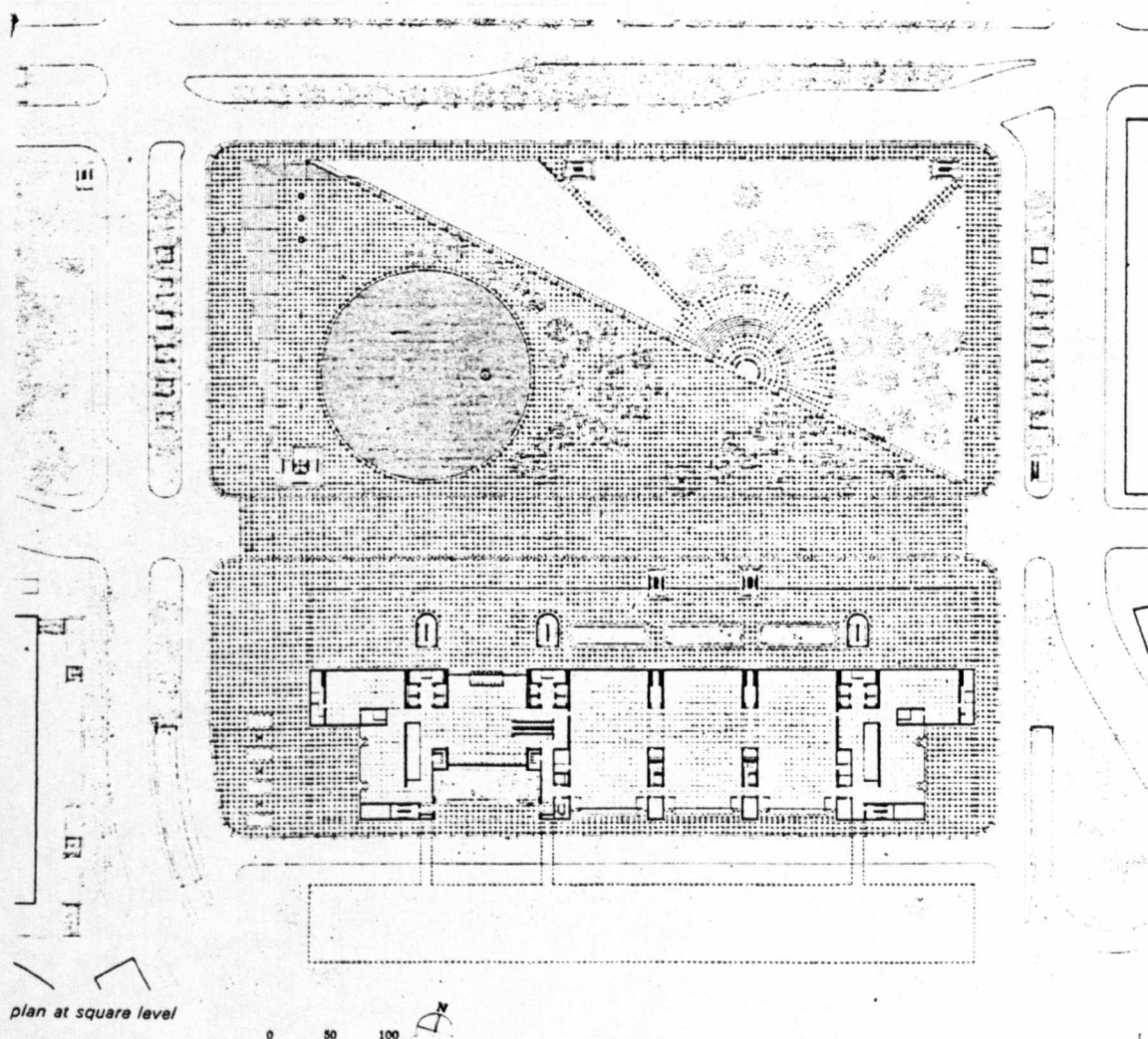


Fig. (7.23). The Piazza of Dallas city hall. Architects: I.M. Pei & Partners/Harper & Kemp. An example of which the square was dominated by the gigantic municipal building. Dallas will have to build some equally mammoth building around this one in order to create a sense of enclosure around the square.



(Source: The Architectural Review, Nov. 1978, Vol. CLXIV No. 981, p.301)

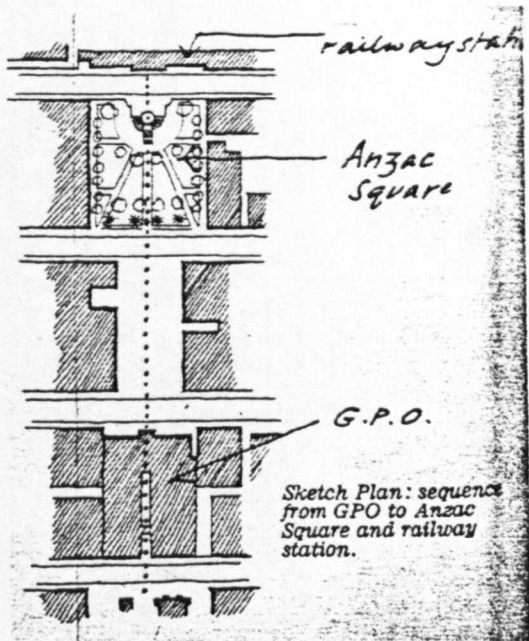


Fig. ( 7.24 ). Plan of Anzac Square from which the railway station and the general post office (GPO) can be seen.



Fig. (7.25 ). Anzac Square as seen from the G.P.O. War Memorial & Station in the background.

(Source: The Architectural Review, 1979, Vol. CLXV, No. 986, p.238.)

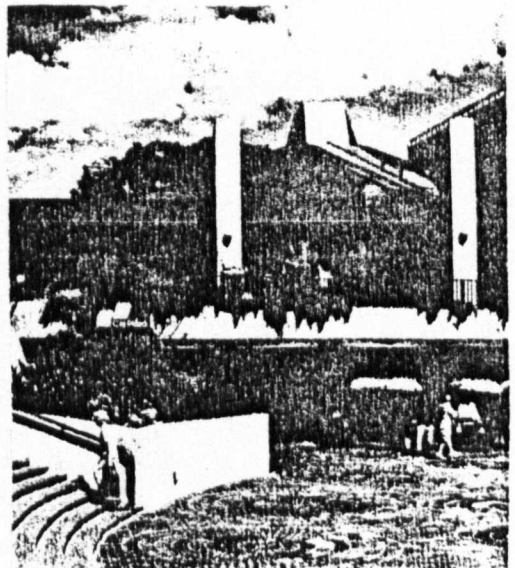
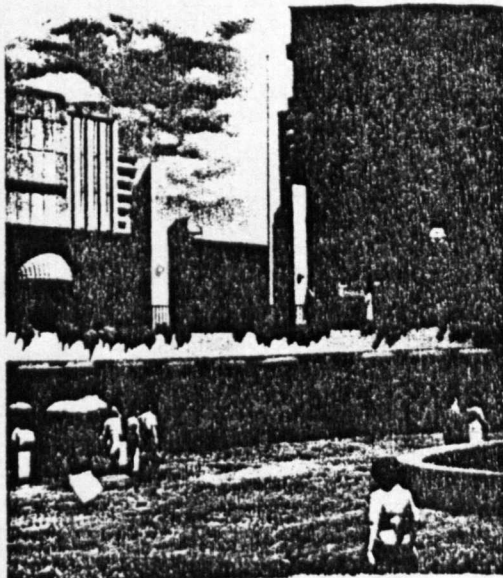


Fig. ( 7.26 ). Squares and the Sense of Drama, Brisbane. Here is an example of a sunken shopping square that is used at the same time as a public piazza.

(Source: The Architectural Review, 1979, Vol. CLXV, No.986, P.237.)

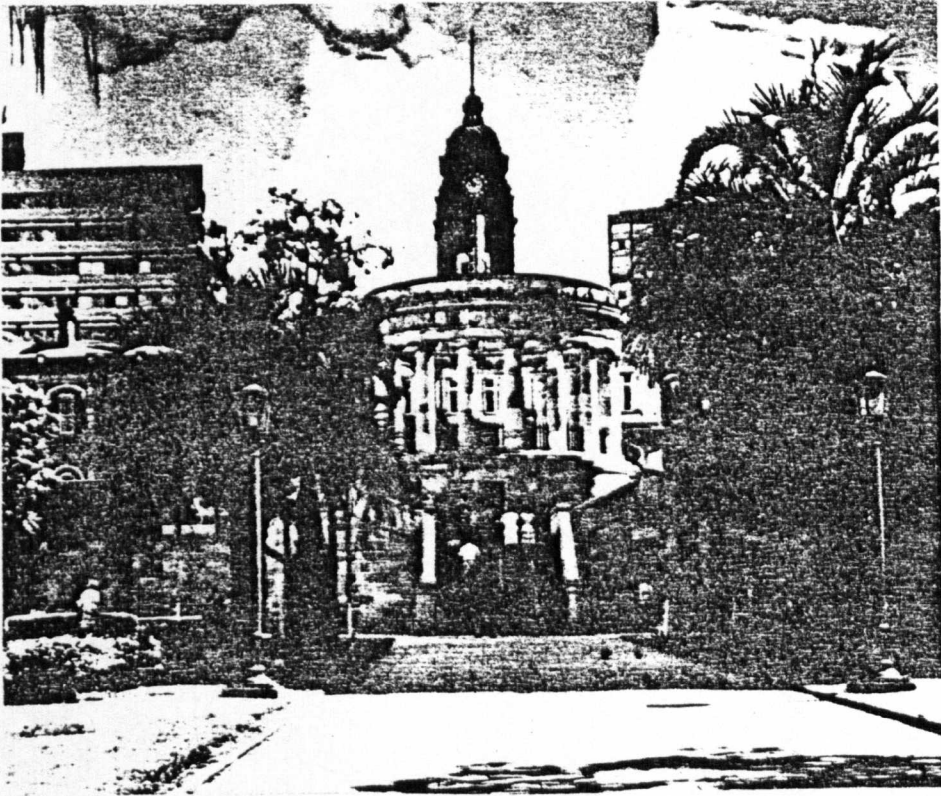


Fig. ( 7.27 ). Anzac Square as a place for commemoration, in Brisbane. In this photo one can see the war-memorial as it stands in the background. It was argued in 1979 that the proposal of raising the whole square to be bridging a joint road between the station and the post office will destroy the present harmony and the scale of the war-memorial at one end and the classical facade of the post office at the other.

(Source: The Architectural Review, 1979, Vol. CLXV, No. 986, p.238.)





Fig. ( 7.28 ). Plan of Central Hamburg as it was in 1892. In this plan we can see the River Alster from which a canal and a lake have been extended into the center of the city.

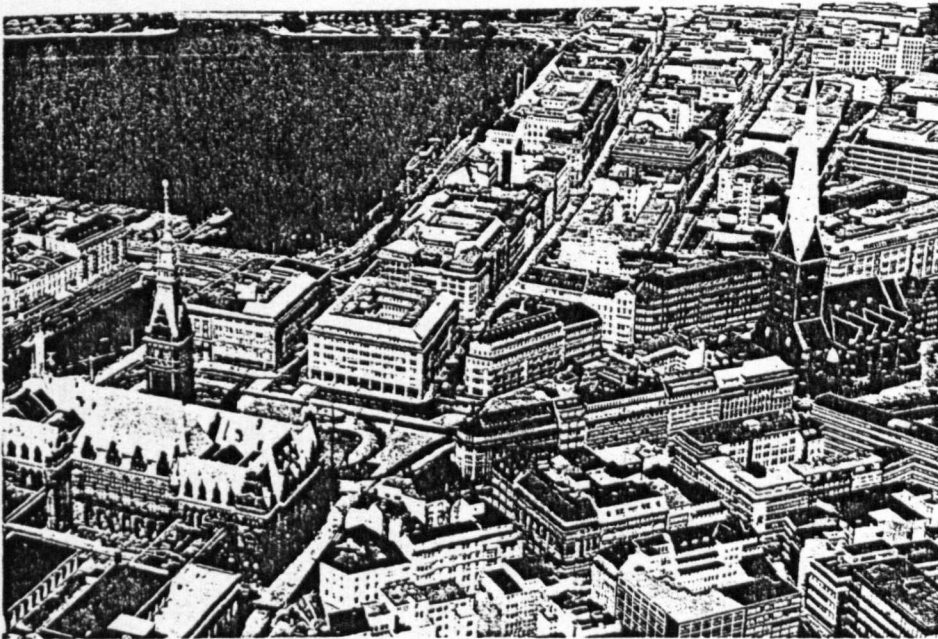


Fig. ( 7.29 ). General view of the city center of Hamburg, 1921. In this picture we can see the established thoroughfare 'Monckeberg Strasse' by Schumacher's, of which the designer tried to connect the town hall square on the left with the railway station on the right.

(Source: The Architectural Review, March 1980, Vol. CLXVII, No. 997, p.167.)



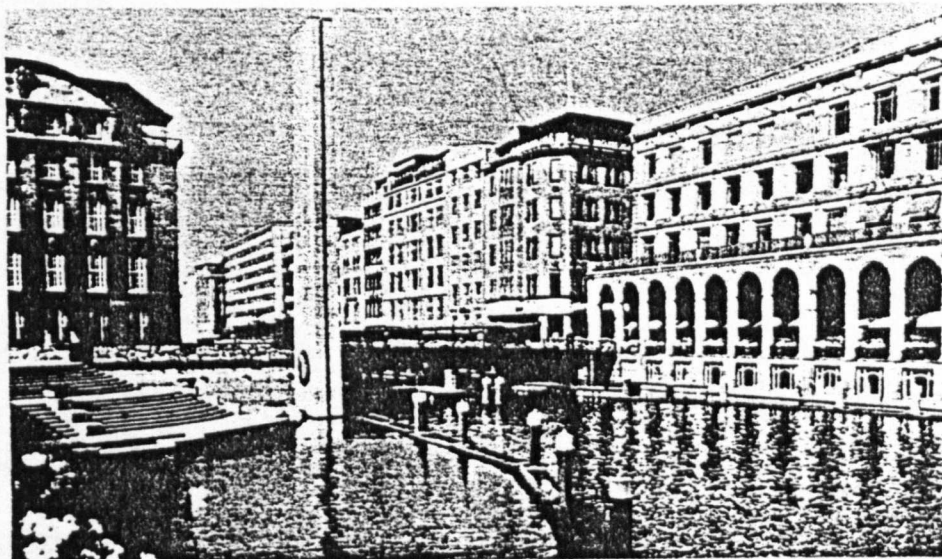


Fig. ( 7.30 ). Town Hall Square and the use of San Marco's concept, 1921, Hamburg, Architect: Schumacher's. Here is an example of a square in which the designer has tried to imitate the concept of San Marco's piazza in Venice by establishing a landing jetty for water buses in the middle of Alster's lake river, which was considered as the core of Hamburg's commercial, administrative and cultural center.

(Source: The Architectural Review, March 1980, Vol. CLXVII, No. 997, p.168.)

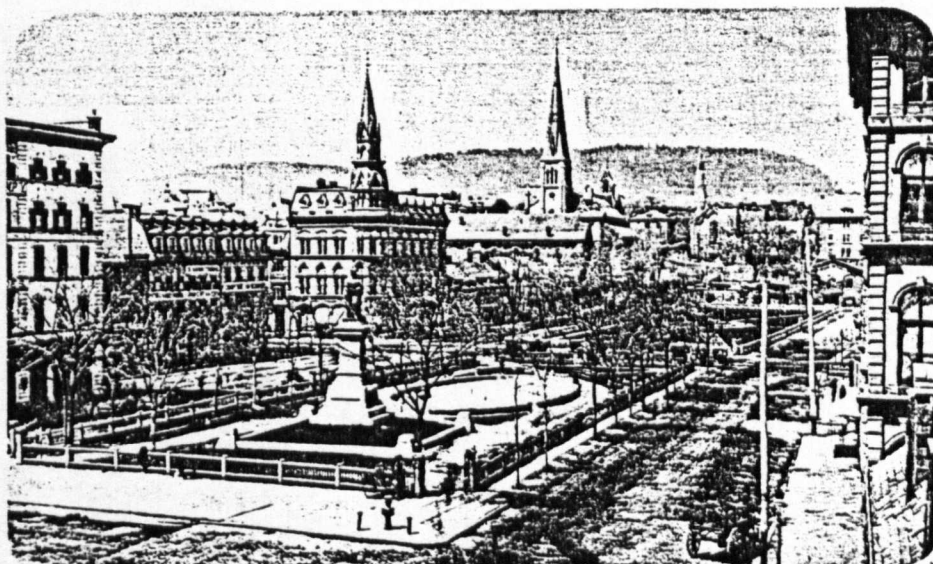


Fig. ( 7.31 ). Victoria Square, 1873, Montreal Canada. An example of charming and formalised public piazza, that is surrounded by some of the commercial and the administrative establishment. Here we can also notice the mutual relationship between the space of the square and the open landscape outside in the background. Unfortunately in 1960 the square became lifeless after using its space as a car park.

(Source: The Architectural Review, May 1980, Vol. CLXVII, No. 999, p.300.)

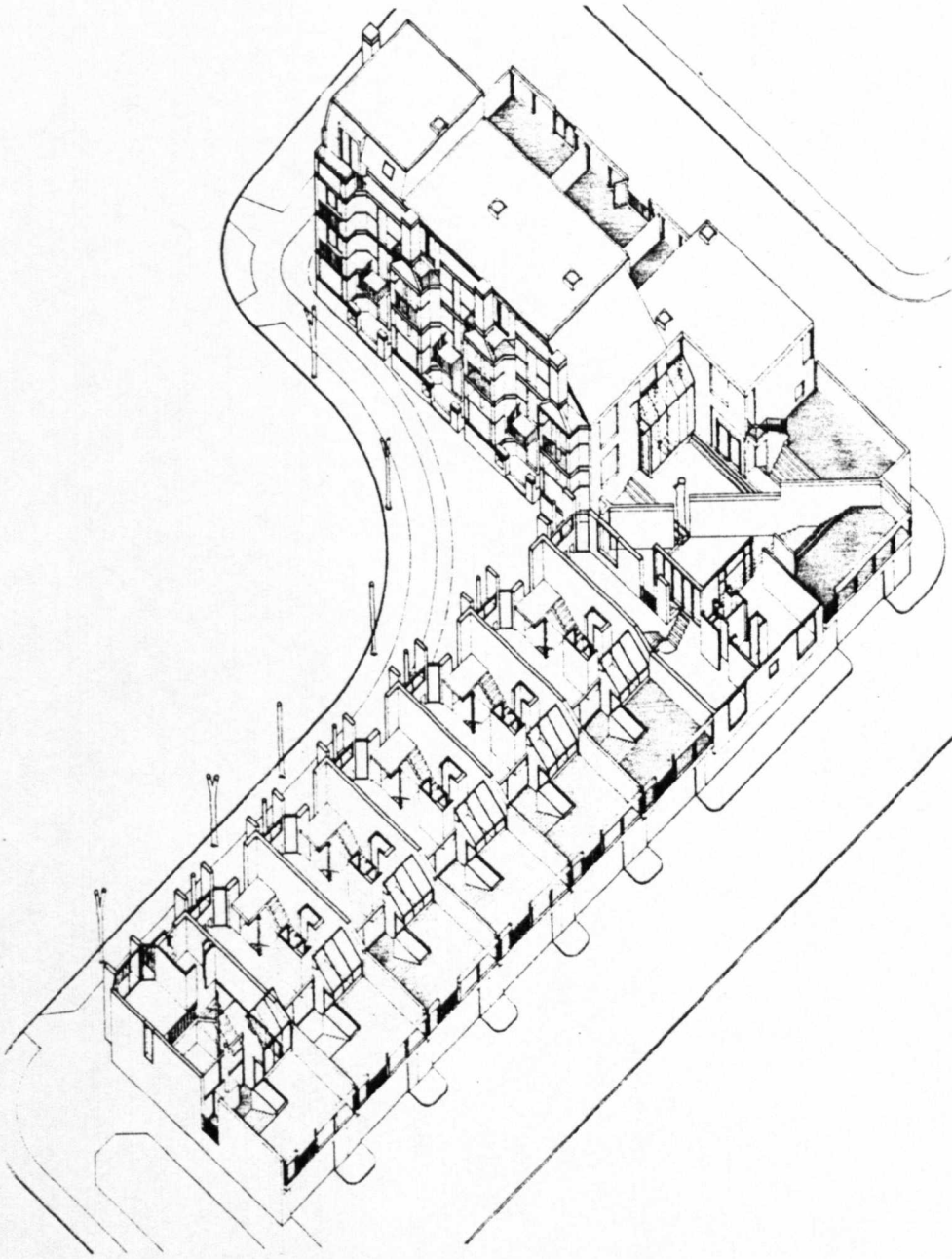


Fig. ( 7.32). Ghent Square, Virginia, U.S.A., designer: Barton Myers. By using the predominant element of the confined bay-window/chimney, Myers was able to satisfy the three needs required which were as follows: The individuality of the attached houses of which the unity of the whole terrace was intended to be established; maintaining the traditional values and the stylistic character of the environment and finally using a sense of symbolism in order to define the house. It is important to indicate that the completion of the whole square will be conditional on building the corresponded shape.

(Source: The Architectural Review, 1981, Vol. CLXIX, No. 1009, p.158,)

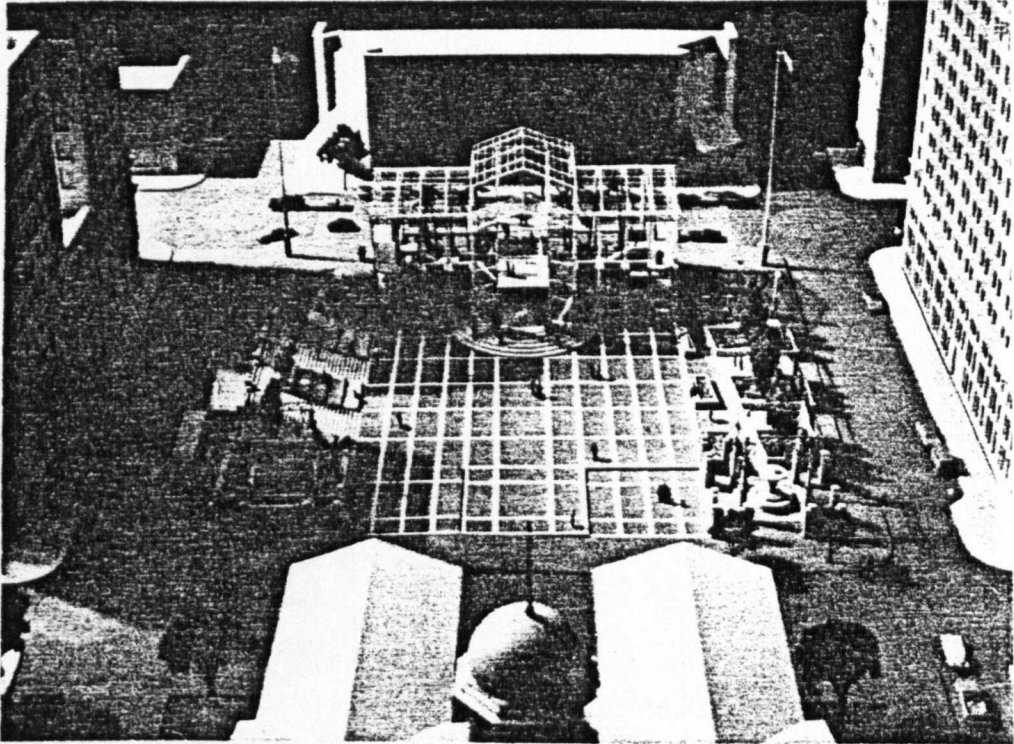


Fig. ( 7.33 ). Portland Plaza, first prize, designed by Machado/Silvetti; an idea of echoing the courthouse with a delicate glass winter garden.

Portland Plaza Competition, 1980. Firstly the required designed square should be working as a magnet to attract the public to Portland downtown; secondly it should be a place for all seasons, all weather space, where Portland has a reputation of being one of the wettest cities in the States. Hence we will notice that all of the winners' schemes shown here starting from 1 - 6 display only one approach of using a greenhouse as a dominant structure.

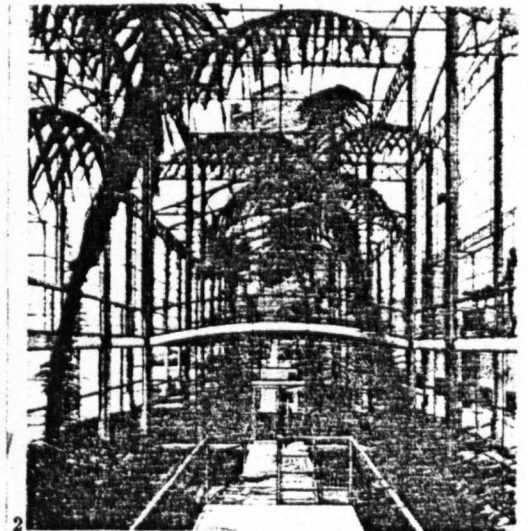


Fig. ( 7.34 ). Portland Plaza second prize. The scheme has used the same concept as the first scheme. It is an idea which has been described as a dialogue between man & nature.

(Source: The Architectural Review, March, 1981, Vol. CLXIX No. 1009, pp.194-5.)



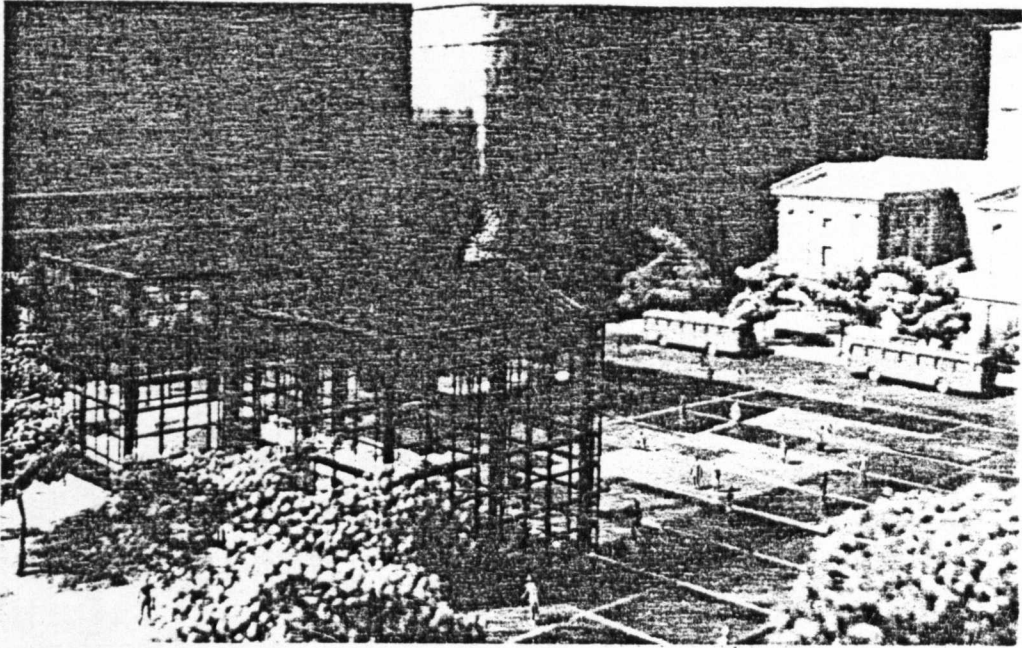


Fig. ( 7.35 ). Portland Plaza, Third Prize.  
In this concept a sense of contrast has been established  
by using formal and natural forms at one time.

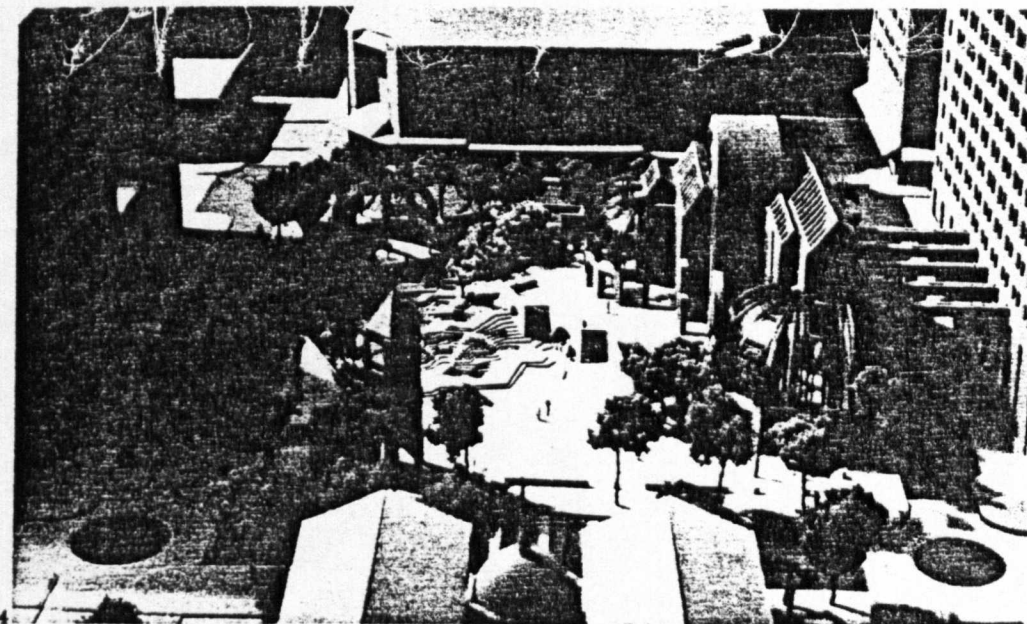


Fig. ( 7.36 ). Portland Plaza, fourth prize.  
A crammed idea in which a clock-tower, water garden, winter  
garden, arcades and a stage were used in forming the square.

(Source: The Architectural Review, March 1981, Vol.  
CLXIX No. 1009, pp.194-5.)

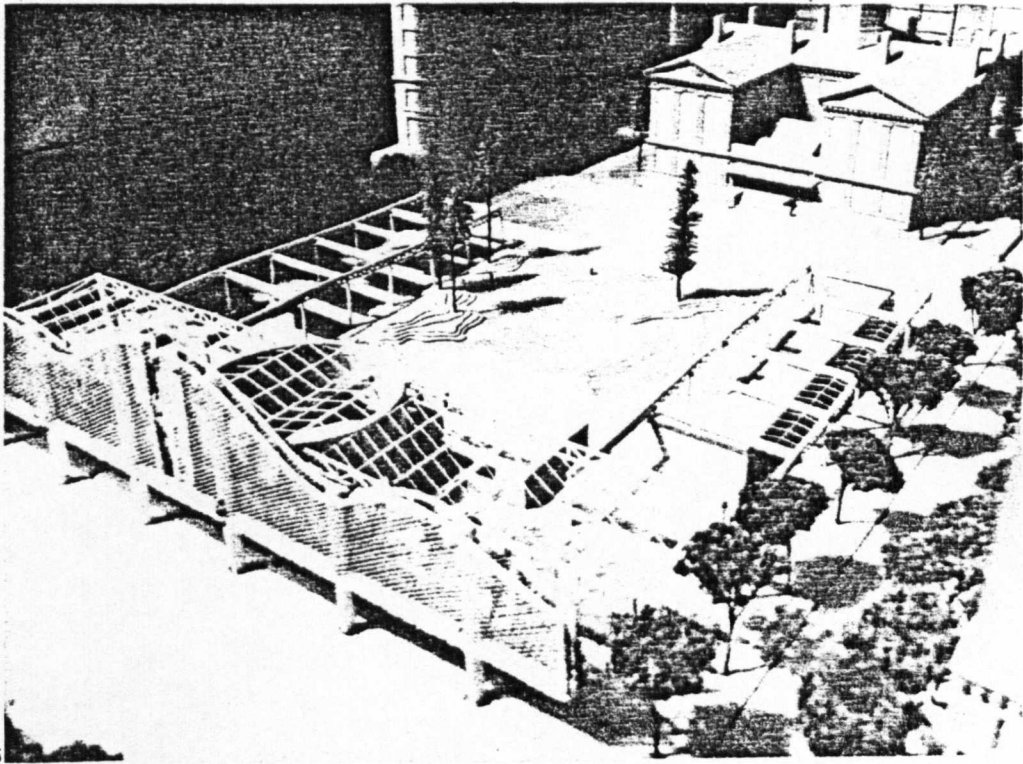


Fig. ( 7.37 ). Portland Plaza. Fifth prize.  
An idea in which pergulas and trellises were the  
main element.

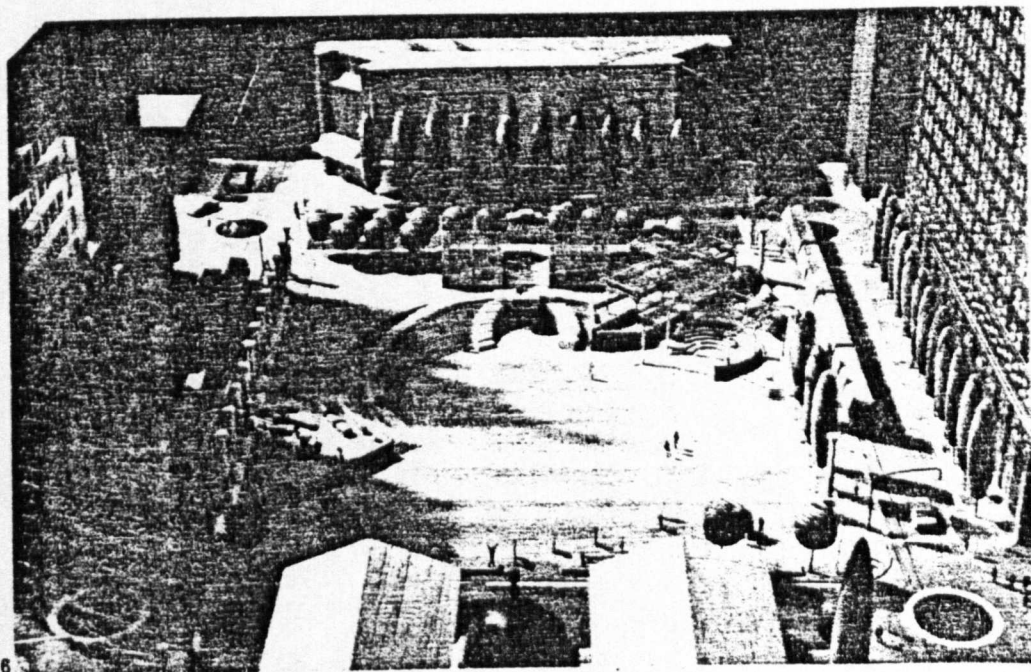


Fig. ( 7.38 ). Portland Plaza. Sixth prize. An idea of  
creating a piazza under the street level. A concept which  
was described as "windswept"

(Source: The Architectural Review, March 1981, CLXIX,  
No. 1009, p.195.)



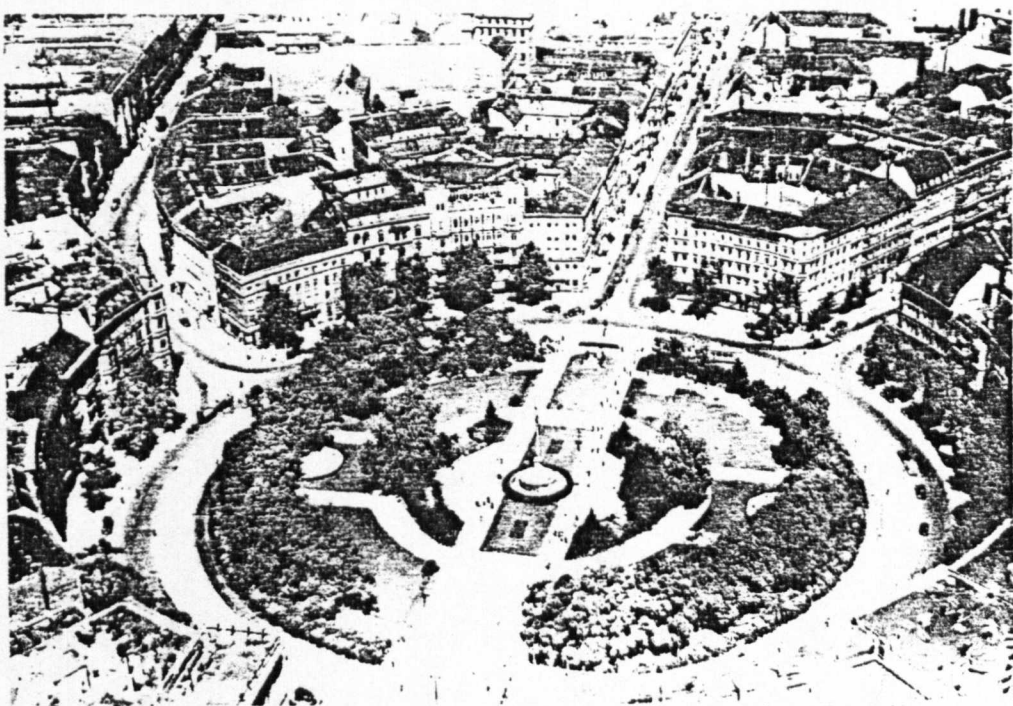


Fig. (7.39 ). Mehring Platz, Berlin. An example of a circular square surrounded by traffic around its circumference, on which its center a monument was positioned and a dense hedge of trees around its periphery was planted.

(Source: The Architectural Review, June 1981, Vol. CLXIX, No. 1012, p.327.)

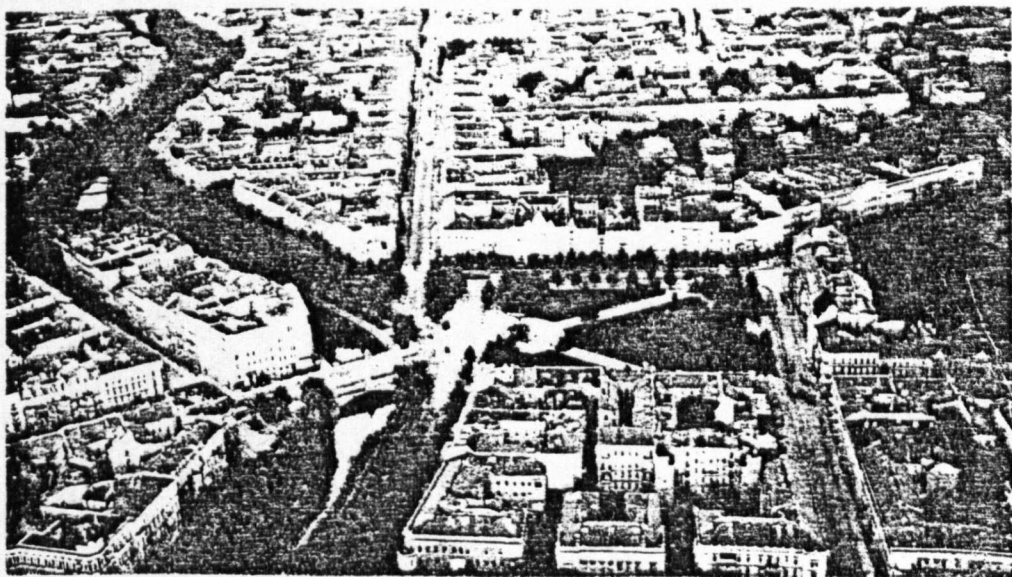


Fig. (7.40 ). The Lützow Platz, Berlin. It is an example of which a sense of enclosure and a sense of strong connection with the surrounded environment have been established.

(Source: The Architectural Review, June 1981, Vol. CLXIX, No. 1012, p.327.)



Fig. (7.41 ). Prager Platz, a square for traffic. Prager, Berlin.

Previously Prager Platz was an ornamental square, a symbolic square with a dynamic character. Not a square for dallying in but for passing through. Not a square for children to play in but for traffic which was seriously distributed uniformly over all streets. Prager Square, functionally and symbolically has been disrupted, the reason for which a number of proposals have been submitted to return it to life again.



Fig. (7.42 ). Prager Square as it was until 1981, a state of aggressive wilderness.



Fig. ( 7.43 ). Plan of Luisenstadt in Berlin, 1925.

(Source: The Architectural Review, June 1981, Vol. CLXIX, No. 1012, pp.326-8.)

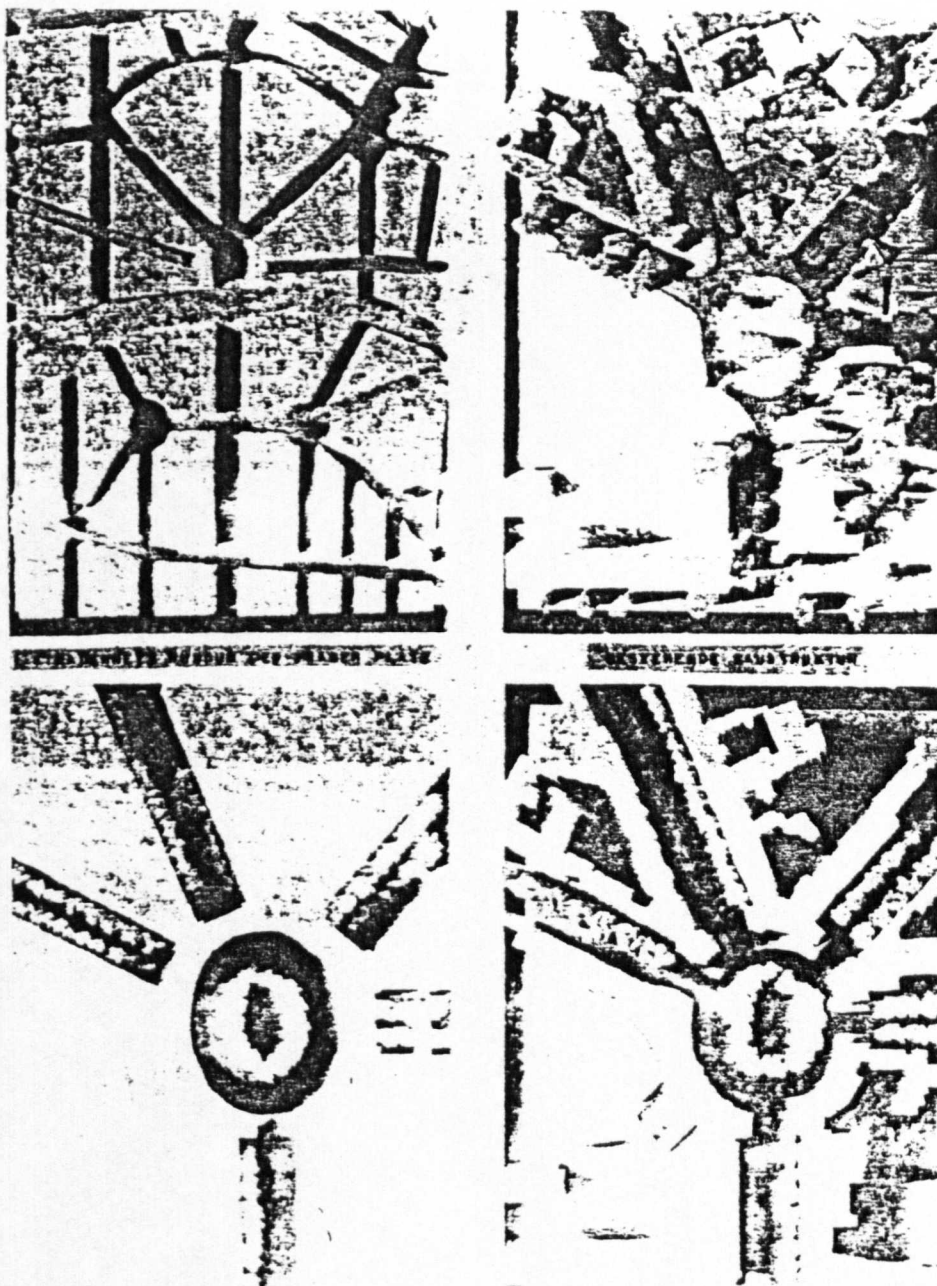


Fig. ( 7.44 ). Prager Square proposal. It is an example in which its designer was considerably concerned with the surrounded streets pattern and its impact on the square.

(Source: The Architectural Review, June 1981, Vol. CLXIX, No. 1012, p.354.)



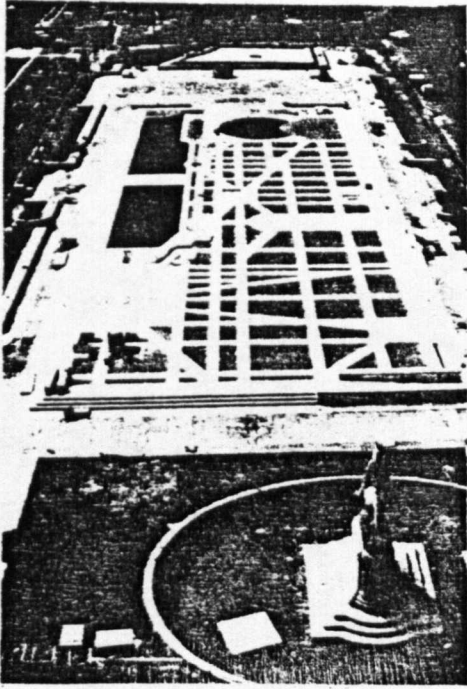
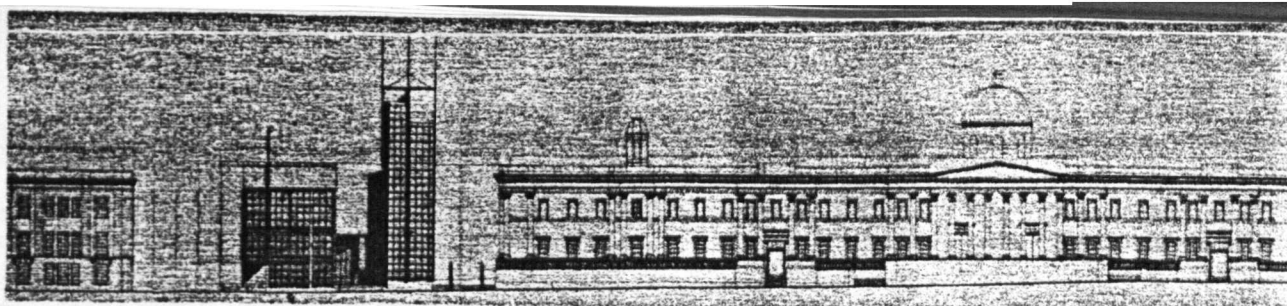


Fig. ( 7.45 ). Venturi's Piazza, 1977, Washington.

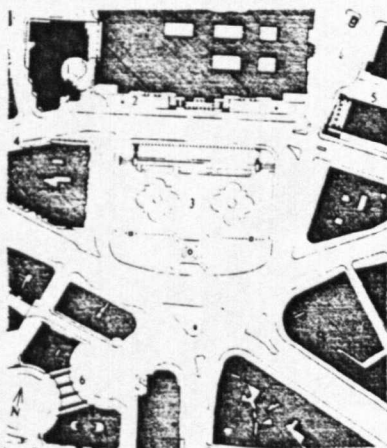
An example of a square in which the designer had to echo the pattern of the city of Washington streets in the floor of his piazza, notably the straddling axis of Pennsylvania Avenue. In the design of that square which lies at the western end of Pennsylvania Avenue, Venturi has also proposed establishing two marble models of the capital and The White House. Unfortunately, Venturi's concept was destroyed, leaving a barren horizontal wind-swept square.

(Source: The Architectural Review, January 1981, Vol. CLXIX, no. 1007, p.2.)



An exciting dialogue between the new and the old.

Fig. ( 7.46 ). Trafalgar Square and the sense of drama. In this example one can see how much great effect has been provided for the square throughout the newly established extension of London's National Gallery. It is worth indicating that such an extension has established a sense of rhyme, excitement and a dialogue of spatial tension between the old and the new.



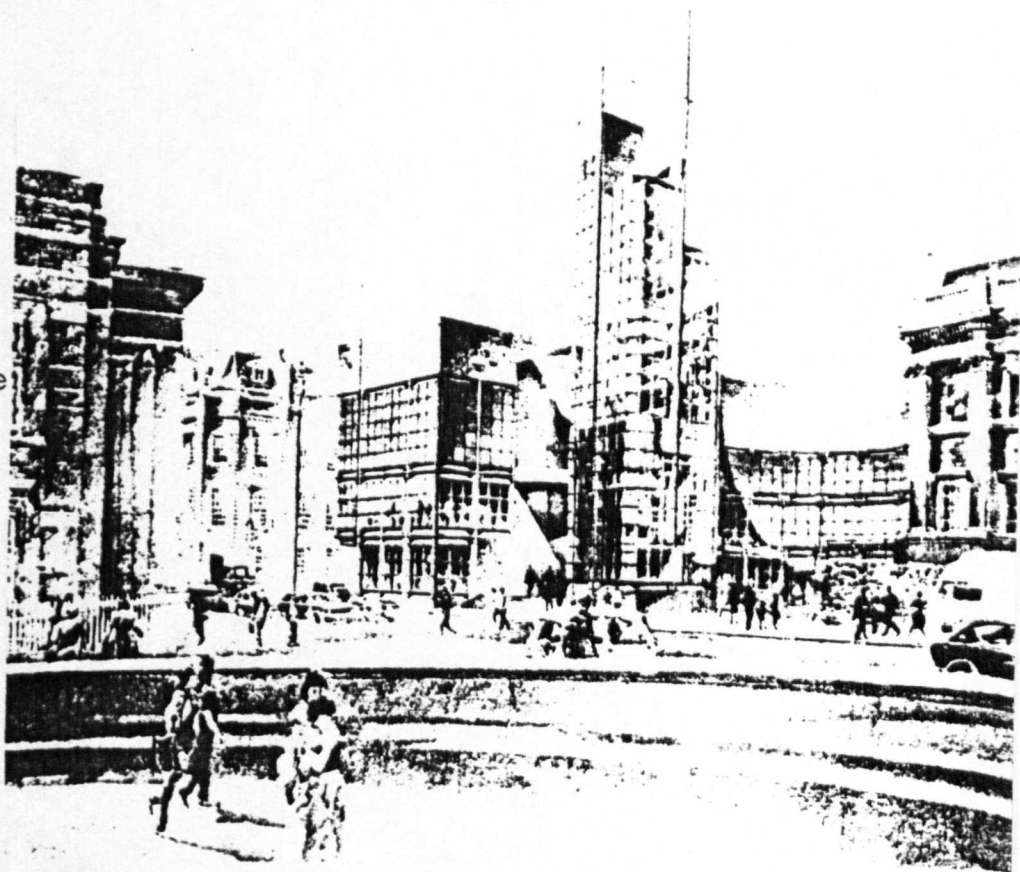
(Source: The Architectural Review, February 1984, Vol. CLXXV, No. 1044, pp.56-7)

## Site Plan

### Key

- 1 Extension
- 2 National Gallery
- 3 Trafalger Square
- 4 Canada House
- 5 St. Martin-in-the-Field
- 6 Admiralty Arch

On left perspective of the square showing the extension of the Gallery in the center



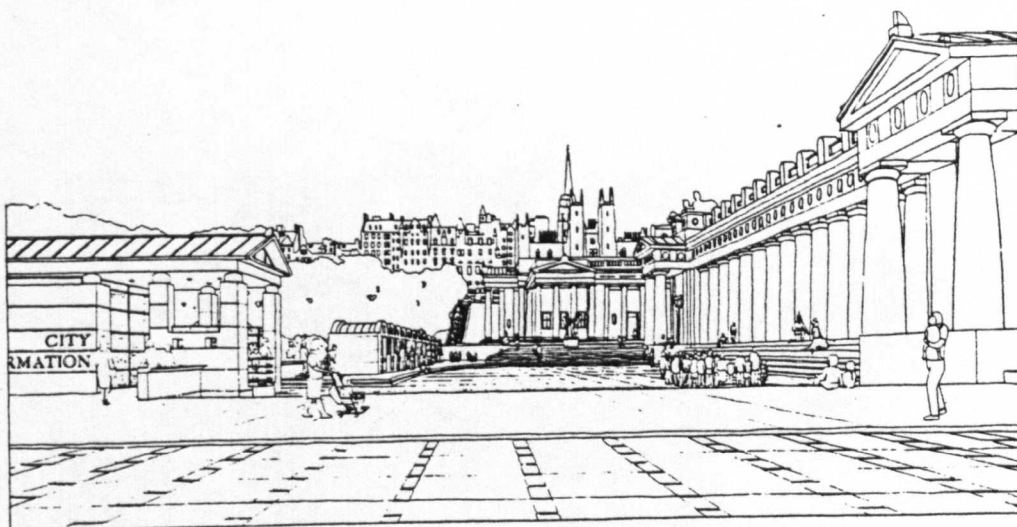
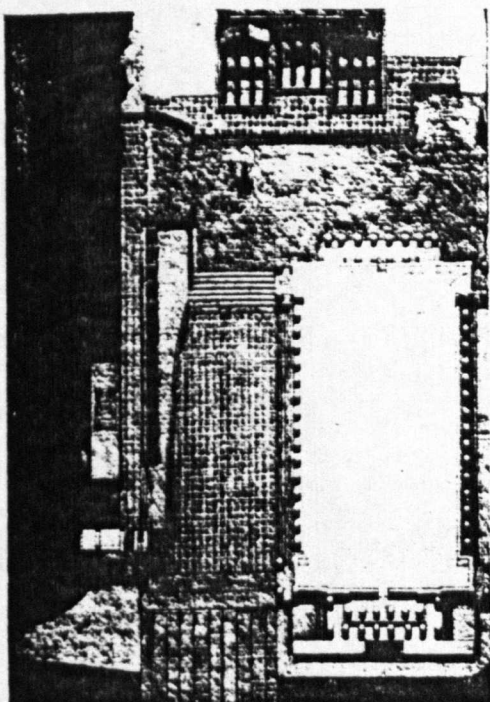


Fig. ( 7.47 ). The Royal Scottish Academy and the National Gallery of Scotland, Public Space Competition. The winning proposal which was submitted in this competition included an information center at the entrance of the site, a row of small shapes helping to define the main enclosure, an adjustment to the steps of the R.S.A. and finally creating a wide pedestrian link to the north side of Princes Street.



Plan projection from  
Princes Street

(Source: The Architectural  
Review, June 1984, Vol.  
CLXXV, No. 1048, p.25)



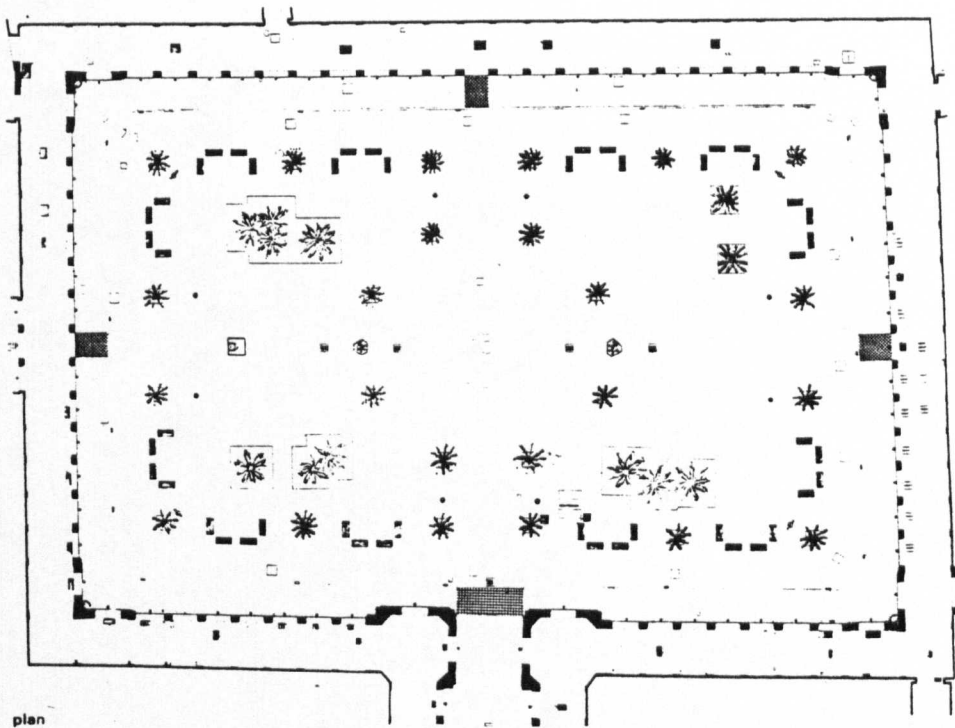
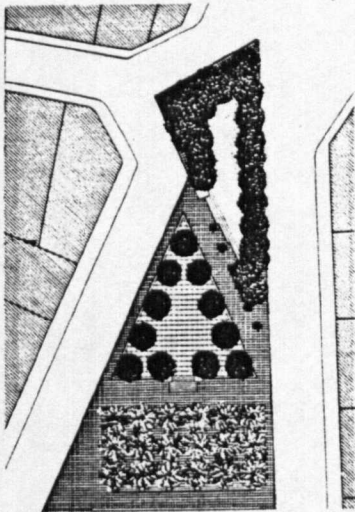


Fig. (7.48 ). Placa Reial, Barcelona. Architects: Federico Correa, Alfonso-Mila. Here is an example of a square, in which cars were no longer allowed to enter, where it was considered as an element of violation inside that square.

View of the renovated plaza.

(Source: The Architectural Review, 1984, Vol. CLXXV, No. 1048, p.39/6.)



Plan



Lower Square with palms

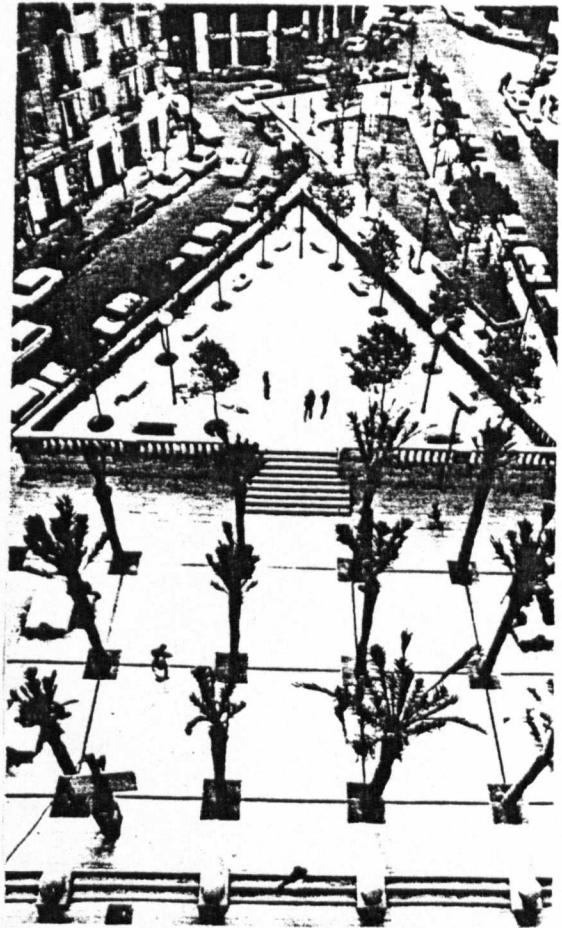


Fig. (7.49 ). Placa de Las Navas, Barcelona, Architects: Daniel-Navas, Neus Sole, Imma Jansana. It is an example of a square, in which its whole space was divided into three different parts either in shape or in level.

In the center is a triangular raised terrace with pines and benches around its perimeter. Steps from here lead down axially to a rectangular square shaded by a grid of palms. Across a pedestrian path from this terrace is a children's playground set slightly down inside a perimeter of granite sets and eucalyptus trees.

(Source: The Architectural Review, 1984, Vol. CLXXV, No. 1048, p.39/6.)

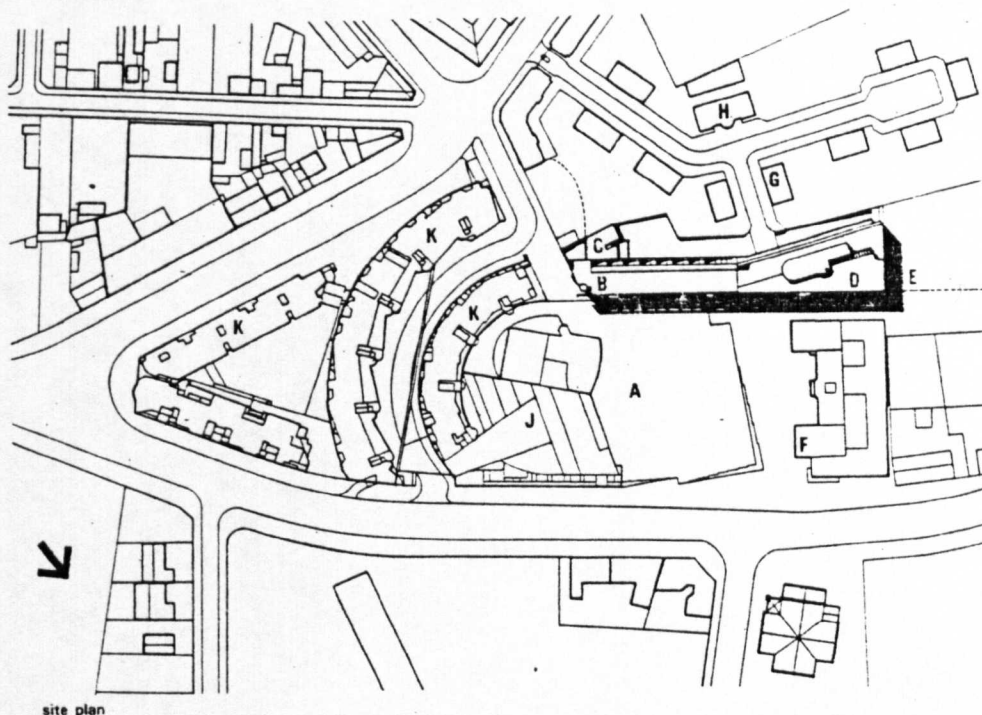


Fig. ( 7.50 ). The New Housing and Municipal Center of Drancy, France, 1980. Here we can see an example of a square in which its two designers: Georges Maurios and Oliver Gerard have cooperated together in order to produce a unified continuous elevation from the set of buildings which they have to design. On some occasions the designer of the center had to pick up some important features from the existing buildings to be repeated in the new building. It is worthy of indication that the two designers were not a partnership. Thanks for their co-operation.

#### Key

A	Piazza	F	Existing Town Hall
B	Housing	G	Garden Village
C	Kindergarten	H	Public Bath
D	New Town Hall	J	Community Center
E	Town Hall Extension	K	Housing under Construction

(Source: The Architectural Review, 1985, Vol. CLXX VIII, no. 1064, p.37)



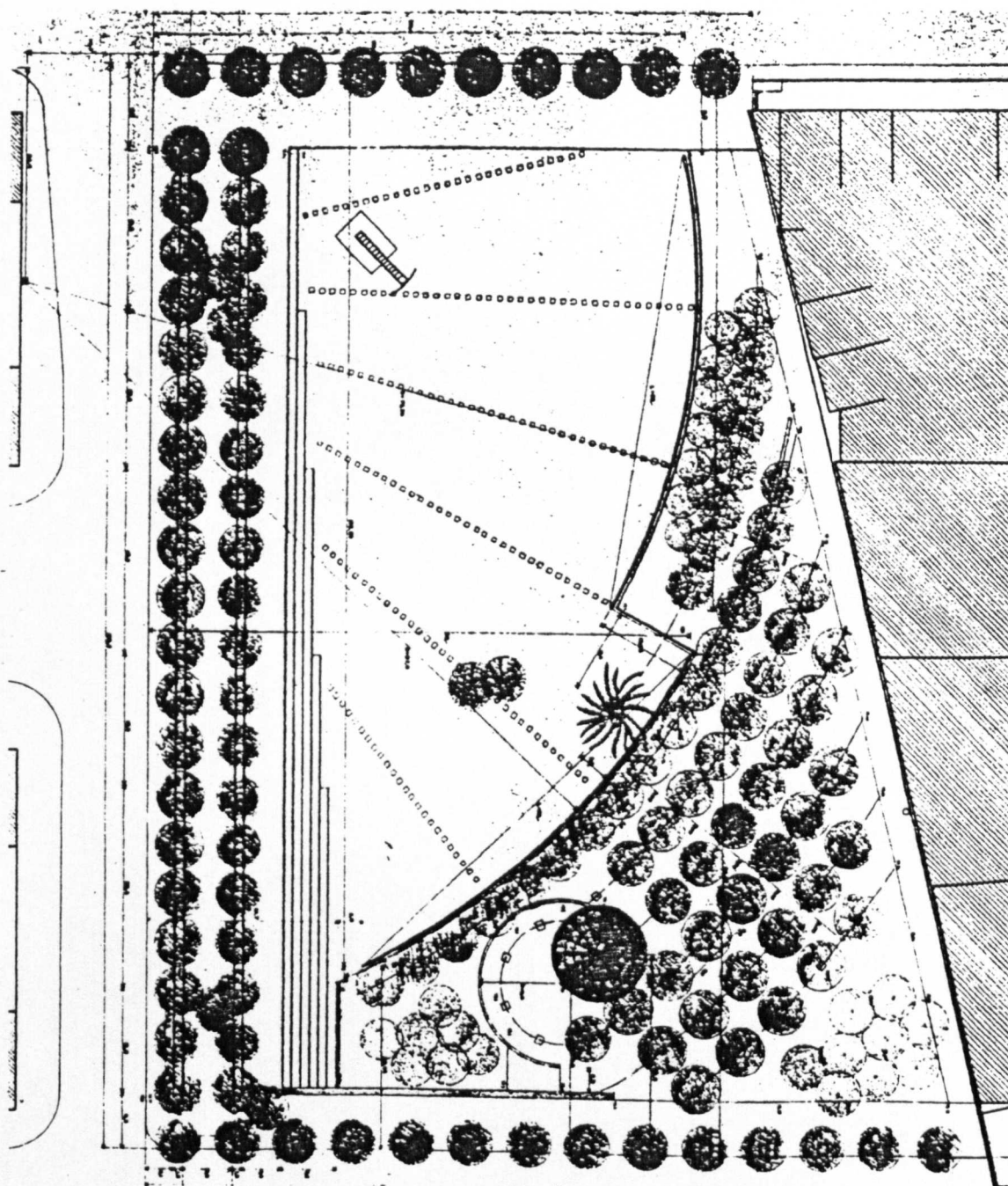


Fig. ( 7.51 ). Place de la Palmera, Barcelona.  
Architects: Pere Casajona & Pedro Barragan. Sculpture by Richard Serra.

Here is an idea in which the main square area has been divided by two concentric concrete walls into two spaces. The first is shaded by trees to be used by the elderly and the very young; the second, sandy place is lined by the promenade and was allocated to be used as a ball games field.

(Source: The Architectural Review, September 1985, Vol. CLXXIX, No. 1063, p.63/9).



Fig.(7.52)

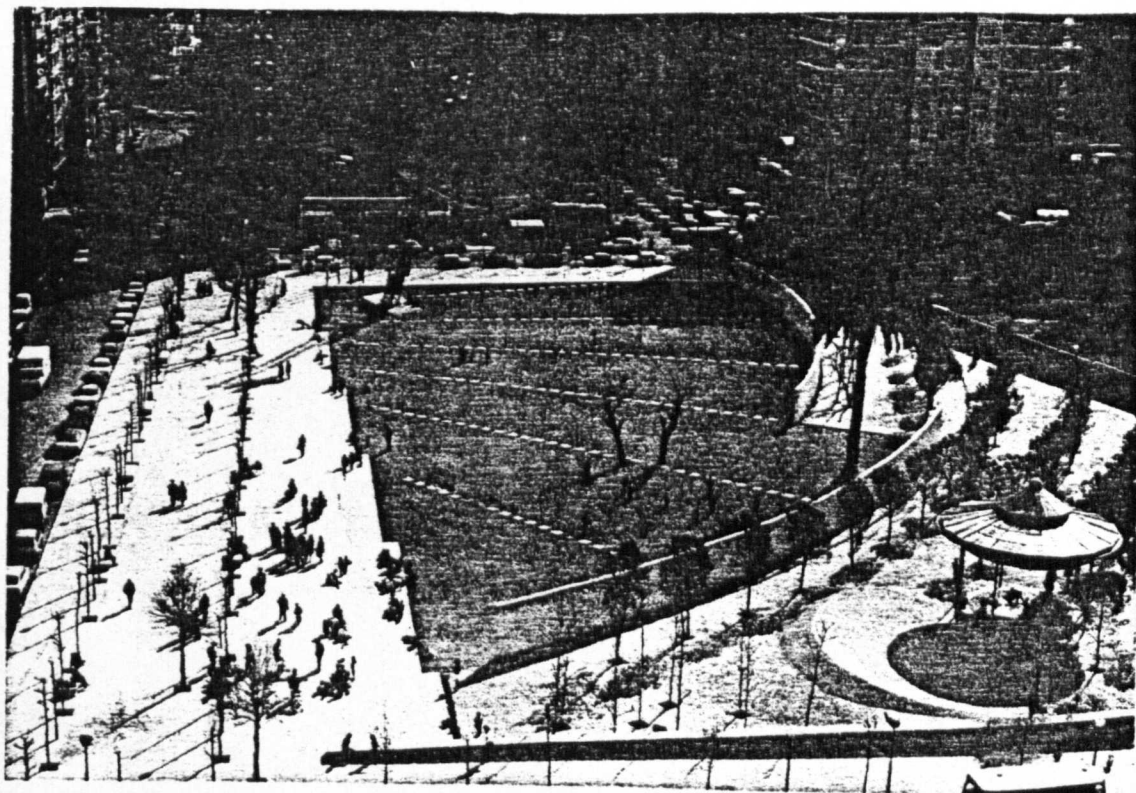


Fig.(7.53)

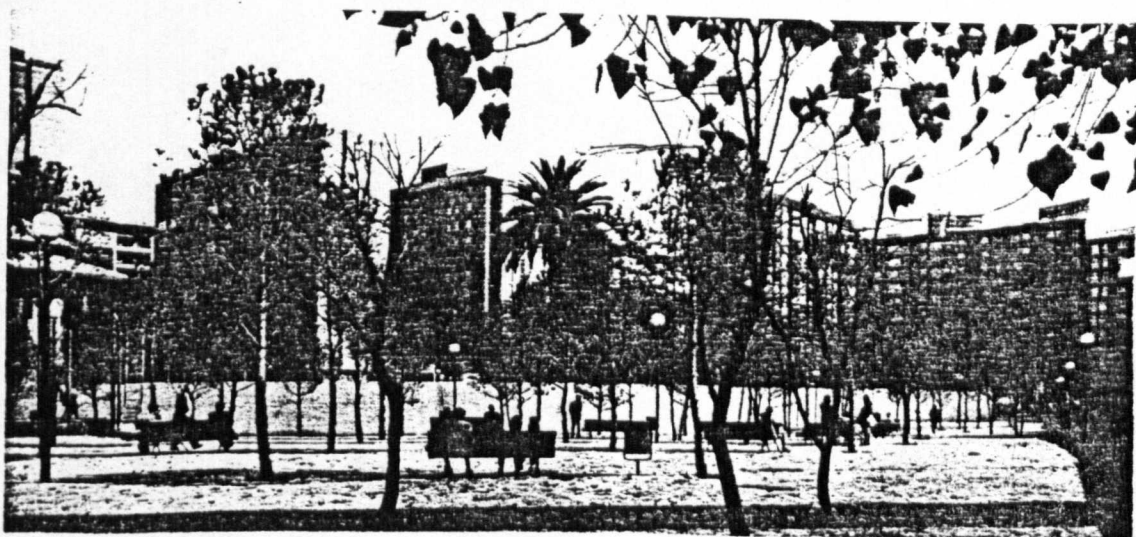


Fig. (7.52 ) General view of Place de la Palmera

Fig. (7.53 ) Looking from the Tree area to the back of the curved wall by Richard Serra.

(Source: The Architectural Review, September 1985.  
Vol. CLXXIX, No. 1063, p.62/a)

Fig. (7.54)  
General view  
of the square

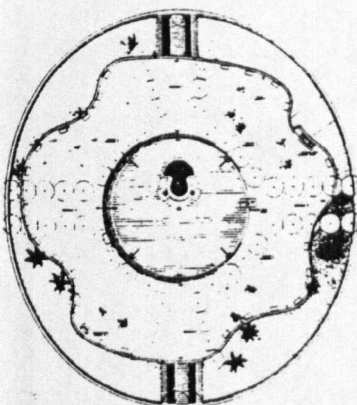
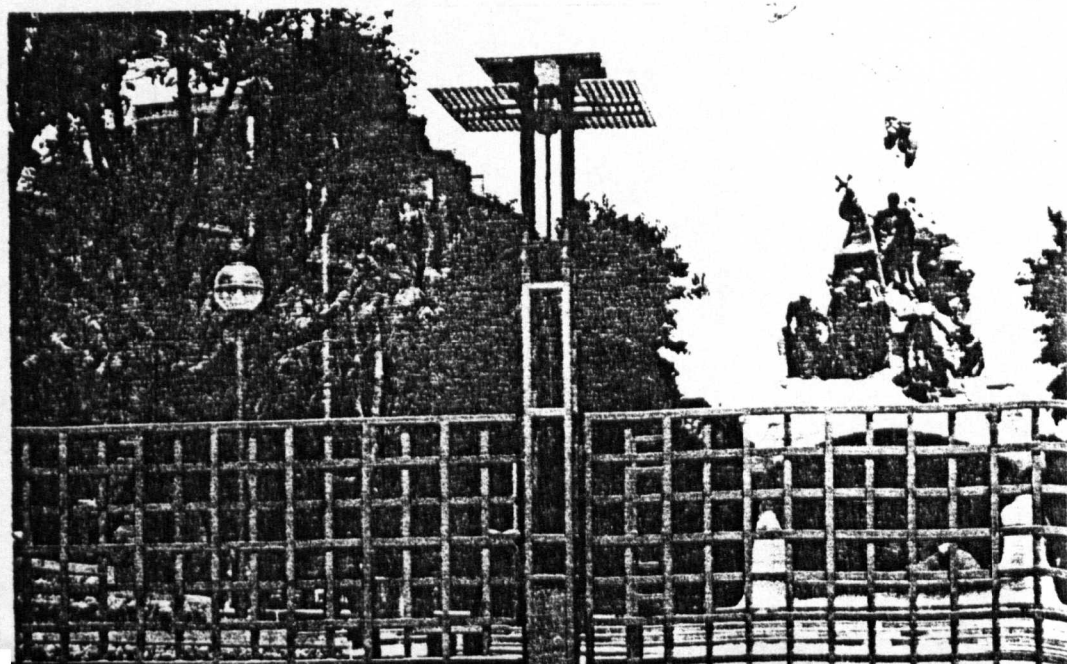


Fig. (7.55)  
Plan of the  
square with  
the monument  
in its center

Place Tetuan, Barcelona. Architects: Antonia Moraces and Josep Casonovas. Here is an example of a square surrounded by flow of traffic around its limit line. It is also an instance in which a sense of formality and informality have been created. Through using the serpentine edge that limits the hard sandy surface of the square with the mown grass bank, it is remarkable to mention here that the used raised ballustrade protects the island visually and physically from the swirling traffic.

(Source: The Architectural Review, September 1985, Vol. CLXXIX, No. 1063, p.65/9.)

Fig. (7.56)  
Detail of  
gates and  
lamp-stand-  
dard. In the  
back-  
ground the  
monument  
stands.





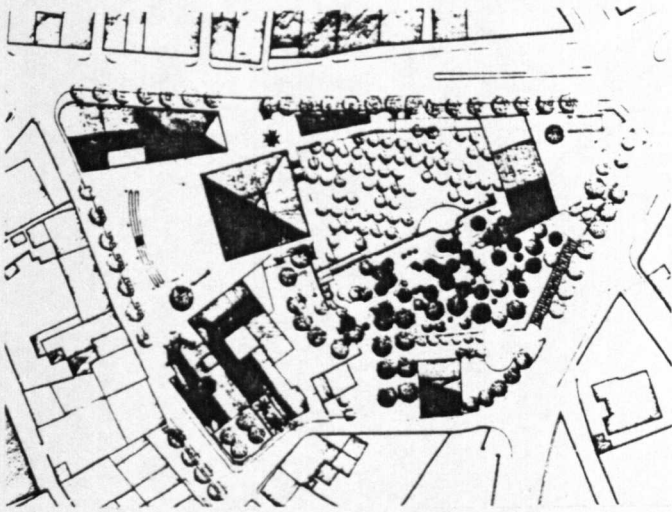


Fig. ( 7.57 ). Site Plan

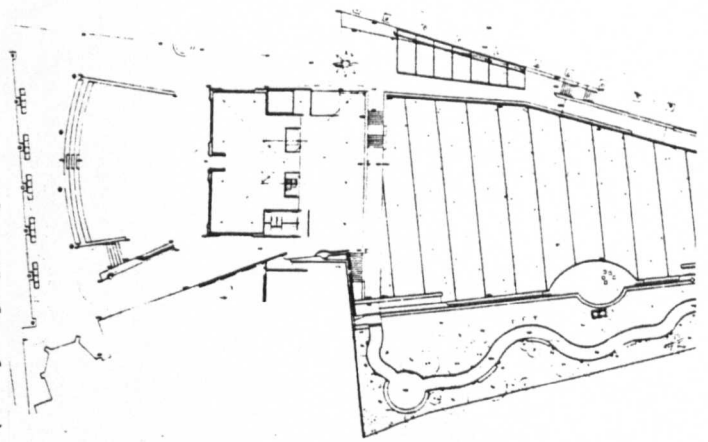


Fig. (7.59 ). Plan of Alella Square, in which a sense of contrast is established between its brick ribbed floor and the adjacent delicate private garden. Penetrable barrier of a thick yew hedge and stone benches with a delicate canal is constructed.

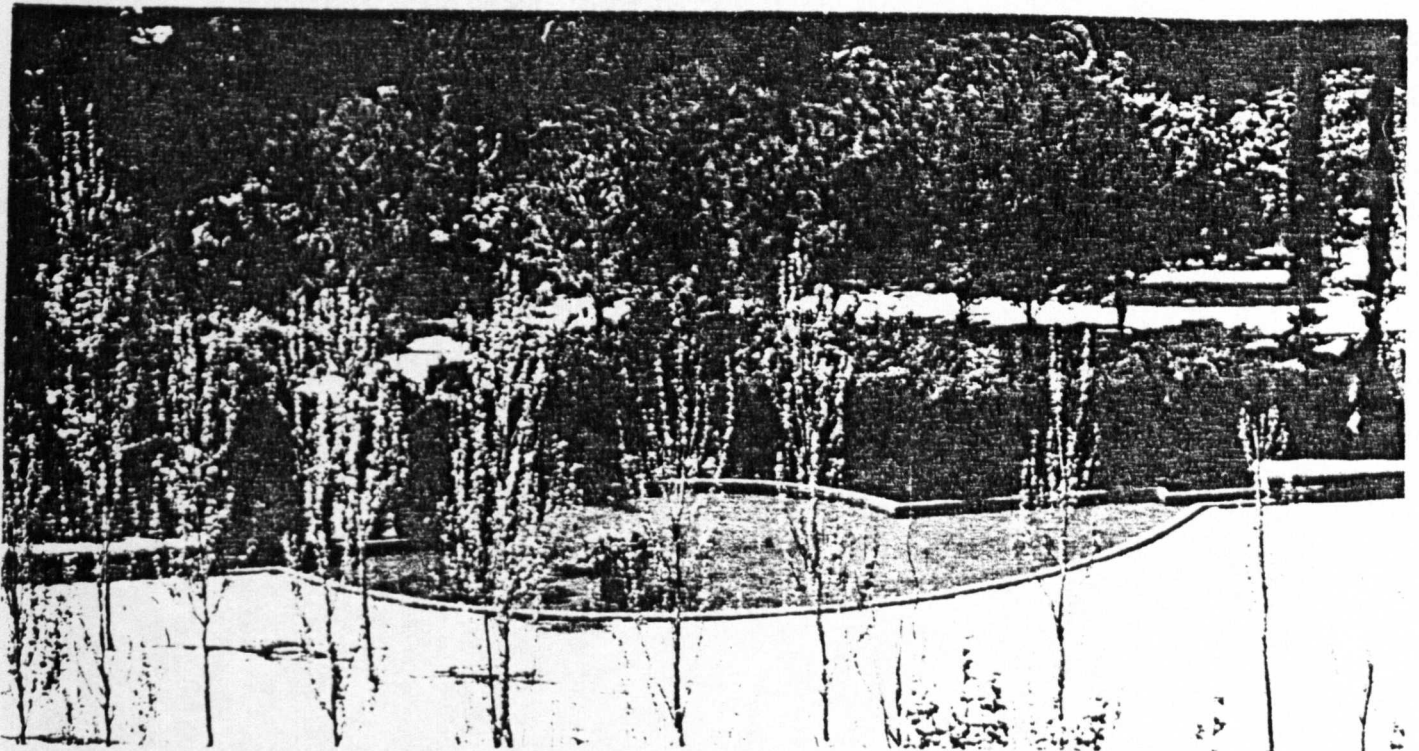


Fig. (7.58 ). The boundary between the private garden and the square, in which a contrast between the soft environment in the background and the hard gravelled floor of the square is established.

(Source: The Architectural Review, September 1985, Vol. CLXXIX, no. 1063. p.65/9.)

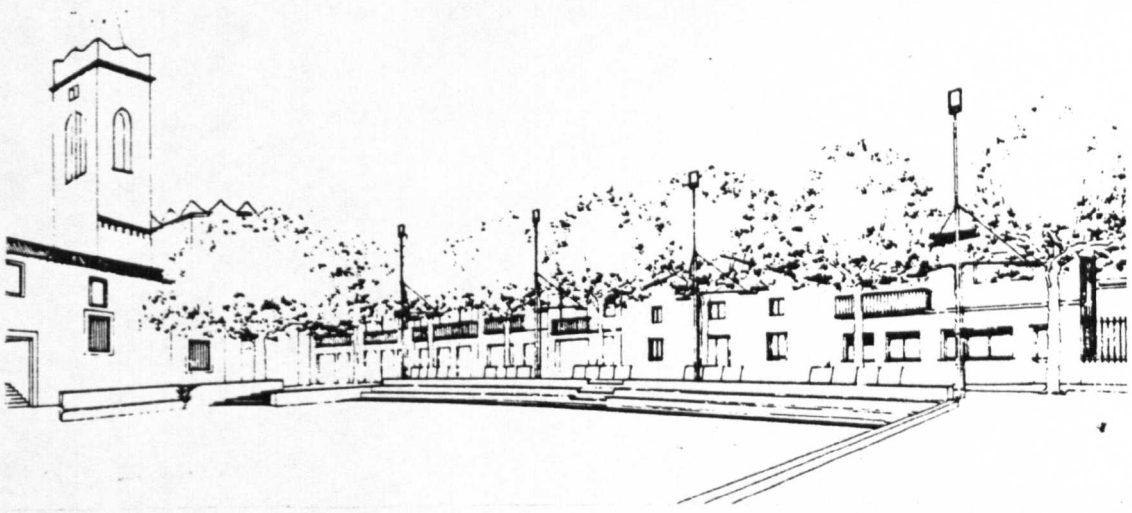


Fig. (7.60 ). Square and Market, Alella, Barcelona.  
Architects: Batlle & Roig. It is an example of a Piazza  
between the market of the city and the main street.

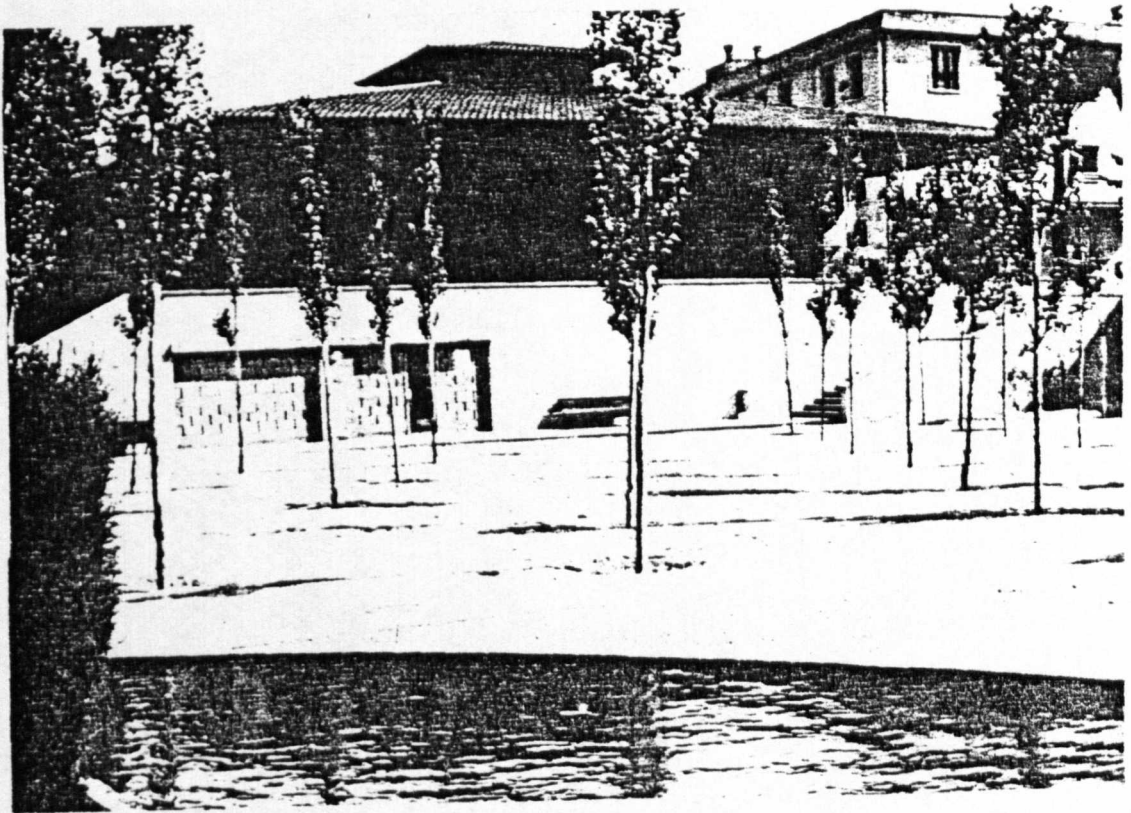


Fig. ( 7.61 ). Perspective of the square as it can be seen  
from a boundary between it and the private garden. In the  
back at a high level, is the market porch underneath its  
inclined roof. Here is an example of a square in which its  
ground is paved by gravel and planted by Poplar trees.

(Source: The Architectural Review, September 1985,  
Vol. CLXXIX, No. 1063, p.64/9.)

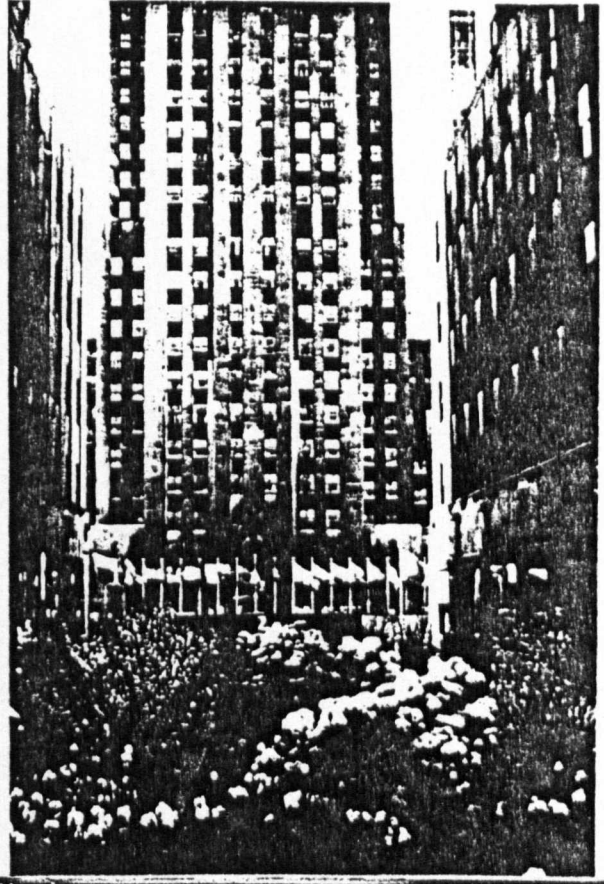
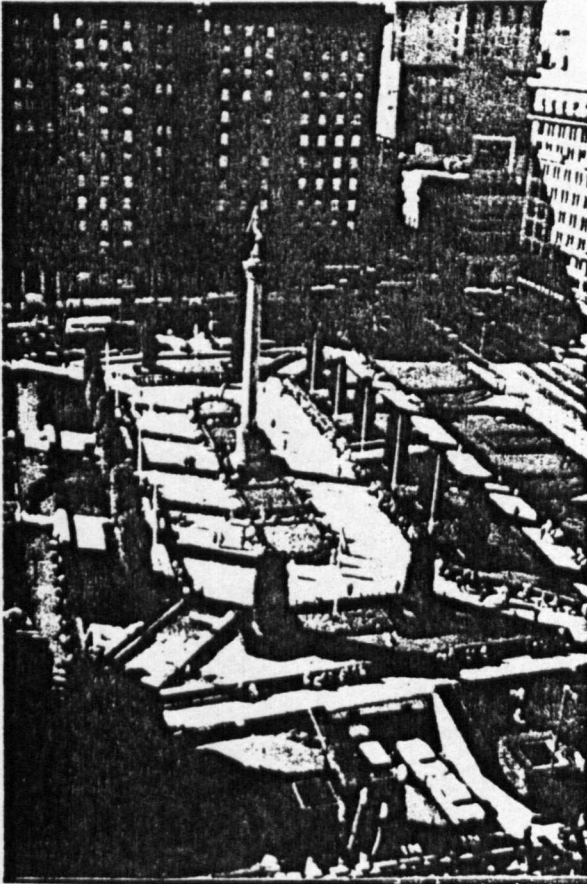


Fig. (7.62 ). San Francisco's Union Square

Fig. (7.63). New York's Rockefeller Center

(Source: Halprin, 1978, p.29.)

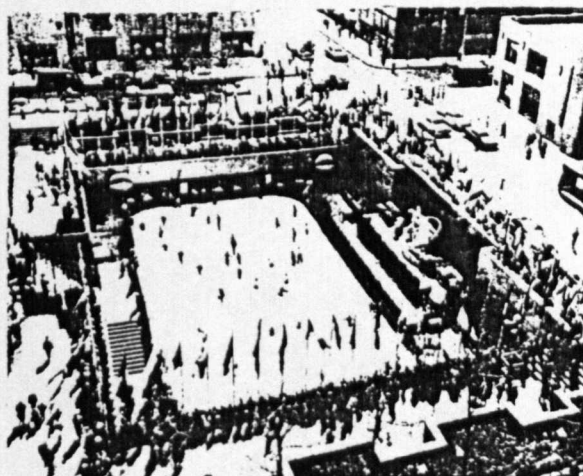




In summer-time the square works as an entertainment outdoor public space. With its splashing coolness and handsome fountain, the square acquires a special flavour at that time of the year.



In Christmas-holiday time the square works as a celebrating place.



In winter it works as a skating rink.

Fig. (7.64). Rockefeller Center, Lower Plaza, U.S.A. It is an example of a square which can be used in all seasons and in all occasions.

(Source: Simonds, 1961, p.81.)



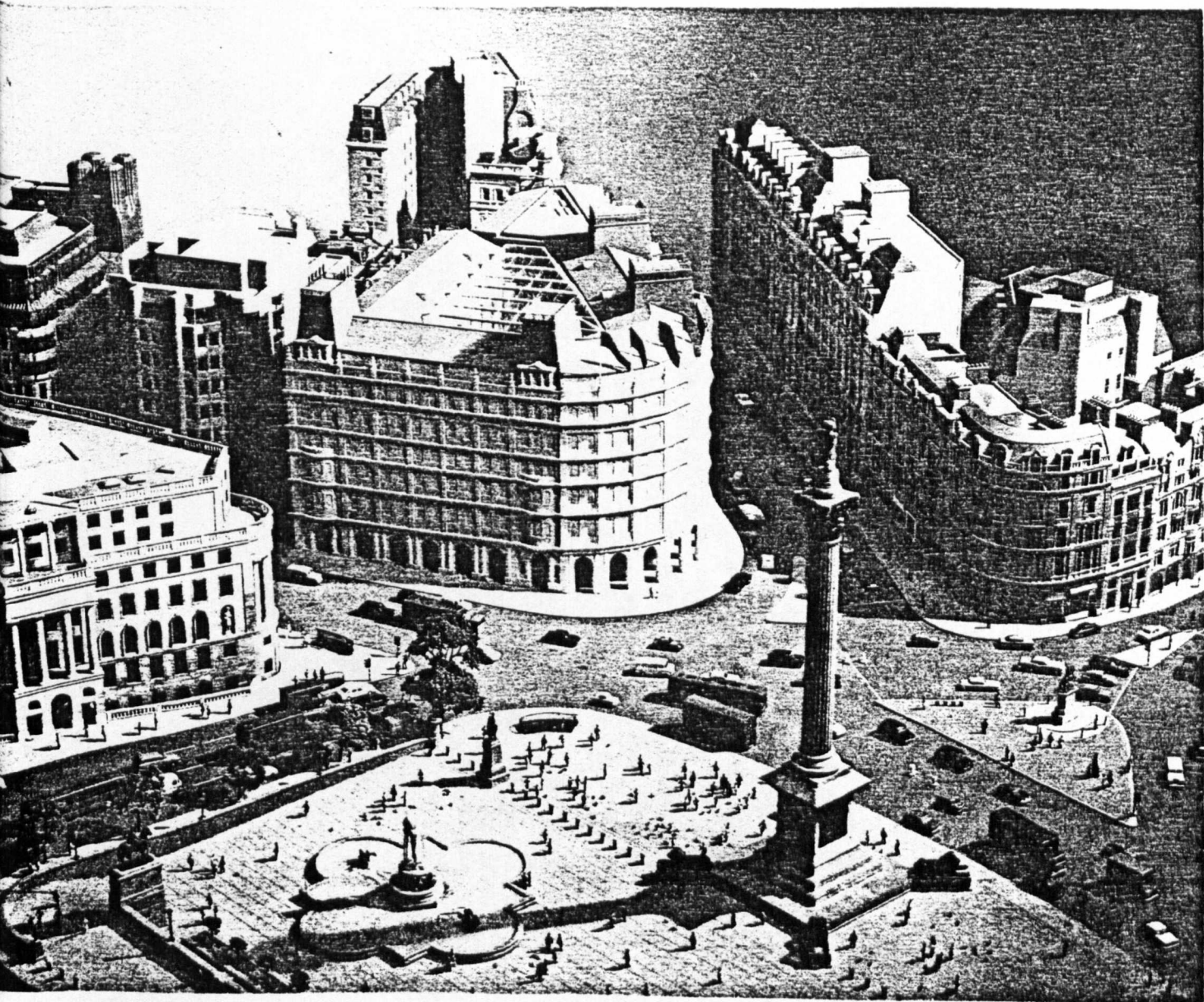


Fig. (7.65). Trafalgar Square, London,

(Source: The Architectural Design, 564 - 1986, p.27)

## 7.2 HISTORICAL BACKGROUND OF THE SQUARES IN EGYPT

It has been argued that the ancient Egyptian cities which were built many years B.C. did not produce and did not show any considerable examples of the idea of the square as an outdoor public space. According to Zucker (1959, p.20);

City planning as such, conscious collective and integrated action beyond the mere construction of individual houses, existed already in India and Egypt in the third millenium B.C., but never the impulse to shape a void within the town into a three-dimensional area which we call a 'square'. 14

The planning of the ancient Egyptian city did not provide much interest in establishing and producing the concept of the square as a public urban space, as a result of sociological factors which existed at that time as Zucker mentions; however, this is not to say that their appreciation and their understanding of the space power was totally absent. Examples of such awareness can be seen in their temples, in which we can interpret their appreciation of power of space and its value. Looking at the temples of Ammon at Karnak, and giving the mind the opportunity to understand the philosophy behind connecting its series of court spaces around the straight avenue, would provide a good evidence of the existence of such

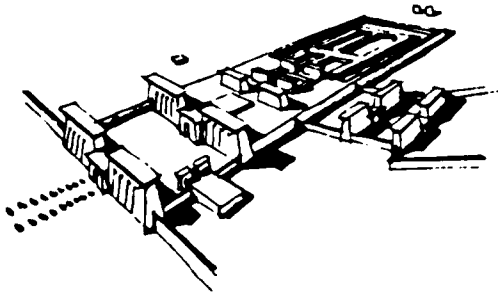


Fig. ( 7.66 ). Ammon Temple at Karnak, Egypt.  
(Source: Spreiregen, 1981, p.7.)

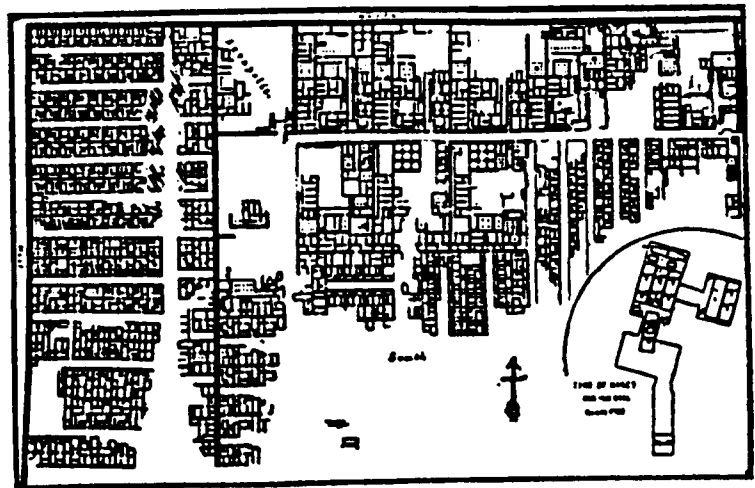


Fig. ( 7.67 ). The Town of Kahun, Egypt.  
An example of a town without squares.  
(Source: Zucker, 1959, p.24.)

appreciation of the value of the enclosed space during the ancient Egyptian civilisation.<sup>15</sup>

While we move to the medieval ages, we find that the square concept in Egypt generally and in Cairo particularly is a controversial subject. While Zucker (1959, pp.20-9) says that the social life in Egypt and the ideology of that community did not give the chance for the evolution and revealing the square concept as an outdoor public place, we find Mubarak (1888, Part I, P.83,) on the opposite of this viewpoint, indicating that Cairo, starting from the Fatimid's reign until the Circassian Reign, has had a great number of squares and outdoor open spaces. These spaces which usually were positioned at the front of the Prince's Palaces as Mubarak says, were also used as urban public places where people used to meet each other in festivals to entertain themselves, either by practising sports or by walking in them, being considered the picnic place in the city. Inevitably, such argument between Zucker & Mubarak would raise the following questions: Were there really squares in Cairo during the period under discussion or were there not? Also, why is there a contradiction between Zucker & Mubarak in this matter? The Answer to the last two questions has a terminological interpretation that it lies beyond the intention of the two persons in using the term 'square'. As an explanation of the last sentence, it can be said that when Mubarak has used the term 'square', his idea and his image about that term, was not in exact conformity with Zucker's image;

i.e. while Zucker in his meaning of the word 'square', was referring to the fully intact three dimensional open space, we find on the other hand that Mubark was using the term to refer to the square as being that enclosure which is mainly created in the plan by the two basic dimensions. According to that we can understand two important facts: firstly that the concept of the square as a three-dimensional constitution was not dealt with during the medieval period in Egypt. Secondly, that such an idea has little roots which needs time and more research to be developed. Briggs (1974, pp.146-50) who describes the treatment of the external spaces in Cairo during the medieval time says that the idea of having external open spaces to be used by the public as a recreational outdoor place did not exist in Cairo for two important reasons. The first is social, where the people in this community used to live an indoor lifestyle. The second reason is climatic, where Egypt lies in the tropical zone which is characterised by hot weather in the summer. As a support for Brigg's viewpoint, Abdel Gawad, the Egyptian Historian, in an article published in the journal of the Egyptian Society of Engineers in 1982, when he was counting the effective and the logical performance of the internal court of the Egyptian Islamic house, as being a successful architectural treatment to the requirements of the Egyptian Islamic life which meant to be as an inward life, and as a direct response to the climatic conditions of this country, was providing at the same time the evidence that the use of such outdoor open spaces which we call the

squares would not have been functionally successful if they had been provided in the organism of the Egyptian city during the medieval age, for the climatic and the sociological reasons which were indicated earlier.<sup>16</sup> This is not to say that the existence of such open spaces within the fabric of the city of Cairo during the medieval ages was totally avoided, conversely such an element really did exist. However, the philosophy of its use and the limits of that use, and the location of these spaces within the fabric of the city, and the amount of interest which was given to their three dimensions was not on the same level as that afforded to their equivalents in Europe at that time. In interpreting the meaning of the last clause, it can be said that these open spaces which were provided mainly in front of the mosque to be used primarily as religious and meeting places after Friday praying time, and to be used also as a spatial nodes, by which the movement system through the structure of the city can be recognised.<sup>17</sup> Examples of such spaces as in Mubarak (1888, Part I, p.83), are: the square of Ibn Tulun, the two squares of Mohamed ibn Qalawun, which one of them was known by Al Mahara Square and the other was known by Al Nasir Square, and finally Al Zahir Square, which according to Mubarak was used as a horse racing place and as a place where fighters used to train.<sup>5</sup> It is remarkable that these squares were situated as a link between the palace of the governor and the mosque, which usually was bearing the name of that governor as its founder. Unfortunately, the majority of



these squares as Mubarak says have been destroyed, and only two of them were left when Mohamed Ali (1805), the founder of the new country of Egypt, came to power. These two squares as in Mubarak are: Al Azbakiyah Square in the west of Cairo and Qaramiddann Square under the citadel of Salah Al Din in the south of the city.<sup>18</sup>

In a new history of reconstruction and development of the city of Cairo, Mohamed Ali Started as in Mubarak, to widen some of the city streets, and started to incise some others. Also in the plan of this city some of Ali's interest was given to its squares which resulted in the construction of other new squares. However, the great favour of construction the majority of the city's new squares which can be seen in the city of Cairo today, can be attributed to Ismaile, one of Ali's grandchildren. Ismaile was educated in Paris, and was so impressed with its design which had been achieved by Haussman, the French planner..

Taking the chance of his expected international celebration of opening the Suez Canal, to which most of the crowned heads of Europe were invited, as a reason for polishing and beautifying the city of Cairo, he commissioned his minister of public works, Ali Mubarak in 1867 to prepare a plan for the quarter of Al Ismailiyah, and to execute it according to the technique used in the design of new Paris.<sup>19</sup> According to the plan of the newly established quarter, around 11 new squares were constructed , as Abu-Lughold (1972, p.110), says. These squares, according to the attached map are: Al-Atabah Al-Khadra, Abdin, Khazindar,

Bab Al Hadid, Sayidah Zaynab, Bab Al-Luqu, Mohamed Ali, Sultan Hassan, Qasr Al Nil, Theatre or Opera and finally Al Falki Square. It is important to indicate also that the newly constructed quarter which lies in the west of the old city, would have been connected organically strongly with it if the whole plan had been executed. However, two squares from this plan and some of its major roads which are shown in dotted line were not carried out. The establishment of this new quarter with its European style both in planning technique and in the style of its architecture was the beginning of a drastic new era in the history of Cairo, where such things were considered negligible to our original planning technique. Hence, it is necessary for the Egyptian planner to review contemporary planning techniques and it is essential for him also to try to revitalise his own method. It is not to say that we should imitate the past but, conversely we should use that past as a starting point for our future, otherwise we will lose utterly the roots of our identity.<sup>20</sup>

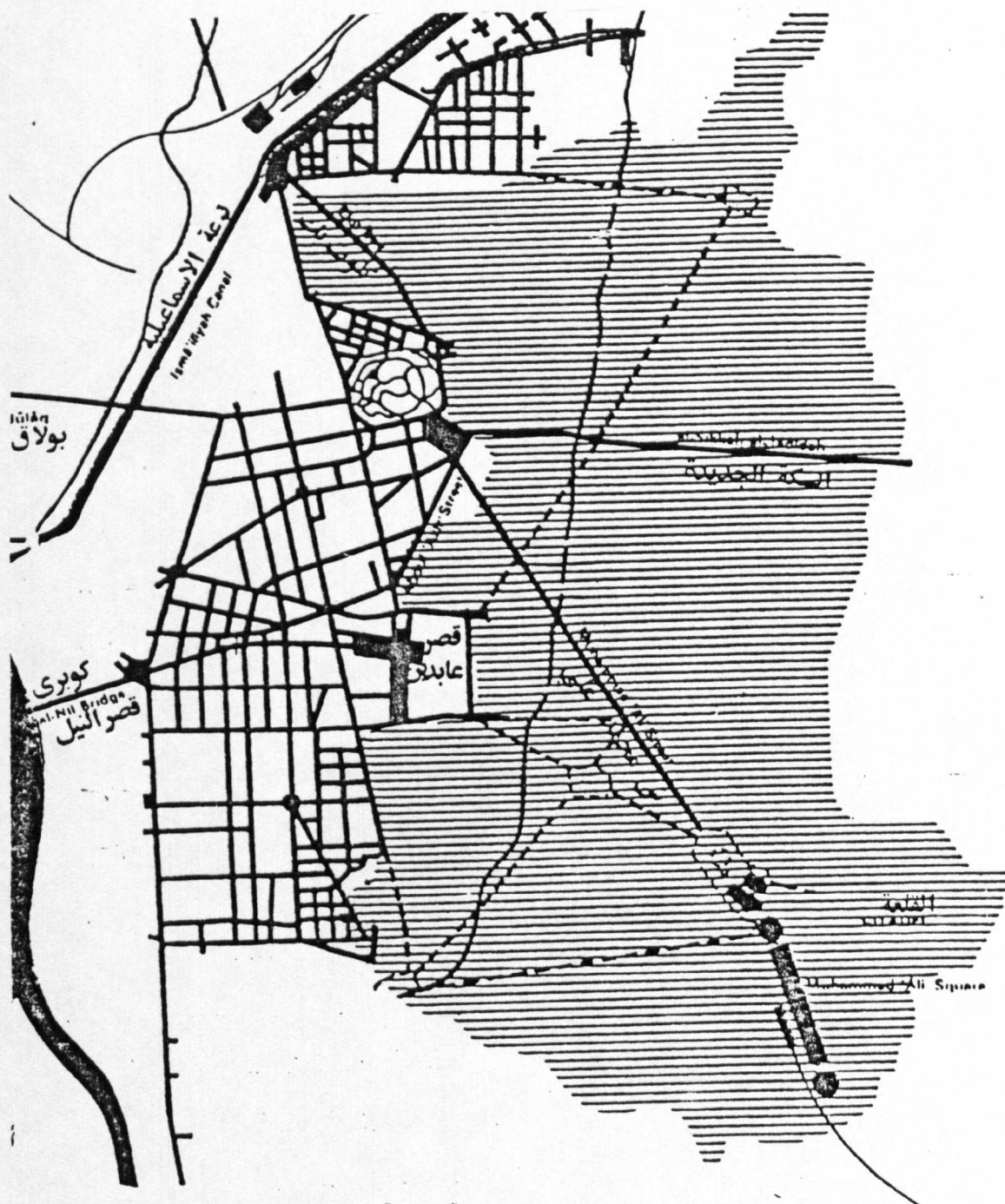


Fig. (7. 68 ). The development of Cairo during Ismail reign 1869-1870.. Shown in this map also is the set of squares which have been established in the city during this period.

(Source: Abu Al-Lughod, 1971, p.111.)



Fig. (7.69 ). The Mosque of Ibn Tulun, Cairo, with its central square 'Maydans', which was used as an open space for sports and tournaments.

(Source: Abu-Lughod, 1971, p.15.)

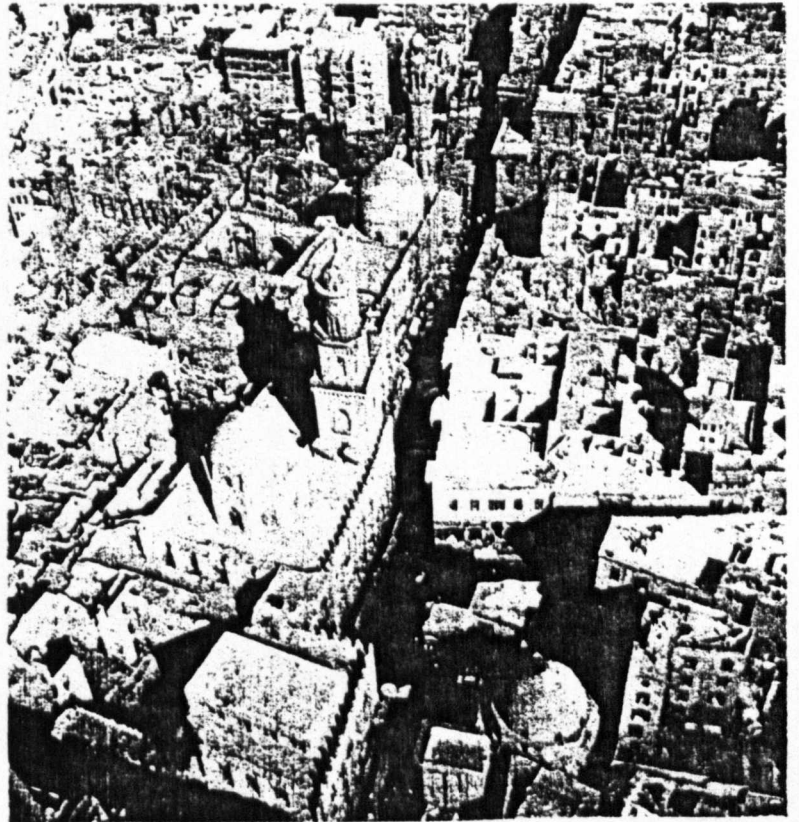


Fig. ( 7.70 ). Ibn Qalawun Mosque and its square.

(Source: Aub-Loghod, 1971, p.32.)



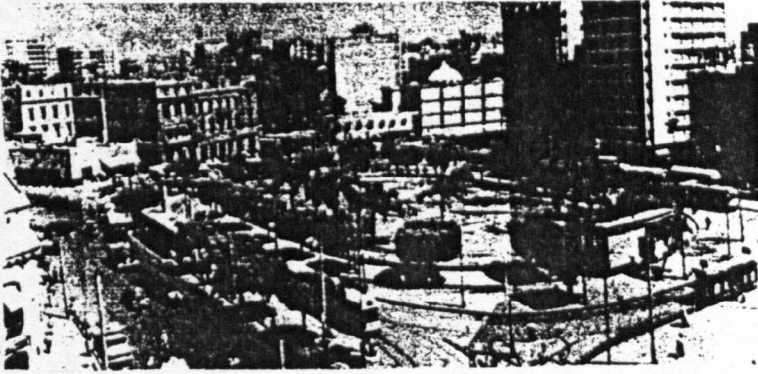


Fig. ( 7.71 ). Al-Atabah Al Khadra Square.

(Source: Abu-Lughod, 1971, p.136.)

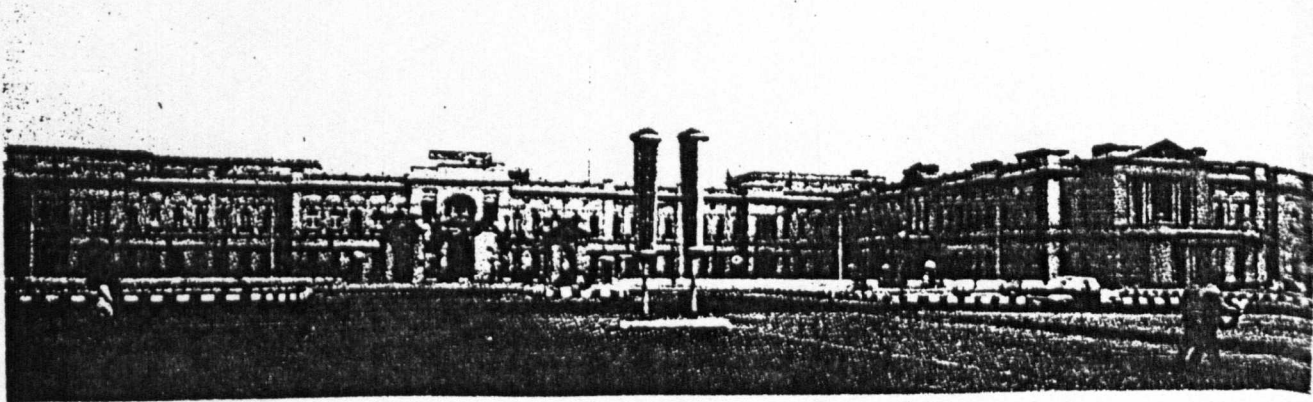


Fig. ( 7.72 ). Abdin Palace and its Square.

(Source: Abu-Lughod, 1971, p.116.)



Fig. ( 7.73 ). Cairo Central Station Square, Bab Al-Hadid.

(Source: Abu-Lughod, 1971, p.139.)

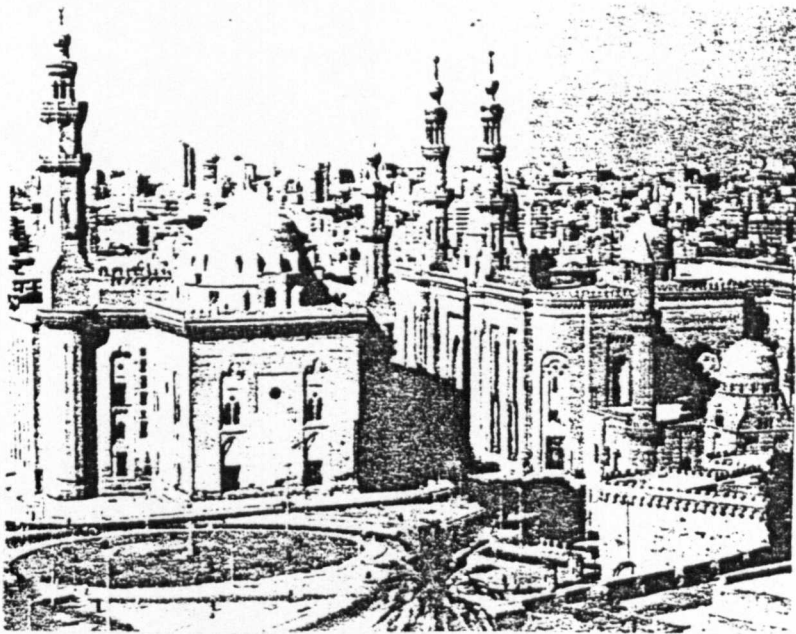


Fig. (7.74 ). Mohamed Ali Square

(Source: Cairo 969 - 1969  
Ministère de la Culture.)



Fig. ( 7.76). The Liberation  
Square, Cairo 'Maydan al  
Tahrir.

(Source: Abu Al-Lughod,  
1971, p.164.)

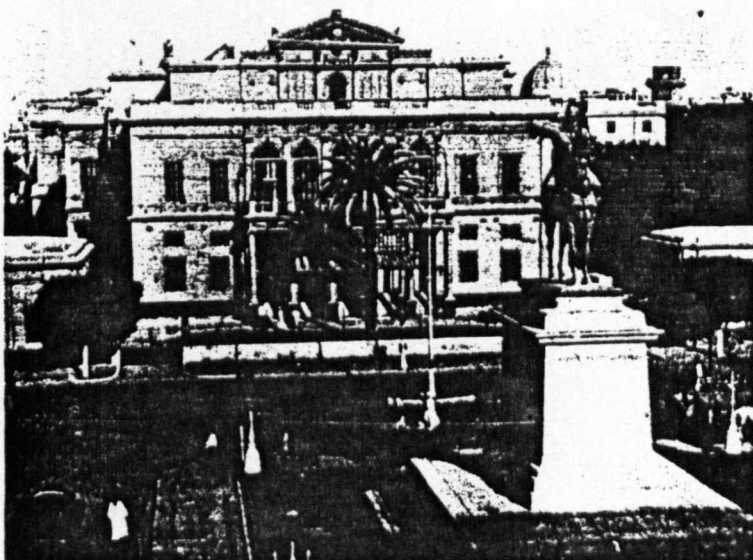


Fig. (7.75 ). The Square of Cairo  
Opera House.

(Source: Abu Al-Loghod, 1971, p.107)



Fig. ( 7.77 ). Crowd in Al Husayn Square after Friday praying service.

(Source: Abu Al-Lughod, 1971, p.164.)

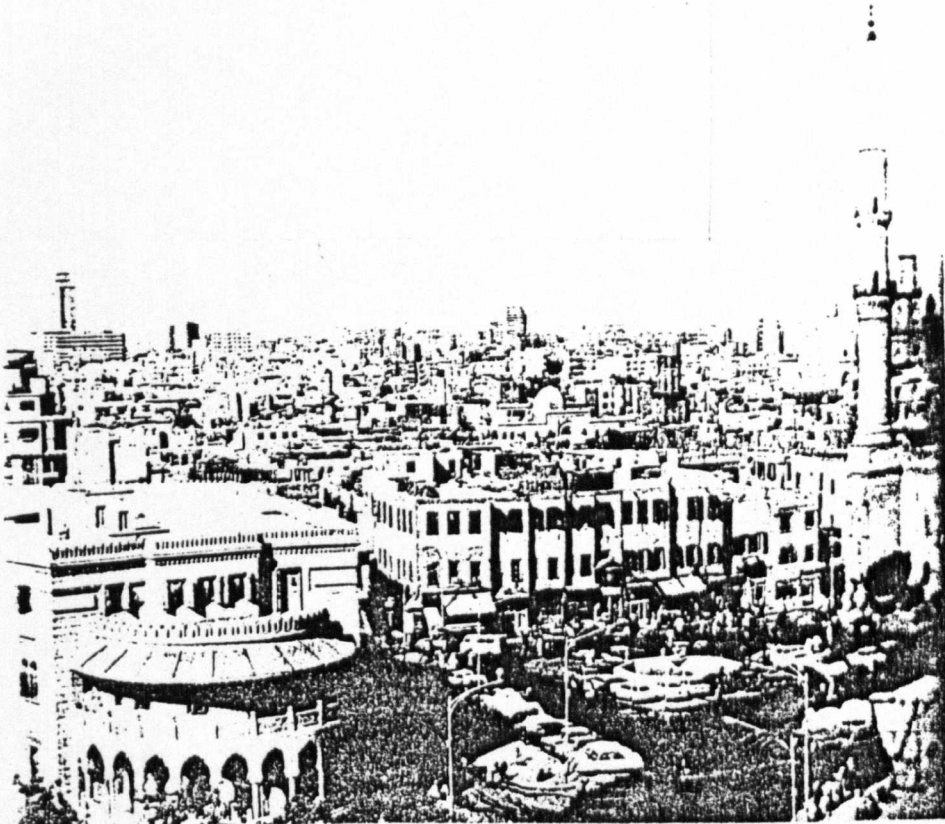


Fig. (7.78 ). Al Husayn Mosque and its Square.

(Source: Cairo, 969 - 1969, Ministere de La Culture.)





Fig. ( 7.79 ). The Mosque of Al Hakim and its square.

(Source: Abu Al-Lughod, 1971, p.190.)

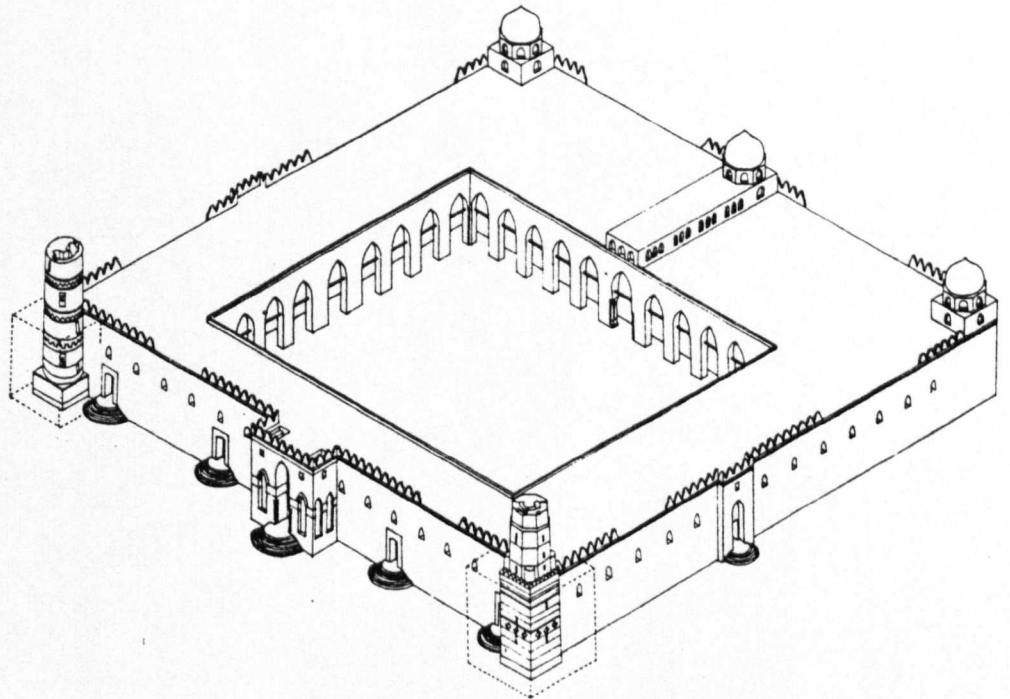


Fig. (7.80) The mosque of Al Hakim with its internal court (Sahn).

(Source: Hoag, 1977, p.142.)





Fig. (7.81). Heliopolis Cathedral with its dominated open space; it could have been a good example of a nucleus square if its site was closed to traffic.

(Source: Abu-Al-Lughod, 1971, p.216.)

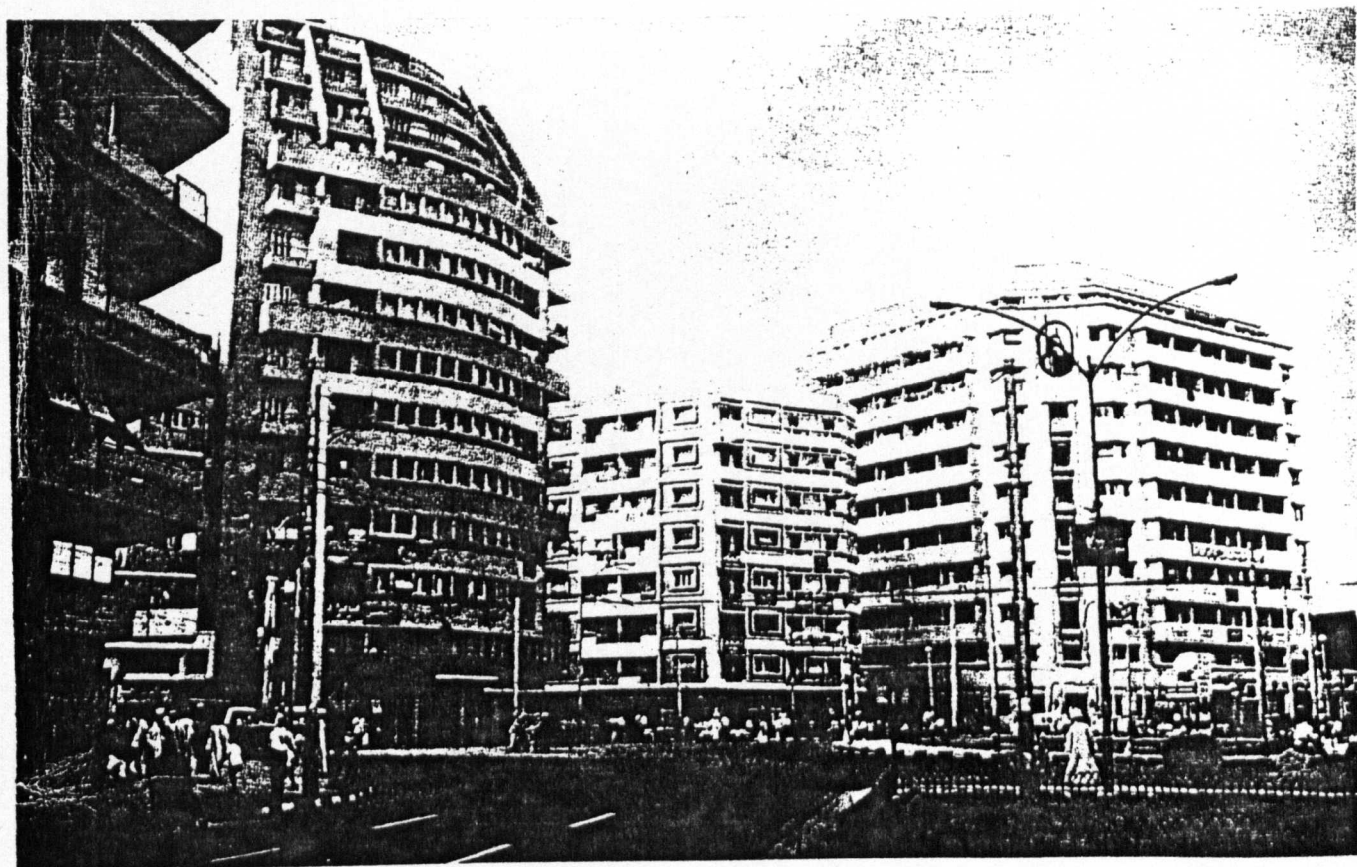


Fig. ( 7.82 ). Al Gizeh Square. It is an example of traffic circle in which the term Maydan 'square' has been used wrongly.

(Source: Abu Al-Lughod, 1971, p.206.)

## PART 4

### CHAPTER 7      NOTES & REFERENCES

- 1 Zucker, Paul, Town and Square from The Agora to the Village Green, (Columbia University Press, New York & London, 1959), p.2.
- 2 Bacon, Edmund N., Design of Cities, Thames & Hudson, London, 1967), pp.56-7.
- 3 See Bacon, *ibid.* and Spreiregen, Paul D. Urban Design, The Architecture of Towns and Cities, (Robert E. Krieger Publishing Company, Malabar, Florida, 1981), pp.4-5.
- 4 Zucker, Paul, *ibid.*, 1959, pp.22-3.
- 5 See Zucker, *ibid.*, p.53 and Krier, Rob. 'Typological and Morphological Elements of the Concept of Urban Space', Architectural Design, Vol. 49, No. 1, p.3.
- 6 Zucker, Paul, *Ibid.*, 1959, p.69 .
- 7 Argan, Giulio C., The Renaissance City, (Studio Vista - London, 1969), p.15.
- 8 Simonds, Landscape Architecture, (London, Iliffe Books Ltd., 1961), pp.182-3.
- 9 Zucker, Paul, *ibid.*, 1959, p.93.
- 10 Zucker, Paul, *ibid.*, 1959, pp.110-11.
- 11 See Argan, Giulio, *ibid.*, 1969, p.21, and Bacon, Edmund, *ibid.*, 1967, pp.35,110.
- 12 Zucker, Paul, *ibid.*, 1959, p.185.
- 13 *Ibid.*, p.202.
- 14 Zucker, Paul, Town & Square from the Agora to the Village Green (Columbia University Press, New York & London, 1959), p.20.
- 15 Spreiregen, Paul D., Urban Design: The Architecture of Towns and Cities, (Robert E. Krieger Publishing Company Malabar, Florida, 1981), p.7.
- 16 See Abdel-Gawad 'Cairo as a City.....and Egypt's capital also, its age is over 10,000 years. How it was and what is its origin', Journal of the Egyptian Society of Engineers, Vol. 21 No. 2 (1982), p.10 and Al-Zoghby, /...

Ahmed (Revitalization of Fatimite Cairo' (Unpublished Ph.D. Theses, Ain Shams, University, Cairo, Egypt, 1973), p.123.

- 17 Al-Zoghby. Ahmed R. Ibid., 1973, p.120.
- 18 Mubarak, Ali, Al-Khitat Al-Tawfiqiyah Al-Jadidah, Topography & History of Egypt (Bulaqu Press, Cairo, 1888), Part 1, p.83.
- 19 See Abu-Lughod, Janet L. Cairo 1001 years of the City Victorious (Princeton University Press, Princeton, New Jersey, 1971). P.105, and Mubarak, Ali, ibid., 1888, part 1, p.83.
- 20 See Reyaadd, Kamal, 'Strategy of Studying the Historical Regions of Cairo', The Engineers Magazine, Year 40, No. 356, (1984), p.61, and Again Reyaadd, Kamal, 'Architectural Studies for the Citadel Region', The Engineers Magazine, Year 41, No. 358, Jan. (1985), p.79.



CHAPTER 8      THE SQUARE, ITS FUNCTION & ITS IDENTITY  
INSIDE THE CITY

8.1      The Definition of Space

Space as a formative element plays an important part in the architectural design process. According to Bacon (1967, p.15), this element with its association with mass produces the two basic ingredients of this process. Being of great interest to us, exterior space as in Ashihara (1981, p.14), is regarded as architecture without a roof.<sup>1</sup> The piazza Del Campo in Siena figure ( 7.9 ), can be cited as an example of such a concept. Exterior space in Architecture is that space which is created by defining and delimiting nature. Nature as in Ashihara's definition is considered to be a centrifugal negative space which can be reversed to a positive and potential one if it is carefully planned. Architecture and space as Arnheim says, establish a relation that is comparable to the relation of figure to ground. Perceptually people (Anand, 1978, pp.32-4), often feel lost or lonely in wide expansive spaces as a direct result of losing their human scale in such situations. Conversely they feel safe in confined ones which maintain their scale. Conceptually the positivity of space as in Ashihara (1981, pp.20-1) indicates the existence of human intentions, conversely to the negativity which implies the absence of such intentions. As a formative factor, the philosophical interaction of forces between mass and space, that it varies

Fig. ( 8.1 ). Positive space and negative space.

(Source: Ashihara, 1981, p.20)

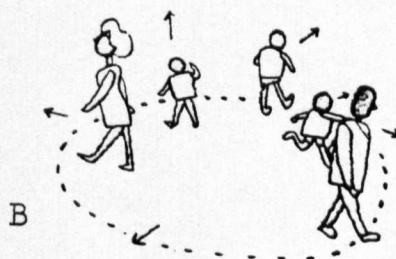
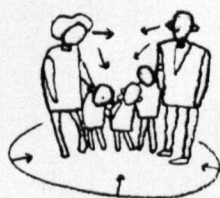
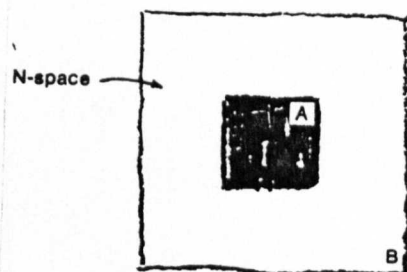
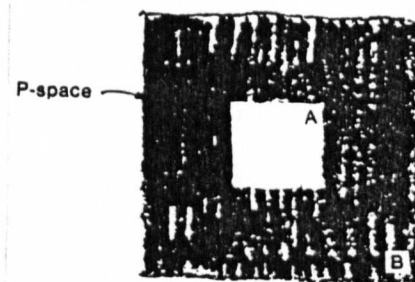


Fig. ( 8.2 ). grouping and the potentiality of space. In A. the established space is positive but in B the established space is negative.

(Source: Ashihara, 1981, p.21.)

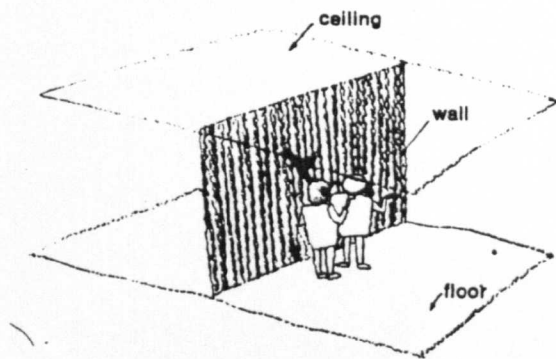


Fig. ( 8.3 ). The basic formal elements of space.

(Source: Ashihara, 1981, p.11.)

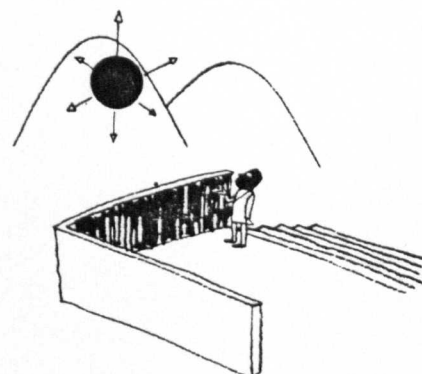
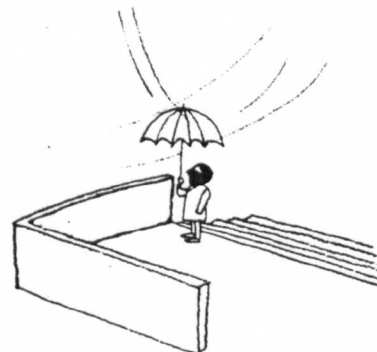
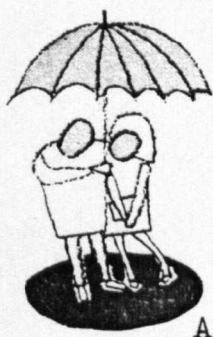


Fig. ( 8.5). The space and the surrounding physical conditions. In this sketch one can notice how sun and rain can affect the character of the exterior space.

(Source: Ashihara, 1981, p.10.)



A



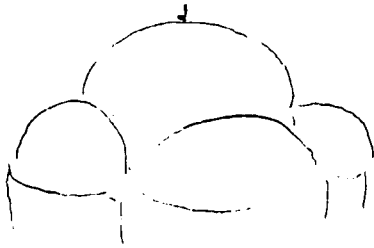
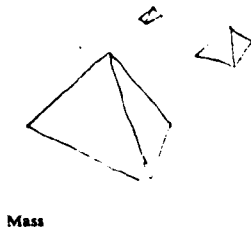
B

Fig. (8.4 ). Casualty and space. In many different situations of our daily life, space can be created in a varied accidental way. As in the case of an unfolded umbrella over the head of the couple in A or as in the case of gathering people around the speaker, as in B.

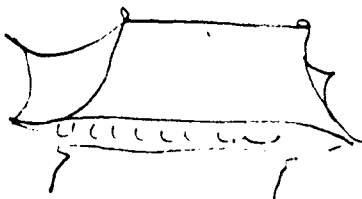
(Source: Ashihara, 1981, p.10.)

from one culture to another, is considered to be the mystery behind the variation of the formal architectural expressions between these cultures. While in Islamic Architecture the form of the dome with its convexity was considered as a formal interpretation of the potentiality of the internal space, we find on the extreme opposite that Chinese forms, with the concavity are considered as an interpretation of the power of the external space, which overcomes the internal one. Articulating space plays an important part in creating varied dramatic experiences. As in Bacon "Architectural forms, texture, materials, modulation of light and shade, colour, all combine to inject a quality or spirit that articulates space."<sup>2</sup> There are strong relationships between space and time and between space and movement. While life, as in Bacon (1967, p.19), is considered to be a continuous flow of experiences, hence we find that the relationship of spaces to one another appears as a major design problem under the urge of establishing a continuous flow of these varied experiences. As for the relationship between space and movement, one can say that such a relationship can be established by the sensitive use of rhythmic spaced configurations in our environment. Defining the external space is a very important technique, by which a sense of potentiality can be provided. According to Bacon, (1967, p.17), 'In Islamic architecture devices were developed for delimiting space as a positive 'and often religious' element. The four minarets around a mosque establish a transparent cube of space infused with the spirit of the mosque.'<sup>3</sup> In the view





A blowing out —  
space inside



A curving in —  
space outside



Fig. ( 8.6 ). The interaction between form and space. Every culture has its own spatial expression. While in Islamic culture forms were blown out, we find that in the Chinese culture forms were curved in.

(Source: Bacon, 1967, p.16.)

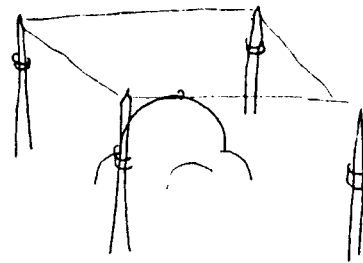
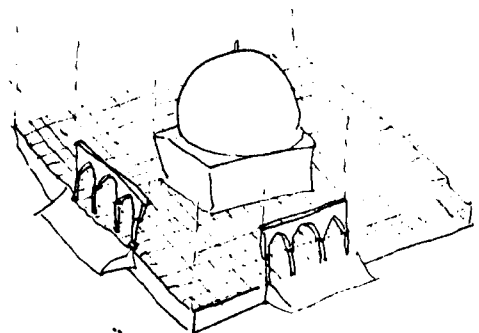


Fig. (8.7 ). A sense of spatial positivity around the mosque.

(Source: Bacon, 1967, p.17.)



of Ashihara there are two elements which govern the configuration of the exterior space. These elements are: scale and texture. In the case of scale, it has been mentioned that there is an appropriate distance governing the visual relationship between the building and the viewer. According to Ashihara 'one should be separated from the building by a distance equalling about twice its height, which means he should see it at an angle of 27 degrees'.<sup>4</sup> Exterior space, when it lacks an enclosing force, tends to appear ambiguous or weak in its impact. According to Ashihara, such a space, if it is designed in such a way that there is a continuous change of rhythm, texture and in floor level, then the monotony will be considerably decreased. As for the factor of

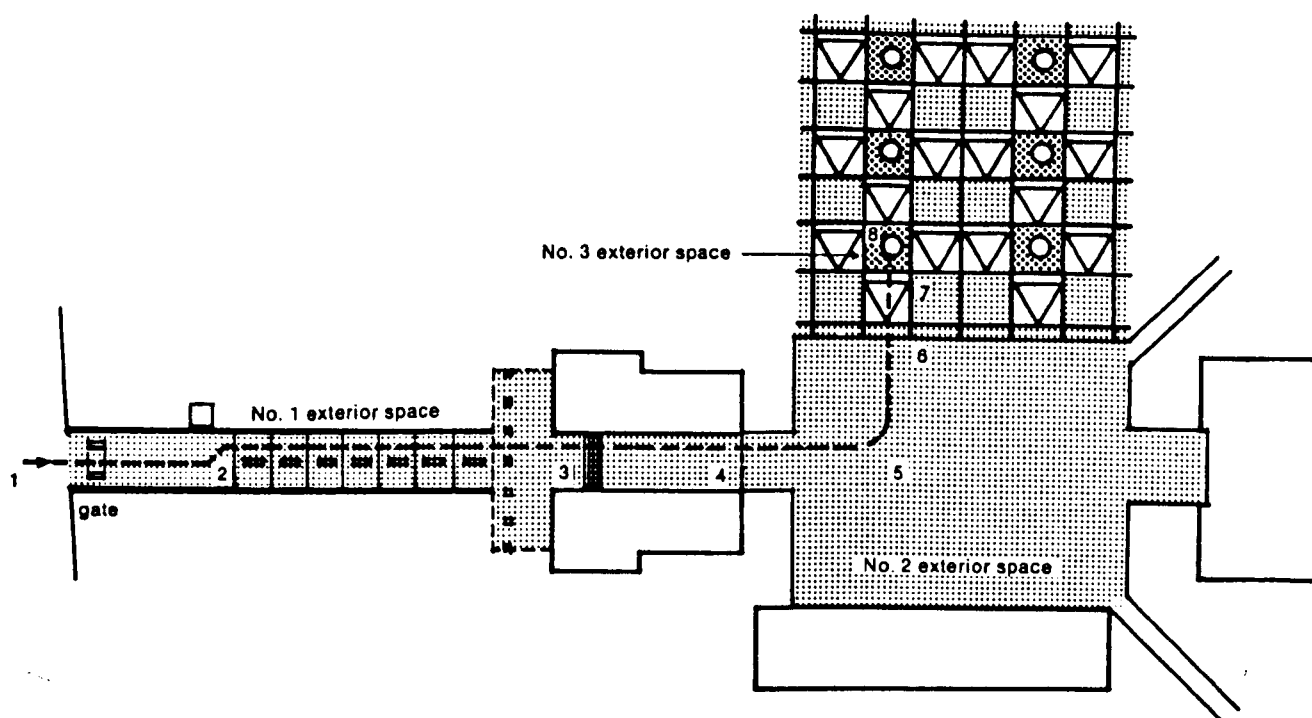


Fig. ( 8.8 ). Plan of Musahino Art University. In such a plan we can see a relation of well developed sequence hierarchy of exterior spaces.

(Source: Ashihara, 1981, p.84.)

texture it has been indicated as in Ashihara that having a knowledge of how building materials appear at certain distances helps the architect to choose the most appropriately textured one, by which a certain dramatic effect can be established.

Studying the varied technique of planning the exterior space is very important to architects. For further explanation; in external spaces in which a sense of direction is required, the setting of a powerful and attractive object at the end of the terminous, would be able to create the pre-required feeling of direction. As in Ashihara, without the placing of such an object, the potentiality of space will deteriorate and degenerate towards the end of the axis.

Enclosing space, as another technique of forming the exterior space, also has its own rules. In such a technique it is very important for the architect to study the implications of the height of the wall and its textural and facial impact before the start of using that technique. As for the technique of establishing hierarchical relationship between a series of adjacent exterior spaces, it has been mentioned that (Ashihara, 1981, p.82), such a relationship can be established if an orderly relationship between these spaces is built. For example, such a relationship can be constructed as follows:

Exterior	——	Semiexterior	——	Interior
Public	——	Semipublic	——	Private

Finally, in regard to the technique of building a continuous sequence of the external spaces, Ashihara says that 'the

difference between the western and the Japanese techniques of designing exterior space often lies in whether the whole view is revealed at the very outset or gradually, step by step.<sup>15</sup>

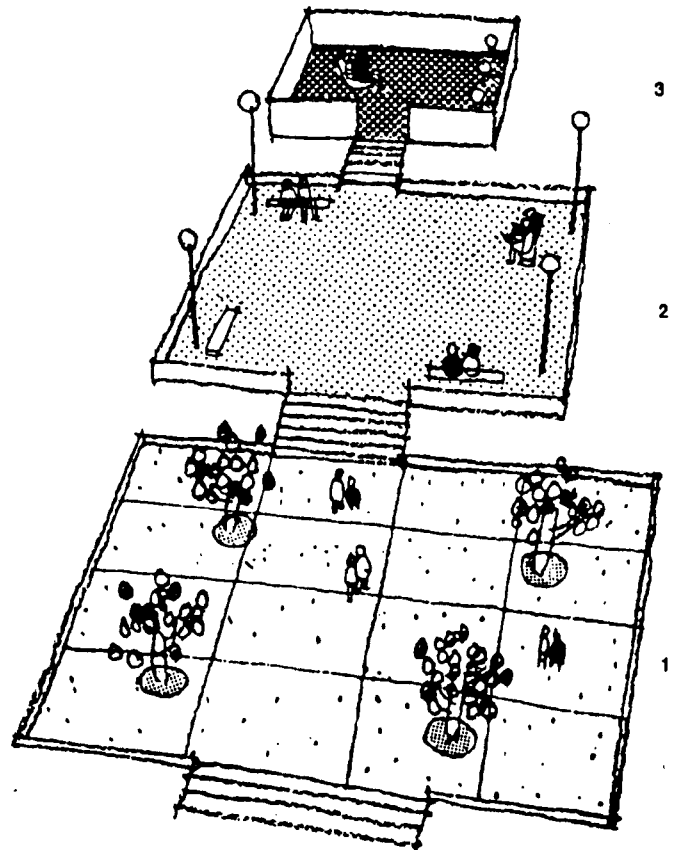


Fig. ( 8.9 ). Sense of hierarchy between different exterior spaces of different functions and different character.

(Source: Ashihara, 1981, p.83.)



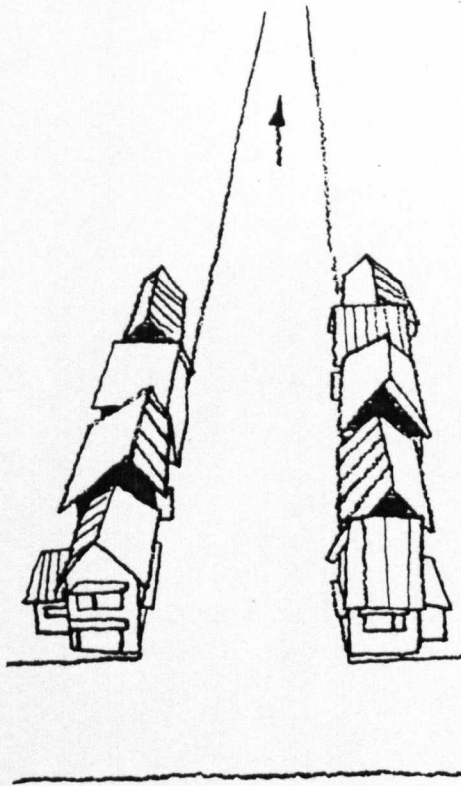


Fig. ( 8.10 ). Axis without terminous. It is an example in which the quality of the space deteriorates towards the end and the space becomes diffused.

(Source: Ashihara, 1981, p.66.)

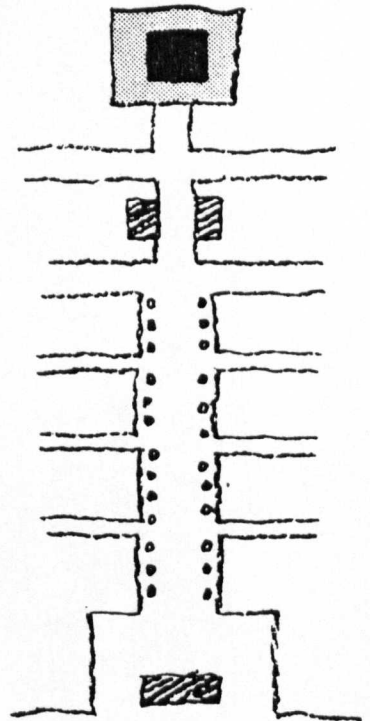


Fig. ( 8.11 ). Asakusa Temple in Tokyo. In This example a sense of perceptual balance is created between the potentiality of the confined space and the terminous point at the temple hall.

(Source: Ashihara, 1981, p.67.)

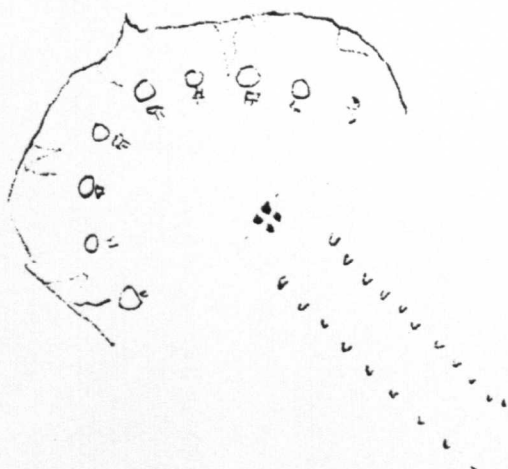


Fig. (8.12). The tombs of the Ming Emperors, are a question of an established sense of movement through space.

(Source: Bacon, 1967, p.20.)

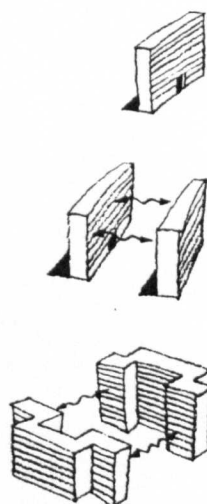


Fig. (8.14). Sense of spatial tension between opposing buildings.

(Source: Ashihara, 1981, p.36)

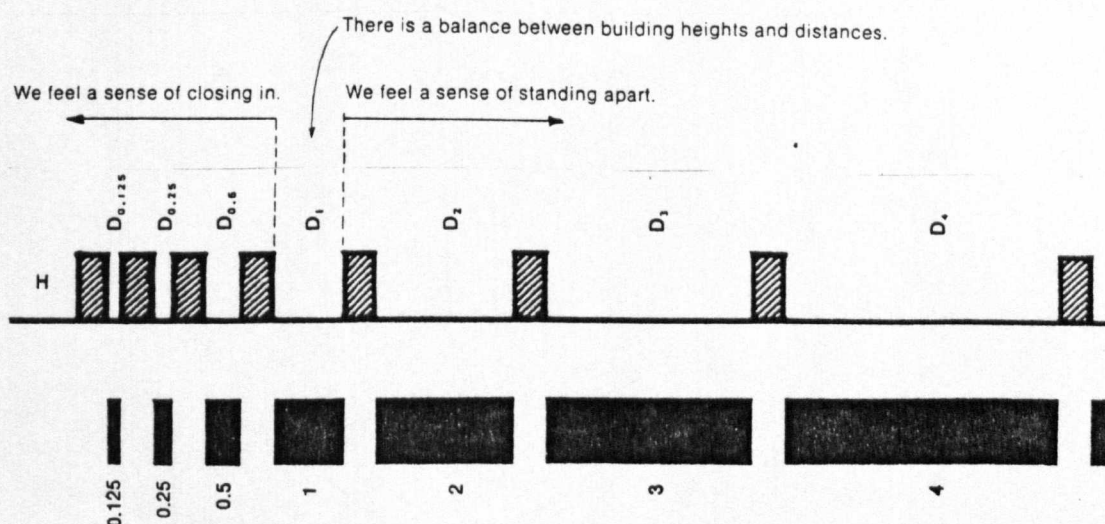
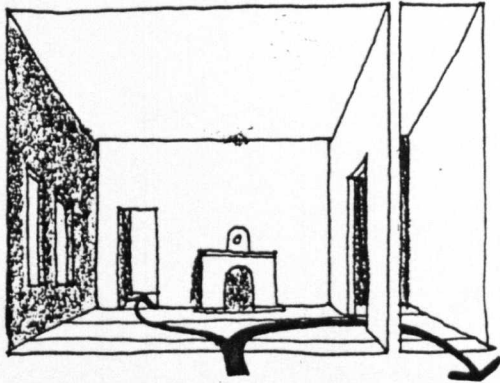
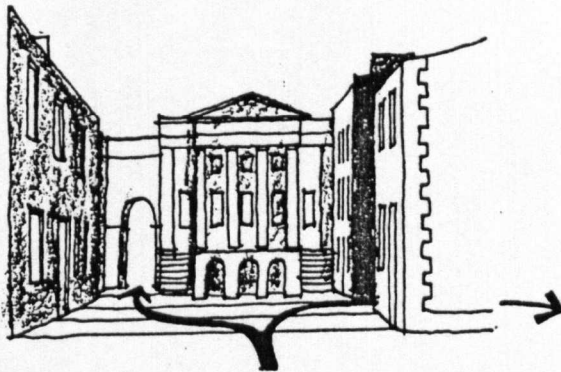


Fig. (8.13). The relationship between the height of the buildings and the appropriate intervals between them.

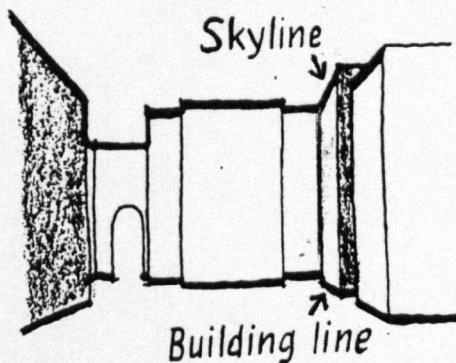
(Source: Ashihara, 1981, p.43.)



A sense of continuity between internal spaces.



A sense of continuity between external spaces.



The sky line and the building line are two strong formative factors in creating the external spaces.

Fig. ( 8.15 ). The main elements of enclosure. Here in these illustrations in A, B and C one can see the formative relationship between the main elements which produce both the external and internal spaces.

(Source: Worskett, 1969, p. 138 .)





Fig. ( 8.16 ). Place in Durham.

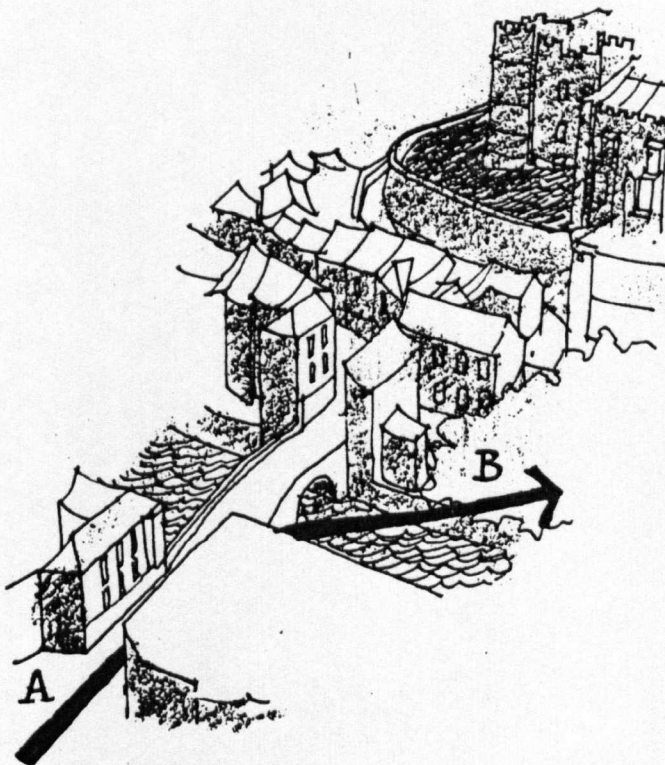


Fig. (8.17). Contrast of spaces. Where spaces of varied character adjoin, an exciting relationship of contrast between them can be established. The sketch shown of the above place in Durham presents an example of such technique, in which the bridge has been employed to provide the contrast effect.

(Source: Worskett, 1969, p.156 )

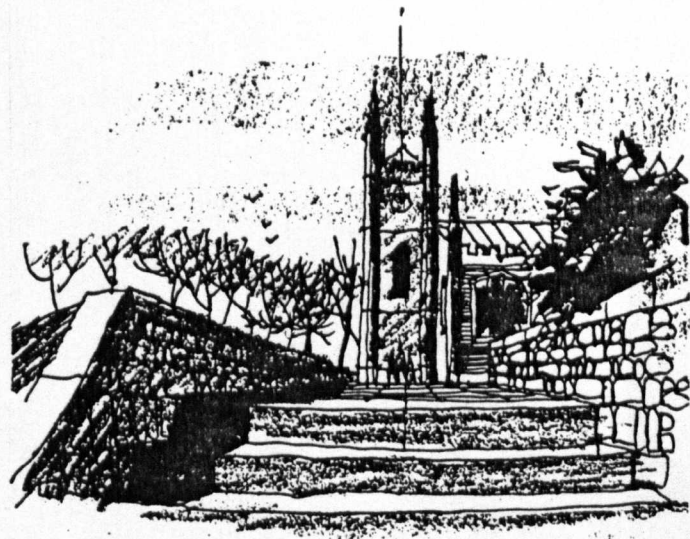


Fig. ( 8.19 ). Alley in Dartmouth. Here the space of the alley does not get its character only from the tightness of its enclosure, conversely it gains it also from the change of level.

(Source: Worskett, 1969, p. 149 ).

Fig. (8.18 ). Change of levels and the sense of surprise. Change of levels not only change the character of space but also it provides an element of surprise.

(Source: Worskett, p.149 ).





Squares as urban public spaces play an important role inside the city. Apart from being recreational public places, squares have an undeniable biological importance for the dwellers of the city. In a comment on this point, Halprin says that:

Open spaces in a city are not decorative frills which can be added or subtracted at whim. Adequate open space is a hard biological necessity essential to life. We know, for example, the exact number of square feet per individual needed for other animals to live a normal existence.....we do not know yet the exact ratio of open spaces which people need biologically for their lives and personalities to be fulfilled. 6

The life of cities can be divided into two aspects: one is public and another is private. Therefore, it is necessary for the design of these cities to be able to respond efficiently to its varied and social needs. Plazas, parks and streets as urban public spaces (Halprin, 1981, p.11), stand in that context as representations of what we might call the extroverted social aspect of life. Biologically the existence of squares and the other open spaces inside the organism of the city works as the lungs, through which its inhabitants could breathe. As in Perenyi (1973, p.114), small wooded squares and footpaths are effective in providing the chance of introducing nature to the heart of towns.<sup>7</sup> Under the title of 'pathology of crowding' Lynch (1981, p.263) mentions that the psychological studies of crowding have proved that there is a strong connection between streets and being in a crowded room<sup>8</sup> According to this one might be

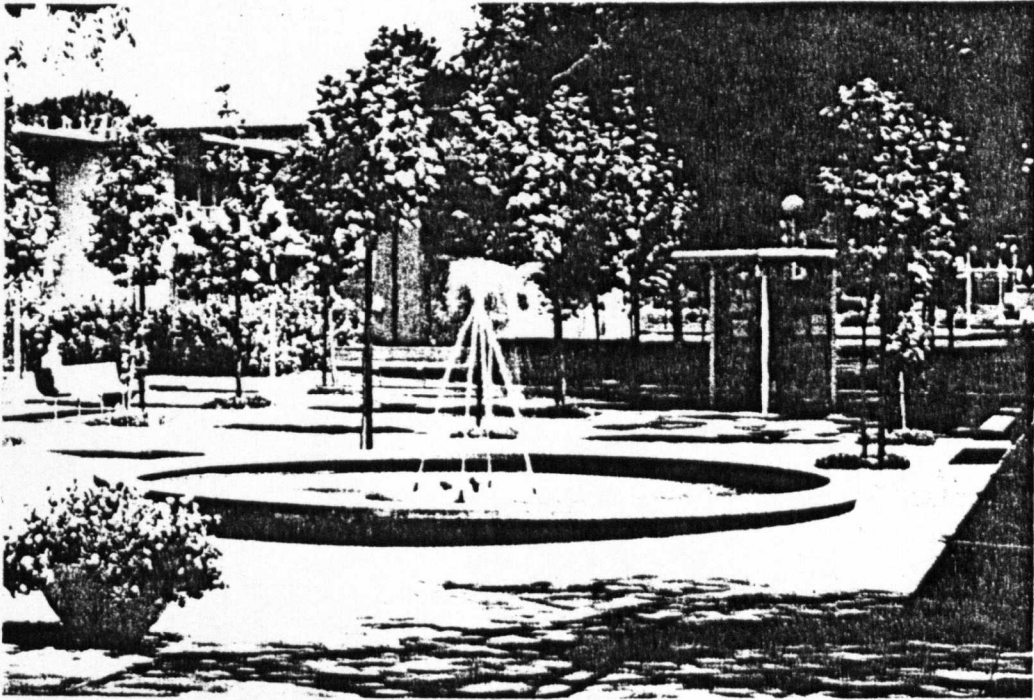


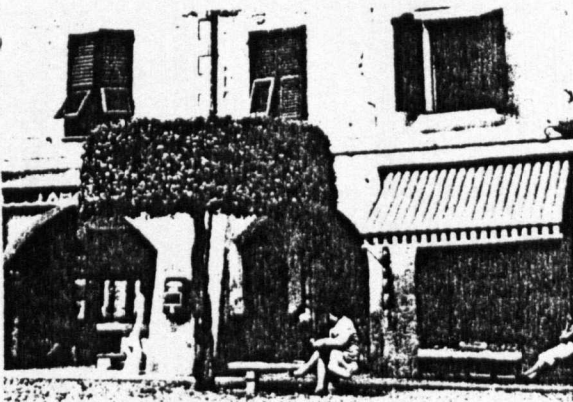
Fig. ( 8.20). A small neighbourhood plaza in Sacramento, California. It is an example of a local plaza, of which a sense of place can be perceived. Such a place, while working as a focus for its neighbourhood, can be working consecutively as a rallying place for its inhabitants.

(Source: Halprin, 1978, p.27.)



Fig. ( 8.21 ). The bustling  
place Du Tertre, Paris.

(Source: Halprin, 1978, p.27.)



(Fig.8.22). A small plaza and  
arcade in Porto Fino, Italy.

(Source: Halprin, 1978, p. 26 ).

able to understand the value of such spaces which we call squares, in providing open 'lungs' inside the fabric of the city, in which its dwellers can escape from the congestion.

Through their function as economical and social centers, squares in the city play another symbolic part, by which these cities can be identified all over the world. St. Peter's Square in Rome and San Marco in Venice can be quoted as an example of these kinds of squares. Piazza del Campo in Siena as Halprin (1981, p.28) says, does not only work as a governmental center inside the city but it performs another symbolic role, being used since the medieval times as a horse racing arena. The Place de la Concorde in Paris was treated as a grand urban symbol through which the spirit of Paris could be evoked. Today with all its subsequent changes and additions the Place de la Concord as Zucker says, 'is still the square which signifies the spirit and meaning of Paris in the most impressive form - unique in its grandeur and monumentality'.<sup>9</sup> Historically squares have played an undeniable physical and psychological role regardless of their size or scale. All were the same in their performance. According to Zucker:

The village green in a small new England town, the central square of a residential quarter within a larger city, the monumental plaza of a metropolis, all serve the same purposes; they create a gathering place for the people, humanising them by mutual contact, providing them with a shelter against the haphazard traffic, and freeing them from the tension of rushing through the web of streets. <sup>10</sup>

As a Civic Center for social and human activities, squares as in Lynch, 'contain features meant to attract groups of



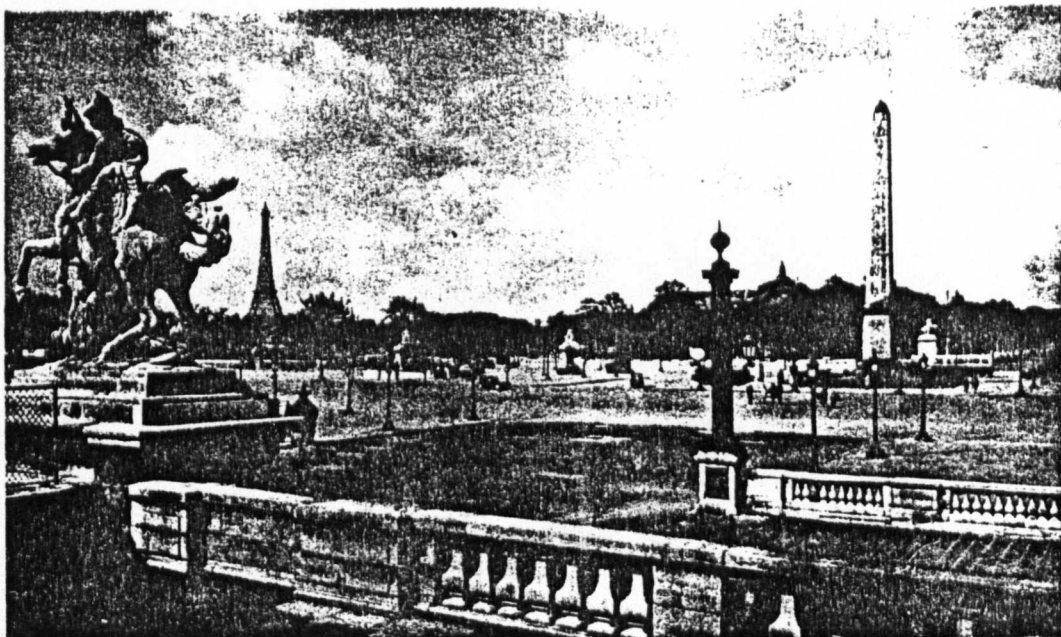


Fig. ( 8.23 ). The Place de la Concorde; a symbol of Paris.  
(Source: Zucker, 1959, p.91.)

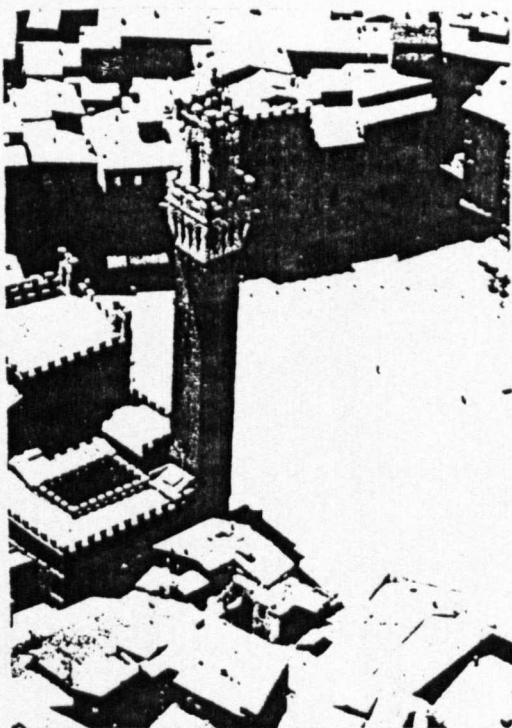


Fig. (8.24 ). The Piazza del Campo in Siena.  
(Source: Ashihara, 1981, p.15.)

people and to facilitate meetings: fountains, benches, shelters, and the like. Planting may or may not be prominent. The Italian Piazza is the most common prototype.<sup>11</sup> Being considered as strategic points in the city, squares therefore were employed in orientating the inhabitants of the city visually. The structure of Venice with its dispersed sub-centers is dominated by San Marco's Piazza. Bacon offers Venice as a clear example of a city, in which a person can be guided visually throughout the sensitive visual relations between its dominant and subordinate spatial centers. Psychologically, squares, as in Zucker (1959, p.233), have a strong emotional impact upon the inhabitants of the city being considered as a place of high aesthetical value.

Squares are an important element, through which the history of the city with its changes in the varied aspects of life can be read. As in Zucker;

The visual appearance of squares, in contrast to that of a painting, a sculpture, or even of an isolated individual work of architecture cannot be understood or enjoyed as an expression of a single historical epoch. The square as a living organism changes continuously with varying socio-economic conditions and altered technological possibilities. Morphological differences of successive stylistic epochs are of minor importance. <sup>12</sup>

Squares cannot be considered merely as voids, for more than that, they represent organised space and a history of the square truly means a history of its space.



Fig. ( 8.25 ). The small Mechanics Plaza in San Francisco. It is an example of a symbolic square, where its sculpture was dedicated to the dignity of labour.

(Source: Halprin, p.1978, p.26.)

### 8.3      THE SQUARE: ITS FUNCTION AND ITS IMPORTANCE IN THE CITY

Squares perform a very important role within the fabric of the city. They serve its inhabitants in many different ways. Historically squares have been used as Zucker (1959, pp.1-225), in a variety of functions such as a market place, meeting and gathering places, a religious place as in the case of the parvis before the church, ceremonial and memorial places, and finally as places where athletics and sports can take place within its closure.<sup>13</sup> Major plazas such as St. Peter's Square in Rome and San Marco in Venice were treated as civic symbols, not only because of their asthetical dimension, but because of the varied civic events which took place in them. According to Halprin:

St. Peter's Square in Rome, with its beautiful colonnades by Bernini, is as much a symbol of Catholicism as the church itself, for it is here that hundreds of thousands of people congregate to listen to the Pope. The Campo in Siena is not only the focus of governmental functions, but it continues to be the place where the famous horse races and festivals from medieval times are held. The piazza San Marco in Venics, that quintessence of civic design, focuses within it the activities of outdoor eating, shopping, band concerts and religious festivals, to say nothing of feeding the pigeons.<sup>14</sup>

Minor plazas such as those which are located at the intersection of streets are mainly used as local public places. Such places as Helprin says, "can contain, in a relatively casual way, sculpture, fountains, art exhibits,



cafes and benches which are human in scale, intimate and usable. A local plaza gives a sense of place and becomes a focus for its neighbourhood."<sup>15</sup>

Throughout history squares have different functional moods. The Agora, the well known Greek Civic element, was used as Zucker (1959, p.36) says, as a political gathering place and as a place of legislative assembly. Gradually these functions have been changed into those of a commercial place. During the Roman period, the Fora and the basilica were considered to be the most important civic places. As in Zucker (1959, pp.49, 52), while the fora, which were the Greek's agoras replacements were used as a commercial place, we find that the basilica were used for other different functions, such as administrative buildings, as a court of justice, as market halls and the aisles served as a public promenade. During the medieval ages the square was used mainly as a congregational meeting place before the church, the reason for which a parvis was provided opposite the main entrance of the building. However, in some instances from the medieval period another square was provided at a certain distance from the church, to be used as in Zucker (1959, pp.69-70) as a market place. The function of the square as a public urban space and as a national ceremonial place has been mentioned. It flourished during the renaissance and the baroque periods. Such a development remains so unlike the eighteenth century, where the concept of the square as a public urban space started to degenerate and started to leave its significance during the nineteenth century.

Fortunately this trend did not continue into our century as interest in the square as a public urban place within the fabric of the city returned. While we move from the history of squares in Europe to its history in America we find some difference in the use of squares. As a public urban space, squares were used in early America as an ecclesiastical public place and as a market. However, such use was not absolute for these squares were used also for other functions which were not seen in Europe's squares. According to Zucker (1959, p.238) such squares were used as a communal open area for grazing and for storing cattle at night, also they were used as a central open space for the drilling of militia and for public gatherings. Now the U.S.A. in its new era has a lot of open spaces, which unfortunately cannot be categorised under the title of squares, being such spaces devoid of the three dimensional studies.<sup>16</sup>

#### 8.4            THE TRAFFIC IN THE CITY AND ITS                  IMPACT ON THE SQUARE FUNCTION

Traffic today represents an important factor in designing our cities. As in Eckbo (1969, p.131)

Automobile traffic is now the primary determinant of the form of urban and sub-urban development... The auto has freed us in space and time, has freed us to live where we please when we please, has freed us from home if it is cramped or dull. <sup>17</sup>

While cars have the advantage of joining the different parts of the city, unfortunately it has on the other hand the disadvantage of destroying our environment as in Eckbo,

We can only reach open spaces by use of the auto- yet somehow as the auto approaches, open space shrinks, blanches, shrivels and disappears. This is because the auto brings with it its own-type open space, asphalted, oily, smoggy and littered with evidence of mechanical casualties. 18

Traffic, as a destructive element inside the city, works as an enemy to the existence of both man and vegetation according to Pereny; (1973, p.10), traffic in the city center does not only work as an enemy to trees and vegetation but it also represents an enemy to the human being himself as a consequence of the pollution of the environment. Thus whilst the car can be considered as man's friend, it can also be considered as his opponent. According to Eckbo (1969, p.134, the car now makes man live a precarious life on a system of sliced islands that is surrounded by traffic from all directions.

In order to make man's life secure inside the city center, heavy traffic and parking areas should be removed from it. When developing the transit system in this area, transport should be as Perenyi says, (1973, p.60), be fast and comfortable. Walking in this area also should be given a special importance in order to allow the pedestrian to move freely and safely.

As a suggestion for developing our cities' centers and their public urban spaces, it is essential for the transport system (Perenyi, 1973, p.88), to be kept out by a ring road surrounding it, which can be connected with radial main roads coming from each city direction.

Architects have a great responsibility for the destruction which could happen due to the limitless growth of the

monster traffic inside our cities. They must, as in Perenyi (1973, p.224), fight against the growing theory which states that the traffic volume is a phenomenon of nature which is irresistible by man.

Traffic inside the city should not be given the main priority. Such a priority should be given to man. According to Crosby,

Traffic is not important. What is important is how people live. There is no gain cutting a few minutes travelling time if the result is an unsatisfactory environment at the end of it. There is no gain in adequate parking for everybody if it involves a half mile walk across the asphalt to do your shopping. There is no sense in planning for traffic without planning even more intensively for people's other needs.<sup>19</sup>

in order to ease the traffic problem inside the city

It has been argued, as in Eckbo (1969, p.134,) that mass transit facilities should be assigned to all travel that occurs regularly in time and space, such as work, school and shopping, leaving to the private car all irregular travel, recreational travel and business travel, etc. As an application of such policy the cities of London and New York can be quoted, where less than 10% of the population in these cities travel by car. According to Crosby, (1965, p.43), car travel in these cities is a luxury, because there is a relatively efficient public transport system. As a solution to the congestion of our cities by traffic, massive investments in a new infrastructure of motorways and public transport will be required. However, we must realise that such a solution will not be practical inside the central and the densely built up areas where land



will not be available for the establishment of such structures.

It was argued however, as in Perenyi (1973, p.40) that 'pedestrian and vehicular traffic at ground level should be separated if possible and shelter pedestrians against rain and wind'.<sup>20</sup>

As an evaluation of the validity of London's first floor pedestrian crossing system, Lloyd (1976, p.135) proved that such a system is not practical where man would suffer greatly of being 'insulated in contained passageways (of being) exposed to wind and weather on open bridges and, above all, of being alienated from much of the rich complexity of the urban environment'.<sup>21</sup> Also it was declared that the construction of such structures should be abandoned utterly. Lloyd says that 'no policy decision by the city (of London) Corporation is of greater urgency than one to abandon any further instalments of the first floor walkway system.'<sup>22</sup> As a resolution for solving the established conflict between the heavy traffic and pedestrians along the part of Tower Hill between the tower of London and Trinity Square, it was decided as in Lloyd (1976, p.136), that traffic should run in a sunken roadway with pedestrian platform above.

In a comprehensive evaluation of London's walkway systems it has been argued as in Lloyd (1976, p.137), that neither bridges over nor subways can provide a satisfactory solution in most cases. Finally, Lloyd indicates that the priority in the city should be granted to man and not to the car where he says 'the city is traditionally an area

for pedestrians and their convenience and safety should be a prior consideration'.<sup>23</sup> In the same meaning Crosby (1965, p.41), adds that traffic inside the city is not as important as the people's life-style, which should be given all priorities.

As we start discussing the traffic problems inside city squares and piazzas, we come to the conclusion that automobiles must be removed from these places completely, except for those traffic circles which have been designed to work as traffic nodes. San Francisco's Union Square in Halprin's opinion (1978, p. 29 ) is an example of a square which functions as a public urban space would have been improved if the streets surrounding it were closed to traffic. According to Zucker (1959, p.1) squares are gathering places in which people become secure from the haphazard traffic inside the city. Also they are places which free them from the tension of rushing through the web of streets. Most of the French squares which were established during the seventeenth century were closed to traffic. As in Zucker (1959, p.173), the Place des Vosges can be cited as an example of those squares. Squares as public urban spaces cannot be used in any different way other than the function they were designed for: an entertainment and a symbolic public place. The intrusion into our plazas and our urban public places in all aspects was considered as a destructive and violating element to these places. According to Halprin:

(It is impossible) to expect a great civic plaza to serve as a storage space for automobiles, and a traffic circle, as a setting for a great civic



Fig. ( 8.26 ). Prague Main Square. A place for cars and not for the public.

(Source: Perenyi, 1974, p.99.)

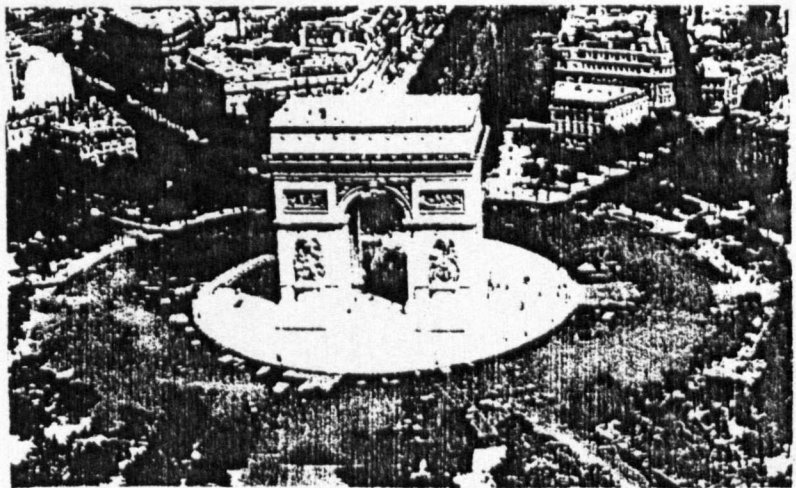


Fig. (8.27 ). The Place de L'Etoile, the largest traffic circle in Paris.

(Source: Simonds, 1961, p.125)

fountain and civic pageants, and at the same time be a quiet, open breathing space in the dense fabric of buildings. Many of the great urban plazas in European cities are being desecrated and destroyed by making them into parking lots.

There is a great difference in meaning between squares that are used by people and those circuses which are used as traffic centers. The Place de L'Etoile can be quoted here as an example of these centers being merely works as in Zucker's view point (1959,p.193), as a monumental crossroad and as a traffic node. In support of Zucker's viewpoint Peets also says that the Etoile works conveniently as a traffic center: therefore 'it has no right to be called a Place in the sense of the word established by the French architects of the seventeenth and eighteenth centuries.'<sup>25</sup> Most of Washington's squares, as in Peets' opinion can be counted as circles, or as open areas of various shapes at street intersections and not as real squares.<sup>26</sup> New York's Times Square, as in Zucker's viewpoint (1959, p.17), can be counted similarly as a metropolitan traffic center and not as a square.

#### 8.5 THE CONSERVATION POLICY IN THE SQUARES

One of the most important studies which should be given enough time and care is the study of conservation. According to Worskett (1969, p.46), conservation plays an important role in maintaining and preserving our historical legacy which we wish to see and to live with in the present and in the future also.<sup>27</sup> Conserving our architectural



Fig. ( 8.28 ). Group of houses in Cheyne Walk, London. Here we can see an excellent example of infilling, where the newly added building has maintained the same size and the same scale of the existing ones.

(Source: Worskett, 1969, p. 199 .)



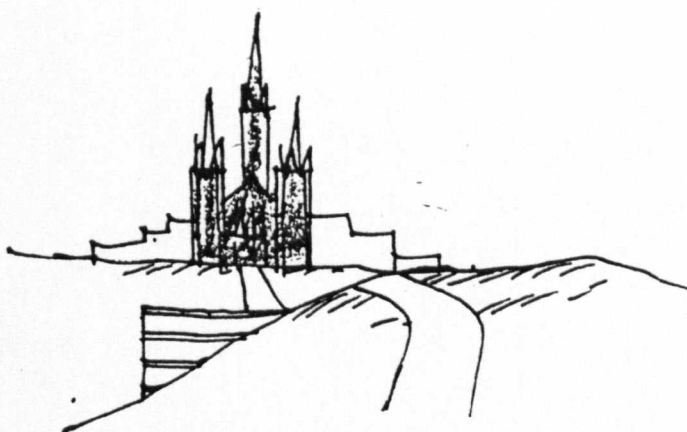
Fig. ( 8.29 ). A photograph in St. Martin's, Stamford. Here we have an example of failed attempt of infilling where the newly added building looks awkward without having a pitched roof.

(Source: Worskett, 1969, p. 185 .)



heritage should not, as in Worskett (1969, p.19), be applied only to historical masterpiece buildings; conversely it must consider any other buildings which show a town's history through their interaction with people or events, local activities or styles and history of architecture, where it was argued that the conservation of these buildings imply the continuity of our life's stream. As a starting point in rebuilding our old squares, it is necessary for architects to survey the historical buildings in order to define which buildings will remain and be preserved and which ones are going to be demolished. It has been mentioned, as in Worskett (1969, p.9), that preserving our historical buildings is an idea that has a psychological and emotional interpretation. Change is an important factor in the conservation process being the main motive behind it. Changing society creates, as in Worskett, the need for a changing environment. Hence it is necessary for architects and townplanners to try to establish a strong relationship between the old and the new, where city with its varied image has been acknowledged as a continuing story that can be read from the relationship between its buildings. Unless we try to resolve the conflict between change and conservation in order to integrate and link the twentieth century sympathetically with its ancestors, our architectural legacy will be lost.

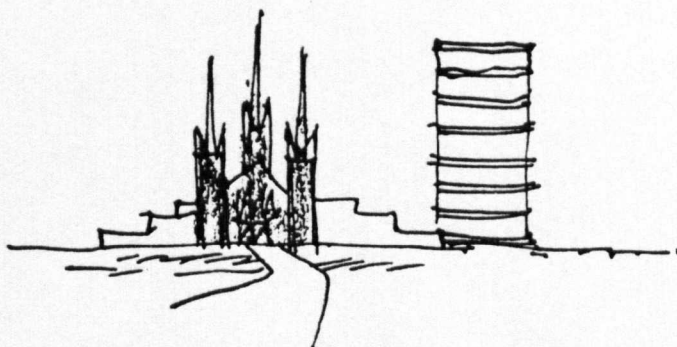
It has been argued, as in Worskett (1969, p.12), that society needs both cultural and physical roots. Squares, with their visual and historic qualities as a part of their towns can provide a part of this need.



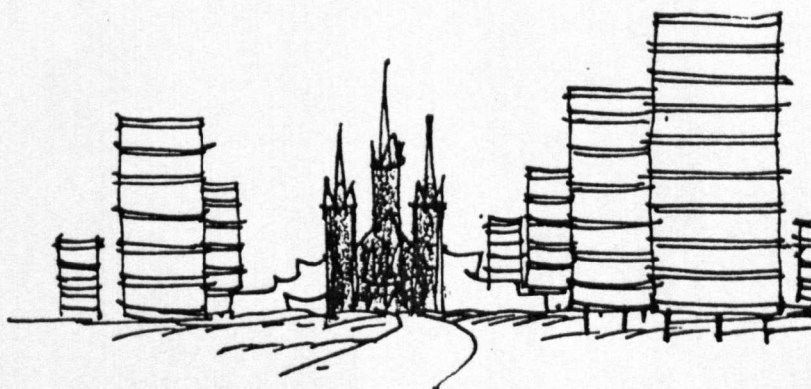
A. Here the site's contours provide the chance to slip in a high building.



B. Here the rise of trees creates another opportunity to hide the newly established high building.



C. Here the rise of the new building has destroyed the autonomy of the old one.



D. Here the conflict can be resolved by establishing another new building on the other side of the old one in order to assert its dominance on its setting.

Fig. ( 8.30). The relationship between the old and the new buildings.

(Source: Worskett, 1969, p. 113 .)

Therefore it is necessary for us to try to preserve historical buildings that are worthy of being conserved as a part of our past. It is important to note also that conservation of these historical buildings in our squares will inevitably impose a kind of restriction upon designing the new ones which are expected to be added later on beside them. Apart from those squares which have been designed and executed at the same time, we must notice a visual stylistic differentiation in the buildings of those squares which were established through different decades.

Where it was proved that the over population stands as a major cause of considerable damage to our city centers, it is necessary, as in Worskett (1969, p.38), to consider a new plan for the land uses in which a sensible transportation policy can be employed in order to reduce the pressure on these centers and their squares.

## 8.6                    THE LOCATION OF SQUARES WITHIN THE ORGANISM OF CITIES

### 8.6.a                AN INTRODUCTION TO THE STRUCTURE OF THE CITY

The city as a unified organism consists of different elements with varied functions, and every one of these elements must work as a part of a whole and not as a separate entity. The city, as in Lynch's definition ( 1982, p.91), 'is a multi-purpose, shifting organisation, a tent for many functions, raised by many hands and with relative speed.

The form must be somewhat non-committal, plastic to the purposes and perceptions of its citizens'.<sup>28</sup>

Lynch carried out studies of the idea of imageability in three American cities: Boston; Jersey City and Los Angeles. It was proved that the main elements which contribute in building the image of the city are: paths, edges, districts, nodes and the landmarks.<sup>29</sup> Among those fine elements 'Nodes' stand as an important theme being related to our subject of squares. Nodes in Lynch's definition, (1982, pp.47-8), are strategic spots inside the city which an observer can be attracted to. It is also an intensive focus by which the city inhabitants can end and start their journey. A node may have many different shapes; it could be a crossroad; or traffic junction or any other important open space. Among these varied shapes which nodes can take, squares stand as an important class.

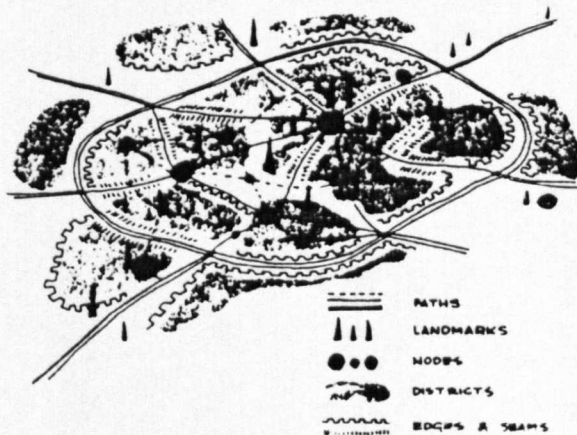
#### 8.6.b.            SQUARES AS THE MAIN COMPONENT OF THE CITY CENTER

Theoretically, it has been argued that the area of downtown or the city center is the basic constitutional core from which any new expansion starts. An application of this theory can be seen in the evolution of the Greek city 'Delas', which according to Bacon (1967, pp.78-9) was expanded around its own original kernal, the agora.

Similarly, it has been argued that squares are considered to be the elementary and the very constitutional heart of the city center. An application of this theory can

be seen in the design of Hartford town center in the U.S.A., which according to Perenyi (1973, p.77), was developed around Constitution Plaza. Another example is the town center of Erevan, the capital of Soviet Armenia. This center, as in Perenyi (1973, p.71), is composed of three large squares; the Procession Square, Lenin Square and thirdly the Theatre Square. A further example is the center of Sibiu in Transylvania (Rumania) which, according to Perenyi (1973, pp.95-6), was developed around four squares. The design of the city around a central square is a phenomenon which can be interpreted intuitively. Commenting on that meaning, Zucker says,

(Many) squares appeared on early town plans with no use assigned to them. They were merely open spaces in the real-estate subdivision plat. Obviously, it was an instinctive feeling on the part of the designers that the heart of a new town should be the square, whether or not they thought of any or all of the uses listed above. 30



*Representing the form of a city with abstract symbols.*

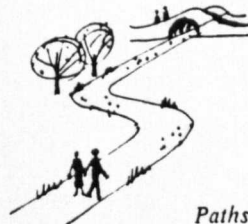
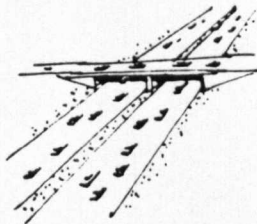
Fig. ( 8.31 ). The structure of the city in abstract form.

(Source: Spreiregen, 1981, p.51.)

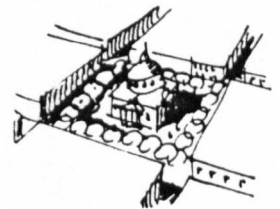
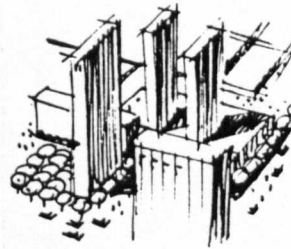




*Landmarks.*



*Paths.*



*Nodes.*



*Districts.*

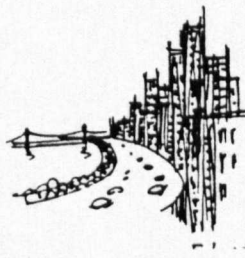
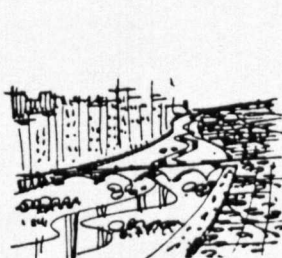


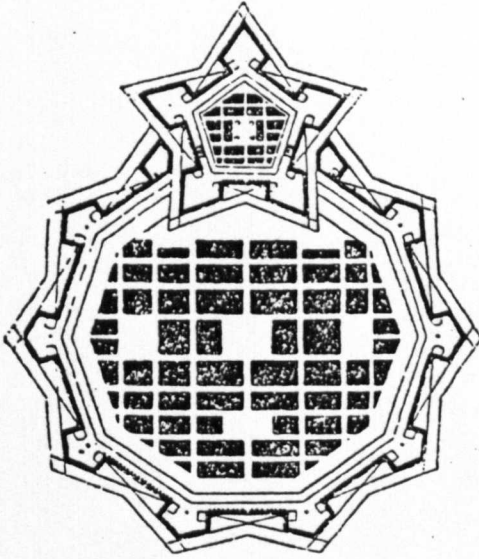
Fig. ( 8.32 ). The main elements in the structure of the city.

(Source: Spreiregen, 1981, pp.5-51.)

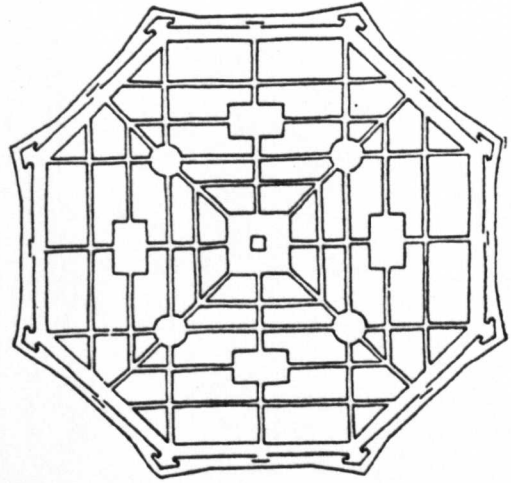


Fig. (8.33). Lenin Square in Erevan.

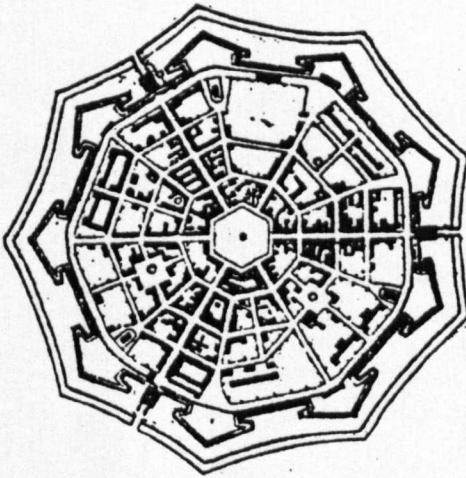
(Source: Perenyi, 1973, p.71.)



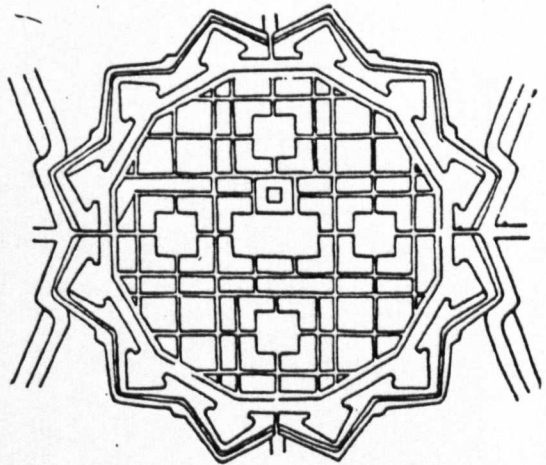
PLAN FOR AN IDEAL CITY,  
ca. 1567, BY PIETRO CATANEO



PLAN FOR AN IDEAL CITY,  
1598, BY VASARI IL GIOVANE



. PALMA NUOVA, 1593. PLAN



PLAN FOR AN IDEAL CITY,  
ca. 1615, BY VINCENZO SCAMOZZI

Fig. ( 8.34 ). The Square and The City. Here we have four examples of varied ideas for the ideal city, in which the square appears as an organising element and as a dominant feature of its structure.

(Source: Zucker, 1959, p.105.)



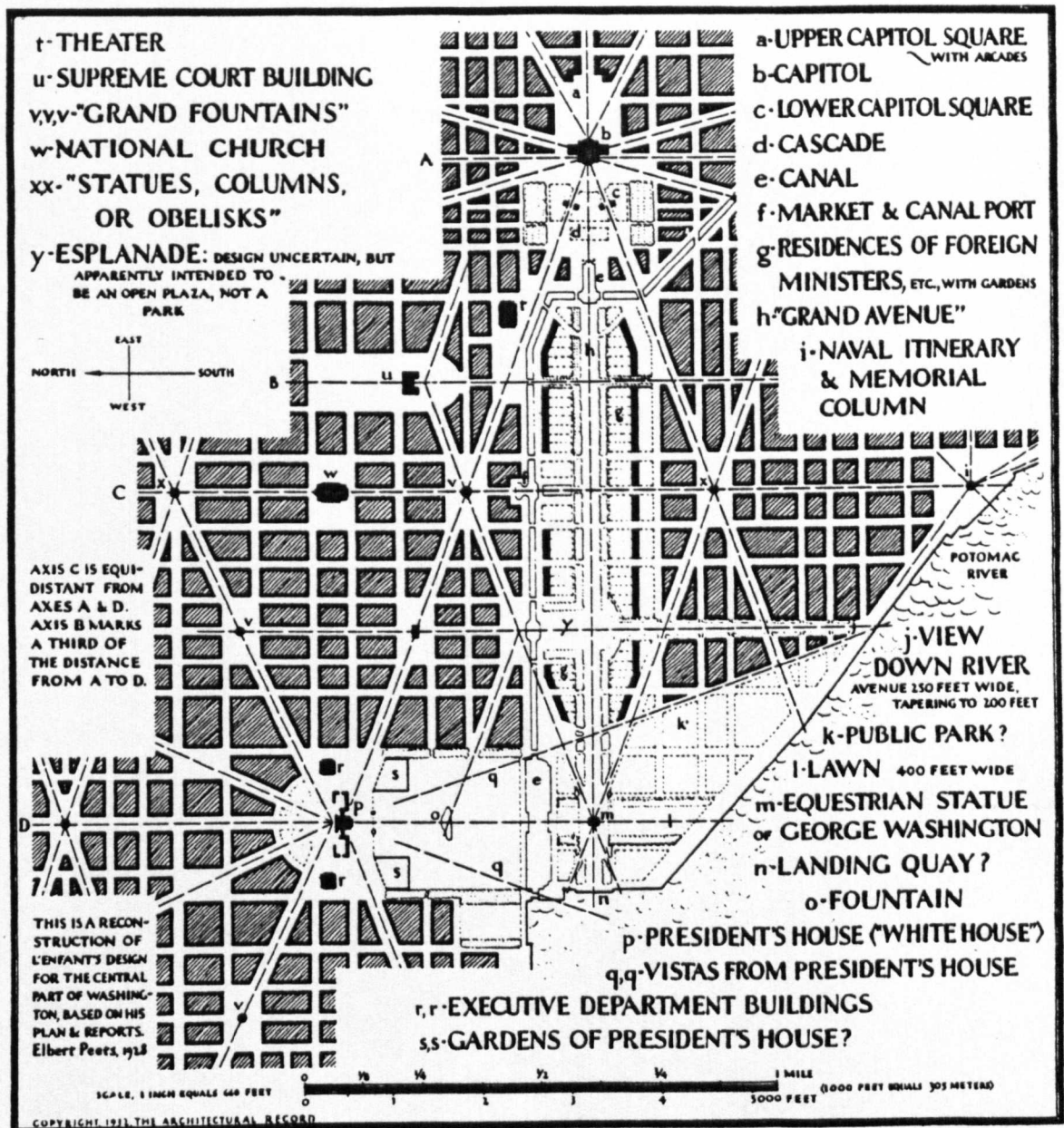


Fig. ( 8.35 ). The central part of Washington. Here we have an example of a city whose structure was mainly created by a physical and visual relationship between a set of avenues and squares.

(Source: Peets, 1968, p. 36 .)

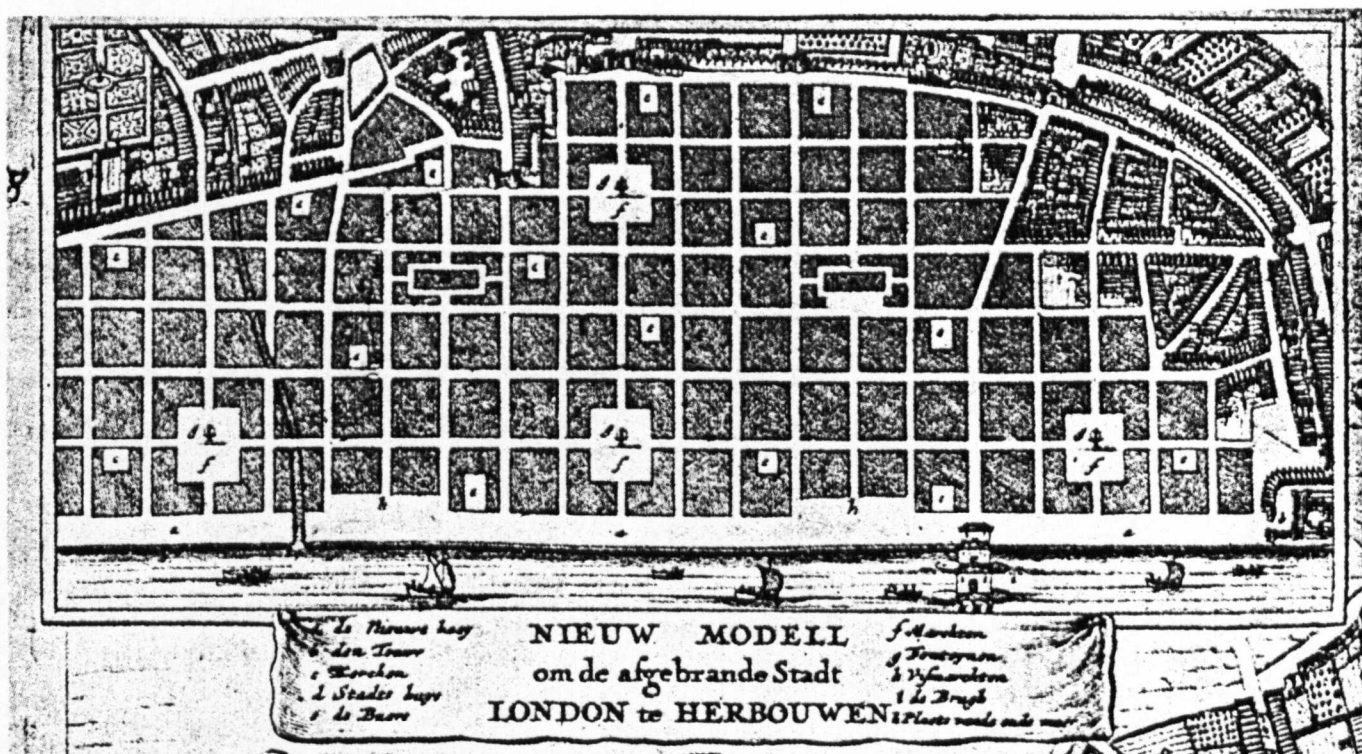


Fig. ( 8.36 ). Plan of London by Hooke. Here is an organism of a city whose structure was mainly developed upon a strong connection between four squares. These squares, had they happened to exist as in Peets (1968, p.126), would have been the jewels of London.

(Source: Peets, 1968, p. 125 .)



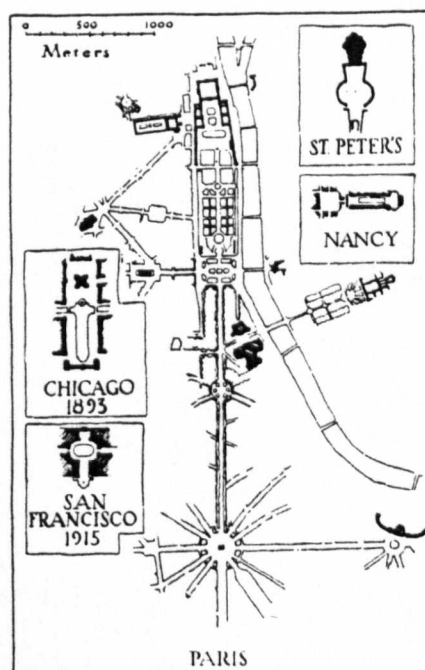
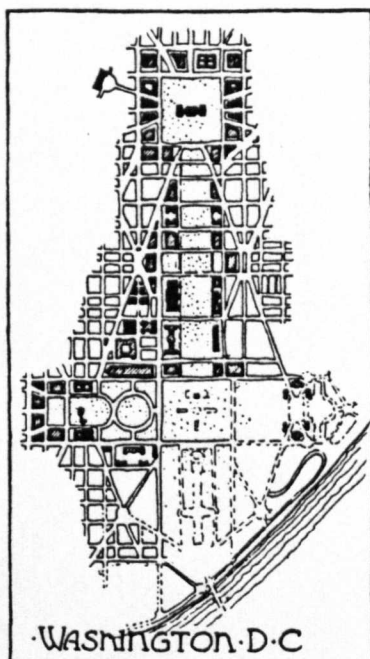
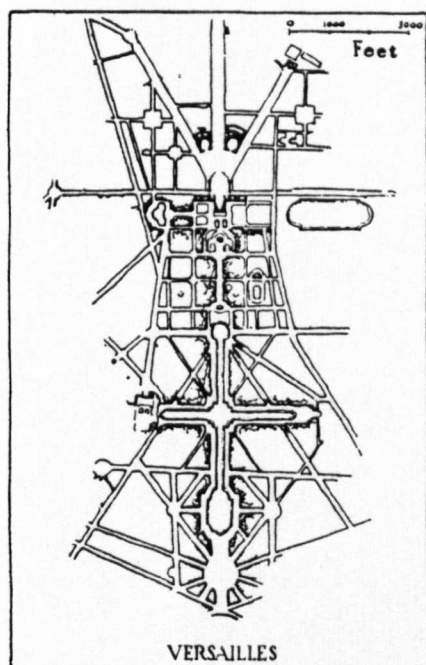
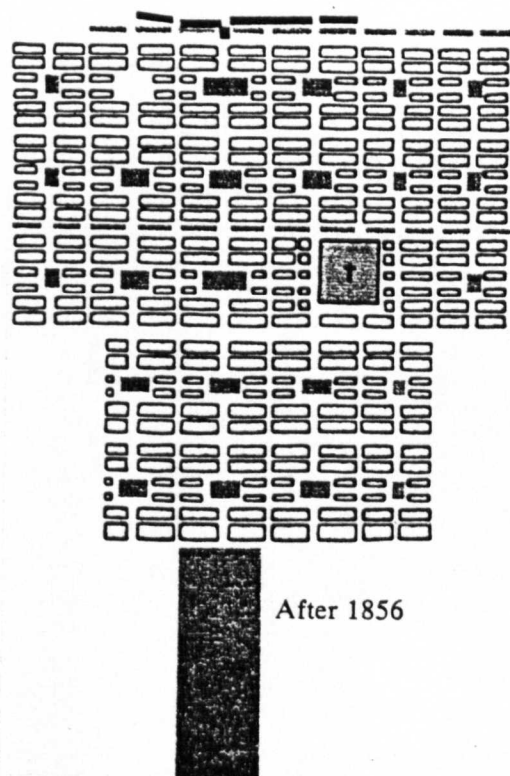
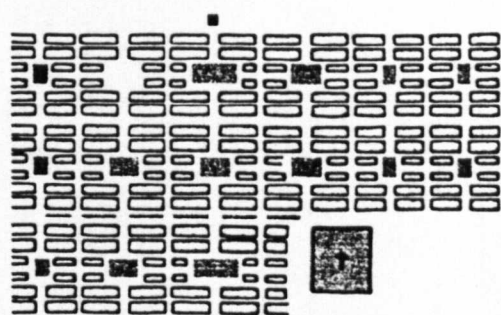


Fig. ( 8.37). A comparison between Washington, Versailles and Paris. So important here is the relation between the relatively varied sized plazas and the connected avenues.

(Source: Peets, 1968, p. 46 .)



After 1856

Fig. ( 8.38). The develop-  
ment of Savannah.

(Source: 1967, p.206.)

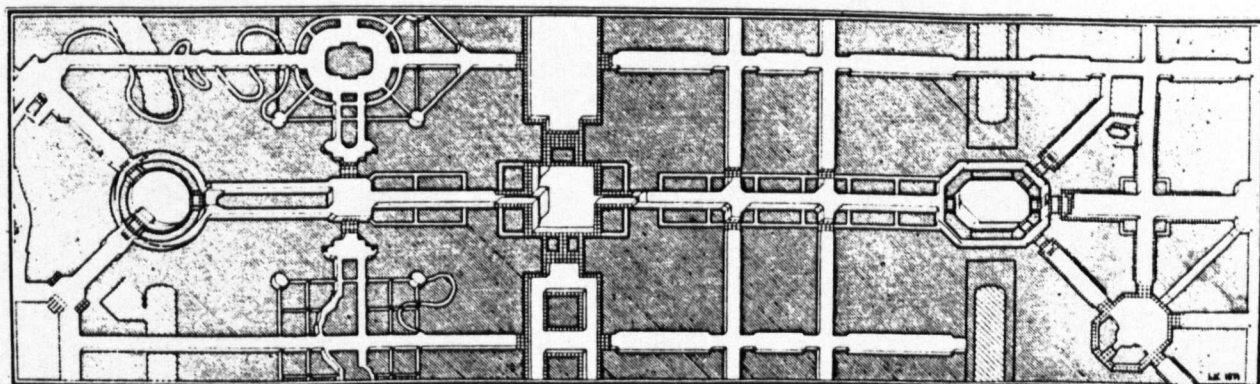


Fig. ( 8.39 ) Project for the Center of Leinfelden,  
West Germany, by Rob Krier.

(Source: Gosling & Maitland, 1984, p.103.)

It has been mentioned previously that the square as a three dimensional constitution ought to be well defined in order to establish the required sense of containment which it was intended to produce. As structural elements in building square: walls, floor and the imaginary ceiling have the potential of establishing such containment powers. According to Zucker (1959, p.7), squares as three-dimensional constructions have three confining elements which are as follows: a wall built of a row of surrounding structures, an expanded floor and finally an imaginary ceiling created by the sphere of the sky above. As basic elements in creating the structure of a square, these three elements may vary in their characteristics, the thing which would impose a certain character upon the square itself. As in Zucker,

These three factors which produce the final three dimensional effect may vary in themselves: the surrounding structures may be of uniform height, proportion and design, or they may differ; they may be more or less coherent. The floor, an equally important factor for the appearance of the square, may be homogeneous in expansion and texture (pavement) or it may be articulated by slopes, steps, different levels, etc. Its surface pattern may unify or isolate the framing vertical structures. The sky, the 'ceiling' of the square although distant, offers a visual boundary which in spite of its purely imaginary character confines aesthetically the space of the square just as definitely as do the surrounding houses or the pavement. 31

As an important fact it was acknowledged that the relation between these main elements that confine a square is based on the human scale as being the focal point of both

architecture and city planning. It was mentioned earlier in Ashihara (1981, p.81), that the height of the wall has an undeniable impact upon the character of the square. Hence it is important for the architect to study the implications of these phenomena before the start in designing any square. As an outdoor enclosed space, squares were regarded, as in Ashihara (1981, p.14), as architecture without a roof, being delineated only by two planes - a floor and a wall. Psychologically (Zucker, 1959, p.9), the sense of confinement which is produced by the power of the delineating planes can be considered as man's need against being lost in a gelatinous world.

The floor of the square, in addition to its function as one of the main three dimensions which confines its closure, performs another important function as a unifying element for the closure of that square. The floor of St. Peter's Square in Rome with its pavement pattern which radiates from the central obelisk that locates inside the closure of that square, can be cited as an example of such a floor which we look at as a spatial unifying element. Another example which is worthy of quotation here also is the Capitoline's Hill floor by Michelangelo. According to Bacon (1967, p.118), 'without the shape of the oval, and its two dimensional star-shaped paving pattern, as well as its three dimensional projection in the subtly designed steps that surround it, the unity and coherence of the design would not have been achieved.'<sup>32</sup>

One of the most distinctive features of plazas is

their furniture. According to Lynch (1981, p.443), '(plazas) contain features meant to attract groups of people and to facilitate meetings: fountains, benches, shelters and the like. Planting may or may not be prominent'.<sup>33</sup>

One of the main factors which enliven the character of the square and make it really work as a lung within its city, is the technique of designing its landscape. Therefore it is recommended that such a technique be biased towards nature in order to establish the required sense of contrast between architecture as a man-made object and nature as the god supreme creation. According to Eckbo (1969, p.63), nature is important to landscape design because it is the world of forces in which we live and work. As an important principle in designing landscape, the selected materials, the used technique of discipline ought to be natural in every sense.

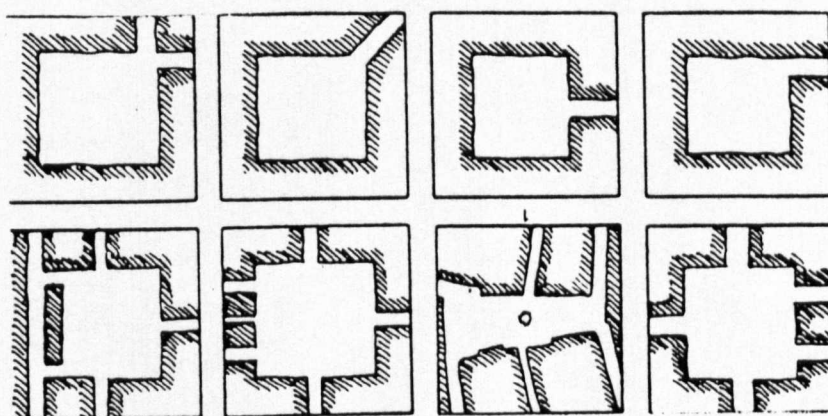


Fig. ( 8.40 ). The wall and the identity of the square.

(Source: Gosling & Barry, 1984 , p.134.)



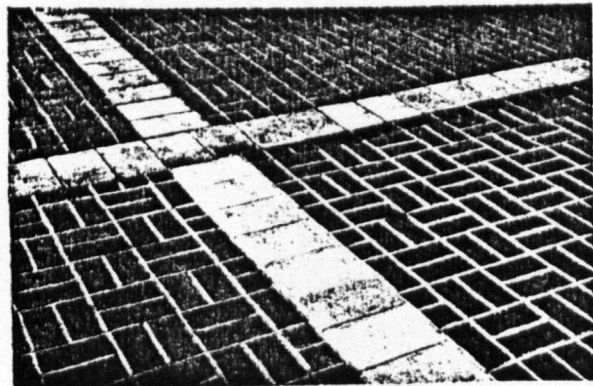
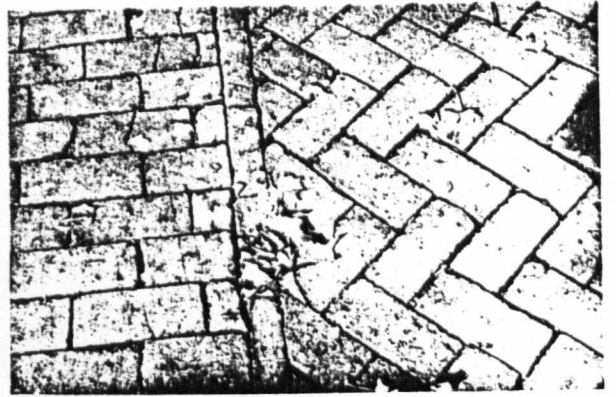
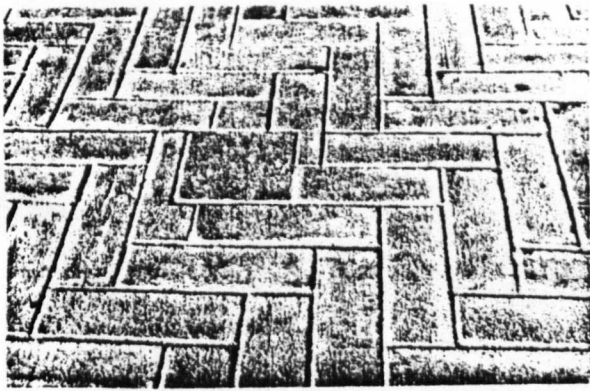
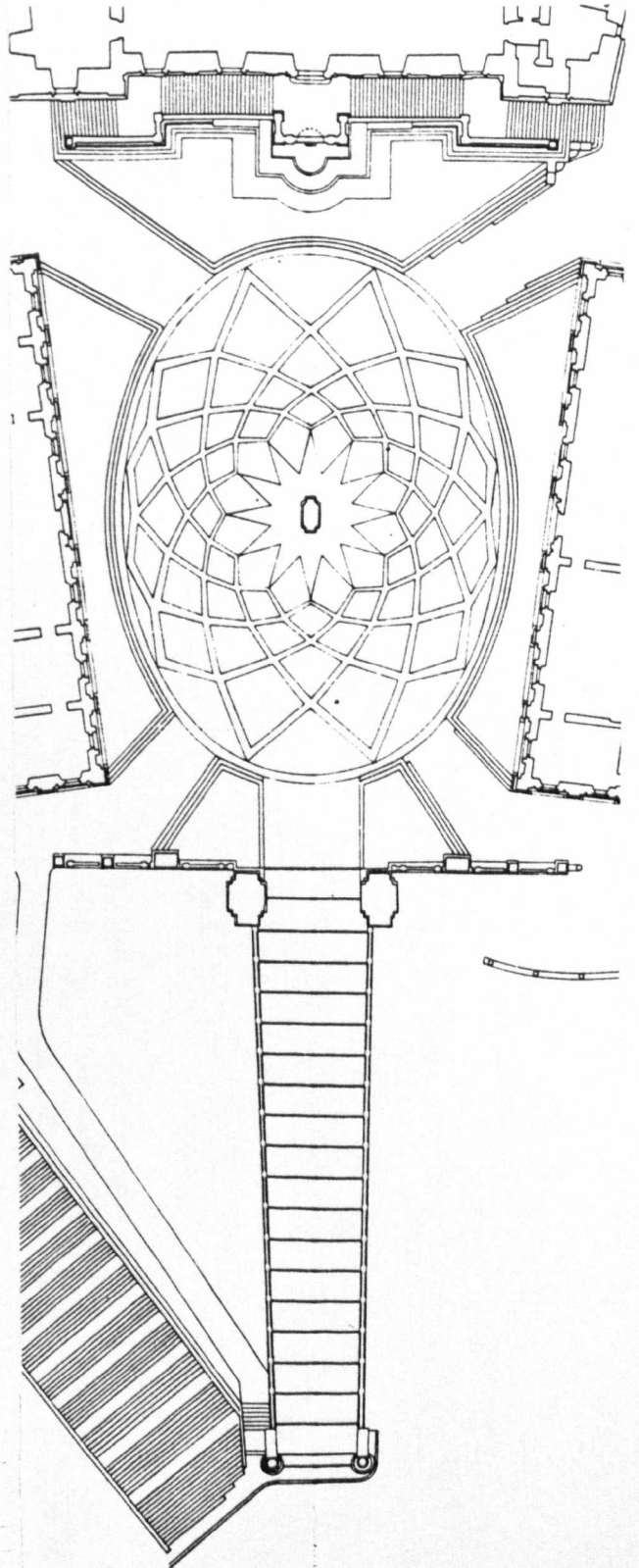


Fig. (8.41). Brick makes different pattern of floors.

(Source: Halprin, 1978, pp.104-5.)

Fig. (8.42 ). The floor of the  
Capitoline's Hill by Michelangelo.

(Source: Bacon, 1967, p.105.)



CHAPTER 8      NOTES & REFERENCES

- 1 Ashihara, Yoshinobu, Exterior Design in Architecture, (Van Nostrand Reinhold Company - London, 1981). p.14.
- 2 Bacon, Edmund, N., Design of Cities, (Thames and Hudson, London, 1967), p.18.
- 3 Ibid., 1967, p.17.
- 4 Ashihara, 1981, *ibid.*, 1981, pp.42-3.
- 5 Ibid., 1981, pp.94-5.
- 6 Halprin, Lawrence, Cities, (The Mit Press, Cambridge, Massachusetts, and London, 1978), p.11.
- 7 Perenyi, Imre, Town Centers, Planning & Renewal (Akadeemiai Kiado. Budapest, 1973), p.114.
- 8 Lynch, Kevin, A Theory of Good City Form, (Massachusetts Institute of Technology, 1981,) p.263.
- 9 Zucker, Paul, Town and Square From the Agora to the Village Green, (Columbia University Press, New York & London, 1959), p.184.
- 10 Ibid., p.1
- 11 Lynch, 1981, p.443
- 12 Zucker, *ibid.*, 1959, p.31
- 13 Ibid., pp.1-225.
- 14 Halprin, *ibid.*, 1978, pp.28-9
- 15 Ibid., p.27
- 16 Peets, Elbert, On the Art of Designing Cities (The Mit Press, Massachusetts Institute of Technology, Cambridge, Massachusetts, London, 1968), p.63
- 17 Eckbo, Garrett, The Landscape we See, New York, Toronto, London, Sydney, 1969, p.131.
- 18 Ibid., 118.
- 19 Crosby, Theo, City Sense, (Studio Vista, London, 1965), p.41.

- 20 Perenyi, Imre, Town Centers Planning & Renewal, (Akadeemiai Kiado, Budapest, 1973). p.40.
- 21 Lloyd, David, Save the City, A Conservation Study of the City of London, (Society for the Protection of Ancient Buildings, 1976), p.135.
- 22 Ibid.
- 23 Ibid., 137.
- 24 Halprin, *ibid.*, 1978, p.11
- 25 Peets, Elbert, On the Art of Designing Cities, (The M.I.T. Press, Massachusetts Institute of Technology, Cambridge, Massachusetts and London, 1968), p.140.
- 26 Ibid., p.56.
- 27 Worskett, Roy, The Character of Towns, An Approach to Conservation (The Architectural Press, London, 1969), p.46.
- 28 Lynch, Kevin, The Image of the City, (The M.I.T. Press, Massachusetts Institute of Technology, Cambridge, Massachusetts, and London, 1982), p.91.
- 29 Ibid., p.47.
- 30 Zucker, *ibid.*, 1959, pp.238-9.
- 31 Ibid., p.7
- 32 Bacon, *ibid.*, 1967, p.118.
- 33 Lynch, *ibid.*, 1981, p.443.

PART 5

CASE STUDY

PARLIAMENT SQUARE



INTRODUCTION

If the Houses of Parliament with their famous clock tower, 'Big Ben' can be counted among London's most memorable landmarks, then the square which that building overlooks must be considered as one of the most important urban spaces which the city of London has. Parliament Square which is one of London's major urban nodes was designed in 1834 by Charles Barry, the designer of The Houses of Parliament. More than a century elapsed before the square was redesigned by Grey Wornum in 1951. In a recent evaluation of the role of the square as a symbolic and recreational public space inside the City of London, it has been discovered that its function has been affected drastically by the annual increase of traffic which has quadrupled since 1951. In an attempt to improve the performance of the square, a competition was held in July 1984 in which the researcher participated by submitting a proposal.

As a part of that research the Parliament Square competition was considered by the researcher as a useful case study for a new urban scale. Using his entry in this competition as a field study application, the researcher was trying again to look at a significant part of London's built environment through the basic principles of perception which were referred to at the end of Part 1. The method of

analysis of Seventh Heaven 1 and Seventh Heaven 2 in Part 3 will be applied to the proposal of the researcher's in this competition. This means that its design on the one hand will be analysed formally and spatially in an attempt to reveal its perceptual and latent potentiality. On the other hand the scheme will be tested against the basic limits of perception which have been described at the end of Part 1.

In addition to the benefit of using this competition as a new opportunity for applying the basic principles and the constraints of perceptions in the process of design, we find that such a competition also gave the researcher a good opportunity to build a new dimension into the methodology used in his research. By way of further explanation it can be said that the researcher's participation in this competition prepared him for the next case study, that of redesigning the Liberation Square in Egypt. Taking advantage of such a chance, the researcher started to build his assumption upon the results of this competition and its considerations, besides his main use of the results of the theoretical part.

## 9.1 HISTORICAL BACKGROUND

As a part of his commission to redesign the royal palace of St. Stephen at Westminster, now called the Houses of Parliament, Charles Barry designed in addition the frontal square of that palace which is known most recently as

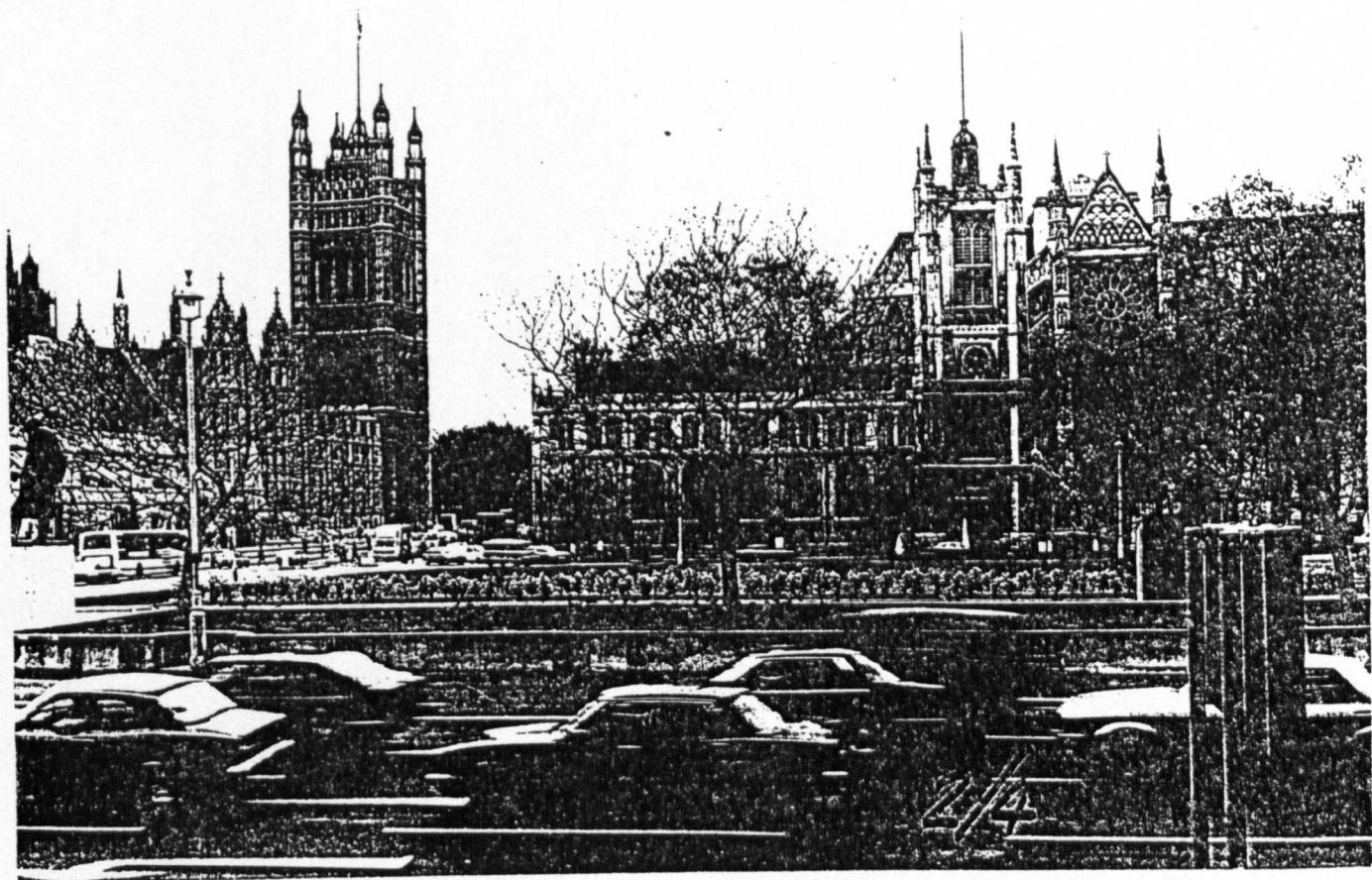


Fig. (9.1). Parliament Square.

(Source: The Competition's documents)

Parliament Square. In 1951, Grey Wornum had commissioned to redesign that square again to look as we see it now. According to the attached map we can see that the site of this square is surrounded by an important group of buildings. On the southern side of the site stands Westminster Abbey and the Parish Church of Westminster, St. Margaret's Church; on the east side of the square, the Houses of Parliament were rebuilt following the destructive fire in 1834.<sup>1</sup>

As a part of the Palace, the clock tower known as Big Ben rises (93m) up as an international symbol of London.<sup>2</sup> From this historical display, one might be able to appreciate the significance and the architectural value which lies behind the existence of the square and also the need for conserving its buildings.

As in the case of any square used by traffic, the performance of Parliament Square as a public urban place has now degenerated. Safe pedestrian access to it no longer exists as traffic volumes have quadrupled since 1951. Its function as a historical and symbolic place is drastically affected, as a result of its gradual change to a noisy hazardous traffic node. Hence it was quite natural for some voices to raise the importance of reviewing the recent design of the square and its performance as an entertainment and symbolic public place.

## 9.2 THE NEW SQUARE AS WE NEED IT

In an attempt to revitalise the public and the

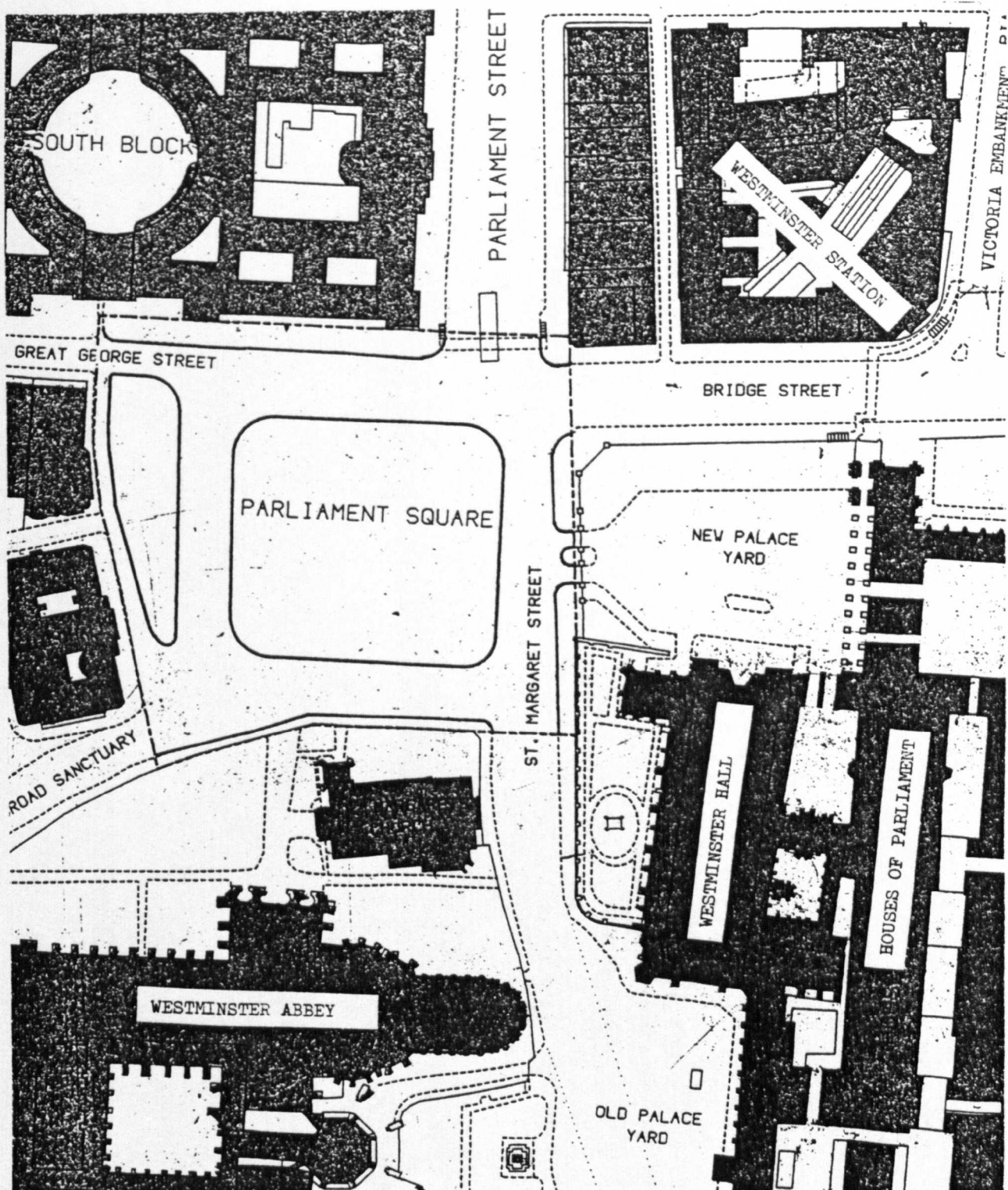


Fig. ( 9.2 ). Parliament Square Site Plan.

(source: The Competition's documents)



symbolic role of Parliament Square, within the area of Westminster, the redesigned Piazza was expected to be easily accessible by pedestrians from all directions, to comprise a landscape of high standard and finally to contain all of the needed amenities which are required by people in such a public place such as restaurants, cafes etc. In order to achieve such a goal, a set of rules were formulated in the competition's brief to be followed and to be used as guidelines by the competitors. These rules were:

- A - The square will continue to be used for traditional ceremonial occasions such as the opening of parliament and coronations.
- B. Existing statues and monuments are either to remain in existing positions or be re-sited.
- C. Existing mature trees are to remain except where the advantages in their removal heavily outweigh their retention.
- C. Improved pedestrian access, including disabled access to the square.
- E. The existing highways will be retained.
- F. The vehicular traffic flow around the square is heavy and it is not intended to substantially restrict or alter this movement.
- G. All buildings around the square will remain.
- H. The existing pedestrian flow is substantial and includes many foreign visitors.

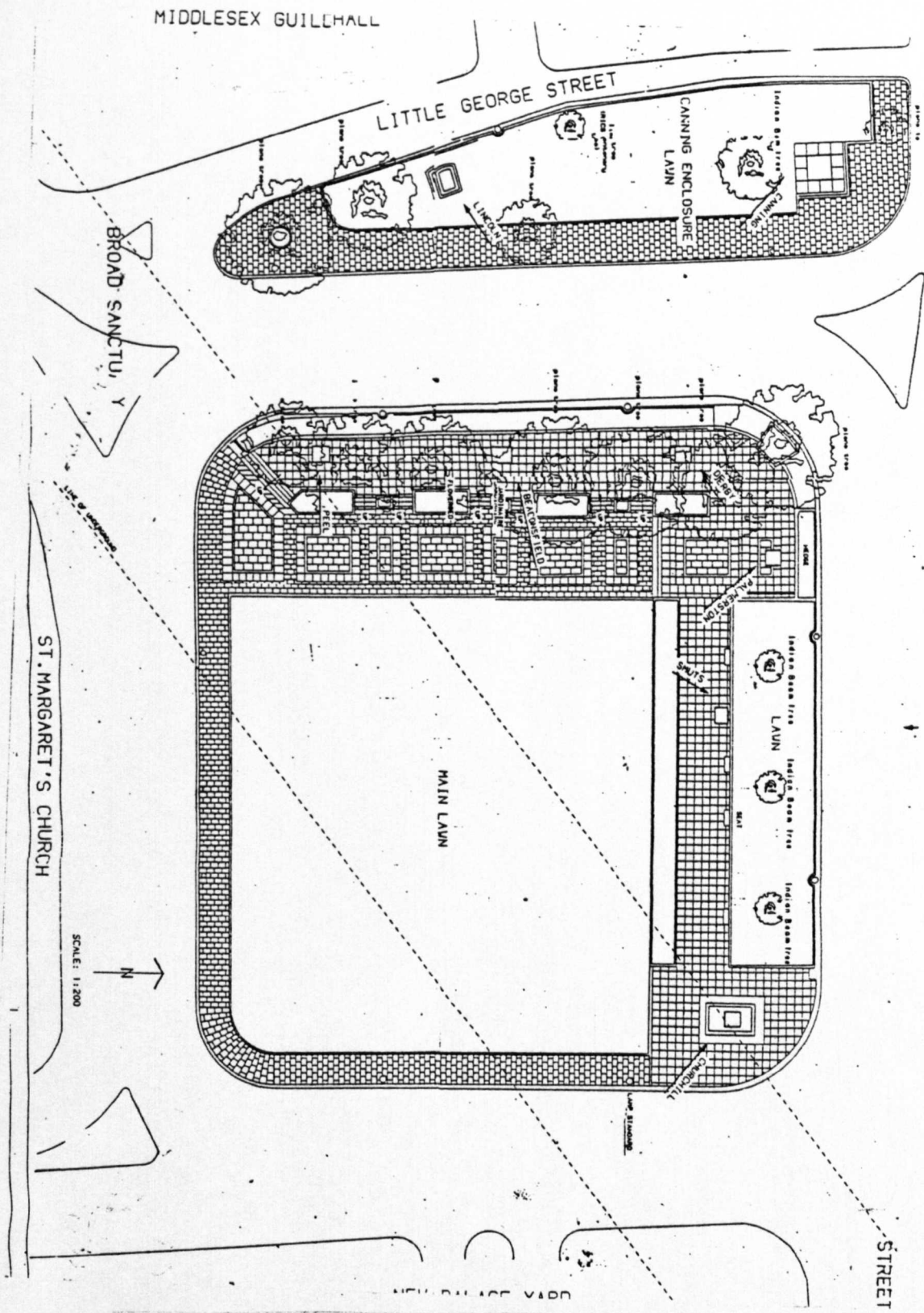


Fig. (9.3). Plan of the Existing Square.  
 (Source: The Competition's Documents.)

### 9.3 THE RESEARCHER'S ENTRY

#### 9.3.a THE DESCRIPTION OF THE SCHEME

Basically the idea of the scheme was based on the creation of a nearly geometrical quadrate square. In more detail, the proposed concept suggested the creation of a centralised and geometrical spatial enclosure defined by a permeable screen of trees, statues and walls. At the center of its green lawn, a monumental high tower, meant to be used as a symbol for the Houses of Parliament and its context, was erected. This tower which was suggested to be designed in a modern Gothic style, was carrying a flame torch as a representation for liberty, power and right, being the most valuable human principles. The suggestion of establishing such a monument here in that place should display the strong symbolic connection between the Houses of Parliament and the square under the analysis.

In a response to the competition's brief, the concept of the scheme comprised the suggestion of establishing a number of kiosks at the corners of that square for selling snacks, drinks, souvenirs and for providing leaflets about British history to its visitors.

Also to comply with the traffic provision and its consideration in this competition, all roads were allowed to be used by cars as it was in the old concept.

#### 9.3.b PARLIAMENT SQUARE ANALYSIS

Now as we start analysing the formal and the spatial potentiality of the researcher's entry in detail, we find

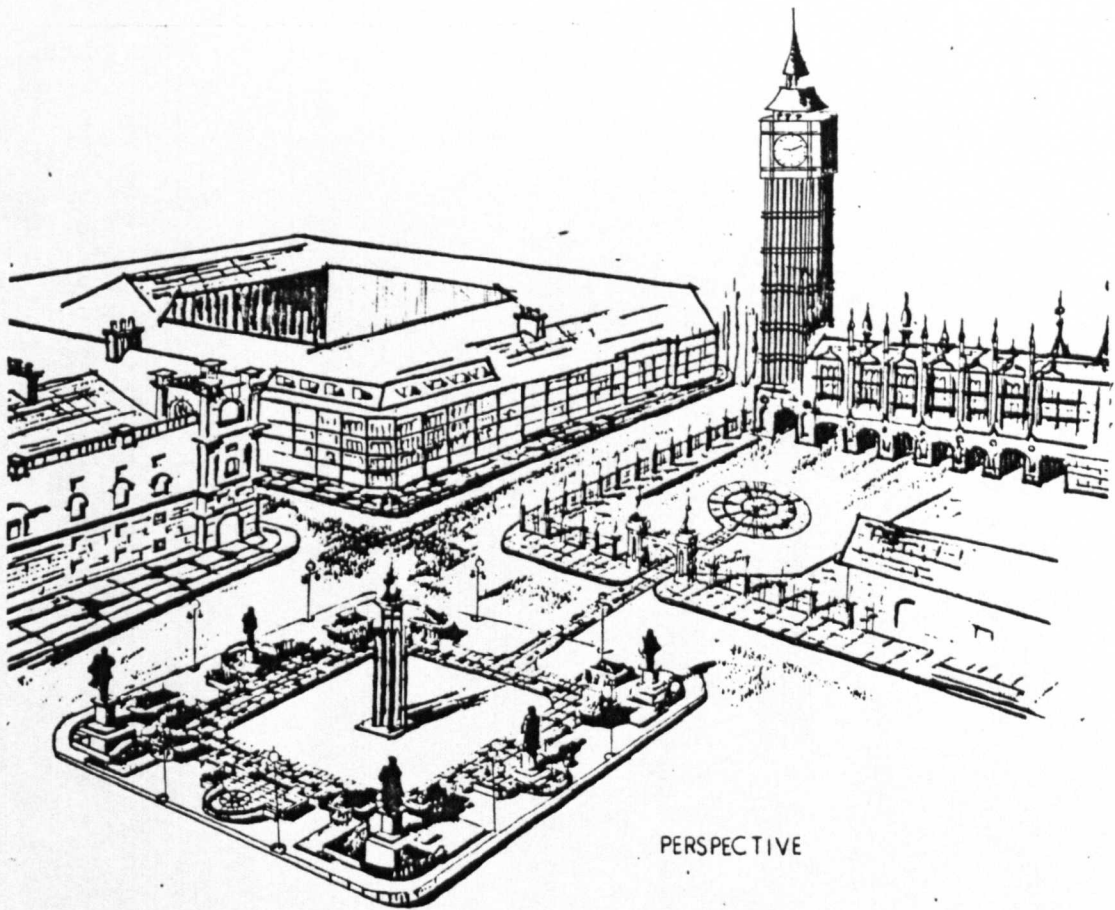


Fig. (9.4). Perspective of the Researcher's Scheme.

(Source: Prepared by the Researcher).

it more appropriate on the other hand to build such analyses in a series of points, as follows:

(i) Landscape Formation

Having looked at the overall form of the square concept one can realise the researcher's intention in creating a symmetrical simple pattern. Throughout combining both of the circular shapes with the rectangular one he started to build a whole unified form. The symmetry was needed in this concept as an answer to the pre-requisite sense of formality which is induced by the existing Houses of Parliament.

As major formative elements in the landscape, the sensitive distribution of the kiosks have been working as punctuating points at the corner of the square. Their existence in closed pairs has heightened the value of the defined spaces between them.

With regard to the use of circular shapes, it can be said that their use was very successful in providing the opportunity for locating the previously mentioned statues in an organic way, in that every one of them appeared to be contained within a quarter or a half circle.

Turning to the monumental tower, we can say that its position has been chosen in the center of the square deliberately, being that such a point represents the highest level of potentiality for that shape, that is worthy of being the location of such a monumental and symbolic structure.

Considering the sense of closure that is essential in



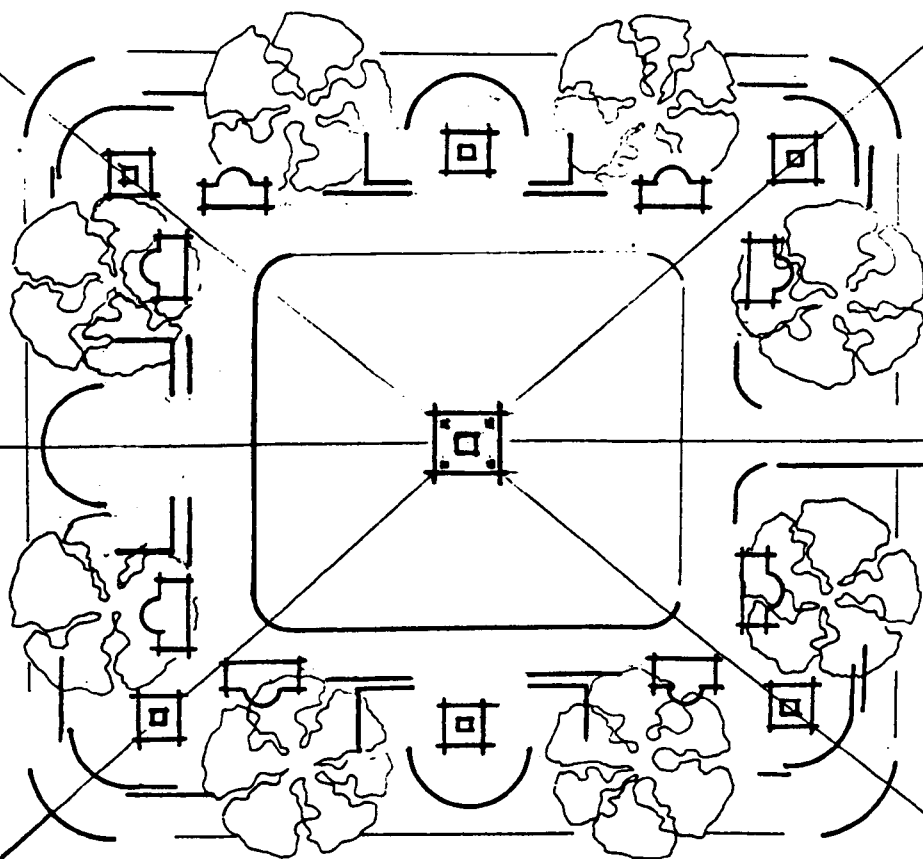


Fig. (9.5). Abstract Plan of the  
Researcher's proposal.

(Source: Prepared by the researcher.)

such a place, one might say that the overall organisation and distribution of trees and statues on the perimeter of the square and the erection of a relatively low wall around the perimeter, and finally lifting the floor of that square above street level, all contribute to the establishment of the sense of containment and closure.

As for the use of nature in such a place, one might argue that such usage may evoke a sense of contrast and excitement, especially when the paved paths, with their hard texture are taken into account.

In consideration of the public comfort in such a place, many seats have been arranged around the main lawn in the paved paths. Pots of flowers were positioned between every two of them to beautify the square on the one hand, and to please its visitors on the other.

(ii) The Pedestrian in the new Concept:

To facilitate the approach to the square by the public as a prime consideration in this competition, the proposed concept has suggested the construction of an underground crossing system, in which four links of outwardly diagonal paths were proposed. Also, a new system of traffic lights was considered in order to comply with the suggested pedestrian system.

(iii) The Influence of Traffic

As in the case of any other piazza intruded by automobiles, traffic in the square appeared to be a great

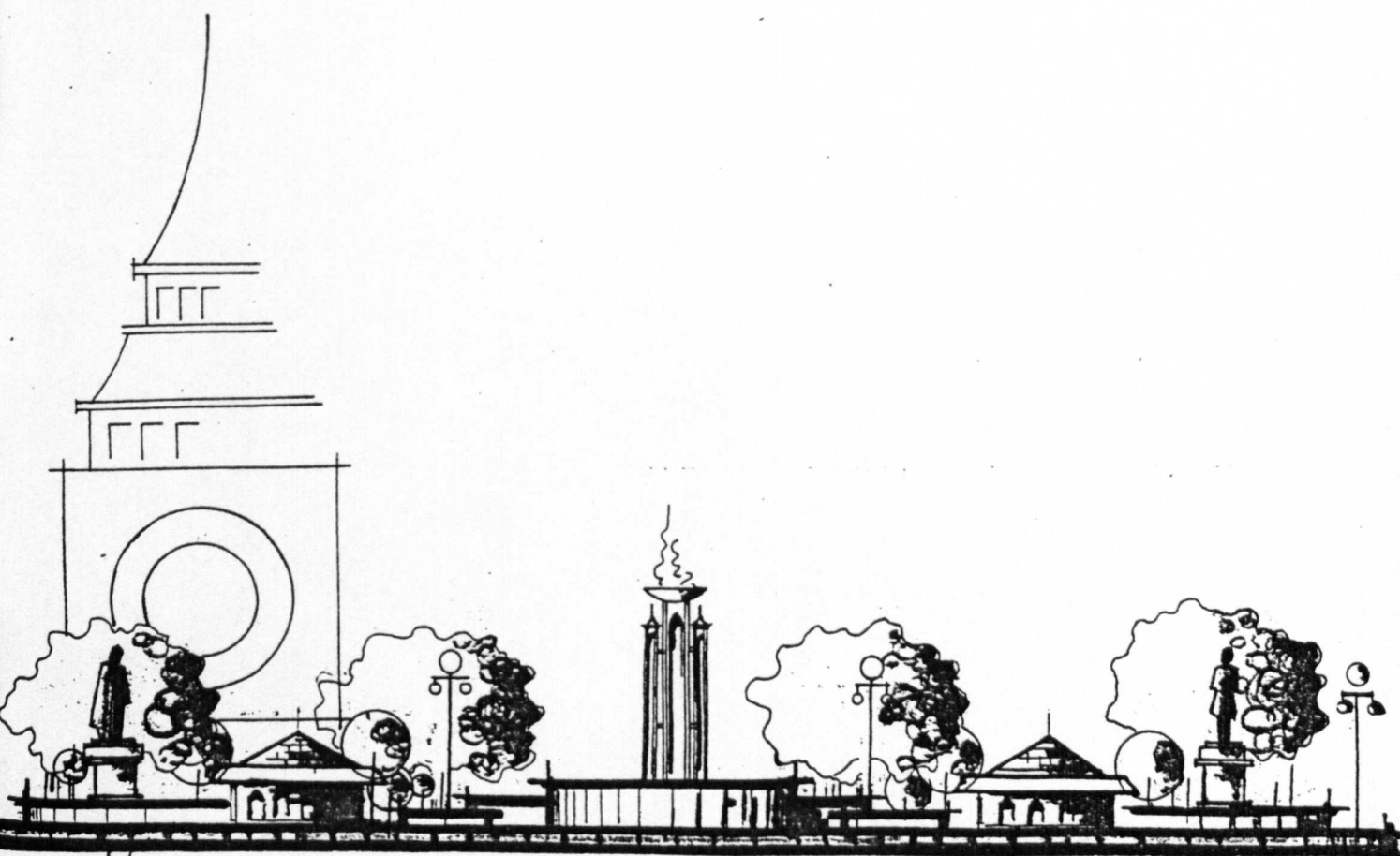


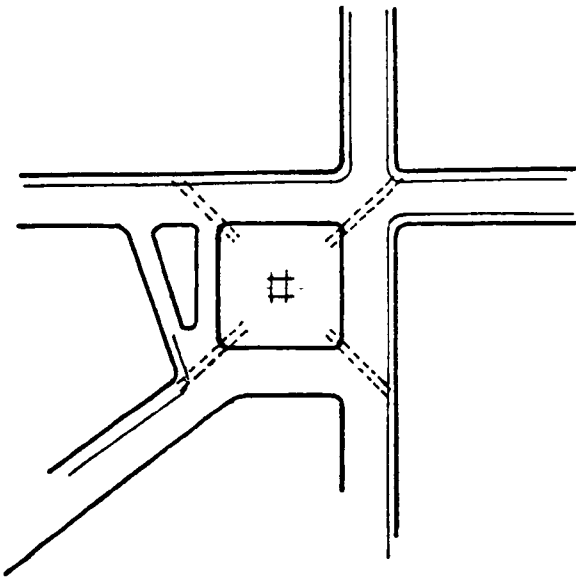
Fig. (9.6). North Elevation of the Researcher's Concept.

(Source: Prepared by the Researcher.)

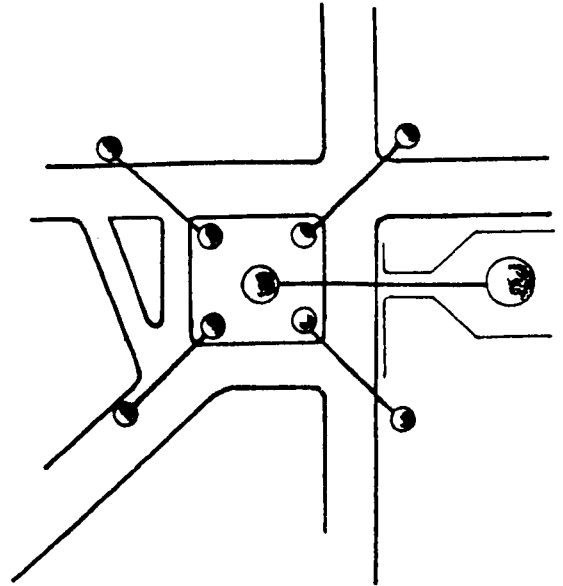
obstacle, in conflict with the desire to establish a real public piazza. As we can see from the attached drawings, the proposal for the new square suggested the continuity of using the new square as a traffic node, and as it was working in the old concept which can be seen today. From our previous reading we know that traffic is the most destructive element within the piazza. Although it represents a source of noise and pollution, it also stands as a source of adventure to the visitor. As was indicated earlier, the researcher had to allow traffic to run around the square in order to comply with the competition's preconditions. Consequently the proposal for the square as a real public piazza becomes threatened. Such doubts must be increased when we consider the general attitudes of the first three winners' schemes, which in general ignored the traffic existence and closed the square in order to establish a real quiet piazza.

As a major result of this competition one must think deeply about the identity of those traffic nodes which we categorise as squares. Are they real squares? The answer to that question will be left to the analysis of the next cast study, where it will be treated as an assumption, testing the reality of such places.

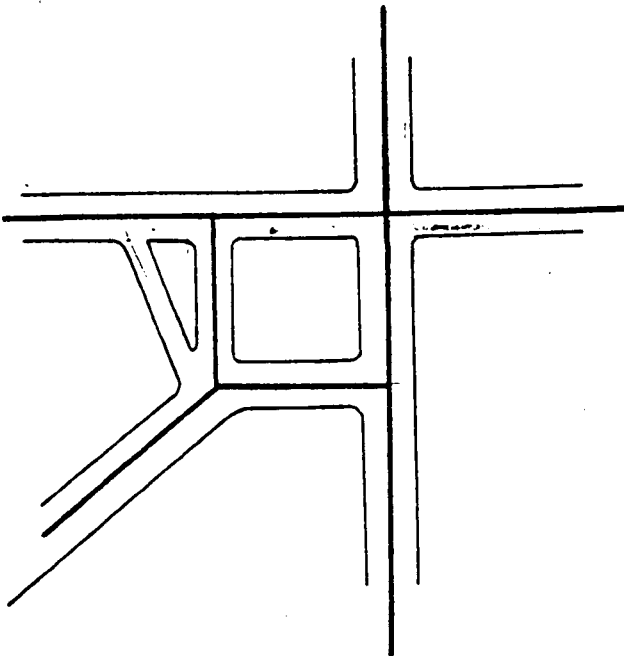
Apart from the destructive effect which traffic might have on our concept, such traffic has another disastrous effect spatially and formatively where it destroys the value of the continuity and the unity of the three dimensions of that concept.



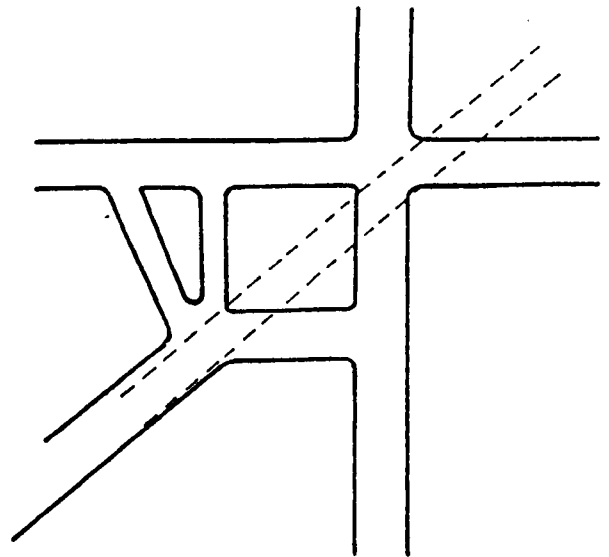
The illustration shown in dotted lines is the proposed underground crossing system.



The physical relationship between the square and the overall location.



The traffic flow around the square isolates it from its setting.



The illustration shows in dotted lines the Victoria Line underground.

Fig. (9.7). Analytical studies of the Researcher's entry)

(Source: Prepared by the Researcher.)



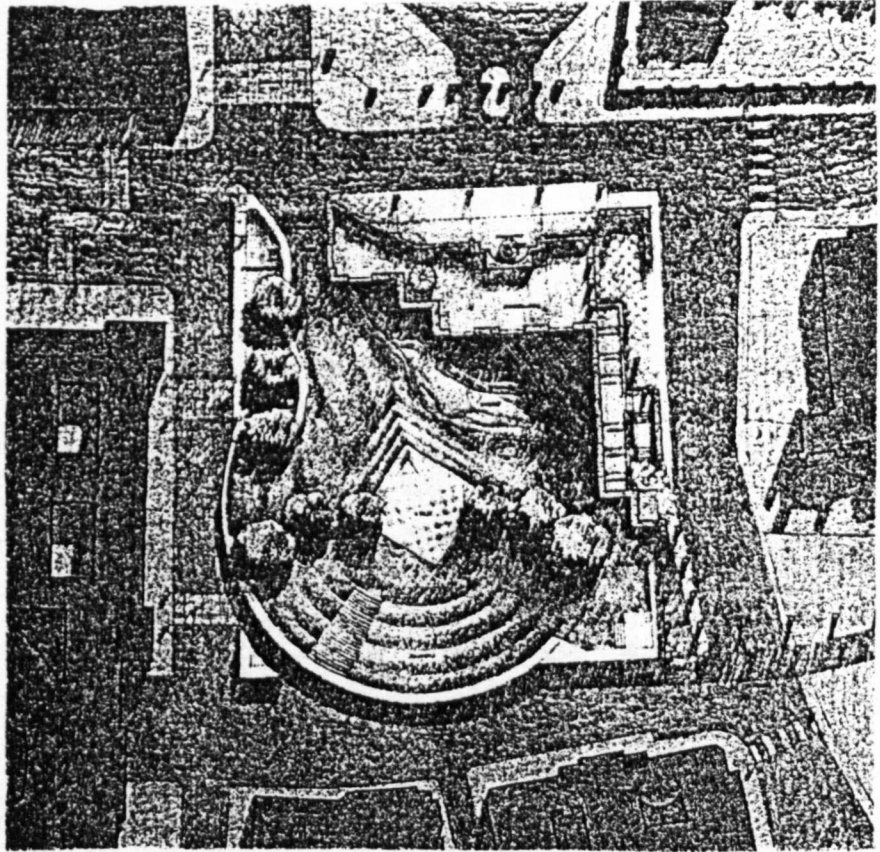


Fig. (9.8). First Award Scheme in the competition by Christine Killory. In this scheme the designer has proposed the construction of a high cliff surrounding a great theater in order to establish a sense of closure.

(Source: Building Design, October, 1984, No. 710, p.34.)

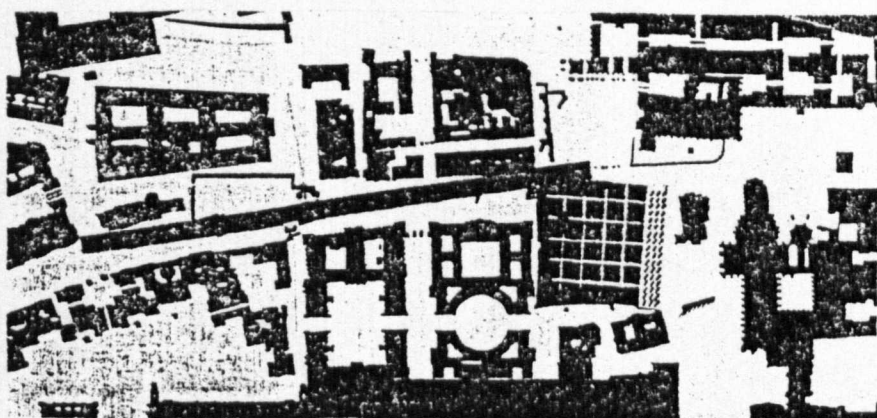
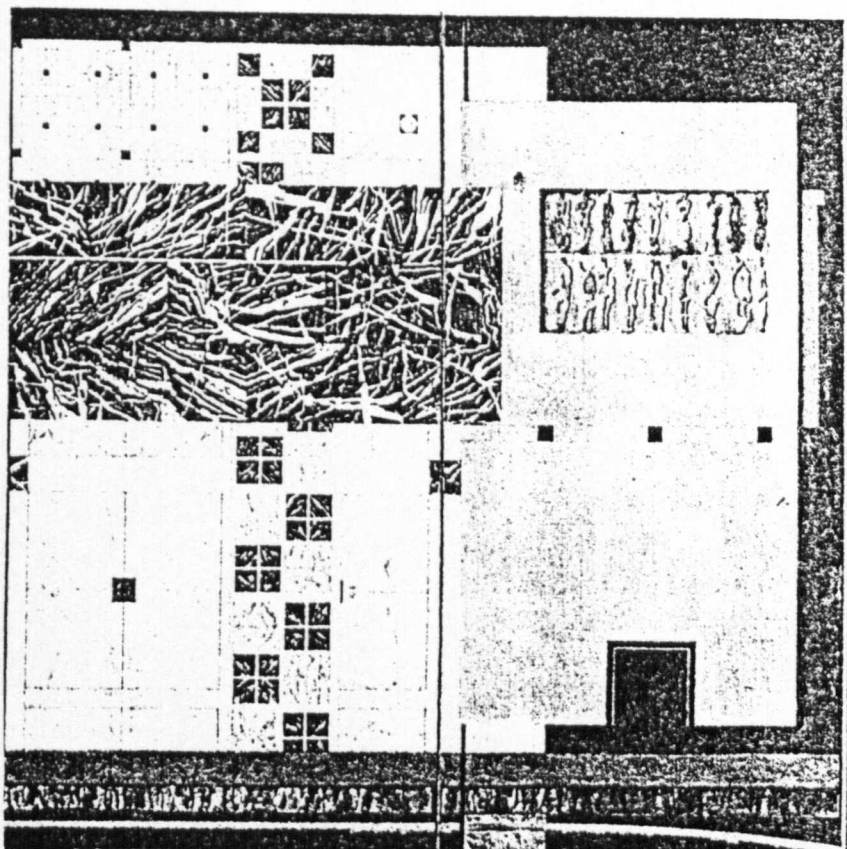


Fig. (9.9). Shared first award scheme, designed by Kevin R. Howetham. In this scheme the designer closed the traffic by the construction of a marble walled platform of a grid iron designed pattern.

(Source: Building Design, October, 1984, No. 710, p.35.)

#### iv. The Symbolism of the Place in London

As was mentioned earlier, there is a mutual relationship between the Houses of Parliament and its square in the outside. The square is not only carrying the name of that building, it is also dominated by its spirit. Hence one can identify it and also perceive it as a formal place. A place where the annual ceremony of the opening of parliament and the coronation can take place. Similar to the Piazza of San Marco in Venice in having a spatial character within its city, the Parliament Square can be conceptualised as a unique place of spacial atmosphere within the City of London, through which the area of Westminster can be identified and recognised easily as an individual part of the city. Hence one can understand that there is also a mutual and symbolic relationship between the square and the area in which it is located.

#### 9.4. PARLIAMENT SQUARE AND THE LIMITS OF PERCEPTION

As we proceeded in analysing both the Seventh Heaven 1 and the Seventh Heaven 2 against the basic principles of perception which we summarised in the end of Part 1, we also tested the Parliament Square entry against these principles.

When we start analysing that scheme, the most striking thing is the consistency and the coherence of its landscape pattern. Such a consistency which is created by the repetition of the varied sizes of circular shapes and the rhythmic distribution of the statues in the landscape has

contributed to the creation of a sense of unity which, according to the first limit of perception, is desirable and accepted by our perceptual faculty which tends to perceive wholes and not particles and according to the fifth limit is easier to assimilate where it leads to the construction of a consistent form.

Another noticeable thing about the pattern of that landscape is its simplicity, which, according to the second limit of perception, stands as a great factor in facilitating the process of perceiving its form.

As we examine the scheme in terms of its formal directions, we find that combining both the horizontal direction and the vertical direction, have led to the construction of a lively and an exciting spatial pattern which, according to the fourth limit, is perceptually needed as a reason for our mental health and growth. However, when we examine the relationship between these directions in terms of the principle of 'dominance', we find that the scheme's formal constitution is dominated by the horizontal direction, which, in contrast to the vertical one establishes a whole unified composition, that is, according to the ninth limit, providing a sense of emotional satisfaction.

It was stated earlier that the rhythmic formulation of the landscape pattern with its distributed statues, has contributed to the establishment of a unified form. Now we can add that such rhythmic modulation has contributed as well in establishing a consistent whole which according

to the tenth limit stands as a reason for building a simple form.



PART 5

NOTES & REFERENCES

CHAPTER 9

- 1 Quotation is taken from Parliament Square Competition's documents sponsored by Elsom Pack & Roberts Partnership, 21 Douglas St., London, SW1P 4PE. July 1984.
- 2 'Ideas for Westminster', Building Design, Issue No. 0007-3423, October 12, 1984, London, p.32-7.

PART 6

APPROACH & METHODOLOGY

## INTRODUCTION

This part comprises three differing yet related headings which are: (10.1) Perception and Methodology; (10.2), Hypothesis (to be tested) and finally (10.3) the Design Questionnaire.

Under the first heading the Researcher is attempting to interpret how he used the principles of perception, which have been discussed earlier in the research, in building up his methodology. He also attempts to explain the significance of using such principles as a new dimension in the process of constructing his hypothesis. Under the second, he is trying to set up his hypothesis, which it is intended will be tested later by carrying out an analysis of Liberation Square in Cairo (Maydan Al Tahrir), as a final case study in this research. The third and final heading describes the process of interpreting formulation of the design questionnaire for the practical field study. It discusses all the considerations which the researcher had to bear in mind during the process of designing that element, e.g. how the questions were formulated, and their relationship with the ultimate objective of this research. The technique used in the choice of sample and the considerations taken during this process which, for example, were: level of education, income, age and place of residence, etc. Finally, the technique used to analyse the respondents' answers is discussed, with special emphasis being placed on attaining a fair and homogeneous representation of the opinions of the majority of the city's residents.

10.1 PERCEPTION & METHODOLOGY

In this part I will be trying to interpret the methodology used in the research.

Basically, this research with its emphasis upon the theme of urbanism, aims to evaluate the psychological and the sociological roles of squares within Egyptian cities. In order to achieve such a goal, two interlinked approaches were used. The first of these was theoretical; the second one was practical. In more detail, the method used depended on the use of one of Cairo's largest squares as a case study. 'Maydan Al Tahrir' as the square is known in Egypt or 'Liberation Square' as the name can be translated into English has been employed in the research as a part of this method. The reader might recognise a bias towards the use of the English translated name. The reason for this is that the majority of the world population use English compared to those who use Arabic. Consequently, using the English term through the argument was thought to be more appropriate especially when the discussion will be about the symbolic role of the square inside the city.

To revert to the main line of the methodology, it can be said that the theoretical approach which was one of two approaches used here in the research was essential.

As for the second approach to the research, that based on the field study, this comprises several elements explored during a short visit to Cairo. In the middle of December 1984 and for a period of three months the researcher made a visit to Cairo to amass the required data about the square which is the subject of the research. During this visit a questionnaire was launched in the areas which surround that square. Many photographs were taken and many sketches were drawn of the square buildings and the surrounding streets.

The researcher was faced with the choice of carrying it out by using the known traditional methodology of setting a set of assumptions to be tested throughout the field study, but his deep reading of the area of perception was considered as an effective addition to that conventional method, where such a reading has provided him with the opportunity to discuss the problem in depth without giving him the chance of accepting the results of the field study as it comes, whether they are right or wrong. Also, it allowed him to understand the significance and the hidden dimensions of these results in a satisfactory way. We all know that Lynch's experience in his attempt to draw the image of the city via using the questionnaire was generally successful in achieving its goal. However, it was argued that such a technique alone is not sufficient to provide us with the right answer and the exact interpretation of those questions by which we seek their answers. Arnheim (1977, p.4), in an argument about the validity of the questionnaire states that whatever the level of the frankness and exactness which



we might obtain from the responses to questionnaires and interviews we will not be able to exhaust the factors that determine a person's state of mind. The reason is that many of these factors are unknown to the consciousness of the subject's mind. Hence the researcher had to face a situation which forced him to use his knowledge of the field of perception through analysing the case study in order to avoid such errors, and in order to provide him also with the chance to test that method of treatment.

## 10.2 HYPOTHESIS TO BE TESTED

Basically the hypothesis of this research derives primarily from the literature review and from practical experience in the Parliament Square competition.

The next set of hypotheses try to reveal the potentiality of the square at two varied levels, i.e. that some of the hypotheses will be arguing certain architectural problems of great importance to the square identity as a complete individual constitution and others will be arguing different problems which are of a great concern to the square on the urban level. The reader might realise also that these hypotheses initially tend to be general but later tend to be specific to the circumstances of the case study. Initially this can be attributed to the researcher's desire of contriving a set of measurements and criteria which can be applied everywhere and can be applied to the Liberation Square itself when used as a case study in research. The

set of hypotheses which we are going to test are:

1. The character of the square can be affected drastically with the established contradictory moods of architecture which repel one another in terms of their varying forms, size, direction, style, colour and texture etc. Accordingly it can be assumed that the Liberation Square has no definite character, being composed of varied buildings which contradict each other, and does not form a spatial unity.

2. Using the square in many different activities at one time such as its use as an entertainment public place or as a place for leisure or as a symbolic place or as a market place or as a commercial center or as traffic node or as parking impair its function and destroy its sociological, its psychological and its biological roles inside the city. Accordingly and conversely we can assume that the Liberation Square does not perform its function properly inside the city when it is shared in its use by all of these activities at the same time.

3. Being varied in their characters and their aesthetic moods, squares can be considered as the most powerful spatial elements in the city, by which its parts can be identified and recognised easily. Accordingly, we can assume that the Liberation Square does not identify its environment clearly. The reason for such a conclusion can be attributed to the variation of those meanings which are associated with its environment. While we are looking here at that environment as being a symbolic place, others might

look at it as being a transportation commuting center, whilst others might look at it as a recreation center.

4. The formal organisation and the spatial relationship between squares within the city, stand as an important factor in determining the mood of our perception to its structure, i.e. the more complicated this relation is, the more difficult the structure of the city to be conceptualised and vice versa. According to this, we can build the hypothesis that the structure of the city of Cairo is cluttered and very difficult to build an instant image of. The reason is that the pattern of the relationship between the Liberation Square and its equivalents in the organism of this city is not clear and difficult to read.

5. The form of the square and its shape should evolve and grow up from the basic pattern of the original city in order to be unified organically with it. Otherwise a sense of confusion and duality might be established. Hence we can make the assumption that the Liberation Square with its European design technique stands as a contradictory and damaging element against the old city of Cairo which varies in its planning technique from those European ones.

6. The design of those squares which needed to be built in the countries which lie in the region of North Africa require a special climatic treatment compared with those squares built in European countries.

7. There are great terminological differences between those squares which are used as a public urban space and those spatial centers which are used as symbolic traffic

nodes. Consequently we can assume that the Liberation Square is not a real square, conversely it can be categorised under the second class of spaces.

After this review of our assumptions which will be tested through field study, we can now move to the next stage of our methodology which relates to the design of the questionnaire and considerations which have been taken into its design.

### 10.3 THE QUESTIONNAIRE DESIGN

#### 10.3.A BUILDING THE QUESTIONS

There were three factors and considerations governing the design of the questionnaire. These limits were as follows: the objectives and the assumptions, choosing the sample and finally the technique of the analysis.

It was quite natural that design of the questionnaire must be influenced by the objectives and the assumptions of the research. Both of these objectives and assumptions were expected to influence the way the questions were designed in the questionnaire and the context behind every one of them, i.e. some of these questions had to be direct questions, others had to be indirect, other questions had to be open, whilst others had to be closed. In certain circumstances some important questions had to be repeated in different formulations in order to ensure the correctness of their answers. The researcher was aware that the design

of the questionnaire might involve some technical mistakes which in their turn might result in getting imprecise answers. Therefore he had to make a pre-test of the questionnaire to guarantee having an acceptable standard of responses, sufficiently reliable to act as a basis for the final decisions. In this stage five subjects were asked to answer the first draft of the questionnaire. After checking their answers it was discerned that the overall structure of the questionnaire covered most of the points which needed their answers, except for some points. Other questions were added to it and some were modified which had been too vaguely formulated. Although such a check was carried out, it was proved that the small size of the sample used in the pre-test did not prevent the researcher from making the mistake of formulating questions which might have influenced the respondent's answers: therefore I recommend the next researchers to enlarge the size of the sample in the pre-test. Also, I recommend them to try to use more indirect and open questions, especially in those subjects which deal with subjective problems. Anyway, apart from such a mistake, the general result of the questionnaire was satisfactory and reliable enough to be used.

#### 10.3.b CHOOSING THE SAMPLE

As we were aiming to obtain an homogeneous standard of responses for our questions, therefore it was necessary for us to be very careful in choosing the expected sample to



answer the questionnaire. In order to achieve such a goal many considerations have been taken into account during choosing that sample. The first of these considerations was the standard of education; the second was the age; the third was the place of residence and finally the fourth consideration was the standard of living. According to our plan there was a need of 200 persons to answer the questionnaire. The choice of these people according to the last mentioned consideration was as follows: 40 percent of them were highly educated, and another 40 percent had an average standard of education and finally 20 percent of them were illiterate. All of those categories which make the whole size of the sample were chosen from varied ages, different destinations compared with the square location, and also from different classes, where education was taken as the prime consideration in this survey.

As we know the last considerations play an important role in defining the direction of the subjects' answers. Age for example stands as a representation for experience and of course the experience of the subject stands as a great influential factor in his response. Education also does the same while an educated man would be expected to offer an intended constructive answer, other illiterates might offer a subjective commonplace one, and so on.

### 10.3.c. THE TECHNIQUE OF THE ANALYSIS

During this process there was one prime consideration which the researcher had to bear in mind concerning the variation of the respondents' answers. As was mentioned earlier, the chosen sample had to consist of people of varied ages, educational levels, etc. Hence there was an established expectation that their answers would vary. Therefore the researcher had to concentrate on understanding the main direction of those answers which it was thought would deal with the problem in depth. In other words, this meant that the researcher had to avoid considering the extreme answers which might be thought to deal with the problem superficially, and to give most attention to those answers which were thought to be constructive and representing a major sector of the respondents. This did not mean that all of the individual opinions were ignored, for they did represent certain attitudes held by individuals. Indeed some of them which were thought to be significant, were considered. One of the important considerations which has been taken into account throughout the analysis, was the trial to understand the psychological factors which were behind the answer of each subject. As for the method of listing the respondents' answers, the researcher had to use the tables and the diagrams initially. Later both of the diagrams and tables were summarised in written statements to ease understanding their conclusion.

PART 7

LIBERATION SQUARE

ANALYSIS

CASE STUDY NO. 4

## INTRODUCTION

As mentioned earlier in the introduction to the last part, the analysis of Liberation Square as a case study in this part will attempt to test its performance and its validity as a public memorial piazza. The approach used in this process of analysis has two different aspects. One will argue certain architectural problems of great importance to the square as an entity of unified spatial constitution; the other will discuss different problems which are of great concern to the square on the urban level. Hence it can be understood that the list of seven hypotheses which has been assumed previously will be the basic theme of this argument as they deal directly with all of these aspects. But with regard to the technique of analysis the case study, it can be said that such a technique will include making a comparison between the results obtained from the questionnaire analysis, which are considered to be the main element of the field study, and the results obtained from the theoretical analysis which follows. Through the establishment of such a comparison the researcher would be able to set up the final conclusion and consequently those new criteria and measurements, which would be required as a basis for building any new square at any place in the world and particularly those which are needed to be built in Egypt.

11.1 THE HISTORICAL EVOLUTION OF LIBERATION SQUARE

It was mentioned earlier in the historical description of the evolution of Egyptian squares in Part 4, that the square of Qasr Al-Nil (Maydan Al-Tahrir today as the square is named in Egypt or Liberation Square as the name can be translated into English) was designed and built as a part of the Al-Ismailiyah quarter in 1867. In common with the majority of the other eleven squares which were built at that time, Qasr Al Nil Square was intended to be designed according to the French technique of designing squares. However, unfortunately its design did not hold the same potentiality as those French equivalents, as can be seen later in the rest of the analysis. Anyway, according to this intention the majority of the buildings which were built around its boundaries were designed and executed according to European styles, notably the Classical style which can be seen clearly in the design of the Ministry of Foreign Affairs building and in the design of the Egyptian Museum. As we know, that style which had spread in Europe particularly in France and Italy, was introduced to Egypt later in the nineteenth century.<sup>1</sup> Among the important buildings which were built around that square, was the Palace of Qasr Al-Nil or the Palace of Al-Ismailiyah dedicated to Ismail Pasha who built it. This Palace unfortunately was destroyed during the British invasion





Fig. (11.1). Overall view of Liberation Square in the Sixties.

(Source: Cairo, 1969-1969 Ministère de la Culture.)

of Egypt in 1882<sup>2</sup>, and its location was refilled in the middle of the twentieth century by the gigantic edifice of the Government Central Building which can be seen dominating the square today. Around the square from the west there was another palace which was built in the first half of the nineteenth century for Nazlie Hanim. This palace which Mohamed Ali (1905-1830) had built as a residence for his daughter Nazlie, was destroyed by Said Pasha, and was replaced by the Qasr Al-Nil barracks, which were used as a head-quarters for the British troops during the occupation of Egypt (1882 - 1956).<sup>3</sup> It is worthy of note that this barracks was destroyed after the 23rd July revolution which was led by Nasir, and its site has been replaced by the Arab League Building, the Hilton Al-Nil Hotel and by the Government Central Committee Building which faces the river.

According to the above, one can understand that the square evolved over two consecutive centuries; namely the nineteenth and the twentieth centuries. Therefore, there should be no surprise that the square displays a great differentiation of styles between the old classical architecture of the nineteenth century and the modern architecture of the twentieth century.

It has been mentioned in the part of the literature review, that the city complex can be identified and described as a continuous story, in which a sense of unity and integration between the old and the new buildings must be established. Also, as mentioned, squares particularly as living organisms should reflect the variations in the

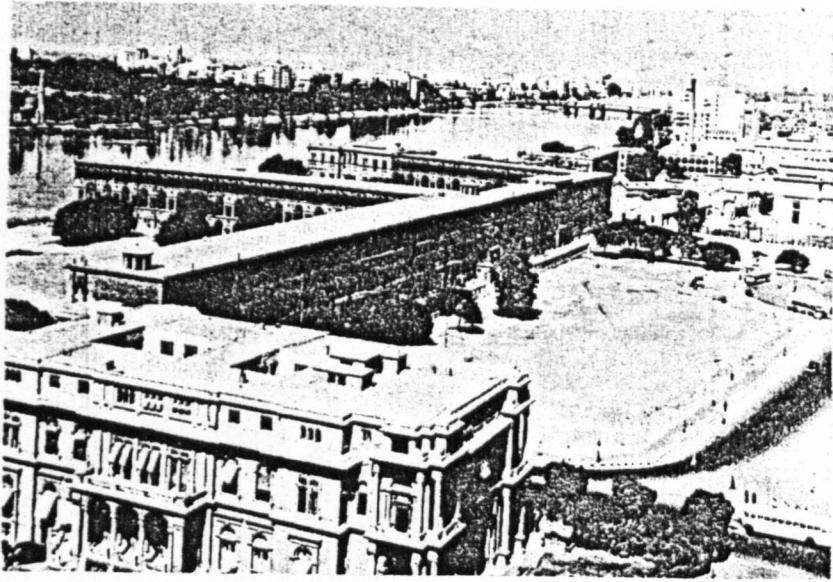


Fig. (11.2). Qasr Al-Nil Barracks  
in the 1940's (British Troops headquarters).

(Source: Abu-Lughod, 1971,p.102)

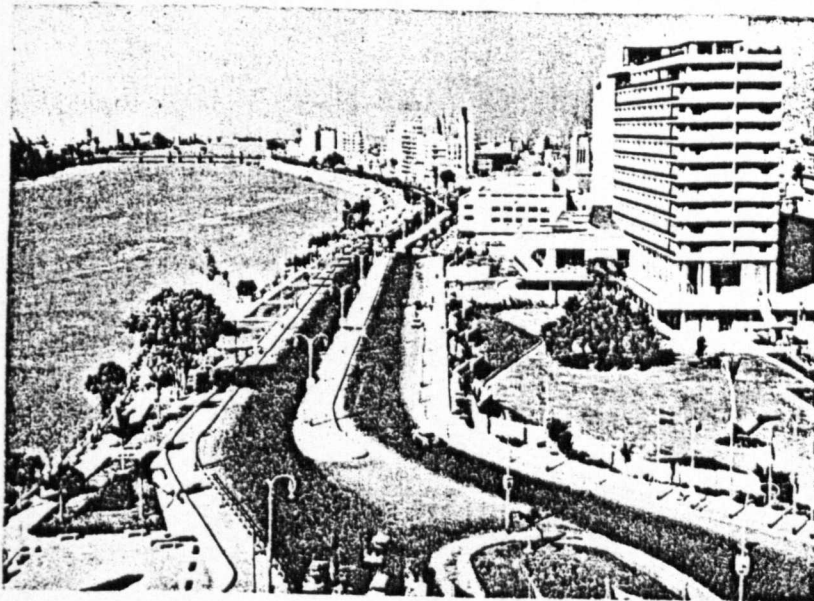


Fig. (11.3) shows the Hotel of Hilton Al-Nil  
which replaced the above shown establishment

(Source: Abu-Lughod, 1971, p.102).

socio-economical conditions and the development of technology which changes from time to time during the evolution of the city. Therefore one would be able to say that the whole constitution of Liberation Square does not produce any sense of unity or integration, as a result of the great variations of style which conflict one another in most senses, as in size, height, colour, etc. While such variations have been accepted theoretically on the one hand as a representation of the historical changes which comprise the evolution of the square as a living entity, it was argued on the other hand that such variation should not produce any sense of disruption or break. Conversely they must show and present a unified sense of rhyme between the varied styles and elements. Consequently we can reaffirm that Liberation Square has no sense of historical stylistic unity, where its elements and buildings do not show any sense of rhyme, in that these buildings contradict each other greatly in most senses. Notably the relation between the Egyptian Museum and Al-Nil Hilton Hotel building and between the Ministry of Foreign Affairs building and the Government Central building. Having reached that conclusion about the stylistic formation of Liberation Square and its destructive effect upon the character of that square, one can say that such a conclusion complies with the first hypothesis of the research in its meaning and also proves it, for it has been assumed that the character of the square can be affected drastically by the established contradictory moods of architecture which conflict with one another in terms of



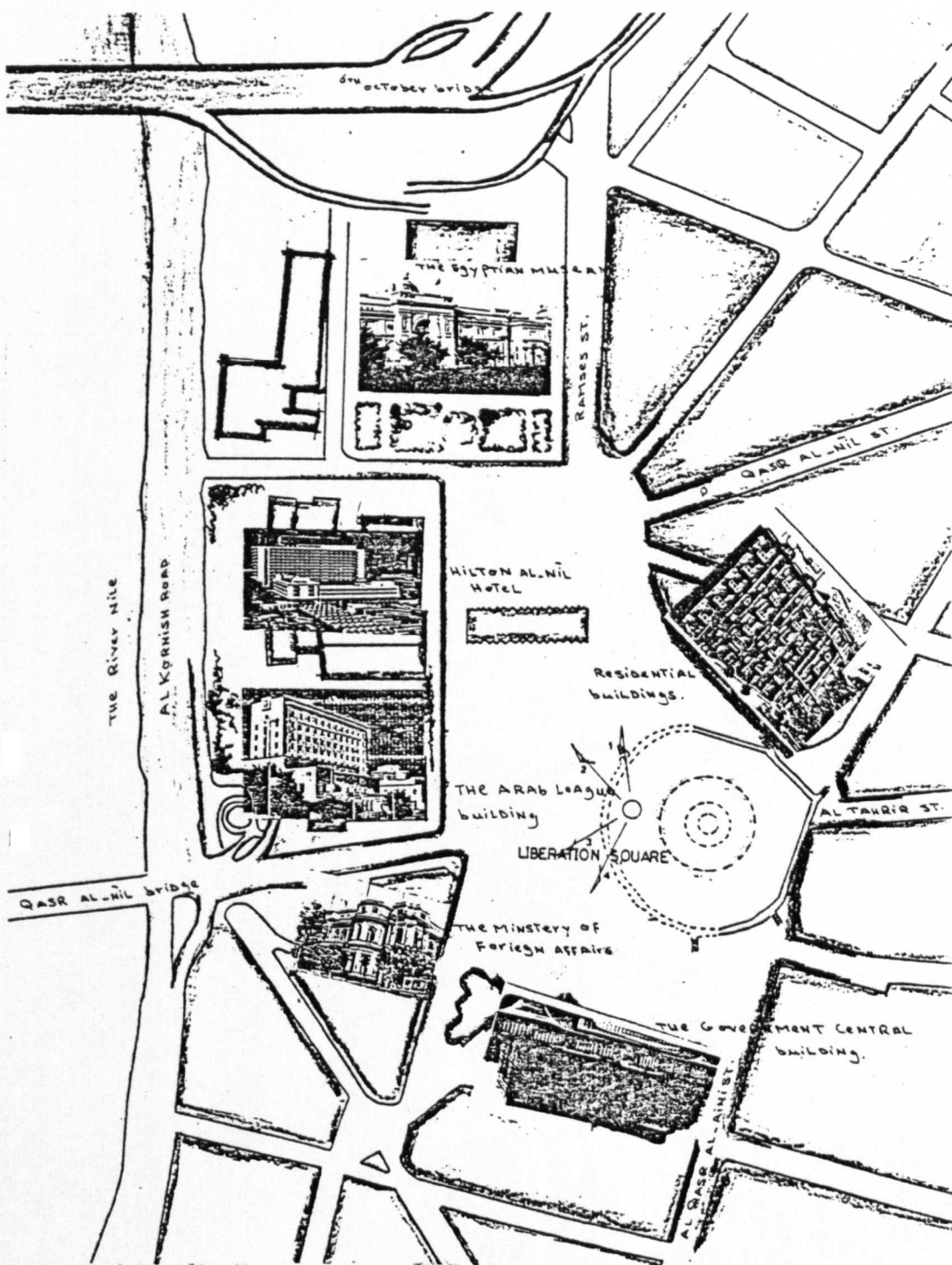


Fig. (11.4). Liberation Square & The Important buildings around its edges.

(Source: Prepared by the Researcher.)



their varying forms, size, direction, style, colour and texture, etc.

When we confront the shape of the square and its form in relation to the basic form of the city of Cairo and its original planning technique, it can be said that such a form which has been influenced by the French technique of designing the squares, is so odd and alien to the original constitution of this city, where its basic and old structure was characterised by the use of the broken and the narrow streets, and by the lack of the wide spaces which we call squares. Hence it can be understood that Liberation Square and also the whole part of the modern city of Cairo which has been built by Ismail (1867-1869) is alien and contradicts the mother city in its design technique. As we know, the basic pattern and the original structure of this city before Ismail's addition, was characterised by the use of an inward planning technique through which life meant to be indoors. On the extreme opposite of that we find that the newly added part of modern Cairo by Ismail, has transferred the focus of this life from inside to outside, through the establishment of the very wide avenues and squares. Hence it can be understood that such a transformation disrupted the whole organism of the old city through the addition of these squares which have amalgamated and been imposed upon it. Having reached this conclusion about the evolutionary relationship between Liberation Square and the old city of Cairo, it can be said that such a conclusion complies with and proves the fifth hypothesis of the research which assumes

Fig. (11.5). The Medieval city of Cairo & the new added part by Ismail in 1867.

(Source: U.I.A., 1985, Issue 7, p.19.)

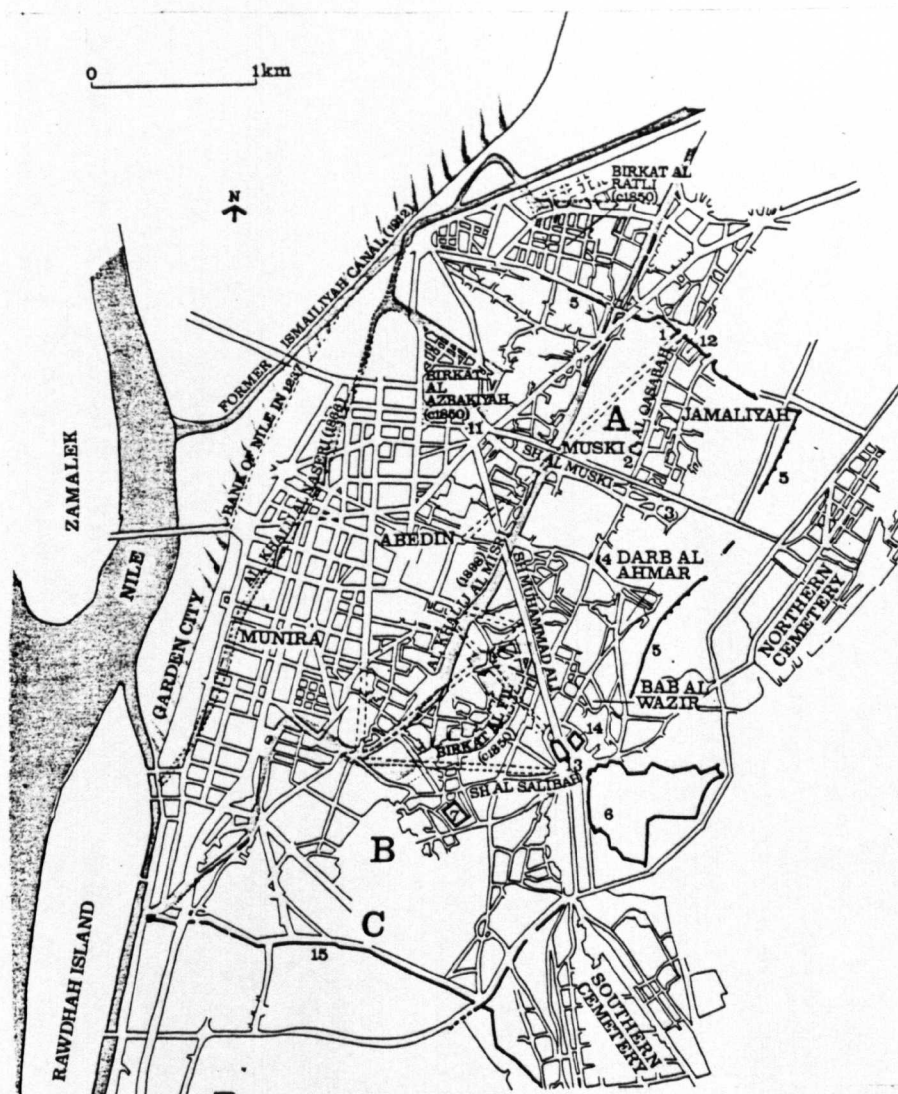
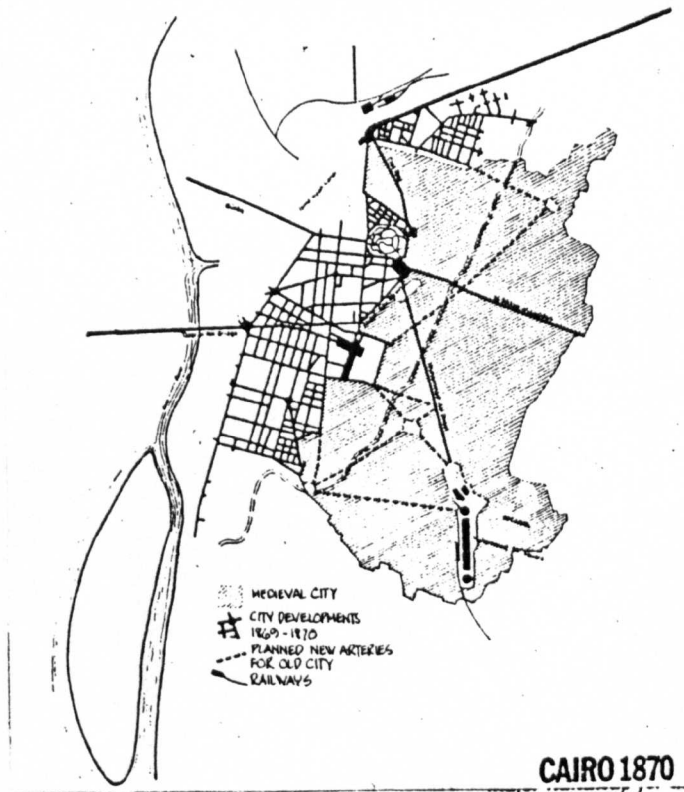


Fig. (11.6). Cairo in the Mid-nineteenth century. In this map one can notice the impact of Haussmann's style awareness on the old city.

(Source: Architectural Review, 1978, Vol. CLXIV, No. 978 p.117)

that the form of the square and its shape should evolve and grow up from the basic pattern of the original city in order to be unified organically with it.

As a final summary of this argument one would be able to say that Liberation Square has been built as a part of Al-Ismailiyah quarter 'Cairo down town now' in 1867. And its formal constitution underwent a great irrational stylistic modern change during the first half of this century which resulted in destroying its unity. Also it can be said that the irrelevant use of the French technique in designing that square and its equivalents in the rest of the city, has resulted in the establishment of a historical disruption expression between the old and the new.

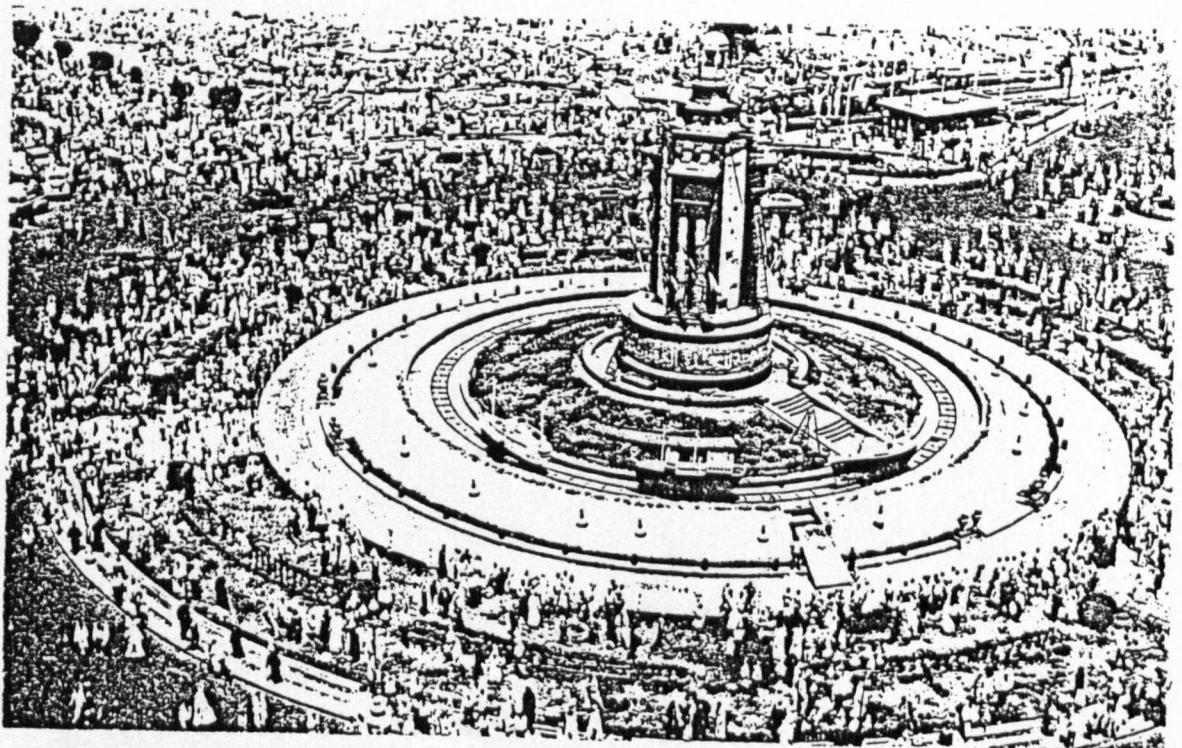


Fig. (11.7) Liberation Square in 1956. People celebrating the nationalisation of the Suiz Canal.

(Source: Photograph taken by amateur.)

Fig. (11.8). The Egyptian Museum on the North side of the square.



Fig. (11.9). The group of residential buildings on the east side of the Square.



Fig. (11.10)  
The Egyptian Ministry of Foreign Affairs.



The Classical building style around Liberation Square.

(Source: Photographs taken by the Researcher.)



Fig. (11.11). Hilton Al-Nil Hotel building and the bus terminal in the front of it.



Fig. (11.2). The Arab League building.



Fig. (11.13). The Government Central Building and Omer Macram Mosque.



The Modern buildings' style around Liberation Square.

(Source: Photographs taken by the Researcher.)



## 11.2 LIBERATION SQUARE AND HOW IT LOOKS TODAY

Liberation Square as can be seen from the attached map, is one of three major squares defining the area of Cairo's main civic centre. Apart from being a component of that centre, Liberation Square acquires a special importance within the city of Cairo for many reasons. The first of these reasons is its proximity to the River Nile, which is considered to be a major recreational element in the city. The second reason is its relation to the main axes of movement in the organism of the city, where it is connected with Ramses Street from the north; Qasr Al Nil Street and Al Tahrir Street from the east; El Qasr Al Aini Street from the south, and finally is connected with Al Tahrir bridge from the west. The third reason for this importance is the functional and the architectural importance which its defining buildings have, where it is defined by the Egyptian Museum to the North, and the Cleopatra Hotel to the east, the Government Central building and Omer Macram to the south and the Ministry of Foreign Affairs building; the Arab League building and finally the Hilton Al Nil building to the west. As for the fourth reason of such importance, it can be attributed to the use of that square as a transportation commuting center, where it is occupied by two major bus terminals; one lies in front of the Hilton Hotel and the Egyptian Museum and the second lies in front of the Government Central building. But with regard to the fifth and final reason why Liberation Square gains a special

importance within the city of Cairo, it can be attributed to the current construction of El Tahrir underground station, which will lie in the middle of the square after completion. The construction of this station will be finished according to the latest statement in the middle of 1987, when the first regional underground metro line in Cairo will start to operate. It is an important fact that the construction of this line and also the above mentioned station have resulted in the complete demolition of the previous landscape of the Liberation Square. Fig. (11.51).gives an idea of the demolished landscape, which is expected to be reconstructed again, as the officials say, nearly the same as the previous one, after finishing the construction of the underground station.

Fig. (11.4). Liberation Square as it looks today during the construction of the underground Central Station.

(Source: Prepared by the Researcher.)

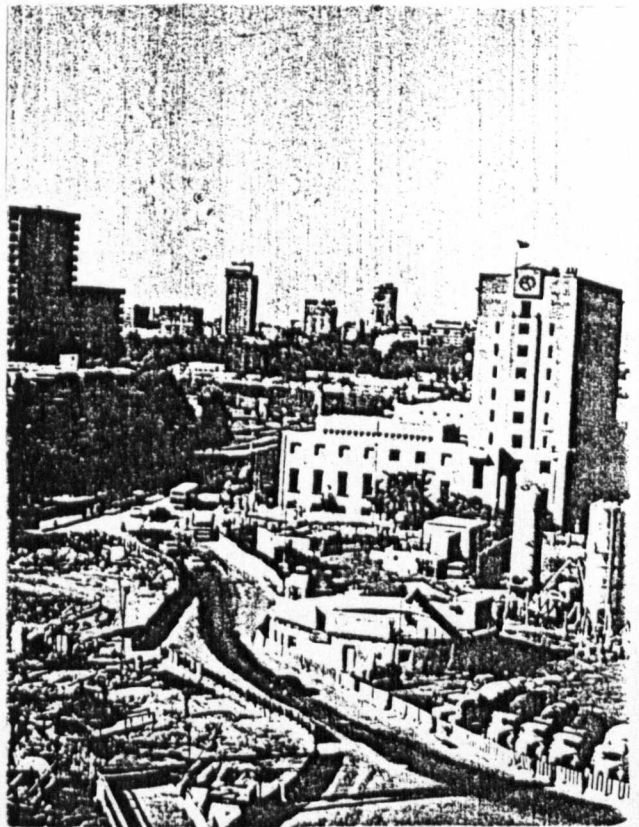




Fig.(11.15) an established sense of chaos today during the construction of the underground Central Station.

(Source: Prepared by the Researcher.)

### 11.3 THE SQUARE'S FUNCTION AND HOW PEOPLE USE IT

It has been discovered from the results of the field study, that the function of Liberation Square and its performance as a public urban space, is affected greatly by the potentiality of a certain number of considerations which are as follows: the traffic, the pedestrians, the landscape of the square, the relationship between the square and the river and finally the use of the square as a symbolic place within the city of Cairo.

As indicated in the field study findings in the Appendix No. 1, it has been discovered that Liberation Square functions primarily as a great traffic node inside the city of Cairo, and consequently it cannot be considered as a public urban space to which people can come for enjoyment and entertainment. Also it has been discovered that this square does not even fulfill its role as a symbolic place inside the city, where it was concluded that the square has nothing to celebrate or to commemorate the significance of Liberation. Accordingly it was suggested as well that the design of that square and its relation to its environment must be reviewed and must be redesigned if necessary. As we mentioned earlier in the introduction, the final conclusion concerning the question of redesigning the square will be a representation of the comparison between both the field study findings and the theoretical findings. Hence we find ourselves obliged to hold such a decision or such a conclusion, until the end of the theoretical analysis in

this part where we would be able to set up the previously mentioned comparison.

### 11.3.a THE TRAFFIC AND THE SQUARE

It has been discovered from the results of the field study that the function of Liberation Square is mainly dominated by the traffic which uses it as a turning point. In this analysis I will try theoretically to reveal and measure the potentiality of that element and its influence on the function of the square.

As analysis starts by looking at the location of the square in relation to the whole organism of the city of Cairo, then we should realise from the first glance, that the location of the square which lies at the southern edge of Cairo downtown, must be affected by the heavy traffic which runs through this area. If we look at the attached map

Fig. (11.16). which shows the relationship between the area of downtown Cairo and the main traffic routes inside the city, then we can appreciate carefully the importance of Liberation Square as a major traffic node lying within this vital area of the city. In a statement about the traffic volume inside Cairo, Reddah Abd-Allah the Chief Officer of traffic administration of the city says, that the number of cars which run in the streets of this city is about 600,000.<sup>4</sup> There is no doubt that such a large number must influence the importance of the square as a major node inside the city.



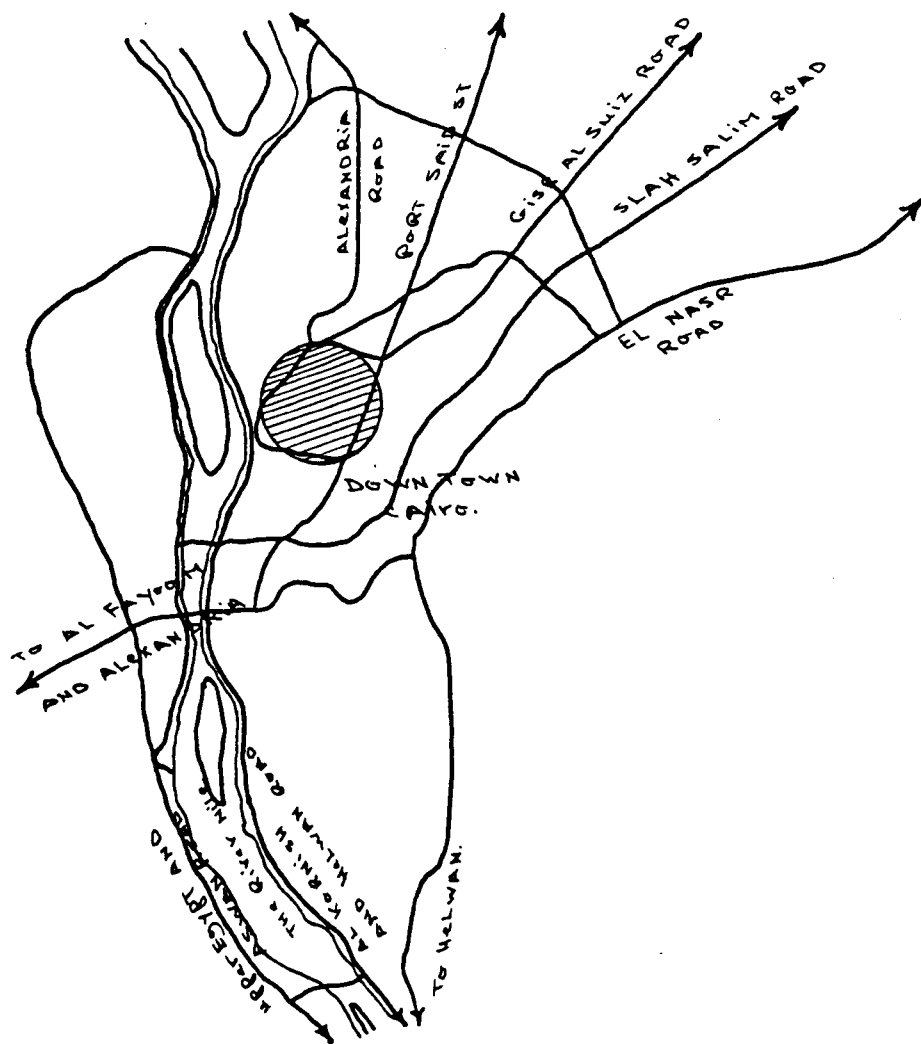


Fig. (11.16). Downtown Cairo and the main roads in the city.

(Source: Published article by Askar, No. 3, 1981, Vol. XX).



Fig.(11.17). Liberation Square before the demolition of its landscape in the end of 1982. In this photograph one can see how strongly the traffic manipulates the square.

(Source: Postcard, No. 5-59 published by Iziess House for Tourism Printing).

Another influential element which adds to the importance of using Liberation Square as a major traffic node inside the city of Cairo, is the existence of the two bus terminals and the existence of the taxi terminal as well which lie in front of Omer Macram mosque.

An important fact about the existence of these terminals inside the square is that they are considered to be a very destructive element conflicting with its function as a public urban space. While on one hand they occupy a large area of the square, on the other hand they are considered to be a great source of undesirable crowds, noise and pollution. The Egyptian planner Askar raised the importance of removing all of the bus terminals from all of Cairo's squares. Also he pointed out that the particular existence of these terminals inside Liberation Square can be counted as a destructive element for its function as a major traffic node in the city of Cairo, and as a destructive element for its appearance and its aesthetic value as one of the largest squares in this city.<sup>5</sup>

While we close the discussion about the impact of the bus terminals inside the square, and their influence on its function as a public urban space, we find on the other hand that the bridge of Qasr Al-Nil plays a great importance in confirming the function of that square as a major traffic node within the city of Cairo. This bridge which joins the square from the west, was considered to be the main link between the east of Cairo and the west, before the recent construction of the bridge of 6th October in 1980.<sup>6</sup> Even

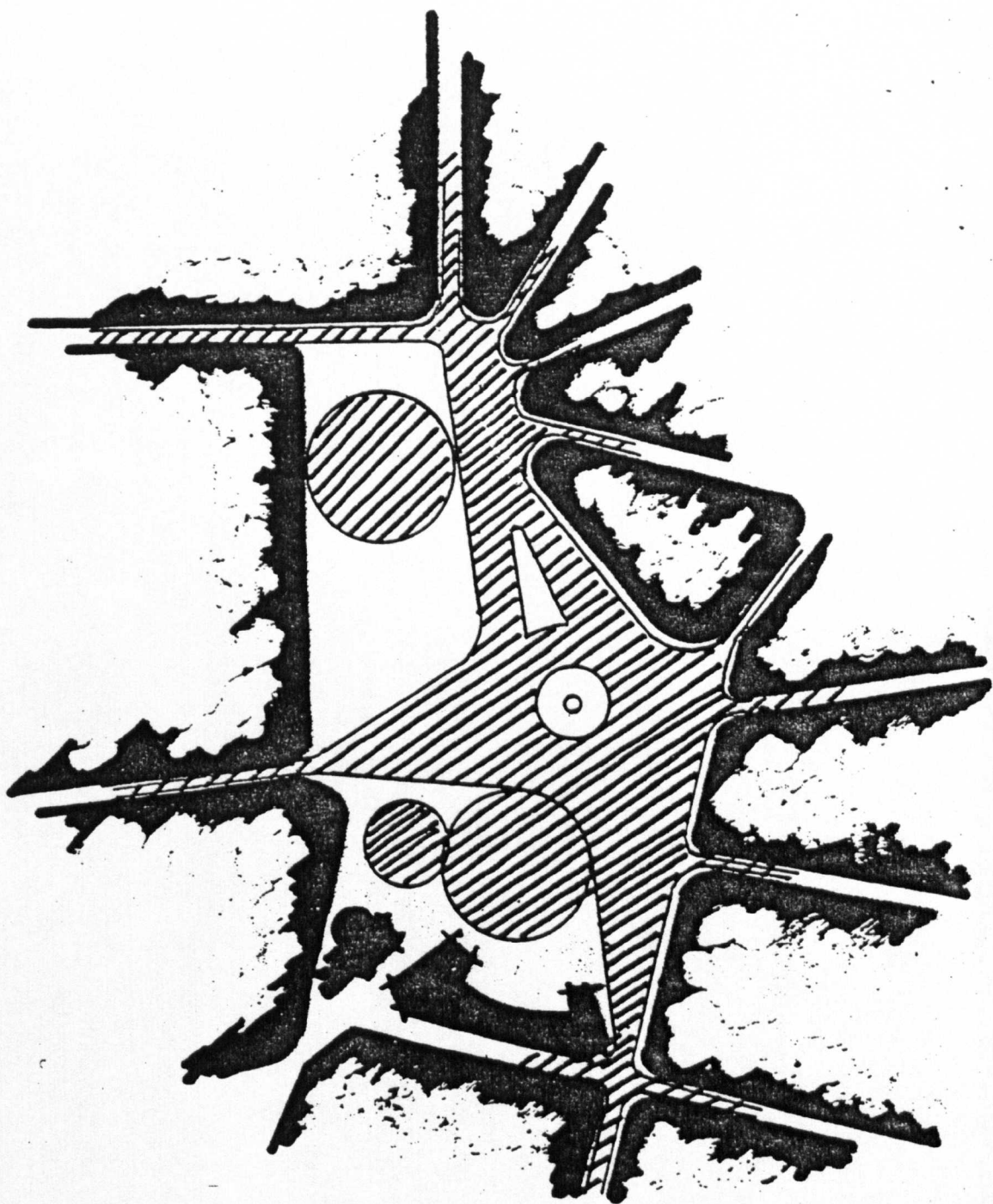


Fig. (11.18). The traffic's and the bus terminal's occupied area inside the square.

(Source: Prepared by the Researcher.)

after the recent construction of the later bridge, the bridge of Qasr Al-Nil still has a great importance as a link between the east and the west of the city. An important fact about the performance of that bridge is that its assigned load of traffic after the construction of both of Rod El-Faraq and Abu El-Ela, will be reduced relieving the existing traffic jam within the area of downtown Cairo.

As we end the argument about the importance of the bridge of Qasr Al-Nil as an influential factor on the importance of using Liberation Square as a major traffic node inside the city of Cairo, we find that the anticipated operation of Cairo's main underground line in the middle of 1987, will stand as a great factor in assuring the function of the square as a transportation commuting center.

The recent construction of El-Tahrir underground central station, which is located in the middle of that square, aims to establish a link between the bus and taxi terminals, as we can see from the attached drawings. Also, it was argued that the start of operations for the previously mentioned underground line, will have the advantage of reducing the number of bus trips which terminate inside the square, where it has been said that the reduction of these trips will be about 81% of its recent capacity.<sup>7</sup> Consequently, it can be said that the size of the bus terminals which lie in the heart of the square will be reduced considerably to an extent which could raise the possibility of removing them from that square altogether.

In conclusion it can be said that Liberation Square works



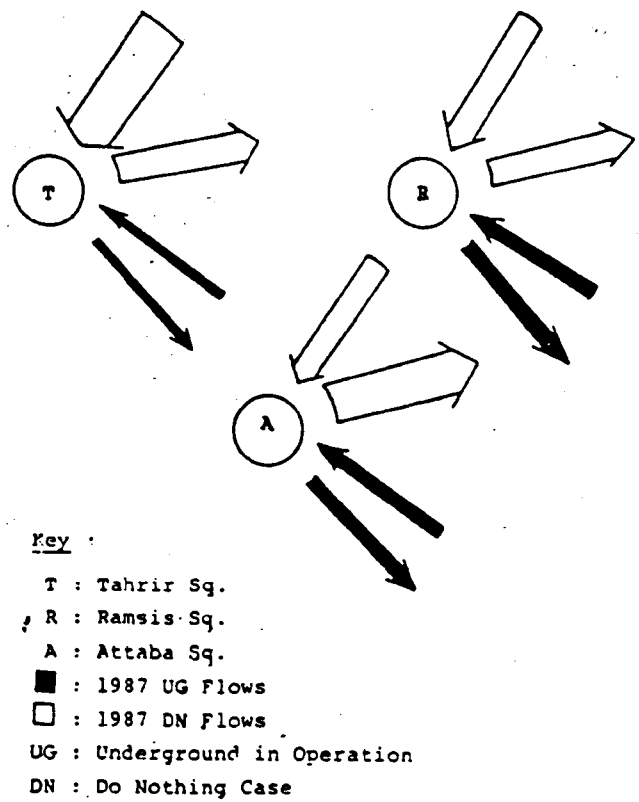
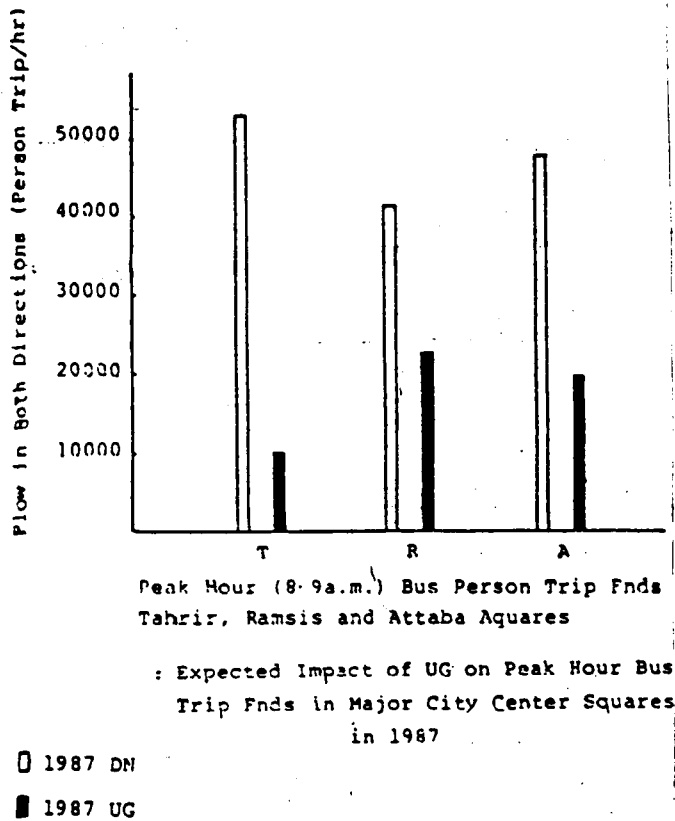


Fig. (11.19). The anticipated impact of the underground on peak hour bus trips, which terminate in Liberation Square. ('T' as shown in the illustration) and the other main squares in the city.

Squares	1987 Total Trip Ends		1987 Change	
	DN	UG	Trips	% Reduction
Tahrir	52000	10000	42000	— 81%
Ramsis	42500	10375	32125	— 57%
Attaba	48750	20500	28250	— 58%
	143250	40875	103375	— 72%

Fig. (11.20). The expected impact of the underground on the bus trips, which end at Liberation Square. (Tahrir Square as shown in the Table).



Fig. (11.21). Cairo's traffic problems over the Egyptian Newspapers

(Source: prepared by the Researcher from collected articles.)

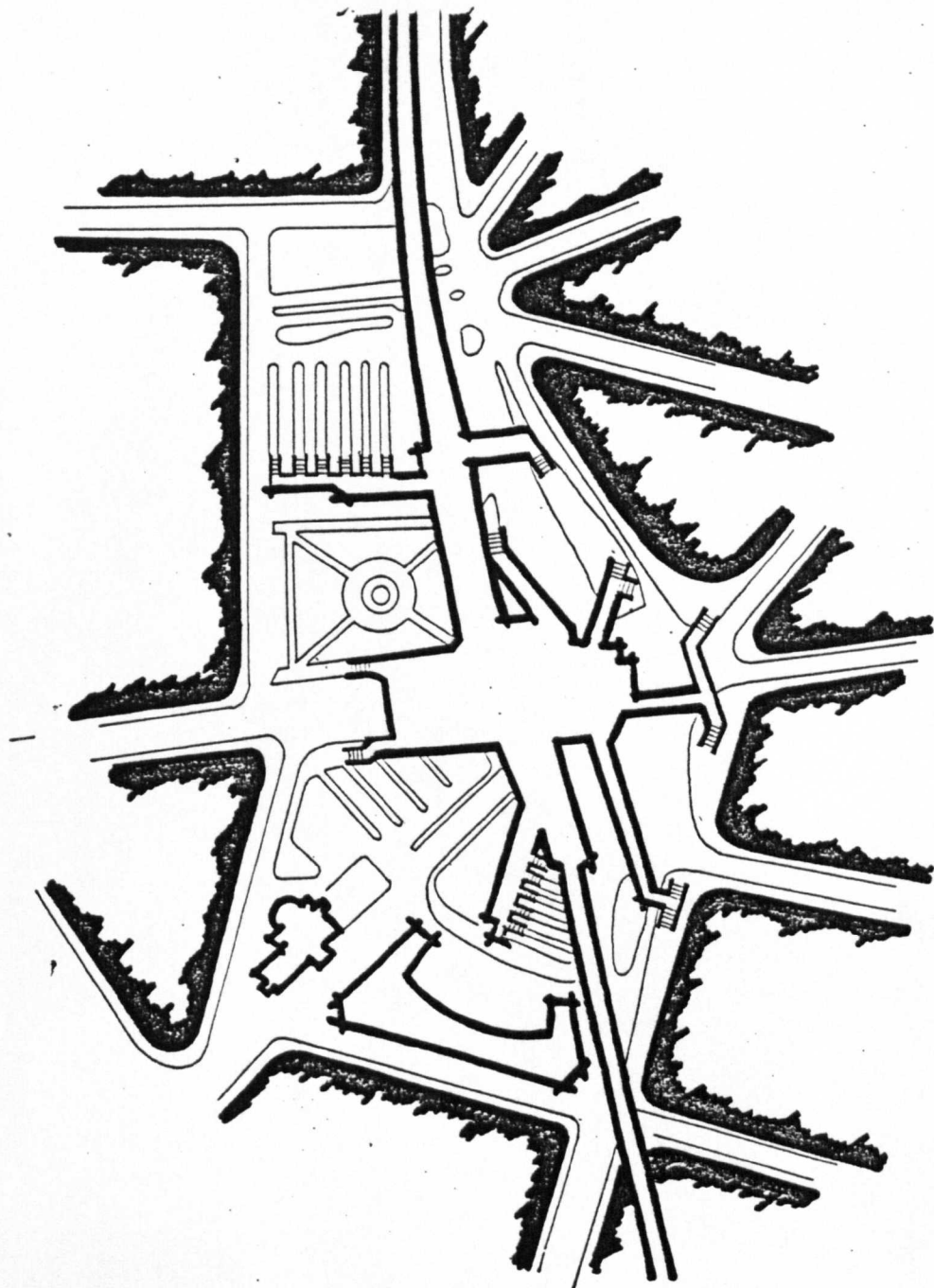


Fig. (11.22). Al Tahrir Underground station and its entrances and exits system.

(Source: Prepared by the Researcher.)

as a large traffic node within the city, and its character can be identified mainly as a major traffic node and turning point inside the city and not as a recreational public square. Accordingly it can be said that such a discovery would provide the opportunity of proving the validity of the second; and the seventh hypothesis of this research as new basic measures for the establishment of any new square. For it has been assumed previously in the second hypothesis that the additional use of the public square for parking cars, and in diverting the traffic etc., would destroy its sociological, psychological and biological roles inside the city. It has further been assumed in the seventh hypothesis that there must be great terminological differences between these squares, which are used as public urban spaces, and those spatial centers which are used as symbolic traffic nodes.

In summary, it can be said that the result obtained by this theoretical analysis that concerns the use of Liberation Square as a major traffic node within the city of Cairo, was exactly the same result which has been reached earlier through the field study. Also it can be said the previously assumed hypotheses No. 2, and No. 7, that is concerning the use of the square as a traffic node, have proved their validity as new basic criteria that are relevant to the establishment of the new squares.

### 11.3.B THE SQUARE AND THE PEDESTRIANS

It has been argued in the last point that Liberation

Square is mainly dominated by cars which use it as a terminal point and as a divergence node. Hence it can be understood that the existence of these cars inside the square can be counted as a source of hazard for those people who use it either as visitors or as commuters. If we have a look at the previously constructed landscape in that square before its recent demolition at the end of 1982, we would be able to understand clearly how much destruction the landscape has had as a result of the use of the square by cars, which have sliced it into a great number of pieces of land. Also we would be able to realise that the pedestrians inside that square are given no chance to move safely at ground level. The only way of doing so was to use the elevated crossing system, which they reject as a means of crossing the traffic flows as it tires them and distorts the look of the square, being so ugly. We know from the field study findings that people have referred to their appreciation of using the suggested underground crossing system, and such acceptance was motivated mainly by two reasons; the first of these reasons was based on the difficulty of using the elevated crossing system and the second was based on their desire to escape from the traffic, which threatens their life at ground level.

From the last analysis it can be understood that the users of that square are victims. Their lives are threatened by cars which use it as a turning point and as a terminal center, and their convenience is neglected by the compulsory use of the elevated bridges which were rejected as a



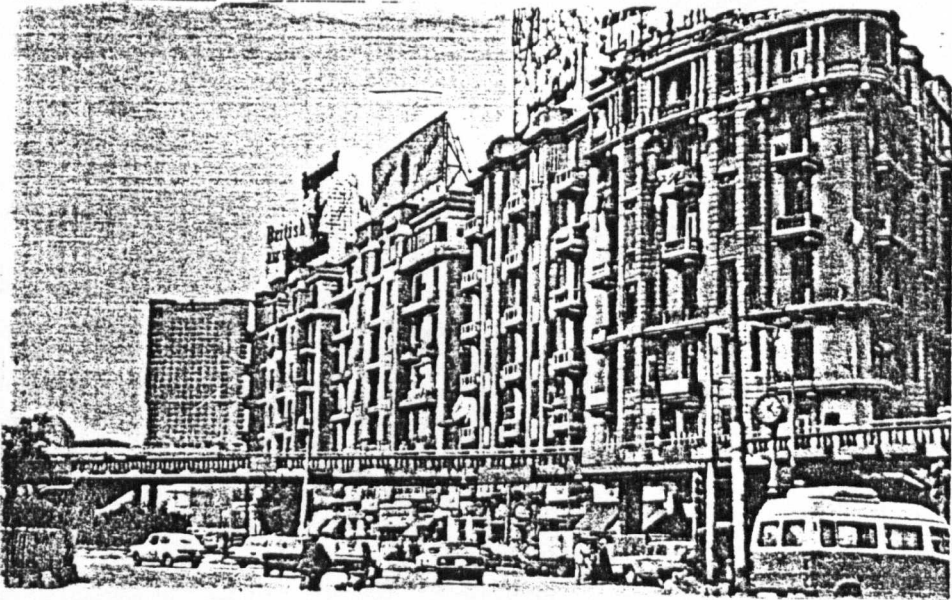


Fig. (11.23). View of the square looking towards the north, in which one can see the elevated crossing system (The pedestrians' bridge).

(Source: Photographs taken by the Researcher.)

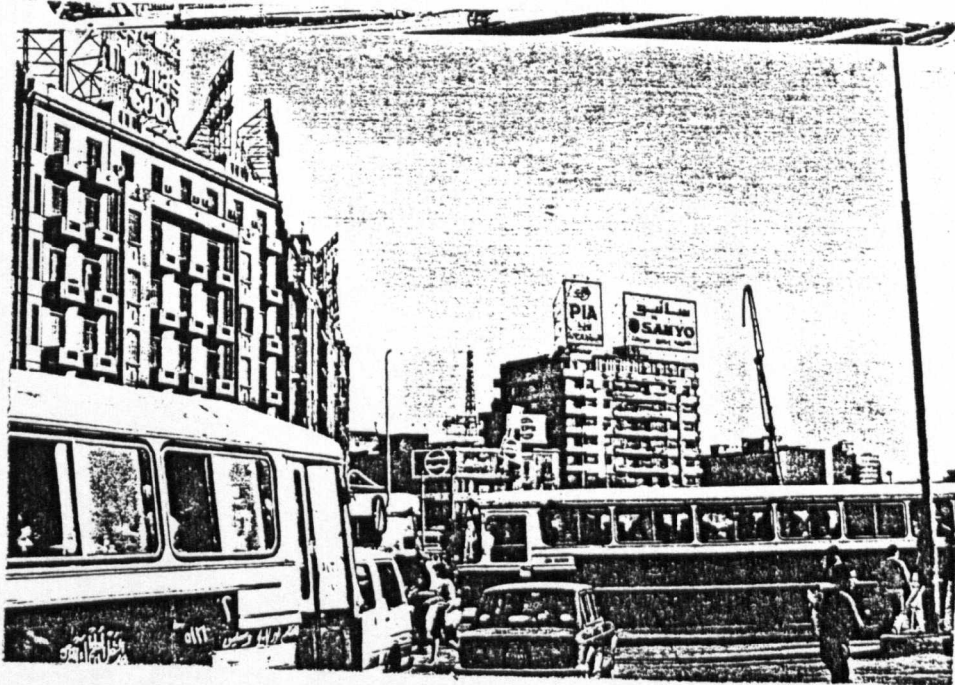


Fig. (11.24). Sense of human violation. In this illustration people look like victims as they struggle to cross the square.

(Source: Photograph taken by the Researcher.)

pedestrian crossing means in London during the 1960's.

As a result of this discovery one would be able to say that such a matter would raise the possibility of proving the validity of the second hypothesis in this research, which states that the extra use of the square by cars spoils it, and destroys its sociological role inside the city as a recreational public space.

### 11.3.C THE SQUARE AND THE RIVER

It has been discovered from the last theoretical part that the character of squares is affected dramatically by their relation to the surrounding environment. The Piazza of San Mark's in Venice as an example (Bacon, 1967, p.85), has acquired a unique identity through its physical and visual contact to the maritime space of the grand canal. Also the Piazza Della Signoria in Florence has a special character by which it can be remembered permanently through its connection to the River Arno.

It was discovered from the field study findings that Liberation Square has no visual contact with the River Nile. People have referred to their inability to see it as an important source element of joy and pleasure in its area. Also they have referred to their wish to obtain easy access to it, if the design of the existing square were to be revised in the future.

If we examine the last mentioned fact theoretically we will realise that Liberation Square is hardly connected

visually with the adjacent river. We can also realise that the square does not provide any safe access to the promenade of the river. As we try to interpret the hidden dimension of these facts, one would be able to say that the loss of such visual connection between the square and the river can be attributed to the commonplace of designing its landscape, which does not provide a vantage point, through which people can see the river and enjoy its scenery. Another reason behind such isolation, can be related also to the existence of those buildings which stand between the square and the river. Notably the Nile Hilton Hotel building and the Arab League building.

From the last argument it can be understood that the design of Liberation Square does not provide a strong visual contact with the River Nile. Also, it can be said that the design of that square does not provide a remarkable and safe connection with the promenade of that river.

#### 11.3.D THE SQUARE AS A SYMBOLIC PLACE

It has been discovered from the field study findings, that the overall design of Liberation Square does not provide any clue, through which its symbolic meaning can be transmitted to the consciousness of its visitors. As an investigation to the implication of such a discovery, one would be able to say that the previously mentioned square stands as a representation of the significance of 'liberation' only by name. None of its buildings can claim the

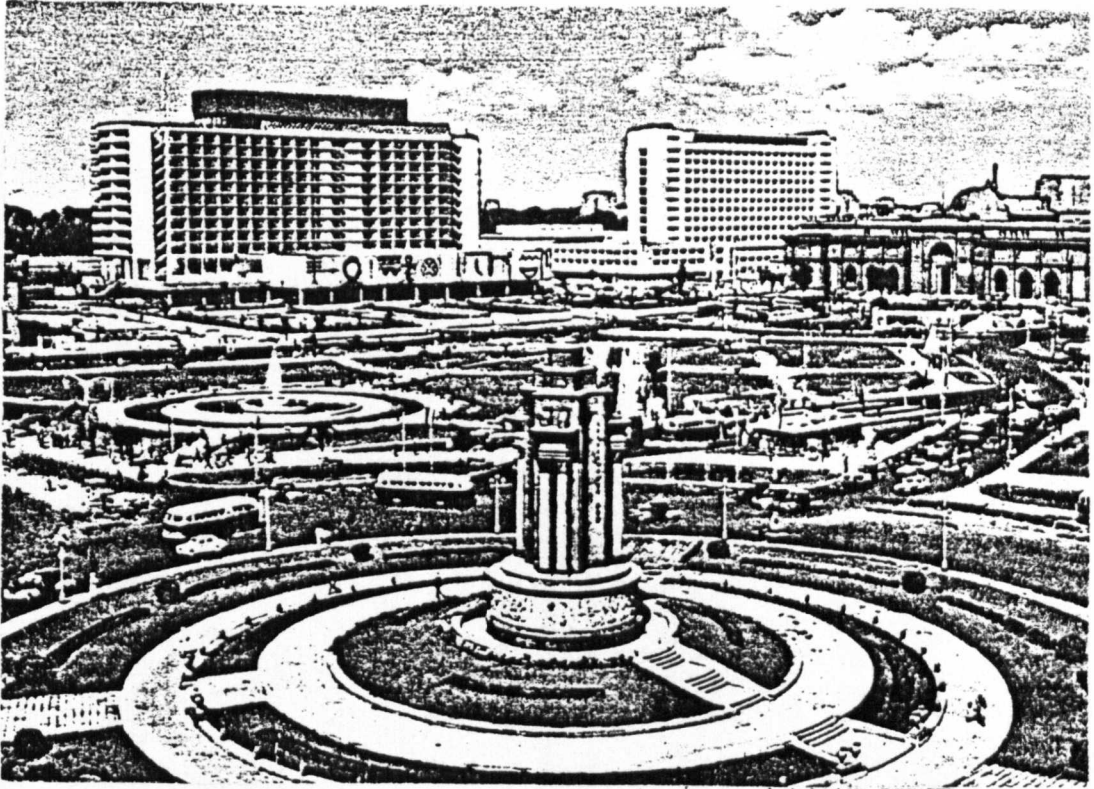


Fig. (11.25). Liberation Square in the 60's.

In this photograph one can see the monumental base before its removal in the end of 1982, which used to stand in the middle of the square, celebrating nothing on its top.

(Source: Postcard No. 553, published by Lehnert & Landrock, Cairo.)

right of such representation; or such expression. None of its constitutional elements can be counted as a monumental expression for such significance.

Now, as we come to the end of this argument about the function of Liberation Square, through which many varied elements and factors influence the function of this square have been discussed such as the impact of traffic, the pedestrian etc., we can conclude that this square works primarily as a major traffic node within the city of Cairo. We can conclude as well that this square cannot be counted as a recreational public space, conversely it can be identified and described as a main transportation commuting center within the city.

#### 11.4 THE POTENTIALITY OF THE SQUARE AND THE POWER OF ITS COMPONENTS

It has been argued in the last theoretical part that the character of the space and its special identity are subjected to the influence of the surrounding buildings, which define it. These buildings which might vary in their function, size, colour, weight and shape play a very important role in defining the identity of that space which is dominated by them. It has been argued also, that the potentiality of that space and its power of containment, are dependant on the power of its architectural defined form and its strength. Space can be categorised differently as positive or negative. And such differentiation depends on the technique used in



its planning and its design, whether it was planned and designed intentionally or it was planned and designed unintentionally. St. Peter's Square in Rome can be quoted as an example of well planned positive enclosure.

According to the above mentioned measures and definition which define the character of the space, one should be able to say that the space of Liberation Square can be counted and categorised as a lively positive space, i.e. that if one stands within its closure he must experience a sense of containment and protection. And such an experience can be counted as the opposite of a person's experiencing the sense of loneliness and forlornness in an expanded desert. In addition, it can be said also that the volume of potentiality and possibility for that square, would have been increased if its defined buildings were all relatively high, and if also the number of the streets which join that square and penetrate its boundaries at different points were reduced, for it can be argued that such a penetration stands as a great factor in minimising the square's power and its potentiality.

Now as we start examining the potentiality of the square's components, we must mention first of all that, it has been proved theoretically, that every body has a power, and this power needs a certain domain to expand in and to reveal itself through. It has been mentioned also that such revelation takes a certain shape described by the field of forces.

In the light of this theory one must be able to envisage

from the first moment that the total power and forces of Liberation Square's components would be colossal. As an interpretation of this phenomenon one would be able to say that Liberation Square , while it has been identified previously as a major traffic node, and as a great transportation commuting center within the city of Cairo. could counted and described also, as a spacious esplanade of moving masses of cars and people. Apart from the power and the potentiality of the human crowd element in that square, cars and their structures can be counted as the greatest source of possitivity and forces in it.

According to the last discovery one would be able to say that, if the latent power of the enclosed space of that square would be added to the latent power of its enclosed components, this square inevitably will explode. Such a discovery should not surprise us where it has been discovered from the field study findings that the space of the square is so tight, and its visitors experience a severe sense of congestion, as a result of the its irrational use as a major traffic node and as a main transportation commuting center.

In summary one can say that Liberation Square can be described as a highly charged container of struggling opposing forces. And as a solution for this matter, it would be necessary for us to try to reduce the volume and the capacity of the use of that square, either by minimising the traffic volume which runs through it or by removing the terminals of the buses and the taxis to any other place

outside the square, where they have been counted as the main source of human crowd inside the square.

According to the above mentioned result one would be able to say that such results correspond with the second hypothesis in that research and prove it. Where it has been assumed in this hypothesis that the irrational use of the square, in many varied activities such as its use as a traffic node, and as a parking and as an entertainment public place etc. spoils it and destroys its sociological, psychological and finally its biological role inside the city.

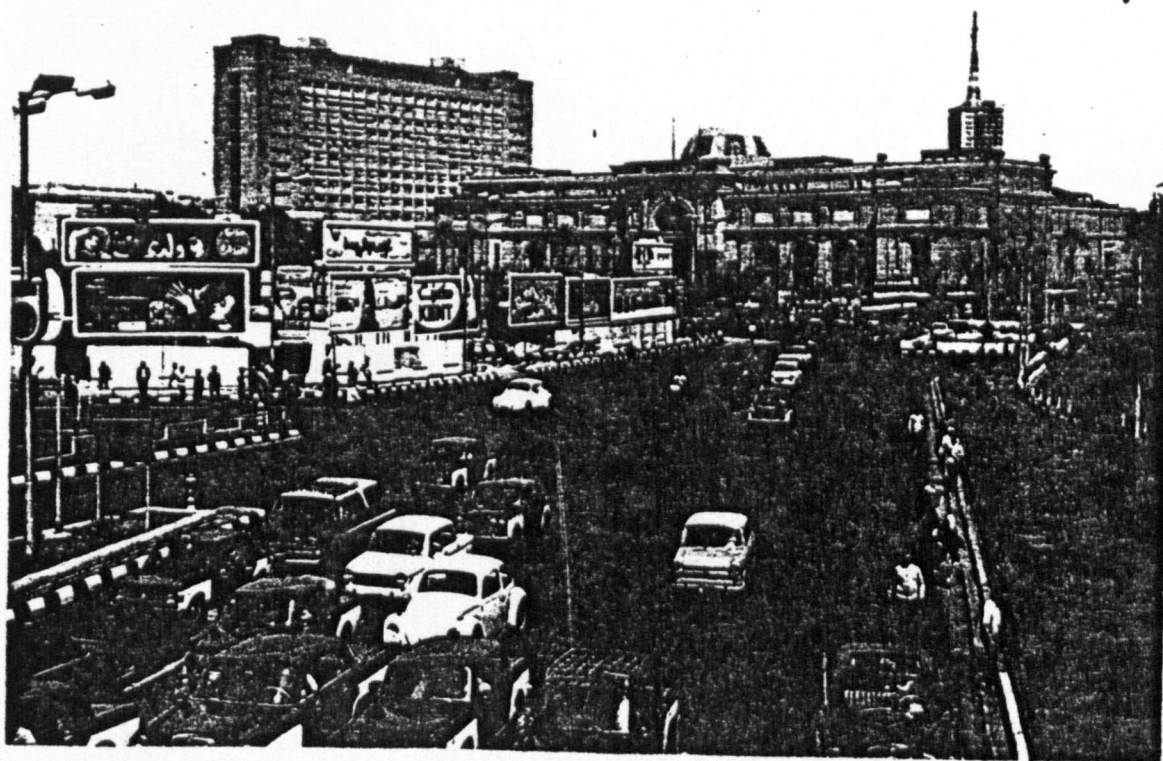


Fig. (11.26). Liberation Square, a place mastered by traffic.

(Source: Postcard published by Isis House for tourism printing.

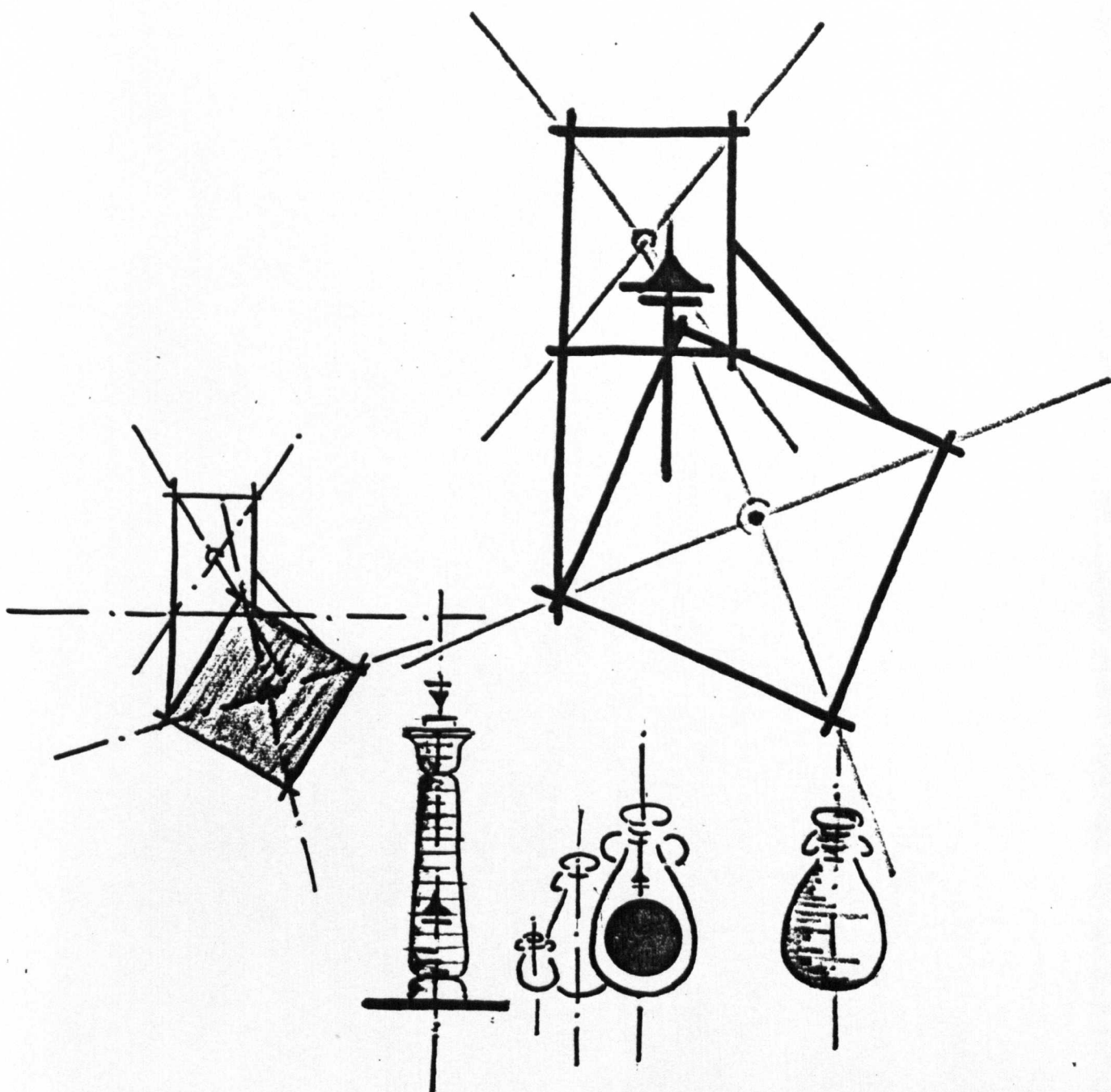


Fig. (11.27). Sub-conscious study for the potentiality of the square's shape. This illustration shows the location of the subject matter and where it should be positioned.

(Source:: Prepared by the Researcher.)

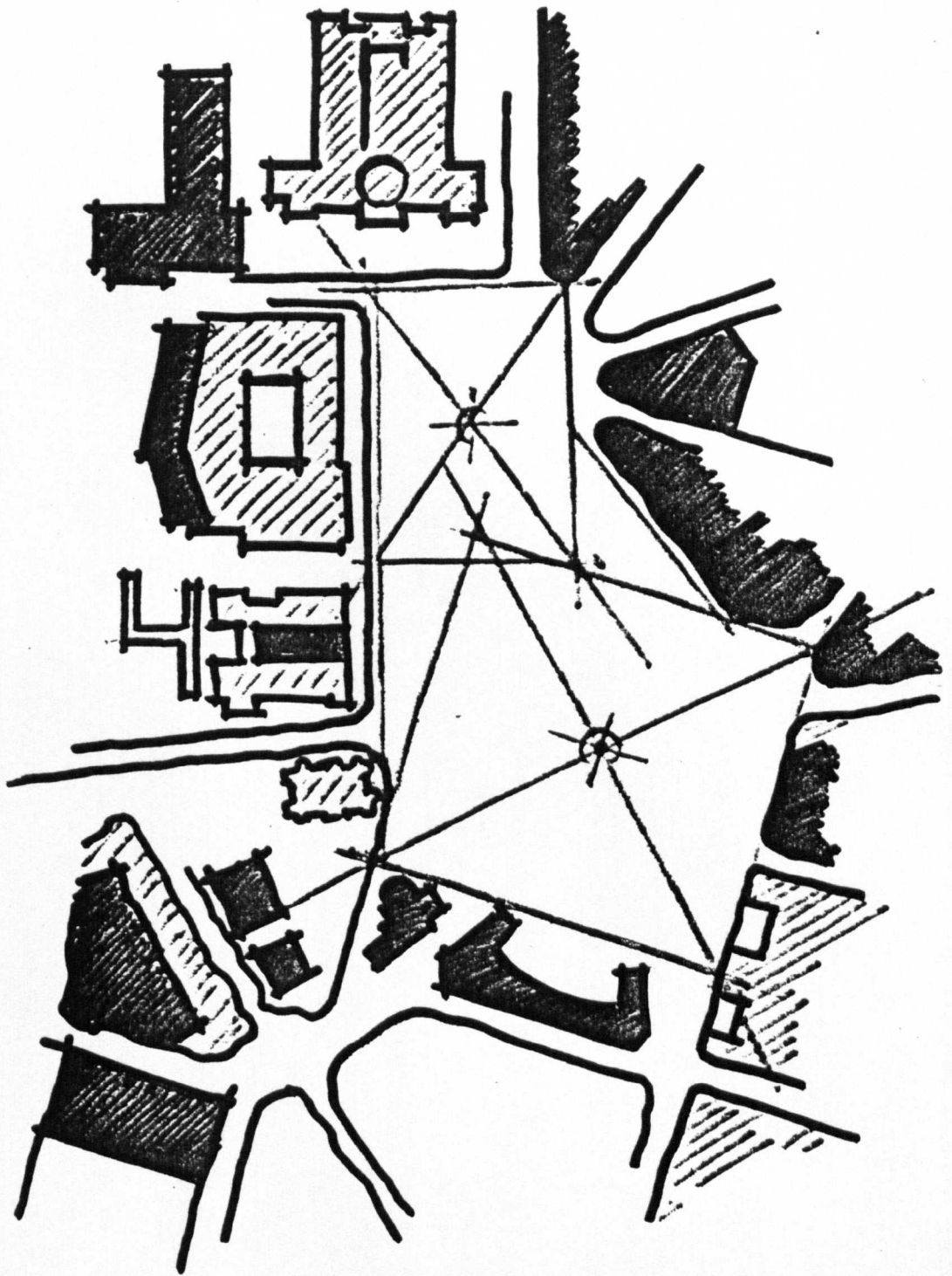


Fig. (11.28). The Square boundaries.  
In black this illustration shows the high  
buildings around the square and in hatched  
blocks the illustration shows the low buildings.

(Source: Prepared by the Researcher.)



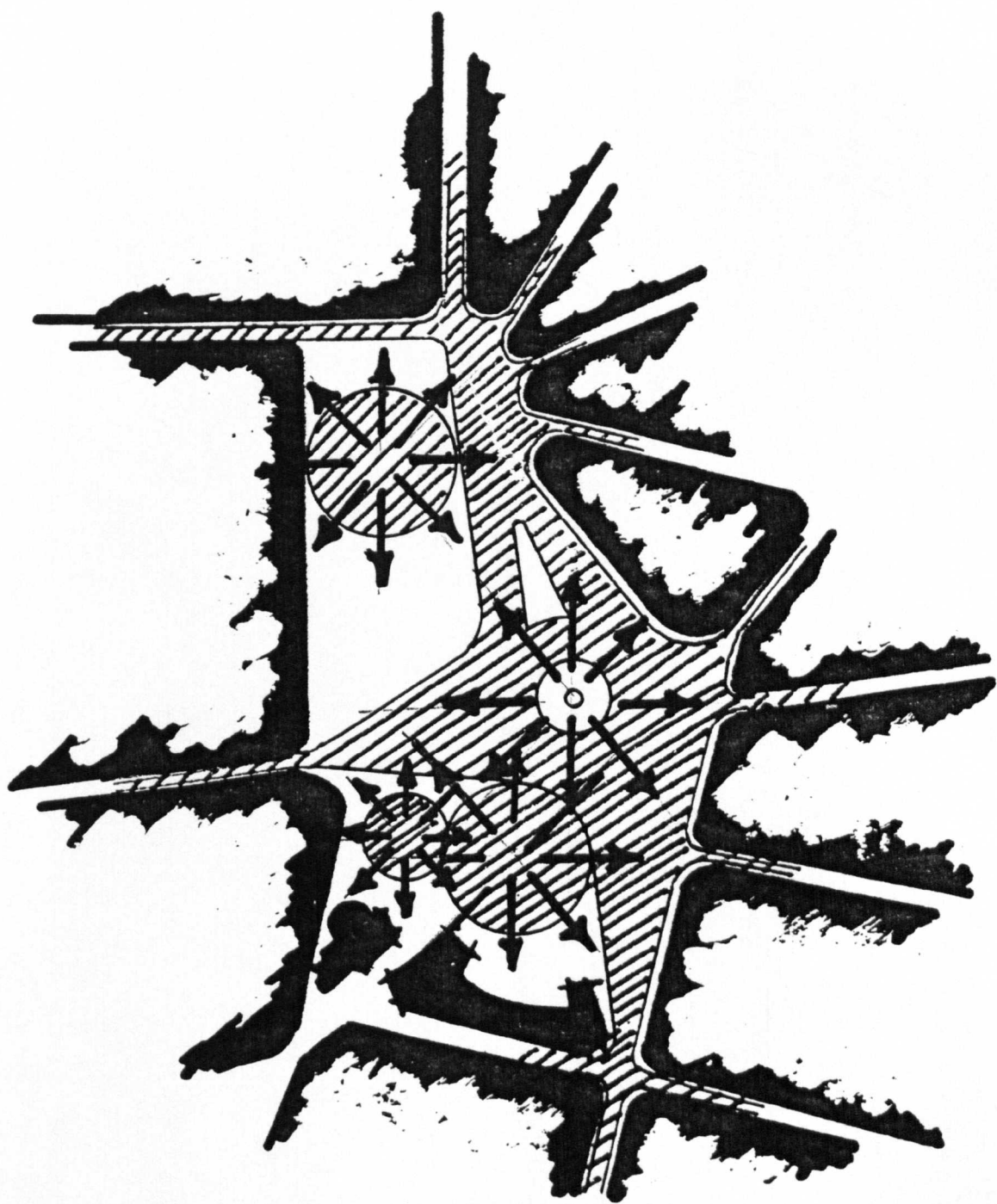


Fig. (11.29). The potentiality of the traffic inside the square.

(Source: Prepared by the Researcher.)

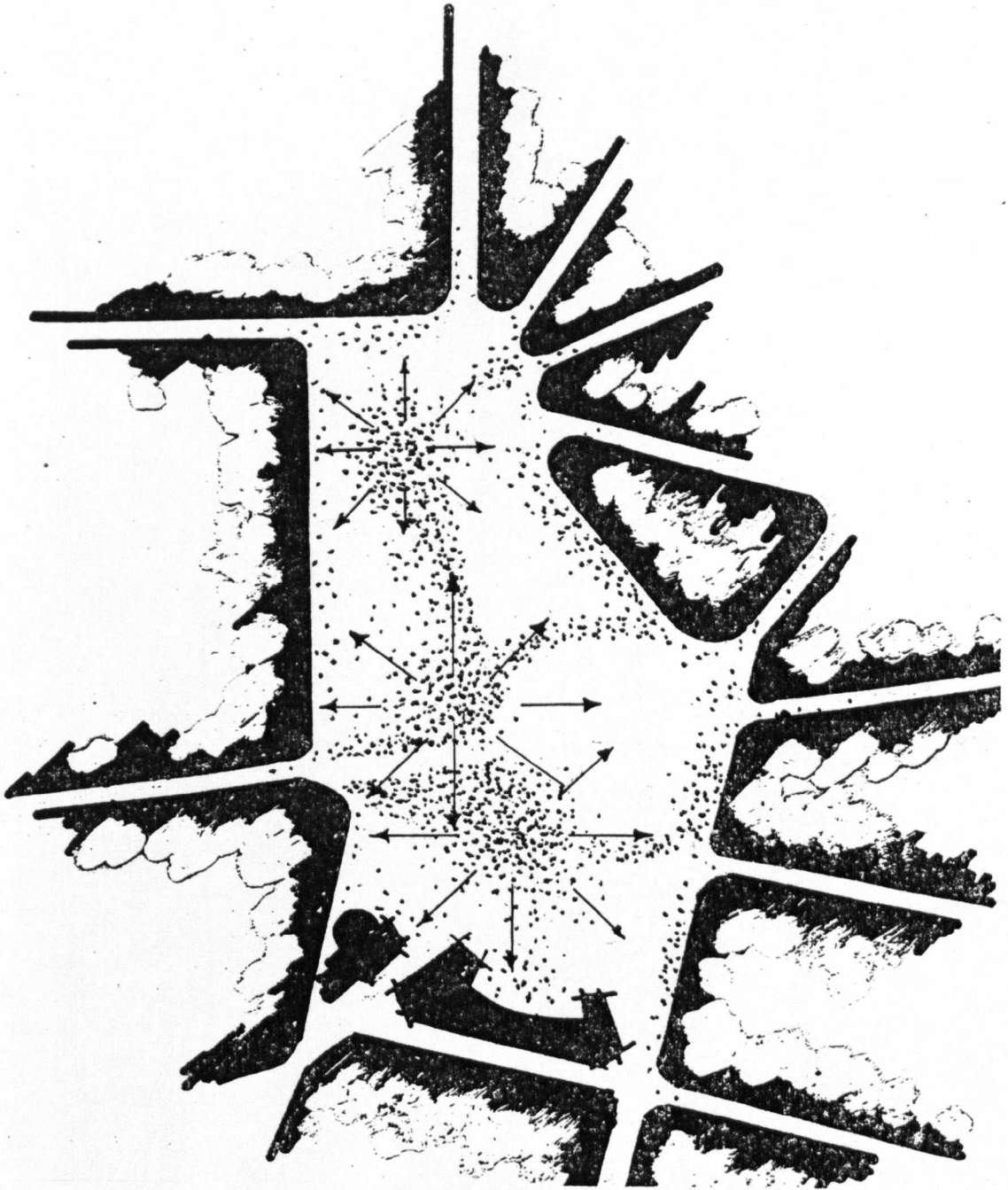


Fig. (11.30). The Potentiality of the crowds inside the Square.

(Source: Prepared by the Researcher.)

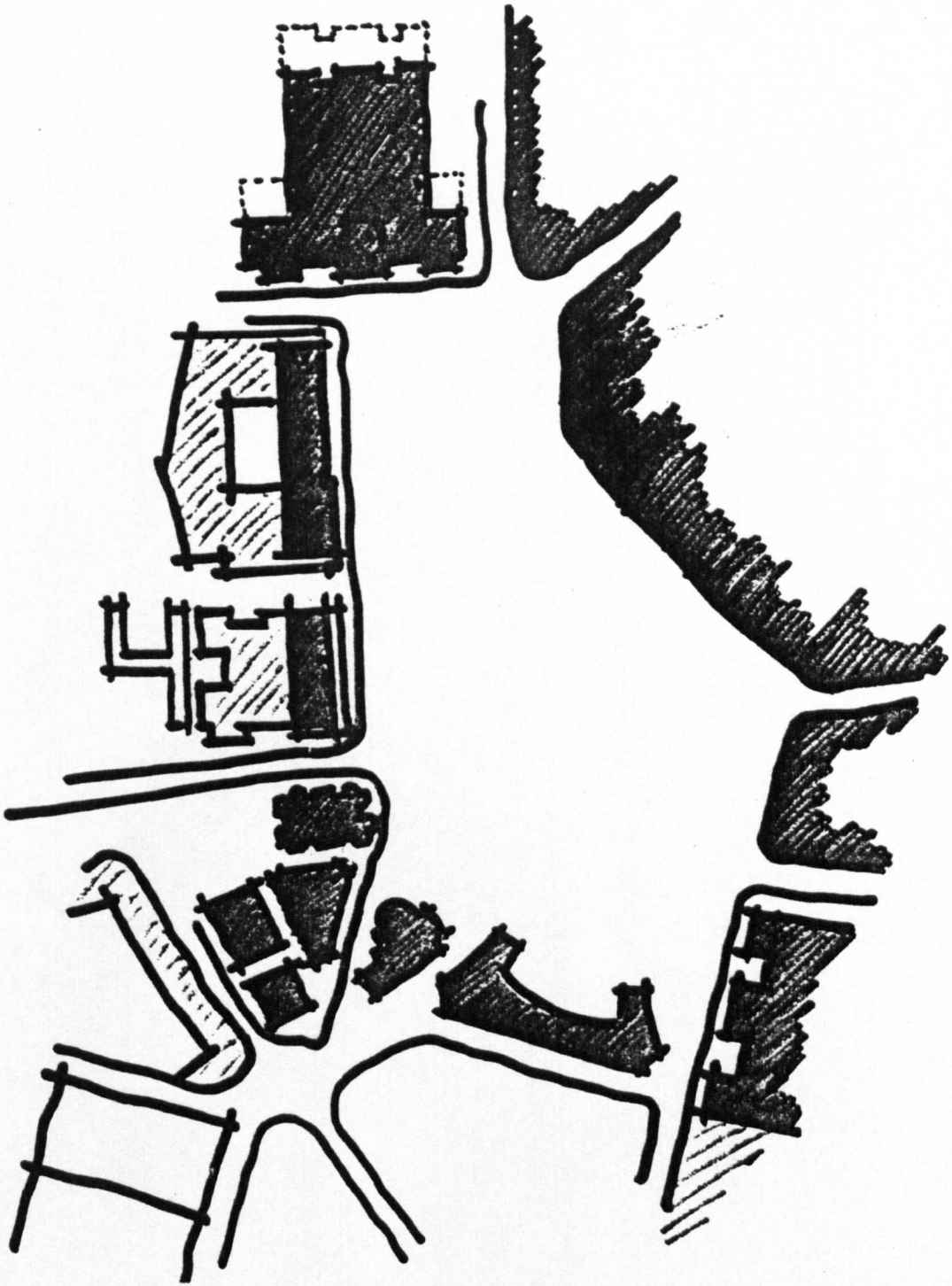


Fig. (11.31). Sense of Containment. The containment power of the square should have been increased if the surrounding buildings around its closure were arranged as shown in this illustration.

(Source: Prepared by the Researcher.)

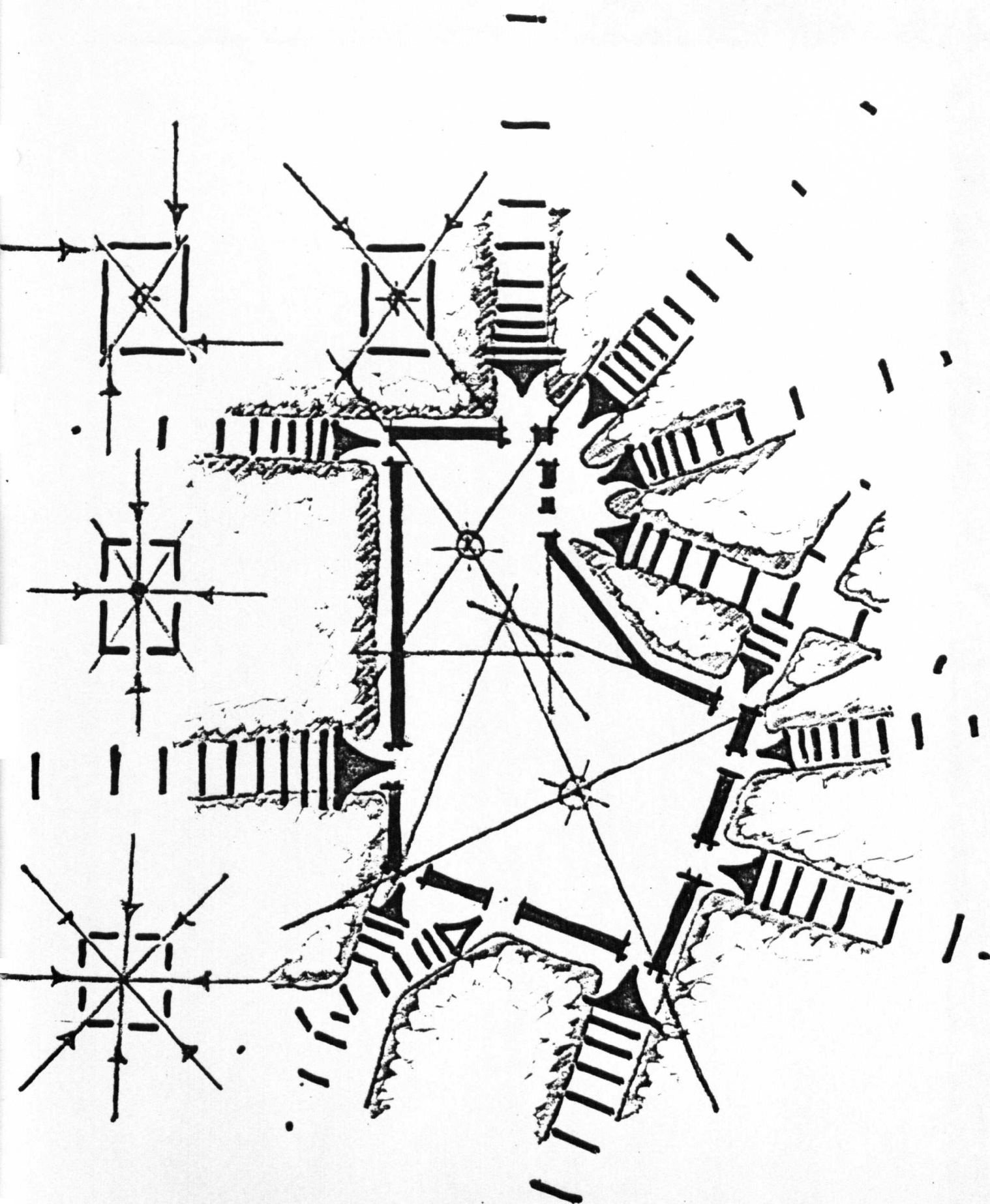


Fig. (11.32). General sense of disruption.  
In this illustration one can be able to perceive a sense  
of general intrusion created by the irrational relation-  
ship between the square and the joined penetrated streets.

(Source: Prepared by the Researcher.)



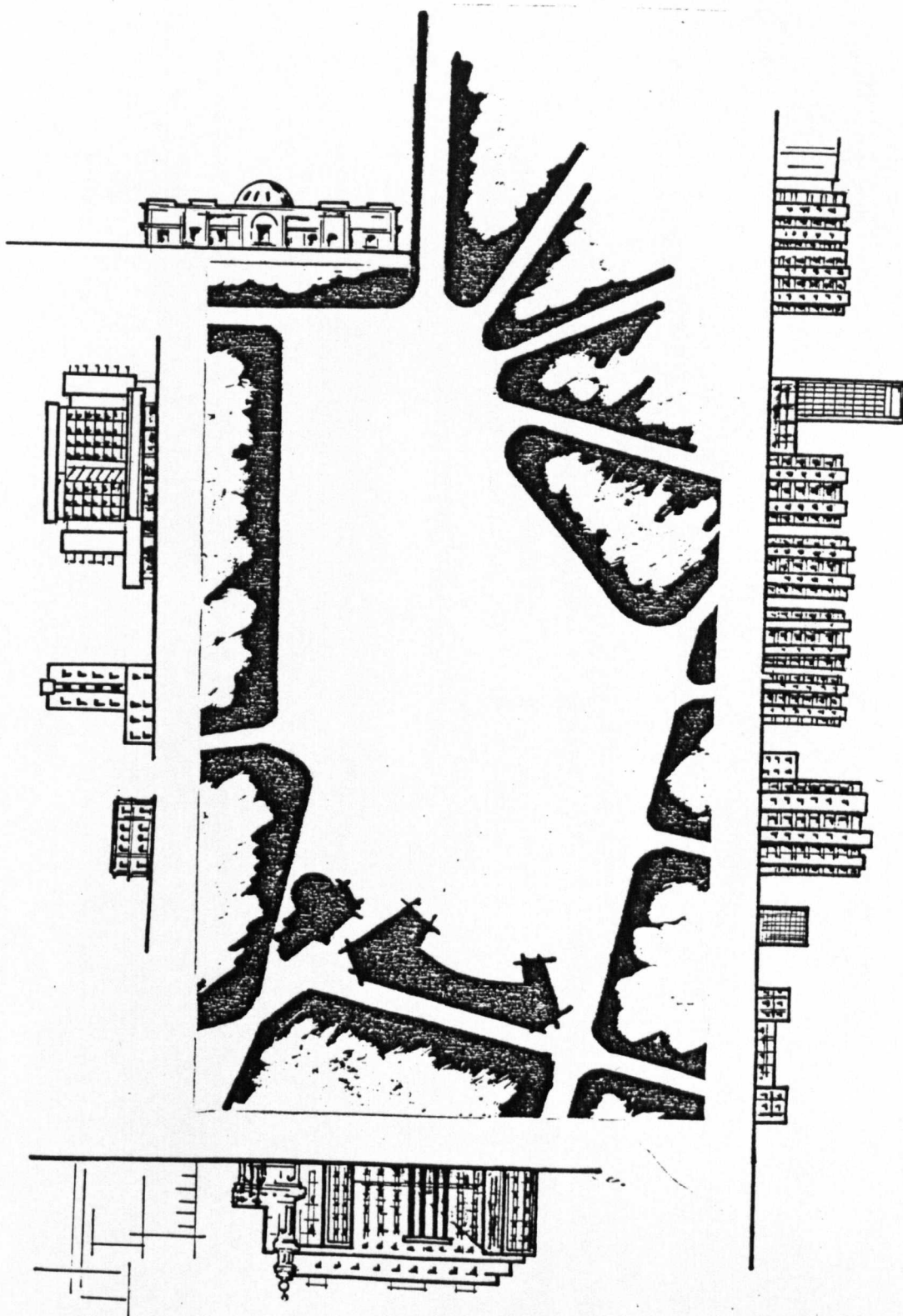


Fig. (11.33). The height of the buildings which surround the square.

(Source: Prepared by the Researcher.)



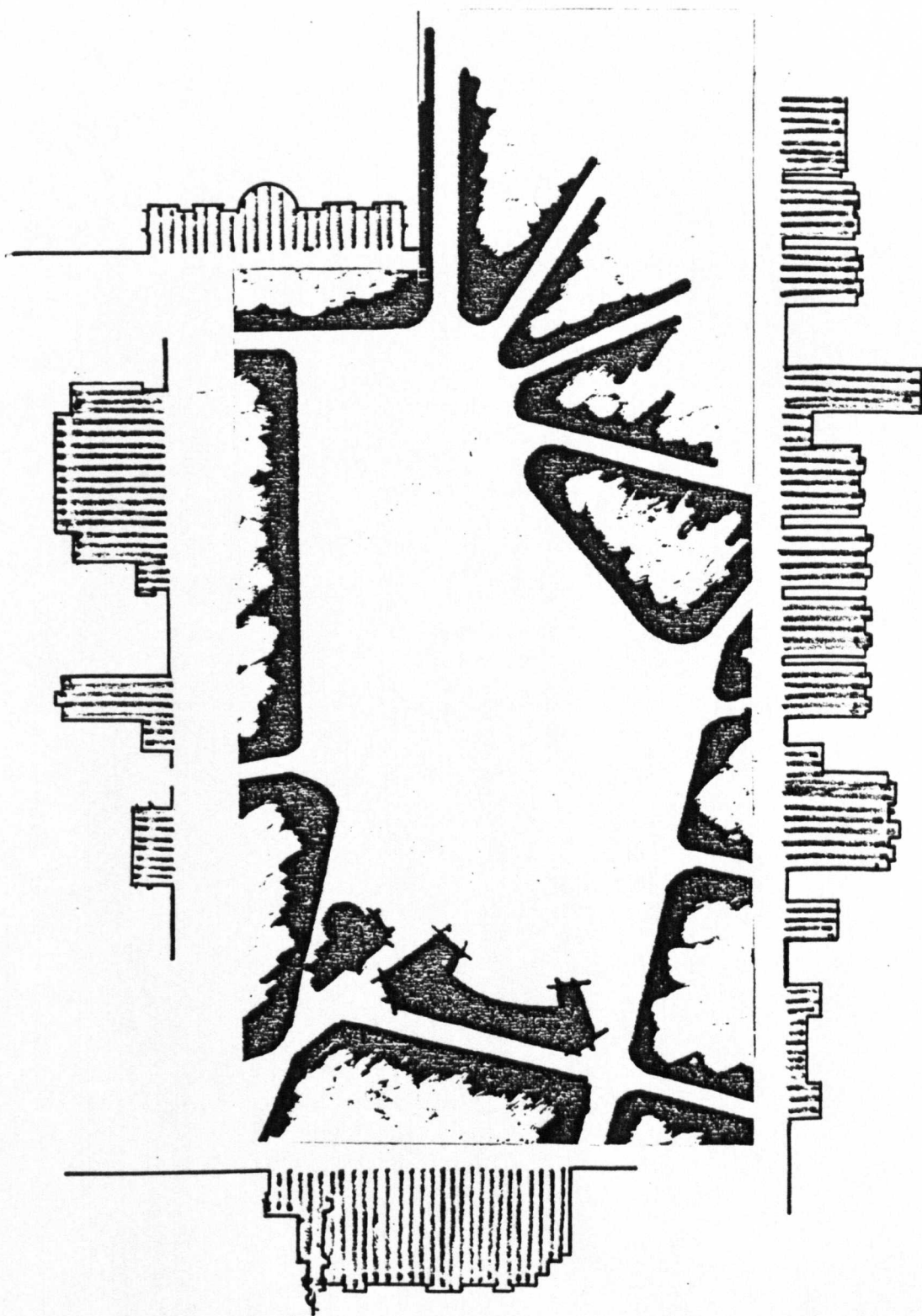


Fig. (11.34). The skyline of the buildings around the square edges.

(Source: Prepared by the Researcher.)

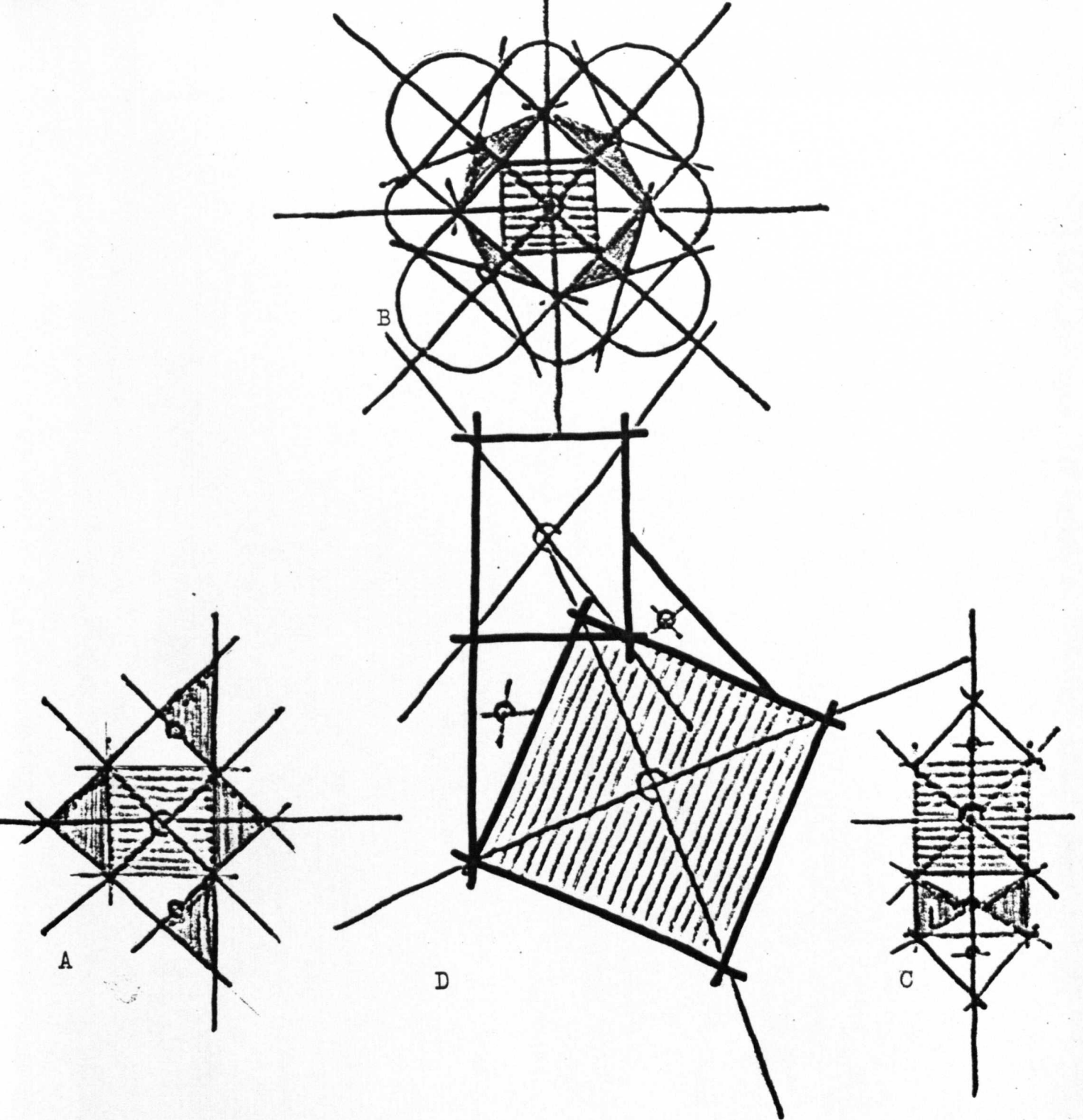


Fig. (11.35). Geometrical study for the square form. in this illustration A, B, & C show a homogeneous and unified geometrical patterns. D shows a confused relationship of a group of geometrical forms.

(Source: Prepared by the Researcher.)

#### 11.5 THE SQUARE BUILDINGS: THEIR STYLE, CHARACTER AND THEIR EXPRESSION

It has been argued that every style of building has its own character and expression and both culture and time stand as very influential factors in the process of change, which the style experiences. Style can be counted as a representation for the ideological and the aesthetic values which vary from country to country and from culture to culture and from time to time. The ancient Egyptian style as an example has been replaced by the Egyptian Islamic style, as a direct indication of the change of the ideological and the aesthetic values over time, while style changes and its differentiation has been accepted as a representation for the change of history. We find that such a change should consider the establishment of a strong link between the past and the present, otherwise we might lose our heritage and consequently our identity. It has been argued that harmony as a unifying element leads to static formation, and the opposite is the diversity which leads to a dynamic, exciting one. According to Smith 'Harmony, conformity, etc. have their place, but there is also room in the built milieu for more strident elements, capable of arousing feeling and even at times inducing shock. Dynamism as a source of creating tension and shock can be established as Venturi says (Smith, 1979 p.58), through the creation of a contradictory relationship of varied architectural buildings and elements.<sup>8</sup> On the other hand,

it has been argued that the clever use of the principle of rhyme between varied buildings of varied style would be able to resolve the contradiction and the differentiation between them. Rhyme as it has been identified by Peter Smith is the state of likeness tempered with differences.<sup>9</sup> There are many varied ways of creating rhyme. Rhyme could be created through the repetition of the same iconic features within varied styles of buildings, or it could be achieved through using the same dimensions. Variation of style as it has been indicated by Smith has the capability of influencing the character of the space.

While we start analysing the building of Liberation Square, the most striking thing which attracts our attention is the variation of the style of its buildings. These buildings which have been built over almost a century starting from 1867 when the quarter of Al-Ismailiyah was built, have undergone a great change where some of them have been demolished to be replaced by others of different styles. The styles of the square buildings can be classified as: classic, Islamic and modern style. The Egyptian Museum building, the Ministry of Foreign Affairs building and the residential group of buildings which stand on the east side are all of classical style. The Mosque of Omer Macram is Islamic style. The Arab League building and the Government Central building are of modern style tempered with Islamic features. Finally the Hilton Al-Nil hotel and the Cleopatra hotel are both of absolute modern style. Apart from the variation of these buildings in their styles one might be



Fig. (11.36). The Government Central Building.  
In this photograph one can see the Square before  
destroying its landscape at the end of 1982.

(Source: Postcard published by Lehnert & Landrock,  
Cairo.)

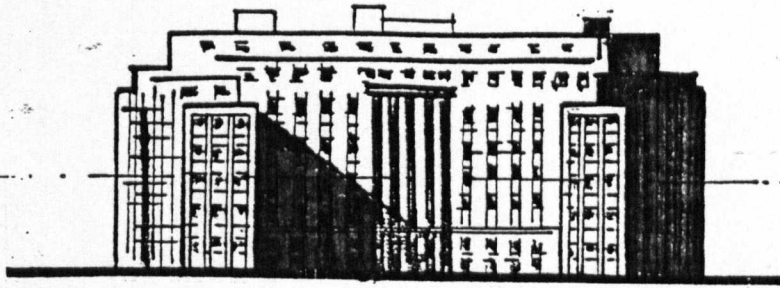


Fig. (11.37). Sense of Dominance, rigidity,  
formality and balance.

(Source: Prepared by the Researcher.)

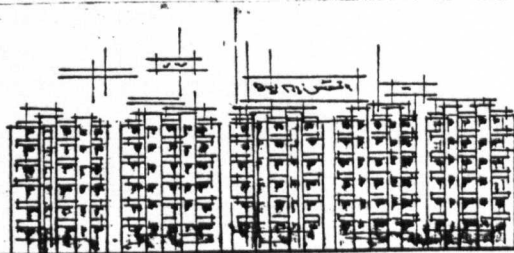


able to say that those buildings vary also in their forms and consequently in their expression. The most striking observation of such a variation is the extreme sense of contradiction which it aroused. No harmony can be felt, no integration and sense of rhyme; instead contradiction and unrest. For more interpretation of the last observation, one might say that setting a comparison between these varied buildings in the square under the analysis, would help greatly in understanding the hidden dimensions and the emotional expression for every one of them.

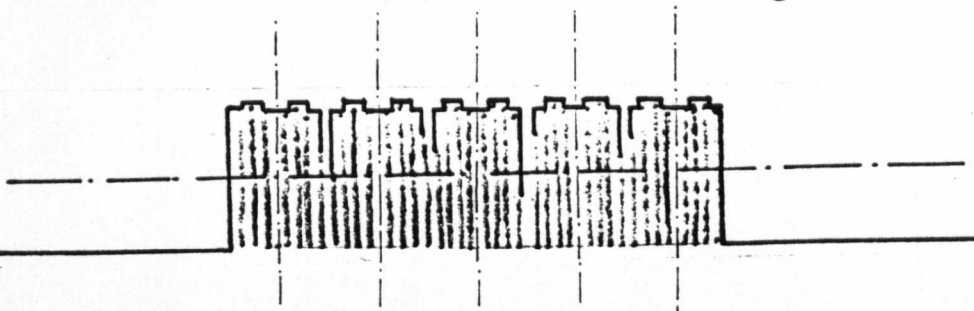
If we begin this process of comparison by comparing both of the Government Central building with the group of the residential buildings which stand on the east side of the square and act as one mass, one inevitably would perceive a sense of differentiation between them. The reason behind such a feeling can be attributed to many reasons, most of them are formal. While the form of the Government building looks oppressive; heavy and solid, we can find on the other hand that the overall impression of the residential group is relatively lighter in their visual weight. The reason for such an observation can be related to the formal way of treating both of these elevations. As we give a close look at the elevation of the Government building, the most striking thing which will dominate our attention, would be the impressive look of it. Perceptually, while the form of that building and its elevations evoke in the percipient's mind the image of a castle, we find on the other hand that the recession of its mass at the extreme



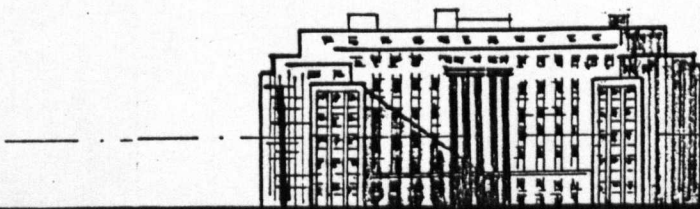
(Fig. 11.38). The Residential Group of buildings around the Square.



Sense of articulation, perforation and lightness



- Sense of grouping and whole
- Sense of horizontal expansion



- Sense of massivity, solidity and settlement.

Fig. (11.39). Comparison between the Government central building and the group of the residential buildings around the square.

(Source: Prepared by the Researcher.)

corners, induces the sense of heaviness and settlement. Contrary to the formal way of treating the elevation of the above mentioned building, we find on the opposite, that the formal way of treating the elevation of the residential group of buildings is different. This elevation, while it raises a sense of articulation and individuality, produces on the other hand a sense of perforation and integration.

Now, if we compare the Omer Macram Mosque with the Government Central building, the most striking thing which one would notice is the contradictory relationship of their masses and dynamism. While the mass of the Government building looks colossal and gigantic, we find on the other hand that the mass of the mosque looks relatively spare and delicate. The reason for such an observation can be related to the formal relationship between the masses of these buildings, which can be described as the relationship between the giant and the dwarf. As for the relationship between the dynamism of the masses of these buildings, one would be able to argue that the mass of the government building expands perceptually in the horizontal direction, while the mass of the mosque expands perceptually upwards to the infinite sky.

Now, while we consider the relationship between the Government building and the Ministry of Foreign Affairs building, we find that the most obvious thing which would attract our attention, is the contradictory relationship of their masses and styles. While the mass of the prime



Fig. (11.40). The Government Central Building and Omer Macram Mosque.

(Source: Photograph taken by the Researcher.)

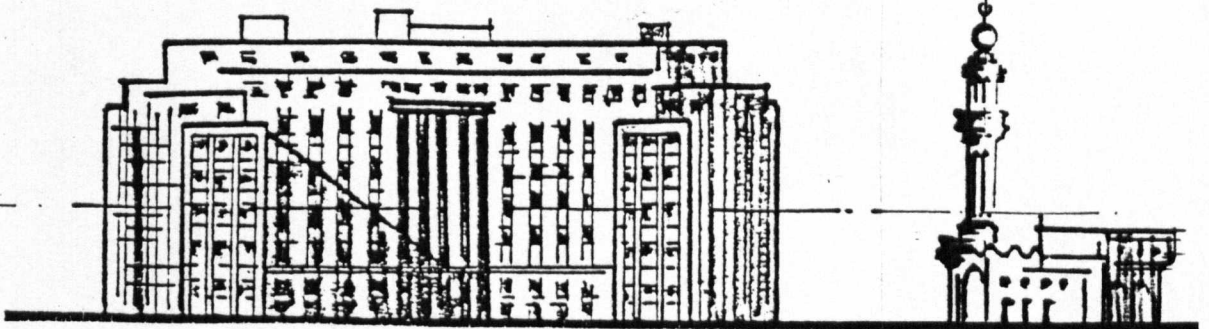


Fig. (11.41). A comparison between the Government Central Building and Omer Macram Mosque. This illustration shows the mosque standing as a dwarf beside the Government building.

(Source: Prepared by the Researcher.)

building looks gigantic and impressive as we mentioned earlier, we find on the other hand the mass of the latter looks relatively small and modest. And while the style of the first one can be classified as a modern style tempered with Islamic features, we find on the other hand the style of the second one can be classified as a classical style.

As far as the relationship between the Government Central building and the Egyptian Museum building is concerned, one would be able to say that the most vivid thing which could be noticed is the variation of their style and height. While the style of the Government building looks modest, plain and devoid of any impressive artistic feature as most of the modern buildings in this century, we find on the other hand the style of the museum looks impressive and rich in its artistic formation.

With regard to the relationship between the Government Central building and the building of Hilton Al-Nil one would be able to say that the most attractive observation in this relationship between these buildings which can be counted as a modern style architecture, is the great contradiction in their visual weight and their formal expression. While the Government building looks oppressive, settled, subjected to gravitational pull and formal, we can find on the other hand that the hotel building looks visually light, self-supported and informal.

Considering the relation between the building of Hilton Al-Nil Hotel and the building Cleopatra Hotel, one would be able to say that both of those buildings have a sense of



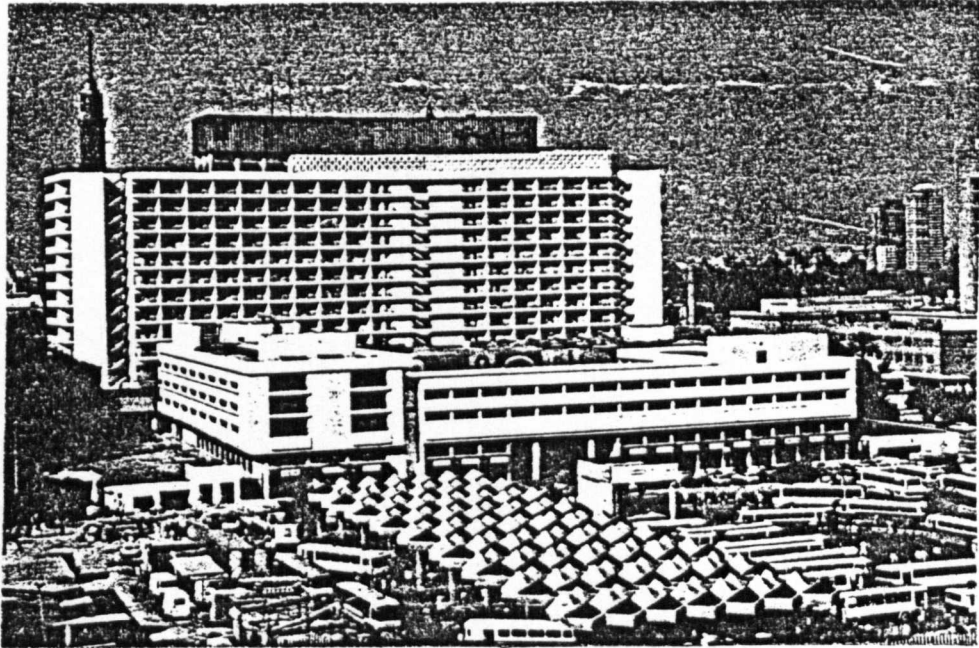


Fig. (11.42). Hilton Al Nil Building Hotel.

(Source: Photograph taken by the researcher.)

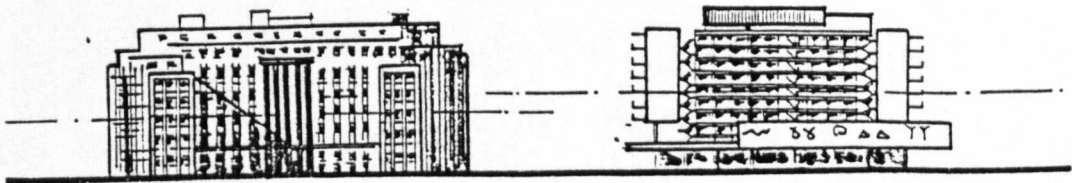


Fig. (11.43). Comparison between the building of Hilton Al-Nil Hotel and the Government Central Building.

The Government Central Building  
can be described as:

- heavy and settled structure
- Mass of downward movement
- structure of cubic formation
- mass of horizontal and lateral expansion

Hilton Al-Nil can be  
described as:

- light and floating structure
- mass of upward movement
- structure of horizontal and vertical slices
- mass of horizontal lateral expansion

(Source: Prepared by the Researcher).

likeness and similarity either in style or in the visual expression.

Now, as we consider the overall relationship between those buildings which define the closure of Liberation Square, one would be able to say that, the most obvious observations of this relation is the established sense of contradiction and consequently the sense of isolation between them. Namely; it can be said that each of these buildings has its own style, character, expression and self-identity which has nothing to do with the rest of the adjacent buildings. No sense of rhyme to unify them within a whole contrasted formation of varied architectural expression. No sense of similarity to integrate them within one exciting constitution of different architectural accents. Hence, it can be understood that the character of the square looses a lot of its unification and integrity as a result of varying its enclosed buildings in their style and their architectural expression.

According to the above mentioned conclusion, one would be able to say that such a conclusion corresponds to the first hypothesis in this research and proves it, where it has been assumed previously in this hypothesis that the character of the square can be affected drastically with the established contradictory moods of architecture which repel one another in terms of their varying forms, size, direction, style, colours and texture etc.



Fig. (11.44). Cleopatra Hotel Building.

(Source: Photograph taken by the Researcher.)

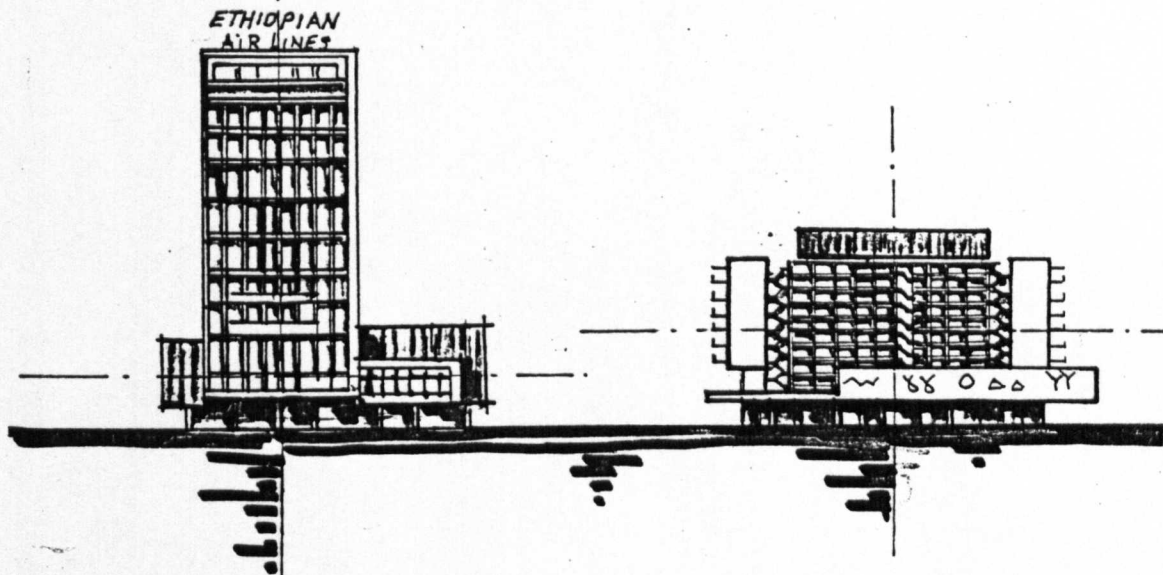


Fig. (11.45). Comparison between the Building of Hilton Al-Nil Hotel and the Building of Cleopatra Hotel

Cleopatra Hotel can be described as:

- structure of horizontal & vertical slices
- structure of self supported and floating constitution
- structure of a self unified entity
- mass of vertical upward movement

Hilton Al-Nil Hotel can be described as:

- structure of horizontal & vertical slices
- structure of self supported and floating constitution
- structure of a self unified entity
- mass of horizontal lateral expansion

(Source: Prepared by the Researcher.)

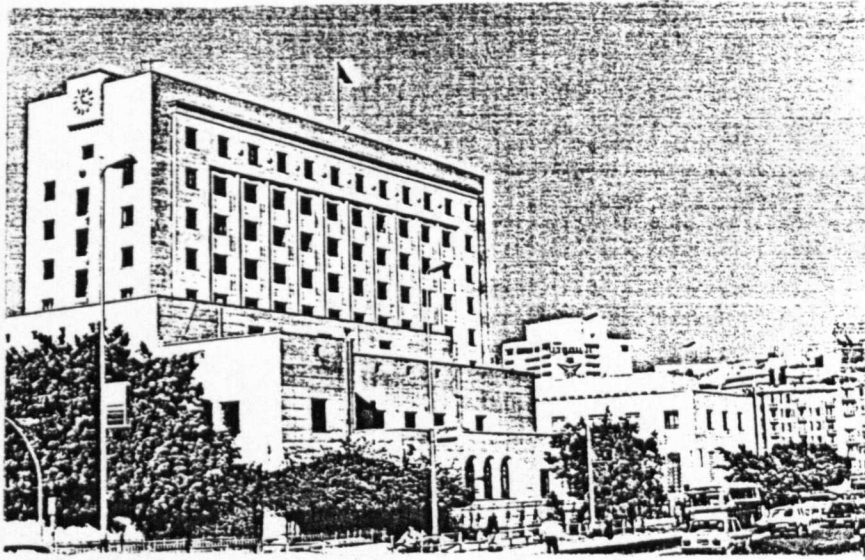


Fig. (11.46). The Arab League building.

(Source: Photograph taken by the Researcher.)

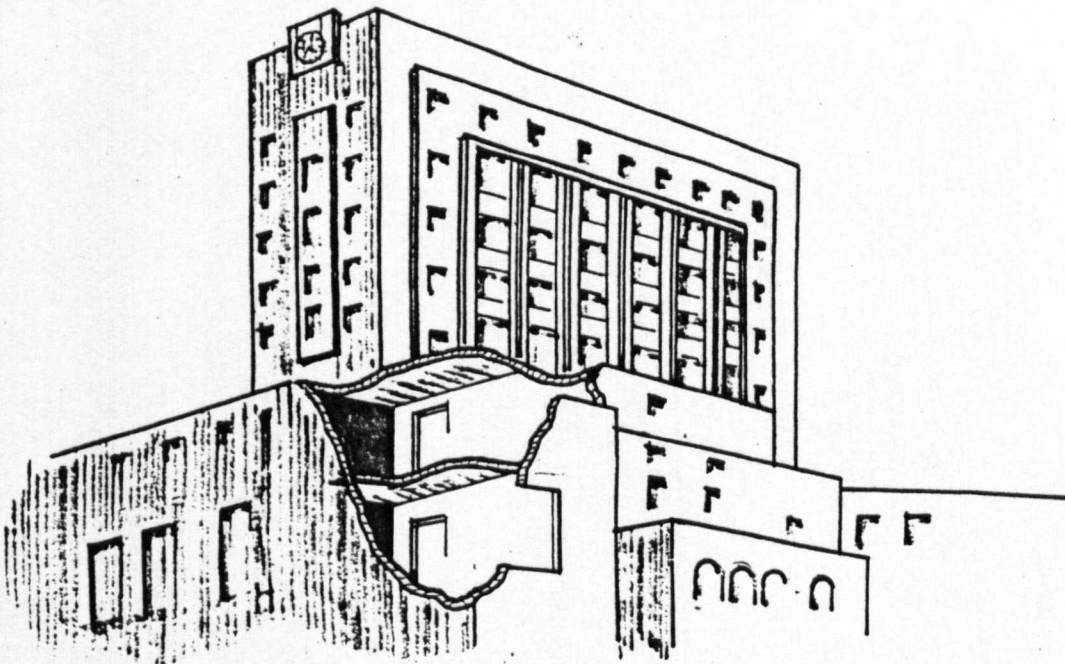


Fig. (11.47). Sense of emptiness and hollowness.

The Arab League Building looks visually light being formally composed of hollow cubic constitution.

(Source: Prepared by the Researcher.)

## 11.6 THE SQUARE AND THE PEDESTRIANS' BRIDGE

It has been discovered from the field study findings, that the users of the square reject the continuity of using the elevated crossing system in crossing the junctions of that square as this requires considerable physical effort. In addition to the failure of such a system in achieving its function properly, it was discovered also that there are many other aesthetic reasons which lie behind that rejection, as the look of that system has been described as being ugly.

While we start analysing the formal look of that bridge or that elevated system, we can find that the most striking impression which we might perceive, is its rigid and its ugly appearance. The reason behind such a feeling can be attributed to many other visual and perceptual implications related to the structural and the textural expression of that bridge. As we examine the perceptual impact of the material used in the construction of that bridge, we must be able to say that, either the steel material or the concrete create a sense of heaviness and strength. Considering the ample use of both of these materials with their crude look and coarse texture, one would be able to say that the overall structure of that bridge looks durable and rough. The reason for such observation can be attributed to the unskilled use of its material, which has been characterised by its coarse sections, and its lack of any sense of elegance and



dynamism. In that meaning it is remarkable to mention to the intolerable and the unbearable the sense of sharpness and aggression, which the steel eaves of the steps of that bridge arise, and also to the inconvenient sense of heaviness, which the structure of that bridge produces, as a result of its extremely commonplace used technique of design, which did not provide any sense of potentiality and lightness.

As a summary of what has been mentioned above, one would be able to say that the overall appearance of the bridge is unsatisfactory. It looks ugly, heavy, aggressive and consequently inhuman.

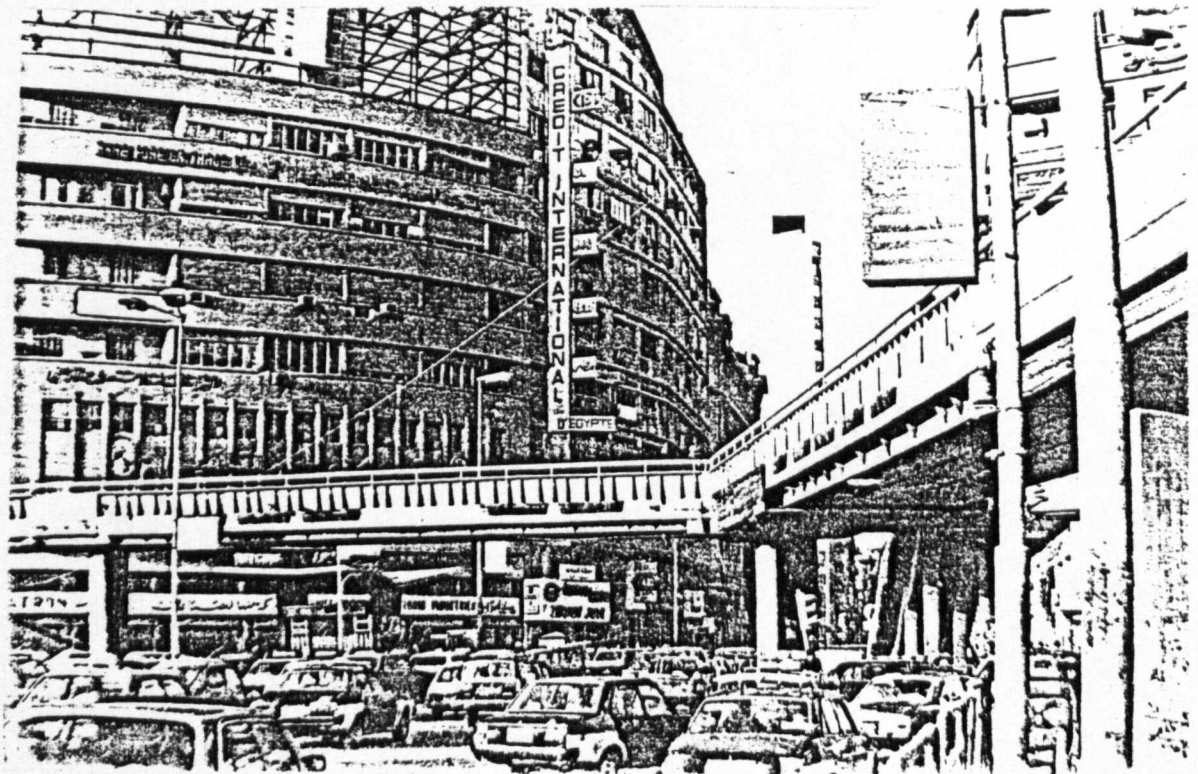


Fig. (11.48). The 'pedestrians' bridge in Liberation Square.

(Source: Photographs taken by the Researcher.)

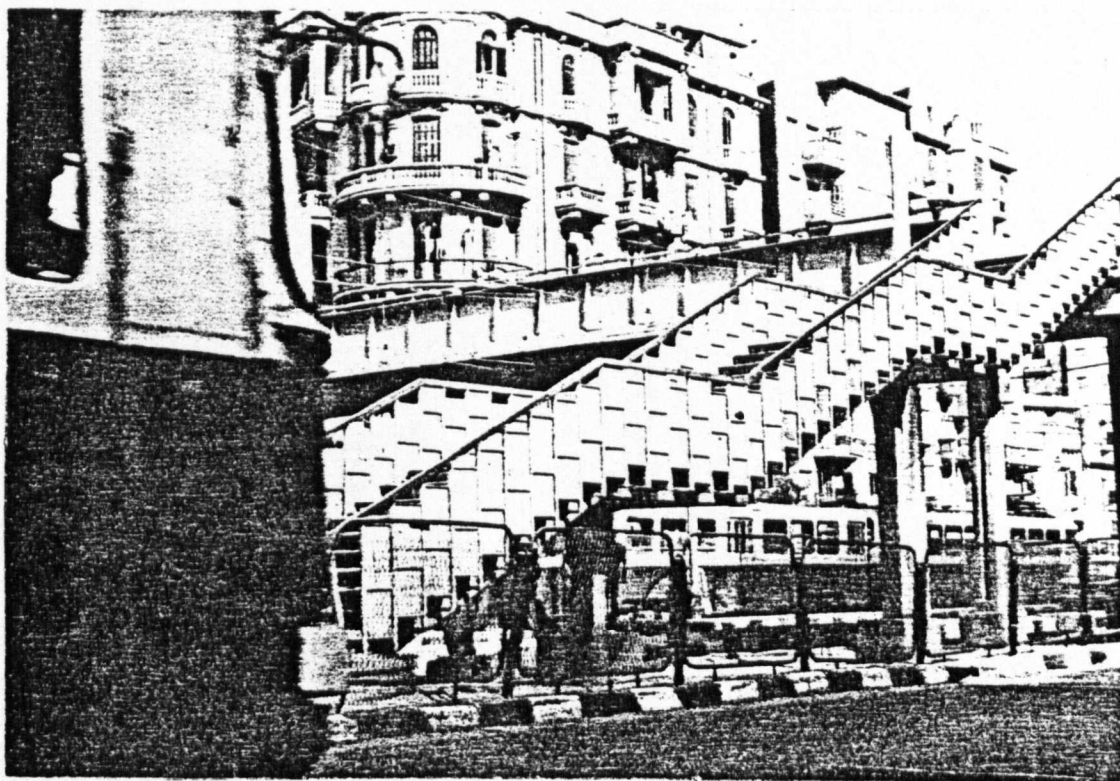


Fig. (11.49). The pedestrians' bridge at Al-Falaki Square. As one can see in this picture, the bridge looks ugly, heavy, aggressive and inhuman.

(Source: Photograph taken by the Researcher.)

## 11.7 THE LANDSCAPE OF THE SQUARE AS A RECREATIONAL AND FORMATIVE ELEMENT

It was mentioned at the start of this analysis, that the landscape of Liberation Square was destroyed completely at the end of 1982 as a result of constructing Al-Tahrir underground central station in the middle of the square. However, analysing and discussing the potential of that element would be based on the fact that this destroyed landscape would be rebuilt exactly as it was intended to be before.

During several meetings between the researcher and officials in Cairo in January 1985, it was confirmed that the previously destroyed landscape would be reconstructed according to its previous design once the construction of the underground station is completed in the middle of 1987. If we give a speculative look at the design of the system of entrances and exits for this station and its corresponding relationship to the pavements and paths of the last existing landscape, we would be assured of the fact that the expected landscape design would be the same as the destroyed one.

As we review the general theories which govern the landscape design process, we find mainly that the design of such elements should meet the varied psychological needs of excitements and pleasure for the users of the city. The landscape design process as Eckbo says (1969, p.59):



Fig. (11.50) Nature in Landscape.

(Source: Eckbo, 1969, p.58.)



Involves the making of all specific decisions as to physical form and arrangement, from the most generalised preliminary diagrams of land-use, space needs and circulation to the final, most minute detailing of each fence; walk and flowering plant. To design the landscape is to decide the exact form and arrangement of everything to be seen or experienced by a given individual or group within a given area or movement zone. 10

Landscape design process as has been mentioned previously can be counted as any other art design process in that it should comprise a state of balance between its used elements. Green areas as the foremost of these elements, can be treated as feminine objects by which a sense of contrast, softness and relaxation can be established. Green areas and parks within our cities, play an important part in introducing the spirit of the countryside to the city. According to Ardland and Bakhtair (1975 p.68), gardens and parks played a great role throughout Islamic architecture, having counted as an integral element in the hot weather. In addition to its use as a source of pleasure and charm, water as we know has also been used as a relief from heat in islamic architecture within those hot countries like Egypt for example. Water as in Bacon (1967, p.85), can play a great part in projecting the dramatic effect of a piece of sculpture, especially if it is associated with well designed lighting. Being considered one of the main elements in designing the squares, the floor surface can be counted also, as a great spatial unifying element. The Campidoglio design floor with its oval star shaped pattern, designed by Michelangelo can be cited here as an example showing such an effect of unification.



In general, variation of materials, levels, colours and lighting can play an important role in the enrichment of our landscape and its articulation.

As we start analysing the prior landscape of Liberation Square, we find that the most important thing which attracts our attention is its generalised boring and chaotic condition. In an interpretation of the last observation, one can say that such a boring and chaotic state can be attributed to many factors. The first of these factors can be related to the lack of green and the areas of vegetation. Such a lack can be attributed of course to its extravagant clumsy use by traffic, which slices it into small pieces and occupies a great portion of it. The second reason which lies behind the boring condition of the landscape, can be attributed to the unskillful use of its sculptural element, where one would be able to perceive a sense of challenge and rivalry, between both the previously existing granite base and the fountain in that square. As for the third reason, it can be attributed to the unsuccessful design of its paving areas, which do not provide any sense of variation or excitement through the sensitive use of a well designed and beautiful coloured pattern for example or through the use of varied exciting levels.

As a summary, one can say that the previously constructed landscape in Liberation Square did not hold any sense of aesthetic dimension. It suffered the serious lack of green areas and trees as a vital heat relief element. The

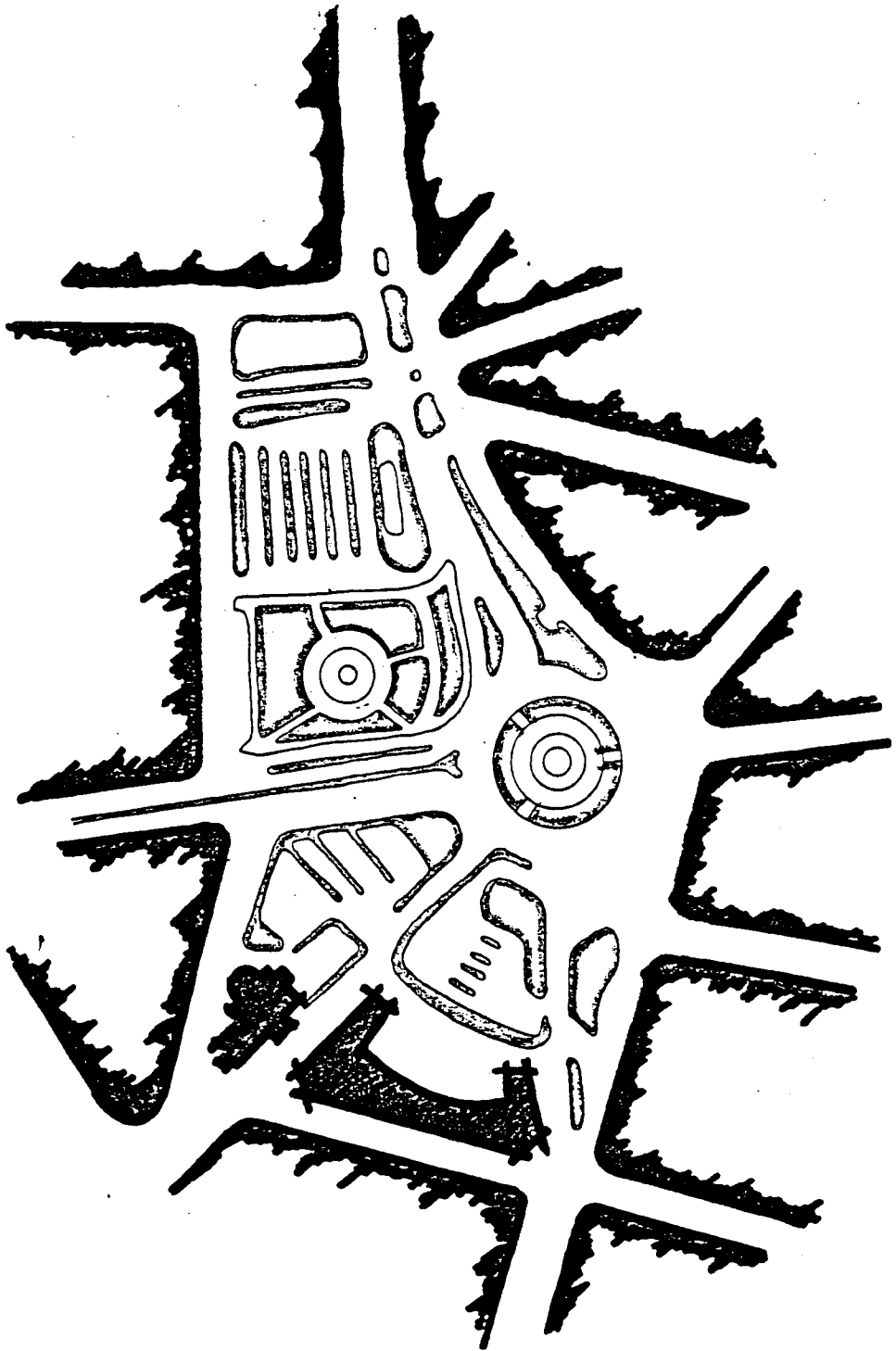


Fig. (11.51). The Square's previously demolished landscape.

(Source: Prepared by the Researcher.)

dramatic effect of the variation of levels, the contrasted effect of its varied materials either in colour or in texture, the sense of richness through the use of the element of furniture and finally it suffered the lack of the sense of charm and beauty through the use of the element of sculpture.

We know from our previous study that Egypt lies in the tropical region which is characterised by its hot weather during the summer and we know also that this fact was behind the mystery of using the internal court, the fountain and the wind catcher as a heat relief element in the Egyptian islamic architecture. Consequently we can understand that the scarcity of existing green areas, trees and the water element in the landscape of Liberation Square, would be considered a disaster in summer where its users would not find any shaded and cool place to avoid the heat of the weather at that time of year. As a quotation from the field study findings, one will recall how much suffering the square's visitors had to bear in summer, as a result of their inability to find a shaded place to protect them from the heat of the sun. Hence it can be understood that the existence of the green areas, trees and the element of water, can be counted as a vital need in these squares which exist in hot countries.

As a result of what has been mentioned previously, one can say that such a result complies with the significance of the six hypotheses in that research and proves them where it has been assumed before that the design of those squares

which needed to be built in the countries which lie in the region of North Africa require a special climatic treatment compared with those squares built in European countries.

#### 11.8     THE SQUARE; ITS EXPRESSIVE AND SYMBOLIC CONNOTATION

It has been argued theoretically in The Literature Review, that symbols play a great part in stretching our imagination towards an understanding of the hidden implication of the visualised theme. Also it has been argued that the most effective forms of symbols are those which tend more to the metaphor than to simile. The monumental building as a symbol has been accepted since the Renaissance, as a representation of the historical and the ideological values of the community. Among Rome's greatest buildings the Colliseum stands as an example of these monumental and symbolic qualities of architecture. It has also been mentioned that the most powerful symbols which we can find are those which are derived from the very elementary perceptual sensations, which in their turn refer to the basic human experiences such as the sun, seas and the moon. Also, it has been argued that the spontaneous symbolism, can be considered as the most powerful aspect of symbolism as a result of its direct relationship to the inherent expression of the visualised object. Architecture as a symbol has been accepted for a long time as a cultural representative and as an expression of it.

Now as we start investigating the symbolism theme in the square under analysis, we find that the most important thing which attracts our attention is its name as a representation for the meaning of Liberation. Recalling the history of that square and its symbolic connotation, one can understand the reason for such a call; where it has been mentioned that the location which defines the square from the west, was occupied by the British troops headquarters building. This building which used to dominate Liberation Square on that side, was destroyed and replaced by the Government Central Committee building, and the building of Hilton Al-Nil and thirdly by the Arab League building, during the early part of Nasir's revolution after 1952. Hence it can be understood that the location of that square has a special significance and relationship with the theme of 'Liberation' in the consciousness of the Egyptian citizen.

When we start analysing the character and the expressiveness of the buildings which define Liberation Square and dominate its closure visually, we find that the Arab League building is the only building which can be counted as a symbol of the Liberation theme. This building which has been established over that ground which used to be occupied by the British troops headquarters, was meant to be a representation and a symbol of the significance of liberty, not only for Egypt but for all of the Arab countries. Where it was thought that such a significance would not be attained unless the Arab world becomes unified in one strong league. But, as we consider the impact and the influence of that



building and its character upon the closure of the square, we can find that this building has only a marginal influence on that square compared to the rest of the buildings which enclose it like the Government Central building or the building of Hilton Al-Nil for example. There are many reasons behind such an observation, some of which deal with the orientation of the building in relation to the core of that square, and others deal with the formal constitution, the perceptual impact and the potentiality of that building in relation to the others. As we consider the orientation of the Arab League building in relation to the heart of Liberation Square, we notice that its mass has a little influence on it, where it overlooks its closure laterally, showing no sense of dominance or authority over it. But with regard to the formal constitution of that building and its perceptual impact upon that square, it can be said that this constitution does not show any sense of power or strength either in its details or in its used scale. In a comparison between the formal constitution of both the Government Central building and the Arab League building, one would be able to realise how much power and authority the first building has, and consequently how much dominance it imposes over Liberation Square, compared with the Arab League building, which should have dominated and mastered the closure of the square.

As a result of the last argument, it can be understood that the Arab League building has failed to achieve its role as a representation of and as a symbol of the theme

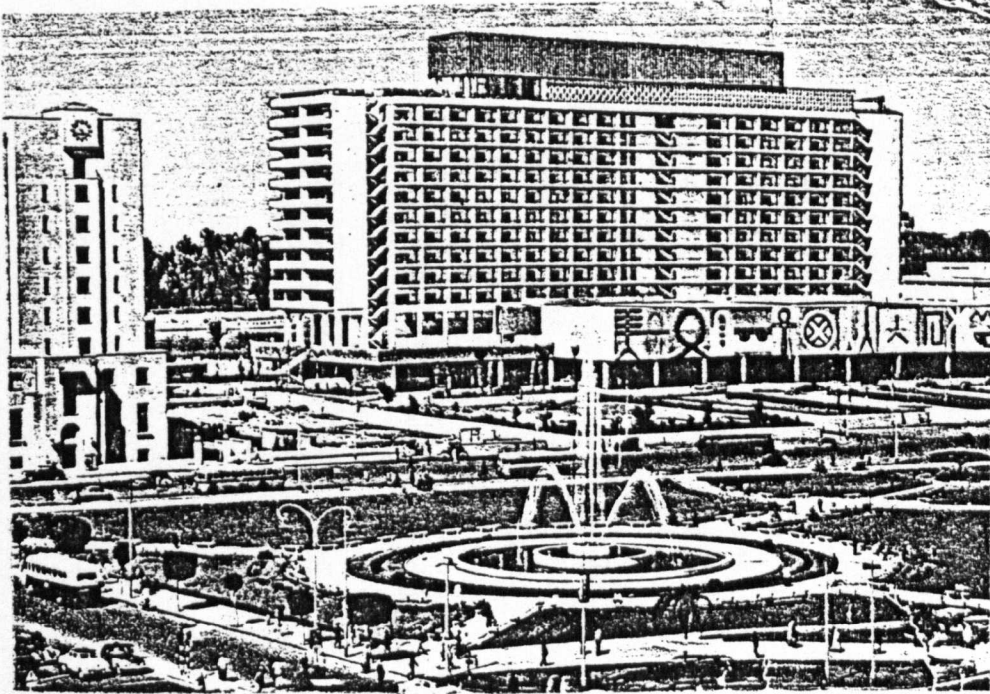


Fig. (11.52). Liberation Square and The Arab League Building. On the left hand side of this photograph one can see the Arab League Building facing the Square laterally showing no sense of dominance or authority upon its closure.

(Source: Postcard No. 638 published by Lehnert & Landrock, Cairo.)

of Liberation. Such a discovery also can account for the mystery of the respondent's failure to identify the previously mentioned building as a representation for the theme of Liberty during the field study. Thus, one can say that the architectural representation of the theme of Liberty in the square under the analysis is doubtful, and such doubts might be confirmed when we add into our consideration the square's lack of any other monumental structure or sculpture to symbolise and to commemorate the theme of Liberation and its context.

Considering the result of the last discovery one would be able to say also, that the established contradiction between the name of the square and its visual and formal look, would weaken that square its significance inside the city as an important and special foci . Looking at other examples of Cairo squares, one would be able to realise the important role which the square could play as a symbolic focal point within its environment. The square of Al-Husayn's mosque fig. (11.53), for instance can be treated perceptually as an important religious focal point within Cairo, through which the whole quarter of Al Husayn can be identified and conceptualised. The same is true for Abdin Square (See page 306 ). The reason behind such importance which the last two examples of squares have acquired, can be related to their domination by special and significant buildings.

Now as we move to another aspect of symbolism, that is related to the culture and its architectural expression through the style of buildings used, one can say that the

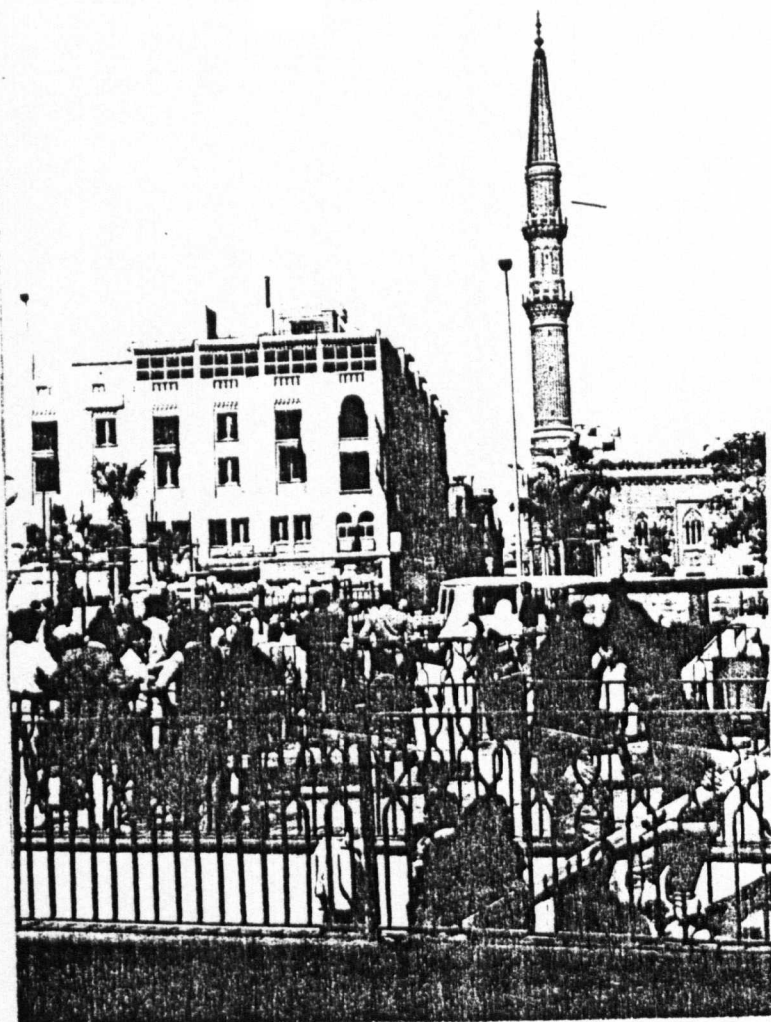


Fig. (11.53). Al Husayn's Square - a symbol for its environment.

(Source: Photograph taken by the Researcher.)

environment of Liberation Square does not relate to Egyptian cultures in a tangible sense. The reason for this is the excessive use of the European style of buildings around that square.

As a summary of the last analysis it can be said that none of the Liberation Square buildings show any sense of power or authority and consequently they cannot be treated as a symbol of the Liberation theme. None of its architectural elements can be counted as a monumental representation of the above mentioned theme. Also, it can be said that the conflict which arises between the name of that square and the expressional mood of its architecture, has resulted in the failure of that square to influence its environment and mark it as a unique part within the whole city of Cairo. It can be said also that, the inappropriate use of the European style of buildings around the square, has resulted in the creation of a sense of isolation between that square and the mother city, and consequently it can be argued as well that this square with its buildings does not reflect the Egyptian Islamic culture and the genuine identity of the old city of Cairo.

As a result of the previously mentioned conclusion about the symbolic role of Liberation Square within the city of Cairo, one would be able to say that such a conclusion corresponds with the third hypothesis of the research and proves it, where it has been assumed previously that squares vary in their characters and their aesthetic moods. Therefore, they can be considered the most powerful spatial



elements in the city, by which its parts can be identified and recognised easily.

#### 11.9     THE SQUARE AND THE CONSERVATION POLICY           OF ITS HISTORICAL BUILDINGS

It has been argued previously in the theoretical review that conservation plays an important role in keeping and preserving our historical heritage which represents the roots of our ideological and aesthetical values. Also, it has been mentioned that the application of such a policy, is thought to be of a great psychological importance for the human being and its emotions which feel security in seeing the past. Preservation in its simple meaning refers to the necessity of establishing a strong link between the past and the present otherwise our historical values and consequently our identity might be lost.

Now, as we start analysing the architecture of Liberation Square, in order to define its important buildings which are worth preservation, we find that both of the Egyptian Museum building and the Ministry of Foreign Affairs buildings, can be counted as the greatest historical and most valuable buildings which are worthy to be preserved. The first reason for this is the uniqueness of their rich classical style of architecture which is no longer used in Egypt. The second reason is their historical value, being counted among the oldest buildings in their environment through which its history can be read. On the one hand while we are

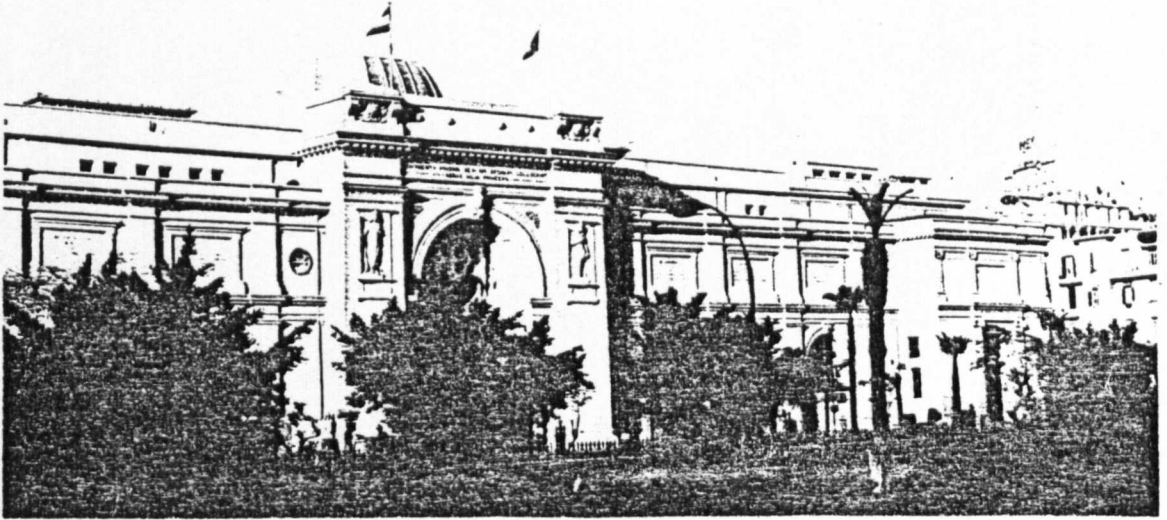


Fig. (11.54). The Egyptian Museum.

(Source: Photograph taken by the Researcher.)



Fig. (11.55). The Ministry of Foreign Affairs Building

(Source: Photograph taken by the Researcher.)

recommending here the necessity of keeping and preserving the last two buildings for their historical values, unfortunately we can see on the other hand that the unsuccessful construction of the new high buildings behind both of them has destroyed their scale and consequently their identity. The destructive relationship between the museum and the tower of the Hilton Ramses Hotel is worth of note here. Commenting on such a relationship, one can say that this tower which forms the backdrop of the museum building has dominated the scene and monopolised the vista, drawing ones view in its direction instead of emphasising the later building and projecting its importance. What has been said here of the relation between the Egyptian Museum and the tower of the Hilton Ramsis, can also be said of the relationship between the Ministry of Foreign Affairs building and the tower of the Samiramis Hotel and its recent surrounding high buildings.

As we continue the discussion of the conservation policy in the square, we find a contradictory situation. In more interpretation, while we speculate on the significance of the European style of the previous buildings and the other buildings around them from the same style, we find that the existence of this architecture with its alien style can be considered as a very damaging break in the continuity of our history and consequently our sociological, ideological and our aesthetical values which we used to see in our Islamic architectural style. Hence we can understand that the importance of keeping the last two buildings, would be to remind

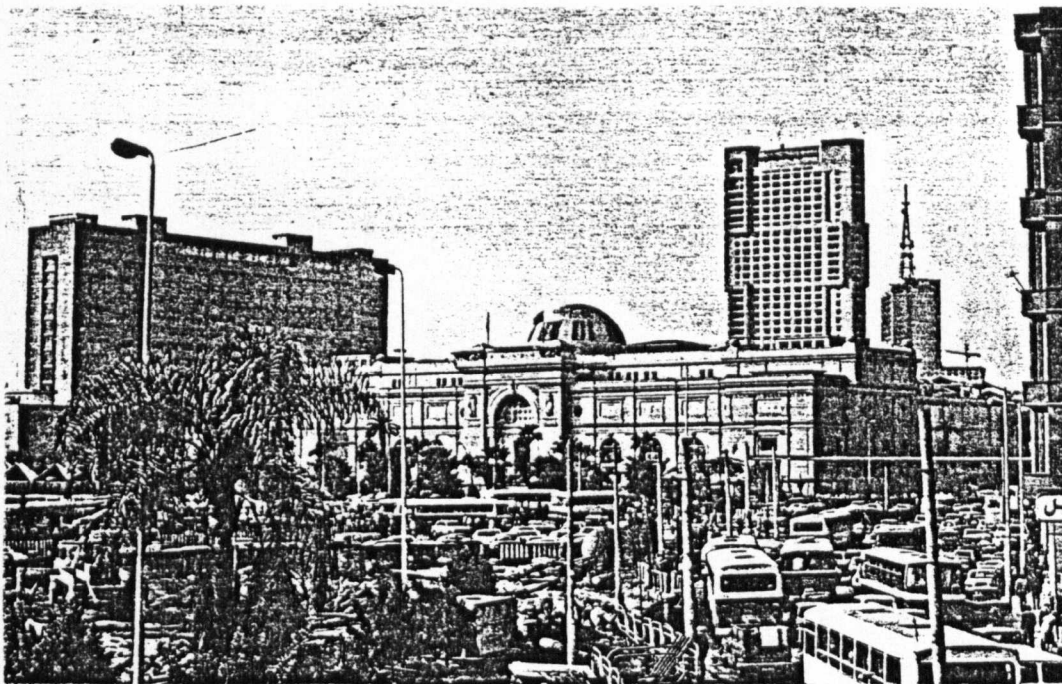


Fig. (11.56). The Egyptian Museum and the tower of Hilton Ramses. In this illustration one can notice how badly the towers in the backdrop have destroyed the identity of the museum.

(Source: Photograph taken by the Researcher.)

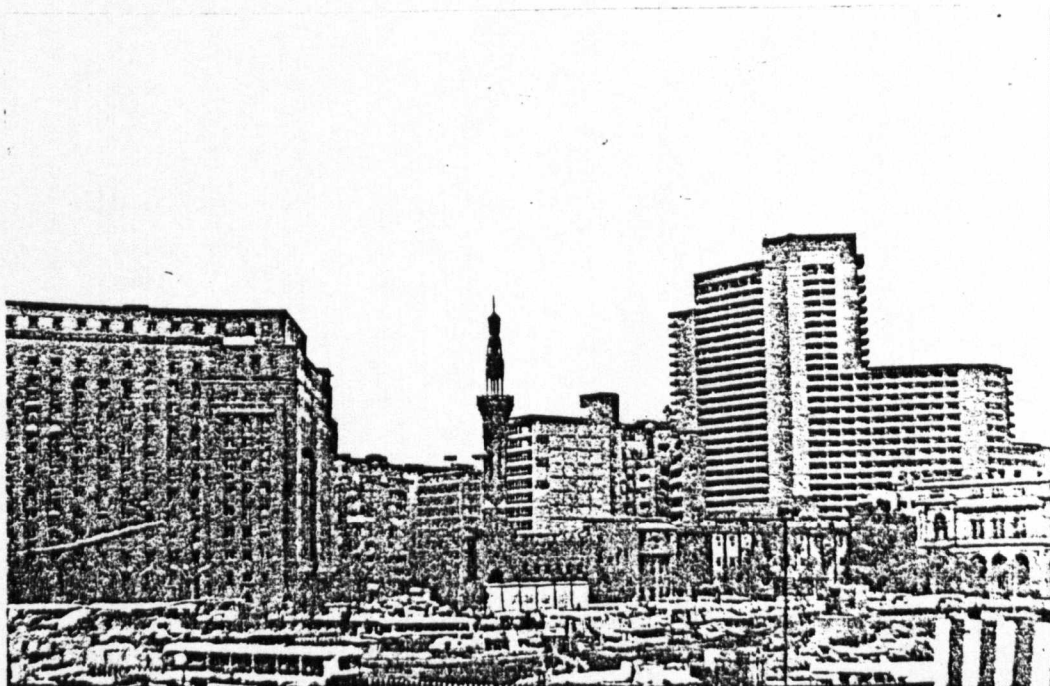


Fig. (11.57). The Foreign Affairs Building within a sense of confusion. In this photograph one can hardly distinguish the Foreign Affairs building which stands on the extreme right-hand-side of this photo.

(Source: Photograph taken by the Researcher.)

us of the unforgivable introduction of the European style to our country and its effect in destroying the link between our past and present.

As a summary, we can say that both the Egyptian Museum building and the Ministry of Foreign Affairs building are worthy of preservation and to be maintained for their historical and aesthetical values. Also, it can be said that such preservation would keep for Liberation Square its special character and its distinguished aesthetical dimension among the other squares within the city of Cairo.

According to the previously mentioned discovery, one would be able to say that such a discovery complies with the third hypothesis in the research and proves it, while it has been assumed previously in this hypothesis, that the variation in the characters of squares and their aesthetic moods, can make them stand as the most powerful spatial elements in the city by which its parts can be identified and recognised easily.

#### 11.10 THE SQUARE AND THE STRUCTURE OF THE CITY

It was indicated earlier that the newly added part of modern Cairo, which was built in 1867 by Ismail, was developed according to French planning techniques, which were used in the design of the new Paris by Haussmann. We know that eleven squares were built, out of the thirteen squares which were proposed in Mubarak's plan at that time. As we can see from the attached map, these squares are (1)





Fig. (11.58). Plan of the Medieval City of Cairo before Ismail's addition in 1867.

(Source: Architectural Review, 1978, Vol. CLXIV, No. 978.)

Al-Attbah Al-Khadra, (2) Addin, (3) Khazindar, (4) Bab El-Hadid, (5) Sayidah Zaynab, (6) Bab Al-Luq, (7), Bab Al-futuh, (8), Mohamed Ali, (9) Sultan Hassan, (10) Qasr Al- Nil (Liberation Square today), (11) Theatre or Opera, (12) Birkat Al-fil, (13), Al Azhar. Considering the significance and the symbolic value of each one of these squares within its environment, one can say that these eleven squares which were included in Mubarak's plan played an important part in articulating and identifying the varied parts of the city of Cairo during the second half of the nineteenth century. Each one of them established for itself a symbolic nucleus within its environment, through which its economic and sociological significance was epitomised. The quarter of Abdin, for example, can be identified by its Royal spatial and sovereign faci (Abdin Square) which is dominated by the Palace of Abdin (p. 306 ). The quarter of Qasr Al- Nil used to be identified and recognised from the square of Qasr Al- Nil (Liberation Square today) (P. 389 ), being considered its major focal point which was dominated by the palace of Qasr Al- Nil before its destruction by the British during the occupation period. The same is true for the rest of the eleven squares, which were built in 1867 and formed the kernel of modern Cairo which can be seen today.

From the last argument one can say that squares play an important part in identifying and articulating the varied parts of the city as a result of the variation in their symbolic significance, which in its turn is a part of the significance of its environment. Accordingly we can say that

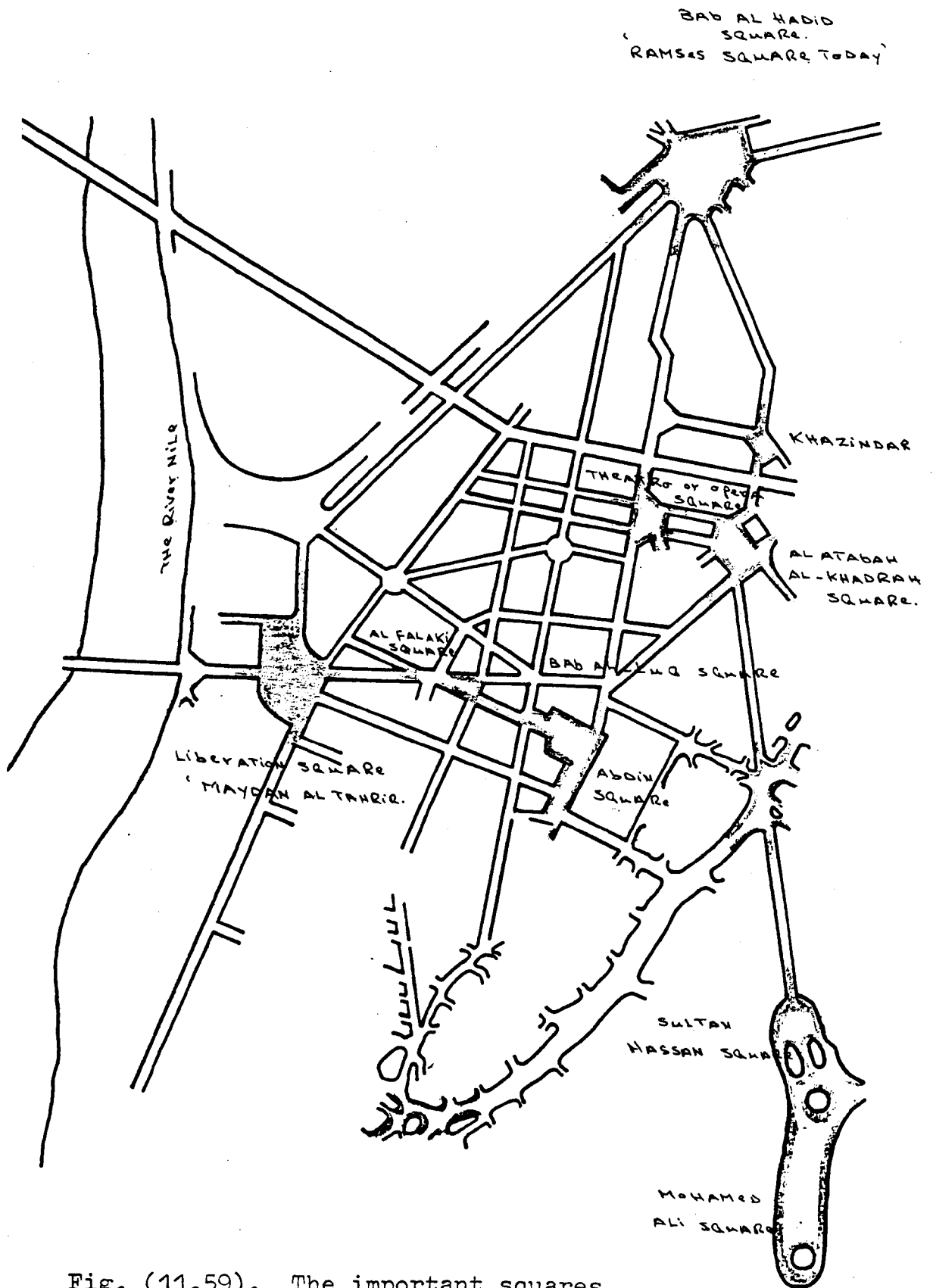


Fig. (11.59). The important squares appeared in the modern city of Cairo, 1887.

(Source: Prepared by the Researcher.)

such a discovery complies with the third hypothesis in this research and proves it.

Now, as we look at the spatial pattern of the 1867 addition to Cairo devised by Ismail, we find that the planning technique used in that part of the city varies greatly from the planning technique used in the old city. On the one hand while the old city was characterised by its broken narrow streets, and by its inward spatial formation, we find on the other hand that the modern part which we consider the kernel of the contemporary city is characterised by its straight roads and its outward spatial formation. As in the planning technique used in both of Washington by L'Enfant and Paris by Haussmann, the newly added part of modern Cairo is characterised by the use of an irregular triangular network and a grid-iron network at the same time. It is worthy of note that such applications of these combined networks in both of the above mentioned cities, has been criticised by Lynch, where he points out that such a usage in a large scale city establishes a sense of confusion and chaos. <sup>11</sup>

As we analyse the spatial structure and the planning pattern of the newly added part of the city of Cairo, we consider the very heart of the whole city, upon which its most recent extension which can be seen today has taken place. We find that the relationship between the established squares of the modern part, and those which were established in the old part of the city is a confusing one. One can say that this relationship between those squares in general



(Fig. (11.60). Plan of the Central Part of the contemporary city of Cairo with both of its old and new parts.)

(Source: U.I.A., 1975, Issue No. 7.)



does not provide any sense of clarity and consequently does not raise any sense of spatial tension between each other, when compared with those squares constructed in both of Paris and Washington. The reason for this is the unskillful design of the structural pattern of that part of the city which lacks both legibility and order. As an example of this confusing relationship between the squares constructed in the part of the city under analysis one would be able to quote the awkward connections between Liberation Square and Al-Attbah square, between Liberation Square and Mohamed Ali Square, between Liberation Square and Abdin Square and between Liberation Square and Al-Sayidah Zaynab Square.

The construction of Qasr Al-Nil Palace around the square of Qasr Al-Nil (Liberation Square today) was meant to create a ruling place instead of Abdin Palace. Therefore we can expect that such an awkward connection between that square and the other squares within the city would have influenced the contact between the ruling place and the other parts of the city. We know from our previous reading, that the plan of London by Hooke (see page 353 ), which has been praised for its coherence and clarity, comprised four major squares each related to the other in a very direct way. Similarly the city of Savannah (see page 355), was developed and grew up through the establishment of a strong and connected series of repeated squares within a grid iron pattern. Both of the designs of the two cities can be cited here as easy, recognisable, memorable and imagable patterns which are easy to perceive and to conceptualise, for it has

been stated previously that we tend to perceive wholes and not particles, easy unified patterns and not complicated ones.

Comparatively we can conclude that the pattern of the newly added part of modern Cairo (1867), with its squares and its overall spatial structure, is difficult to conceptualise and to build a strong image as a result of its established confused pattern.

According to the above mentioned discovery one can say that such a discovery complies with the fourth hypothesis of this research and proves it. This hypothesis assumed previously that the formal organisation and the spatial relationship between squares within the city stands as an important factor in determining the mood of our perception of its structure, i.e. the more complicated this relation is, the more difficult is the structure of this city to conceptualise and vice versa.

#### 11.11 MODERN CAIRO AND THE DESIGN OF NEW PARIS BY HAUSSMANN

It has been mentioned earlier in the historical account that the newly added part of the city of Cairo used the same planning techniques which were used in the design of new Paris by Haussmann.<sup>12</sup>

Reviewing the planning technique of the later city, one can say that Paris has developed and extended basically around one dominant axis starting from the Louvre, passing

the Tuileries Palace with its gardens, crossing the Place de l'Etoile and ending more recently at the new modern centre, La Defence. The Champs Elysees, the name of the above described axis, represents genuinely the application of the outward regional expansion force which this new city has employed in its early evolution, but later it was the achievement of Haussmann who reversed the direction of this force towards the heart of the city, through the establishment of his powerful and magic axes, which crossed the River Seine. From this river which has been treated as a central spine for the growth of the city, a series of axial and perpendicular developments were extended, notably the esplanade of the Invalides and the Champ de Mars with the Eiffel Tower.<sup>13</sup>

As we start analysing the spatial structure for the modern city of Cairo, which has been established by Ismail in 1867, in order to reveal the potentiality of its urban spaces, and their interaction with each other in terms of Haussmann's applied principles in the design of new Paris, we find that the spatial structure of the city did not hold the same potentiality as that which characterised the structure of Haussmann's Paris. The reason for this is its chaotic planning pattern which did not understand the significance and the power of Haussmann's established axes in Paris. In further interpretation, one would be able to say that the linear spatial developments of the city under analysis do not provide any sense of axial thrust energy and consequently do not provide the same sense of formality and

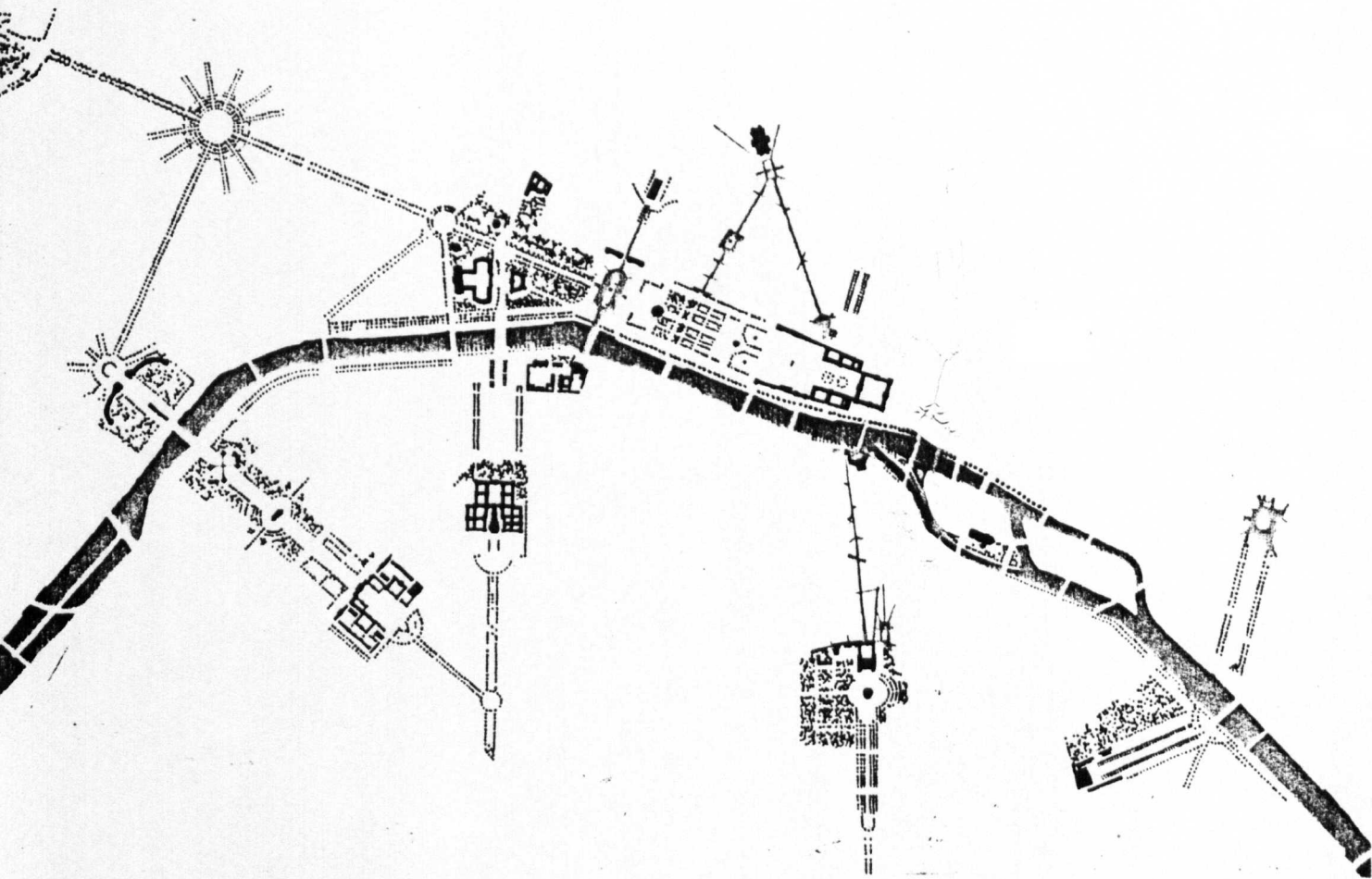


Fig. (11.61). The Structure of Paris after Haussmann's addition.

(Source: Bacon, 1967, pp.178-9.)

monumentality which characterised the spatial developments of the city of Paris. As an example of this unsuccessful spatial formation, one can quote the relationships between Liberation Square and Ramses Square, between Liberation Square and Abdin Square, between Abdin Square and Al-Attabah Square, and so on. As we examine the relationship between the bridge of Qasr Al-Nil (Al Tahrir Bridge) and the Palace of Abdin with its dominated square, we realise that there is a sense of confusion and ambiguity between both of them. The reason for this is that the sense of individuality between both of them in terms of their own axes which clash with each other at Al-Falaki Square. Worthy of note is the fact that the relationship between that bridge and the palace, can be compared to the relationship between the church of the Madeleine and its leading bridge over the River Seine. In this example we can see a very successful, axial, and unified relationship between the building of the church and the crossing bridge.

As a summary of what has been mentioned, one would say that the newly added part of modern Cairo by Ismail in 1867 which we consider the basic nucleus of the whole structure of the contemporary city, has applied the same planning technique, which has been used in the design of Paris but in unsuccessful and unsatisfactory ways. And the reason for this is the restrictions which the medieval old city imposed on the construction of the new part, as a result of their variation in the used planning technique.

According to the last conclusion one can say that, this



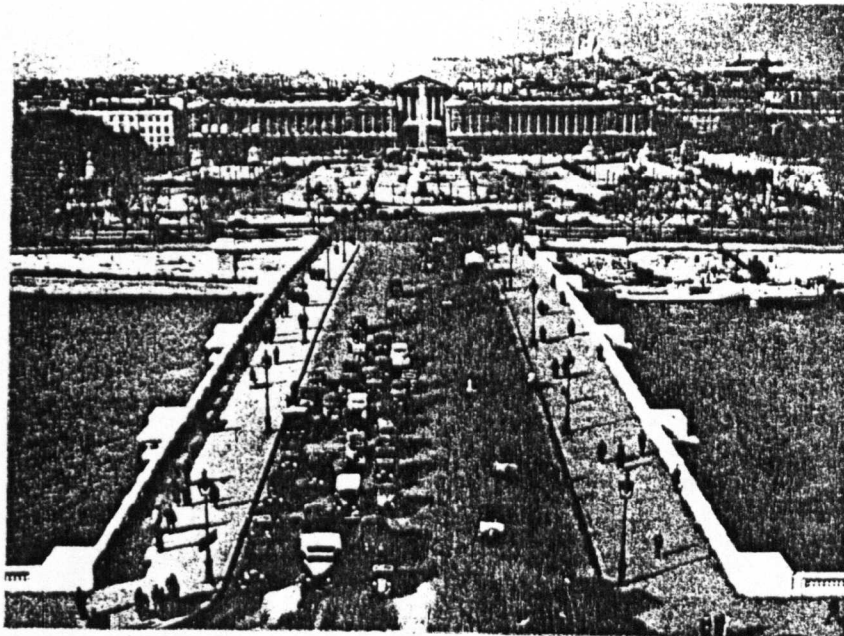


Fig. (11.62). The Madeleine & its leading bridge over the River Seine. The view from the bridge axially passes the Place de La Concord and terminates at the church.

(Source: Zucker, 1959, p.190.)



Fig. (11.63). Liberation Square as it can be seen from the direction of Al-Tahrir bridge. The same view passes the square assymetrically and terminates at nothing.

(Source: Photograph taken by the Researcher.)

Fig. (11.64). Al-Falaki Square and how it looks today after the construction of the elevated crossing system.

(Source: Photograph taken by the Researcher.)

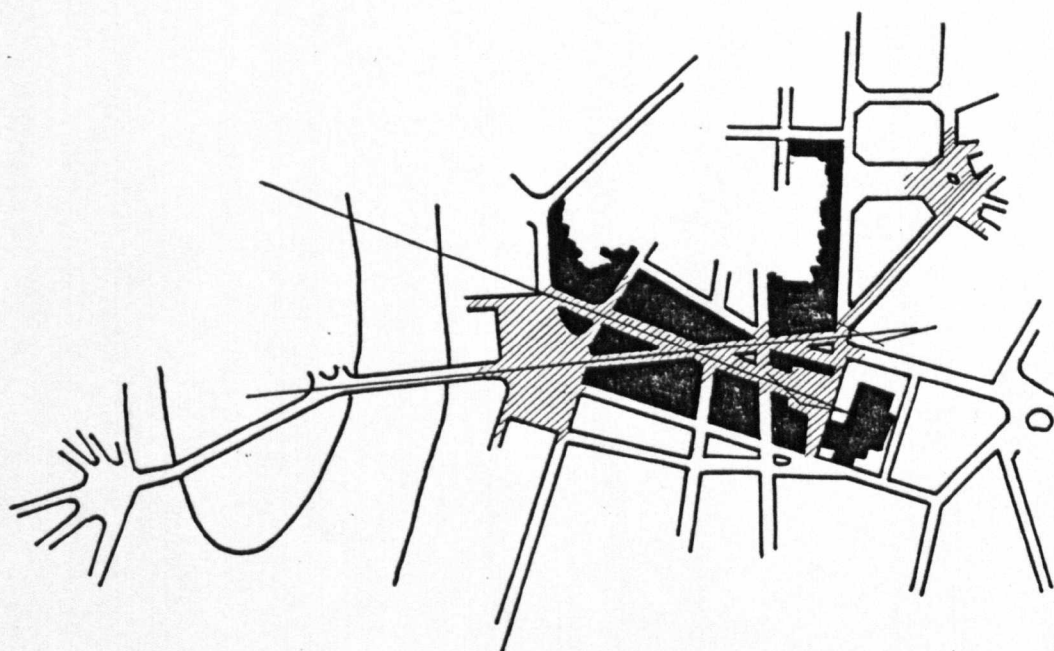
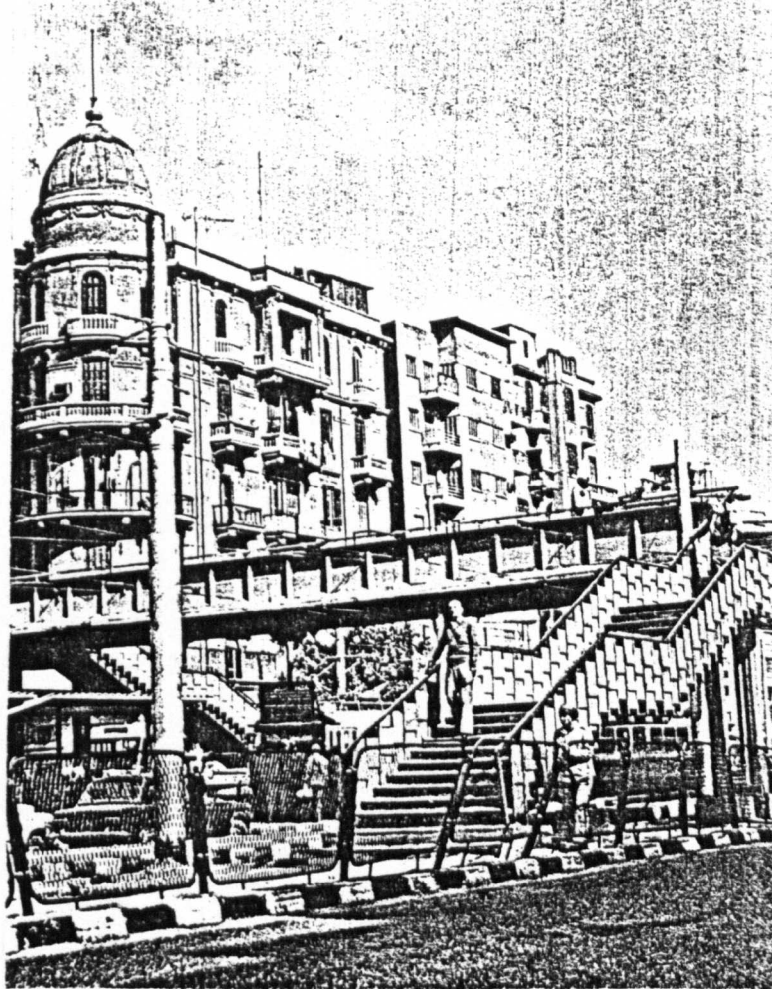


Fig. (11.65). Collision at Al-Falaki Square. The map shows the established sense of confusion and axial collision at the above named square.

(Source: Prepared by the Researcher.)

conclusion complies with both of the fourth and the fifth hypotheses of the research and proves them.

11.12     CAIRO'S SPATIAL STRUCTURE AND  
ITS MONUMENTAL AND HIGH BUILDINGS

It has been argued before that the monumental and high buildings play an important part in articulating and punctuating the structure of the city. As a strong visual landmark inside the city, both of these qualities of buildings can be treated also, as a spatial organising element within the structure of this city, by which one can find one's way and can define one's place as well. It has been argued that there is a mutual relationship between the spatial structure of the city and the location of these buildings in it, where it was noticed that those types of buildings subconsciously tend to be positioned around the squares as a major spatial node inside the city, or around any other open space within the city. The reason for this can be related to the great power in which these qualities of buildings develop around themselves and to the necessity of this power for a frontal wide space to reveal themselves in. With their association with the structure of the city, the monumental and the high buildings play an important role in drawing and defining the formal structure of the city and its conceptual mood of perception.

According to Bacon (1967, p.123), the spatial structure of the city of Rome during the Baroque period depended

basically on the use of the obelisk as a movement organiser through which its strategic points used to be identified easily. So the city of Philadelphia (Bacon, 1967, pp248-9), can be quoted here as another good example, in which one can see a successful application to the previously mentioned relationship between the way of setting the high buildings with regard to the spatial organisation of the structure of the city.

The design of Venice (Bacon, 1967, p.87), with its dominant and subordinate centers can be cited here as a third example, in which one can see the effective role which the monumental and the high buildings can achieve in articulating and identifying the varied spatial centers inside the city.

As we start analysing the spatial structure of the city of Cairo in relation to the organisation of its monumental and high buildings, we find that the old and new parts of the city should be analysed separately. While we look at the structure of the old part of the city, we shall find that, this part was characterised by a great sense of articulation in its spatial constitution, as a result of the fine and skillful distribution of its mosques with their raised minarets, which used to be dominated by the elegant minarets of Mohamed Ali mosque on the top of the citadel.

Now, as we turn to the spatial structure of the modern city with its relation to the monumental and the high buildings, we discover that the important feature which characterises the formal constitution of this city, is its





Fig. (11.66). The skyline of London in the nineteenth century.

(Source: Bacon, 1967, pp.200-1.)



Fig. (11.67). The skyline of Venice. In this illustration one can notice how greatly the spire of San Mark's dominates the other dispersed spires around the city.

(Source: Bacon, 1967, p. 86 )



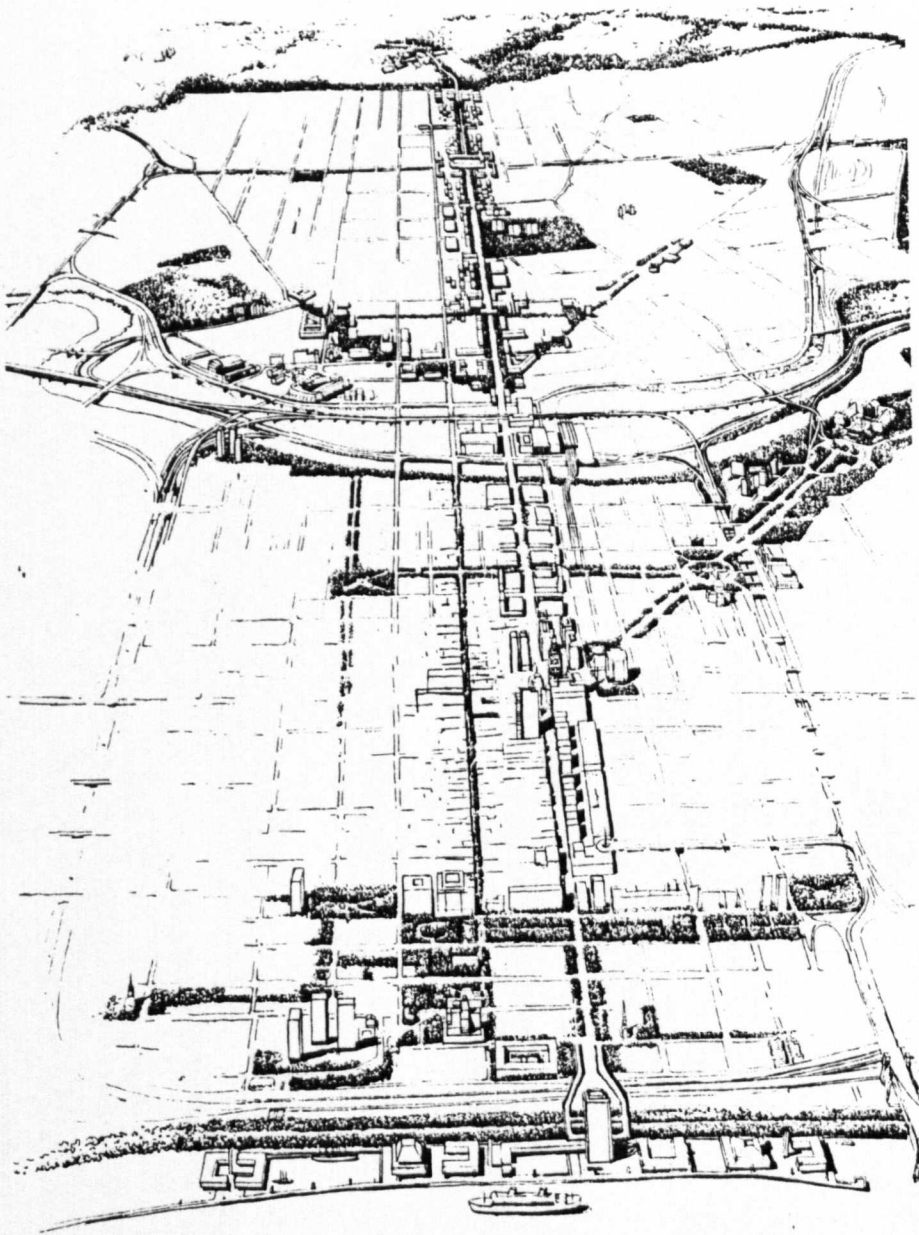


Fig. (11.68). The City of Philadelphia.

(Source: Bacon, 1967, p. 264 ).

confused sky line which does not conform with its spatial structure. The reason behind this phenomenon is twofold. The first reason can be related to the current irrational policy of constructing high buildings everywhere regardless of its relation to the structure of the city and its spatial and aesthetical values.<sup>14</sup> Worthy of note here in that respect is the construction of the Sheraton Ramses Hotel, Hilton Ramses Hotel, Samiramis Hotel and Cairo Plazza. The second reason is the commonplace and the modest use of the twentieth century architecture in that part of the city, which as we know, hardly produces any sense of monumentality, which is needed as a vital element in identifying and characterising the varied spatial nodes of the city.

As a summary of the last discussion one would say that the spatial structure of the city of Cairo with its sky line is very confusing; where it was argued that this skyline does not provide any successful sense of hierarchical organisation in terms of locating its monumental and high buildings. No one can claim the ability of identifying its spatial and varied nodes through the current relationship between these buildings. No one can even read its spatial structure clearly, and define the dominant and the subordinate spatial nodes within its expanded organism. And finally, no one can distinguish and identify the location of Liberation Square as a dominant node within the structure of this city as a result of its chaotic and confusing skyline.



Fig. (11.69). The skyline of old Cairo. On the extreme right of this photo one can see the Minarets of Mohamed Ali's Mosque dominating the skyline of the medieval city.

(Source: U.I.A., 1975, Issue 7, )



Fig. (11.70). Different views of the skyline of modern Cairo.

(Source: Prepared by the Researcher).



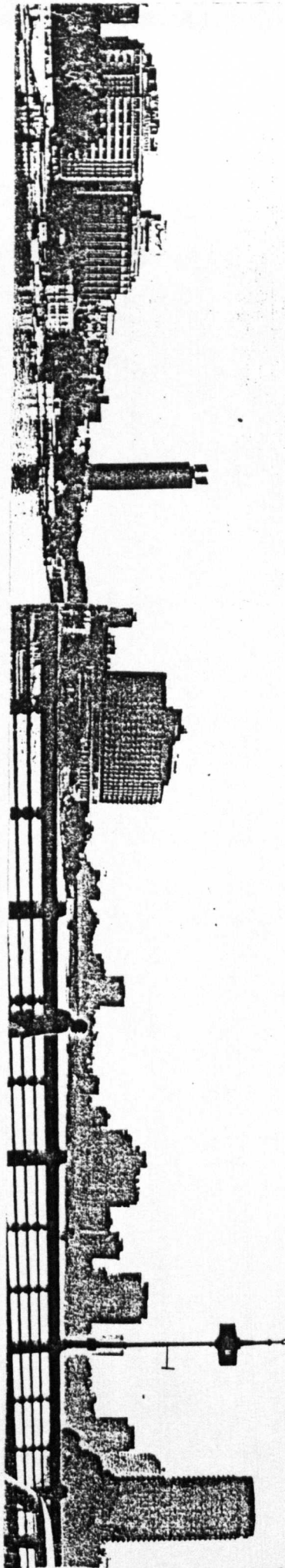


Fig. (11.71). The skyline of modern Cairo. View from Al Tahrir Bridge. (Qasr Al-Nil Bridge)', towards south east. In this illustration one can perceive a sense of challenge and lack of dominance between the high buildings, which rival each other on the eastern side of the River Nile.

(Source: Photograph taken by the Researcher.)

- 1 Abdel-Gawad, 'Cairo as a City.....and Egypt's Capital also, Its Age is over 10,000 Years. How it was and what its origin', Journal of the Egyptian Society of Engineers, Vol. 21, no. 3 (1982), p.11.
- 2 Abdel-Gawad, 'Cairo as a City.....and Egypt's Capital also, Its Age is Over 10,000 years. How it was and what its origin'. Journal of the Egyptian Society of Engineers', Vol. 21, No. 2 (1982), p.22.
- 3 See ibid., vol. 21, No. 3, p.9 and Mubarak, Ali Al-Khitat Al-Tawfiqiyah Al-Jadidah, Topography and History of Egypt. (Bulaqu Press, Cairo 1888), Part I, p.83.
- 4 Abd-Allah, Reddah, 'That Man and Its Difficult Job', Journal Al-Ahram, No. 35863, February 1985.
- 5 Askar, Abd El-Nabi, 'The Traffic Problems in the City of Cairo', Journal of the Egyptian Society of Engineers, Vol. XX, No. 3, 1981, p.32.
- 6 El-Hawary, Mohamed, 'Cairo Transportation Problem', The Magazine of Engineers.
- 7 Ibid.
- 8 Smith, Peter F. Architecture & Human Dimension (Godwin Limited, 1979,) p.58.
- 9 Smith, Peter F. The Dynamics of Urbanism, (Hutchison Educational Ltd., 1974), p.96.
- 10 Eckbo, Garrett, The Landscape We See, (McGraw-Hill Book Company, 1969,) p.59.
- 11 Lynch, Kevin, Good City Form, (The Mit Press, Cambridge, Massachusetts, London 1984), p.283.
- 12 Abu Loughd, Janet L. (Princeton University Press, 1971), p.105.
- 13 Bacon, Edmund N. Design of Cities, (Thames & Hudson, London, 1967), p.179.
- 14 See Abdel-Gawad T (Cairo as a City and The Capital of Egypt, its Age Over 10,000 Years, How It was', Journal of the Egyptian Society of Engineers, 1982, Vol. 21, No. 3, p.20 and Allam, Ahmed K., (Moving the Capital, /.....

Journal of the Egyptian Society of Engineers, Vol. 21, No. 2,  
1982, p.28.



## PART 8

### CONCLUSION & RECOMMENDATIONS

## INTRODUCTION

This part consists of five varied and related points. Point No. 12.1 comprises a comprehensive hypothesis about the significance, the function and the relationship between Liberation Square and the city of Cairo.

Point No. 12.2 comprises an analysis and tests of the existing design of Liberation Square against the basic criteria and the limits of perception. Point No. 12.3 comprises a set of recommendations which are of relevance to Liberation Square. Point No. 12.4 comprises a proposal for redesigning Liberation Square. Point No. 12.5 comprises a recommendation of general validity and relevance of its application in any country of the world.

12.1 CONCLUSION

As a result of analysing the last case study one would conclude with the following points:

A. Historically, Liberation Square was built as a part of Al-Ismailiyah quarter (downtown Cairo) and its formal constitution underwent a major stylistic change during the first half of this century which resulted in the destruction of its unity. Further, the irrelevant use of the French technique in designing the square and its equivalents in the rest of the city resulted in the establishment of a historical disruption between the old and the new.

B. Functionally, Liberation Square works primarily as a major traffic node within the city of Cairo. In its present form it can also be identified as a main transportation commuting center within the city.

C. Liberation Square can also be described as a highly charged container of struggling opposing forces, i.e. pedestrian; traffic and constructions and as a solution for this, it would be necessary for us to try to reduce the volume and nature of its use, either by minimising the

traffic volume which runs through it, or by removing the terminals of the buses and the taxis to another place outside the square.

D. When we consider the overall relationship between the varied buildings, which define the closure of Liberation Square, one can say that the most obvious observation of this relationship is the established sense of contradiction and consequently the sense of isolation between them. It can be said that each one of these buildings has its own style; character, expression and self identity which has nothing to do with the rest of the adjacent buildings. There is neither a sense of rhyme to unify them within a whole contrasted formation of varied architectural expression, nor any sense of similarity to integrate them within one exciting constitution of different architectural accents.

E. As for the functional and the aesthetical value of the existing pedestrian bridge inside the square, one can say that this bridge functionally is used compulsorily and under severe necessity, as it is the only available means of crossing the hazardous junctions of the square and of its aesthetic value, it can be said that the overall appearance of the bridge is unsatisfactory, it looks ugly, heavy, aggressive and consequently inhuman.

F. With regard to the relationship between Liberation

Square and the River Nile, one can say that the design of this square does not provide a strong visual contact with that River, and nor does it provide a safe pedestrian connection with its promenade.

G. As for the Square's previously demolished landscape which is expected to be rebuilt similarly again after finishing the construction of the underground central station in 1987, one can say that the design of this landscape did not involve any sense of aesthetics, for it suffered a serious lack of the green areas and trees as vital elements in heat relief, the dramatic effect of the variation of levels, the contrasted effect of the varied materials either in colour or in texture, the sense of richness through the use of the element of furniture, and finally it suffered the lack of the sense of charm and beauty through the use of the element of sculpture.

H. Concerning the symbolic role of Liberation Square inside the city of Cairo, one can say that it stands as a representation of the significance of the concept of Liberation only in name. None of its buildings can claim the right of such representation or such expression and none of its constitutional elements can be counted as a monumental expression for such significance.

I. In considering the important buildings of



Liberation Square, which are worthy of conservation, it is suggested both the Egyptian Museum building and the Ministry of Foreign Affairs building are worthy of preservation for their historical and aesthetical value, which is a part of the value of that environment. Such preservation would keep for Liberation Square its special character and its distinguished aesthetical dimension among the other squares within the city of Cairo.

J. Concerning the spatial relationship between Liberation Square and the structure of the existing city of Cairo with its conflicting use of planning techniques, the Egyptian and the French, one can say that the structure of the city is difficult to conceptualise and to build a strong image for it, as a result of its confused pattern.

K. In considering the spatial relationship between the design of the modern and newly added part of the city of Cairo by Ismail in 1867, which we consider to be the basic nucleus of the whole organism of the contemporary city, and the design of the new city of Paris by Haussmann, one can say that this newly added part of Cairo did not hold the same potential which characterised the spatial structure of Paris. The reasons for this are its chaotic planning pattern which did not understand the significance and the power of Haussmann's established axes in Paris, and the restriction imposed by the medieval city on the construction of the new part due to the variation in the planning technique used by them.

L. As for the relationship between the spatial structure of the city of Cairo and its skyline, one can say that this relationship is confusing, as a result of the unsuccessful policy used currently of permitting the construction of high buildings anywhere, regardless of their destructive impact upon the spatial and the formal constitution of the city. Consequently, one can say that no one can identify the spatial and the varied nodes of the city easily through a reading of the skyline of the city, and no one even can distinguish and identify the location of Liberation Square as a dominant node within the structure of the city.

M. In relation to the formal constitution of the part of Ramses Street which joins Liberation Square with Ramses Square, it has been discovered from the field study, that this street, as with the majority of modern Cairo streets, does not provide an adequate sense of dynamism and tension as a connection between two spatially important nodes. The reason for this is its unskillful architectural design which lacks articulation and the continuity due to its contradicted and stylistic formal constitution.

## 12.2 LIBERATION SQUARE AND THE LIMITS OF PERCEPTION

It has been pointed out in the analysis in the last chapter, that Liberation Square was intended to be designed according to the French technique of designing squares.

Hence this square with its form and with the majority of its European classical buildings, can be counted as an element which is historically destructive to the identity of the Islamic city of Cairo. Also it can be argued that the establishment of this European Square and its similar entities in the city, would lead to the construction of a new urban schema within the memory system, which in its turn would contradict the already established schema for the Islamic city, and would prevent its development as well.

As for the exclusive use of the square by traffic, one can argue that such a use would build a certain image for the square and would characterise it as one of the most congested, hazardous, noisiest and most polluted places within the city of Cairo, which its citizens would be reluctant to visit.

However, with regard to the established sense of contradiction which characterises the relationship between the varied buildings of Liberation Square, one can say that such a relationship causes an intolerable sense of excitement and destruction, and causes also a fragmented constitution, which according to the first and the second limits of perception is difficult to perceive, and according to the eighth limit is confusing and emotionally repellent, and according to the ninth limit, is conflicting and lacks dominance and consequently lacks unity.

In relation to the low standard of the functional and the aesthetical qualities of the pedestrian bridge, one can say that this phenomenon would build unpopular images of

itself and would characterise it as an inconvenient, tiring and ugly looking means of crossing the square.

As for the established sense of visual isolation and inaccessibility between the square and the river, one can say that such isolation inevitably hurts the feelings of the visitor to the square, who consider' that the river, with its free and expanded embankments, offers compensatory experience for his displeasure at the congestion in the crowded square.

As we consider the unskillful design standard of the previously constructed landscape, which is expected to be rebuilt one can say that such a design does not provide any sense of simplicity, logic and order in the relationship of its components and consequently can never be counted as a beautiful element, which could attract our attention as the third limit states. It can be argued also that the design of the landscape does not establish any sense of wholeness and consequently its form can be counted as a fragmented entity, which cannot be perceived easily, as the first and the second limits of perception state. Also, it can be argued that such a design does not provide any sense of order; conversely it raises an unrestrained sense of diversity which, according to the eighth limit, is emotionally repellent.

Concerning the doubtful symbolic role of Liberation Square within the city of Cairo, one can say that such a sense would weaken the constructed image of its meaning within the residents of this city, and would destroy also

its picture as a symbolic and commemorative place within the memory.

As for the necessity of conserving both the Egyptian Museum building and the Foreign Affairs building one can say that such a procedure will have two contradictory perceptual interpretations. On the one hand such conservation would establish a sense of contradiction and stylistic, historical and cultural collision with the aesthetical and the cultural values of the old city of Cairo. On the other hand it can be argued that such preservation is very vital and inevitable for keeping the roots of the new environment with its newly established historical and stylistic values, which have been changed and set up solely and unfortunately by an arbitrary ruler.

Concerning the complicated and the chaotic pattern of the spatial structure of the city of Cairo, one can say that such undesirable sensations would lead to difficulty in building an image of it and would lead also as the first and the second limits of perception state, to difficulty in perceiving and conceptualising its structure as a whole.

Finally, in relation to the complexity and the confusion of the formal constitution of the skyline of the city of Cairo one can say that such complexity and disorder is emotionally repellent as the eighth limit, states and is difficult to perceive as the second limit states.



### 12.3     RECOMMENDATIONS OF RELEVANCE TO LIBERATION SQUARE

According to the previously obtained conclusion, one can recommend the following points:

A. Being counted as one of the important traffic nodes within the city of Cairo, Liberation Square accordingly is recommended to continue working as indicated above, where it has been discovered from the analysis that eliminating the traffic from it in order to convert it to an absolute public piazza as we wished earlier, would confuse the whole traffic system for the city of Cairo.

B. Being described as a highly charged container of struggling and opposing forces of pedestrians, traffic and construction, we therefore recommend the necessity of reducing the volume and the capacity of the use of that square as much as possible, either by minimising the traffic volume which runs through it, or by removing the terminals of the buses and the taxis to any other place outside the square for they are considered the main source of crowds in the square, or alternatively by using the last two policies at one time. Also, we recommend the necessity of removing all of the existing constructions which stand inside that square without exception, namely, the terminals construction, the pedestrians bridge and finally all of the kiosks and the stalls distributed within the square.

C. As a result of its failure to perform its function



Fig. (12.1). The proposed location for the bus terminals. shown in black in this map, the suggested site for the bus terminals after their removal from the square. It is worthy of note that most of the buildings on that site have been demolished during the construction of the underground, and the proximity of that location to the square would allow the continuity of the intended commutation circle between the bus and the underground.

(Source: Prepared by the Researcher.)

properly as a means of crossing the square and also as a result of its low aesthetical value as an architectonic formal constitution, accordingly it is recommended to remove the pedestrian bridge completely from Liberation Square and to replace it with an underground crossing system, linked to the underground transportation system, otherwise it is recommended that pedestrians should use ground level as a means of crossing in those squares, which lie outside the main traffic system in the city.

D. Considering the failed relationship between Liberation Square and the River Nile, we recommend the necessity of providing a formal and safe pedestrian route between them, through which we can establish the needed conceptual and visual connection between these two elements.

E. Considering the low standard of the previous landscape design we recommend the necessity of designing the replacement landscape in a way which could arouse a sense of excitement, drama, charm, richness, variation and integration, through the use of its varied materials, sculptural elements and its designed levels.

F. Considering the failure of Liberation Square to perform its function properly as a representation of the theme of Liberty, we accordingly recommend the necessity of constructing a powerful monumental structure in the middle of the square to commemorate the concept of liberty and perpetuate its significance.

G. Considering the historical and the aesthetical values for both of the Egyptian Museum building and the Ministry of Foreign Affairs building, we therefore recommend the necessity of preserving and keeping them in any new proposal submitted for ~~redesigning~~ Liberation Square.

H. Considering the confusing spatial pattern of the city of Cairo which has resulted from using two varied planning techniques at one time, we accordingly recommend the necessity of making a new spatial plan for the city through which its infrastructure can be easily identified and recognised. Also we recommend the necessity of avoiding the use of contradictory planning techniques in the future.

I. Considering the failed application of the French planning technique in Cairo, which has resulted in destroying its identity and its character as a unique Islamic city, we accordingly recommend the necessity of revitalising the values of the Egyptian and the Islamic planning technique as a basis for reviving the previous roots of this historic city.

J. Due to the established confusion in the skyline of the city of Cairo, which has resulted in destroying the spatial and the aesthetical values for its structure, we accordingly recommend the necessity of reviewing the current unrestrained policy of constructing high buildings anywhere without any consideration of its

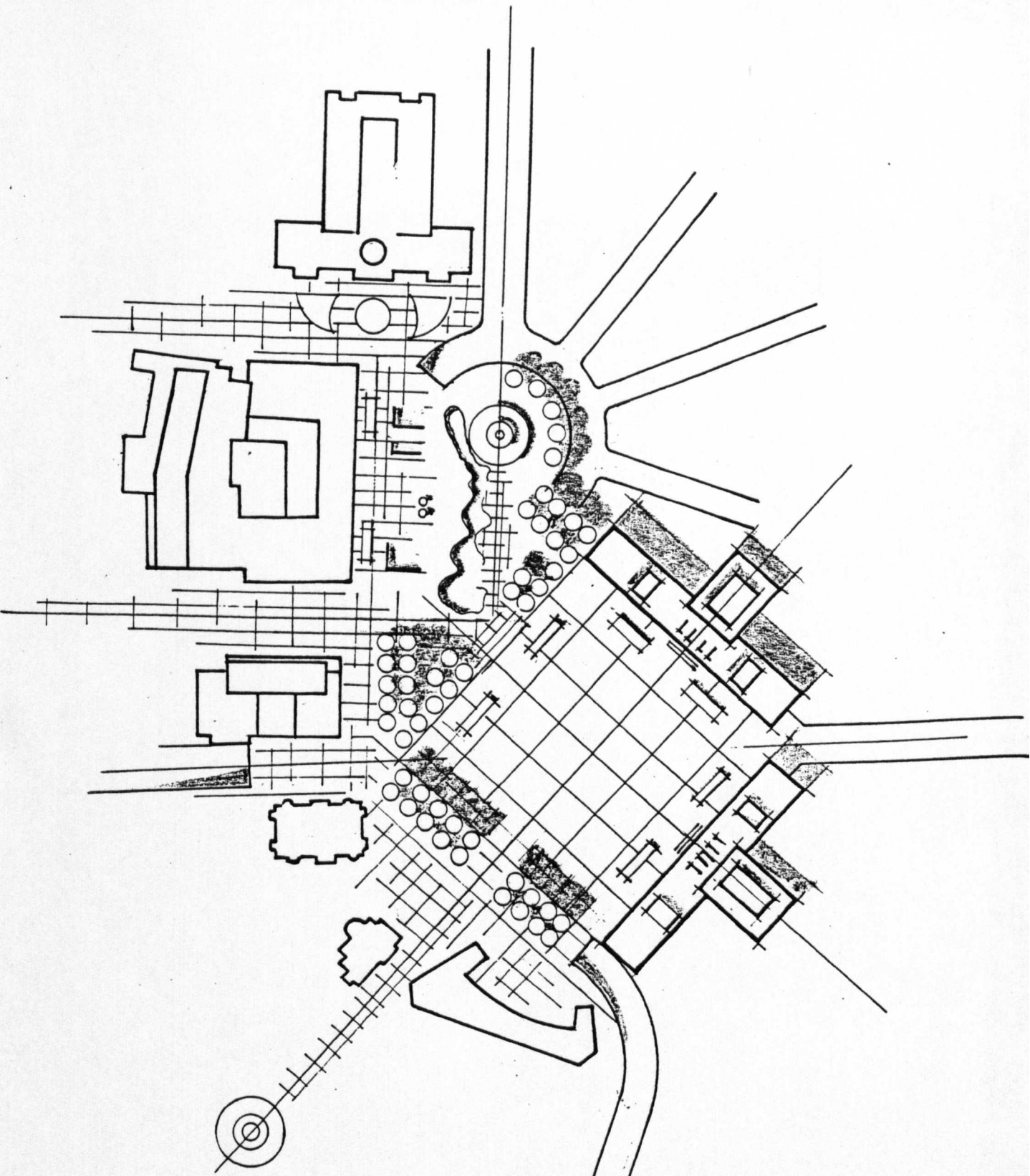


Fig. (12.2). Liberation Square as a public urban piazza. This concept comprises the construction of two formal buildings on the east side of the square as a replacement for some of the residential old buildings. Also, it comprises the establishment of two sunken roads for allowing the arrival traffic from Ramses St & Al-Qasr Al-Aini Street to cross the river towards the east and it also proposes the elimination of the arrival traffic from the direction of down-town Cairo. It is worth noting that this concept would have transferred Liberation Square into a great real Piazza, if it does not disrupt the traffic flow in this area.

.(Source: Prepared by the Researcher.)

destructive impact upon the aesthetical and the spatial values for the city. Also, we recommend the necessity of using and constructing the monumental buildings at the major spatial nodes of the city, being of a great value in identifying location and strengthening its perceived image.

#### 12.4 PROPOSAL FOR LIBERATION SQUARE

Considering the recommendations concerning redesigning Liberation Square, the researcher proposes here a concept which basically was set up to improve the performance of that place as a major symbolic node within the city of Cairo. The concept as can be seen in fig. ( 12.3 ) comprises two main parts, one formal and another casual and informal. In more detail one can say that the formal part, which lies in the southern half of the whole concept, consists of a large monumental and circular Islamic colonnade. This colonnade which on the one hand, is meant to establish a well defined public enclosure, protected against the traffic which runs around it, is meant also to be used as a symbolic structure for commemorating the theme of Liberty within the city of Cairo. Apart from its use as a public ceremonial place, this monumental structure can also be used as a strong visual landmark within its environment, by which this environment can be identified and acquire a special character as a formal and commemorative district within the whole city.

As for the informal part of the concept, it can be



said that this part which lies in the northern half of the whole concept, comprises a wide landscape area which has a small circular single colonnade as an echo of the large one in the square hub. This area with its soft environment which basically creates a green area; trees and water, is meant to be used as a recreational public place which people can visit in order to meet each other and for entertainment. Apart from its use as a recreational urban space, this area can also be counted as an extension of the element of nature at the River Nile, especially when we take into consideration the successful effect of the two proposed planted paths which join the landscape of the square with that of the river.

Having a general look at the whole concept one can recognise two important things. One is functional and the other is formal. Considering the genuine and the functional fact of this concept, one can say that this concept has accepted and has acknowledged the existence of the traffic as a vital force in this area of the city. As for the other formal aspect which would attract our attention, one can say that the successful use of the crescent and the star as dominant shapes in the pattern of the floor, can be regarded as a strong indication of the Islamic culture with its beliefs and its ideological values, where both of these shapes have been recognised and accepted as important Islamic decorative symbols. The crescent has acquired its symbolic value and its importance within Islamic culture, from its use as a

decisive element in the Higri (lunar) Islamic calender.<sup>1</sup>  
As for the star, one can say that this shape has acquired its symbolic value within Islamic culture because of its use as a sacred source of light.<sup>2</sup>

Now, as we turn and look towards the proposed means for pedestrians to approach the square, it will be realised from the attached drawings that the crossing system of the current constructed underground station, should be modified as shown in fig. (12.04) to provide an access to the square from varied points.

As for the mutual relationship between the square and the river, it is worthy of mention that the suggested construction of the two circular entertainment buildings on the river bank with their leading pedestrian bridges over the sunken Kornish Road would have a strong functional and formal impact over all of their environment. Apart from the possibility of using these buildings as a recreational water sport center for example, or the possibility of using them in any other entertainment function, these buildings with their circular forms can be perceived as an echo of the two proposed colonnades in the suggested concept.

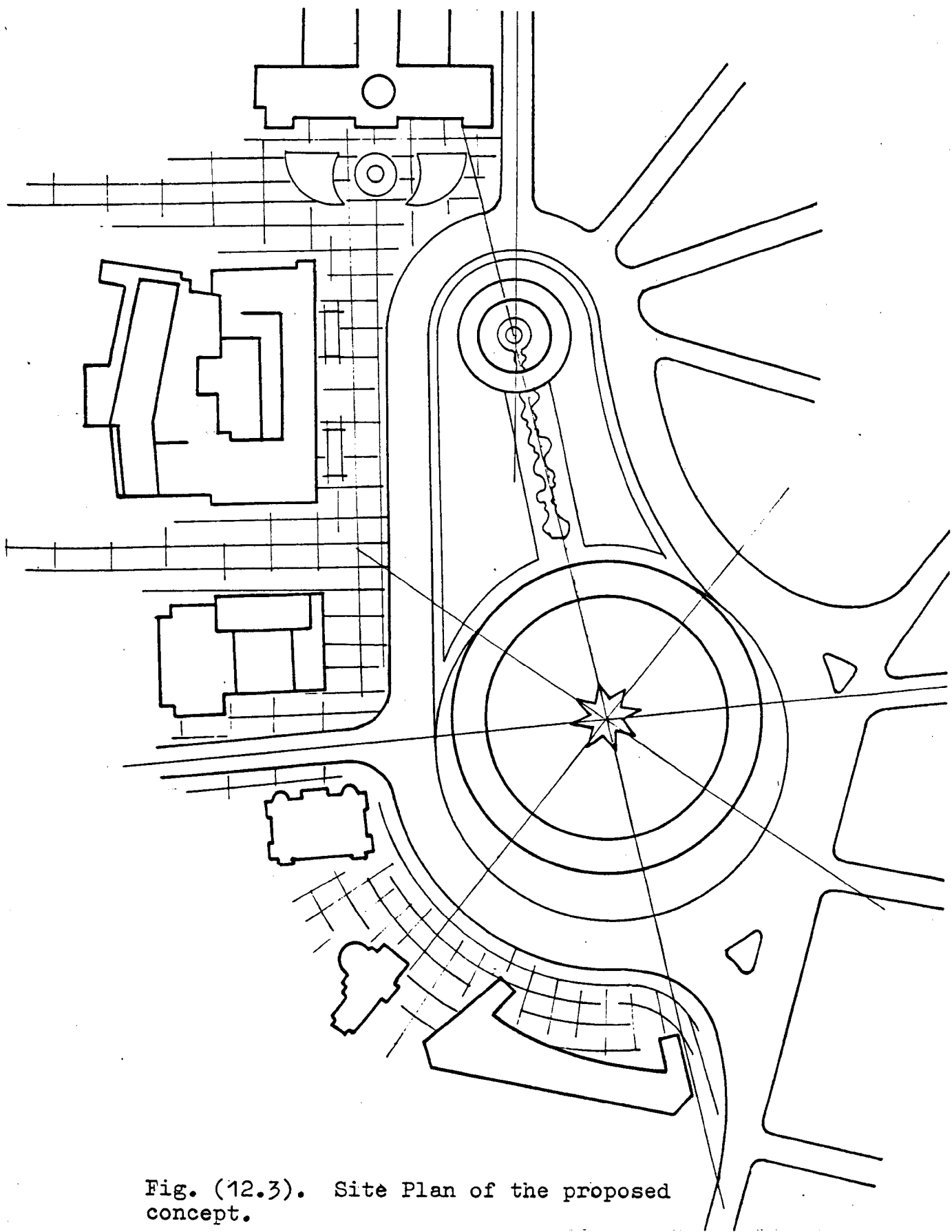


Fig. (12.3). Site Plan of the proposed concept.

(Source: Prepared by the Researcher.)

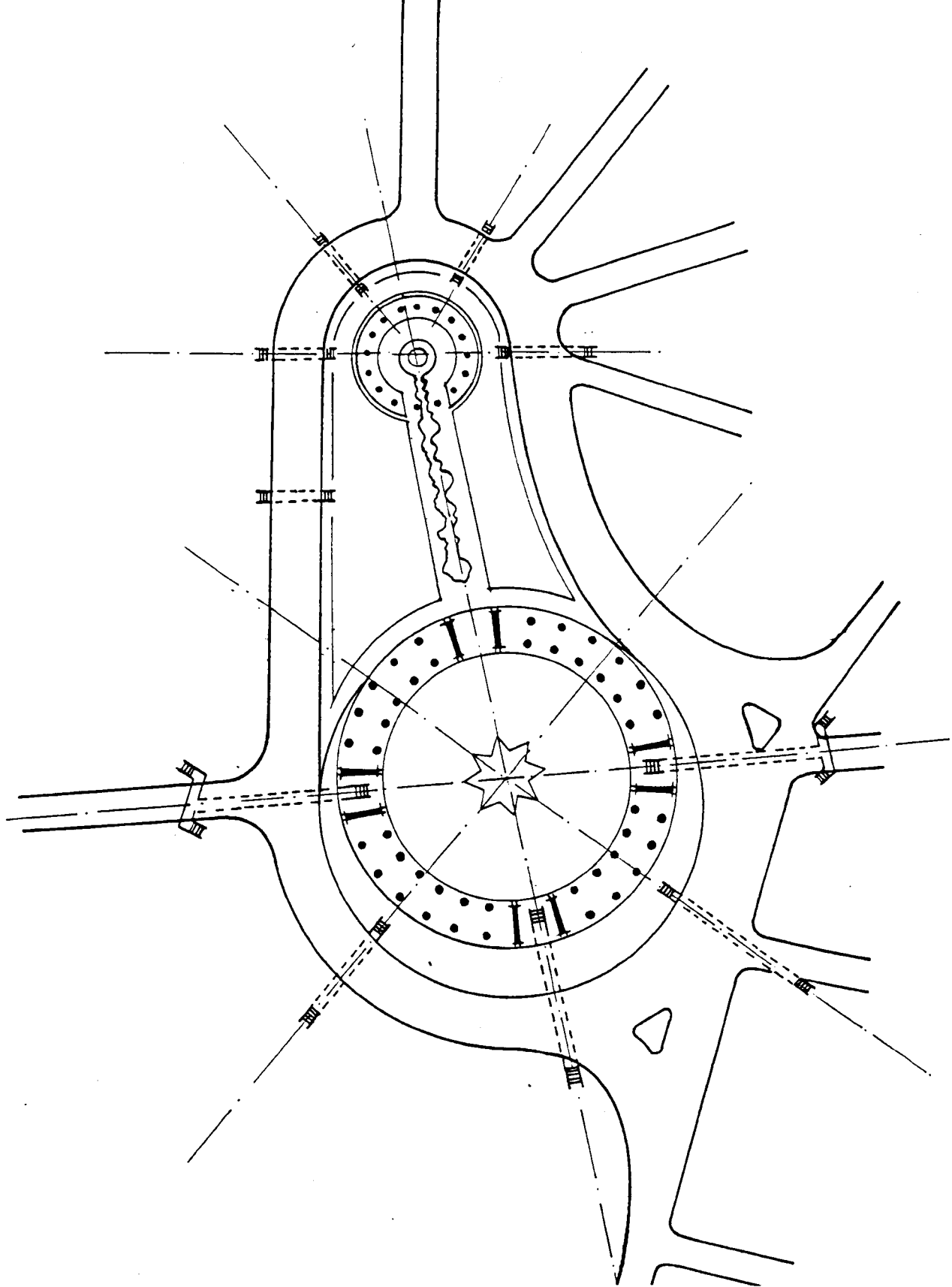


Fig. (12.4). Plan of the proposed idea shows the relationship of the two colonnades and the system of exits and entrances.

(Source: Prepared by the Researcher.)

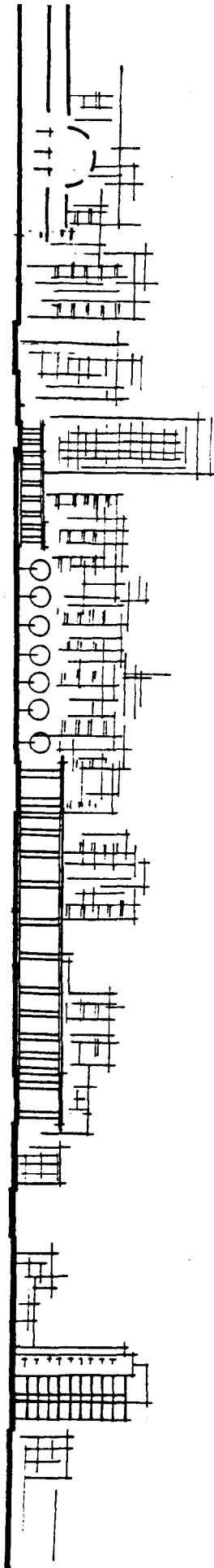
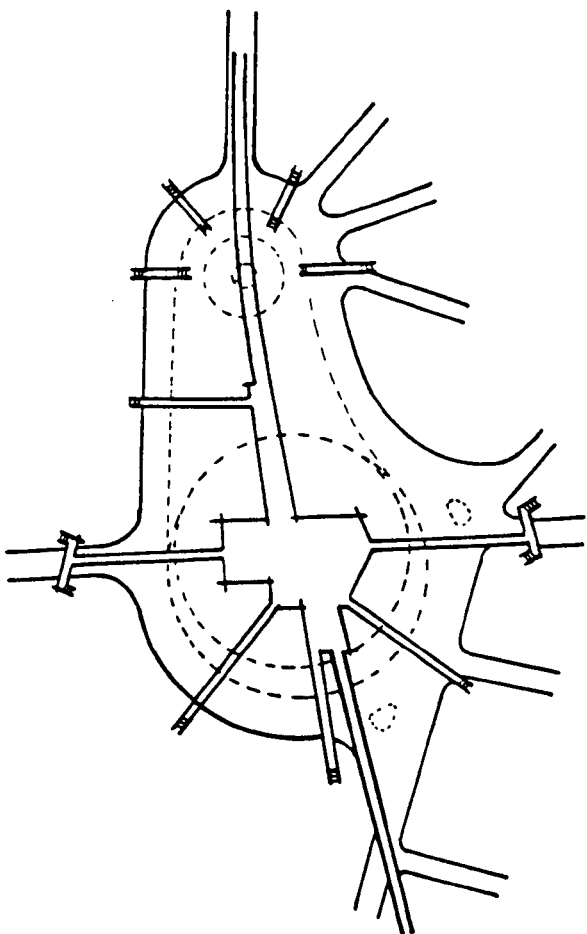
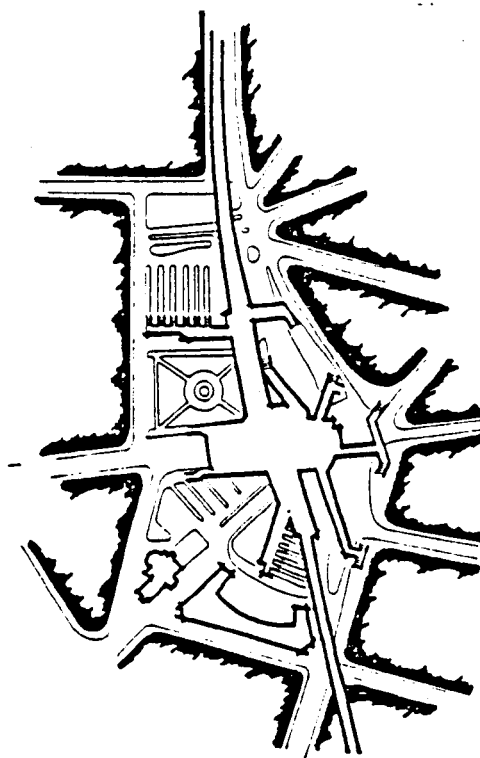


Fig. (12.5). Longitudinal section through the proposed concept passes the Museum building in the north and the Government Central Building in the south. In the backdrop of this section one can see an overall impression of down-town Cairo and its relationship to the suggested concept.

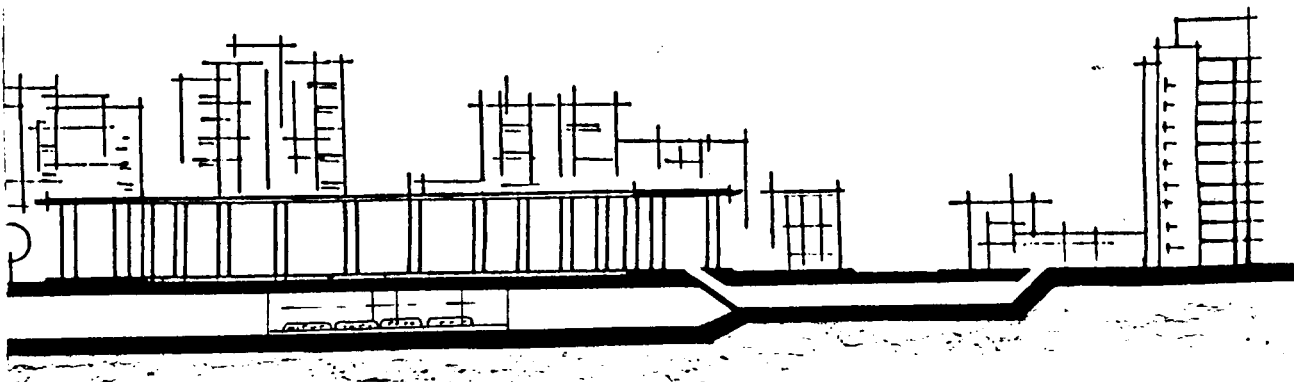
(Source: Prepared by the Researcher.)



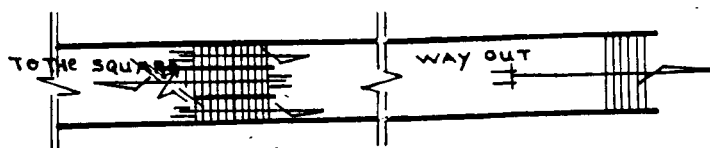
The entrances & exits system after the proposed modification



The current constructed underground entrances and exits system



Detailed section shows the link between the underground station and the square



Plan of one of the tunnels in the proposed crossing system.





Fig. (12.6). Site Plan of the proposed concept.

(Source: Prepared by the Researcher.)



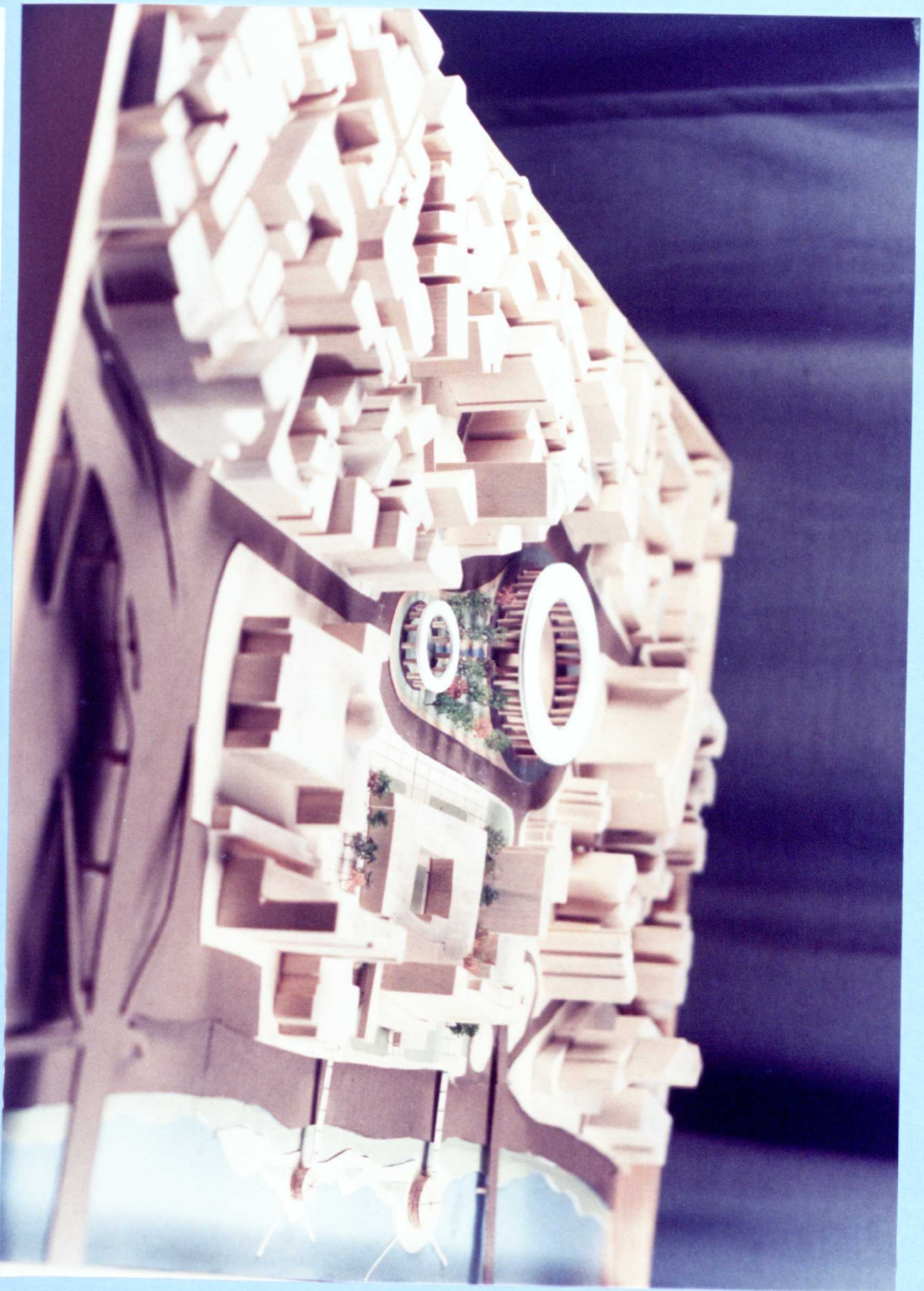


Fig. (12.7). Overall view of the concept passes Ramses Street in the north towards the Government Central Building in the south.

(Source: Prepared by the Researcher.)



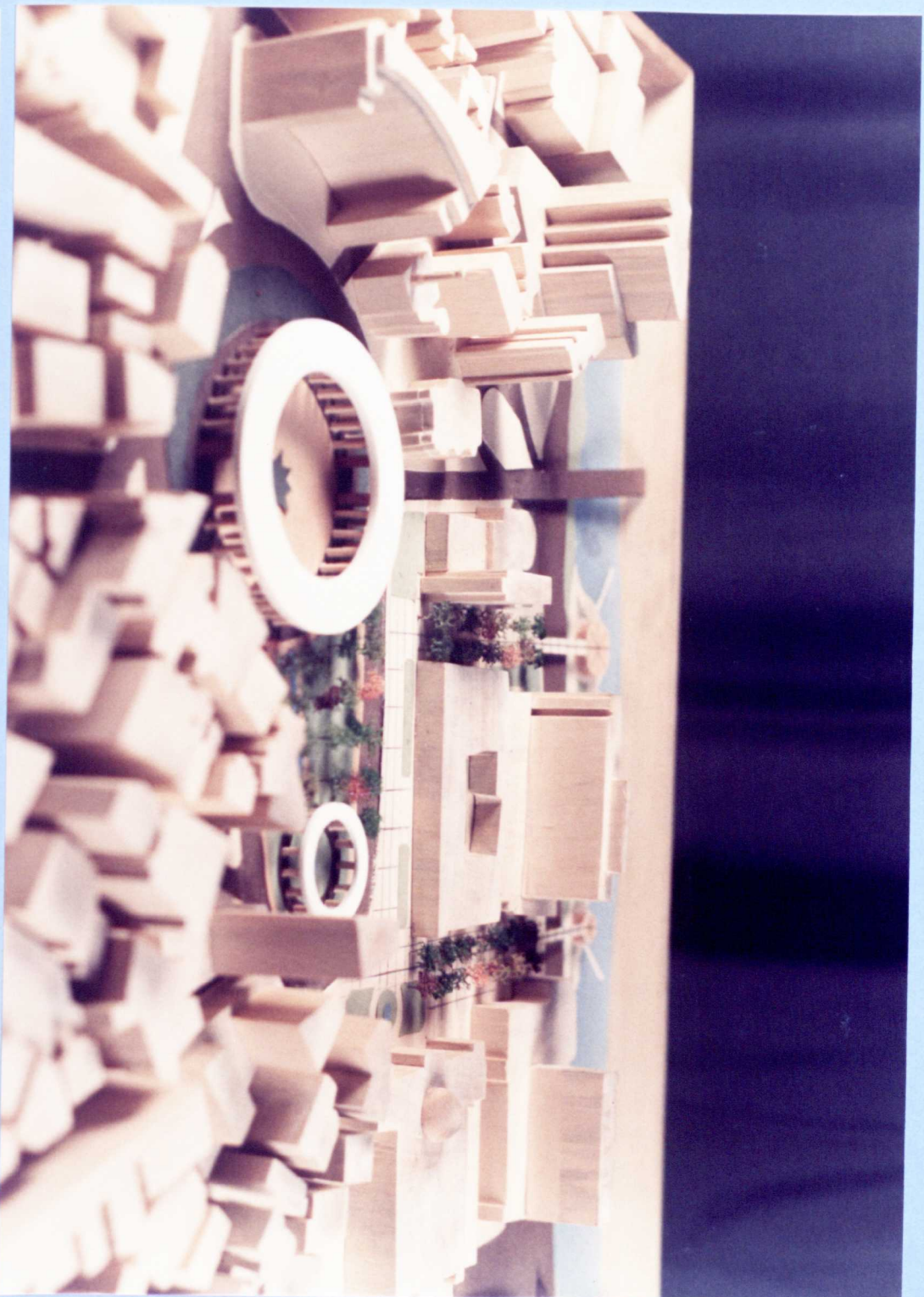


Fig. (12.9). View from the east showing the concept and its relationship to the area of downtown Cairo appearing in the background of this photo. (Source: Prepared by the Researcher.)



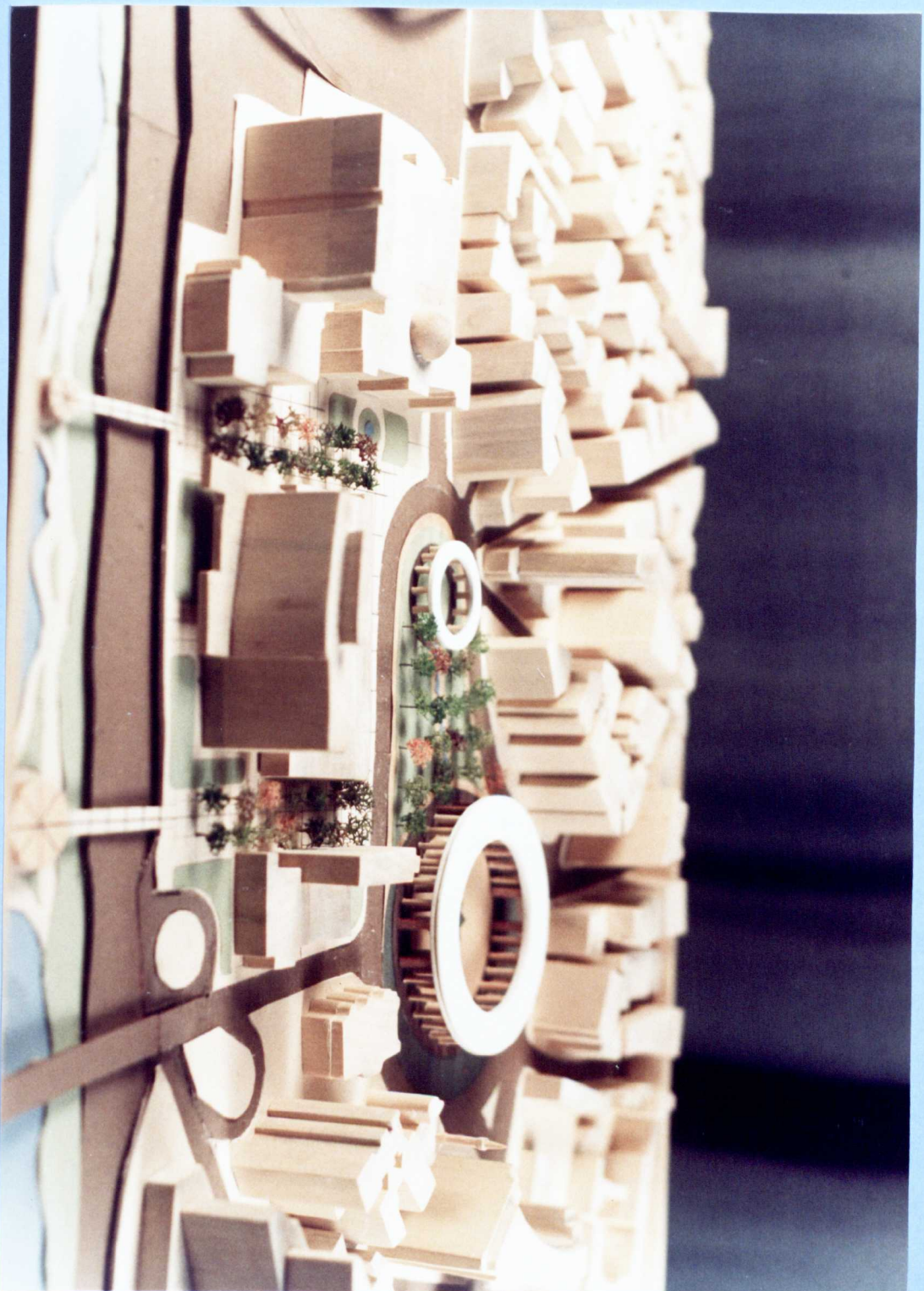


Fig. (12.9). View from the east showing the concept and its relationship to the area of downtown Cairo appearing in the background of this photo.  
(Source: Prepared by the Researcher.)

## 12.5     THE LESSONS OF LIBERATION SQUARE

Analysis of Liberation Square and the formulation of a satisfactory redesign highlights the lessons to be learned and confirms the validity of the ten design points deduced from the researcher's reading and observation.

A. The character of a square can be affected drastically by the contradictory moods of architecture which repels in terms of varying forms, size, direction, style, colour and texture etc. Hence we recommend the necessity of avoiding such a phenomenon through the use where possible of unifying architectural and formal means. Excess contradiction is perceptually undesirable and leads to the possibility of a sense of segregation and isolation.

B. Using a square for too many widely different activities at one time such as its use as an entertainment public place, or as a place for leisure or as a symbolic place or as a commercial center or as a traffic node or as parking, would impair its function and would destroy its sociological, its psychological and its biological roles inside the city. Hence we recommend the necessity of avoiding such misuse by assigning and defining the function of squares to avoid a disorder which is emotionally repellent.

C. Through the variation in their characters and their aesthetic moods, squares can be considered as

powerful spatial nodes in the city by which its different parts can be identified and recognised easily. Hence, we recommend the importance of establishing the character of any square and its individuality, through the uniqueness of its formal and the aesthetical formation. Perceptually it can be argued that such a variation in the characters of the city squares would lead to the establishment of a varied image of the different parts of the city and consequently, would heighten and strengthen its conceptual picture within the memory system and the urban schema of its residents.

D. The formal and spatial relationship between squares within the city, stands as an important factor in determining the mood of our perception of the structure of the city; i.e. the more complicated this relationship is, the more difficult the structure of the city to conceptualise and vice versa. Hence, we recommend the necessity of using an orderly, simple spatial planning pattern in the design of the city in general.

E. The skyline of a city plays an important part in identifying its spatial nodes and squares. Hence we recommend the importance of designing that skyline in a way which could arouse a sense of articulation; distinction; dominance and unification for the spatial structure of the city, as it has been argued perceptually that otherwise a sense of confusion and ambiguity would be created.



F. Streets as connectors between squares or spatial nodes play an important part in unifying the whole spatial structure of the city. Hence we recommend the importance of designing the street in a way which could arouse a sense of continuity; dynamism; distinction and unity, otherwise a misleading sense of ambiguity might result.

G. The form of a square and its specific shape should evolve and grow from the basic pattern of the original city in order to be unified organically with it.

H. The design of squares or open spaces to be built in the countries which lie in the region of North Africa require a special climatic treatment compared with squares built in European countries. Hence, we recommend the necessity of designing these squares in a way which could create a sense of refreshment and coolness, throughout the use of the fountains as a heat relief element, or through the employment of areas of vegetation, trees and varied levels which could provide shaded cool places. It has been argued perceptually that the existence of such elements would provide a sense of psychological compensation and visual balance against the heat; otherwise a sense of irritation could be established.

With the exception of the last norm, we recommend a special formal treatment for those squares, which could be designed in order to represent a special meaning or special idea such as Liberation Square, which is expected to be

simple and powerful in its form, in order to express its symbolic importance.

I. There are great typological differences between squares which are used as a public urban recreational space and those spatial centers which are used as symbolic traffic nodes. Hence we recommend the necessity of avoiding where possible mixing these uses. A city should have both types of spaces; however we strictly recommend the importance of avoiding the abuse of their use by mixing them injudicially. Due to their vital importance in the city as public urban spaces, squares and piazzas which are meant to be used exclusively by people as meeting and entertainment places, should not be interrupted and violated by traffic whatsoever or under any circumstances.

## CHAPTER 12:      NOTES AND REFERENCES

1. See Khan, Muhammed M., The Translation of the Meanings of Sahih Al-Bukhari Arabic-English. (Kazi Publications, Lahore, Pakistan, 4th Revised edition 1979), Vol.111, Hadith No. 124, p.69 and see Dawood, N.J., The Koran 'Translation' (C. Nicholls & Company Ltd. Great Britain 1970), Surat Al Baqarah Ayah No.198 and Sorrat Yasien Ayah No.39.
2. Dawood, N.J. *ibid.*, 1970, Surat Al Nahl, Ayah No.15 and 16.

APPENDIX A

THE QUESTIONNAIRE

Glasgow University  
Mackintosh School of Architecture  
U.K.

## QUESTIONNAIRE

### INTRODUCTION

Dear Citizen. The aim of this questionnaire is an attempt to understand the functional and the aesthetic shortcomings of Liberation Square in order to find a solution. Therefore, I would be grateful if you would answer the questions in this copy, taking into consideration the importance of ignoring the temporary inconvenience of the current construction of the underground central station. Finally, thank you very much for your help.

Yours faithfully,

Hassan M. H. Kamel  
Research Student at  
Glasgow University

### PERSONAL INFORMATION

NAME:

ADDRESS:

AGE:

QUALIFICATION:

ANNUAL INCOME:

Q1. Please tick (✓) the appropriate answer.

Do you think that the space of Liberation Square 'Mydan Al-Tahrir' is sufficiently wide compared with the activities which share its use (pedestrian, traffic, commercial activities etc.)?

The space is wide ☐

The space is narrow ☐

Q2. Please indicate to what extent you agree or you disagree with the following statements:

Example: If you do not agree with the meaning of Statement A, you are requested to tick right under the column (Disagree) in the table shown and so on.

A. The Construction of the bus terminals in the square occupies a large area of its enclosure

B. The excessive increase of the traffic movement inside the square raises the feeling of narrowness in its area and its space.

Answers Grades		
Agree	N.Agree nor dis- agree	Dis- agree
		<input checked="" type="checkbox"/>



# Brought Forward

C. The size of the huge crowd of people which uses the square adds to the feeling of narrowness.

D. The random existence of the scattered kiosks on the square pavements increase the feeling of narrowness.

Answers Grades		
Agree	N. Agree nor dis- agree	Disagree

Q.3. Do you consider that the square is a recreational public space to which you like to go for entertainment?

- Yes

- No

Q4. If you do not like to go there, then would you please specify the reasons for this dislike. (Please try to ignore in your answer the inconvenient effects arising from the construction of the underground central station.)

- 1
- 2
- 3
- 4
- 5

Brought forward

6

7

8

9

10

Q.5. Do you see, in the square, any sculptural or any architectural and monumental elements which relate to the concept of 'Liberation'.

- Yes

- No

Q.6. If you would like such a symbol to commemorate that event, then what is the place you suggest for siting that symbol?

- .....
- .....
- .....
- .....
- .....
- .....
- .....
- .....
- .....

Q.7. When you approach the square from Al-Qasr Al-Aini Street, which one of these buildings attracts your attention first:

1. The Egyptian Museum building.
2. or Ramses Hilton hotel which stands behind that museum.

Q.8. When you approach the square from Al-Qasr Al Aini Street, do you see the Museum building clearly?

- Yes

- No

Q.9. When you approach the square from Qasr Al-Nil Street what is the important building which attracts your attention at the outset?

The name of the building .....

Q.10. When you approach the square from Ramses Street, which one of the square's buildings attract your attention at the outset?

The name of the building .....

Q.11. When you arrive at the square, do you see the River Nile directly?

- Yes

- No

Q.12. If you do not, would you wish to see it in that way?

- Yes

- No

Q.12. Do you use the pedestrian bridge voluntarily or do you use it compulsorily where there is no other easy means of crossing the square?

- I use it voluntarily      - I use it compulsorily

Q.14. Do you prefer using an underground crossing system equipped with escalators than using the raised pedestrian bridge system?

- Yes      - No

Q.15. If the previously mentioned underground crossing system was not equipped with escalators but instead had conventional stairs, would you still prefer to use it rather than the pedestrian bridges?

- Yes      - No

Q.16. If you do prefer using the underground crossing system, then would you please specify the reasons which lie behind that preference:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

Q.17 Can you divide that part of Ramses Street which starts at Ramses Square and terminates at Liberation Square, into three parts which can be remembered and described easily, through the existence of important buildings on their ends? (Please read the next example before you answer.)

- Yes

- No

The example: This part of Ramses Street can be divided for example into the next three parts: (The first part) starts at Ramses Square and ends at Ahmed Orabie Cross (where the Engineers' Corporation stands).

(The second part) starts at Orabie's Cross and ends at Abd El Moniem Reynaad Cross (where the 6th October bridge crosses)

(The third part) starts at Reyaad Cross and ends at Liberation Square.

Q.18. Presuming that you can divide the last part of Ramses Street into the three parts as specified above. Can you then describe the beginning and the end of each part. (Please follow the last example as a guide.)

1. (The first part) starts at.....  
ends at .....
2. (The second part) starts at .....  
ends at .....
3. (The third part) starts at .....  
ends at .....

Q.19. With regard to the above mentioned parts of Ramses Street, please can you refer to the most important buildings in it?

The building name

- |    |    |
|----|----|
| 1. | 2. |
| 3. | 4. |
| 5. |    |

Note: If that part has any other important buildings, please mention them.

- |    |    |
|----|----|
| 6. | 7. |
|----|----|

Q.20. Can you describe, as though to a friend, a certain location some where in that part of Ramses Street easily?

- Yes

- No

### THE QUESTIONNAIRE ANALYSIS

The Result of Question No. 1

The space is wide

14%

The Space is narrow

86%

The Result of Question No. 2

The statement No:	The Respondents' answer percent		
	Agree	N .Agree nor dis- Agree	disagree
A	86%	-	14%
B	86%	6%	8%
C	84%	4%	12%
D	82%	9%	9%

Table (A.1)



The result of question No. 3

	Yes	No
The Respondent's Answer per cent	-	100

Table (A.2)

The result of question No. 4

Reason No.	Respondents' Answer per cent
1	63%
2	57%
3	50%
4	17%
5	15%
6	14%
7	12%
8	10%
9	7%
10	5%
11	3%

Table (A.3)

The varied reasons elicited by question 'No. 4' which lie behind the respondents' rejection to use the square as an entertainment place are as follows:

1. Allowing cars to use the square as a traffic node resulting in the creation of an intolerable complicated atmosphere.

2. The permanent crowd of people in the square.
3. The square lacks any source of enjoyment.
4. It lacks the existence of adequate areas of vegetation and trees.
5. Its atmosphere is very polluted by smoke.
6. There is no place to park in the square.
7. The square lacks any sense of order, conversely it appears chaotic.
8. It is very difficult to arrive there using public transport which is constantly crowded.
9. The general atmosphere of the square is very noisy.
10. The space of the square is narrow, hence one is expected to experience a sense of congestion.
11. There are a lot of traffic signals and consequently stopping points which interrupt car movement.

The result of question No. 5

	Yes	No
The respondents' answer per cent	-	100

Table (A.4)

The result of question No. 6

	In the middle of the square	did not answer	in another place
The suggested location of the Liberation symbol	70%	20%	10%

Table (A.5)

The result of question No. 7

	The Egyptian Museum	did not answer	Ramses Hilton
The name of the building	40%	10%	50%

Table (A.6)

The result of question No. 8

	Yes	Did not answer	No
The respondents' answer per cent	20%	20%	60%

Table (A.7)

The result of question No. 9

	The name of the building		
	Hilton Al Nil	did not answer	other buildings
The name of the building	90%	-	5%

Table (A.8)

The result of question No. 10

	The Gov- ernment Central building	did not answer	The Egyptian Museum
The name of the building	30%	60%	10%

Table (A.9)

The result of question No. 11

	Yes	No
The respondents' answer per cent	10%	90%

Table (A.10)

The result of question No. 12

	Yes	No
The respondents' answer per cent	90%	10%

Table (A.11)

The result of question No. 13

	Voluntary Use	Compulsory use
The respondents' answer per cent	10%	90%

Table (A.12)

The result of question No. 14

	Yes	No
The respondents' answer per cent	88%	12%

Table (A.13)

The result of question No. 15

	Yes	Did not Answer	No
The respondents answer per cent	70%	10%	20%

Table (A.14)

The result of question No. 16

Reason No.	The respondents' answer per cent
1	30%
2	28%
3	26%
4	24%
5	23%
6	21%
7	17%
8	14%
9	12%
10	10%
11	9%
12	8%
13	6%
14	5.5%
15	3%
16	2%

Table (A.15)

From question 'No. 16', the varied reasons which lie behind the respondents' preference for the underground crossing system instead of the elevated pedestrian crossing system are as follows:-

1. Psychologically it is more convenient to start crossing the square descending than to start ascending.
2. Such a system can protect the pedestrians from weather changes.
3. It can offer pedestrians the possibility of having some public amenities around its paths.
4. It does not deduct any space from the square like the pedestrian bridges, and it will also provide the chance of removing all the commercial activities which take place on the passages of the bridges.
5. It does not distort the facades of the buildings which define the square compared with the pedestrians' bridges.
6. Unlike the case of the circular elevated bridges, the system can save the pedestrians a lot of effort and time as its entrances and exits can be planned to provide the minimum crossing lengths between two points.
7. While it is expected to be less in depth than the height of the bridges, it would be easier to ascend and descend.



8. Through the use of such a system traffic will be given a greater chance of flowing freely where pedestrians will be separated.
9. It would be less dangerous in its use as a crossing means inside the square especially for children who might face the danger of a fall from the bridges.
10. It would be convenient for the elderly and the disabled to use in crossing the square, especially if it was equipped with escalators.
11. It would reduce the crowd of people in the square.
12. It will protect the pedestrians from the traffic noise.
13. It does not damage the privacy of the residents who live in the buildings which face the square, compared with the bridges.
14. Such subterranean system will not deter the extension of the sight line between the square and the surrounding streets.
15. It provides the chance to get rid of the bridges with their ugly appearance.
16. Such a system protects the pedestrians from the polluted atmosphere in the square.

The result of question No. 17

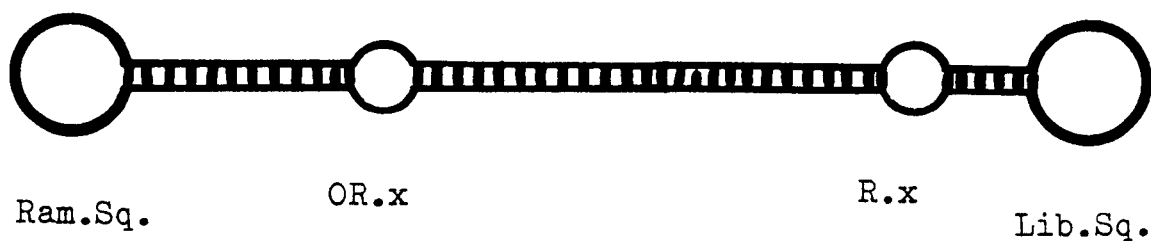
	Yes	Did not Answer	No.
The respondents' answer per cent	60%	20%	20%

Table (A.16)

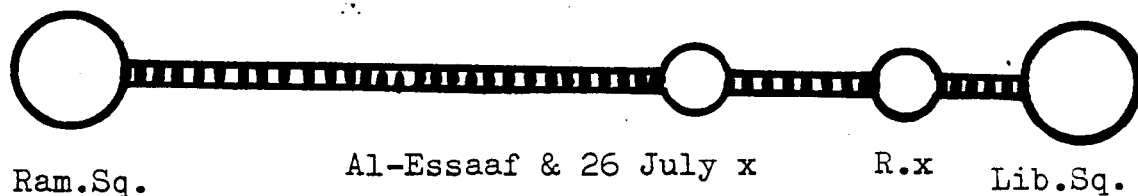
The result of question No. 18

The three divisions of Ramses Street as it appeared from the respondents' answers.

60% of them divided it as shown below



and 60% of them divided it as shown below



& finally 50% divided it as it can be seen underneath

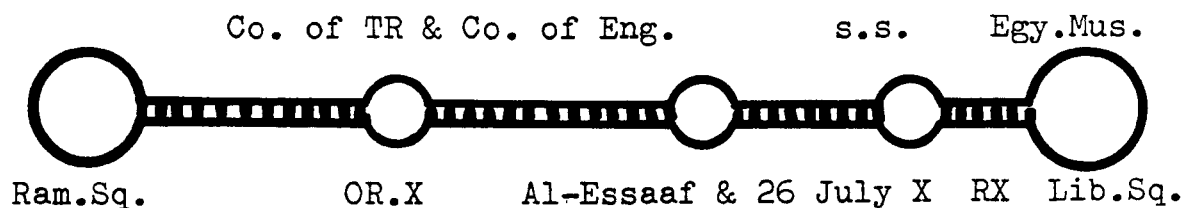


Fig. (A.1)

# KEY

R.S.	Ramses Square	Co.of Eng.	Corporation of Engineers
OR.X	Orabie Cross	Eg.Mus.	Egyptian Museum
R.X.	Abd Al Moniem Reyaad Cross	s.s..	Sewage pumping Station
L.S.	Liberation Square	x	Cross
Co.of TR	Corporation of Traders		

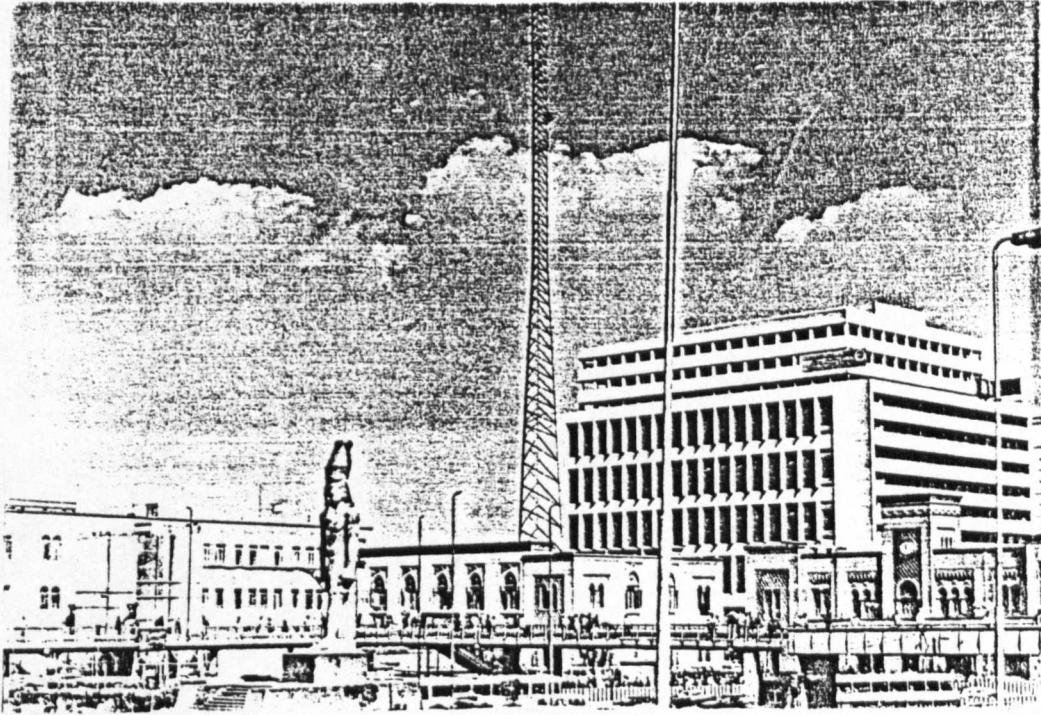


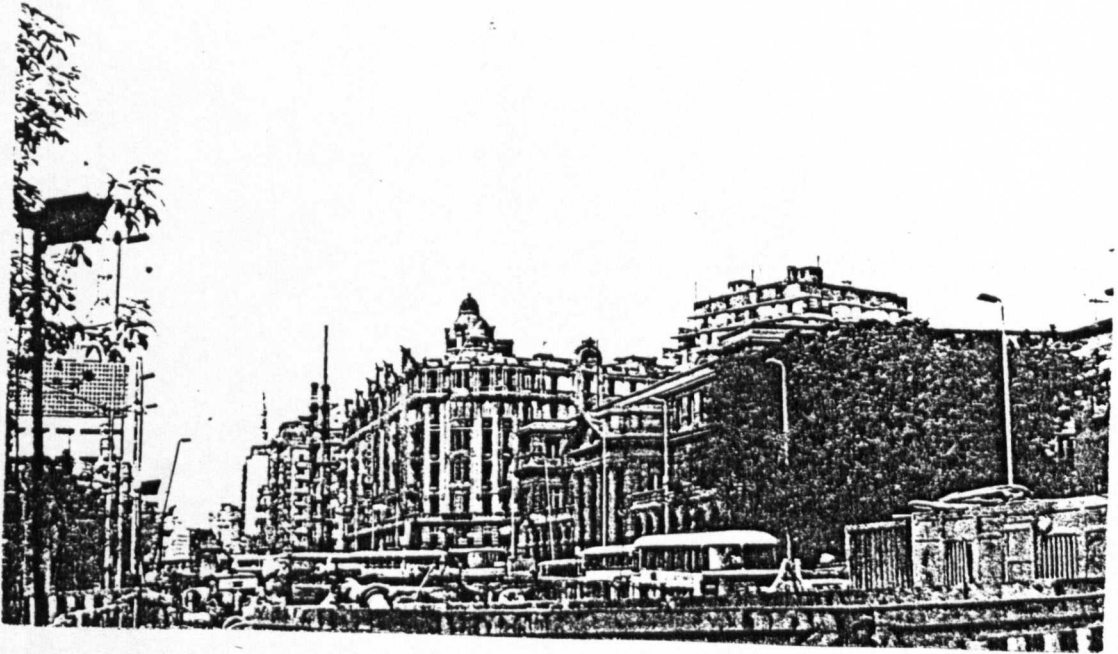
Fig. (A.2) Ramses Square

(Source: Photo taken by the Researcher.)



Fig. (A.3) Orabie Cross

(Source: Photo taken by the Researcher.)



(Fig. (A.4). Al Essaaf & 26 July Cross.

(Source: Photograph taken by the Researcher.)

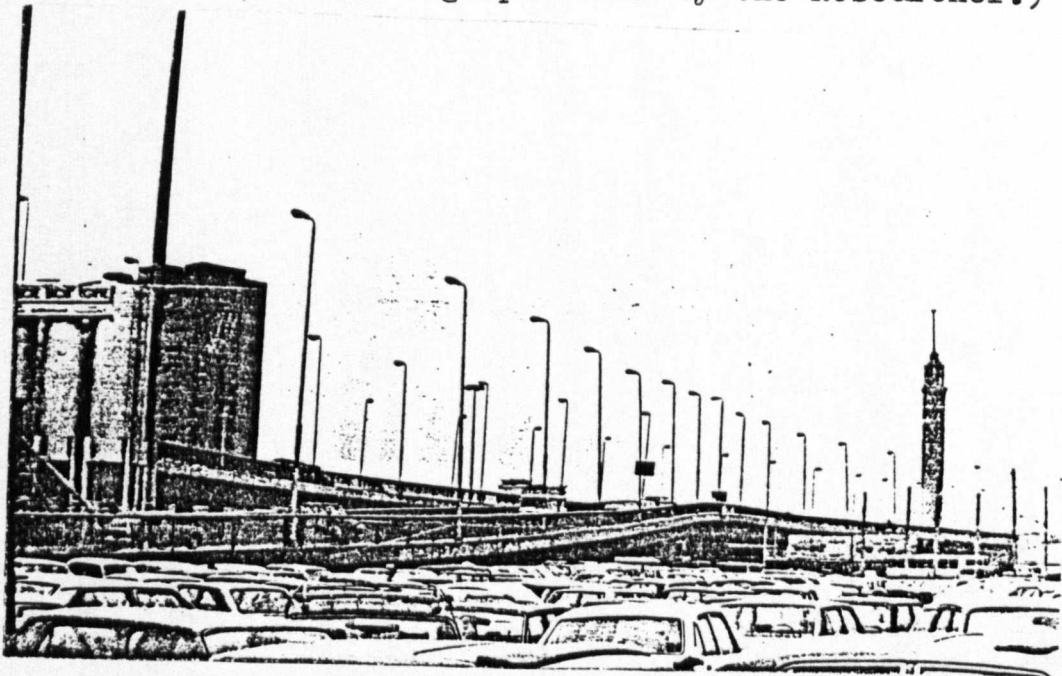


Fig. (A.5). Abd Al-Mohiem Reyad Cross

(Source: Photograph taken by the Researcher.)

The result of question No. 19

The most important buildings in the part of Ramses St. under analysis and their relationship to the main squares and crosses in that part.

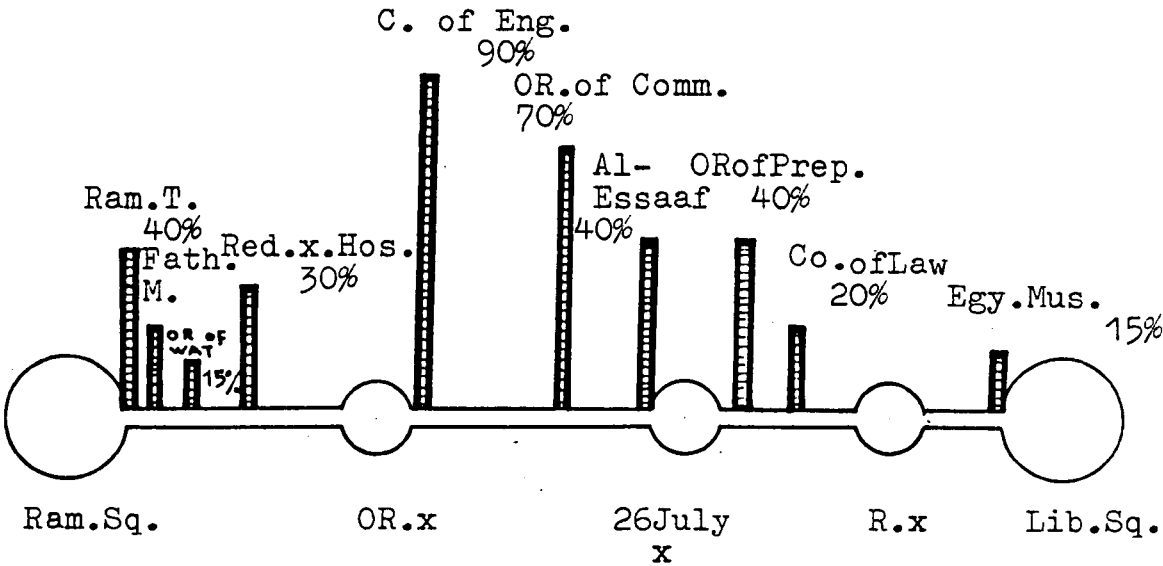


Fig. (A.6)

The diagram shows the repetition of the most important buildings per cent.

KEY

Ram.Sq.	Ramses Square
Ram.T.	Ramses Tower
Fath.M.	Al-Fath Mosque
Red.x.Hos.	Red Cross Hospital
OR.x.	Orabie Cross
Co. of Eng.	The Corporation of Engineers
Or.of Prop.	The organisation of properties registra- tion
Al-Essaaf	Al-Essaaf Pharmacy building
Or.of Comm.	The organisation of communication
Co. of Law	The corporation of Lawyers
R.X.	Abd Al-Moniem Reyaad Cross
Egy.Mus	The Egyptian Museum
Lib.Sq.	Liberation Square
O R	Organisation of Water



Fig. (A.7). Ramses Tower  
& the Organisation of water  
in the back.

(Source: Photograph taken  
by the Researcher.)



Fig. (A.8). Al-Fath Mosque

(Source: Photograph  
taken by the Researcher.)



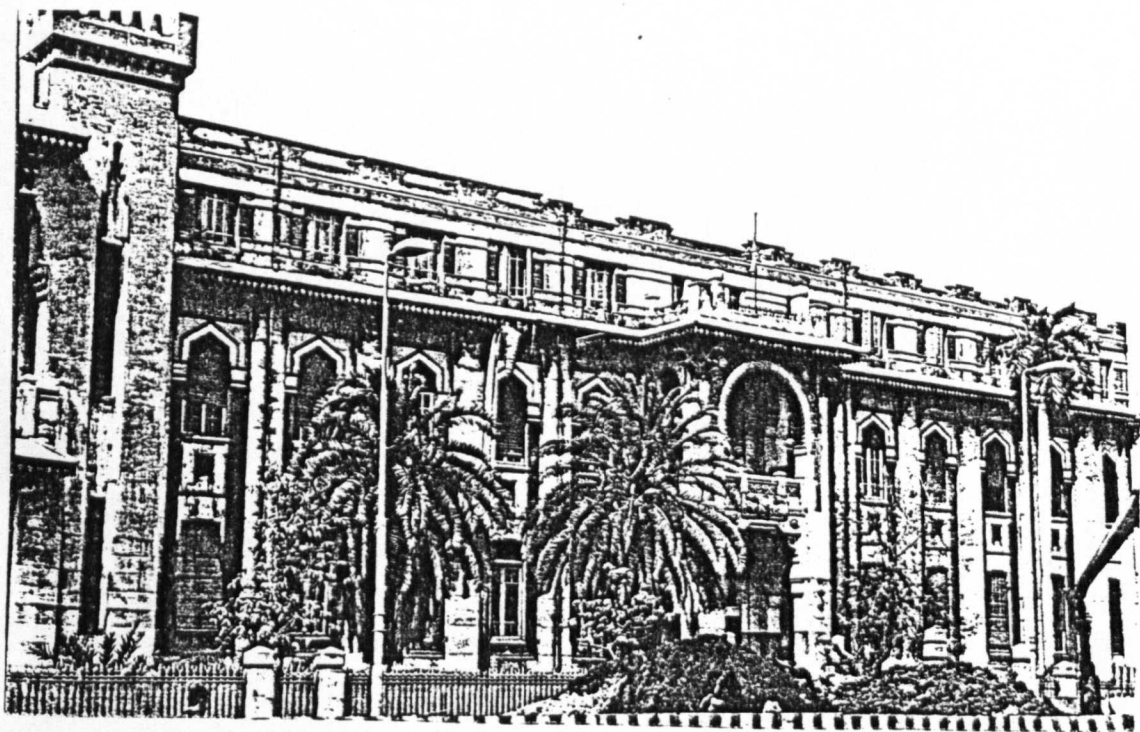


Fig. (A.9). Red Cross Hospital

(Source: Photograph taken by the Researcher.)

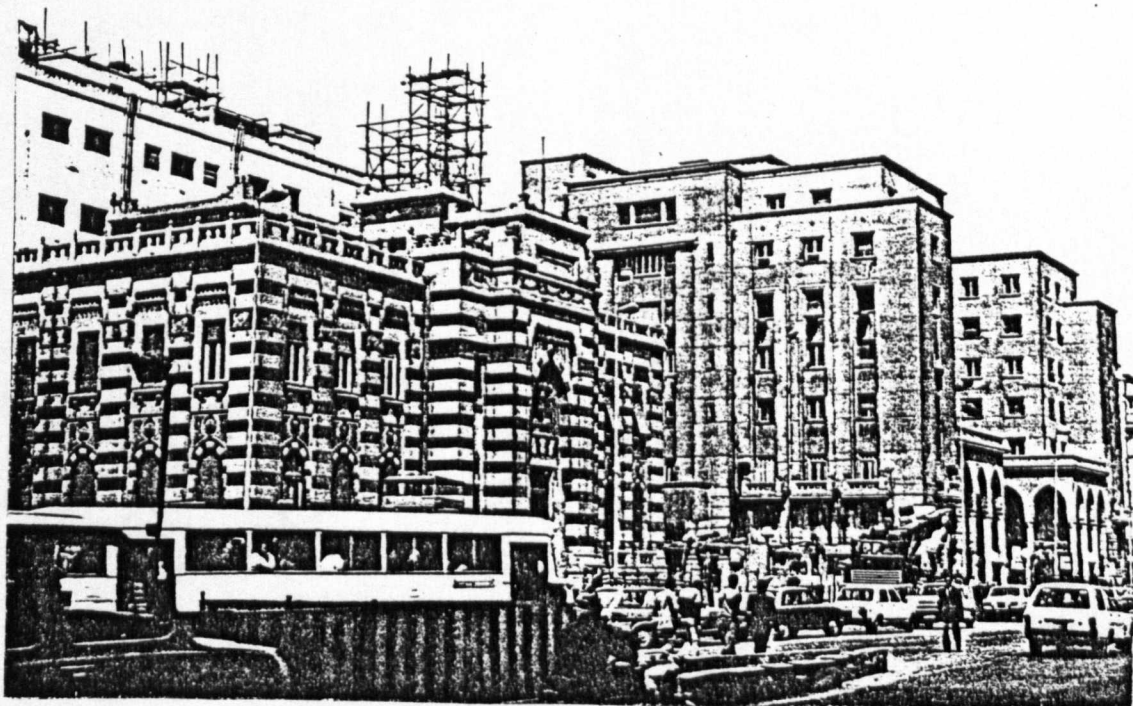


Fig. (A.10). The Corporation of Engineers.

(Source: Photograph taken by the Researcher.)

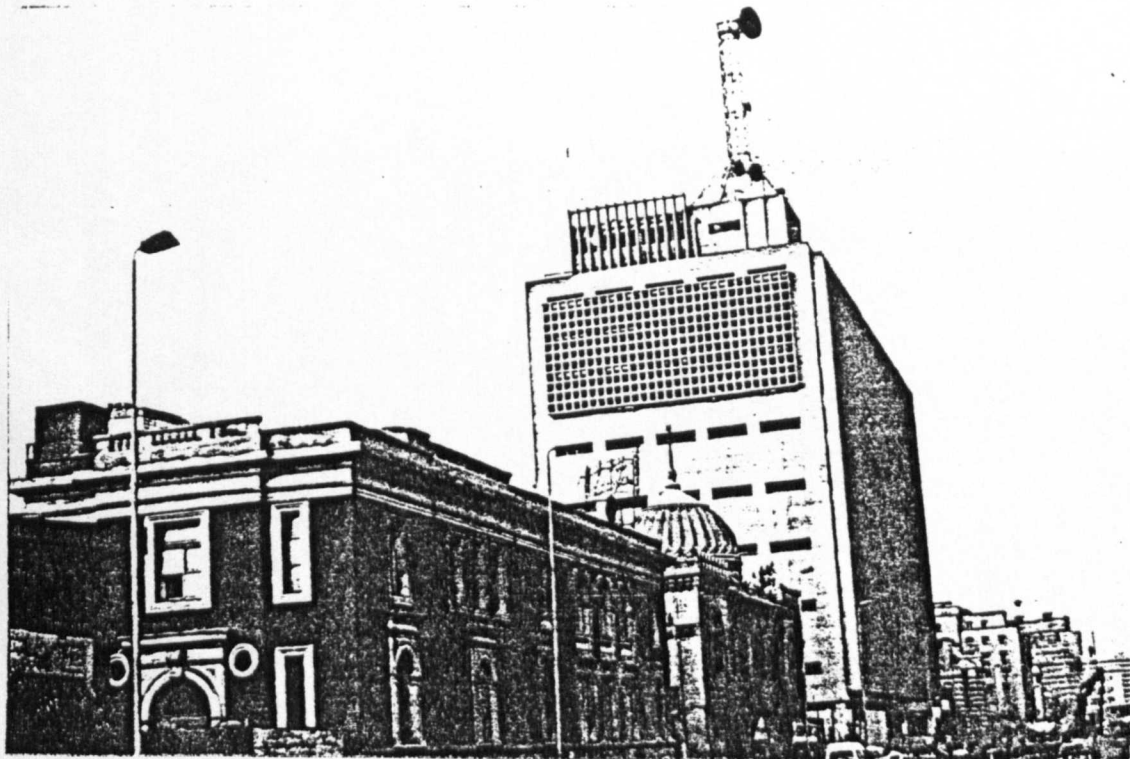


Fig. (A.11). The organisation of Communication.

(Source: Photograph taken by the Researcher.)



Fig. (A.12). The Organisation of Properties Registration

(Source: Photograph taken by the Researcher.)



Fig. (A.13). The Corporation of Lawyers.

(Source: Photograph taken by the Researcher.)

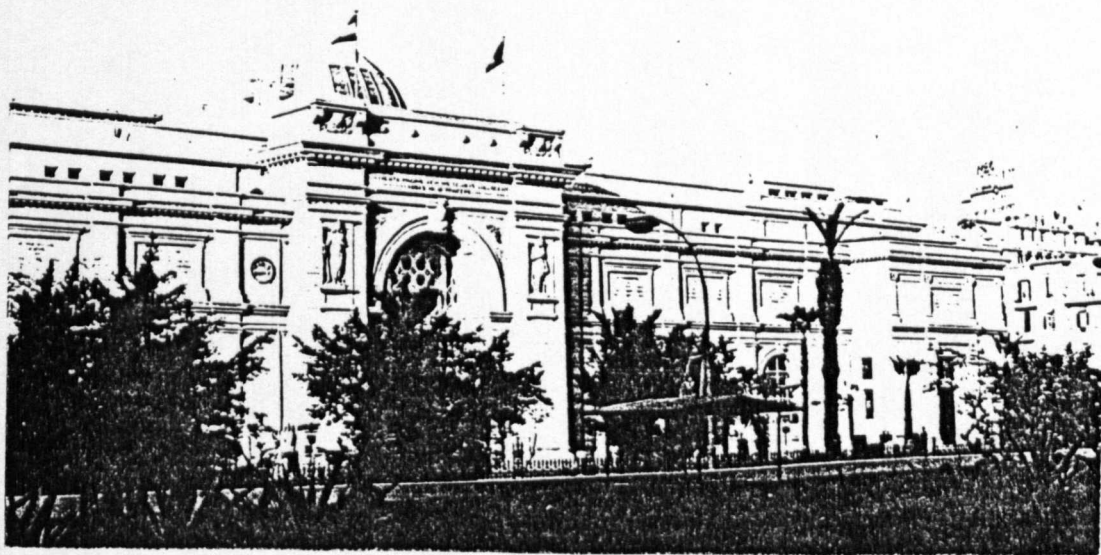


Fig. (A.14.) The Egyptian Museum

(Source: Photograph taken by the Researcher.)

The result of question No. 20.

	Yes	Did not Answer	No
The respondents' answer per cent	90%	-	10%

Table (A.17)

### THE FIELD STUDY FINDINGS

It was mentioned earlier in the account of the methodology that the questionnaire analysis has two aspects. As we have seen, the first aspect of the analysis has been achieved through listing the respondents' answers in the tables. The second aspect of the analysis following summarises the tables used in the last aspect of analysis. The researcher will try here to interpret the figures listed in the tables in the form of written statements to facilitate an understanding of the conclusions of the questionnaire results.

### THE SPACE OF THE SQUARE AND HOW THE RESPONDENTS PERCEIVE IT

Considered as the very hearth of the square's constitution, the space element and its analysis has formed the core of the researcher's interest. As an interpretation of the results of question No. 1 and No. 2 one can understand that the square's area cannot reconcile the varied activities which are practised inside its enclosure. In a comment on the result of the first question in which the respondents are asked to state whether the enclosure of the



square does suit the occupation of the following activities (pedestrians, traffic, commercial activities, etc.) at one time, it was discovered that 86% of them had stated that the enclosure of that square is narrow and not appropriate to use by all of these activities at one time. It will be recalled from the account of the methodology that some of the questionnaire's questions were influential and not unbiased and consequently should be avoided in future researches. Hence it should be mentioned here that the second question is an example of this problem where it was noticed through the analysis, that formulating the given statements in that question which the respondents were asked to show their agreement or their disagreement with, were utterly direct and consequently made them acquainted with the researcher's intention, the criteria which influenced their answer.

#### THE SQUARE AS A RECREATIONAL PUBLIC SPACE

Having analysed the results of both question No. 3 and No. 4, it can be stated that Liberation Square cannot be counted as a recreational public space at all. More than that, it has been discovered that the residents of the city of Cairo do not even like to be there for entertainment. quoting the result of the third question, in which 100% of the total number of the respondents disagreed with the description of the square as a recreational and entertainment public space, one can gain a clue as to the importance

of redesigning it. Among the important reasons which were behind such considerations are; the destructive effect of the existing traffic inside the square; the state of congestion created by the large mass of people which use it as a transportation commuting center; its lack of any source of enjoyment; trees and adequate green areas; its polluted atmosphere; its chaotic look; its unbearable level of noise; etc. From the last display, it can be understood that basically the square is dominated by the traffic existence and its generated effects.

#### THE SQUARE AND THE SYMBOLISM

Considering the result of question No. 5 and No. 6, we are able to state that Liberation Square does not contain any visual clue to commemorate the glorious significance of 'Liberty'. Quoting the result of the fifth question, in which 100% of the respondents have referred to the none existence of any sculptural or any architectural and monumental constitution to refer to the concept of 'Liberation', one can be given a clue to the urge of setting up such a monument, otherwise such calls will be vain and meaningless. As for the suggested placing of that monument, it was discovered that 70% of the respondents have agreed on the choice of the center of the square as a location for siting the monument, the matter which reflects their sensitive conscious with the potentiality of that place.



## THE SQUARE BUILDINGS AS A TERMINUS TO ITS AXES

Having analysed the results of questions No. 7, 8, 9 and 10, it can be stated that the square building in general does not deal properly with its approached axes as a strong attractive and terminal point. As an exception to such a conclusion, the building of Hilton Al-Nil has proved its potentiality as a strong and magnetic end to Qasr Al-Nil Street, where 90% of the respondents referred to it being the important building which attracted their attention at the moment of their arrival in the square.

As to the relationship between Al-Qasr Al-Aini Street and the Egyptian Museum, which was expected to function as a termination point to that axis, it was discovered that this building has no sense of dominance over the terminal point of that street at its junction with the square, for 50% of the respondents have referred to the building of Ramses Hilton, which stands behind the museum at the background, as being the most important building which attracts their attention at the outset when they approach the square through Al-Qasr Al-Aini Street, while only 40% of them referred to the museum as being the most important building which dominates their vision at that point. As an interpretation of this failed relationship, it can be said that the non-axial relationship between the building of the museum and Al-Qasr Al-Aini Street; the remoteness of that building from the terminal point of that street at the edge of the square; the existence of the bus terminal structures; and the

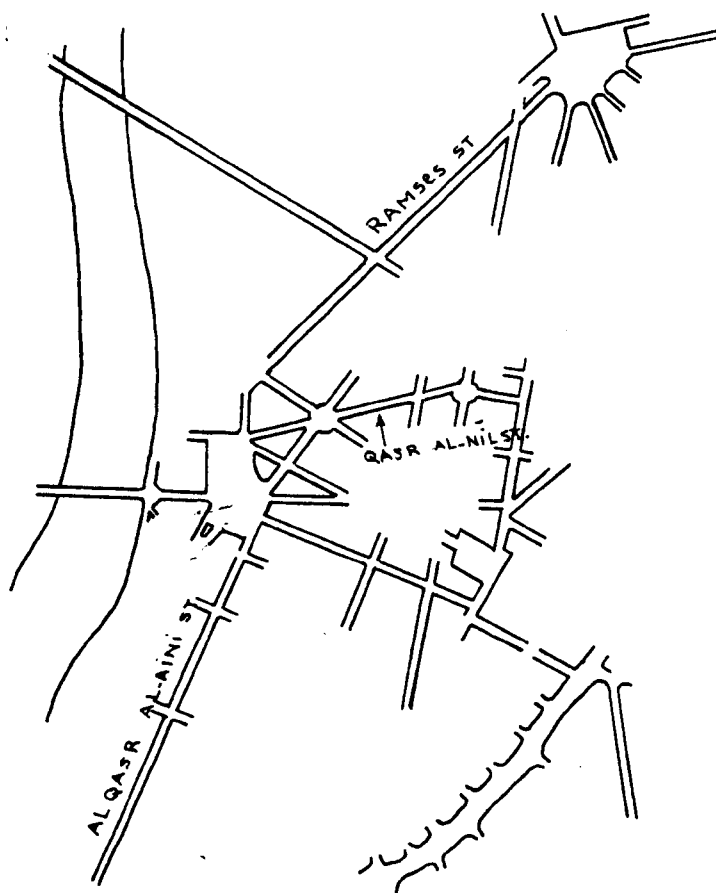


Fig. (A.15). Liberation Square and its main axes

(Source: Prepared by the Researcher.)

pedestrian bridge, which does not allow a clear view of the square; the existence of the bus terminal structure, and finally the irrational construction of the gigantic tower of the Ramses Hilton in the background of that museum all have contributed to the failure of its relationship with its coming axis as a powerful, visual and attractive point.

But with regard to the relationship between Ramses Street and the Government Central building, which was expected to be the visual terminal point of that axis, it has been discovered that there is a weak connection between both of them, for only 30% of the respondents have referred to that building being the most powerful and attractive structure which dominates their attention at the point of their arrival in the square. The reason can be attributed again to the remoteness of the building from the terminal point of its street at the square's edge, and also can be related to the existence of the pedestrian bridge and the bus terminal structures, which do not allow a clear vision.

#### THE SQUARE & THE RIVER

Considering the results of questions no's 11 and 12, both of which were trying to reveal the value of the relationship between the square and the river, it can be stated that there is no direct visual contact between them. If we quote the figures of the respondents' answers to both questions, one must appreciate the criticality of the existence of such connection, where 90% of the respondents



Fig. (A.16). View from Qasr Al-Nil St. towards Liberation Square. In this photo one can see the Hotel of Hilton Al-Nil dominating the vista.

(Source: Photograph taken by the Researcher.)



Fig. (A.17). The Egyptian Museum & Hilton Ramses Hotel.

(Source: Photograph Taken by the Researcher.)



Fig. (A.18). View from Al-Qasr Al-Aini towards the Square.  
(Source: Photograph taken by the Researcher.)

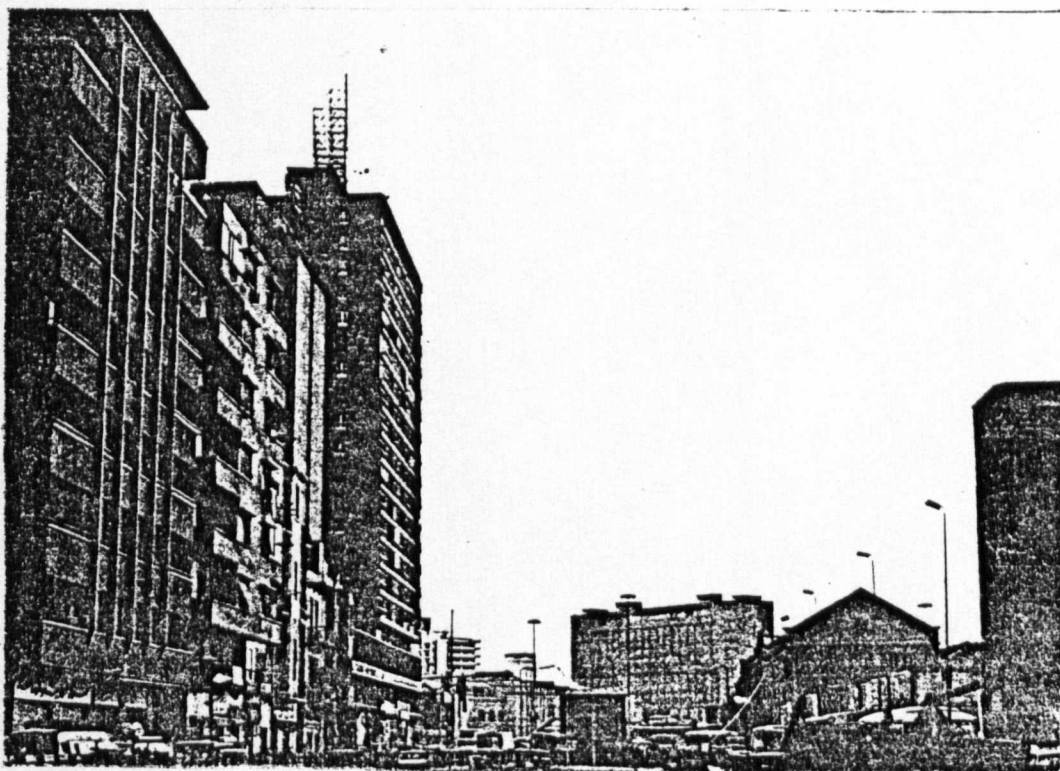


Fig. (A.19). View from Ramses St. towards the Square.  
In this photograph one can see a fragment of Al-Hilton Hotel building.

(Source: Photograph taken by the Researcher.)

have indicated their desire of viewing the river directly from inside the square.

#### THE PEDESTRIANS & HOW THEY CROSS THE SQUARE

Having analysed questions No's. 13, 14, 15 and 16, which were intended to test the validity of using the pedestrian underground crossing system in the square, one can say that the use of such a system might succeed in achieving its purpose especially when we consider the established complicated circumstances inside the square. The reason for such success can be attributed to the fact, that the square users on one hand reject the continuing use of the elevated crossing system which requires great effort and on the other hand they find in the use of these tunnels an escape from the traffic which threatens their life in the square. When reviewing the results of the last four questions in more detail, one would be able to appreciate how much the pedestrians have to contend with inside the square in order to walk around and to cross its junctions safely, and also to know why those pedestrians utterly prefer to use the underground crossing system as a means for crossing the square instead of using the existing elevated crossing system. For example, such a person will be surprised when knowing that 90% of the square users use the pedestrians' bridge compulsorily being the only means available for crossing that square, and will be impressed also when knowing that 88% of those users have welcomed the idea of using the





Fig. (A.20). The pedestrians in Liberation Square.

(Source: Photograph taken by the Researcher.)

underground crossing system, if it is equipped with escalators. Apart from the realisation of the difficulty of using the pedestrian bridge in crossing the square, and also apart from the realisation that the existing traffic stands as a threatening element for its users, there were many other reasons for the respondents' acceptance of using the underground crossing system. Among these reasons were that such a system can protect them from the weather and the polluted atmosphere of the square and its noise. Also, it will not spoil the square's aesthetic value, compared with the bridges which distort the facades of the buildings behind them and also invades the privacy of the residents who live in these buildings. Briefly, we can understand that the respondents' acceptance of the underground crossing system is mainly due to their reluctance to use the bridges which exert them especially the old, and is also due to the domination of the square use by cars. It is not to say that such a system is the optimum solution for crossing the square, but it can be said that the people have accepted it being the best of two available choices, that is of either using the elevated system or using the underground one. Therefore, I imagine that those people might have accepted the offer of using the ground level of the square to move and to walk on, if such an offer had included the exclusion of the traffic from the square. The reason is because those people mainly seek their greatest convenience and safety.



Fig. (A.21). The pedestrians Bridge in Liberation Square.

(Source: Photograph taken by the Researcher.)

## RAMSES STREET AS A JOINT BETWEEN TWO SQUARES

Considering the results of questions No. 17, 18 and 19, one can say that the part of Ramses Street which connects both Liberation Square with Ramses Square, is very weak and does not provide any sense of orderly articulation between its joined parts at the junctions. Consequently, it can be said also that this part of the previously mentioned street has no sense of dynamism by which a sense of expectation and movement can be built between its poles at the extreme ends where the two squares exist. The reason for such a conclusion from the respondents' answers, is the confusing formal structure of that part of Ramses Street. In other words, the structure of that street lacks any sense of visual articulation due to the random distribution of its important and high buildings in relation to its crossroads and junctions. For example one can see from question No. 19 that the building of the Communication Organisation which 70% of the respondents have referred to as being one of the important buildings in that part of the Ramses Street, lies between two junctions neither of which are marked or can be recognised with it. It is worthy of notice that this building stands also fairly in juxtaposition with the Corporation of Engineers building. On the contrary from that we can see that the building of Al-Essaaf pharmacy, which has no architectural or aesthetic value, does occupy the important corner of the 26 July cross which identifies it instead of being the cross itself marked and identified by it.



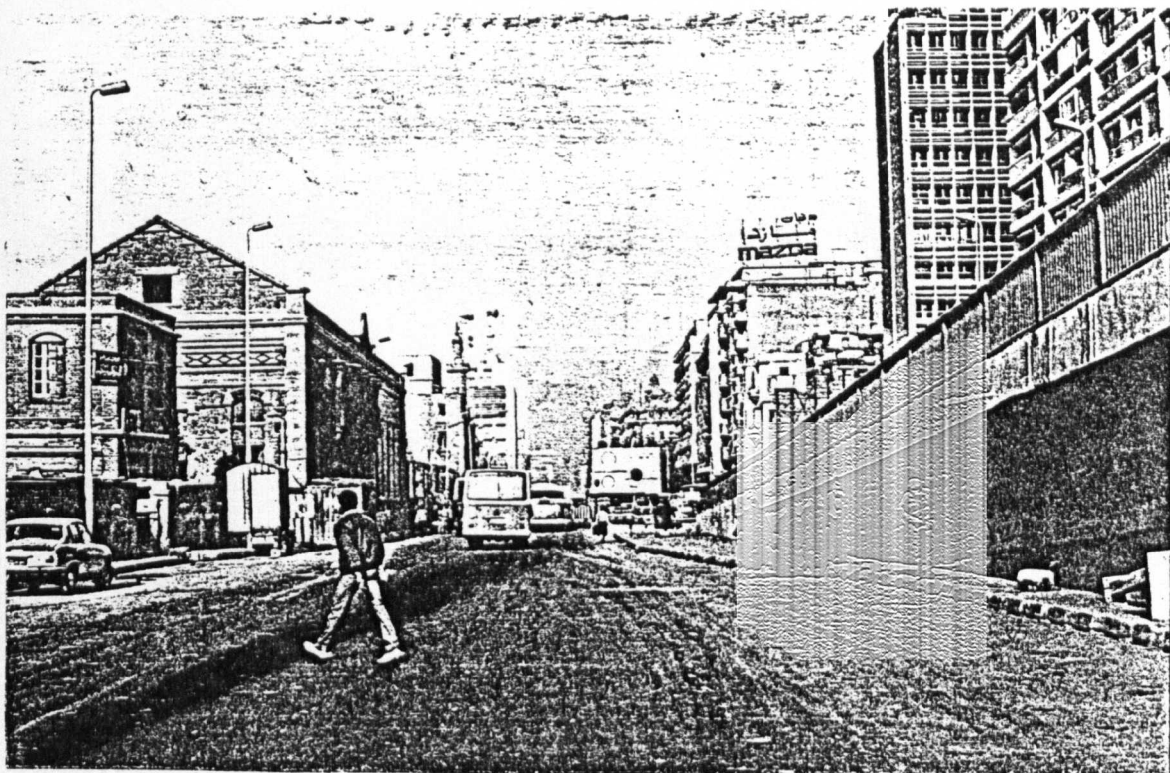


Fig. (A.22). View of Ramses St. taken from Reyaad Cross

(Source: Photograph taken by the Researcher.)

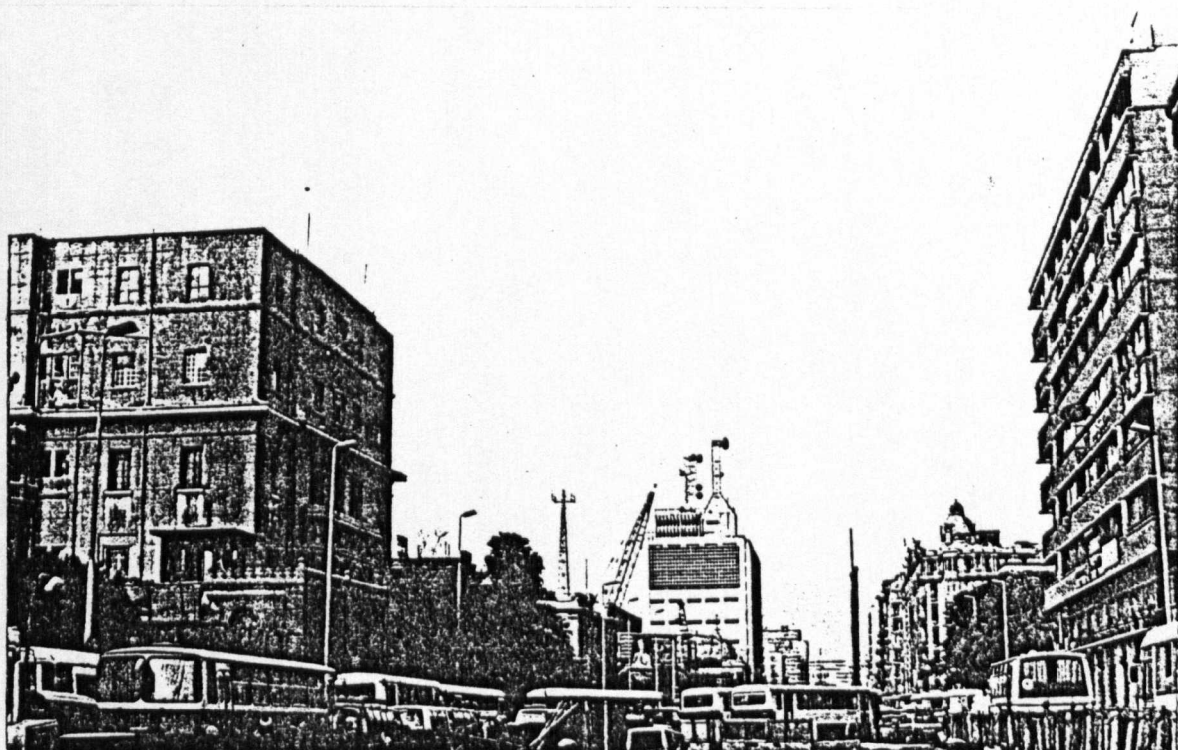


Fig. (A.23). View of Ramses St. looking towards the Organisation of Communication & 26 July Cross.

(Source: Photograph taken by the Researcher.)

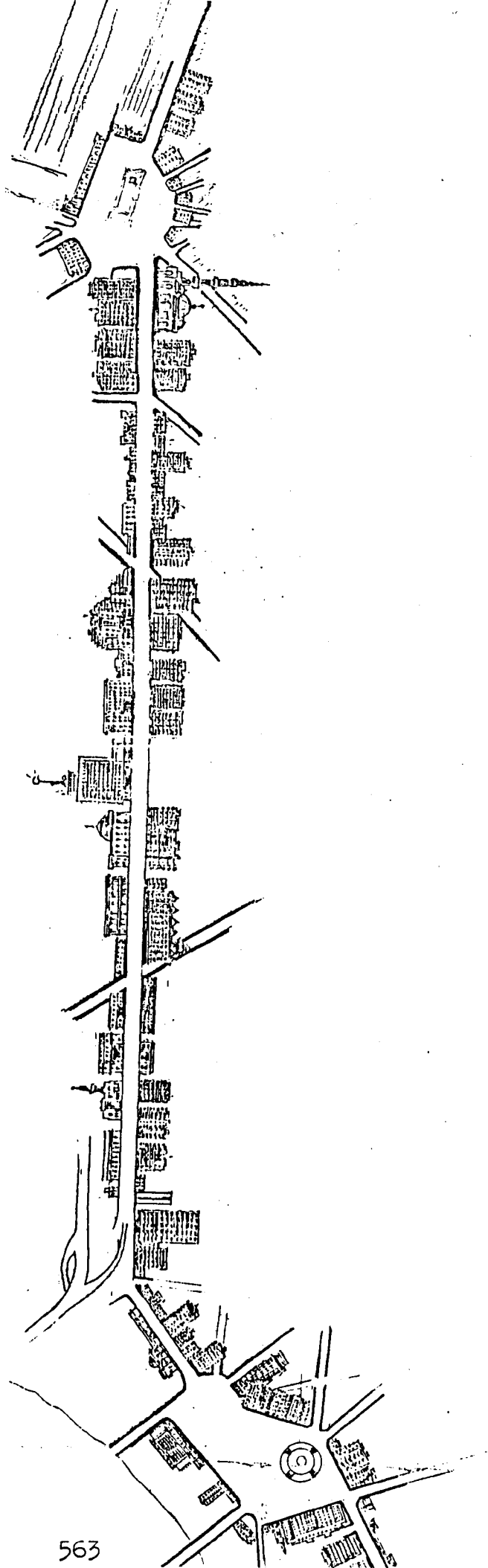


Fig. (A24). The formal organisation of Ramses Street  
between Liberation Square and Ramses Square

(Source: Prepared by the Researcher.)



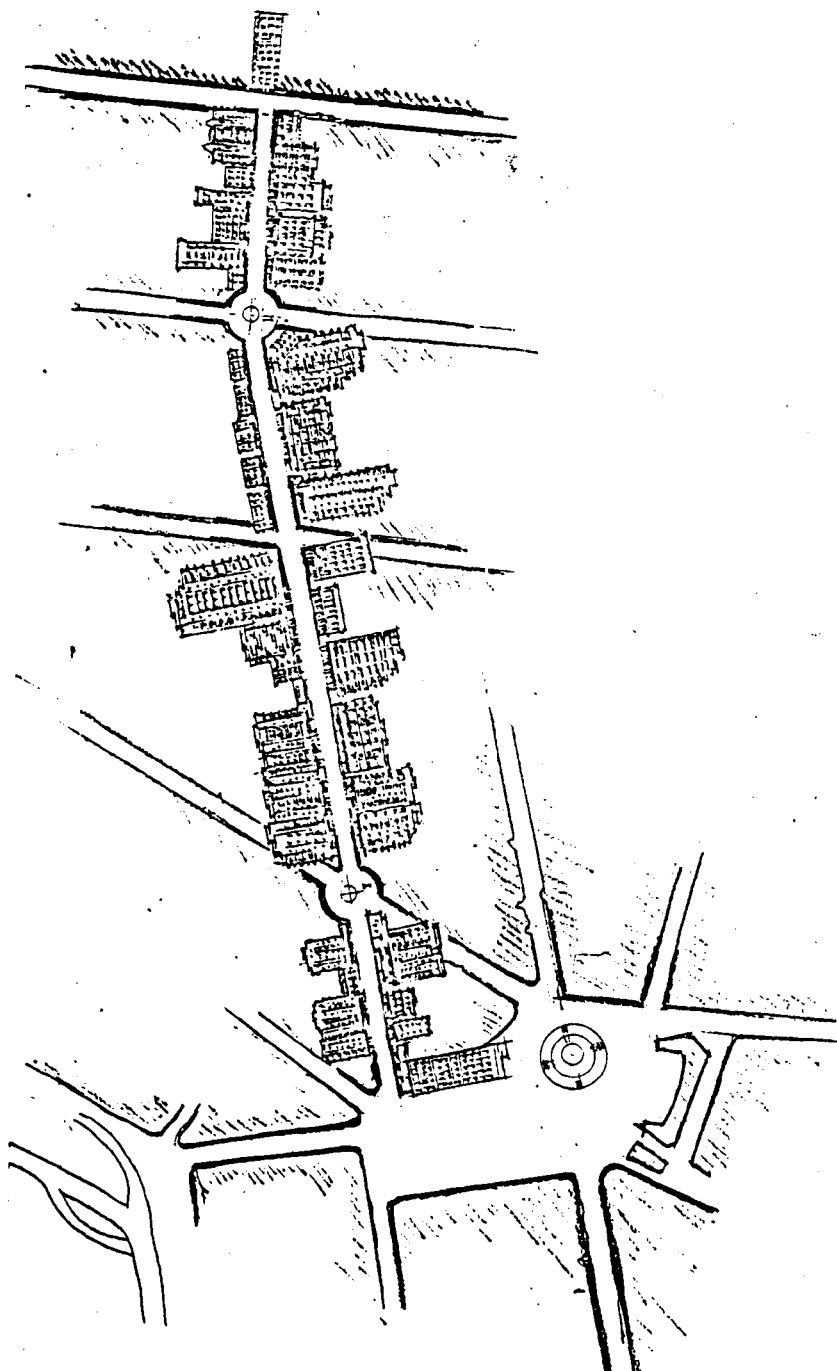


FIG. (A.24). The Formal Organisation of Qasr Al-Nil St. between Al-Kechyah Mosque Cross and Liberation Square.

(Source: Prepared by the Researcher.)

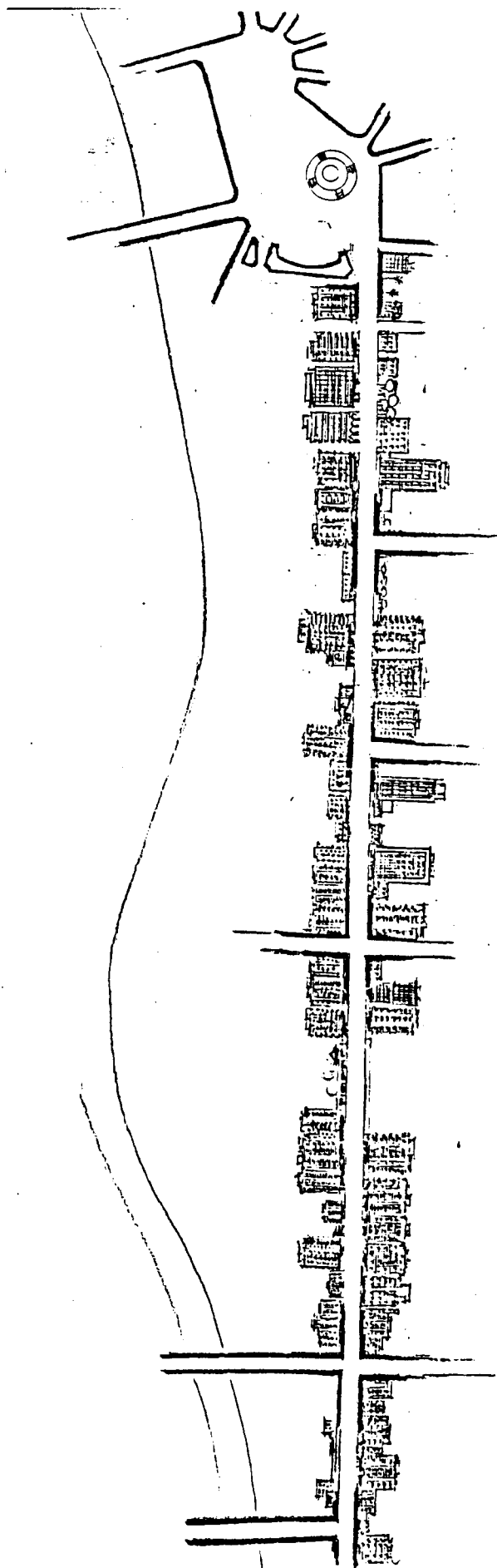


Fig. (A.26). The Formal organisation of the part of El Qasr Al-Aini St. which starts at Al Qasr Al-Aini Cross and ends at Liberation Square.

APPENDIX B

SEVENTH HEAVEN COMPETITION

SCHEME 1



The site plan : 1 5000

Fig. (B.1). Site Plan

(Source: Prepared by the Researcher.)



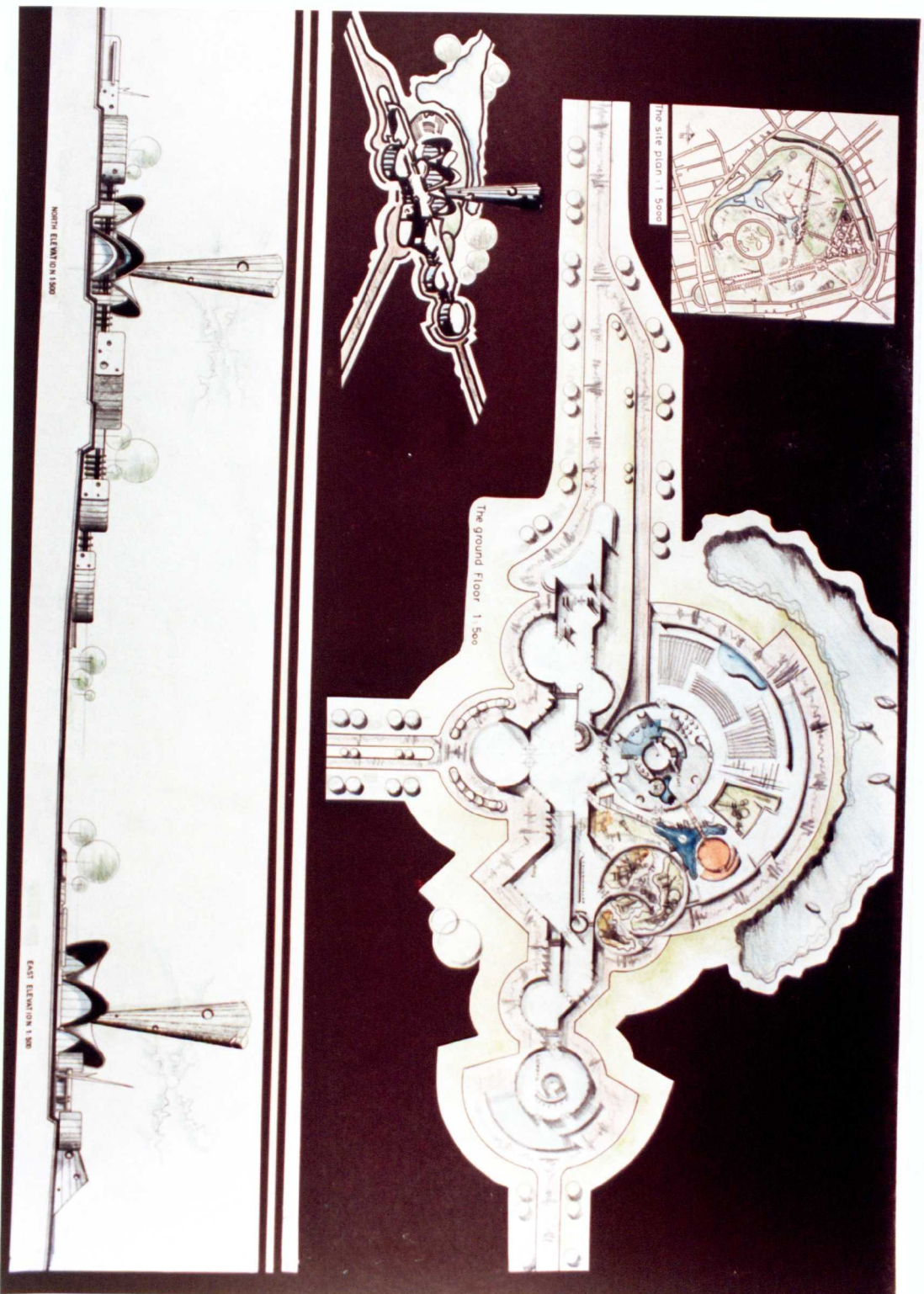


Fig. (B.2). The Ground Floor; The Elevations; The Site Plan; and Perspective.  
(Source: Prepared by the Researcher.)

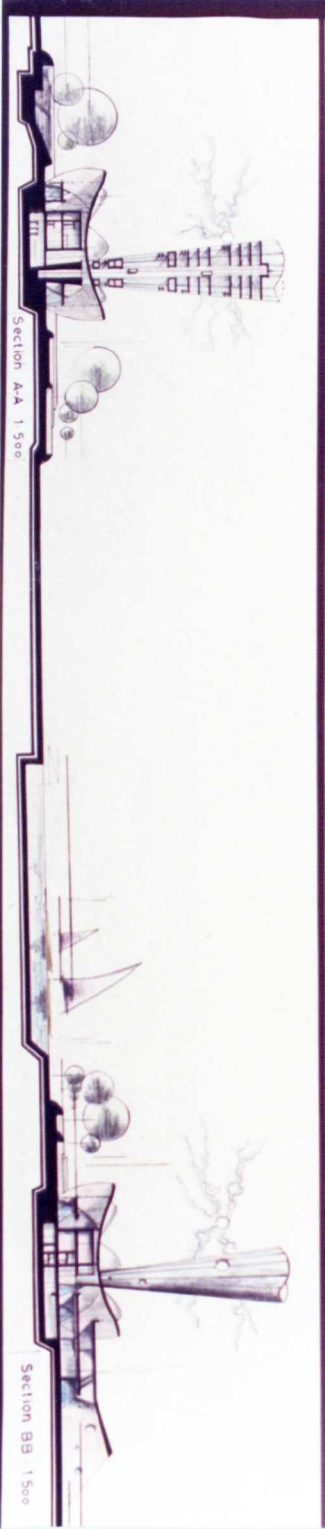
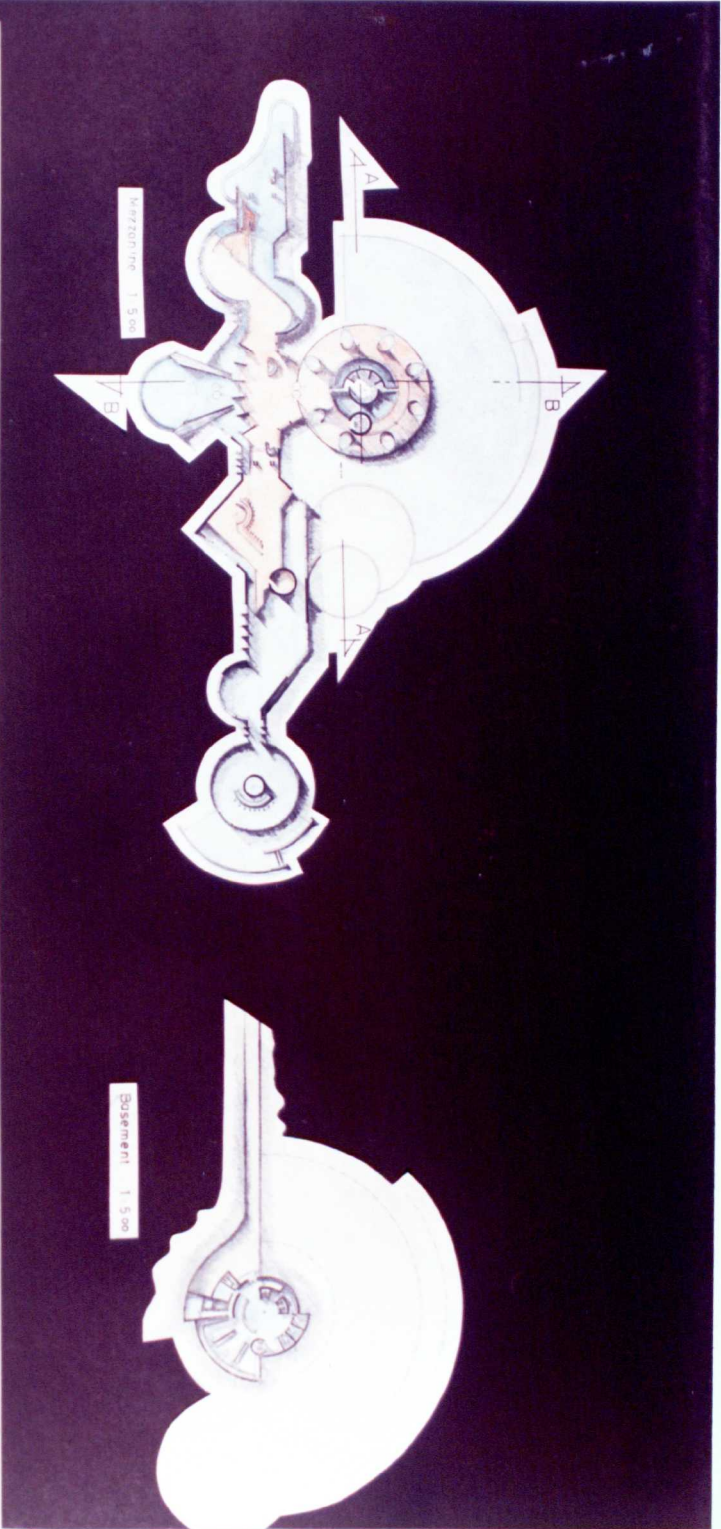


Fig. (B.3). The Mezzanine Floor; The Basement and the Sections.  
(Source: Prepared by the Researcher.)



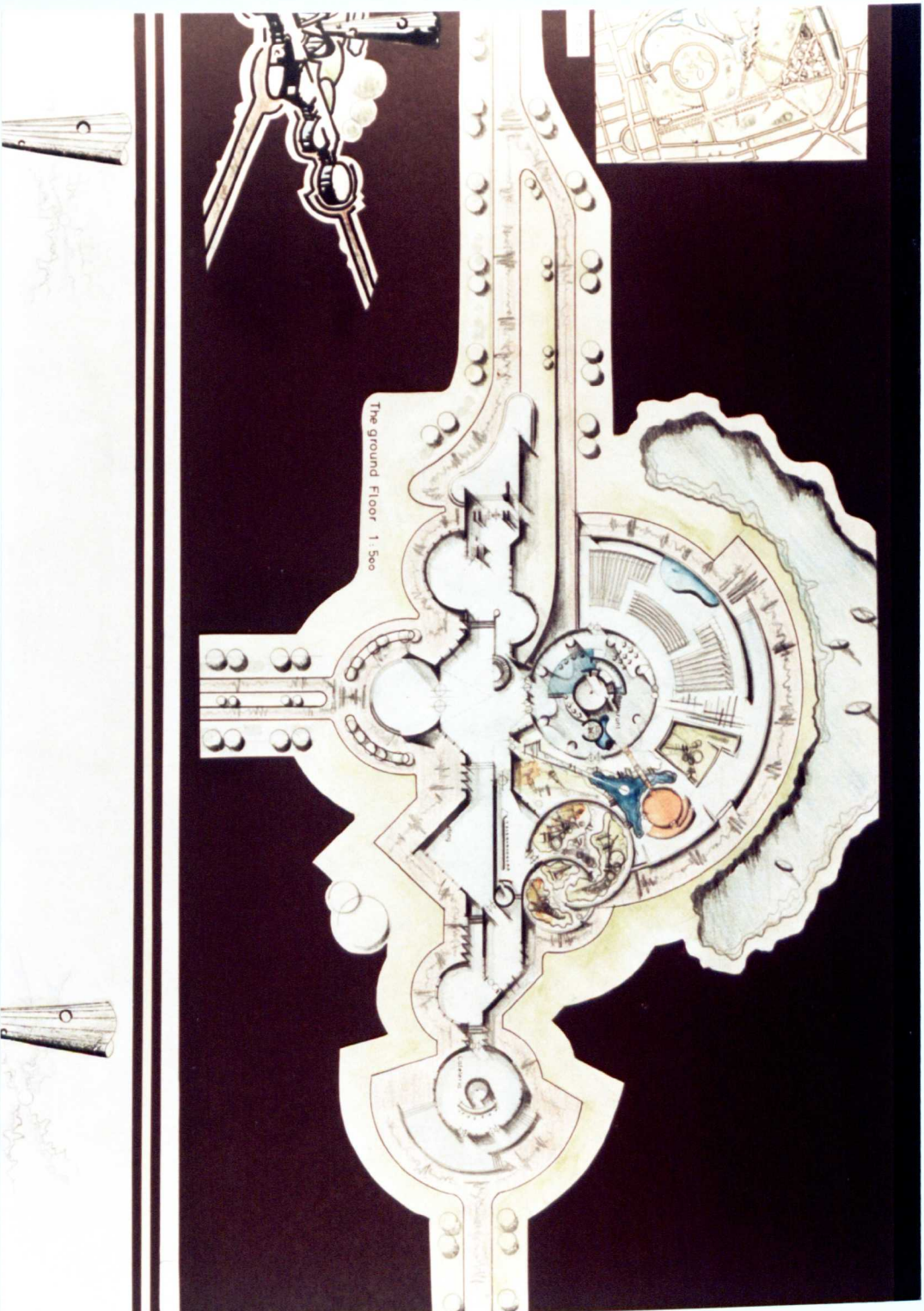


Fig. (B.4), The Ground Floor.

(Source: Prepared by the Researcher.)

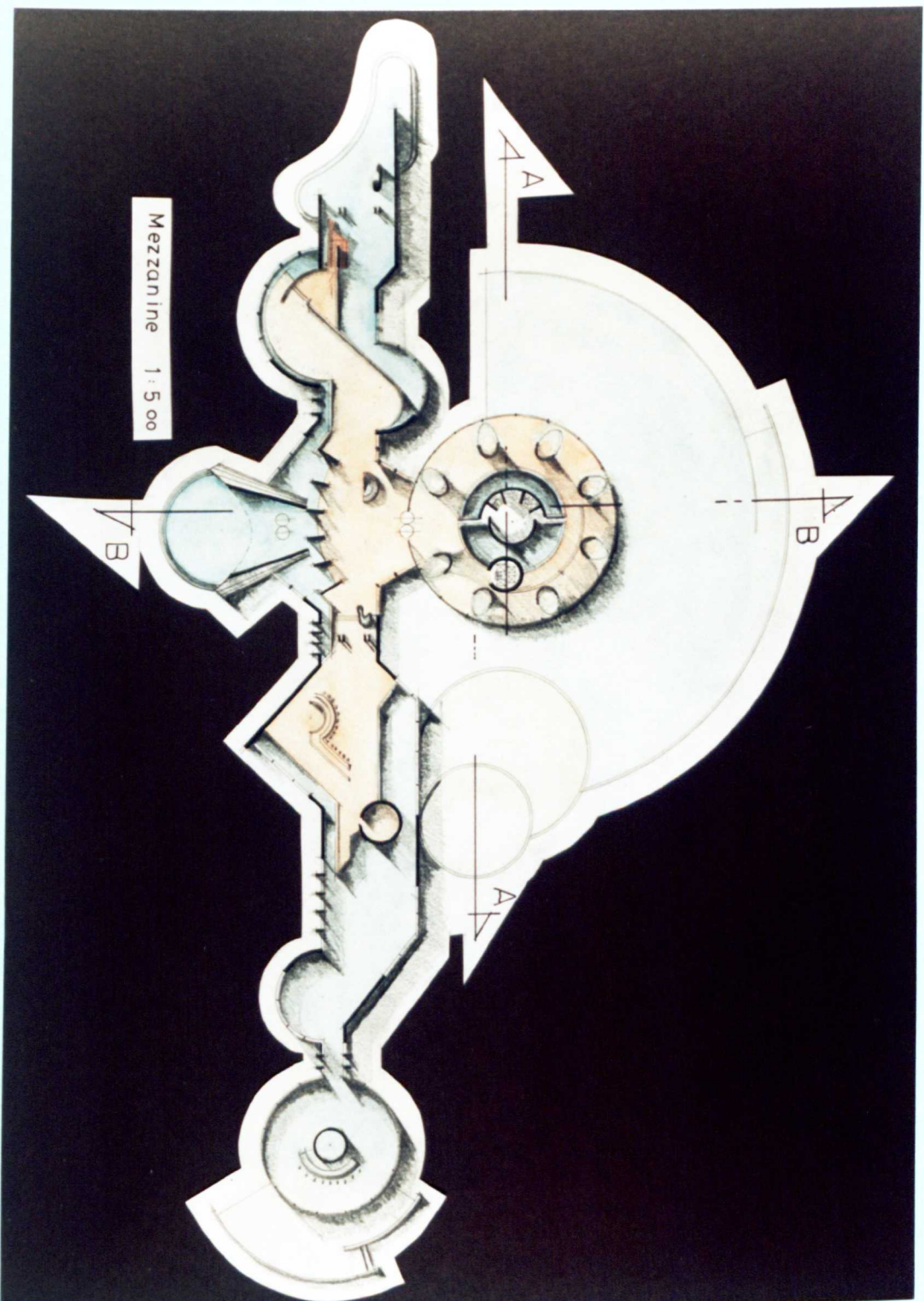


Fig. (B.5). The Mezzanine Floor.  
(Source: Prepared by the Researcher.)

APPENDIX C

SEVENTH HEAVEN COMPETITION

SCHEME 2



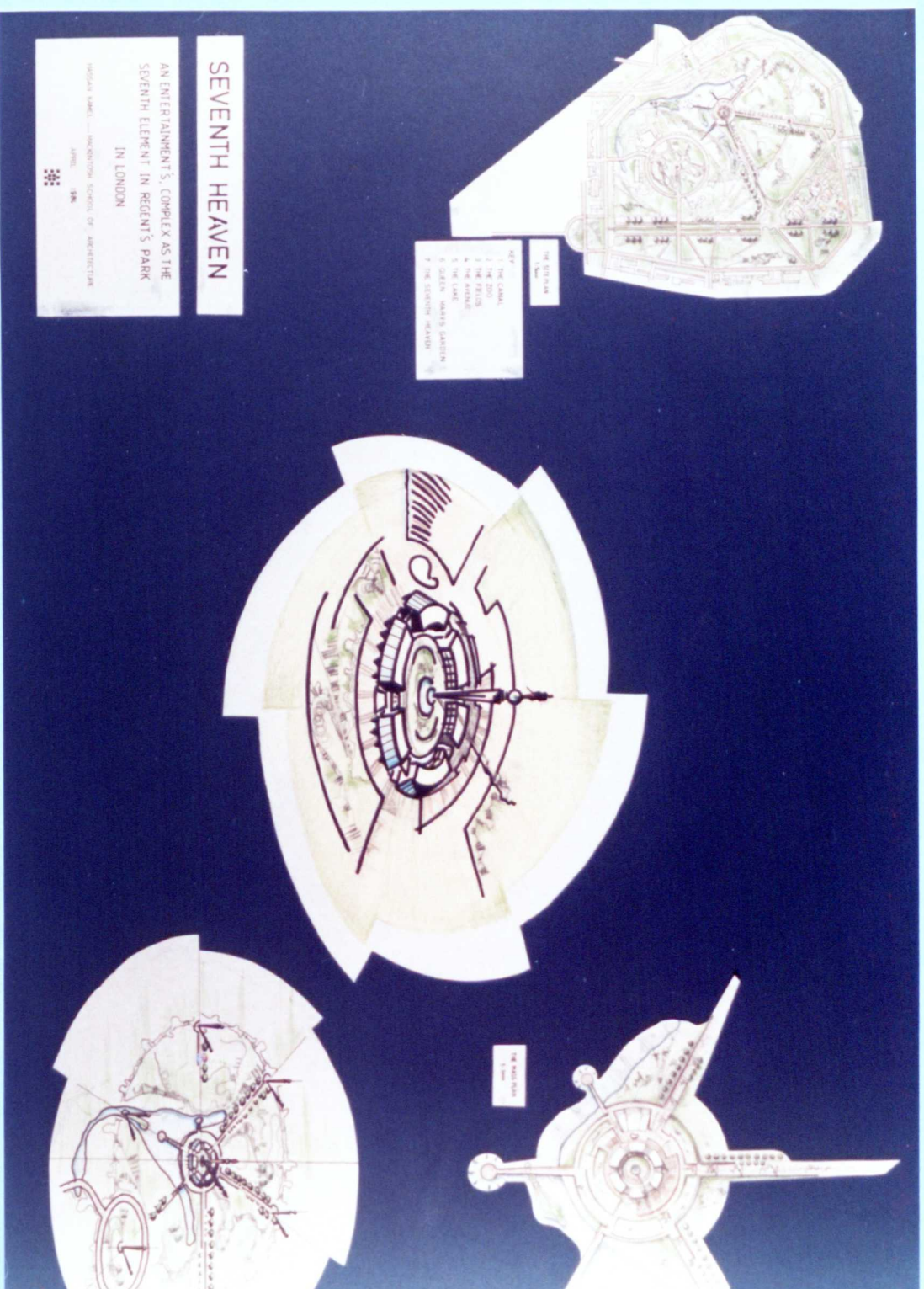


Fig. (C.1). The site plan; the mass plan and the perspectives of Seventh Heaven 2



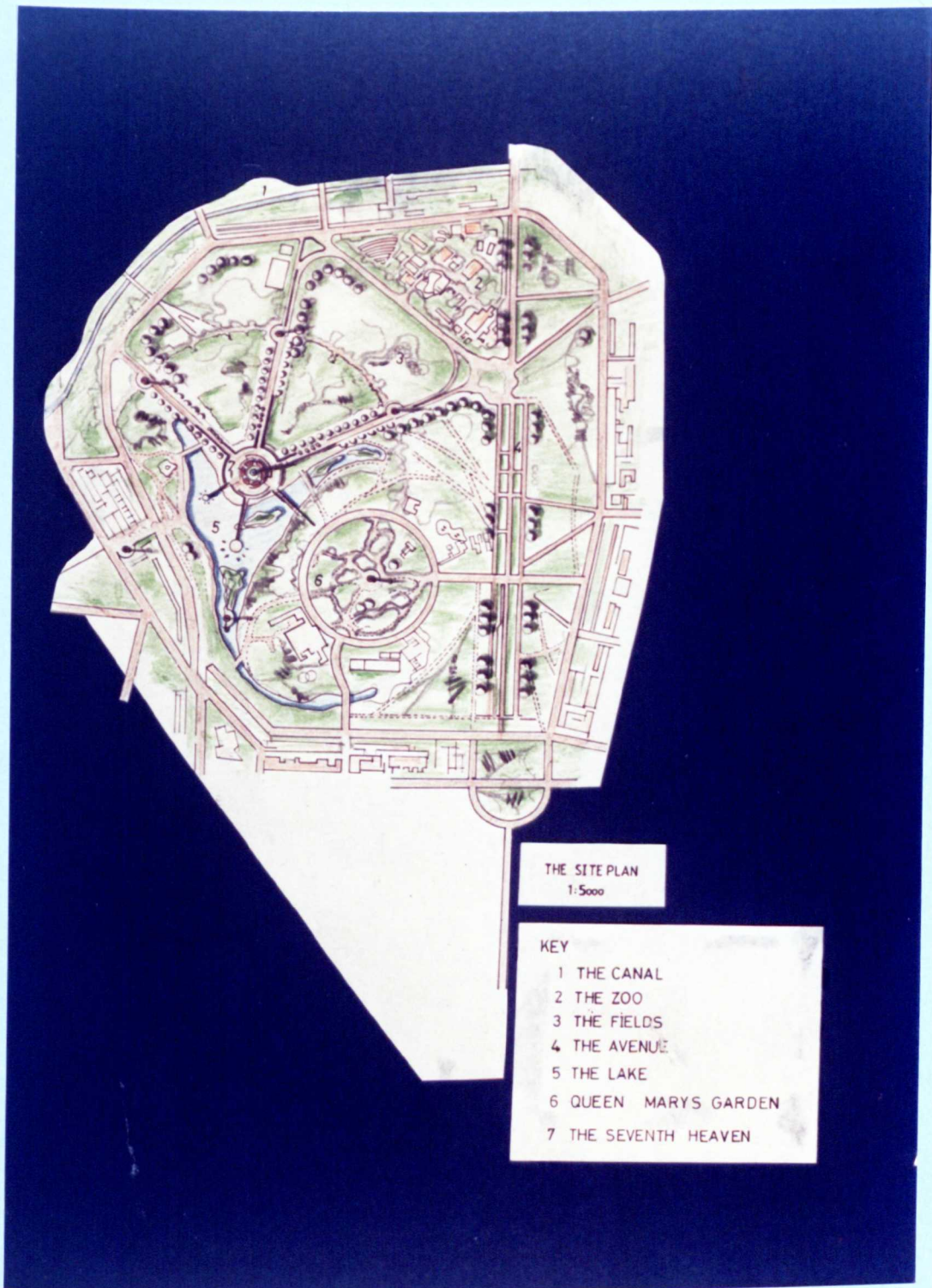


Fig. (C.2). Site Plan of Regent's Park & the Proposed Concept.

(Source: Prepared by the Researcher.)



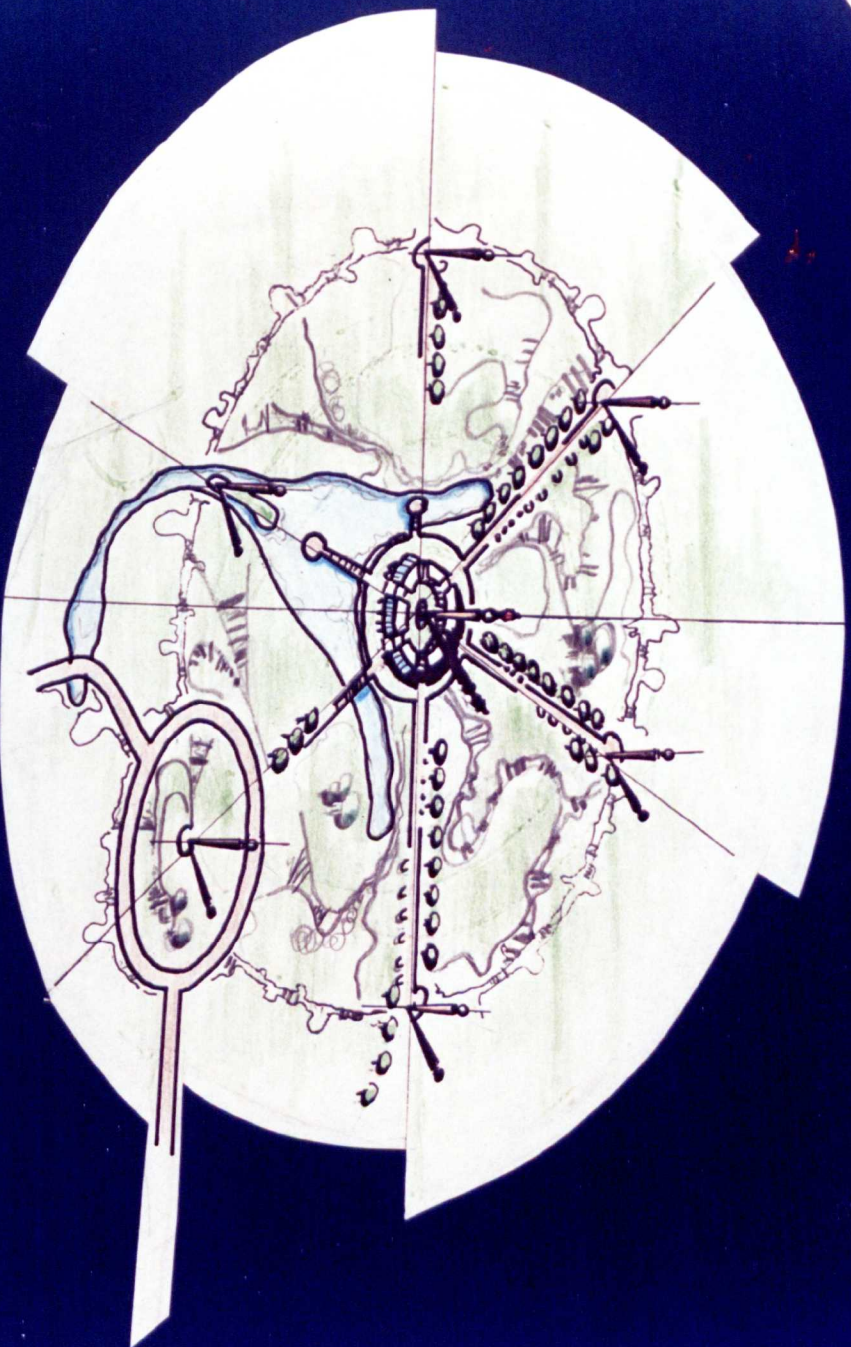


Fig. (C.3). General Perspective of the Proposed Scheme and The Seventh Columns.

(Source: Prepared by the Researcher.)



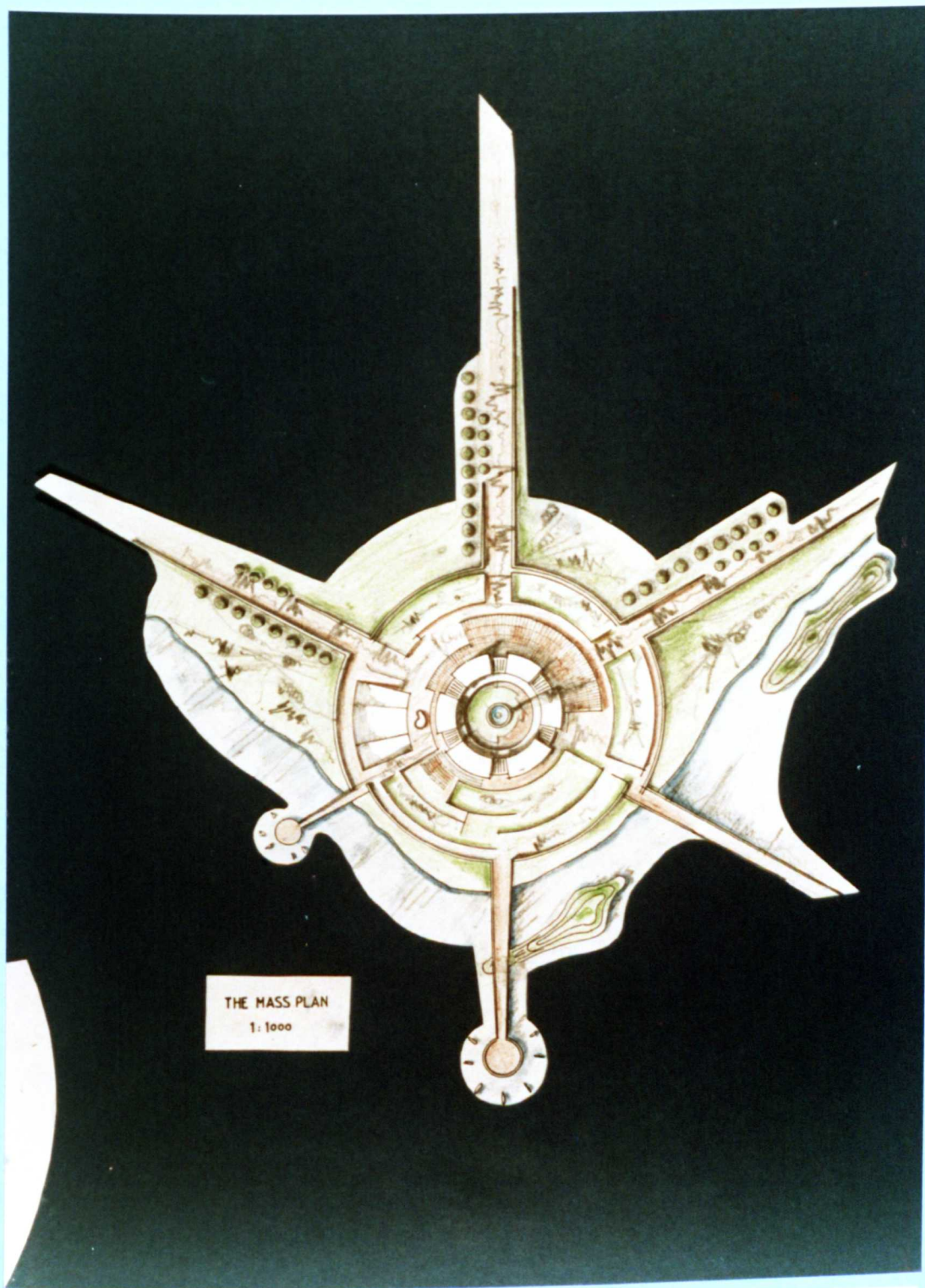
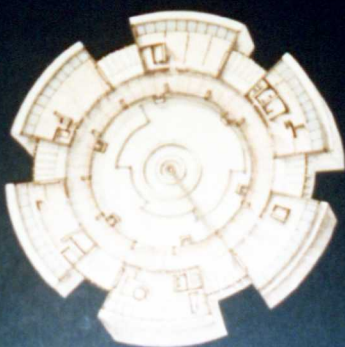
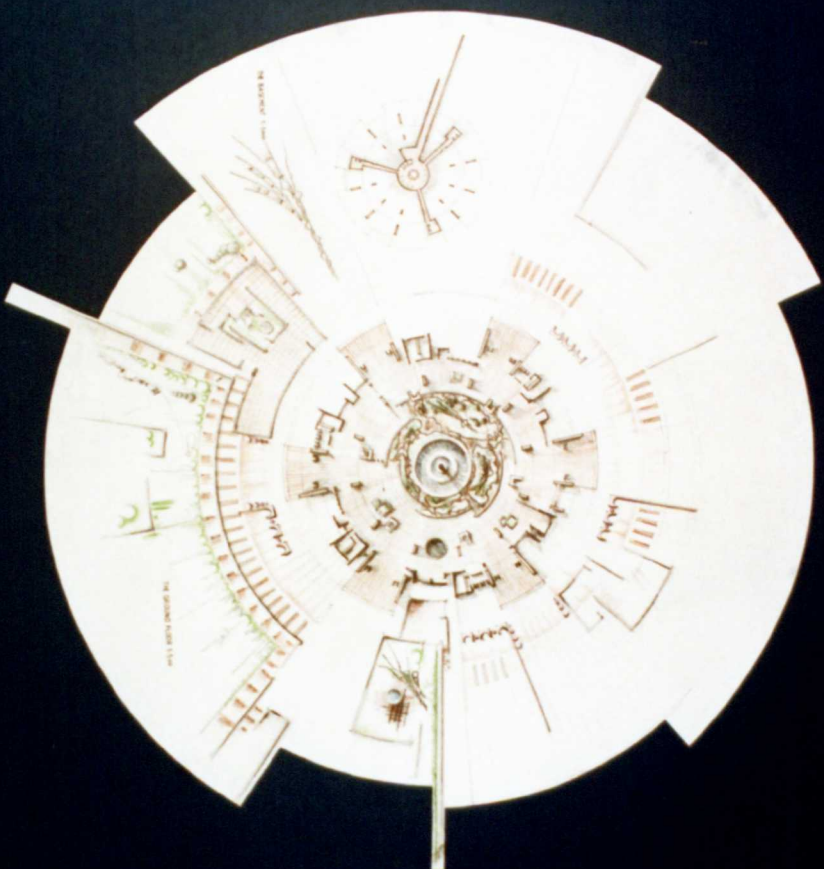


Fig. (C.4). Mass plan of the proposed concept.  
(Source: Prepared by the Researcher.)



THE GRAND ALLEY 1100

Fig. (C.5). The Ground Floor and the First Floor.  
(Source: Prepared by the Researcher.)



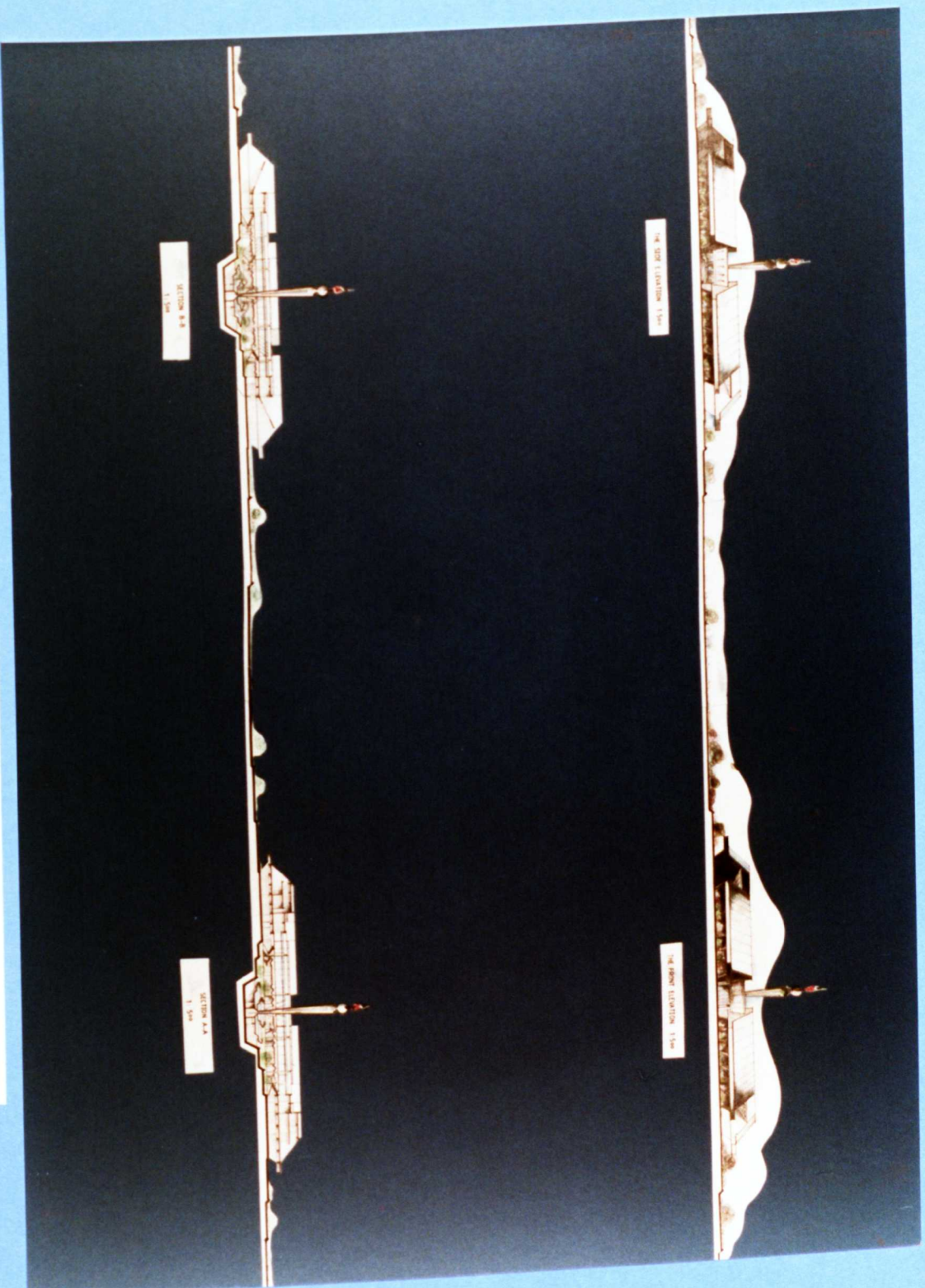


Fig. (C.6). Sections and Elevations.  
(Source: Prepared by The Researcher.)

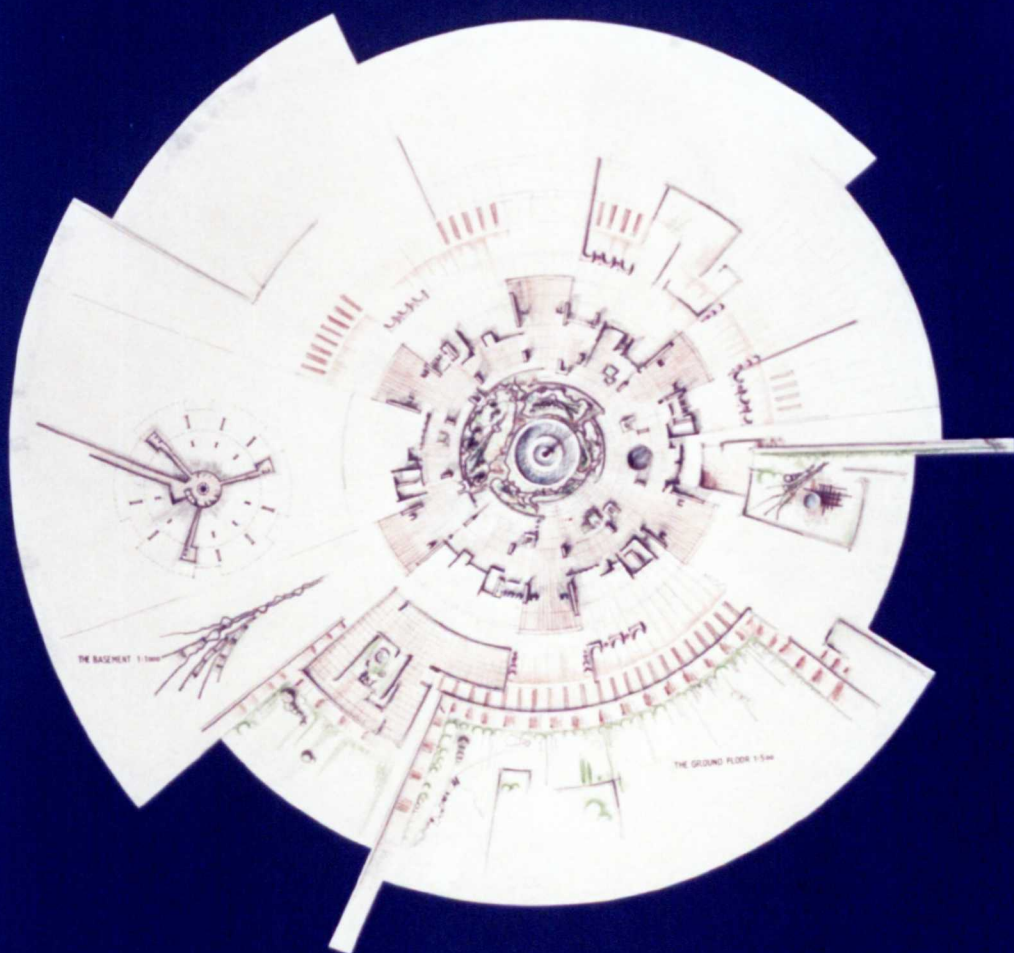


Fig. (C.7). The Ground Floor and The Basement. ,  
(Source: Prepared by the Researcher.)



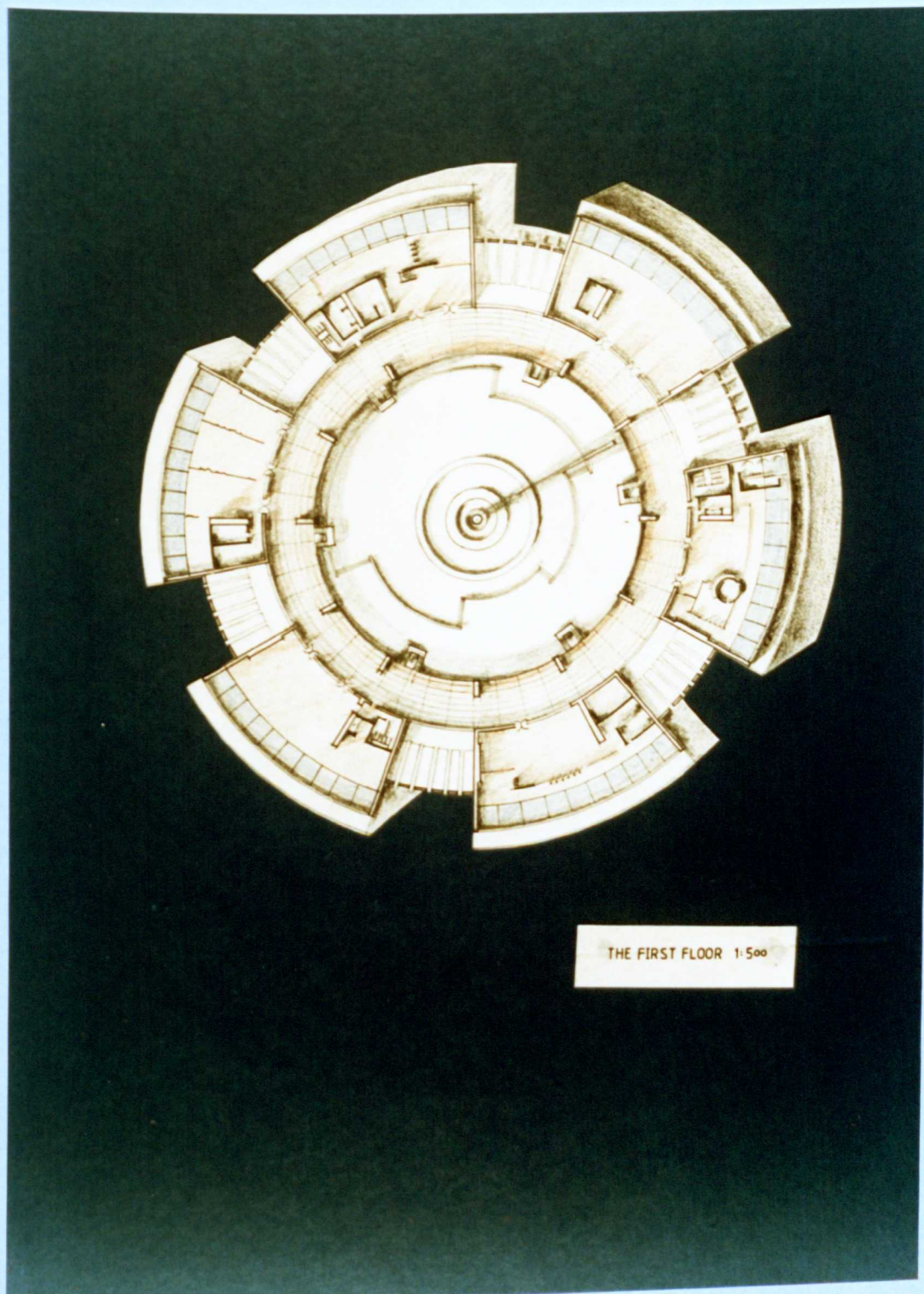


Fig. (C.8). The First Floor.

(Source: Prepared by the Researcher.)



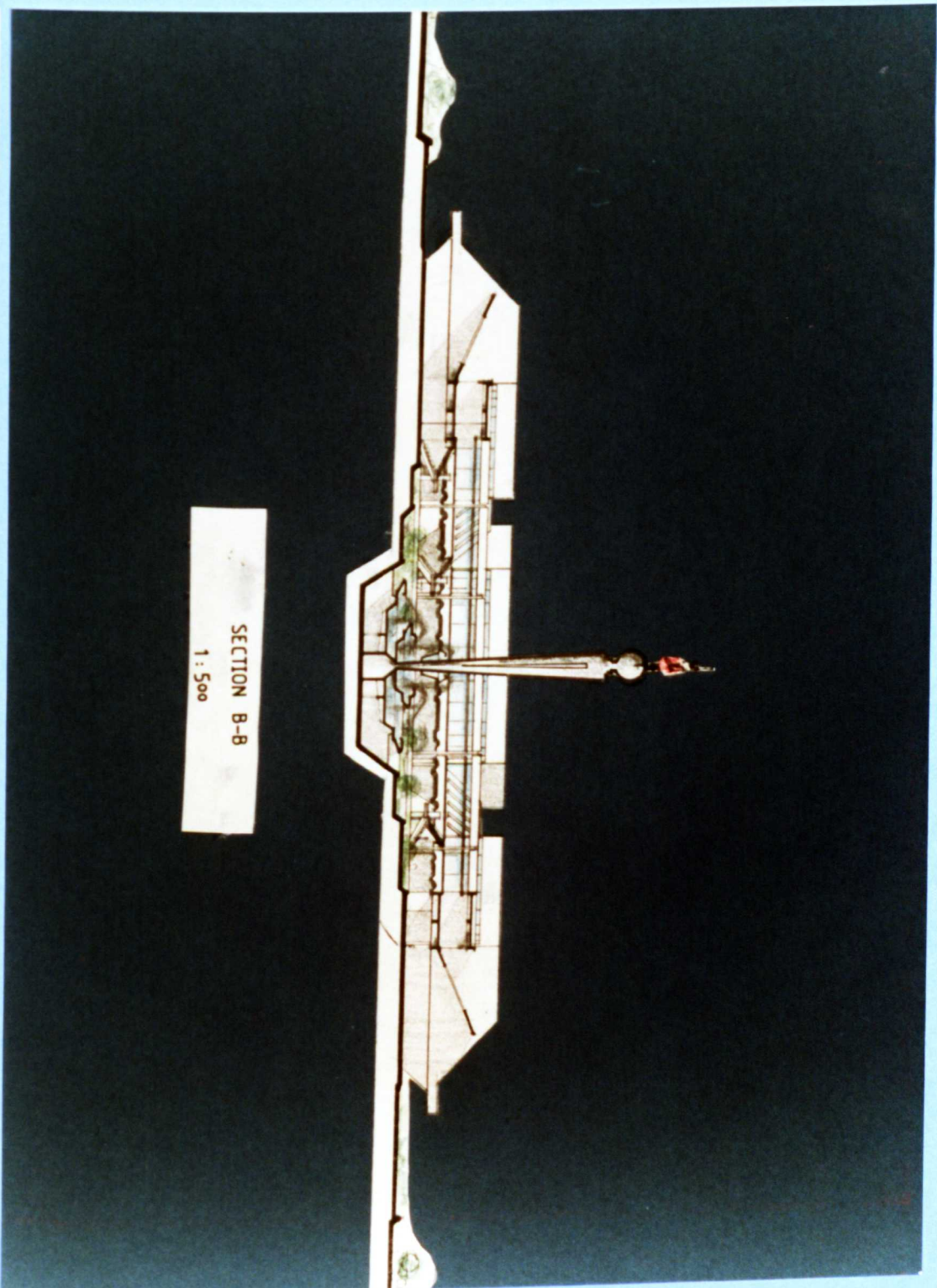


Fig. (C.9). Section B-B.  
(Source: Prepared by the Researcher.)



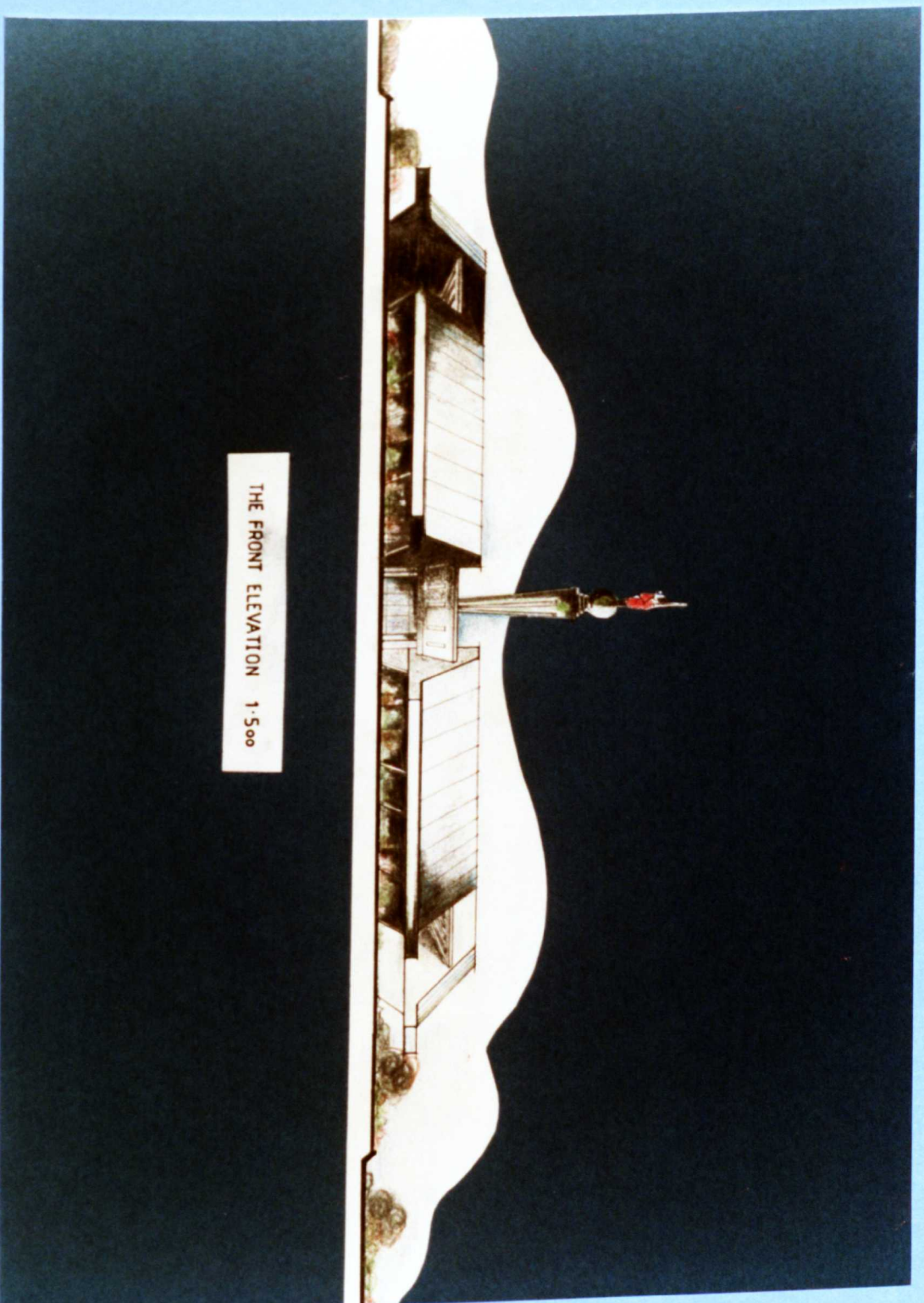
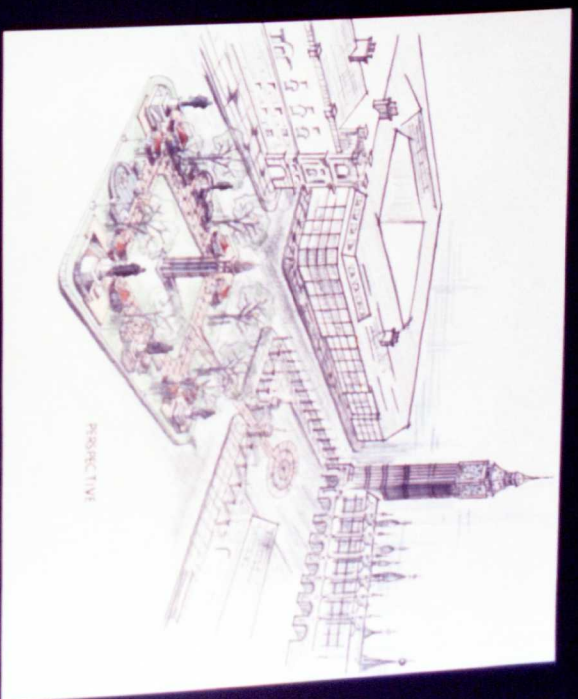
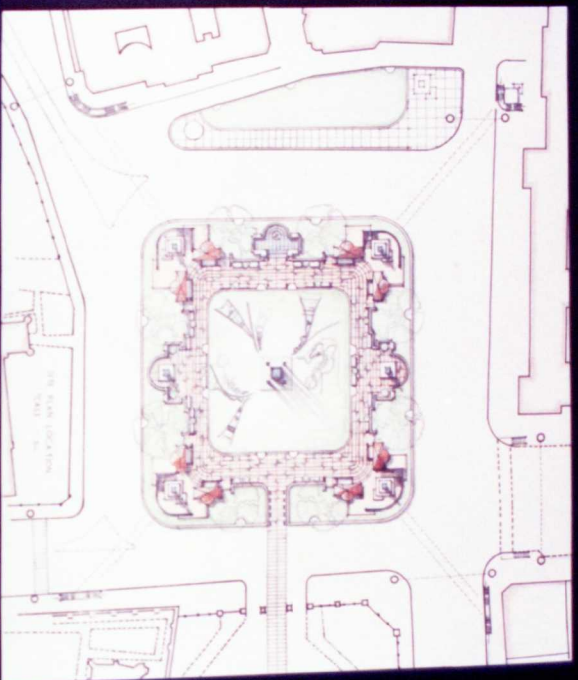


Fig. ( C.10 ). The Front Elevation.  
(Source: Prepared by the Researcher.)

APPENDIX D

PARLIAMENT SQUARE COMPETITION



# PARLIAMENT SQUARE COMPETITION

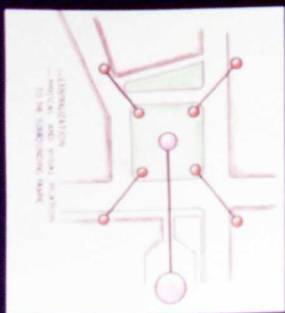
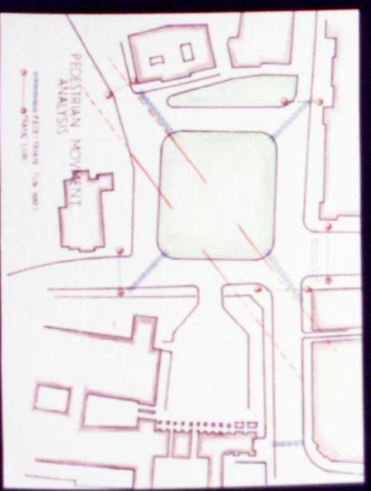


Fig. (D.1). The Site Plan; Perspective; Pedestrian's Movement and Location Analysis.  
Source: Prepared by the Researcher.)



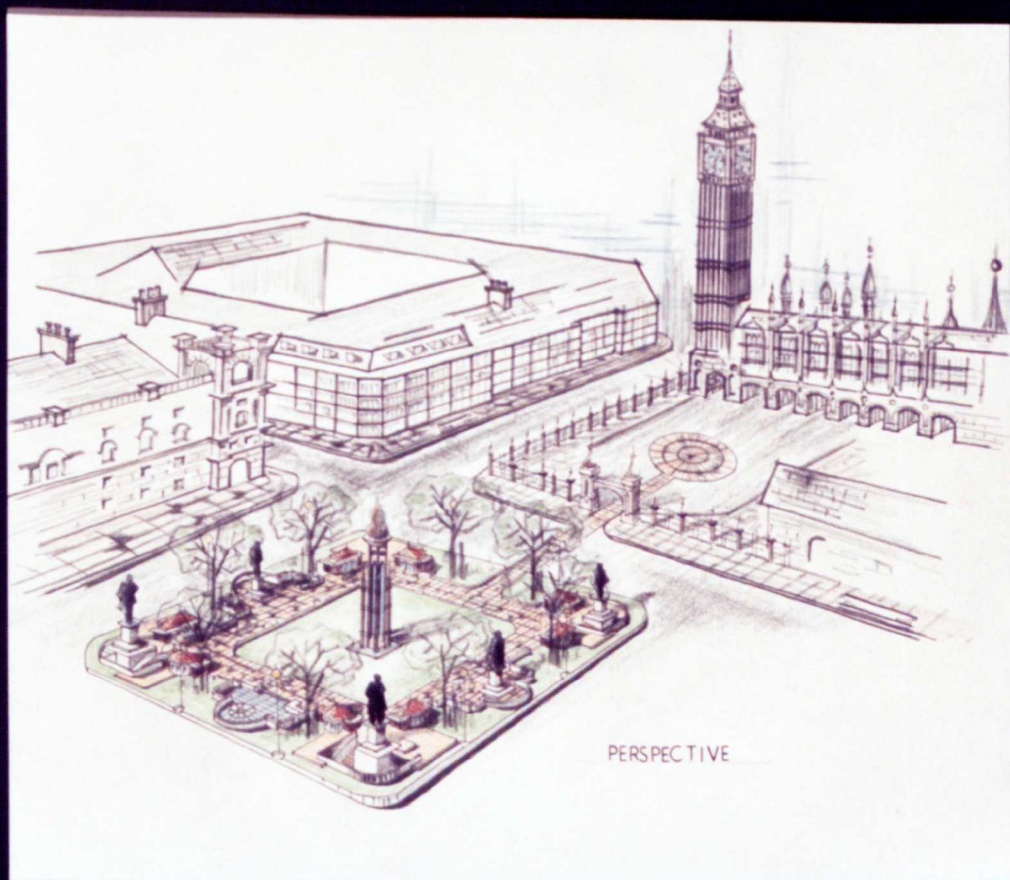


Fig. (D.2). General Perspective of the Proposed Concept.

(Source: Prepared by the Researcher.)

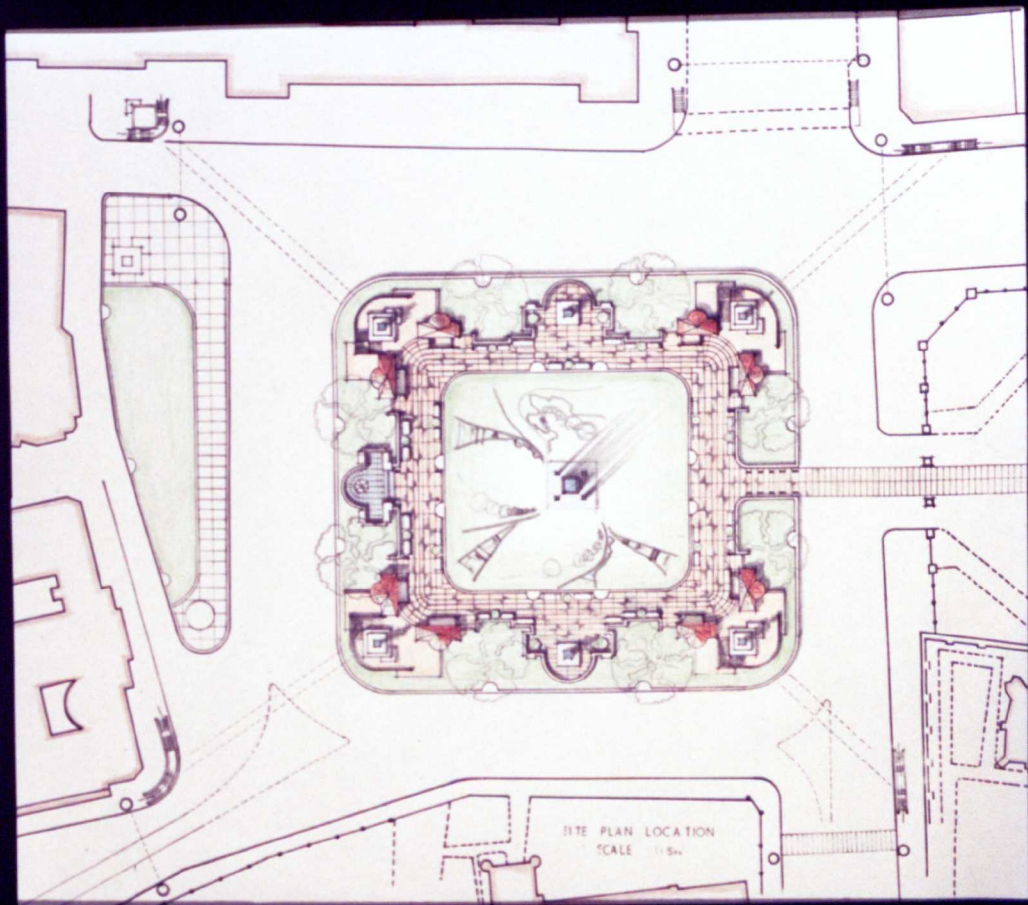


Fig. (D.3). The Site Plan in Detail.

(Source: Prepared by the Researcher.)

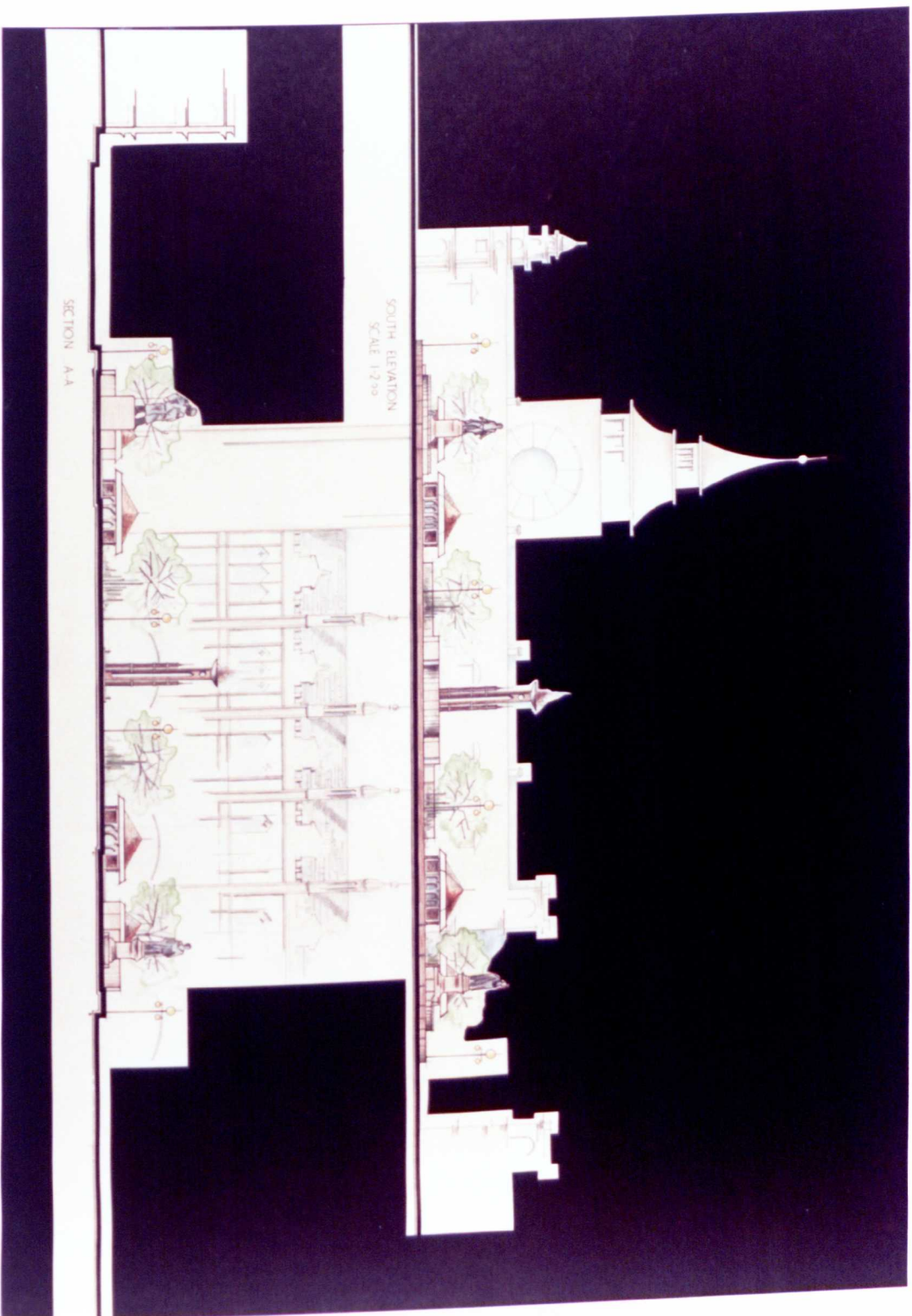


Fig. (D.4). The South Elevation and Section A-A of the Researcher's Entry  
(Source: Prepared by the Researcher )



## BIBLIOGRAPHY

## BIBLIOGRAPHY

### I PUBLISHED BOOKS

- Abu-Lughod, Janet      Cairo 1001 Years of The City Victorious. Princeton: Princeton, University Press, 1971.
- Anand, Mulk R.      Seven Little Known Birds of the Inner Eye. Tokyo: Charles E. Tuttle Company, 1978.
- Anderson, Donald, M.      Elements of Design. New York: Holt, Rinehart, R. Watson, 1961.
- Argan, Giulio, C.      The Renaissance City. London: Studio Vista, 1969.
- Arnheim, Rudolf.      Art & Visual Perception. A Psychology of the Creative Eye. California: California Press 1974.
- Arnheim, Rudolf.      The Dynamics of Architectural Form. California: California Press, 1979.
- Ashihara, Yoshinobu      Exterior Design in Architecture. London: Van Nostrand Reinhold Company, 1981.
- Bacon, Edmund.      Design of Cities. London: Thames & Hudson, 1967.
- Barocas, Claudio      Egypt. London, 1973.
- Beaney, Jan.      Textures & Pattern. London: Palham Books, 1978.
- Benton, Tim.      Expressionism, London: The Open University Press, 1975.
- Briggs, Martin S.      Muhammadian Architecture. New York: Da Campo Press, 1974.
- Brochmann, Odd      Good & Bad Test. London: Eyre & Spottiswoode, 1955.
- Crosby, Theo.      City Sense. London: Studio Vista, 1965.
- Dawood, N.J.      The Koran, 'Translation', London: C. Nicholls & Company Ltd., 1970

- Drew, Philip. Third Generation. The Changing Meaning of Architecture, London: Pall Mall Press Ltd., 1972.
- Drexler, Arthur Transformation in Modern Movement. New York: The Museum of Modern Art, 1980.
- Eckbo, Garrett. The Landscape We See. London: 1961.
- Ellinger, Richard G. Colour Structure & Design. London: Van Nostrand Company, 1980.
- Faisal, King University. Islamic Architecture & Urbanism. Damam, 1983.
- Goldwater, Robert. Symbolism. Allen Lane, 1979.
- Goodwin, Godfry. A History of Ottoman Architecture. London, Thames & Hudson, 1971.
- Gregory, R.L. Concepts & Mechanism of Perception. London: Gerald Duckworth & Co. Ltd. 1974.
- Grillo, Paul J. What is Design. Chicago: Paul Theobald Company, 1973.
- Grillo, Paul J. Form, Function & Design. Dover Publications Inc. 1975.
- Halprin, Lawrence. Cities. Massachusetts & London: The Mit Press, 1978.
- Harald Kueppers. The Basic Law of Colour Theory. U.S.A. Barrons, 1982.
- Hesselgren, Sven The Language of Architecture. Sweden: Student Literature, Lund, 1969.
- Hill, Derek & Golvin, Lucien Architecture in North Africa. London: Faber & Faber Ltd. 1976.
- Hoag, John D. Islamic Architecture. New York: Harry N. Abrams, Inc. Publishers, 1977.
- Issac, Arg. Approach to Architectural Design London: Iliffe Books, 1971.

- Khan, Muhammed M. The Translation of the Meanings of Sahih Al-Bukhari. Pakistan Kazi Publication, 1979.
- Kandinsky, Wassily. Point & Line to Plan. New York, Dover: Dover Publication, 1979,
- Kepes, Gyorgy Structure in Art & in Science. London: Studio Vista, 1965.
- Kepes, Gyorgy. Module Symmetry & Proportion. London: Studio Vista, 1966.
- Kepes, Gyorgy. Sign Image & Symbol. London: Studio Vista, 1966.
- Lampugnani, Vittorio M. Visionary Architecture of the 20th Century. London: Thames & Hudson, 1982.
- Langer, Susan K. Feeling and Form. London: Routledge & Kegan Paul Limited, 1953.
- Lauer, David A. Design Basics. London: Holt, Rinehart & Winston, 1985.
- Le Corbusier Modular 2. Faber & Faber Limited, Limited, 1958.
- Lee, T. Psychology and The Environment. London, Methuen, 1976.
- Leprohon, Pierre. Rome. Italy: Liber, 1981.
- Lloyd, David Save the City, A Conservation Study of the City of London. London: Society for the Production of Ancient Buildings, 1976.
- Lewis, David. Urban Structure. Elek Books, 1968.
- Lynch, Kevin. A Theory of Good City Form. Massachusetts: Massachusetts Institute of Technology, 1981.
- Lynch, Kevin. The Image of the City. Massachusetts, London: Massachusetts Institute of Technology, 1982.
- Lynch, Kevin. A Theory of Good City Form. Massachusetts, London: Massachusetts Institute of Technology, 1984.

- Maly & Dietfried  
Gerhardus Expressionism. Phaidon Press  
Limited, 1979.
- M.H. Pirenne. Optics, Painting & Photography.  
Cambridge: Cambridge University  
Press, 1970.
- Meyer, De Lucio. Visual Aesthetics. London:  
Lund Humphries, 1973.
- Mubarak, Ali. Al-Khitat Al-Tawfiqiyah Al  
Jadidah. Topography & History  
of Egypt. Cairo: Bulaqu  
Press, 1888.
- Osborne, Roy Lights & Pigments. Colour  
Principles for Artists.  
London, John Murray, 1980.
- Palmer, Fredrick. Visual Awareness. London:  
B.T. Batsford Limited, 1972.
- Park, Niels L. The Language of Architecture.  
A Contribution to Architectural  
Theory. Paris - Mouton - The  
Hague, 1968.
- Pates, Lory. The Visual Experience. An  
Introduction to Art, Prentice  
Hall, 1964.
- Peets, Elbert. On The Art of Designing Cities.  
London, Massachusetts:  
Massachusetts Institute of  
Technology, 1968.
- Perenyi, Imre. Town Centers. Planning &  
Renewal. Budapest: Akadeemiai  
Kiado, 1981.
- Sausmarez, Maurice de The Dynamics of Visual Form,  
London: The Herbert Press,  
1980.
- Schulz, Norberg Intention in Architecture.  
Universitesforlaget. Allen &  
Unwin Ltd. 1963.
- Simonds, John. Landscape Architecture.  
London, Iliffe Books Ltd.,  
1961.

- Smith, Peter F. The Dynamics of Urbanism. London: Huchison Educational, 1974
- Smith, Peter F. Architecture & The Human Dimension, London, Georg Godwin Ltd., 1979.
- Smithies, K.W. Principles of Design in Architecture. London: Van Nostrand Reinhold, 1981.
- Sharp, Dennis. Modern Architecture & Expressionism. London: Longman Green & Co. Ltd., 1966.
- Spreiregen, Paul D. Urban Design. U.S.A.: Robert E. Krieger Publishing Company, 1981.
- Tafuri, Manfredo & Dal Co, Francesco Modern Architecture. London: Academy Editions, 1980.
- Valantine, C.W. The Experimental Psychology of Beauty. London: The Camelot Press, 1962.
- Venturi, Robert Complexity and Contradiction in Architecture. London: The Museum of Modern Art, 1966.
- Whyte, Lancelot L. Aspects of Form. London: Lund Humphries, 1968.
- Worskett, Roy. The Character of Towns, London: The Architectural Press, 1969.
- Zucker, Paul. Town & Square from The Agora to the Village Green. London, New York: Columbia University Press, 1959.

## II PUBLISHED ARTICLES & OTHER REFERENCES

- Abdel-Gawad, T. 'Cairo as a City....and Egypt's capital also, Its age over 10,000 years. How it was and What its Origin.' Journal of The Egyptian Society of Engineers, 21, No. 2 (1982), p.22.



- Abdel-Gawad, T. 'Cairo as a City....and Egypt's capital also, Its age over 10,000 years. How it was and What its origin.' Journal of the Egyptian Society of Engineers, 21, No. 3 (1982), p.20.
- Allam, Ahmed K. 'Moving the Capital.' Journal of the Egyptian Society of Engineers, 21, No. 2 (1982), p.28.
- Al-Zoghby, Ahmed R. 'Revitalization of Fatimite Cairo.' Unpublished Ph.D. Thesis, Ain Shams University Cairo, 1973.
- Askar, Abd El-Nabi 'The traffic problems in the city of Cairo' Journal of the Egyptian Society of Engineers, XX, No. 3 (1982), p.32.
- Charney, Melvin. 'The Montrealness of Montreal.' The Architectural Review, CLXVII, No. 999 (May 1980), p.300.
- Bergne, Paul. 'Cairo: Can the Medieval City be saved.' The Architectural Review, CLXIV, No. 978, (Aug.1978), p.113.
- Broadbent, Geoffrey 'New Classicism.' Architectural Design. 49 No.8-9.
- Brown, Kenneth 'Connecting Vision' The Architectural Review, CLXV, No. 986, (1979), p.238.
- Buchanon, Peter 'National Gallery: Progress Report.' The Architectural Review, CLXXV, No. 1044, pp.56-57.
- Buchanan, Peter. 'Regeneration Barcelona with Parks & Plazas. The Architectural Review, CLXXV, No. 1048. (1984) 39/6.
- El-Hawary, Mohamed 'Cairo Transportation Problem.' The Magazine of Engineers.
- Evans, Eldred & Shalev David 'Documents of Seventh Heaven Competition in Regent's Park. London, 1983.

- Fouad, Mohamed 'Historic Growth of Cairo.' UIA International Architect, No. 7 (1985), p.12.
- Gibson, Sidell Partnership 'Grand Buildings, Trafalgar Square.' Architectural Design 56 4(1986), p.24.
- Harris, John 'Marginalia.' Portland Plaza Competition. The Architectural Review, CLXIX, No. 1009 (March, 1981), pp.194-195.
- Hoffer, Peter 'Exhibition Center, Siena, Italy.' The Architectural Review, CLXV, No. 986 (April 1979), p.215.
- Ibrahim, Addel 'That man and its difficult job.' Journal Al-Ahramme No. 35863 (February 1985), p.3.
- Kamel, Reyaadd 'Strategy of studying the Historical Regions of Cairo' The Magazine of Engineers, Year 40, No. 356 (1984), p.61.
- Kamel, Reyaadd 'Architectural Study for The Citadel Region.' The Magazine of Engineers, Year 40, no.358 (Jan. 1985), p.79.
- Kleihues, Josef Paul 'Berlin: IBA.' The Architectural Review, CLXIX, No. 1012 (1981), pp.326-328.
- Knobel, Lance. 'Urban Memories: five projects.' The Architectural Review, CLXII, No. 1028, (October 1982,) p.68/10.
- Latham, Ian 'Ideas for Westminster.' Building Design. No. 710. (October 1984), p.32-37.
- Mackay, David. 'Four more parks and plazas, Barcelona.' The Architectural Review, CLXXIX No. 1063, (Sept. 1985), pp.62-65/9.
- McIntyre, Antony 'Group 1 - Public Space, Edinburgh.' The Architectural Review, CLXXV, No. 1048 (1984), p.25/1.

- Meade, Martin      'Houses & Municipal Offices, Drancy, France.' The Architectural Review, CLXX VIII, No. 1064 (Oct. 1985), p.37.
- Myers, Barton      'Housing, Norfolk, Virginia, U.S.A.' The Architectural Review, CLXIX, No. 1009 (March 1981), p.158.
- Pack, Elsom & Robert Partnership      'Documents of Parliament Square Competition'. London: 21 Douglas St. SW1, 1984.
- Petrus, David      'Marginalia.' The Architectural Review, CLXIX, No. 1007 (Jan. 1981), p.2.
- Rob, Krier      'Typological and Morphological elements of the concept of urban space.' Architectural Design. 49, No. 1, p.3.
- Rosner, Rolf.      (Fritz Schumacher's Hamburg.' The Architectural Review, (CLXVII, No. 997, (March, 1980), p.167.
- Wood, David.      'Texas Builds.' The Architectural Review, CLXIV, No. 981, (Nov. 1978), p.301.
- Wright, Lance & Brown, Kenneth.      'AMP Square.' The Architectural Review, CLXII, No. 979 (Sep. 1978), p.163.

