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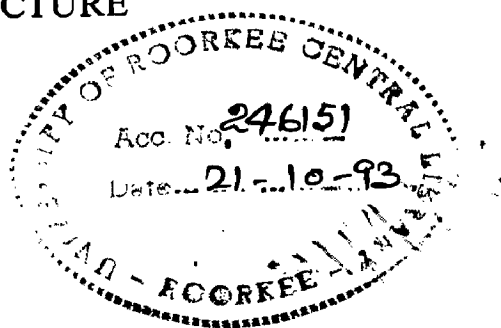
TRADITIONAL ARCHITECTURE AND ITS RELEVANCE IN THE CONTEMPORARY CONTEXT : A CASE STUDY, DELHI.

A DISSERTATION

submitted in partial fulfilment of the
requirements for the award of the degree
of
MASTER OF ARCHITECTURE

By

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February 1991


CANDIDATE'S DECLARATION

I hereby certify that the work which is being presented in the thesis entitled, "TRADITIONAL ARCHITECTURE AND ITS RELEVANCE IN THE CONTEMPORARY CONTEXT : A CASE STUDY, DELHI" in partial fulfilment of the requirement for the award of the Degree of Master of Architecture, submitted in the Department of Architecture of the University of Roorkee is an authentic record of my own work carried out during a period from July 1990 to January 1991 under the supervision of Mr. S.Y. Kulkarni.

The matter embodied in this thesis has not been submitted by me for the award of any other degree.


(MONA PURI)

This is to certify that the above statement made by the candidate is correct to the best of my knowledge.


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A C K N O W L E D G E M E N T

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I also thank my friends and colleagues Vasudha and Mukesh, for helping me in their own sweet ways. The acknowledgement shall remain incomplete until I thank my parents and my friend Anil for encouraging me completing this work in the best possible manner.

MONA PURI

C H A P T E R - 1

TRADITIONS-RESOURCE AND IDENTITY

'This is the paradox! how to become modern and return to sources; how to revive an old dormant civilization and take part in universal civilization'

- Paul Ricoeur, 1961.

1.1 IDENTIFICATION OF PROBLEMS

ARCHITECTURE :

- THE MOTHER OF ALL ARTS ?
- THE MOST SOCIAL OF THE ARTS ?
- ▼ A COMMUNAL ART ?

'Architecture is a communal art, because we put the building in city to be seen by every one, architecture, in fact, forces itself on everyone. If a bad painting is made it will end up on the painter's. Studio wall, and bad music will never have a chance to be played in a concert hall, but an architect can be like dictator, because people are forced to pass through the door he designs and when he puts any thing that is ugly in his building, it is a pity because it is forced upon the community. An ugly or senseless building is an insult to every gentleman passing in front of it, it says : This is your worth Mister' -

Hasan Fathy

But beautiful architecture is an act of civility towards the man who comes to the building. It is as if the building were bowing to you at every corner, as in a minuet. Every building should add to the culture of man. But how can we do it when it does not respect

human reference and human scale ? We should re-introduce man in architecture : we must re-introduce human scale, human needs and human tradition.

Architecture is the social of all arts. Every society presents multiple facets to its members, which may be social, cultural, economic, political, institutional, religious, etc. These multiple dimensions interact to create the complex reality that we call society. Architecture is, then the means that the members of society adopt to express in the physical world. This expression may be explicit or implicit. The resulting building and urban/rural fabric is the physical mirror of the aspects that define the society's objective reality, as well as its linkage backwards and forwards to its cultural heritage and its future aspirations.

It is an art that is physically rooted in the geographic location of that society.

- 1.1.1 FAILURE OF MODERN ARCHITECTURE, EVALUATION
OF REASONS AT INTERNATIONAL AND NATIONAL LEVEL :
- A. INTERNATIONAL SEARCH FOR ARCHITECTURE

A. INTERNATIONAL SEARCH FOR ARCHITECTURE

Events

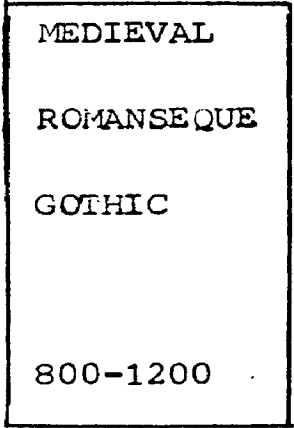
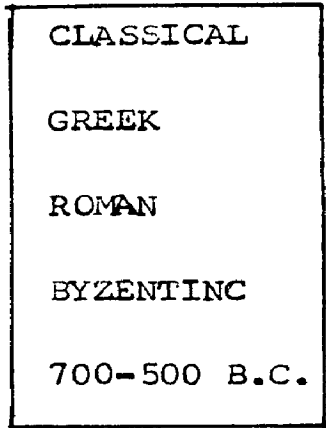
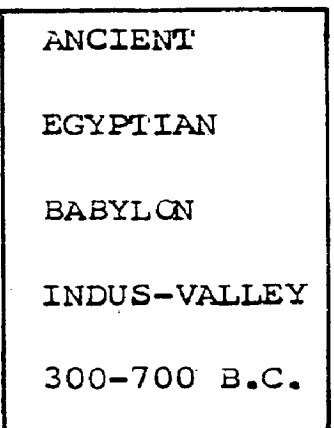
MONARCHY
SOCIETY

Events

SOCIAL STRUCTURE
RELIGION
REPUBLIC

Events

ISLAM
DISTINTIGRATION
CHRISTIANITY
POWER



Effects

AGRICULTURE

SETTLEMENT

METTALLURGY

INVENTIONS

Effects

IMPERIALISM

TRADE

CONQUEST

WOOD IN STONE

Effects

ECCLESISTIC

MYSTERY

DARK AGES

WARS/VADALISM

FEUDAL SOCIETY

...CONTD.

Events

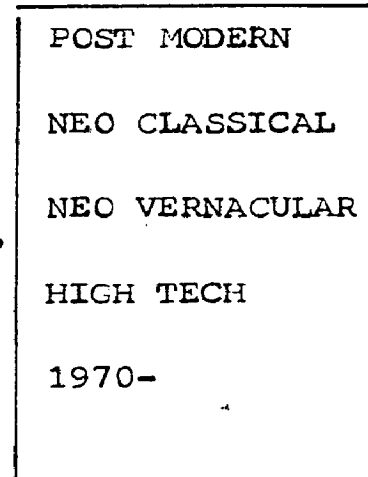
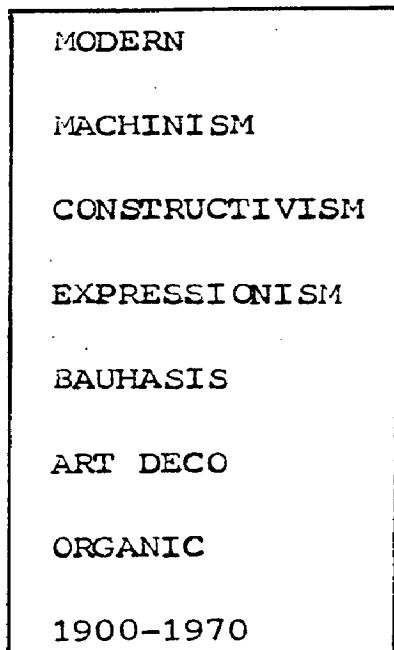
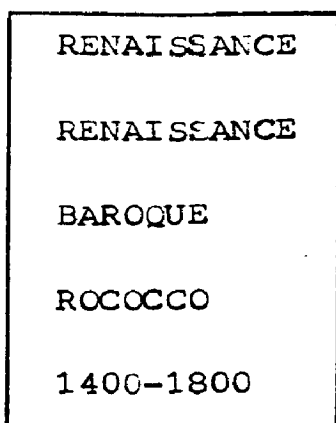
NEW KNOWLEDGE
 RATIONALE
 PAPAL POWER

Events

REASON
 FUNCTION
 DE-EMBLISHMENT
 ENGINEERING
 TECH

Events

REVIVAL
 RESOURCE
 SEARCH
 TECHNOLOGY



Effects

HUMAN ANTHRO-
 POMETRY
 TRADE
 COLONIALISM
 CLASSICAL REVIVAL

Effects

INDUSTRIAL REVO.
 POLITICAL "
 FREEDOM
 RCC/STEEL/GLASS
 CARS/PLANES/TRAINS
 WORLD WARS
 ABSTRACT

Effects

COMMUNICATION
 SYMBOLISM
 PLURALISM
 IDENTITY
 - CRISIS

The phrase 'post-modern' is not the most happy expression one can use concerning recent architecture. It is evasive, fashionable and worst of all negative - like defining women as 'non - men'. It is pluralistic but vague. But, prior to discussing post modern architecture, we shall peep into the modern period of architecture. Though, we shall be eyeing this period critically, but, even then we have got no right to reject it 'in - toto'.

An important characteristic which this type of architecture has, is that it did not have local roots, it claimed to be universal, and under the pressure of fashion, technology and spacious arguments, these claims have lead to its indiscriminate practice around the world. Yet, there are limited areas where modern architecture can be appropriate and effective : certainly in large engineering structures.

THE DEATH OF MODERN ARCHITECTURE :

"We can date the death of modern architecture to a precise moment in time. Unlike the legal death of a person which is becoming a complex affair of brain waves versus heart-beats, modern architecture went out with a big bang."

- CHARLES JENCKS.

"Modern architecture died in St. Louis, Missouri, on July 15, 1972, at 3.32 P.M. when the infamous Pruitt - lgoe scheme was blasted by dynamite. Boom, boom, boom and there remained only a pile of blocks."

-CHARLES JENCKS.

MODERN ARCHITECTURE - FAILURE OF PRAGMATISM,

RATIONALISM & BEHAVIOURISM !

Unfortunately the three 'ISMS' on which, it was supposed to be based. Now let us try to investigate the causes of its failure by seeing the works of some famous architects then.

In terms of expression the architecture of Mies Van der Rohe and his followers is termed as Univalent form of architecture by Charles Jencks, because it makes use of few materials and a single, right angled geometry. Characteristically, this reduced style was justified as rational (even when it was uneconomical) and Universal (when it fitted only a few functions). The glass and steel box has become the single most used form in modern architecture, and it signifies throughout the world 'office building'.

An interesting point to be considered over here is that his first classic use of curtain wall was on housing not on an office - not for any functional reason, but because he was obsessed for perfecting certain

formal draw backs.

A larger question thus arises, what if housing looked like offices, or what if the two functions were indistinguishable ? Thus, working and living would become interchangeable !!

e.g. Lake shore drive housing, Chicago.

It is also interesting to quote Mies Van de Rohe here -

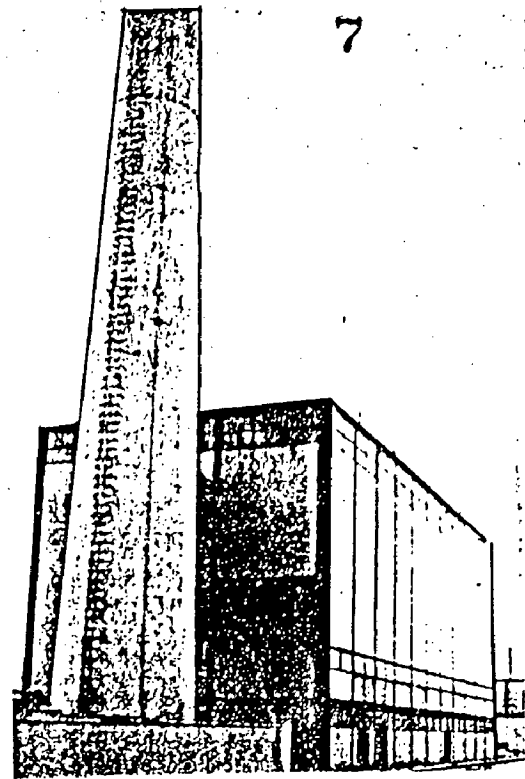
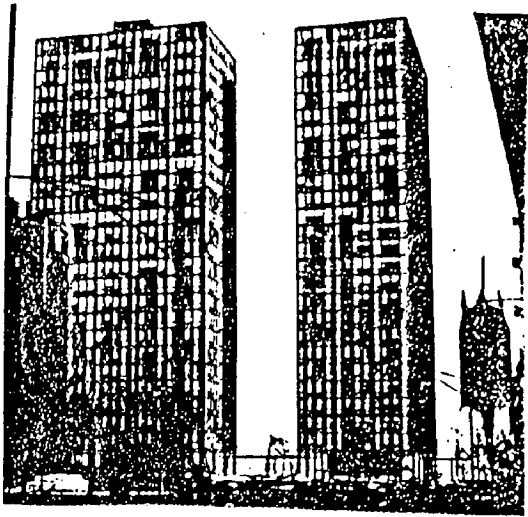
He said, 'I see in industrialization the Central problem of building, in our time. If we succeed, in carrying out this industrialization, the social economic, technical and also artistic problems will be readily solved'.

(1924)

There was a sort of confusion in the expression of architecture practiced those days.

e.g., I.I.T. Building, Chicago, design by Mies.

Now, we come to architecture expressed in an organic manner with the use of floral motifs, and free forms as in Art Nouveau and expression of unity with nature through the use of horizontality, truth to materials, character and response to the sites as seen in the



1. Lake Shore Driving Housing,
 (Above) Mies Van De Rohe, 1950.
 The Curtain wall used for the
 First Time Had No Use but To
 Hide The Drawbacks.

2. I.I.T. Bailer House
 Chicago (Right).
 Mies Van De Roh, 1947.
 The structure comprises
 of a Traditional form of
 Basillica, With Central
 Nave and Clerestorey
 Windows. Hence, Total
 Appearance is similar to
 A Church Building.



3. Church Building, I.I.T. Chicago.
 Mies Van De Rohe, 1947
 The Actual Church is Made out of Industrial
 Materials And Can Be Confused with A Boiler
 House Instead ?

works of F.L. Wright.

e.g. Johnson Wax Building, 1938

Some other examples are as shown in the plate associated.

B. THE INDIAN SEARCH FOR ARCHITECTURE :

EVENTS

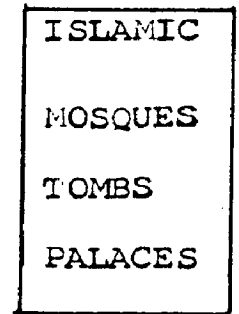
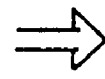
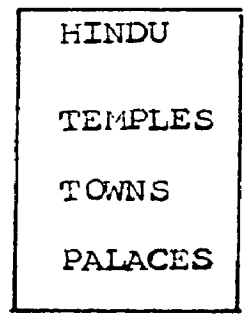
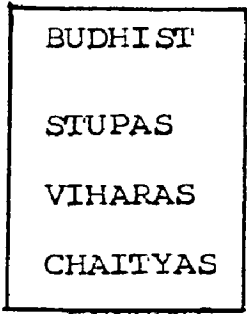
AHIMSA
FORE
BEARING

EVENTS

PERMANANCE
RELIGION
SUBLIME

EVENTS

INVASIONS
CONQUEST
SPREAD



EFFECTS

CYCLIC LIFE
DOCTRINE
COSMIC

EFFECTS

MATERIALISM
HIERARCHY
PHILOSOPHY

EFFECTS

MONARCHY

... CONTD.

EVENTS

INVASION
 DOMINATION
 ECLECTISM

| |
|--------------|
| COLONIAL |
| OFFICES |
| BUNGLOWS |
| PALACES |
| CHURCHES |
| GOVT. BLDGS. |

EVENTS

FREEDOM
 NATIONALISM
 SEARCH FOR EXPRESSION
 ORIGINALITY

| |
|-------------------|
| POST INDEPENDENCE |
| REVIVALIST |
| TECHNOLOGISM |
| TRADITIONAL |
| REGIONALISM |
| NEO VERNACULAR |

IMPERIALISM

DECLINE OF
 REGIONALISM
 RACISM

EFFECTS

TECHNOLOGY
 INTERNATIONAL STATUS
 RELEVANCE
 URBANIZATION
 ROOTS

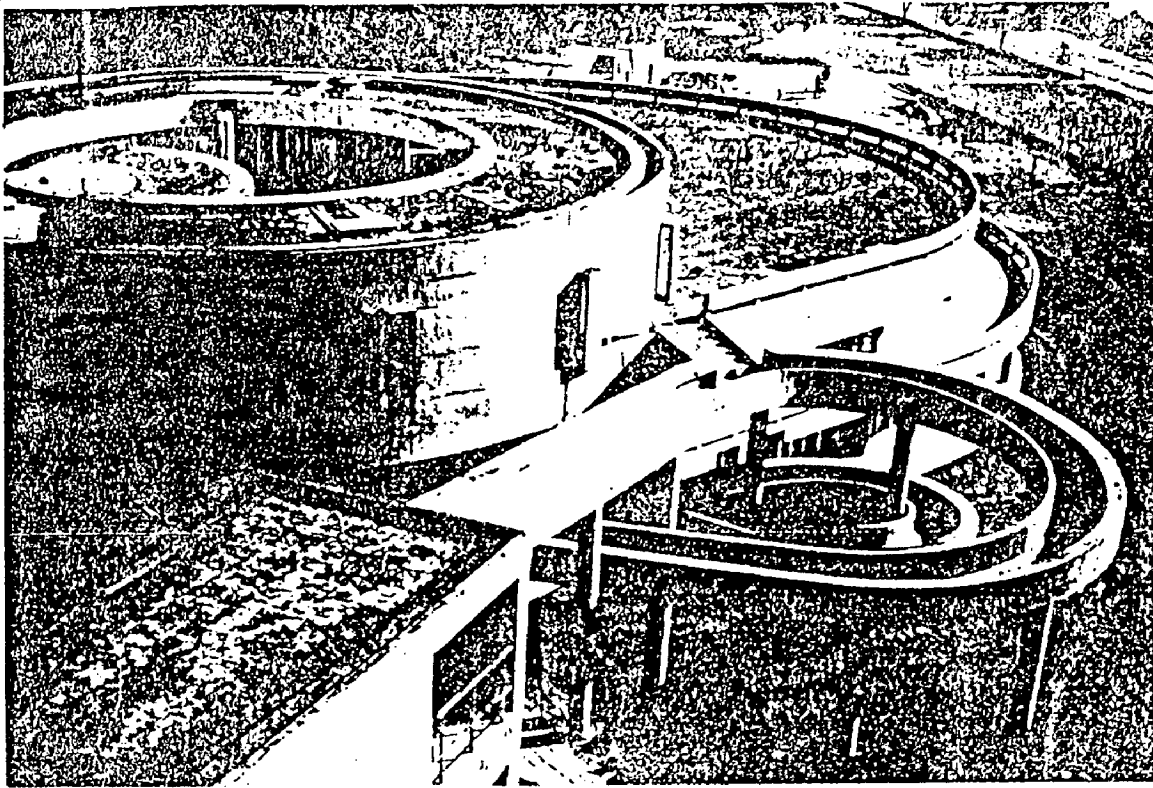
While analysing the scene at national level we shall be using the terms, post - independence architecture instead of post-modern architecture because independence is taken to as a strong line of demarcation in the history of India.

The post independence era saw India at the cross roads of expression while on one hand architecture

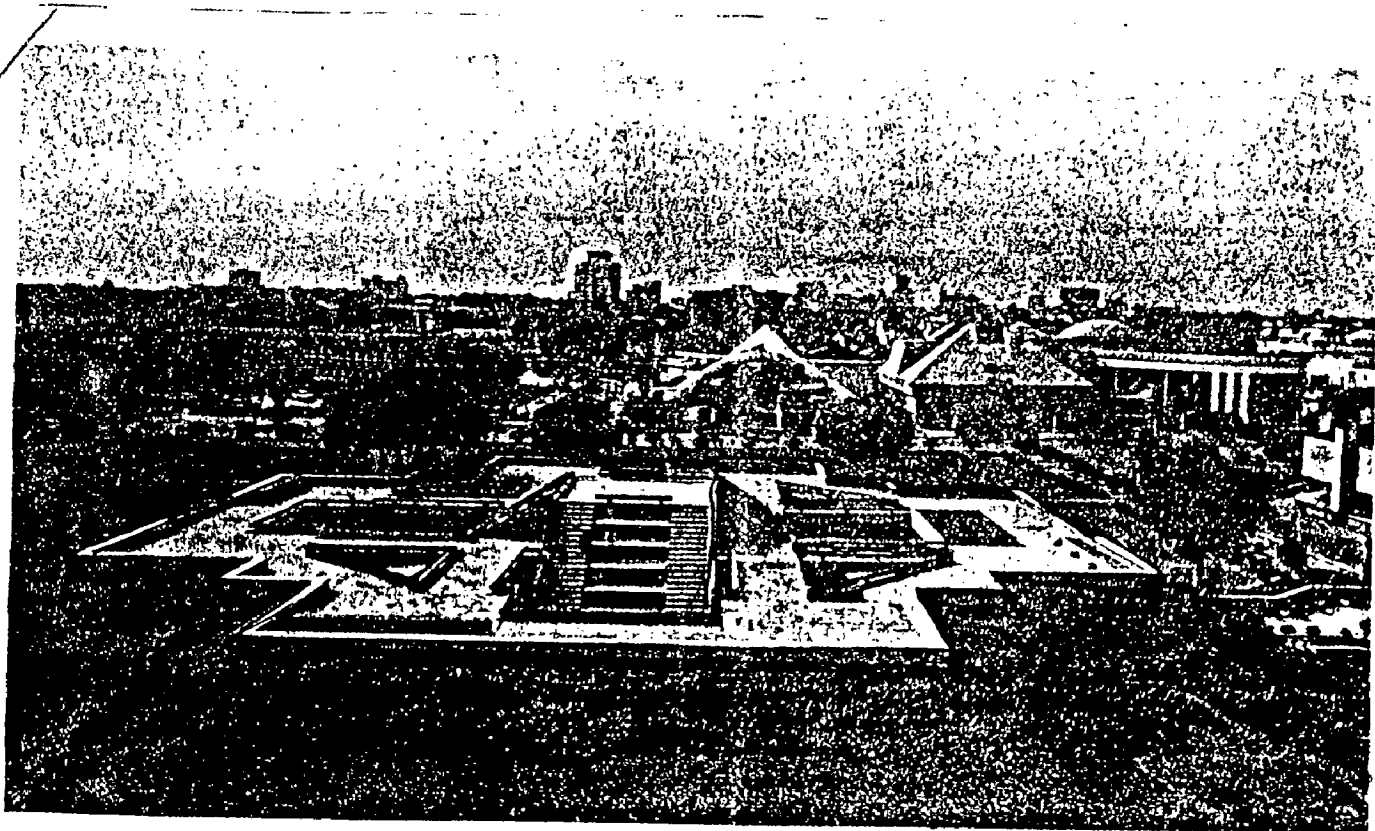
tried to keep pace with the international style, prevailing that time and on the other hand, it tried to revive its links with Hindu, Muslim and colonial expressions. The building of Chandigarh, the new capital city of Punjab, provided the first important threshold in the emergence of post - independence architecture. Le Corbusier came to our land with strong cultural roots. He had his own vision regarding the buildings he designed. He built for future, and with the design of the new city of Chandigarh by Le Corbinsier, India's association with the International Scence was announced.

Inspired by this 'vision', Young Indian architects studied the work other great modern masters of Europe and America - in the process producing new arch types for an industerialising society, and using the mythic overlays of rationality and functionalism to generate imaginative new forms.

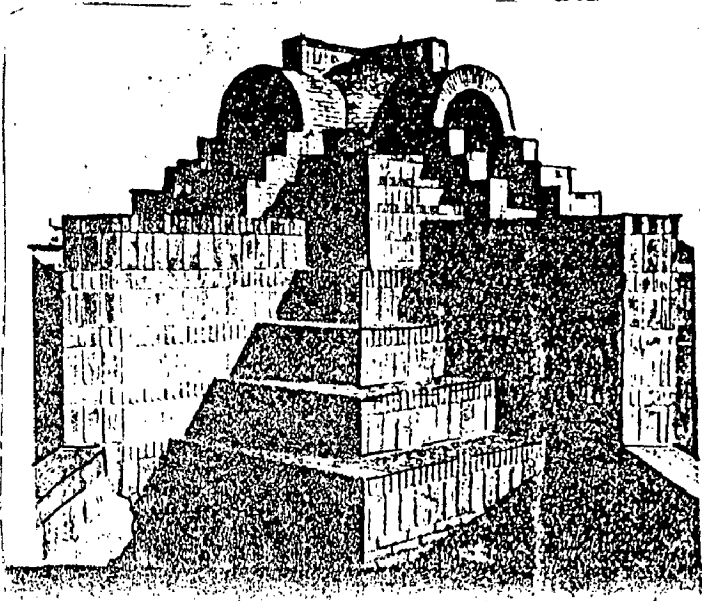
A rapid study of the buildings constructed from 1947 onwards and until recently, has been shown in the plates associated.



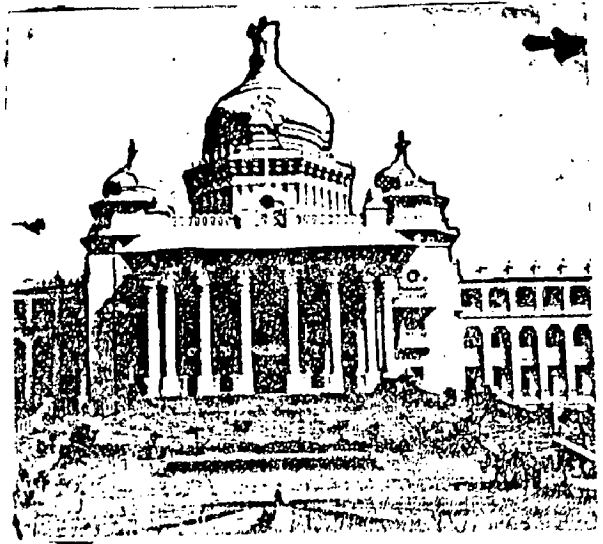
1. Impact of Corbusier. P.G. Institute Of Medical Research, Chandigarh, 1960-66.



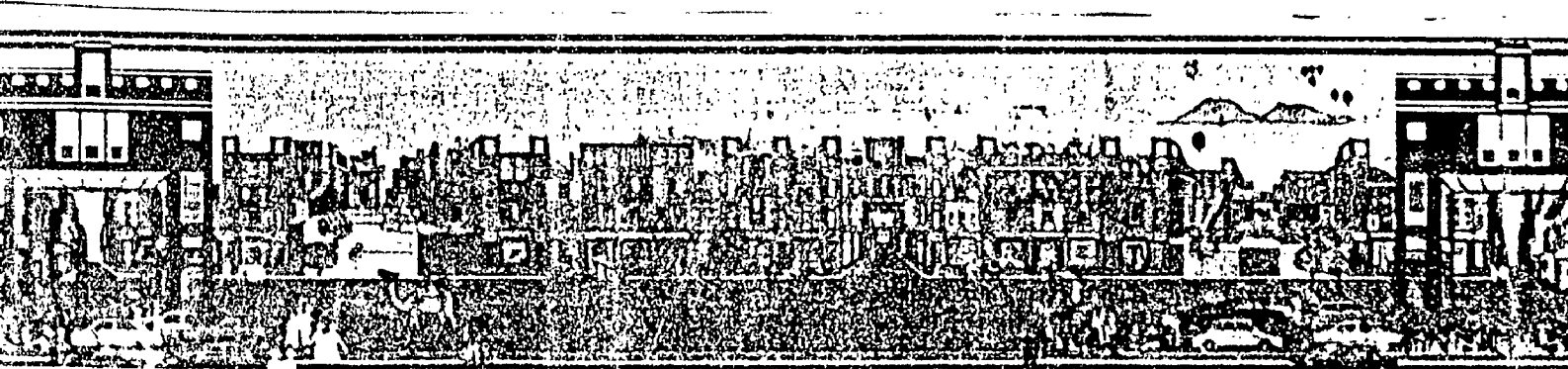
2. Elements Taken From Jantar Mantar
Nehru Pavilion, New Delhi, Raj Rewal, 1971-72.



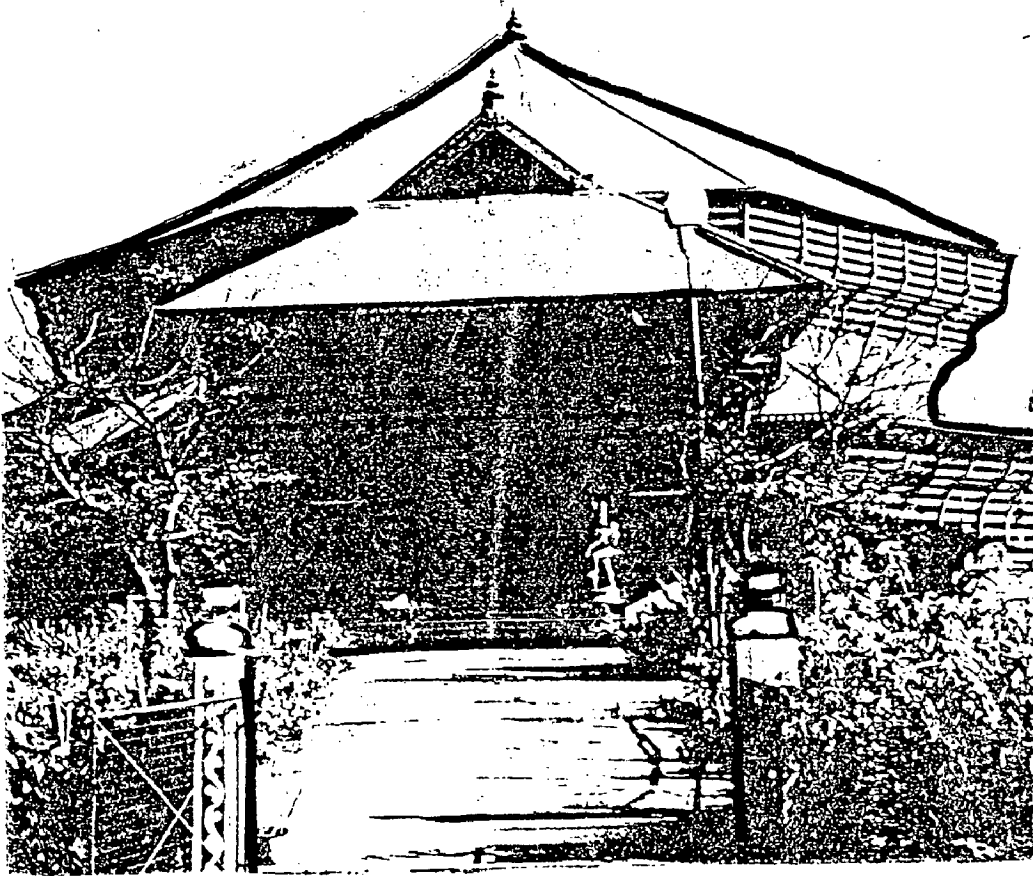
3. Form Follows Function.
Belgium Embassy,
New Delhi, Satish Gujral,
1980-83.



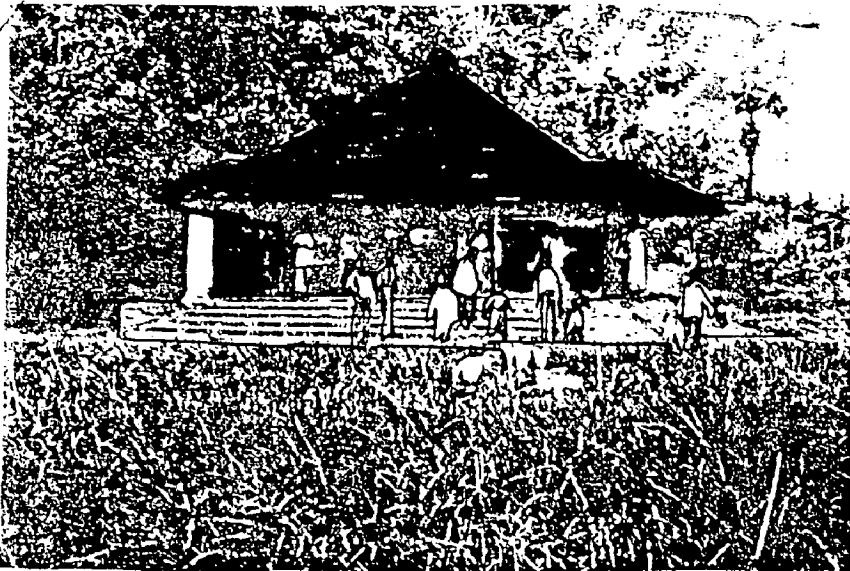
4. An Infra Structure for
A Contemporary Polity
Dressed In Traditional
Values. Vidhan Sabha,
P.W.D., Karnatak, 1952-57



5. Revival of Traditional City. Vidhya Dhar Nagar,
New Jaipur, 1984 - B.V. Doshi.

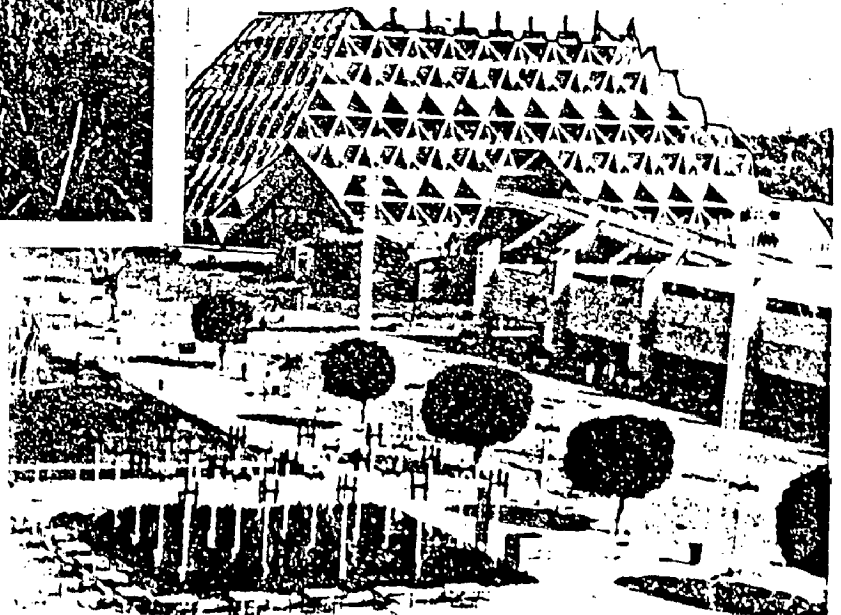


6 : A Formal Expression of Traditional Kerala Architecture, Kalkshetra Theatre, Madras - D.Nair



7 : Totally Vernacular, Mother And Child Centre, Ashish M. Sen Ganju, 1979

8 : 'Hi-Tech' Architecture Hall of Nations, Pragati-Maindan, New Delhi, Raj Rewal, 1970-72.



1.1.2 WHY THIS DELINKAGE WITH THE PAST ?

Since Independence, in India, either to keep pace with a rapidly modernising economy, our profession has followed a diverged path. At present, we are totally confused, we are in a state of dilemma. Our state is perhaps similar to that of a lady, who drives scooter wearing a 'burkha'.

To understand the routes through which contemporary Indian architecture arrived at many cul-de-sacs in which it finds itself today, it is necessary to see the patterns that generated the condition.

Our first prime minister Pt. Jawahar Lal Nehru, right after the country became independent, accelerated industrialization and with that was developed urbanization of its own kind - and we still are following a frenzied path of mass urbanization, involving many problems. The escalating anger and violence in the Indian popular cinema with the particular focus on the urban ethos is the most appropriate graphic symbol of this trauma.

Pt. Nehru considered villages as a sign of backwardness and culturally impoverished. His faith in suburbia is echoed in a letter he wrote to Gandhi,

'There is no question of palaces for millions of people. But there seems to be no reason why millions should not have upto date homes where they can lead a cultural existence. Many of the present evergrown cities have developed evils which are deplorable. Probably we have to discourage this over growth and at the same time encourage the village to approximate more to culture of the town'.

This type of encouragement resulted into :

- (1) The net work of functional cities which usurped the leadership role of the regal ritual cities that existed in India as centres of religion, traditional learning, art, music and the finest of hand woven textiles and handicrafts, leading to the systematic erosion of traditional cultural values.
- (2) Aggravation of colonial relationship of town and country, by shifting emphasis and concentration in capital formation in favour of the modern metropolis.
- (3) Sowing a seed of progressive scientific ideology as against the conservative mythical association of traditional cities.

Dictotomy is visible not only between the new industrial city and other traditional city, but also within each city, as a division between the decaying old city and the shining high rise centres, of new sub-urbs.

From the standpoint of contemporary Indian architecture, Le Corbusier's work provides the symbolic focus for this cultural disjunction.

The alien architectural vocabulary used in the design of the 'High Court and Assembly' is accentuated by the use of exposed concrete as external finish, and carries curious resemblances to the large concrete dams and the smoke vomiting power stations which Pt. Nehru promoted all over the country.

Gandhi on the other hand proposed a settlement pattern for his ideal state which consisted of villages which are self sufficient in all respects including, food, clothing and shelter, but all produced from materials immediately at hand only for self use. Gandhian approach can thus be termed as a vernacularisation on a mass scale.

There are a few problems related to the planning of the city as well. It is planned on a grid iron pattern but at a scale suitable only for mechanical transportation and robotic humans. Jaipur on the other hand has

an 'Indian form' hidden in its bazars, streets, chowks, religious and cultural nodes and land marks with the use of local materials and motifs. The people have changed themselves to suit the designers way of thinking, but to an extent. Beyond that they have started modifying the design to suit their needs and requirements. The covering of courtyards and glazing of verandahs is suggestive of this phenomenon.

1.1.3 WHY GO BACK AND REVIVE ?

India inherits a tradition of built forms that have 5,000 years of history. The treasure trove of varied cultural influences that travelled to the Indian region gave many moods and postures, some of a permanent nature, to Indian heritage. In order that this can be highlighted as a contextural back drop.

Tapio Perriainen, director of Finish Society of Craft and design has worked out a mathematical equation establishing a relation between the development of humanity and its alliance with nature

$$\frac{\text{NATURE (N)}}{\text{MAN (M)}} = \frac{1}{1} = 1$$

or,

$$\frac{M}{N} = \frac{1}{1} = 1$$

This mathematical derivation suggests that when man and nature are in spirrtual and material equilibrium the ratio postulates the value of 1. In times where the ratio struck is :

$$\frac{N}{M} = \frac{2, 3, 4 \dots n}{1}$$

$$= 2, 3, 4 \dots n$$

With nature in command, deduction derives high integral values. Similarly when human being take over, to rule or sub due or destroy and displace nature and thus disturbing ecological equilibrium, the expression becomes :

$$\frac{N}{M} = \frac{1 \dots N}{2, 3, 4}$$

$$= 0.9, 0.8, 0.7 \dots 0.000n$$

indicating diminishing values lower than 1. This is a warning signal for the history of mankind.

With passing time, common forms and accepted tactics acquire traditional garbs and when they are further sharpened by territorial boulderies they become regional in character.

Traditional buildings in mud, brick, stone, thatch or other locally produced materials be it a humble hut or grand mansion, ^{is} a part of the landscape.

We can be benefitted in the following manner, by preferring this type of construction.

1. It leads to energy saving, low production cost and minimum transportation, cost.
2. It also gives self-reliance.
3. Kinship amongst the community members is enhanced through the shared experience and local human potential boosted to the brim.
4. This process enlarges the scope for employment.

This is true that international style of building is rejected, and we all agree to the fact that though modernism is welcome, but, in any case, the building process can not be 'internationalized'. Now, what we have to do is to search for our roots our traditions, while doing so, we realize that we can not adopt traditional architecture in todays circumstances, as it was. For example, some of the buildings in the past had a monumental

character in them, their scale is too large, to be adopted in present circumstances.

Moreover, today's building problems are increasingly urban, and with this we face two major questions, firstly,

- (a) where are the indigenous roots of urban architecture ?
- (b) How can it be rooted in the local culture (urban) when, so few urban 'values' are local ?

We know that our living style has been changed through ages. we no more have the strong joint family system, we now perform most of the daily chores mechanically instead of doing it manually.

In a paper, published by George A. Devos, titled 'Social Mobility and Change in India's Cast Society', the author says that though people have migrated to the urban areas, due to factors such as industrialization, but, they remain in contact with their villages. There is no head long rush among Indians, even in cities, to emulate western society, except for the desire of certain material goods and basic rewards of secure life and livelihood.

This proves that we are not totally cut off from our old ways of living and we certainly can adopt some values, while we have to discard some at the same time.

1.1.4 WHY LEAVE THE TRADITIONAL WAYS IF THEY
STILL SERVE OUR PURPOSE ?

It is a well proven fact that Indian society has not undergone that tremendous a change, so that it should shed all its old ways in toto. There are certain age old experiences involved in our ancestral ways of buildings, so why should we leave them at all. Can't we modify them to suit our present conditions successfully ?

1.2 CHALLENGES INVOLVED IN THE PROBLEM :

- (i) Exploration regarding why tradition is missing ?

Considering every aspect of the problem such as urbanization, socio-economic, changing requirements of the people etc. e.g., Machine oriented life rather than manual way of doing the things.

- (ii) Establishing a list of dominant element :

This study, must reach to a practical conclusion, hence, a list of dominant elements from the traditional buildings in must be established/contemporary architecture.

1.3 SCOPE AND LIMITATIONS OF THE STUDY :

This topic though demands an extensive study, which might not be possible within the stipulated period, so the study is limited in the following manner :

- (i) Firstly, it shall be done only in Delhi area.
- (ii) Secondly it aims at undertaking analysis of buildings of the selected historical periods of Delhi, namely, Shahjahan's period and a brush-up of British period - which can not be discarded, though does not secure any roots of Indian tradition as such, but, it was in this period only when modernity of Indian tradition started.
- (iii) Thirdly, the study shall again be limited to identification of functional elements of architectural relevance at four levels, namely, form-level, scale-level, identifying elements and colour/textures or combinations.

1.4 Goal to be achieved :

Intention is not to reproduce the traditional architecture in toto. Intention is to derive the spirits, the essence and unique qualities of traditional architecture

that can be integrated with the modern concepts.

1.5 WHAT IS TRADITION ?

For a better understanding, I am trying to define the meaning of the title of this dissertation,

TRADITION :

"Refers to the starting point in a particular people - place relationship. Originating from the word 'tradere' meaning continuing handing over, tradition is the selected wisdom of people through the ages. The essential paradox of tradition is its combination of timelessness and Universality, with long practised custom and an intense awareness of locality."

- Lucien Steil, in an article, in Architectural Design.

TRADITION :

"Has the force of law honored by every one through collective assent. It is thus accepted and obeyed, since respect for tradition gives collective control, which acts as a discipline."

- Amos Rappaport, In 'House, Form and Culture'.

1.6 SCOPE OF THE OTHER TERMS INVOLVED IN THE TITLE

There are some other terms also involved in the title of this dissertation, their scope and meaning, as taken in the context of this dissertation is as defined below :

1.6.1 CONTEMPORARY :

Contemporary is the time or period to which reference is being made; belonging to the same time.

- Oxford Dictionary.

1.6.2 CONTEXT :

Context refers to the context of a place, keeping which in mind it becomes possible to realize the true meaning of the place.

The context may be situational, physical, socio-economic, scales or even sensory. It is not only the back-drop and the fore-ground, but, the whole setting for a way of living.

1.7 MODERNIZATION OF TRADITION IN INDIA :

Tradition, by which we mean value - themes encompassing the entire social system of Indian Society prior to the beginning of modernization was organized on the

principles of hierarchy, holism, continuity and transcendence. These four value themes were deeply engraved not only in the system of caste and sub-caste stratification but also in Hindu concepts of human nature, occupational life cycle (ashrams), and moral duties (dharma). Holism implied a relationship between individual and group in which the former was encompassed by the latter in respect of duties and rights, what had precedence over here was community or Sangh and not the individual. This subsumption of individual collectively persisted all along the line of traditional social structure, e.g., family, village community, caste and political territory or nation. Communalism in traditional social system was reinforced through the value system of continuity which in Hindustan was symbolized by principles of Karma, transmigration of soul and a cynical view of change. The principle of transcendence also posited that legitimation of traditional values could never be challenged on grounds of rationality derived from the non sacred or profane scales of evaluation. It formed a super concept of contributing to integration as well as rationalization of the other value themes of the tradition.

1.7.1 ISLAMIZATION : AN ENCOUNTER BETWEEN TWO

TRADITIONAL SYSTEMS :

The earlier encounters with Islam only reinforced

the tradition since Islam despite being exogenous to the Hindu tradition was basically organized on value themes which were traditional ; ideally Islam had no place for hierarchical differentiation of individuals within its community of believers so here it differs from Hinduism. The principle of holism was present in both Islam and Hindustm, varied in sociological meaning. In Hindustm, holism implied individual's social and moral subordination to the group without theocratic implications, so basic in Islam.

Despite these dissimilarities, a synthesis took place between them, which reinforced the traditional character of Indian society without significant break down in its organization. Islam in its Persian transformation had already imbibed some elements of hierarchical stratification when it came to India from there, and in the midst of the caste-stratified Hindu Society, more so owing to large scale conversion to Islam by Caste Hindus, Islamic Social structure in this country soon developed its own pattern of caste hierarchy. Norms of political order of Islamic rulers were not different from that of Hindu, and even where differences arose, an attempt was made to accommodate Hindu norms.

Spread of Islam in India can though be greatly

attributed to the caste structure of Hindu which had already motivated people towards sanskritization¹. Both Sanskritization and conversion to Islam had gone very popular amongst the lower castes of Hindus. But, with the establishment of British, the relations between Hindu and Muslims groups began to be politicized - whose result was division of India.

Thus, we come to the two major conclusions :

1. From the view point of modernization, the Islamic contact was more tradition reinforcing than otherwise.
2. Islamization as a cultural process began as a process of external impact and conversion of low caste Hindus to Muslims Great tradition, then it emerged as a process of status mobility within the Islamic social structure very much like Sanskritization, and finally regained its earlier orthodoxy.

1. The term Sanskritization was first used by M.N.Srinivas to describe the process of cultural mobility in traditional social structure of India. In this study of the coorgs in Mysore he found that lower castes, in order to raise their position in the caste hierarchy, adopted some customs of Brahmins and gave up some of their owns, considered to be impure by the higher castes.

This would explain the diversity in the pattern of modernization in different societies. But, it would be wrong to deduce from this argument that modernization will not bring about structural and cultural similarity among the people of the world. As modernization has processed, it has created uniform sets of role structures with accompanying modern value commitments, instrumental or categorical. The divergence of political ideologies, contradictions in cultural and racial identities coupled with inequality of resources among nations create basic schism in the value structure of modernization. Hence, particularistic growth pattern of modernization seems to be more credible than universalistic form of its development.

1.7.2 PROCESS OF MODERNIZATION :

Modernization in India started mainly with the western contact, especially through establishment of British rule. This contact had a special historicity which brought about many far reaching changes in culture and social structure of Indian Society. The growth of this process, however, was selective and segmental. It was not integrated with the micro-structures of Indian society, such as family caste and village community. At these levels British by and large, followed a policy

CHAPTER - 2

DELHI ; HISTORICAL BACKDROP

'Agar Firdos ber-ru-i-Zamin ast, Hamin asto, hamin
asto, hamin asto'

(Verily, if there be a paradise on earth, it is
here, it is here, it is here)

of least interference, especially after the rebellion of 1857.

Modernization, in its initial stages, in India, according to Eisenstad, did not lead to any serious breakdown because of the peculiar structural characteristics of the Indian Society. There cultural systems was fairly independent of political system. There was a also independence between the political system and the system of caste stratification. Castes had their own panchayats and plural traditions, and similarly, there also existed an autonomy for groups and regional communities. This ^{arrangement} inter-structural/facilitated assimilation of modernizing innovations, without introducing major break-downs. Modernity, however, developed as a sub culture and a sub-culture without pervasive expansion of all sectors of life.

As formodernization in India, we find a growing trend that traditional role structures are giving way to modern ones. But persons following these roles often retains categorial values of tradition instead of those of modernity. Generally, ritual order and religion which are essentially based on categorial values of a traditional nature do not show evidence of decline, nor is there an easy possibility of unique combination of

traditional values can hardly be falsified by scientific proof and hence the spread of science may not logically lead to obsolescence of traditional categorical values.

1.8 THE CONTEMPORARY SCENE :

At present, we can divide the architectural profession into two major groups, the one who, inspite of realizing that international style of architecture is unsuitable, are continuing with it and in the other group fall the architects who are struggling to interpretate the traditional way of building and trying to apply in the present context.

Professionals who are sympethetic towards our traditional ways of living can also be further divided into two sub-divisions. Under the first category fall the architects who took traditional architecture in the physical sense, i.e., copying the elements of traditional architecture, as they are. Taking about this it would be interesting to know that R.C.C. has created a problem over here, every Tom, Dick and Hery started taking the advantage of the plasticity of this material. In the name of giving a regional character to the building they merely copy the domes, and arches of the old buildings, without really understanding their practical implications.

The other category believed in the abstract form of traditional architecture. They believed in creating genuine spatial and architectural experiences. Also they believed, in extracting certain values from it, of course, it is very difficult and fine path to follow. It mainly incorporates the abstract qualities of building for example massing, solids and voids, proportions, sense of spaces, use of light and structural principles in their re-interpreted form. An attempt is made to define in terms of design elements, the prevalent culture of the region concerned. This is an endless devotion to an ideal, and the line which separates a praiseworthy, regionalist achievement from the worthless copying of past, is very subtle.

Renowned architect A.P. Kanvinde says,

'Limitation of the past constitutes vulgarity. It is like putting a dead skin over a new being - in five star hotels, the effort to create Indian ethos is like something being Super imposed - like having an artificial diamond in place of the real. Why does culture have to canote the past ? 20th Century culture is different from the 13th Century culture, beauty is not pre-concieved. It is the Sound Synthesis of purpose backed by perception and manifested through sensation. Rather than imitate,

one should get an inspiration from the past'.

This dissertation is also an attempt to find out that what spirits can be taken from the traditional architecture that still have a place in our present circumstances.

EVOLUTION OF DELHI

Like Rome - the eternal city - Delhi too has an ancient past, sometimes brightened by greatness and glory, often dummed by decline and downfall. The city has survived inspite of locational changes.

We can divide the periods in the history of Delhi into three main divisions, namely Hindu, Muslim and British.

2.1 HINDU PERIOD :

There is hardly any trace in legend or in archeology of any people having settled at or around present Delhi, before the epic period of 'Mahabharat'. Historical legend tell us that some 4,000 years ago when the Kuru empire was divided, the city at that time known as Indraprastha, was the capital of the Panadavs. Mr. Percival Spear in his book 'Historical Sketch of Delhi' also confirms, the view that 'the earliest knowledge we have of Delhi is only of the epic period of Hindu India'.

Indraprasth was built by a King called Yudhishtar. At that time the region of Delhi was a waste land and was covered with dense forests mostly inhabited by local tribes. It is mentioned that the city was architected by 'Maya', the danav architect. This city was built on the banks of River Yamuna, on the site where Purana Qila

stands today. The great epic of Mahabharat contains an alluring description of this great city.

It is often compared with Amravati the celestial capital of Lord Indra. After their victory over Kauravs, Pandavs shifted their capital from Indraprasth to Hastinapur and this city wore a deserted look, for centuries together as after that with the rise of the Kingdom of Magadh, Patilputra enjoyed the political power. This city perished, as we know that Aryans used wood as a material for construction. It was only about Ist century B.C. Raja Dillu of the Mauryan dynasty built a new city some where near the site where Qutub Minar stands today. He called the city 'Dilli' after his own name.

Before the end of Hindu period, a Tomar Rajput King Anangpal, founded another city in 1052 A.D., almost at the same site where Indraprasth had been built. Later on he had been forced to leave his capital of Kanauj by Mohanmad of Ghazni. Later on he shifted the seat of his capital to Lal Kot near Mehrauli. The positive proof of his rule lies, seven miles off Suraj Kund which is a water amphitheatre and there exists a village called Anangpur. The Hindu period came to an end with the reign of Prithvi Raj in 1192, he was defeated and killed. Delhi in his reign flourished as a commercial

town, with splendid palaces and private mansions.

2.2 MUSLIM PERIOD :

Muslims made Delhi their capital as the city lay midway between the eastern side of Bengal and the eastern and southern borders respectively of Persia and Iran, the countries from where the Muslim Invadors usually came. After this Delhi has been capital of succeeding empires and dyansties. Pt. Jawaharlal Nehru writes in 'The Discovery of India', there have been seven cities of Delhi on seven different sites, always moving because of the vageries of River Yamuna.

Six older Delhi's are lying scattered today at different places as a mass of ruins. The seventh is the present old Delhi and the eighth of course, is New Delhi. The story of Delhi infact is a fascinating tale of two cities, old and new. Right from the early Muslim days there have been two Delhis,

2.2.1 SIRI :

The second city was built by Sultan Ala-ud-din Khilji in 1303 approximately 3 miles to the north-east of Qutab. It was in many ways an extension of the first city. Soon after Ala-ud-din ascended

the throne in 1296, the Mughals invaded India and plundered Delhi. Fearing Mughals Ala-ud-din built the fort of Siri to protect the population.

Siri was a circular city, it had a palace of thousand pillars. Its lofty buildings were enclosed by fortifications of the stone and brick. Ala-ud-din had built Hauz Khas, a great royal tank, for providing water to the city. The site of this city is partially occupied by the village of Shahpur Jat. Its walls were removed to build the wall of Shahazanabad. The old giving place to the new. Qutab, Siri, Tughlakabad, Jahanpanah, Firozabad, Purana Qila and Shahjanabad, each in its turn claiming the eminance of being the new town but later on losing the distinction as another town came into existance. Following the old precedent Shah Jahan's city called Shahjahanabad has totally attained the dignity of Purana Shahar, while around the ruins of the six old towns, New Delhi has been built by Lutynes. Now let us have a quick glance over these seven cities, to establish better historical links.

2.2.2 QUTUB :

The first city of Delhi in the 12th century was the capital of Prithvi Raj and was known for Qila

Rai Pithora in it. Mohammad Gauri defeated Prithvi Raj Chauhan and his successor Qutab-ud-din Aibak reconstructed the city and called it Qutab. This as we know was called slave dynasty, Qutub-ud-din being a slave.

2.2.3 TUGHLAKABAD :

The third city was built in 1321 by Ghiasi-ud-din Tughlak, the founder of Tughlak dynasty. Tughlakabad was a huge complex comprising a palace, fort, and town. Its site was on Badarpur Qutab road at a distance of four miles from Qutab Minar. Hardly any thing is now left of the city, except for the founder's tomb and the broken massive walls.

2.2.4 JAHANPANAH :

The fourth city was built in 1327 by Mohammad-bin-Tughlak the second King of the Tughlak dynasty. It was located between Qutub and Siri and was founded in order to join the two walls which in all had a circumference of about five miles, to provide protection to the inhabitants. For this reason the city was named Jahanpanah meaning 'Shelter of the world'. Very little of this

city has survived. The most remarkable remnant is Vijay Mandal a lofty terraced tower like building. Today, its surroundings are known as Chirag Delhi.

2.2.5 FIROZABAD :

This fifth city was built in 1354 by Firoz Shah, the third King of Tughlak dynasty. Next to Shahjahan he was known as the greatest of Delhi's builder King. He constructed it 8 miles north of the Qutub. Firozabad occupied all the land from old Indraprasth to the ridge including the site of Shahjanabad, and that is why its limits are difficult to be traced as Shahjanabad was built later on, at such a distance that people found it easier to pillage the building material of the older city than to get it from distant places.

Kotla Firoz Shah, the King's citadel and palace, is in ruins and is situated just south of the Delhi Gate. Today, Firozabad is known as Kotla. An Ashok pillar was brought by Firoz Shah from Amballa and transplanted in Kotla.

2.2.6 PURANA QUILA :

The sixth city was begun by Humanyun in 1530

on the old site of Indraprasth. The fortress palace was completed by Sher Shah in 1545 and is now known as Purana Quila. Humanyun built his city on the site where Nizam-ud-din Station is located now. He had called it Din-e-panah.

Sher Shah the Afghan King, after defeating Humanyun destroyed whatever was built by him and rebuilt the city afresh and called it Shergarh. After the death of Shershah, Humanyun regained his empire and returned from his exile in Persia, in 1555. After Humanyun's death for nearly a century, Delhi once again sank to the level of a provincial town.

2.2.7 SHAHJAHANBAD :

The Seventh city was built by Shah Jahan, the builder of Taj. Between 1633 and 1658, when, after a stay of 10 years at Agra, he returned to Delhi and made his capital.

The emperor had chosen the site on the banks of Yamuna with the help of astrologers and hakims, the health experts. The capital was located in the Centre of the citadel with two stately portals known as Lahori and Delhi Gate. The three great streets were Chandni Chowk, a road from

the fort to Fatehpuri Mosque, a road from Delhi to Jama Masjid and a road from Delhi gate to the city gate.

The massive ramparts of Shahjahanbad can even now be seen in the ruins between Ajmeri and Delhi gate and also beyond Kashmiri gate. Its walls were destroyed by British when they attacked Delhi to quell the uprising of 1857.

Shahjahanabad, though cast in classical mould of fortified city, acquired a distinct character of its own under the strong impact of its founder's power and personality who is remembered as a great builder of monumental buildings like Red Fort and Jama Masjid. The city was expected to accommodate a population of 60,000, in an area of about 1,240 acres giving, to use the modern terminology, an average density of about 48 persons per acre. There was no dearth of open spaces, parks, and gardens. For the pedestrian traffic of the time, the width of roads was more than adequate.

The main artery was Chandni Chowk, lined with trees. A boulevard extended from the main gate of the Red Fort to the Fatehpuri Mosque, which was built by one of the wives of Shahjahan. On

the north of Chandni Chowk, a beautiful garden, known as Begum Ka Bagh, was developed by Begum Jahan Ara, daughter of Shahjahan.

On both sides of Chandni Chowk boulevard, were the shops of merchants and their living places.

Near Delhi Gate of the Red Fort developed a 'Gudri Bazar' where the common folk shopped. It was one of the most flourishing local markets. The area came to be known as 'Chowk Saadulla Khan', after the name of Shahjahan's prime minister. It covered the entire space between Khaas Bazar and Khanam Ka Bazar, now known as Parade Ground.

The rich merchants and generals lived along the river and their large 'villas' were near Red Fort. The comparatively under privileged were pushed towards the fringe of the town. In fact, the distance from the Red Fort was a measure of the position which the resident occupied in the power structure of the Imperial Mughul court. All the buildings were not pucca, not even in Chandni Chowk.

Apart from the main streets and boulevards, these were a number of narrow lanes and mohallas and bazars. Brass workers, leather workers, dyers, sword smiths, and jewellers had their own 'bazar'

and living quarters. Hamams and caravan, Sarais market for fruits, Vegetables, salt and Cattle created new centres of commercial and trading activity. The Red Fort was the focal point of imperial activity and Jama Masjid that of Spiritual and religious life.

Shahjahanabad was not an elaborately planned city. After the emperor had laid down the broad avenues and constructed the monumental buildings like Red Fort and Jama Masjid, the city grew in an informal manner, manifesting the needs of the time and the medieval forces at work. The street, the bazars, the mohalla arose in the same natural manner as the plant sprouts, from the soil. The city moved in all directions without losing its order and organic coherence. Its imperial grandeur was reflected in the monumental buildings of the time its modieval grace and charm in the life of its nobles and generals, and its social warmth and compactness in the life of the common people. Shahjahana- bad has never been an artificial city. Like folk music which is true to the soul of the people, Shahjahanabad has always been true to its time and soil.

The city reached its zenith during the early period of Aurangzeb when its population grew about two lakhs. It was at that time that the wall around the city was completed and Shahjahanabad acquired its present shape and form. In the later period, however, the city began to show strains of Aurangzeb's puritanical personality. Life nurturing functions of the city weakened and art and architecture suffered.

2.3 BRITISH PERIOD :

With Nadir Shah's attack on Delhi on March 9, 1739, the actual disintegration of Mughul empire started. The Marathas in 1788 secured a hold upon Delhi. After fifteen years, the British defeated the Marathas and brought Delhi under their control. The last Mughul emperor, who neither ruled nor resigned was sent to Rangoon by Britishers in 1858, where he died afterwards, thus putting an end to the famous Mughul dynasty.

In 1858, the responsibility of running the Government of the country was transferred from the East India Company to the British Crown. The status of city was merely reduced to a district town, forming a part of Punjab province until 1912, when finally Delhi was

was made the capital of British India.

But, the crowded Indian town generated its own RAUNAQ. Each MOHALLA was a zone of familiarity which bred its own security. The crowded Indian bazar, the noisy wedding processions, Ram Lilas, Rath Jatras and Id celebrations irritated the British. They derived security from the tranquil civil lines, its gardens and trees, its ordered rhythm of work and leisure, its defensive insularity. Shahajaanbad which British had conquered once was a happy city and a loved one. KAUN JAYE ZAUQ, YEH DILLI KI GALIAN CHOR KAR, wrote one of her poets.

Son-in-law of viceroy Lytens, i.e. Sir Edward Lutynes was sent for, to design, the new capital of the British. Unfamiliar with India and unmoved by what he saw he had a definite idea of the city he wanted. Raisana was finally chosen, after a long battle of sites. The Seige of Delhi created heros, Villians, memories, nightmares. Destroy Delhi, many cried and build a pristine new city - to be called Victoria - But the hysteria passed. Red fort was given to the British army, where barracks were constructed hastily. Indian troops were housed in Darya Ganj, a place meant for Nawabs. Delhi saw its first railway line. A neo-Gothic railway Station and a palladian Town Hall were the chief architectural additions. On 50' high hill of

Raisana, 20' of which were blasted to form a plateau, Govt. house and Secretariat building were built. Lutynes was sent on a tour of north India, to see more of India and ultimately some features of Mughul style - chajjas, Jalis and Chatris were adopted. Houses for officers were of the same style as in every British Indian town. In 1919, parliament house was built. Finally in February 1931, the New Delhi was inaugurated.

Kingsway now, has become Raj path, and Queens way has become Janpath. Krishi Bhawan and Udyog Bhawan have been built where Lutynes never planned to have any building. But a city built for a few thousand people, as a result of partition and independence, has crossed the six million mark, the well designed Delhi is hammed in by sprawling sub urbs. As the price of the land rockets upwards, the green space is diminishing. The noise and pollution calls for remedies.

2.4 PRESENT DELHI :

Our first prime minister said 'Here we stand in Delhi, symbol of old and new India. It is not the narrow lanes and houses of old Delhi or the wide spaces and rather pretentions buildings of New Delhi that

count, bent, the spirit of this old ancient city. For Delhi has been an epitome of India's history with its succession of glory and disaster, and with its great capacity to absorb many facts, some bright and some darkened by age, presenting the course of India's life through the ages. Even the stones here, whisper through years of ages of long age, and as we breathe is full of dust and fragrance of the past, as also of the fresh and piercing winds of the present. We face the good and bad of India in Delhi city which has been the grave of many empires and nursery of a republic, what a tremendous story is here. The tradition of millenia of our history surrounds us at every step, and the procession of innumerable generation passes before our eyes.'

So, we see that our learned prime minister also described Delhi as a symbol of old and new and the city where we face good and bad of India. After the British over-took India a clear line of demarcation was set between the old and New Delhi. Shahjahanabad as we know has been treated cruelly by history. It faced both exhilarating and sad occasions in its life. Shahjahanabad is a gem with many facets, some dark, some bright. Unfortunately, it is the darker side which has gained predominance and bright spots of

Shahjahanabad's social and cultural life are getting submerged in the dust and debris of new forces. Swamped by the flow of migrants after 1947 and mauled by Ruthless Violation of the Municipal bye-laws, Shahjahanabad stands before us today as a battered sick, and over burdened city. It seems to have lost its centre, its soul. It appears even insensitive to pain. Most of the residents are not even conscious of the filth and odour around them.

Shahjahanabad presents a dismal picture of congestion, chaotic land uses, and sub-human existence. The area of walled city is about two square miles and about half a million people are packed into it. Localities like Maliwara and Dariba Kalan have the highest congestion rate in the world with a gross density of about 670 persons per acre. Two-thirds of the households in Shahjahanabad have only one living room.

Number of commercial establishment is disproportionately large. Same is the case with the industries, the area under industries is only 2.9% of the total area, but, the number of industries functioning is very large.

Shahjahanabad today is a cultural desert. It has

lost its poets and patrons. Emperor Bahadur Shah Zafar echoed in a melancholy mood, regarding the tragic fate of Delhi -

'Delhi, which was once the jewel of the world,
where dwell only the loved ones of fate,
which has now been ruined by the hand of time,
I am a resident of that storm-tossed place.'

New Delhi on the other hand is still developing and thriving. Shahajahanabad, the origin of Delhi is a cultural desert and all the cultural activities of the capital take place in Bhartiya Kala Kendra, Fine Arts Club, Sapru House etc. etc., within the precincts of New Delhi covering a large area though, but, even then its sprawling.

Construction activities in New Delhi are totally controlled by developing authorities. Unauthorised construction through is not very uncommon, but urban form and design of New Delhi meet the requirements of modern town planning. There is a proper road-network working efficiently, taking number of people from here and there. It has developed into a place, where people don't have any identity, they are enveloped in a layer of anonymity.

New Delhi is a city, which does not have a compact character like that of Shahajahanabad, people have to travel a lot of between the work place and their places of living.

In short, it does not have a social and physical compactness. It carries an air of artificiality in it.

C H A P T E R - 3

INFLUENCES ON ARCHITECTURE WITH SPECIAL REFERENCE TO DELHI

'The Conflict is between the 'old' which was one's own and 'new' which though alien, is apparently impressive'.

- B.V. Doshi, in,
Cultural Continuum And Regional
Identity in Architecture.

INFLUENCES ON ARCHITECTURE :

Architecture is not an isolated medium of an architect's expression. It draws direct influences from nature and is an attempt to respect what nature dictates and man's response to life. Major influences in architecture can be divided under the following headings :

- 3.1 Climatic
- 3.2 Geographical
- 3.3 Geological
- 3.4 Political
- 3.5 Cultural
- 3.6 Socio-economic
- 3.7 Technological

3.1 CLIMATIC INFLUENCES :

Architecture is a result of man's desire to filter out undesirable climate and create comfortable artificial environment within a potentially hostile natural environment. Traditional responses were by using local materials and ingeneous ways of construction, we see a clear difference between the buildings of different climate, for example buildings of a cold

climate are with sloping roofs and with wide openings where as, the buildings of hot dry climate are of thick wall enclosures and small openings to keep the sun out. Nature not only commands our style of building but also, various other aspects such as type of clothing, habits of eating etc. Inhabitants of a cold place wear warm and tight clothes and eat meat mostly, on the other hand, inhabitants of a warm place wear loose clothes to enable the circulation of air over their bodies and eat mostly vegetarian food. So, we can see that how nature has a direct influence over building of a society.

3.1.1 General Information About The Climate Of Delhi :

| | | | |
|----------|---|--------------|-----------------------------|
| Winter | : | Mean Maximum | 33.7°C |
| | | Mean Minimum | 6.8°C |
| Summer | : | Mean Maximum | 41.2°C |
| | | Mean Minimum | 21.4°C |
| Rainfall | : | 66 cms. | |
| | | | (Mid June to end of August) |

Delhi is situated on latitude 28°-53' N and longitude 70°-74' east with a mean elevation of 670 feet above the Sea level.

3.1.2 Survey of The Climate of Delhi :

The Delhi region is divided into four climatic periods :

1. COOL PERIOD :

This is the period through the later part of December - January and the early part of February.

2. TEMPERATE PERIOD :

Beginning from October to Latter part of December and from mid February to end of March the comfort conditions prevail.

3. HOT AND ARID SEASON :

This period is from April to June. During this period, the humidity is very low and temperature is very high and very uncomfortable conditions prevail.

4. WARM HUMID PERIOD OR

MONSOON PERIOD :

This period extends from the latter part of June to September. The air temperature

drops down but the humidity is still high. The uncomfortable conditions still prevail but this discomfort is not severe as that experienced during the hot and arid season.

3.2 GEOGRAPHICAL INFLUENCES :

Geographical/Topographical conditions of a place has direct influence over the styles of buildings in a place. Hilly regions, with undulated lands have different conditions of planning and shall involve different techniques of construction than that of plains.

There automatically shall be more level differences in a building in a hilly region than in a building in plains. Again, heavy rains and the passage or disposal of waste water shall be an important consideration in a hilly region.



3-2-1. Geographical location of Delhi :

Importance of Delhi is attributed to its commanding position at the junction of the four trade routes from the lower Ganges, the Hindu Kush, the Indus Valley and the Gulf of Cambay.

In the national phusography Delhi region is surrounded by the Himalyan ranges in the far north and extensive desert lands of Rajasthan in the South and South-east. Both these physical features are suitable for large urban concentrations.

The high Himalayas in the north not only protect the city from the icy winds of central Asia and Siberia but also help to hold back the water laden summer monsoons that blow north wards from the sea.

The desert of Rajasthan, on the other hand trends to make Delhi hot and dry.

When seen from the point of view of transfer of ideas regarding art and architecture they gradually moved from Medapata (Mewar) via Gopadri (Gwalior) to Agra. Fatehpur and Delhi, in the Jamuna Chambal region, as shown in the geographical Map of the area.

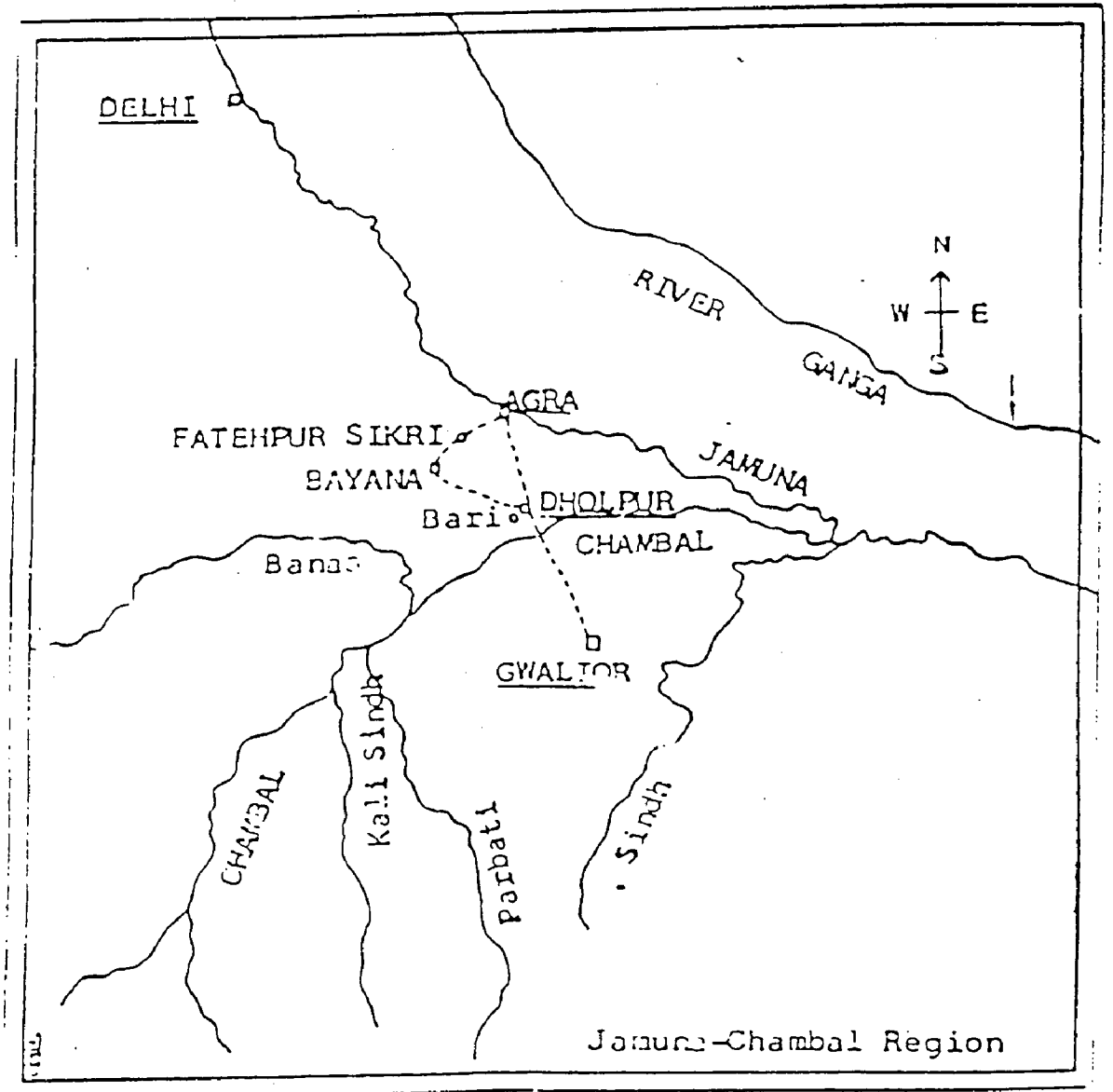


Fig. . Jamuna-Chambal Region

3.3 GEOLOGICAL INFLUENCES :

Geological influences govern directly the style of building in a region, as building process depends upon the type of soil present in an area. It depends upon how much load it can take.

The lack of building stone along the Indus and Ganges valleys, and easily available timber, floated down the river influenced architecture in the area from the earliest times. Untill 18th Century A.D., forms tended to be simply a translation into stone of carpentary techniques. While marble when needed was transported from Rajasthan (Makrana) and fine red and cream sand stone was brought from the neighbourhood of Agra, they were generally used as facing material for rubble walling behind. As far as timber was concerned, an excellent softwood, deodar was found abundantly in northern mountain ranges shisham a hard wood, (inferior to teak) was brought from river valley s of the north. Alluvial soil of rivirine plains was used to make bricks which were and are used in this area. Terra Cotta was used from earliest times, the ease with which plastic clay can be pressed into moulds or carved, before firing, may be responsible (together with the traditions of wood carving) for the

exuberance of decoration in subsequent periods. Lime for building was obtained by burning lime stone, shells and Kankar.

Though stone was not available along Indus and Ganges Valley, but on the whole there was no dearth of stone in India, so, this became the major building material of medieval period. Stone carving in various types of reliefs is associated form of ornamentation. With it, emphasis shifted from 'line and colour' and surface decoration to the treatment of 'Mass and Volume' of stone in third dimension and the pleasant organization of the 'shadows' which is key to architectural aesthetics in tropical climates. Calligraphy on stone was also introduced by muslim art.

3.4 POLITICAL INFLUENCE :

Political influences on a region, sometimes can be so strong that it becomes evident in the building form as well. This case is specially true with Delhi, which has a long political history. There were various types of Governments and their influences which Delhi has faced and more so, when it almost always remained a centre of politics.

There were Pandavs (from epics) who started

building Delhi and beautified it in competition with Hastinapur. Then came a long series of invaders from various alien lands, who had their own policies regarding the building activities. Some were interested in destroying Hindu architecture and transforming the resultant material in this process, to form the architecture of their own land, according to their own needs. There were rulers who were interested in building according to their own whims and fancies, though activities in their period were also induced by that prevailing in their native land and their needs such as protection from other invaders. One example of such an architecture is Tughlakabad. Then there were mughul rulers who did not believe in destroying the available Hindu architecture then, but they also built according to the ideas they had before, they came to India. British Government was an imperialistic type of Govt., they were responsible for a decline in the regionalism. Racism which was strong in that period was also one of the reasons, for which we started losing our own identity. Next, Delhi rather whole of our country saw a tussle between two eminent political personalities, i.e., Gandhi and Nehru. That was a tussle between vernacularism and westernization.

Vernacularization gave way to westernization or so

called modernization, we further started losing our own regional identity.

3.5 CULTURAL INFLUENCES :

Culture is reflected in architecture in an interpretation of spiritual matters, natural phenomenon, social structure, just to name a few. Whether it is man's association of religion with monumentality, his conquest over land with tall building and over nature with large spanning structures, all are the influence of culture. The use of decoration to please his sense of beauty and designing the spaces he uses to match his needs and life styles are clear indicators of cultural influences in architecture.

Due to a constant change in its political scenerio, Delhi observed many cultural changes as well. This can be manifested in a way that whenever there was a political change, it was due to invaders from some foreign land. These invaders brought cultures from their native land. Sometimes they imposed their cultures on already existing culture then, i.e. conversions of Hindus into Muslims or into Christians. There was 'homogeneous' mixture of cultures, so homogeneous quality that it is difficult to differentiate now.

Persians brought their own style of architecture from their land and when it got blended with the Hindu architecture, it got transformed and mughul architecture was formed. Similarly, when British brought their ideas, they did try to convert or transform them, so that they could suit this land. Thus, various architectural styles went on creating with every change in culture.

3.6 SOCIO-ECONOMIC INFLUENCE :

This is a factor which is again interdependent upon two influences, mentioned above, one being culture and the other being political. Social structure of a society can be directly related to its culture and architecture is a clear reflector of this social structure and its hierarchy. Political conditions play a major role as far as the economic condition of a society is concerned. Imposition of taxes or linency in their imposition over the subject has always resulted in their good or bad economic condition. The rise of class, property, wealth and power resulted in monumental architecture, in the mughul period. Whereas, the imperialism in British period saw the decline of original Indian values or loss of identity in architecture.

The free, democratic spirit of modern society gave rise to freedom of expression and quest for a new style of architecture.

3.7 TECHNOLOGICAL INFLUENCES :

Technology is a basic tool of architecture. Developments in technology have directly influenced the man's ability to build more efficiently, to counter nature's laws of gravity and weather, and to provide him with more comforts. From stones in the past, to pneumatic structures or aqua structures of the future, man's understanding and his quest for knowledge has greatly influenced his expression in architecture.

Hindu architecture was trabeated type, whereas, in Islamic architecture spanning was done using arches. Planning also underwent a transition during this period in India, as the mind of an Indian Craftsman was too rhythmic to go with the formal attitude of Islamic ideas. The Hindu temple symbolized the idea of mountain - and - the cavern, but, the Islamic architecture is an art of Silhouette on the sky line. It is masterful organization of the superstructure - mass and volume of the structure rising imperceptibly into the sky, combining some graceful

curved lines, to leave like painting, beautiful rhythmic shadows on the canvas of horizon.

Indo-Muslim architecture was essentially a court (Durbari) art which reflected the personal moods, whims, tastes, beliefs of the person. With the disappearance of the mughul court, it got filtered into people's life. The mughul idioms - tapering fluted pillars with lotus design on bases and capitals, exquisitely designed brackets, curved roof and bent cornices, jharokas, windows, duchatti and chappar compositions, chatries and padma and Kalsa finials on the sky-line.

Hindu artisans were already trained to work on stones, for they already had practised the temple art, the change though was in the structural ideas. They followed a systematic and devoted method of building, there were elements of dedication and sincerity involved, in whatever they did.

Today, the scene at this front is changed totally, we have got sophisticated systems of building, like pre-fabrication, pre-stressing and materials like R.C.C., which has an advantage of covering huge spans and getting moulded as we desire. But, are we understanding the proper place for technology? It is no doubt a tool

when taken in real sense, but the tool has become a hammer now, which we can not weild. Technology is not an end in itself. Unbridled technology can lead to over - production resulting in wasteful consumption.

Talking about the devotion in building workmanship, there is a strong contrast in the workmanship exhibited then and now. In Ajanta and Ellora caves, while the building activity continued over centuries, the quality of execution and the craftsman ship continued to grow better. Today, the work is assigned to an assistant or to a contractor can not achieve the expected quality if the designer is absent even for a few days. In case of these caves and temples, the chief architect or the 'Sthapati' would come, spend time and go away. He perhaps would not come ever again, but the work went on through generations, with the quality remaining constant and often improving.

C H A P T E R - 4

SPATIAL DESIGN : TRADITIONAL & CONTEMPORARY

'Space is the sum of all places, a dynamic field, with direction and qualitative properties'

- Aristotle

4.1 TRADITIONAL SPACES :

4.1.1 OVERVIEW :

When we talk about the Spatial design, we manifest the problem at physical level. Spatial design is something which is not beyond the perception of our eyes. It is not that we can feel it only at our intellectual or spiritual level, we certainly can visualize it.

Ultimate aim of this Chapter is to compare the use pattern of various spaces and enclosures. So, for this reason the chapter is mainly divided into two parts. The first part comprises of observations regarding traditional buildings, followed by the second part which carries observations regarding the contemporary buildings. However, scope of these observations is limited to the residential buildings only.

Again, an attempt has been made to analyse the components of spatial design at micro as well as at macro level, for we can not separate them altogether.

In the end a comparison between the use pattern of traditional house form and that of contemporary, has been done.

The subsequent study is based on the secondary source of literature/references from journals, e.g.,

Inside - Outside July/August 1988, October/November 1988 and as well as from the thesis documents of the architecture students of S.P.A., year 1989. This Chapter is primarily an attempt to create a base for comparative analysis (in terms of similarities and dissimilarities) of a variety of spaces both in Historical examples of the past and from the modern period. Main objective of this Chapter is to highlight the concept of spaces as used in analytical examples to bringing out the relevance and scope of space being used as an Element of Design in a variety of ways. The Hierarchy stipulated here is aimed to establish a space scale relevance to functions.

TRADITIONAL SPATIAL DESIGN :

Traditional spatial design is naturally governed by the traditions, as observed in our society. Paradox of our society is that, every body has to belong to an identifiable group in order to get identification. Thus, no body is alone in our society, not even when one is walking in a bazar. These too an individual gets a chance to participate. Thus creating a sense of participation becomes the foremost criterion of traditional building design.

Considering morphology of a traditional settlement

at a broad level, we observe that an old settlement like Shahajahanabad is characterized by an organically knit built form, with narrow winding streets on a pedestrian scale. It has a high degree of functional mix and introverted social structure, which is reflected in inward, looking residential clusters.

The texture of these settlements is a result of high population density and an intensive utilization of land, whereby the homes, work place and trade centres are closely integrated.

The essential components of traditional spatial design, are :

A. At MACRO - Level :

- a. The neighbourhood (Basti) and the Mohalla
- b. The street system
- c. The Chowk

B. At MICRO - Level :

- a. Entrance
- b. Reception
- c. Living Room
- d. Dining Room
- e. Bed Room
- f. Service Spaces

- i. Kitchen
- ii. Bath room
- iii. Toilet
- iv. Store
- v. Staircases
- g. Multi purpose spaces
- h. Leisure Activity Spaces
- i. Parking

4.2 COMPARISON OF USE PATTERN OF TRADITIONAL AND CONTEMPORARY SPACES :

1. Hierarchy Concept :

a. Traditional :

A clear hierarchy of spaces is seen in the traditional buildings from, public to semi-public, semi public to open enclosed and from open enclosed to strictly private spaces. A psychological sense of enclosure was there. Areas were also clearly demarcated due to the need of privacy for women folk. Zenana and Mardana areas were clearly separated from each other.

b. Contemporary :

The modern house though does not have such

clear demarcations, but it does have a certain gradient of penetration.

The whole idea of private VS. public domains can be related to the distinction between front and back areas; the former for display, presenting a formal face to the world and communicating a public image; the latter for private and service activities and 'messy' behaviour with corresponding control of penetration.

So, penetration gradient starts from front and ends at the back.

2. Space-Form Relationship :

a. Traditional :

The house form on the whole, was an introverted one. It was the house, with court-yard as its heart, so naturally most of the openings were given in the court-yard only.

b. Contemporary :

The modern house shows a complete inversion in space-form relationship as compared to its traditional counterpart. The introvert planning has been

- replaced by increased exposure from the outside. There is an increase in the use of physical devices like gates, fences, hedges, compound walls etc.

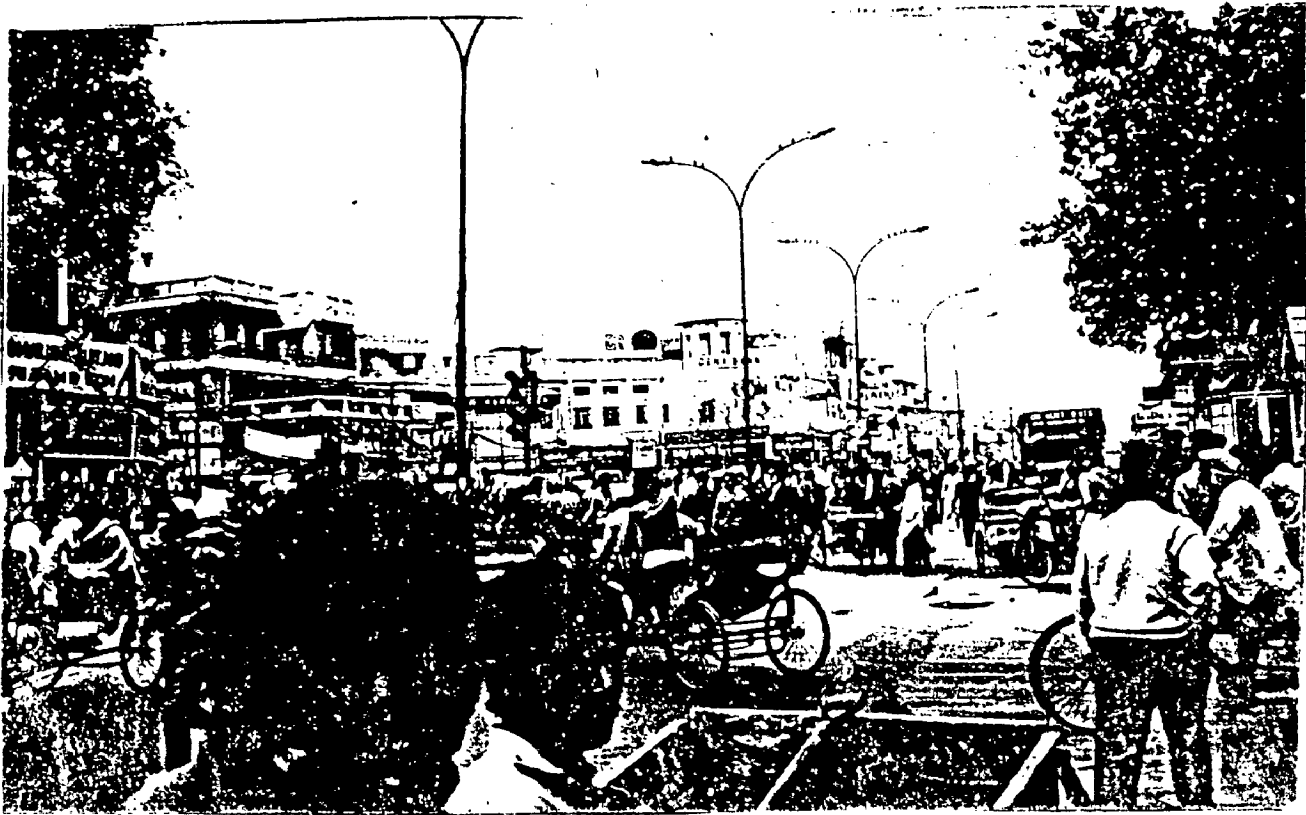
A. HIERARCHY OF SPACES :

MACRO SPACE COMPARISON :

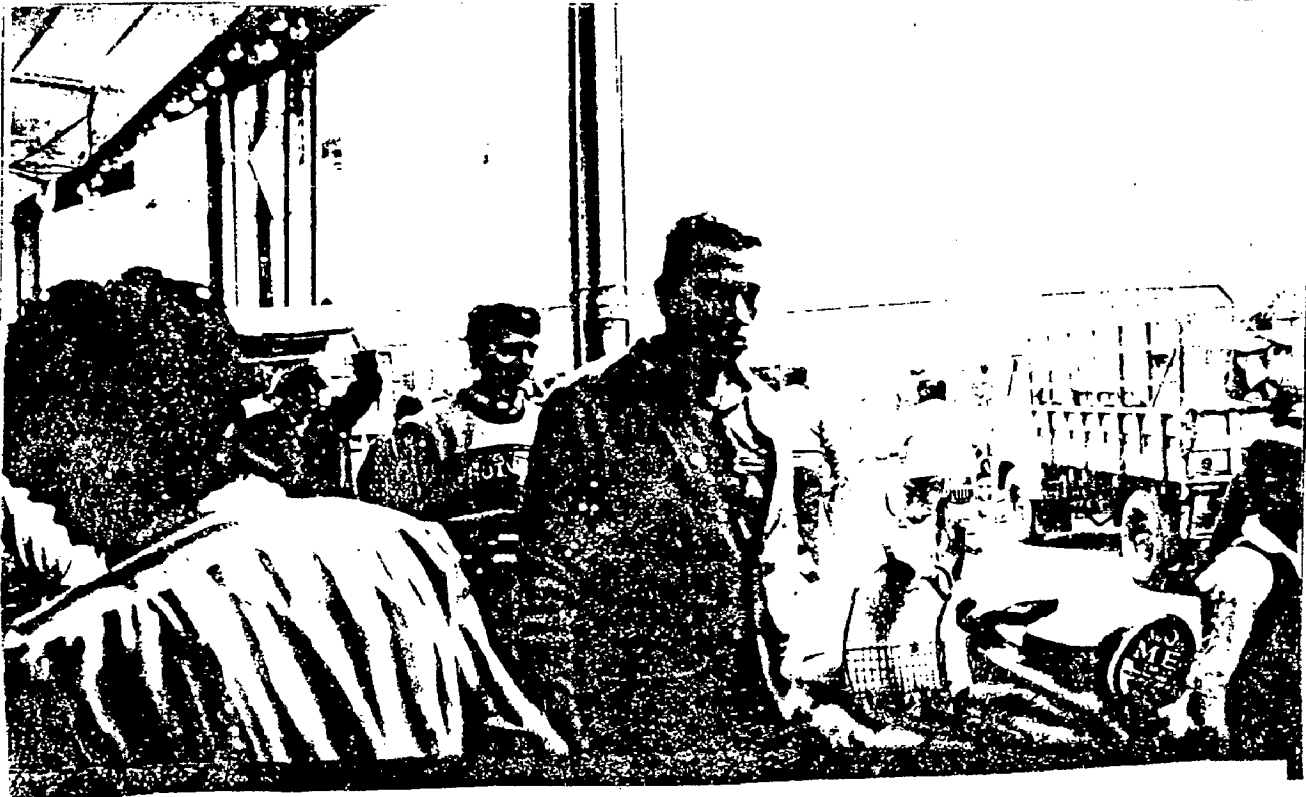
| S.No. | Spaces | Traditional | Contemporary |
|-------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| 1 | 2 | 3 | 4 |
| 1. | Neighbourhood and Mohalla | Mohalla or, Quarter - the module for neighbourhood design. Identified as social and physical entities within the fabric. Characterized by interverted plan form and proximity to trade Centres. | Sector-the module for neighbourhood design. The concept of social entity is missing. Close proximity to the work place absent. |

| | | | |
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| | | <p>Mohalla - the primary residential cluster unit of the old organic city. Educational and institutes, dharamshalas, doctor's clinic attached with. Provided a closed circuit system. The entry often articulated by arched entrance gates with large door ways. Class distinctions obliterated by the caste and religious hierarchies. Intimacy of person with the</p> | <p>Sector - The Unit for neighbourhood design, lacks the concept of self-sufficiency hence, does not provide a closed circuit system. Hierarchy provision in a neighbourhood, according to the economic status. Lacks person - place intimacy. Identification of a person, difficult due to lack of face to face familiarity.</p> |
|--|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| | | | |
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| | | <p>place, due to human scale of built form strong identification of person, due to the face to face familiarity with the neighbours.</p> <p>Proper orders given to the street - system width decided according to the orders.</p> <p>a) First order : Straight and wide roads, 90' wide.</p> <p>b) Second order: Curves gently, above 30' wide.</p> | <p>Proper order given to the street - system, but the concept of relating the built form with the street width, a forgotten chapter.</p> <p>Apartment buildings usually attain greater height and block the light plane of surrounding buildings.</p> |
| 2. | Street - System | | |



FIRST ORDER STREETS ARE STRAIGHT & 90' WIDE.



SECOND ORDER STREETS CURVE GENTLY AND ARE 30' WIDE.

| | | | |
|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | <p>c) Third Order: Winding and narrow kind, 10' wide.</p> <p>d) Fourth Order: Dead Ends, 4'-6" wide.</p> <p>(NOTE : Widths mentioned above are based on the observations, at Shah-jahanabad).</p> <p>The first order streets focus on the prominent landmarks of the area e.g.; Jama Masjid or Fatehpuri Mosque. A large commerce and trade component found</p> | <p>Vehicles taken right in to the streets. Often street forms a parking space for the vehicles, thus marring the street flow.</p> <p>Street, no more as a place for social interaction. Older folks do not come out and sit there, children do not feel a psychological sense of enclosure and hence do not go out to play.</p> <p>Street-System designed on preconceived geometrical patterns, and sharp bends</p> |
|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



THIRD ORDER STREETS ARE NARROW & WINDING WITH 10' WIDTH.



FOURTH ORDER STREETS HAVE DEAD ENDS AND ARE 4'-6" WIDE.

along the major arteries, getting progressively reduced towards the inner streets, where the residential component predominates. Sense of flow, broken by sharp angular bends, sudden shifts of direction and architectural intrusions. Irregular patterns of streets, blocked the dust storms common in Delhi. Internal street system meant primarily for

avoided. Sense of flow rarely broken hence, element of surprise absent.

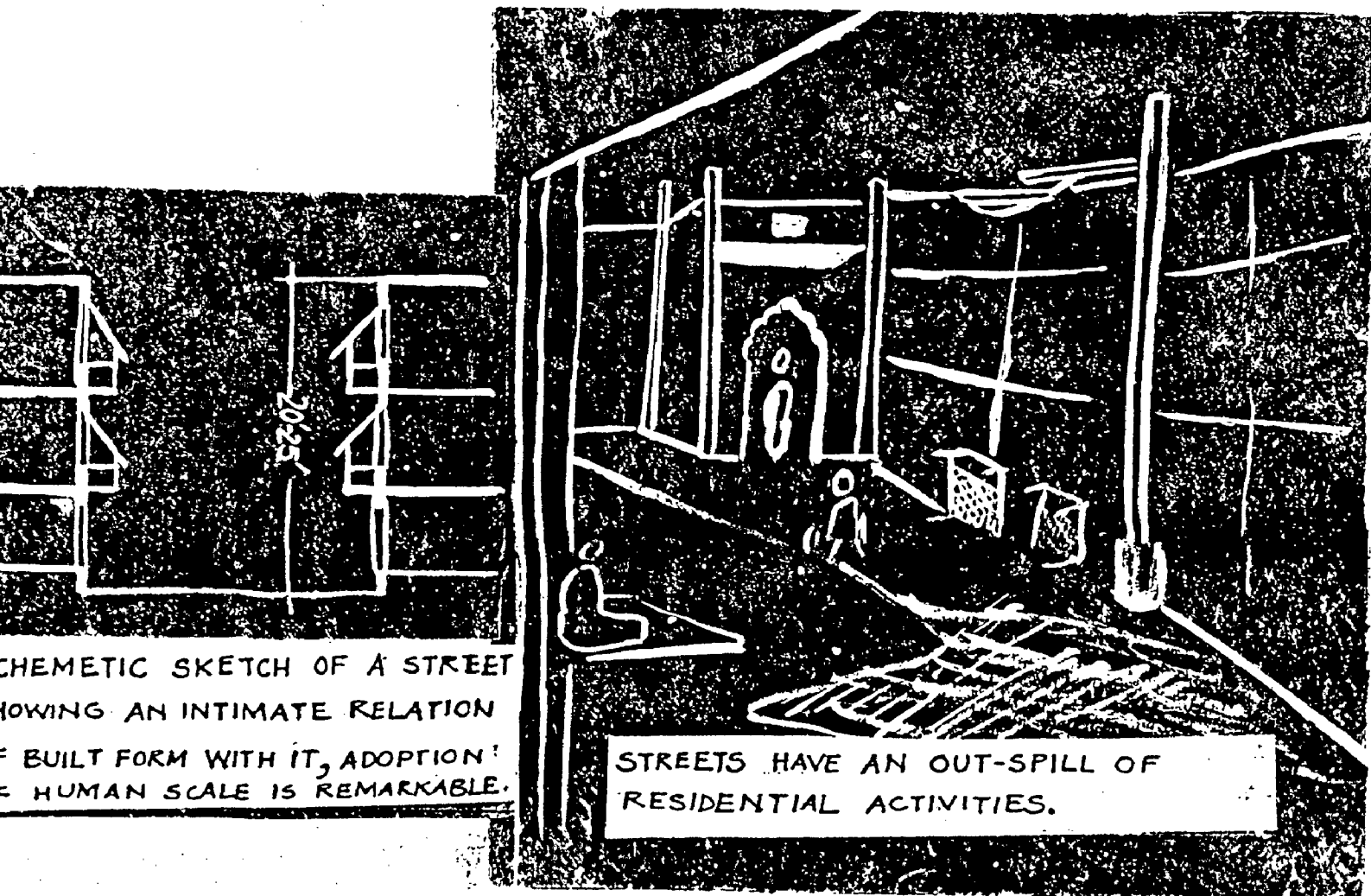
Varied structural materials used for construction purpose, hence harmony to the total mass absent.

Houses and other buildings designed more as a personal expression.

Elements like brackets supporting the balconies granting continuity to the facade are missing creating a visual chaos in totality.



MIXED LAND USE IS FOUND AT SHAHJAHANABAD. SHOPS ARE AT GROUND FLOOR AND RESIDENCES AT UPPER FLOORS.



SCHEMATIC SKETCH OF A STREET SHOWING AN INTIMATE RELATION OF BUILT FORM WITH IT, ADOPTION OF HUMAN SCALE IS REMARKABLE.

STREETS HAVE AN OUT-SPILL OF RESIDENTIAL ACTIVITIES.

the pedestrians and cyclists. Narrow streets remained self shaded and five to seven degrees cooler in summers, than the other parts of Delhi. Out spill of activities in the street observed, In commercial areas, vendors occupy them. In residential areas older folks sit outside on the platforms, children like to play there. An established relation of built form to the street found.

Most of the buildings do not exceed a height of two to two and a half stories.

Height relation to the street width at Shahjahanabad was :

a) 90' wide street:

30' to 40' high building

b) Above 30' wide street :

26' to 30' high building.

c) 30' to 40' wide Street : 20 to 25' high building.

Brick used as a structural material . Gives unity & and harmony to the total mass.

3.

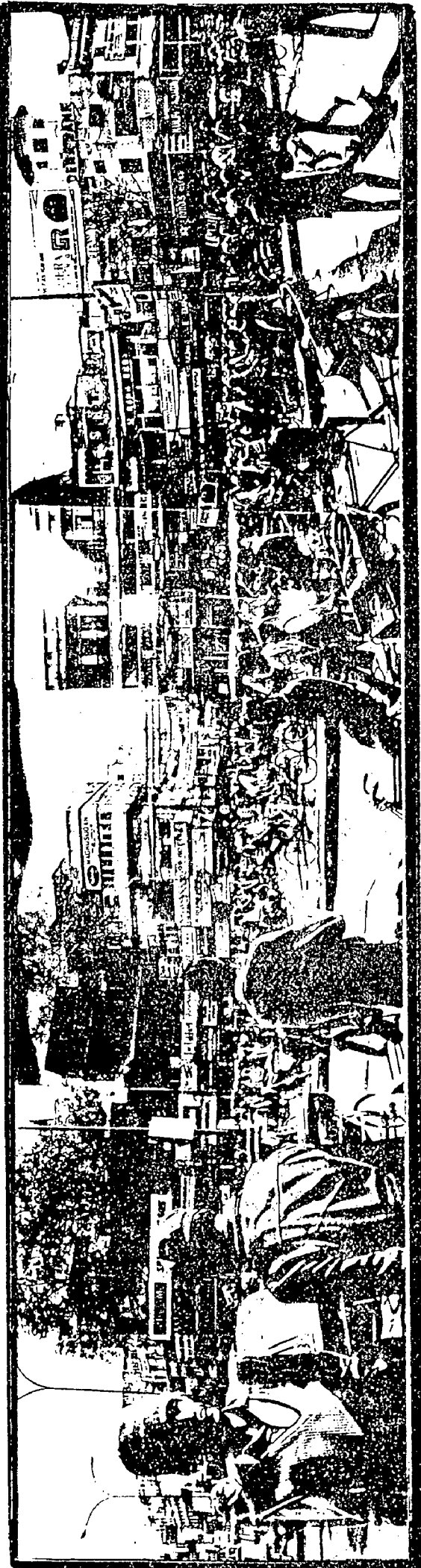
Chowks

Repeated use of certain architectural elements also present a harmonious street picture.

Identified as an indigeneous element in traditional settlements like Shahjahanabad. Located at the junction of two or more streets.

Served as lungs for the community and leant an air of spaciousness. Also acted as a meeting ground for the local community members. Various activities, at different times

Chowks merely reduced to, roundabout, controlling traffic. Has lost its well identified functions. Elders don't meet each other at chowks, children don't go to play there due to the danger of rushing vehicles.



CHOWK - AN INDIGENOUS ELEMENT OF TRADITIONAL
SETTLEMENTS LIKE SHAHJAHANABAD.

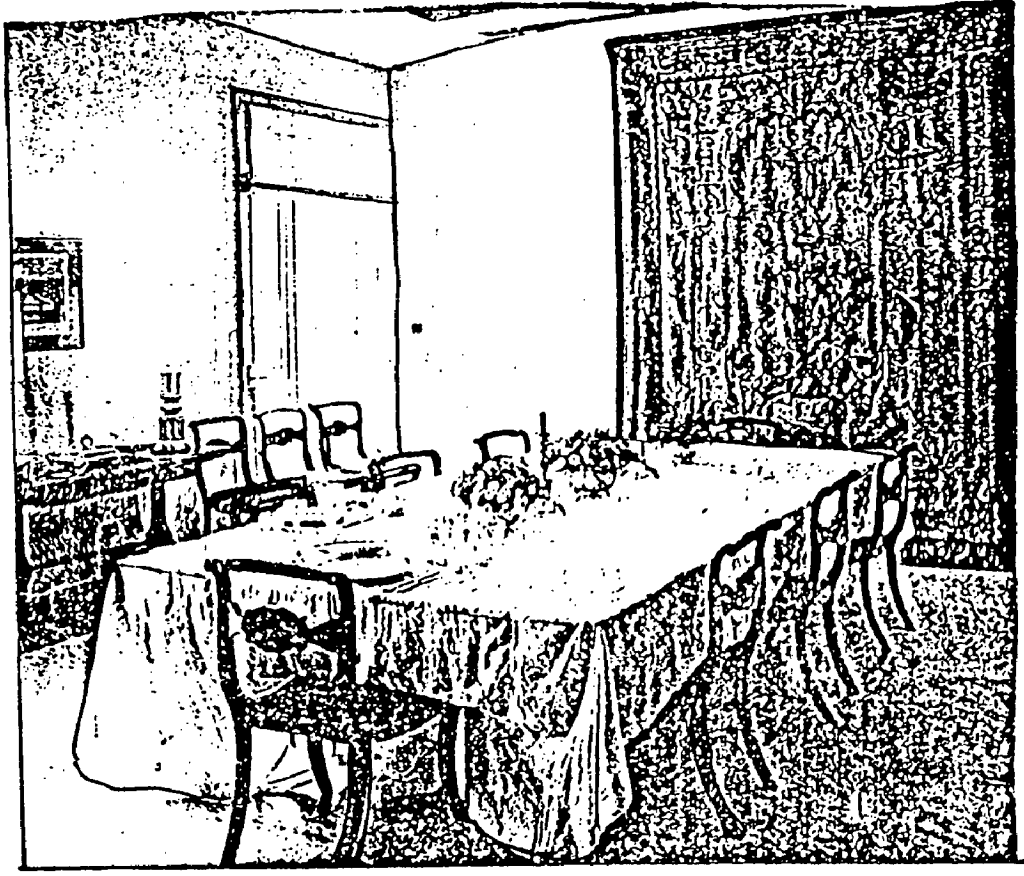
| | | | |
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| | | <p>of days pursued over here. A playing area for children, for elders to meet. Gave an identification to the area, e.g., area surrounding Chandni Chowk, easily identified.</p> | |
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HIERARCHY OF SPACES :

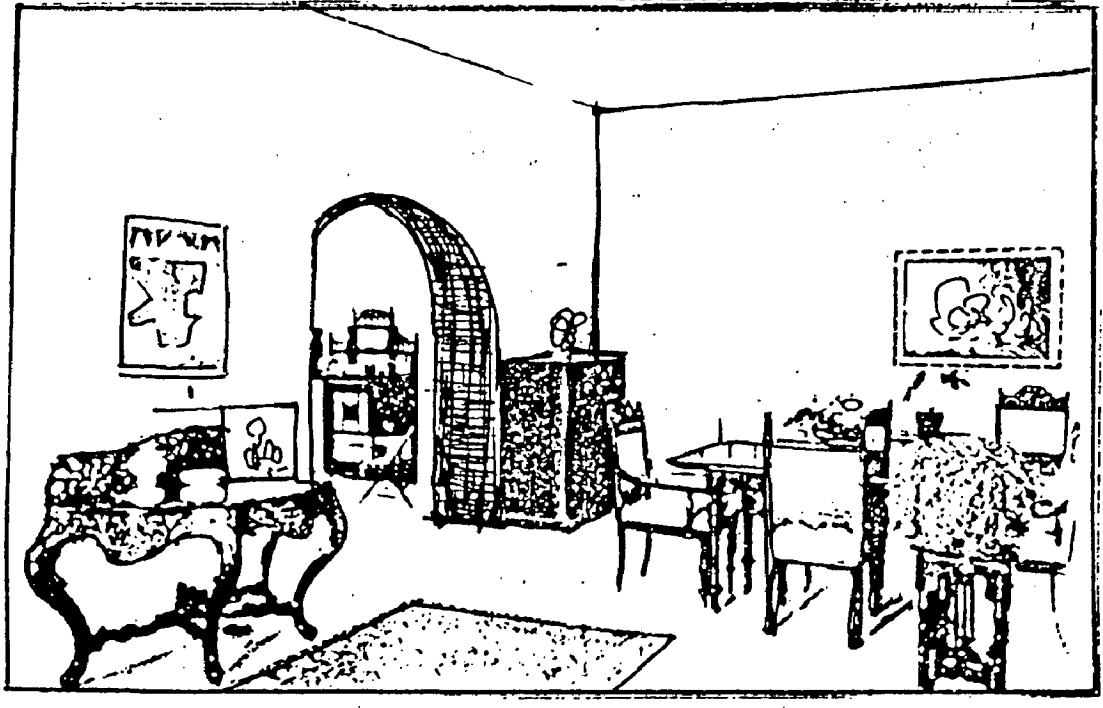
(B) MICRO SPACE COMPARISON :

| S.No. | Space | Traditional | Contemporary |
|-------|----------|---------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| 1. | Entrance | <p>Entrance visible from the street and positioned in a corner indicating the starting or end of the house-wall parallel to the street.</p> | <p>Entrance goes back with the front set back. Separated from the street by a long driveway and front lawn, usually.</p> |

| | | | |
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| 2. | Reception | <p>Reception segregated from all the private areas and hence, an essential part of the house. Becomes a need based but secluded part because women folk not allowed to meet every person coming to the house.</p> | <p>Reception reduced to a place to receive the persons, not to be entertained in the living room, e.g., postman, delivery-man, etc. No need of secluding from rest of the house, since modern hostess takes part in all the social occasions. Often present in the form of verandah, but sometimes omitted due to lack of space.</p> |
| 3. | Living room | <p>Formed the Mardana Section of the house, and the most</p> | <p>Living room in a modern house contains all the economic,</p> |



DINING ROOM IS A RECENT CONCEPT AND IS EITHER SEPARATED OR COMBINED WITH LIVING.



decorated one also. Acted as a status symbol of the family, barred for the ladies. Formed a formal sitting area.

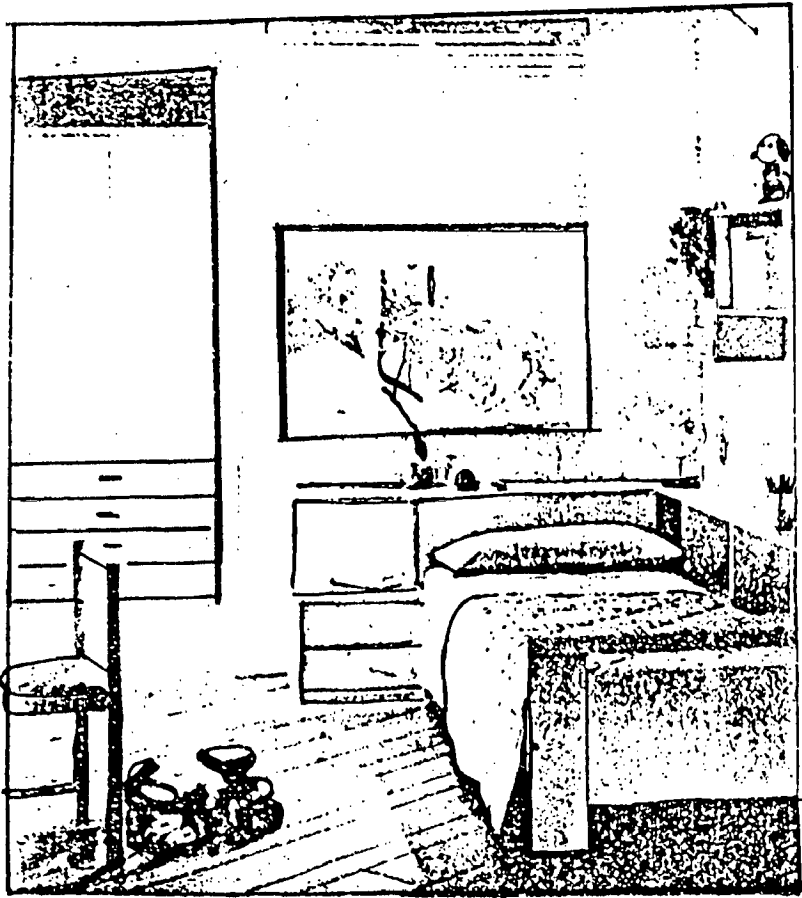
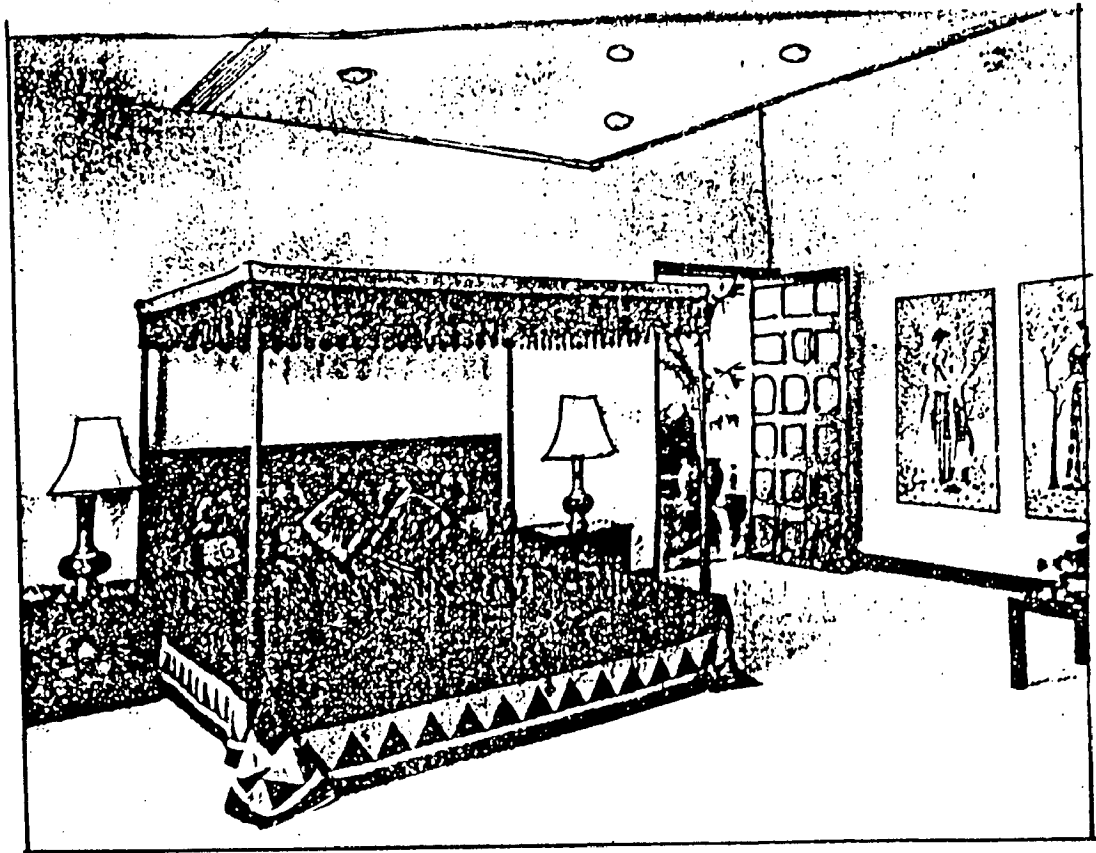
religious and political icons of the family. Emerged as a symbol of the social status of the family. The most formal area in the house, meant solely for entertaining the visitors.

4. Dining Room

This concept not developed in our past, as eating not very formal, those days. Either combined with kitchen area or in summers, outside in the court-yard,

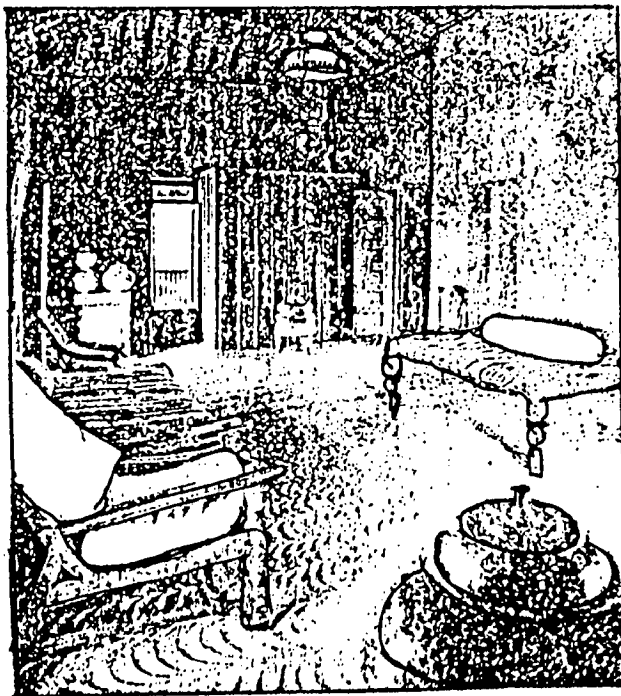
A recent concept and considered as a place wherein members of the family meet, at dinner time. With the addition of T.V., it became a place for entertainment also.

| | | | |
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| 5. | Bed Rooms | <p>where cooking area also shifted due to the unbearable heat inside.</p> <p>As stated earlier, our society did not have an individualistic approach, therefore, this area also not that strongly demarcated in the traditional houses. Mostly, the sleeping areas, were the shared ones or in the day time used for domestic activities and during night hours got converted into sleeping areas.</p> | <p>Modern society's approach individualistic. Due respect given to the privacy of individual and married couples. Privacy realms clearly demarcated in the form of the ^aparent's bed room, childrens' guest bed etc.</p> |
|----|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



PRIVACY IS GIVEN DUE RESPECT IN THE CONTEMPORARY HOUSE DEMARCATING THE AREAS IN THE FORM OF CHILDREN'S BED, GUEST BED.

SLEEPING AREAS WERE EITHER SHARED OR THE CONVERTED ONES. (RIGHT)



| | | | |
|----|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6. | Service Spaces : | | |
| | a. Kitchen | <p>Informal kind of space, i.e., cooking was carried in the sitting position only. Not equipped with modern gadgets like cooking gas, mixers etc. It included the eating area also.</p> | <p>A formal design of kitchen as the concept of eating also gone formal. Well equipped with modern gadgets, Durable and low maintenance materials used for its construction.</p> |
| | b. Bathroom | <p>Open type of bath room, lacking the sanitary facilities. Usually, located in a corner, away from the visibility. Neglected part of the house.</p> | <p>Complete transformation in the attitudes towards the bathroom. The slogan is 'Bathroom is a room too'. Use of low maintenance ceramic tiles and wash basins, in the selection of</p> |

c. Toilet

Neglected part located in a corner, as the bathroom.

Sewage disposed in the back lane, carried away by conservation system.

Sanitary conditions in a sorry state.

which due care taken. Every effort made to make the process of taking bath, pleasant.

Toilet been given a considerable importance in the contemporary house.

No more the god for saken place, as in the traditional house.

Condition of sanitation improved tremendously, and

it got a place within the house, where, every one reaches conveniently.

A fashion of W.C. cum bath become popular.

| | | | |
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| | d. Store | <p>Storage largely in the form of small niches in the walls or in the form of large room, used as a storage of yearly stock of grains. But, no fashion of providing ward- robes or cup-boards, as cloth- -es kept in trunks only. In larger houses, basements used as storage, but usually in the form of large godowns, need of business families.</p> | <p>Pantries and small stores attached with the kitchen, common features of modern houses. Large grain store, hardly needed because, no body stores the yearly stock of grains now-a-days. In bed-rooms, ward- robes and cupboards provided for keeping the clothes and books etc.</p> |
|--|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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| | <p>e. Staircases</p> | <p>Staircases not merely used as a mean for vertical circulation. They never started from ground floor and lead straight to the terrace. Always changed their positions at various levels, so designed for the visual privacy and acoustical purpose.</p> <p>Staircase when started from Courtyard, served a cozy sit out for adults and the railing</p> | <p>Staircases now reduced to a feature projected to improve the elevation of building and of course, basic function being the vertical transportation.</p> <p>Sometimes when a common stair case shared between two or more families, a place for social interaction created.</p> |
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| | | | |
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| 7. | Multi-purpose spaces : | <p>became an important feature of play for children.</p> <p>Served as the multipurpose space. Acted as the heart of the house, a place for the celebration of births and annual festivals. Moreover, roof top always designed at least served as a place for chit chat in winter days and that of sleeping at nights. It also converted into play area for children in</p> | <p>With the advent of modern gadgets like T.V. and V.C.R, an addition made in the Indianhouse, i.e. family room. This instead has become the heart of the house. Court yard neither needed nor included 'as a space' in the modern house. With the omission of this feature, the advantages of natural cooling</p> |
|----|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| | | | |
|--|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>8. Leisure Activity Spaces :</p> | <p>the evenings.</p> <p>Court yard and roof top formed the leisure activity spaces for a traditional house got never separated from the street, so a street always got an out spill of house activities. Street formed a nice play area for children. Platforms outside the houses formed a cozy sit out for the adults, and chowks, the</p> | <p>as a response to our tropical climate, got lost.</p> <p>Modern house starts from the front yard and ends in the back yard. Front yard presents, formal face of communication with the public, hardly can be said a place for carrying out leisure activities. Backyard on the other hand reserved for carrying out the messy kind of activities. In between comes the family room, the</p> |
|--|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| | | | |
|----|-----------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9. | Parking : | <p>places, where men folk met & interacted socially.</p> <p>Due to absence of automobiles, the concept of parking found missing.</p> | <p>concept of leisure in which limited to T.V. and V.C.R. only.</p> <p>Usually done in the front yard, in case, due to limited area of the plot front-yard missing. Street used for this purpose. Small vehicles like scooters and bicycles parked within the house.</p> |
|----|-----------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

4.3 POTENTIAL USE OF SPACES -'DESIGN AND PLANNING APPLICATIONS' :A. AT MACRO LEVEL :

| Sl.No. | SPACES | DESIGN & PLANNING APPLICATIONS |
|--------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | Street | <ul style="list-style-type: none"> - Streets can form a usable public space. - It should give a psychological sense of enclosure, for that arcades can be given. - It should be considered as an outside 'room', for that street can be provided. - Parking in the streets should be discouraged. |
| 2. | Parking as related to Streets | <ul style="list-style-type: none"> - In order to recreate the street as an active social space, the penetration of cars must be stopped within the neighbourhood. - Three orders of streets can be stipulated for this : |

- a. First order street as a free access for vehicles.
- b. Second order street can have parking pockets, wherever it gets terminated.
- c. Third order street can become a mean to connect houses and the Second order street.

B. AT MICRO LEVEL :

| Sl.No. | SPACES | DESIGN & PLANNING APPLICATIONS |
|--------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | Entrance | <ul style="list-style-type: none"> - A transition space between the house and street is essentially required. - To distinguish this space and to emphasize it, change of levels and direction can help. - The space can be further highlighted by the variation |

2.

Court-yard
OR Enclosed
Open Space

of texture and quantum of natural light entering inside.

- It should be a space, where people can relax and enjoy the street scene.
- A place where, after a tiresome day one can relax in an open but enclosed environ, and can behave as one does indoors.
- A house with court-yard provides free light, adequate sanitation.
- A court-yard house is constructed in a less land, because it is constructed on the boundaries, not within the boundaries, of the plot.
- It is not necessary to enclose court-yard by rooms from all its sides. Following points can be taken into consideration for such a design :

- a) The court yard have doors at least on two opposite sides, so that it becomes a meeting point for certain activities.
- b) The transition between rooms and court-yard should not be abrupt, a space like Verandah can be placed in between.
- c) To create more interest in the design, a court-yard may be placed, so that people remain aware of the activities going on there. A garden when placed behind a court-yard, evokes an urge to see 'something behind'.

3.

Balcony

-

Balconies are never used for the purpose they are designed, because their privacy is threatened by passers by or the neighbours.

4.

Multi-purpose

- They are often joined to the rooms behind, as an extension. To stop this, they can be projected in the court-yard. Thus, they would further shade it and their privacy shall be maintained too.
- Family room forms an essential element of contemporary house design. It should be located at the centre of the house, having an easy access, from every part of the house.
- It should not be placed at the end of corridor, discouraging its use.
- Circulation path must not cut deeply through this area, otherwise won't be comfortable for the lingering sort of sitting.
- Interior should be informal and flexible, so that in case of functions, it can join with living room to provide more space.

- | | | |
|----|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5. | Stair Case | <ul style="list-style-type: none">- It should be treated as a space and volume, not merely as a mean for improvement in elevation.- It should be planned in such a manner that it acquires a vital social character, i.e., as a space for meeting the people on their way up and down, some interesting deep set spaces can become play areas for children or, perhaps a projected balcony at the landing can create an interesting space.- It can be made a point of interest generation by placing it in the family/living room, but this can only be possible when the upper floor has not been rented. |
| 6. | Corridor | <ul style="list-style-type: none">- Passages/Corridors, must be reduced to a minimum, for they provide a close character to the building. |

7.

Interior

- A court yard house, again proves to be an advantage over here, as corridors are automatically omitted in it.
- Placement of wide windows, book-cases and allocation of area a bit generously, might give it a feel of a room only.
- Interior must be very flexible.
- A house should be designed for the following adaptabilities :
 - a) Need for rental properties.
 - b) Varying family size.
 - c) Professional needs.
- Shape of the room becomes more important, rather than its size for narrow and irregular rooms give a rigid interior.

C H A P T E R - 5

ENVIRONMENTAL COMMUNICATION FOR THE ANALYSIS OF TRADITIONAL ELEMENTS

'One thing that is new is the prevalence of newness, the changing scale and scope of change itself, so that the world alters as we walk in it, so that the years of man's life measure not some small growth or re-arrangement or modernization of what he learned in childhood, but a great upheaval'.

- Robert Oppenheimer in 'The Dynamics of Change' by Don Fobem.

5.1 PRELUDE :

The analytical study for the conceptualization of building elements, is based on the freedom of communication in the sense of visual and contextural interaction. The main purpose is to high-light :

- a) Visual judgement criteria for identification of an element.
- b) Design context for which the element has been used in the building.
- c) Function design context for which the element has been used in the building.
- d) Thematic significance of the elements.
- e) Personality/individuality, of the element.
- f) Potential derivations of the element applicable to the modern themes of architecture.

The purpose of this visual analytical is primarily related to the following concerns :

1. Why is there a point of break between the architectural expressions of the past to the present. ?

2. Why it is necessary to explore the potential of the past forms and expressions, for its relevance to the present.?
3. Why is it necessary to propose an integrative approach to the design of modern buildings to create a deliberate link with the past to sustain an environmental continuity.?

5.2 ELEMENT, OBJECT - A DIFFERENTIATION :

There are certain parts in a building which make it unique. These parts have inherent qualities in them, for which they can be identified.

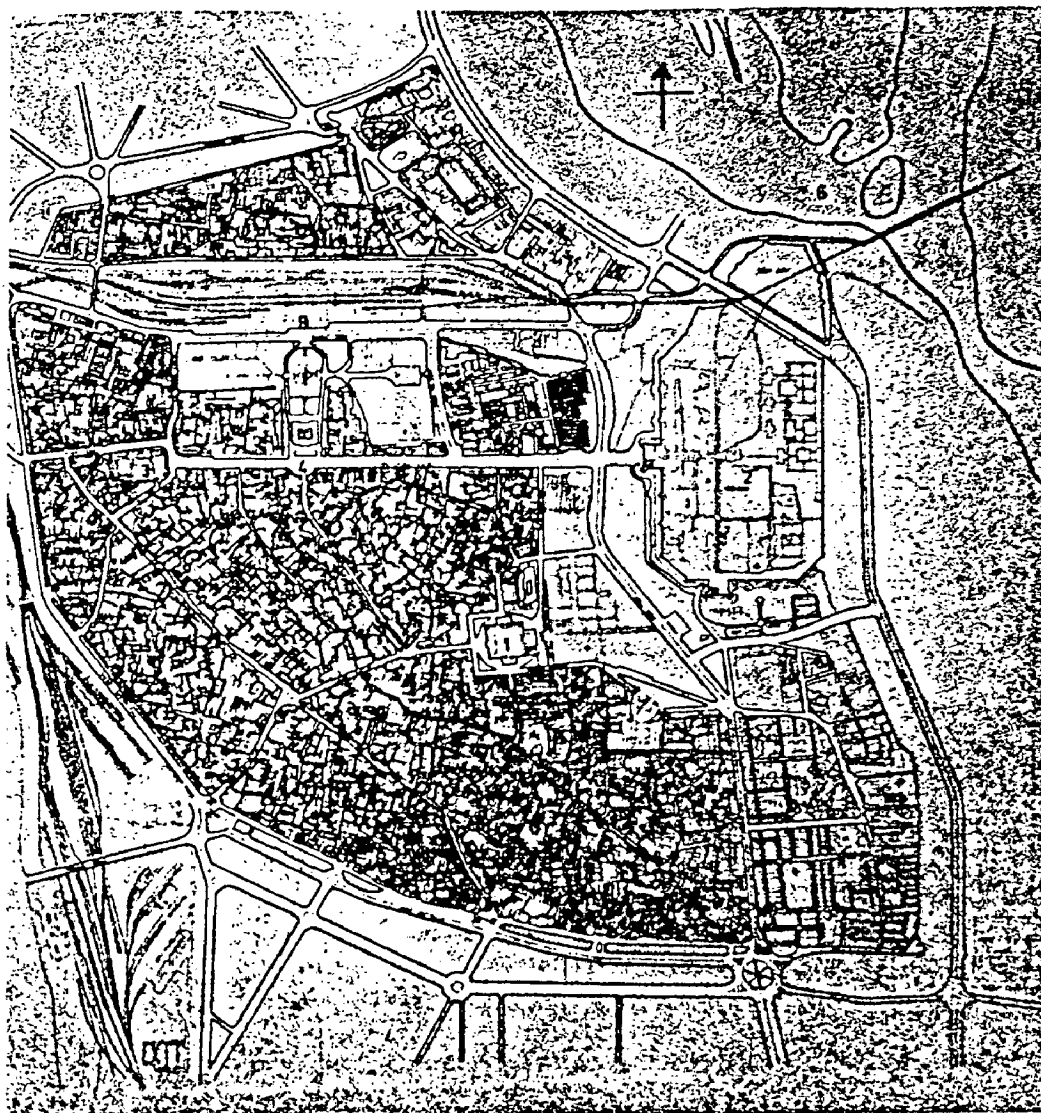
We know that every thing that is three-dimensional becomes an object but, this object when immediately spotted or identified becomes an element. Certainly these objects do possess some unique qualities, for example a chajja might become unique in character and thus can be identified as an element, but, in some other building it might just be useless. The uniqueness in character could be due to its functionality or its placement even.

So, we can state the difference between an object and an element in a simple equation that every element is an object, but, every object is not an element.

Uniqueness in treatment or provision of space also might make that space an element of the building, because that space gives a certain character to that building.

Mostly, they are the elements which make a building traditional. The elements which 'fit in', make building a part of the history. It is seen that an object becomes identifiable as an element, only on functional considerations. It is rarely when an object becomes an element due to aesthetic considerations solely.

Plan of Shahjahanabad



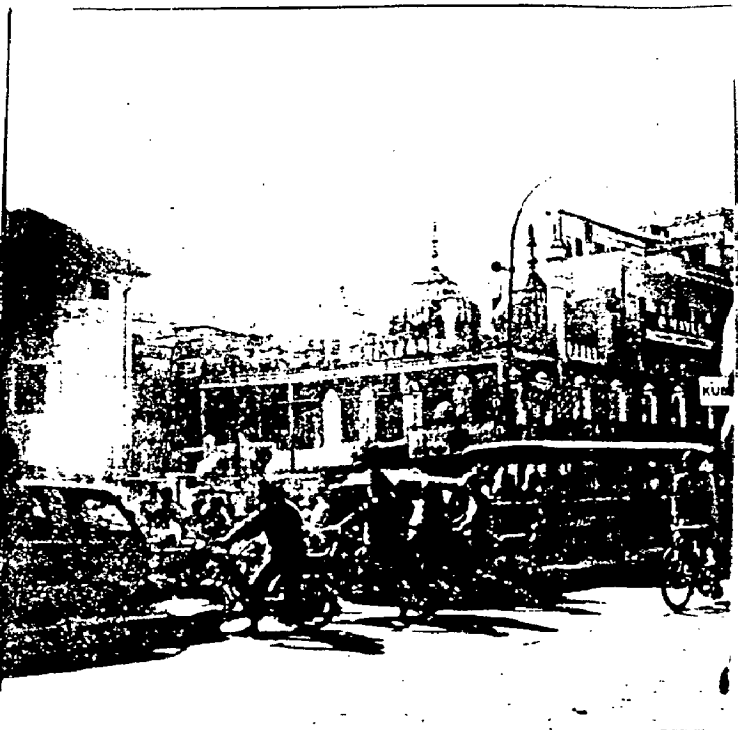
Layout: Sikha Chaudhuri—1978

1. Jama Mosque
2. Red Fort
3. Fatehpuri Mosque
4. Chandni Chowk
5. Railway Station
6. River Jamuna

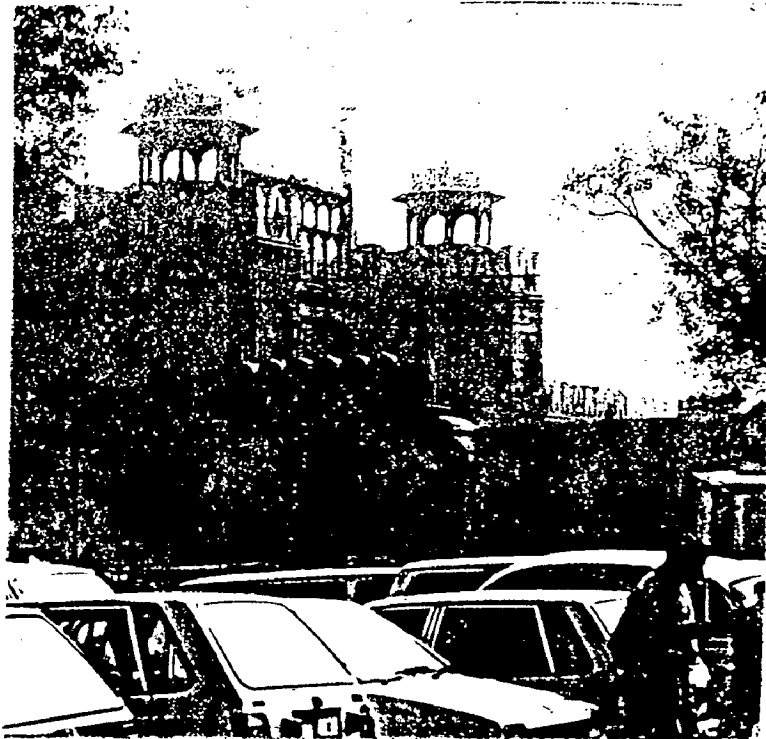
LAYOUT - PLAN OF SHAHJAHANABAD

Elements are identified from Fatehpuri Mosque and Lal - Quila.

SOME LANDMARKS OF SHAJAHANABAD.



SUNHERI-MASJID.



LAL - QUILA.



CHANDNI - CHOWK.

5.3 IDENTIFICATION OF ELEMENTS :

The following elements have been identified in the two buildings studied, i.e. Lal-guila and Fatehpuri Mosque.

5.3.1 Arches and Archways

5.3.2 Jalis and Screens

5.3.3 Elements on Edges

5.3.4 Space Punctuations and Focality

5.3.5 Surface Complexity by Juxtaposition

5.3.6 Elements in Environmental Design

5.3.1 Arches and Archways :

These are identified under the two heads :

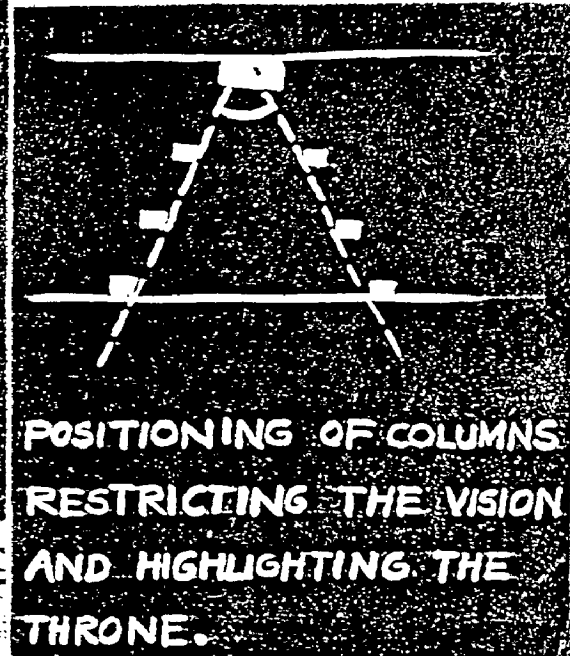
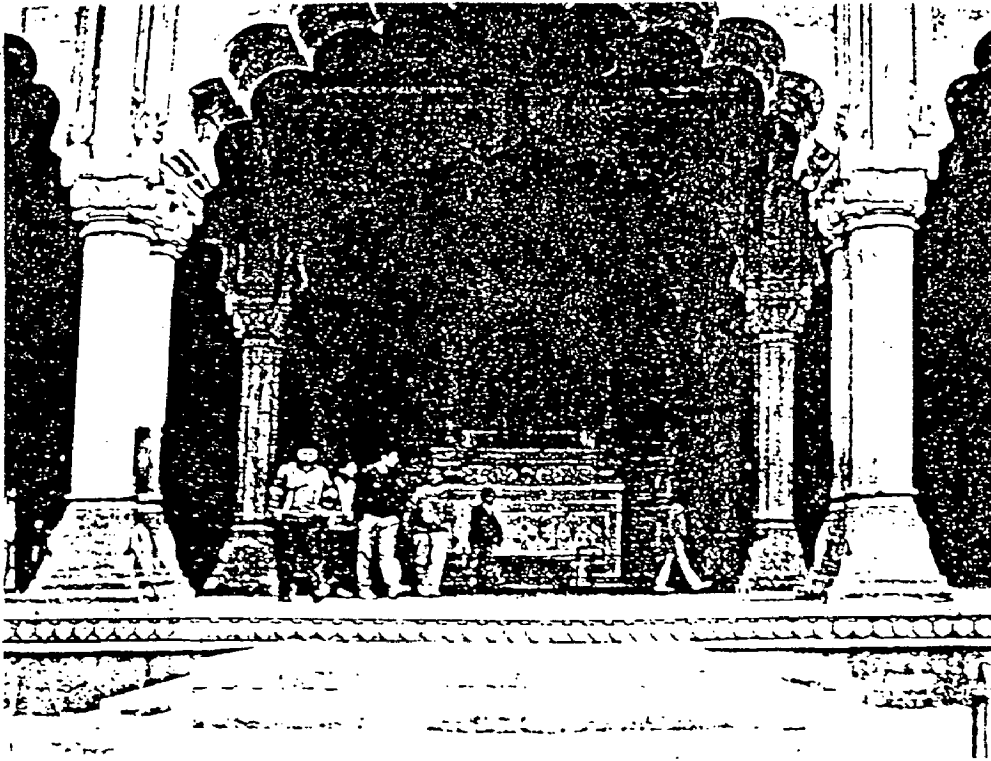
A. Qualification of Design Form

a. Arches as a part of construction

b. Arches as a part of Space

B. Impact of Arches in Repetition

On the front Or In One Plane.



5-3-1-A
Location : Diwane Aam, Lal Quila.

Description : P-5-6.

Space for the occupancy of the famous Pea-Cock throne belonging to the emperor Shahjahan. Three arches with graceful proportions receding in vertical plane enclose the space.

Interpretations :

Arches enclose as well as highlight the space. Columns positioned so that vision of the eyes get restricted. Eyes perceive only the throne and the arch form repeated at the top of the throne. Ultimately lets the eyes to get focussed on the emperor.

Qualification of the Design Form :

- a. Arches as a part of construction.

Location : Diwane Aam,
Lal Quila.

Description : P-5.1

A raised platform, open from all sides. Spanned by twin columns at the edges and single column inside.

Interpretation :

Edge made more pronounced, using twin columns, to lay emphasis on the visibility of the boundary of the open space.





5.3.1 A.

Location :

Sanctuary, Fatehpuri Mosque.

Description : P-5.3

Arches form a sanctuary to the mosque and the middle arch corresponds to the entrance to the nave. Construction technique followed makes the Squinch.

Interpretations :

Squinch formation of the middle arch makes it a focal point. Depth compelles the eyes to penetrate inside and explore further. Eyes don't rest on rest of the arches (small ones) as can see through and through.

Location : Naubat Khana,
Lal Quila.

Description : P-5.2.

Entrances, framed by three
point arches.

Interpretation :

Arch identified due to
the depth or squinch (as
a part of construction).
Depth focalizing the
entrance.

Deep set space, evokes
a spontaneous reaction
to turn inside and
explore, even when walk-
ing on a straight path-
way.



5-3.1(A)
Qualification of the Design Form :

b) Arch used as a part of Space



Interpretations :

Provides a telescopic view. Eyes move in a parallel direction, in a dark tunnel like space and get focussed at the exit behind. An urge evokes within, to see in infinity. (Infinity here is not limitless but, 'something beyond').

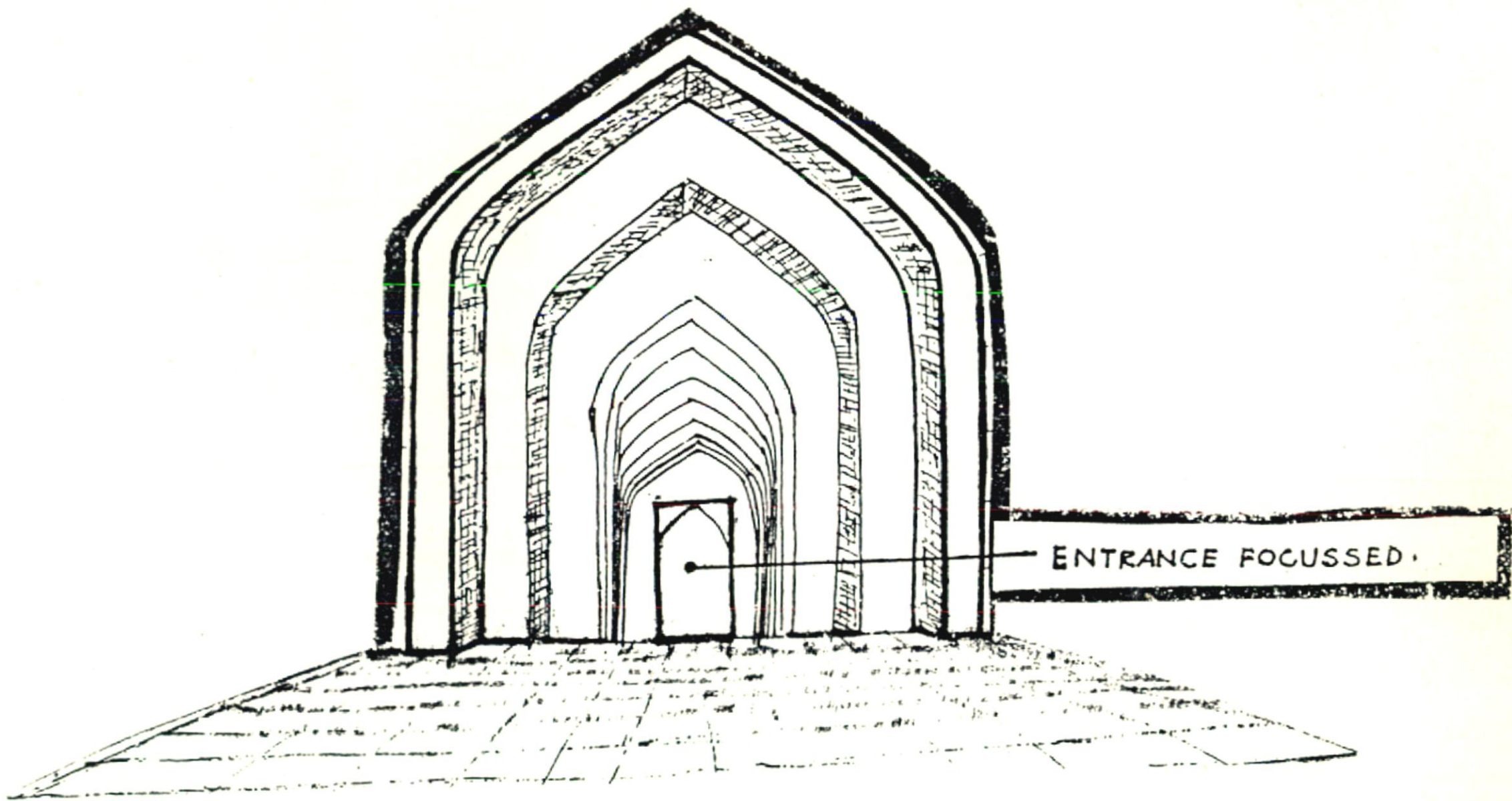
Location : Meena Bazar, Lal Quila.

Description : P 5.4

A series of arches enclosing a space. On both the sides, shops of art pieces and artifices.



P-5-5, MEENA BAZAR, LAL-QUILA.



5.3.1 B) Impact of Arches in Repetition on the Front or In One Plane



Location : Pavillion in the garden, Lal Quila.

Description : P 5-7.

Open from all the sides, pavillion placed up above the edge of Sunken garden. Function of pavillion being, to provide a sit-out in the natural surroundings.

Interpretations :

A psychological sense of enclosure given by providing a platform enclosed by arches, which help framing the view of the garden, while sitting inside. A subtle enclosure so provided, by giving an opportunity to see 'through and through' the arches.



Location : Rang Mahal, Lal Quila.

Description : P 5-8.

Multi-foiled arches of the same proportion placed symmetrically on both the sides of the entrance, which is slightly wider windows rectangular in shape or with arch form, seen on the wall behind the arches.

Interpretations :

Arches create a space continuity and space rhythm, which gets broken by increasing the width of the middle arch suddenly. 'See-through' feeling of the pavilion, replaced by focussing the eyes on the wall behind. Windows thus again focussed, evoke an urge to 'look beyond'. Thus arches here helped focussing the point of interest, i.e. windows.



5.3.18.

Location : Moti Mahal, Lal-Quila.

Description : P 5.9

Arches again provide a space rhythm. Proportion of the middle arch changed. The roof form also tallying with the arch form. Doorways placed symmetrically at both the corners, behind the arches.

Interpretations :

Arches used to focalize the cascade of fountain (middle arch) and the doorways (side arches)

5.3.1 B.

Location : Diwane Aam,
Lal Quila

Description : P-5.10

Multi foiled arches, used to enclose an open platform, with the throne in the middle. Proportion of arches at the edges remains the same through out, and tempered, only when used to high light the throne inside.

Interpretations :

A series of arches at three edges, have the same proportion but even then, throne is high lighted, Arches through out the edges of the platform help framing the view from inside.



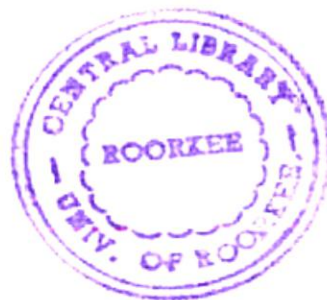


5.3.1.8.

Location : Rang Mahal, Lal-Quila.

Description : P.5.11

Rang Mahal lies on the horizontal axis of Lal Quila, Moti Mahal, Hamam, Diwane Khas, Tajbih Khana Mussamman Burj, Mumtaz Mahal also lie on the same axis with open spaces in between. A water channel run through out these buildings, enclosed by archways at small intervals.



Interpretations :

A strong sense of direction given to the eyes, by providing a series of arch ways at the roof level and water channel at the floor level, thus, never were the eyes allowed to move side ways, they always saw straight. These arches when seen from the open space behind gave a rhythm to the facade, but the central arch emphasized the water channel.



5-3-18.

Location : Fatehpuri Mosque

Description : P 5-12.

Photograph shows the Sanctuary, as seen from the entrance arch of the mosque.

Interpretations :

Entrance arch encloses the view of the facade. The eye starts moving from one minaret to the other, the arches in between maintain the continuity and the squinch of the middle arch focusses the mihrab.

5.3.2 Jali's and Screens :

A. Jali - Against Open Environment



Location : Lal - Quila

Description : P-5-13

It is a jali at upper storey of Diwane Aam, used to form a Jharokha in a staircase room.

Interpretations :

Jali as a peep hole and source of light for the stair case room. Cuts the glare and acts as a separation from the environ.



5.3.2 A.

Location : Mussamman Burj, Lal-Quila

Description : P 5.14

A Burj, projected towards the side where river Yamuna once existed. Burj forms an extension of a room called Tajbih Khana.

Interpretations :

Tajbih Khana gets the filtered light due to the jalis whereas, direct exposure to the environ felt, in the projected balcony. Thus, a transition is achieved in the spaces, due to jalis.



5.3.2. A.

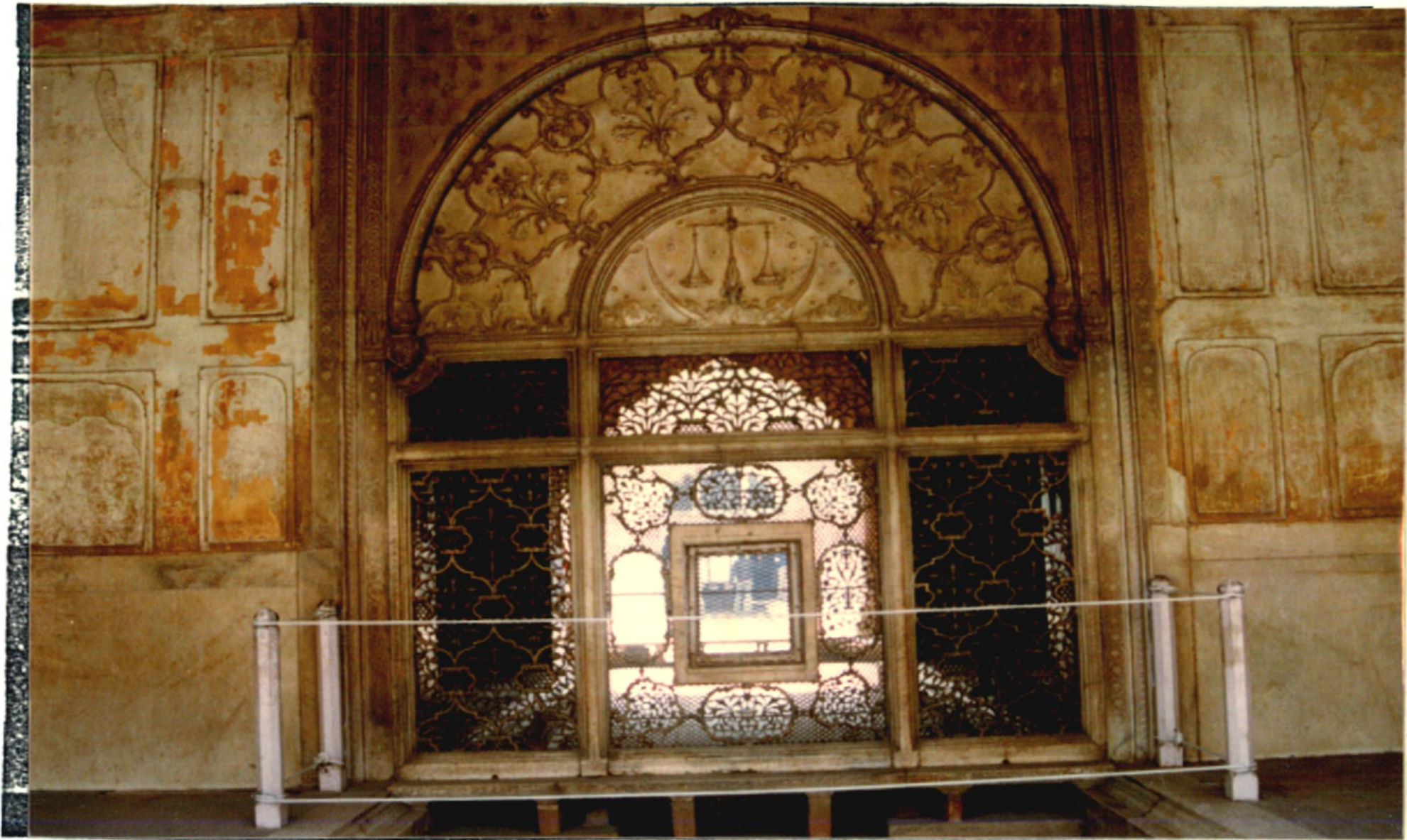
Location : Court-yard, Fatehpuri Mosque

Description : P 5-15

Jalis (at the extreme left) form an enclosure to the group of 'qabrs'. These are the tombs of some important people, who are given due respect after their death, by burying them in the precincts of mosque.

Interpretations :

Function of mosque clashes with the tombs placed in the court-yard hence, jalis used as a subtle separation between the two functions.



Location : Diwane Khas, Lal-Quila.

Description : P 5.16

It is the famous 'Scale of Justice', a jali separating the two spaces, i.e., Diwane Khas (the administrative quarters) and Tajibih Khana (the living quarters). It gave way to the Sunken water channel, running at its foot.

Interpretations :

Acted as the most subtle and the most strong visual separator between the two different functions. Subtle - because when tried, everything/^{seen}at the other side. Strong - because of the intricate patterns one simply gets lost in them and forgets to see behind them. Rather one can see behind only after giving a lot of exercise to the eyes, which one dared not when sitting in a darbar.



5.3.2. B.

Location : Moti Masjid, Lal-Quila.

Description : P-5.17

A niche covered by simple patterned stone jali.
(considering the workmanship of those days).

Interpretations :

Provision of a sit-out, enclosed by jali as a separator between the enclosed area (inside) and the environment. Jali used as a climate modifier.



Location : Diwane Aam, Lal-Quila

Description : P-5-18.

A Ventilator, to the stair case tower as seen from the terrace, it leads to. The triangular shape of jali does not go with the arch which encloses it.

Interpretations :

High lights the entrance doorway, by giving way to natural light. The arch outside prevents rain water from sliding inside.

Serves its function in a unique manner, by letting the desired quantity of light and air in, without giving an access to rain water.

5.3.2 (c) Infill by Jali Used as an Embellishment :



Location : A house cum shop at Chandni Chowk.

Description : P-5.19.

Balcony of a residence, with a shop at ground floor, showing jali as an infill between the arches created to enclose it, included in the study, because of the interesting application.

Interpretation :

Jalis have helped filling the voids in a subtle and decorative manner, in the absence of which the arches would have looked isolated. A continuity is created due to the use of jalis.

5.3.3 ELEMENTS ON EDGES :

Such elements become unique due to :

- a) Uniqueness of distance or locational uniqueness
- b) Defining of Edges
- c) Giving Direction to the perspective

5.3.3 a) Locational Uniqueness :

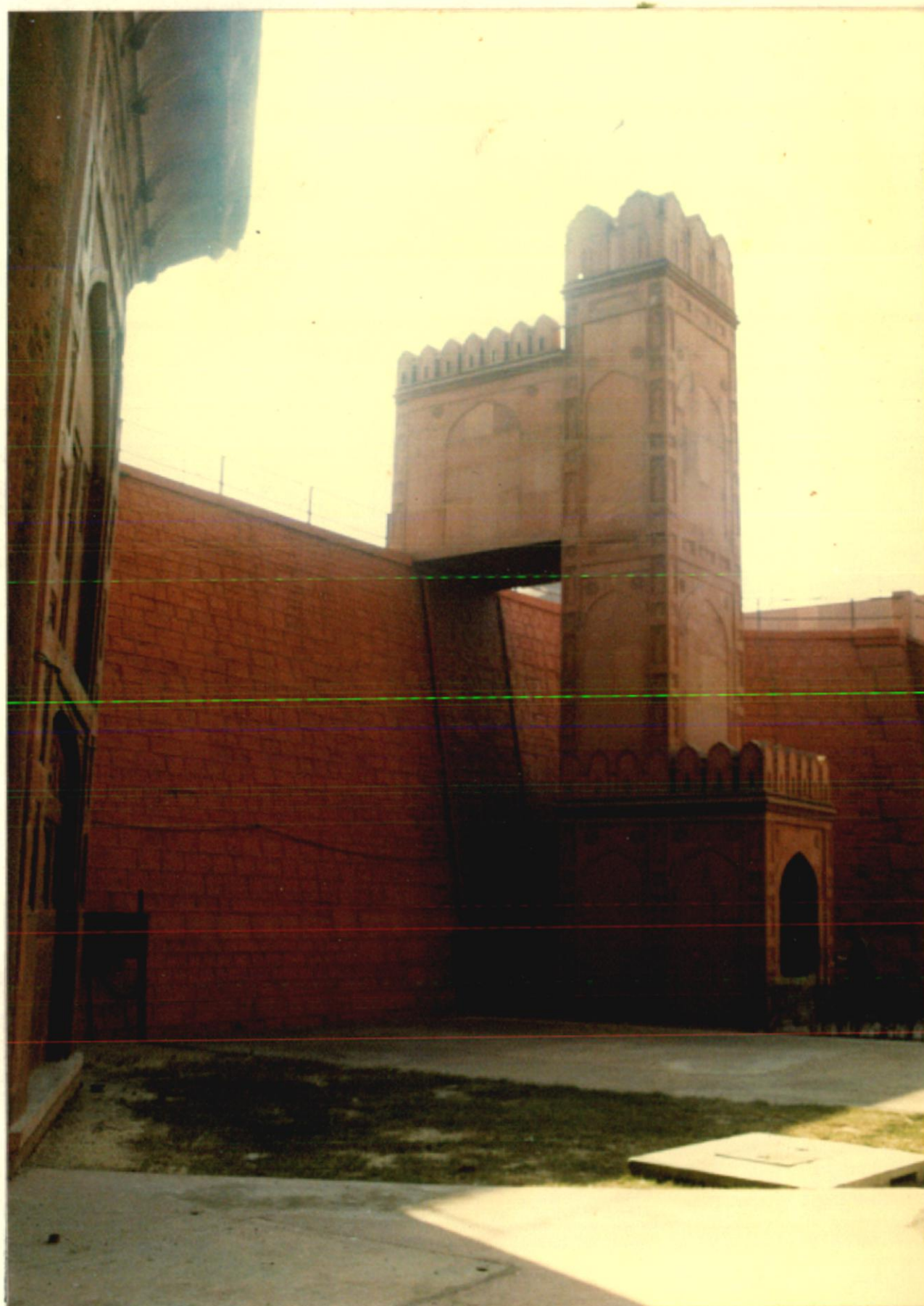
Location : Lal Quila

Description : P-5-20.

This is a view tower located just near the Lahore-Gate. Its proportions are attractive.

Interpretations :

The tower with attractive proportions, located in such a way that one can have a view to outside world, from it. Its location thus makes it identified as an element.





Location : Outer wall of Lal Quila.

Description : P 5-21.

Projected balconies, supported on stone cornices and brackets, on the outer side of Lal Quila where, river Yamuna once, existed.

Interpretations :

Location of the balcony, i.e., nearer to water, has made it a unique feature. The brackets and cornices below further enhance this feature.

5.3.3 b) Defining of Edges :

5.3.3. b)

Location : Basement at
Lal Quila.

Description : P 5.22

The line defining the vertical positive and vertical negative surface is known as edge. Vertical positive here is the surface up the natural ground surface and vice-versa. The basement here, forms a horizontal edge and is an interface between, positive and negative surface.

Interpretations :

The interface has given a sharpness to the in lower edge of the plinth in the absence of which the vertical surface of the building would have been like any other vertical surface. Because of the downward or negative movement of eye, the edge has become distinct.



5.3.3 c) Giving Direction to the Perspective Or
Spatial Perspective by Nodal Appearance
of the Element

Location : The outer
wall of Lal
Quila.

Description : P 5.23

Roofs and eaves
have become distinct, a
burj seen behind.

Interpretations :

The eye roaves
over the roof line and
ultimately get focuss-
ed at the burj behind,
thus getting a direct-
ion in spatial pers-
pective.





Location : Lal-Quila , P-5-24.

Description : A pathway progression in a Sunken garden.

Interpretations :

Progression of vertical surfaces in perspective, i.e., stone railing, brick surfaces walk way, and grass-lawn are differentiated by using different textural treatments. This saves our eyes from monotony, when visualizing the complex as a whole.



Location : Entrance of Fatehpuri Mosque.

Description : P 5-25.

Sunken entrance of the mosque as seen from the court-yard. Entrance is juxtaposed by a row of rooms on both its sides, having chatri at the edges of their roofs.

Interpretation :

Elements like Chattris, when appearing at the nodes give a direction sense, to eye when visualizing at roof level. They also help defining the perspective of a complex.

5.3.4 Space Punctuations And Focality :

Change of levels displaying :

- a) Geometry of lines and Surfaces
- b) Ultimately Focussing an Entrance Or
A Doorway



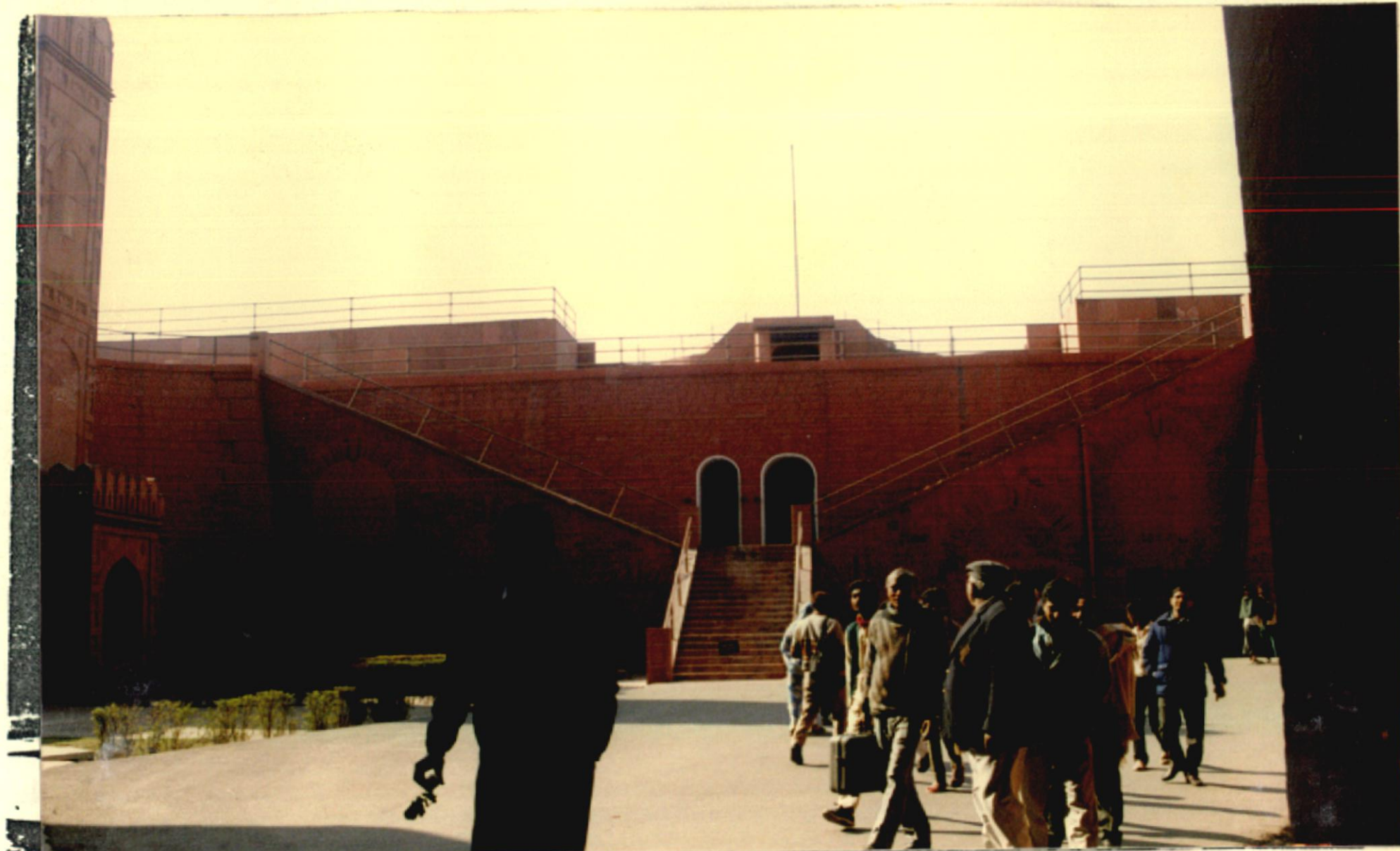
Location : Steps, Lal Quila

Description : P 5-26

The surface enclosing the steps formed out of two clear triangles and a rectangle, giving a sharpness to the surface and making them dominant against the plane surface, of the wall behind.

Interpretations :

Surfaces displaying a clear geometry, give sharpness and help forwarding the element.



5.3.4.a).

Location : Lal Quila

Description : P 5-27

Stairway, placed nearer to the Lahore Gate. Two triangles with dominating proportions enclose a rectangle with timid proportions. Two arched openings can be seen above the rectangle so formed on the wall behind.

Interpretations :

Geometrical surfaces with grand proportions, make the steps dominating, arches help enhancing the rectangle enclosed in the triangles.

5.3.4 b) Ultimately Focusing On An Entrance

Location : Diwane Aam,
Lal Quila

Description : P 5-28

A flight of steps leading to the terrace behind Diwane-Aam, having ventilator as a source of light, placed in the wall, near the doorway.

Interpretations :

Light pours inside through the ventilator and the doorway, thus, highlighting the steps but, ultimately getting focussed on the doorway.



5.3.4 b)

Location : Lal Quila

Description : P 5.29.

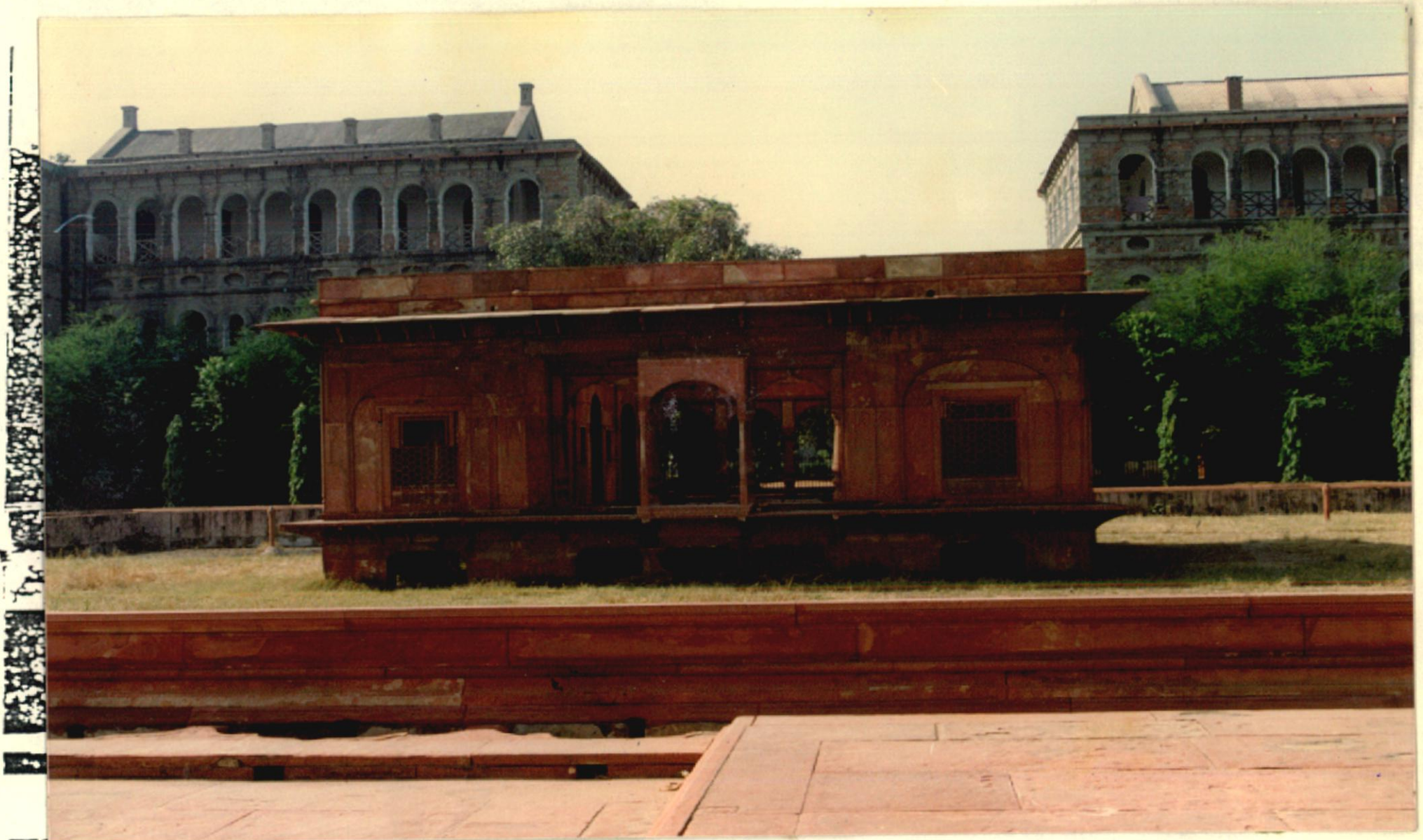
Side entrance
to the Hamam of Lal
Quila. Steps enclosed
by a small parapet.

Interpretations :

Nothing elabora-
te done over here,
Importance of the entra-
nce created merely by
enclosing the steps
with in parapet wall.



5.3.5. SURFACE COMPLEXITY BY JUXTAPOSITION :



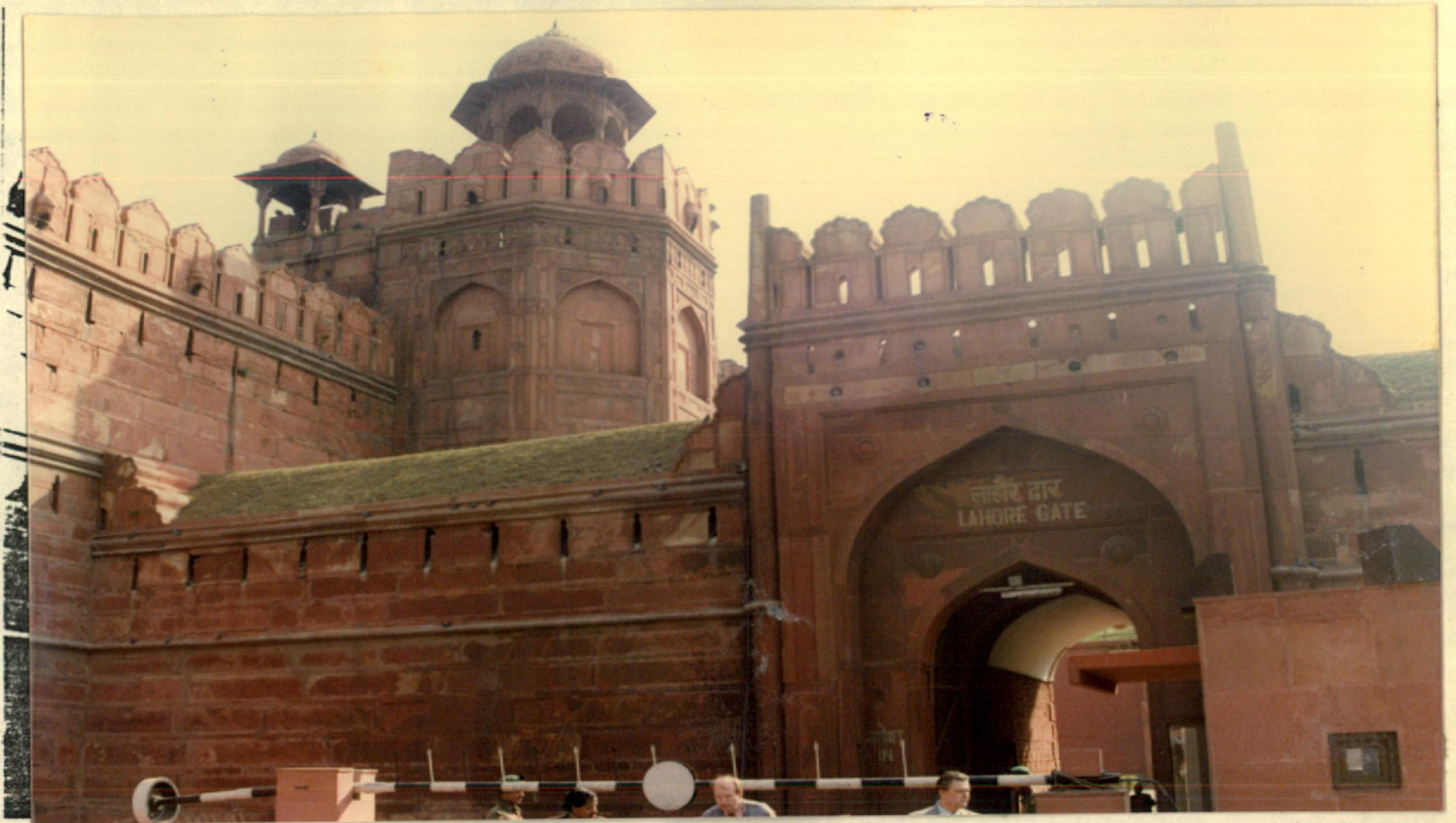
Location : Sawan Bhadon, Lal - Quila

Description : P 5-30.

A water pavilion, placed in the Sunken garden. Whatever picture it presented in the past, but, now the pavilion has two colonial buildings at its back.

Interpretations :

Cheerful red sand stone pavilion forwarded and accentuated by two dull grey coloured buildings behind. Contrasting background has created interest.



5.3.5

Location : Lahore-Gate, Lal Quila.

Description : P 5.31.

A wall surface, with entrance punctured into it having a dominating burj at its back (left).

Interpretations :

Elements on surface (battlements) and juxtaposed elements (the burj behind) : accentuate the main element i.e., the entrance.



5.3.5

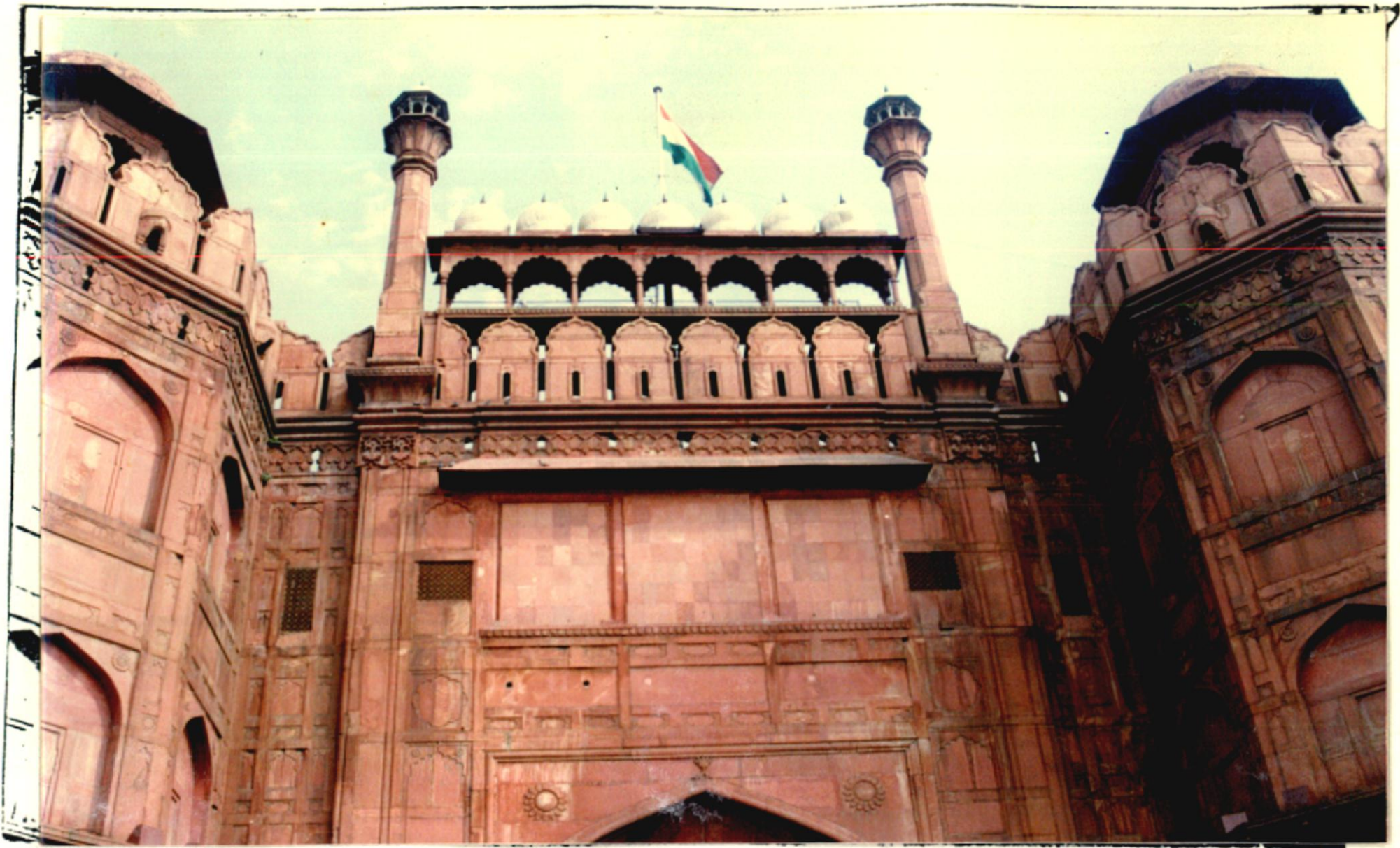
Location : Diwane Aam (back side), Lal Quila.

Description : P 5.32.

The building having a garden in front of it.

Interpretations :

Enclosing surfaces, i.e., the green grass, (horizontal) the blue sky (vertical) create a contrast with the vertical surface of red sand - stone, with offsets on its facade. Material of construction together with elevational effects present an interesting picture.



5.3.5

Location : Entrance, Lal Quila.

Description : P 5.33.

Two main characters of surface treatment clearly evident.

- a) The surface treatment with the reliefs.
- b) By creating solids and Voids.

Interpretations :

1. Textural variations created by giving rectangular reliefs or impression of arches on the wall surface.
2. Rectangular slits and series of small arches above the battlements help giving a textural variation.

5.3.6 Elements in Environmental Design :

Following qualities are studied :

- a) Elements Defining Movements
- b) Special Effects Supplementing the other functions.
- c) Deliberate Surface Variation by Textural Treatment
- d) Locational Individuality or Personality of An Element

5.3.6 a)

Location : Sawan Bhadon,
Lal Quila

Description : P 5.34.

Pattern created out of stone abutting to the pool of water, so that the over flowing water moves following the pattern made at the ground level.

Interpretations :

Spilled water moulded in the pattern formed, give a directional cue to our eyes and on the other hand sustaining the interest of the viewer.





53.6 a)

Location : Sunken garden, Lal Quila.

Description : P 5-35

A balcony projecting out of a raised path way
in a Sunken garden.

Interpretations :

The surfaces get deep set and then again project out, these type of surfaces when seen in a series (there are many such balconies projecting out) create an interesting visual variation.

5.3.6 b) Special Effects to Supplement
the other Functions

An element might function in such a way that it might create some special effects supplementing some other functions too.



Location : Outside Rang Mahal, Lal-Quila.

Description : P 5.36

Picture displays a part of water channel, which has some niches made on its vertical surface to keep earthen diyas in the evenings.

Interpretations :

Reflections in water channel used for creating a multiplicity of visual effect. Diyas or earthen Lamps when lit in the evenings produce a shimmering effect also, in water. Water channel acts as a climate modifier (main function) and serves two more functions (reflection and shimmering.)

5.3.6 c) Delibrate Surface Variation byTextural treatments :

Location : Diwane Khas,
Lal Quila

Description : P 5.37

A wooden darwaja placed in the stone wall, with a stone relief above.

Interpretations :

Surface variations created by using different materials. Treatment further gets focalized by carving it and for creating a contrast, a relief is made above the door. Detailing of treatment has made the door an element.



5.3.6 d) Locational Individuality Or Personality of An Element :

Elements that are located at junctions of surfaces can be deliberately designed to high-light the environmental design quality or the spatial quality of the building.



Location : Roof of Diwane Aam, Lal - Quila.


Description : P 5-38.

Adjoining picture shows the soffit of a roof with chatri placed at its junction.

Interpretations :

With an upward movement of the eye, one sees roof-Soffit and then Chatri. One gets a feeling of seeing in to infinity. Infinity here is not something endless, but is something beyond. This enhances the personality of the element, i.e., Chatri.

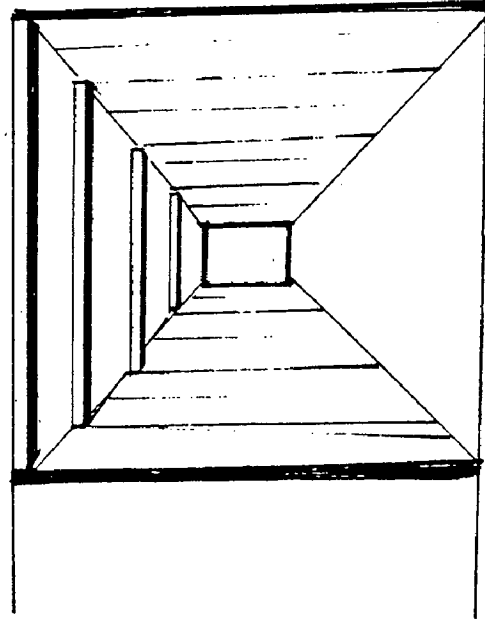
5.4 ELEMENTS, THEIR FUNCTIONAL RELEVANCE AND THEIR POTENTIAL,
PRAGMATIC APPLICATION

| S.No. ELEMENTS | FUNCTIONAL RELEVANCE | POTENTIAL PRAGMATIC APPLICATION |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1. Arches And Archways</p> | <p>a) Structural Component of Buildings</p> <p>b) Space continuity and space construction by Focal dominance</p> <p>c) Space Rhythm by directional repetition</p>  | <p>a. When used a structural as component :</p> <p>1. The depth (created by the Squinch) formed can be used to create a bold effect in the entrance, using a small space even.</p> <p>2. They can be used to span the verandahas, providing an open-ness as well defining the prencincts of a house. Elevation improvement is though a secondary issue.</p> |

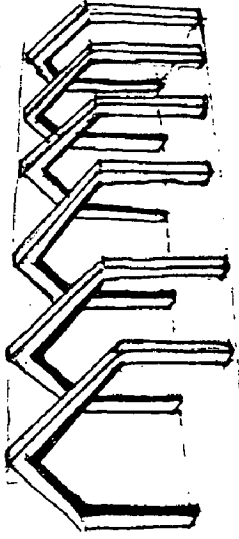
DEPTH CREATED IN THE ENTRANCE (AS IN A SQUINCH ARCH), HELPS FOCUSING IT.

b. When an arch is used to create a space continuity, the following applications can be made :

1. The receding planes of arches enclose a special quality of spaces within them, which helps giving a line to our eyes. It evokes an urge to see something beyond. It is not necessary that we make only arches, to create such an effect, but the same kind of effect can be attained by playing with the vertical surfaces of some other types. Like simple post and beams which hang down the roof, or which are not covered by roof can also give, such an effect.

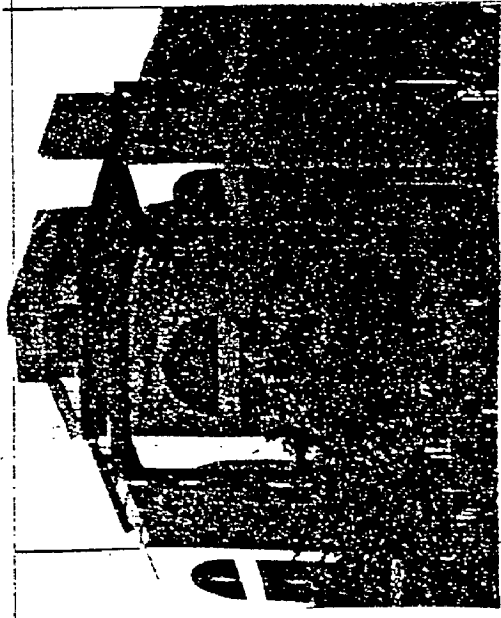


RECEDING VERTICAL PLANES GIVE CUE TO OUR EYES AND CAN BE FORMED BY SIMPLE POST AND BEAMS, IN AN ENCLOSED ROOM (ABOVE) AND IN AN UNENCLOSED (BELOW) E.g. PARK.

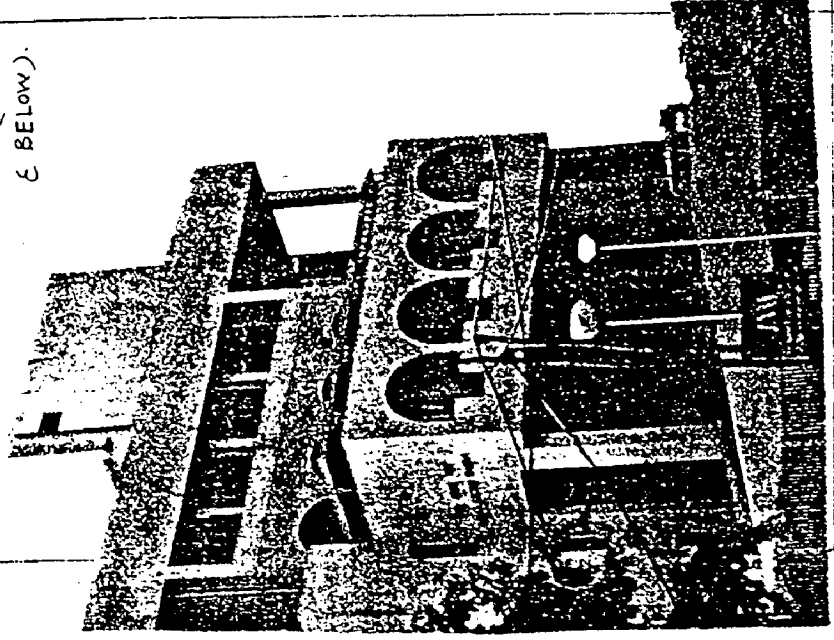


2. The other application of arches, as observed was highlighting of spaces. Column positions were tempered with to attain this quality. Similar application can be made when a space has to be highlighted, may be in a religious or even in a secular building. The only consideration being the restriction of eye movement and the objects which are used to achieve this have to be treated and made important, so that eye gets focussed at the desired points only.

c. When arches are repeated in the same plane or on the front they provide a rhythm to the facade. Not necessary, that only arches be used to attain this, as arches with graceful proportions and good quality of workmanship are difficult to be constructed now-a-



ARCHES ARE REPEATED IN THE SAME PLANE TO ACHIEVE RHYTHM. (ABOVE & BELOW).



days. The fundamental consideration regarding this being the repetition of an element to attain this quality. This element can be a door opening or a window opening as well. It can be an opening with circular lintols or with the triangular lintols as well. There are various possibilities of applications.

a. When Jali is used against open environment.

1. It can serve as a subtle mean of separation. When one does not want to give an effect of seeing through and through, one can use jali successfully.
2. Jali also acts as a climate modifier. It serves a dual function of cutting the light rays and also notstopping the air supply inside.



a. Against an open environment

b. Against a closed environment.

c. As an infill, in between vertical surfaces.

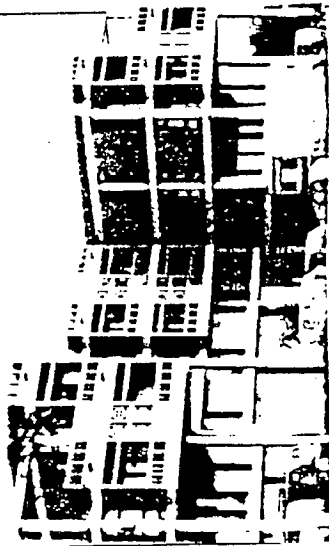
2. Jalis And Screens

2.

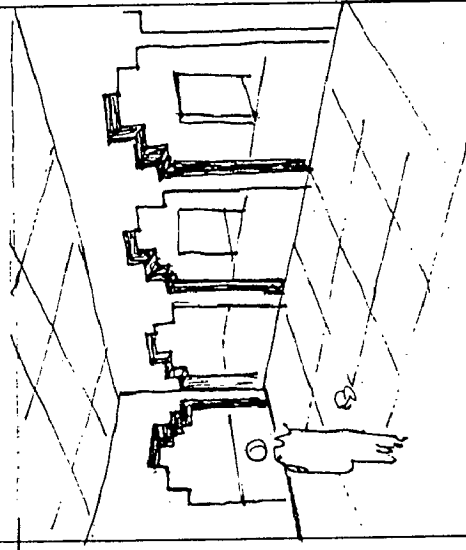
b. When used against a closed environment :

1. It can be used to separate two functions, as done in Fatehpuri Mosque, Photo No. 5.15, there the group of qabars are separated from the usual function of mosque. Hence, an application of jali can be, to act as a screen. Or it can act as a 'Purdah', within a space, as done in the Rang Mahal of Lal Quila. Person gazing towards it, gets baffled in the patterns generated in the screen and thus no more gets an urge to see the other side of the screen.

c. It can be used as an infill, as in a house at Chandni Chowk, Photograph No. 5.19, where jali is given a curved form to fill the space between two arches. This again becomes an climate modifier as well as eye catcher.



JALI USED AS AN INFILL IN PARAPETS.

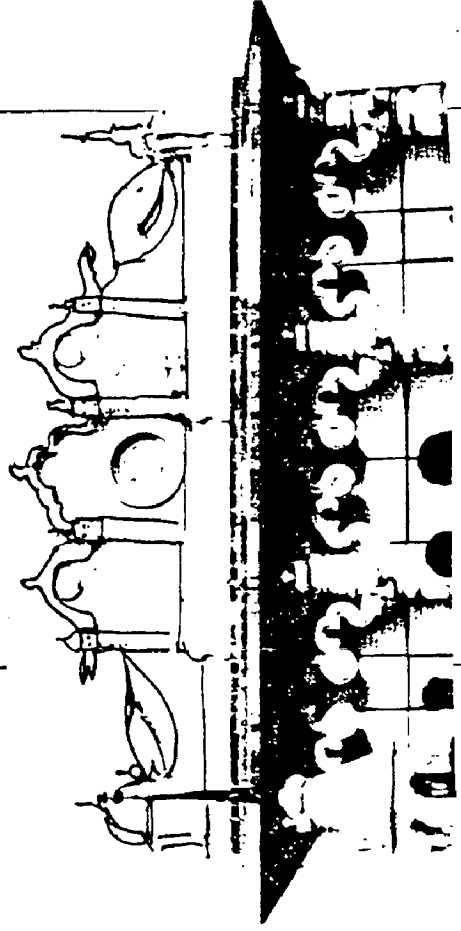


MASONRY WORK CAN ALSO BE USED TO ACT AS AN INFILL, JALI NOT NECESSARY.

The Sun's rays at upper level get cut by the jalis and hence, we can say that it acts a climate modifier. Infill may not necessarily be a jali, when we consider its present day application, it can be merely a masonry work given some patterns, so as to generate the interest of the viewer and also serving its purpose of acting as climate modifier.

Locational Uniqueness can be created by placing the elements, where the users get a unique feeling. This feeling may be of sailing, floating etc. Like the balconies projected towards the side of river Yamuna (Photo No. 5.21) gets the privilege of being unique due to their location.

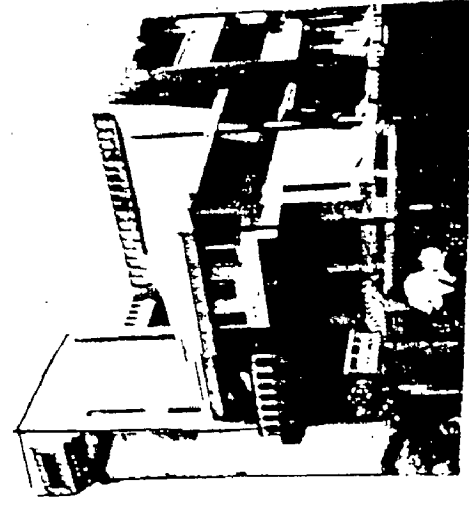
By sinking or raising the levels, as done in the basement of Rang Mahal, Lal Quila (Photo No. 5.23),



CURVED PATTERNS CREATED TO FILL THE SPACES BETWEEN POSTS BELOW THE ROOF.

3. Elements On Edges

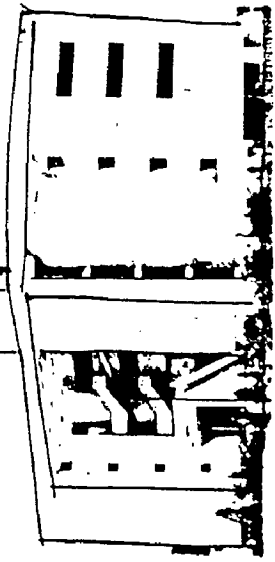
- a. Locational Uniqueness
- b. Defining the edges
- c. Space directives



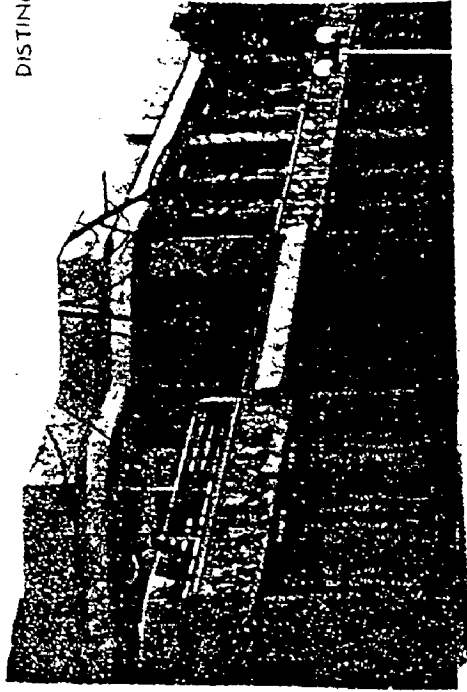
STAIRCASE TOWER GETTING UNIQUE DUE TO ITS LOCATION.

a.

b.



TOWER WITH ITS PROPORTIONS IS MAKING THE BUILDING DISTINCT.



ELEMENTS ON EDGES GIVE DIRECTION TO THE SPATIAL PERSPECTIVE, COLUMNS IN THE UPPER PICTURE & CHATRIS, BALCONY-BRACKETS IN THE LOWER.

an interface can be created. Even subtle change of levels, create interesting design compositions.

Division of spaces can be also made using this method, without putting rigid enclosures like walls, in between two spaces, used for different functions.

c. Elements on Edges can be used to give a direction to the spatial perspective. This can be achieved as done at Lal Quila (Photo No.5.22) where roof and eave projection act as elements to give direction to our eyes. They automatically graze past the roof and eave projection and get focussed on the burj behind.

We can also give a sense of direction to the user, by providing some eye catching elements at the nodes or at every change of direction. The level of these



ELEMENTS APPEARING AT NODES GIVE DIRECTION IN A SPATIAL PERSPECTIVE, ESPECIALLY IN LARGE COMPLEXES, LIKE EXHIBITION GROUND, WHERE THIS BUILDING STANDS.

elements can be decided as per the context of design. By levels I mean, the levels of placement of these elements, i.e., above the roof level, as done in Lal Quila Complex by placing chatris or they can be below the floor level or as shown in the photograph No. 5.35. The pattern created below the ground level give a cue to our eyes. These elements can be at in between levels also, again this decision has to be made by seeing the context of design.

4. Space Punctuations and Focality.

Change of levels achieved in two ways:
 a. Creating a surface geometry or geometry of lines.

a. Change of levels can be made interesting by creating a certain surface geometry. (Photograph No. 5.26) and 5.27).

Following the interpretations of the photographs, one can create some interesting patterns of change of levels. Change of levels with line



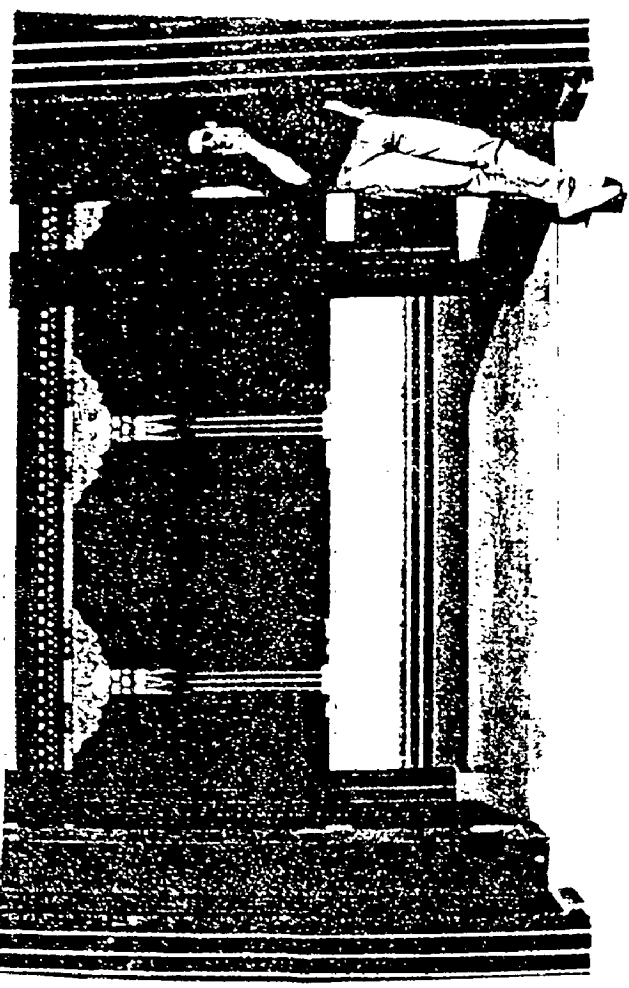
FOCALITY CAN BE CREATED BY CLEAR
LINE GEOMETRY, AS SHOWN ABOVE, IN
THE N.C.E.R.T. BUILDING, N. DELHI.

geometry can also be done. This is done as shown in photograph. Here, steps are not enclosed but have sharp edges and dominating proportions, displaying a clear line-geometry.

b. Changing the level, but ultimately focussing on the entrance.

b. Focussing of the entrance can be achieved, either by allowing a passage for natural light on the entrance, as evident in the photograph

No. 5.29. Or, this can be achieved by enclosing the steps with small parapet. This trick shall work even if the steps have a timid proportion. This application can be seen in the Photograph 5.28.



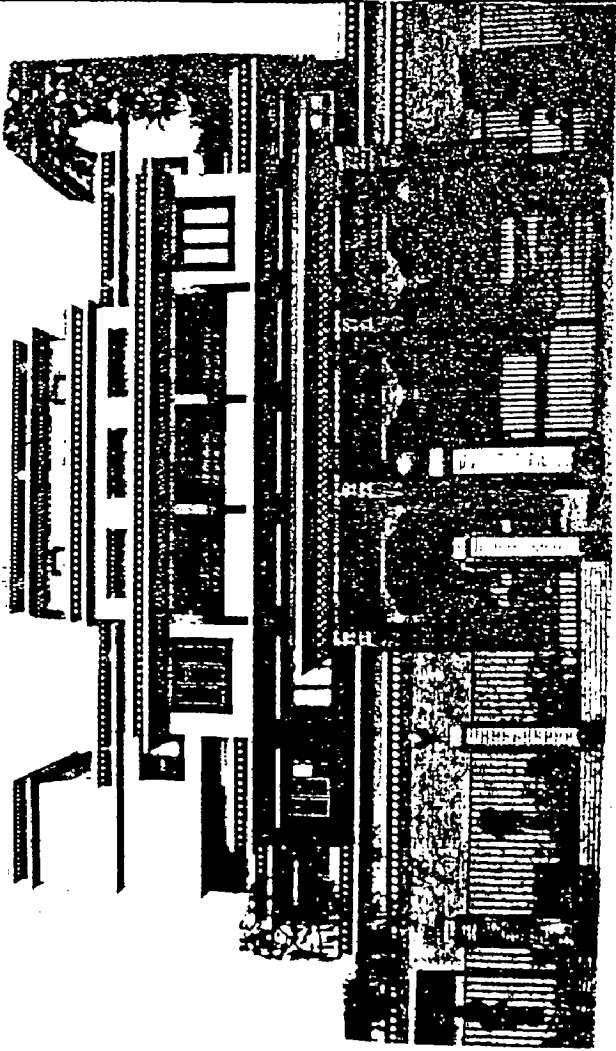
AN ENTRANCE CAN BE FOCUSED ALSO, BY FRAMING ITS VIEW, AS SHOWN ABOVE, IN BUDHISTS CENTRE, NEW DELHI.

Building can be enhanced in two ways :

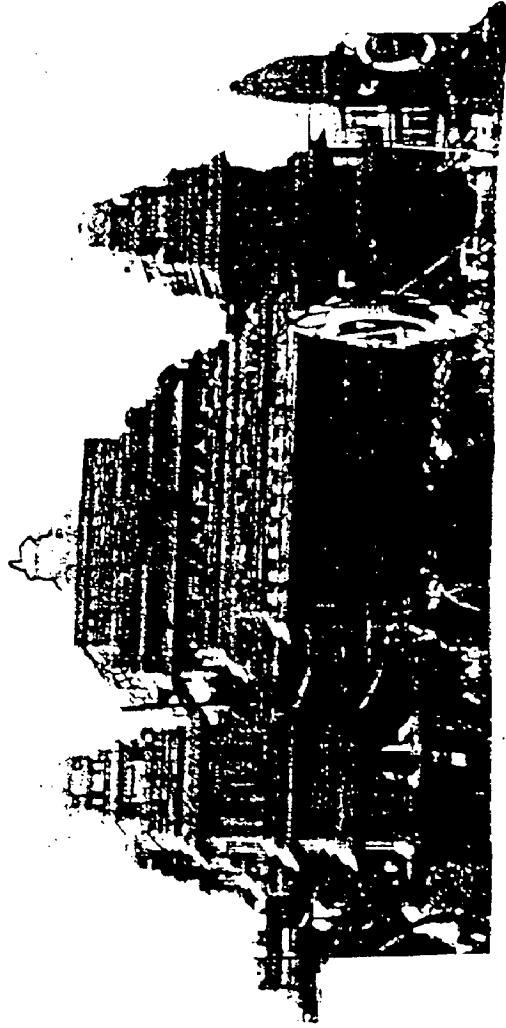
1. Juxtaposing the surfaces or objects in such a manner that difference of colours/texture is created helping in the forwarding of the building. This has been done.

Enhancement of building.

5. Surface Complexity by Juxtaposition.



TOTAL VIEW OF THE BUILDING IS ENHANCED BY
CREATING A CLEAR COLOUR CONTRAST IN SURFACES.

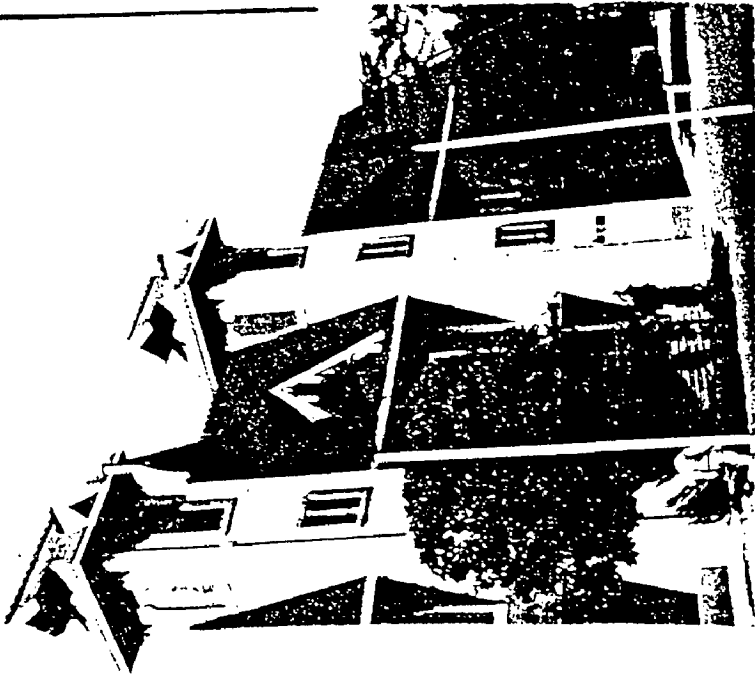


THE TOWERS JUXTAPOSING THE MAIN HALL, GIVE IT
A FORWARDING EFFECT, MAKING IT IMPORTANT, IN A
TEMPLE BUILDING AT CHATARPUR VILLAGE.

Thus, any surface can be forwarded,
by creating a contrasting back
ground.

2. The same purpose can be solved
by giving, solids and voids
treatment to the surface which
has to be enhanced. Further-
more, some elements can be
placed to give importance to
the surface, in question,

like the Burj is placed behind the entrance to give it a forwarding effect (Photograph 5.31).



ENTRANCE AGAIN ENHANCED BY PLACING TWO TOWERS AT ITS SIDES, IN THE PALAVION FOR KERLA - STATE, AT PRAGATI MAIDAN, NEW - DELHI.

| | | |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>6. Element in Environmental Design</p> | <p>Function of such elements is to contribute to the qualitative aspect of environment. In other words, they help creating a positive or favourable environment.</p> | <p>Elements can be of various</p> |
| | | <p>a. Elements can define movement of the user, as done by the ground treatment given, at Lal Quila Complex (Photograph No. 5.35). These elements are created to</p> |

sustain the interest of the passerby. Now, this effect can be used in varied manners, for example, in a long corridor, patterns can be created along the walls, so that walking through those corridors does not become an ordeal.

b. Special effects can be given by elements, to supplement other functions. This can be elucidated through the Photograph No. 5.37.

Elements, can be designed to perform multiple functions. For example, a lamp-post giving light, but also focussing the area below it. Steps to climb up and to sit as well.

c. Plane surfaces can also be made interesting, by creating textural differences. This

can be achieved either by using different materials as shown in Photograph No. 5.38. Here, the desired contrast is achieved by using wood and stone. But, this can be achieved by using the same materials also. One surface can remain plain while the other can have a treatment on it. One surface can be glossy, while the other can be matt.

CHAPTER - 6

TRADITIONAL NORMS AND VALUES

"India, even before the time of Budha, had a Civilization which was peculiarly her own..... The philosophy and religion contained in that civilization had a patent influence, not only in absorbing the artistic elements derived from the culture of other countries, but also in reshaping and transforming them, according to her own ideas".

- E.B. Havell, 1913

6.1 NORMS, VALUES AND ARCHITECTURAL DESIGN :

" A value is a normative pattern which defines desirable behaviour for a system in relation to its environment. Here, it would be better if we differentiate between the norms and values, because traditionally, values and norms have been conceptualized with reference to each other. Indeed, they are at times used interchangeably to mean the same thing. A norm though, is a pattern defining desirable behaviour for a unit or class of units in respects, specific to it and differentiated from the obligation of other classes."¹.

Values thus, are 'Conceptions of the desirable', norms are 'patterns of desirable behaviour' which implement values in a variety of contexts.

Cultural values of a society constitute the core of its system of symbols. Continuously impinging upon it are the value systems of the economy, the polity, the arts, and the Sciences, and the many other cultural subsystems of a society. Religious values however, do not impinge upon cultural values, but, constitute the very womb from which cultural values emerge.

"Karl Marx emphasizes the infinite desires of the powerful who invoke the name of Gods to sanction the existing distributive system (the 'religion which is opium of masses'). However, we need only go so far as to state that religious ideas emerged to explain human finite capacities through imaginatively constructed realities ; the sun and the rains must be placated by offerings so that crops may not fail, death is but the passing of the soul to another birth, and so on."².

Religious symbols encourage certain types of behaviour patterns and discourage others, restrain and guide motivations, and always ground these in the context of ultimate existential questions. Since religious values indicate the kind of cosmic world a society prefers to imagine, they have considerable psychological hold over the members of the society even if religious forces do not have a direct impact but are filtered through cultural values.

Cultural value preferences emerge from the matrix of society's historical experiences, which include religious experiences. In so far as these historical experiences are similar to those of other

cultures, value preferences tend to be similar to those of other cultures. One experience, for example, characterizing many cultures, is the development and diffusion of technology, and all these cultures tend to value scientific objectivity.

In the following pages an effort is made to extract the values as related to the field of architecture.

Reference : Values in Models of Modernization
1 and 2

- Dr.Ratna Dutta, 1971

INTRODUCTION :

The very first social value we shall talk about is the feeling of Self-Sufficiency. We know about the function system of our villages - they had grain products from the farmers in the village, leather products from the Cobler, wooden articles from the carpenters etc. Every member of the society had his own work assigned to, and had his own importance. This system made a village self-sufficient and independent in functioning. Gandhiji had also dreamt of such villages. He wanted to retain this basic character of the villages.

"With today's technologies it should be easy to build a new world, a world which can be linked with the past by building on the basic values, and with the future in terms of the well being of a larger number of people. Planning will only succeed, provided uncertainties about the 'Values' are reduced to a minimum and not subject to pressure of immediate circumstances"

B.V. Doshi.*

Now that we realize, that we are dissatisfied with our present day circumstances, and also it is necessary to accept technological advances and explorations of new

avenues for growth. What we are not understanding is the importance which should be given to the technology. It no doubt is a tool for construction, but it can also become a hammer for destruction. Technology, essentially has to be utilized for the man's welfare.

'Our main aim should be to become industrious not merely industrialized. By becoming industrious, that is through skill and healthy competition and choice, we can have a better rapport between work that one enjoys doing and leisure as its counter point. Our approach should be based on using life, time and space more fruitfully. With this problem of quantity, that is, the needs of the larger number of people will be inter-linked with quality. This will improve the values, since, quality will convert the quantity into an expression of life's desire and will not belong to the realm of competition, because, it will not be superflous but immensely essential' - B.V. Doshi*.

* 'Cultural Continuum and Regional Identity' - A paper presented by B.V. Doshi, in a Seminar on Regional Identity in Architecture, Aga Khan Award.

Religious institutions of our past have provided one community with a sort of cultural stability. They have helped in developing value - systems, which again has led to a strong desire of community belonging. Our old religious town centres were self-sufficient in themselves. Though, population wise those may have been small ones, but they showed strong characters of Oneness. These convictions were handed over from one generation to another and thus became traditions.

The construction period of Cave architecture was not limited to a few years. It got continued for centuries together. The main Sthapati, who conceived the idea originally, might have passed away in between or even when alive might have paid a few visits at the site of construction, but the work continued and surprisingly its quality also kept on improving. What we are doing under the present day circumstances.? The element of sincerity is altogether missing in our work. A contractor or an architect are quite capable of misleading a client. Architect no more has the importance of 'Sthapati'. Also, he has to keep a constant watch over the building activity.

Our society had a concept of community commit-

ment also. Whether its a religious town centre or a mohalla of north India, a pole of Gujrat, or a peth of Maharashtra people prefer a community living. In our olden times, communities were made according to the occupation adopted by the people, e.g., Jullaha Community, dhobi Community etc.

It is peculiarly Indian paradox, that in order to be recognized as an individual, every individual must also belong to a collective - to family, to a caste, a community, a peer group or a political party. The Unit is always recognised over the individual. The co-operative and living is a more recent trend. Extensions of community hierarchy so familiar in the caste consciousness of the traditional collective is equally apprant in the city today eve. Journalist band together, acquire land jointly and make a Press-Enclave, lawyers do the same to create Punjabi Bagh, Bengali's settle together in Chitranjan Park. It is much refer bet, living with a neighbour, who is culturally ethnically, racially, morally, spiritually, economically your equal than to risk, the uncertain benefits of diversity. Well, who says that we have changed a lot ?

The community living was further strengthened by providing community spaces. The illustration of a simple village well, as an element representing a Socio-Cultural pattern, has often been quoted. The water-well is an institution which binds the community very strongly because this is where people meet each other daily, discuss their problems, find solace, in their griefs, and feel socially cared for. The village well over centuries has been grown as a very prominent social institution.

Indian society, as stated earlier is not an individualistic society. It is a society where people belong always to a group and also they always have an open invitation to participate. This act of participation is every where, even when/^{one} is walking in a street or a bazar. No body is alone over here.

We observe that traditional houses had clear ideas of hierarchy of spaces. Streets also were a part of the houses situated on it. It always got an outspill of activities. Chowk again was a place meant not only for traffic control, but it also was used as a place for social interaction. Creation of such places, made the lives of people cheerful.

According to the Vedanti'c beliefs, all man-made

objects have Purush, i.e., Atman or Pran is them, because they are projections of his own personality. This is further manifested in Vastu Purush Mandal. The symbolic language used in this programme the building. In short, Man has given importance to a Man. He showed a concern for the human scale, as the measurements taken were always related to him, i.e., 'EK Purush', 'Do Purush' etc.

6.2 DESIGN CONTEXT OF ARCHITECTURAL ELEMENTS :

Two qualities of elements that create architectural design are :

- A. Design Norms of Elements, and
- B. Design Values of Elements

A. Design Norms of Elements :

Certain elements are such, that they are installed in a building following the norms simply. Such elements are the standard or traditional elements, for they are repeated again and again, from one building to another. Five such elements are already identified in the Chapter - Six, from Lal Quila and Fatehpuri Mosque.

They are :

1. Arches and Arch Ways
2. Jalis
3. Elements on Edges
4. Elements used for space, Punctuations and Focality
5. Elements creating surface complexity by Juxtaposition

These elements established language of not only Indo - Islamic architecture, but architecture that was followed many years after that era.

1. Arches and Arch Ways :

Arches were used as standard Structural Elements. They were used to provide a Space Continuity and Space Rhythm by directional repetition, almost in every building of Indo - Islamic era of architecture. They also become a standard or traditional tool to operate space Construction and Focal Dominance.

2. Jalis :

Jali with intricate patterns was used in every building as a Visual Barrier and a climate -

Modifier for tropical climate of India against closed as well as open environment. It also became an infill between arches or parapet walls in every Islamic building in India, irrespective of the place.

3. Elements of Edges :

Elements on Edges, such as Kiosks, minarets, towers, chatris, balconies, brackets etc. which help defining the edges and give direction to the spatial perspective are also elements contributing to traditional Islamic architecture.

4. Elements used for space, Punctuations and Focality :

Elements used for space punctuations are also standard in all those buildings. The surface geometry or the geometry of lines created with the change of level as identified at Lal Quila is a common feature of every Islamic building. Every entrance is focussed in basically the same manner, i.e., either by enclosing the steps in parapets or by creating a clearly evident textural difference.

5. Elements creating surface complexity by

Juxtaposition :

Surface complexity is also created using the same tactics of either by giving solid and void treatment or, by forwarding a building surface by giving a contrasting back ground. Grandeur of entrance is created in the same manner of juxtaposing elements like at the edges.

So, we see that it is a well proven fact that some elements are these which are used following the design norms only.

B. Design Values of Elements :

Design Value is the inherent quality of elements contributing to psychological and emotional aspects of building design. These are commonly used in pleasure and recreation areas of traditional buildings for emotional and psychological fulfilment and for attaining ecstasy of pleasure. They are again seen in two forms namely, Conceived and Perceived.

Conceived and Perceived elements can be related in a way that, the ideas are conveyed but their outcome is what we see in the Perceived elements. These elements are identified in the Chapter Six, in the elements grouped under the 'sub-heading

Six, i.e. 'Elements in Environmental Design'.

Garden, Barahadari, Fountains, Mahals for dance and music performances, (Rang Mahal at Lal Quila), Hamam etc. are all such pre-determined or conceived ideas followed by a definite perception. We can say that these ideas are pre-determined because we find these elements appearing at definite places only, for example, a barahadri would always envelope the building and serves as a space for enjoying the breeze. So, the placement of Barahadari is a conceived idea, but enjoyment of breeze is the 'perceived - outcome'. Similarly, gardens are found before every pavilion or building of mughul architecture, their geometrical layout was pre-determined. Derivation of pleasure of taking a walk along the trees, or sitting under a shaded tree is the out come of this idea. Fountains placed in those gardens gave an ecstasy of delight to the users. Rang Mahal is present in such buildings in one or the other form. Dance and music performances were carried on here for recreation. Hamam or bathroom of mughul architecture gave a mental relaxation to the users. While lying down in a hot water tub placed in a well decorated room, serviced by maids and servants, who massaged their bodies relaxing their

musscles and keeping their mood light bycracking jokes etc., kings and queens took their heavenly bath. Sheesh Mahal can be quoted as another example in this series, which provided multiplicity of images, giving a visual satisfaction to the human eyes, for they are able to see the activities from different angles and poses.

In short, we can say that the elements with Design Values are the carriers of non-physical issues of the physical elements. There are a large number of such manifestations in the old and existing institutions which tell us about socio cultural tradition of the community. Detailed study of these can provide us with genuine understanding of the real community needs, which must be given importance in architecture and design.

7.1

OBSERVATIONS AND CONCLUSIONS :1. Delinking from Culture :

Segregated work places, emotional starvation, estrangement of nature etc. have led to 'Urban Degradation', as a result the linking among form, culture and behaviour have gone more tenuous. The hot impersonal bee-hives of flats, in concrete, in isolated locations separated by unsuitable public spaces have led to environmental degradation.

2. Institutionalization And Specialization :

Dominant characters of traditional building are Vanishing due to institutionalization and specialization of modern life.

3. Varying Patterns of Life :

Patterns of life in olden days were pre-determined, resulting into an acceptance in pattern of settlement and hierarchy of spaces. Also, the people shared the image of life, whereas, novelty is the essence in today's accelerated life. Buildings reflect the personal tastes.

C H A P T E R - 7

OBSERVATIONS, CONCLUSIONS AND RECOMMENDATIONS

'What we constantly realise is the apparent contradiction between what we had and what we have now. Thus, we live in an atmosphere of contradictions because, we like what we had, but do not yet know well how to improve the present and ensure a better future.'

- B.V. Doshi in a paper titled 'Cultural Continuum And Regional Identity in Architecture'.

4. Urban Realities :

Urban realities have changed the attitude of people towards the traditional courtyards buildings, as it is uneconomical due to high land prices.

5. Crux and Essance of Traditional Architecture :

Our traditional building ways, have suposidly gone obsolete, but we certainly can keep on sticking to our roots, by deriving the inherent spirits of traditional style of building. The essance and unique qualities of traditional architecture can be integrated with the modern concepts. Some of such interpretations are derived in Chapter - Six. The qualities of the objects that have converted them into elements can be used certainly. We can understand a their need and ways of giving cue to the eyes, providing an element of surprize, providing subtle visual barriers and climate modifiers like Jalis, or making the edges sharp and interesting byproviding certain elements, like Chatri, balconies etc.

Projection of surfaces by change in textures, colours or by juxtaposing the elements etc. are the inherent spirits of our traditional architecture.

6. Lack of Communication :

Today's buildings have a superficial way of respecting its aesthetical quality. Also there is a large variety of expressions, and building types leading to a visual chaos and hence, loss of communication. There is no continuity maintained on the facades of buildings, rather, every facade is a displaying canvas of the personal taste of the owner.

7. Loss of Values :

Due to increase in population and lack of resources, people have lost the concept of co-operation, giving rise to formulation and application of bye-laws, codes, zoning acts etc., no doubt helping improve the built environ, but also making the building design rigid.

Loss of values has also led to deteriorated quality of built environ. People go for houses generally constructed by builders and contractors who often construct low quality houses.

7.2 RECOMMENDATIONS :

1. Following a frenzied path of modernization and imitating the west, we have already detached ourselves from our roots, its time that we realize and follow our old ways, of course, after modifying them, to suit our context.

It is, therefore, necessary to talk about physical environment in terms of culture rather than only in terms of buildings, space technology or economy.

2. Technology should only be adopted as ^atool not as a hammer which we can not wield. Built form must not suffer behind the false curtain of economy put by architect.
3. Though the relation of space to the form, colour lines and proportions and textures, as applied to ancient buildings do strike an effective balance between aesthetic consider-

ation s and utility, the decorative features need not be copied and rather super imposed. The success and failure of building is measurable in a design where physical needs and realities are transformed into an aesthetic expression of personal and universal value.

4. Mass housing approach should incorporate certain merits of traditional housing. Following guidelines can be followed in that case :

- a) In mass housing it is very difficult to locate the entrances and individuality is already evident in our modern concepts, so entrances are to be stressed upon. They should be made more bold so that its existance strikes a visitor better.
- b) Covered shaded spaces before the entries must not be omitted.
- c) Court-yard in tropical climate like ours should be given due respect, and should be incorporated in a house, as far as possible.

5. Local building materials like brick in lime mortar should be used because cement is not only a costly material, but does not suit to our climate well.

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